Intersections Between Fintech Imaginaries and Traditional Banking

A Study of Disciplinary, Implementary, and Parasitic Work in the Danish Financial Sector

Kværnø-Jones, Jack

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Jack Kværnø-Jones

Supervisors:

Associate Professor Ursula Plesner

Department of Organization, Copenhagen Business School

Associate Professor José Ossandón

Department of Organization, Copenhagen Business School

Doctoral School of Organisation and Management Studies

Copenhagen Business School

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Prologue

This dissertation studies intersections between an emerging technology sector known as FinTech and traditional retail banking. More specifically, I study how FinTech imaginaries intersect with established organisation in traditional banking. The term retail banking describes the provision of basic banking services to individual customers and small businesses, the stuff of everyday savings and checking accounts, payment cards and loans. The FinTech sector refers to technology firms claiming to reimagine the customer experience and business models of banking products through digital technologies, such as blockchain, AI, advanced data analytics, and cloud computing.

Dominant framings paint FinTech as disruptive innovation, in which new technologies transform traditional banking. This thesis departs from a different puzzle, encountering FinTech as a phenomenon closely connected with established forms of banking. Despite claims to reimagine banking, FinTech imaginaries are closely connected to traditional banking. Rather than an external force of change, the FinTech sector intersects with and relies upon the traditional banking sector. Yet, FinTech imaginaries of disruption do not disappear from view, nor are they simply rhetorical hype, detached from the reality of what organisational actors do in practice. Rather, FinTech imaginaries are actively connected to established organisation in traditional banking. Honing in on the puzzle of how transformative imaginaries connect with established organisation, I develop the concept ‘imaginative intersections’, defined as sites in which FinTech imaginaries are worked with by financial professionals and made to connect with organisational contexts of traditional banking. This is thus a thesis about intersections, exploring the spaces in between attempts to reimagine banking and the mundane organisational operations of the traditional banking sector. This focus is productive, I argue, in generating insights into how imagined possibilities associated with technology are shaped through their intersection with established organisational contexts. In an age where Silicon Valley ‘visions for society’ are hotly contested (Lothian-McLean, 2022), and the grip of tech giants on how we imagine digital futures may be faltering (Flyverbom, 2022), questions of how technological visions become durable parts of social life are timely. In this light, the thesis is motivated by an interest in how imagined possibilities associated with technological innovation are shaped through their intersection with established organisational contexts.

In exploring how FinTech imaginaries intersect with established forms of organisation in traditional banking, the findings of the thesis point to interconnected types of work – *disciplinary*, *implementary*, and *parasitic* - and operations – *problematising*, *projecting*, and *formalising* - through which financial professionals connect imaginaries with established organisational contexts. Drawing out the work and operations performed at intersections between FinTech and traditional banking, the thesis contends, highlights contingent relations in organisational contexts of technological development, shaping imagined possibilities in the financial sector and broader social contexts.

Section One

Introduction

Reimagining Traditional Financial Services

The term FinTech has some definitional ambiguity. It is broadly used to refer to the historical trajectory of financial technology innovation (Ashta and Biot-Paquerot, 2018), but more commonly used to refer to 'the emergence of a distinct sector of retail money and finance after the 2008 global financial crisis (Langley and Leyshon, 2021, p. 3). The FinTech sector includes a nebulous array of products and services in areas such as digital banking and lending, blockchain and cryptocurrency, and mobile payments, where industry actors use the term to describe 'any emerging technology that helps consumers or financial institutions deliver financial services in newer, faster ways than was traditionally available'(Barasch, 2019). As a sector, then, FinTech claims to reimagine financial services by developing new digital products. A blog post from the FinTech company Revolut (Braileanu, 2018) argues that 'a new breed of financial institutions emerged in the wake of the 2007-08 global financial crisis, responding to the subsequent loss of public trust in traditional banks:

> *FinTechs needed to reimagine traditional financial products and offer them by means of new and disruptive technologies.*

These reimaginings of banking brings together a range of organisational actors –from established banks, Big Tech companies, and FinTech firms – into defining and negotiating the imaginative limits of how banking services are provided, who provides them, and their usage in everyday life.

Encountering FinTech Imaginaries

I encountered an emphasis on reimagining finance when attending FinTech and banking industry events during fieldwork, where panel discussions and presentations described the future of banking, drawing on technologically driven imaginaries that seem to gain influence and circulate. For the FinTech sector, this involves reimagining traditional financial services as more inclusive, democratic, frictionless, personalised, and transparent. For example, one FinTech firm studied in this thesis articulate a vision of technologically driven financial inclusion:

> *Making money entirely digital so that it can be used on open-source blockchains and protocols. This would allow anyone with a smartphone to access money without having to go through a bank or other financial institution.*

FinTech actors also imagine financial services as ‘frictionless’ and ‘personalised’, embedded in the lives of individuals. Observe the following description in a FinTech consultancy report, imagining how daily life will be reshaped by financial technologies:

> *On the way home, he stops in at the local super-market to pick up food for dinner. He fills his basket and walks out of the store. His receipt appears in his email or as a text as he exits. When he accepts an incoming reservation for a black-tie charity event, he immediately gets advice about the right amount to donate, based on his current income.* (Cognizant, 2020, p. 4).

The FinTech imaginary depicted here relies on data infrastructures allowing the building of personalised banking experiences, where banking is embedded in everyday life through data analytics and smart devices. FinTech imaginaries also focus on transparency, in which consumers are said to gain control of their finances through digital apps (Lunar, 2022), or detect hidden fees (FF News, 2019). Running through these examples is an imaginary of financial services transformed through technology, in which customers obtain greater control and active choice.

Such FinTech imaginaries are closely tied, either implicitly or explicitly, to critiques of the traditional financial sector. The established banking system is problematised as excluding parts of the global population, having clunky and inconvenient user experiences, and charging unfair, hidden fees. In this sense, the FinTech sector positions itself as an agent of change, responding to problems it identifies within the traditional financial sector through technological innovation. As the above Revolut reference to ‘disruptive technologies’ suggests, FinTech’s narrative of being a force for change is often articulated in the language of ‘disruption’.

Dominant Disruption Framings

This app is your new bank, this watch is your new payment card, this cryptocurrency your new money. The inexorable wave of disruptive technologies arrived at the doors of traditional banking announcing the digital age, as the agile, digitally native, tech entrepreneurs stood ready to transform the sector with their venture capital-backed start-ups, leaving no dinosaur incumbent standing. This is only a slightly exaggerated version of a disruption discourse that troubled banking executives at its peak in 2015-2016, animating what had relatively recently been defined as 'FinTech sector'.

Take the following vision of a transformed financial sector from technology research and consultancy firm Gartner (2018)

> *By 2030, 80 percent of heritage financial services firms will go out of business, become commoditised or exist only formally but not competing effectively, according to Gartner, Inc. These firms will struggle for relevance as global digital platforms, FinTech companies and other nontraditional players gain greater market share, using technology to change the economics and business models of the industry.*

Framings of FinTech as 'disruptive' change echoed in media publications like The Economist (2015):

> *Bright young things based in San Francisco, New York, London and Stockholm are raising billions of dollars in venture capital to "disrupt" financial services. With much brashness, these t-shirt-wearing whizz-kids are confident they will do to banks what digital photography did to Kodak and transistors to vacuum-tube makers. Will FinTech succeed in killing off today's financial services giants?*

As we see in The Economist extract, the FinTech sector – with its digital technologies and entrepreneurial actors - became synonymous with tropes of disruption. FinTech was to be the 'Kodak moment' for traditional banks, a reference to the Eastman Kodak Company's fall from dominance in analogue photography markets following the advent of digital cameras. As with analogue photography, print media, and video rental industries, bankers had been caught sleeping on the job, and digital disruption was on the horizon.

Framings of 'disruption' draw on Harvard professor Clayton Christensen's (1997) influential work 'The Innovators Dilemma', which argued that established firms fail because they continue with dominant understandings of what works in particular markets, missing the transformative possibilities experimented with by new entrants. The influence of disruption tropes is visible in scholarly discussions of FinTech. It is a topic covered primarily by business journals exploring technical and management challenges for FinTech start-ups and traditional banks (Lee and Shin, 2018) the 'impact of digital progress on the financial sector' (Gomber *et al.*, 2017), where FinTech is framed as a 'revolution' transforming different areas of financial services (Gomber, Robert J Kauffman, *et al.*, 2018). Mainstream FinTech literature tends to have a technologically determinist inclination, often displaying some of the same breathless hyperbole as The Economist extract above:

> *With the inexorable march of technological advances and digital transformation, we are now witnessing rampant disruptions in highly regulated sectors such as banking and finance, especially with the development of FinTech, a broad umbrella term that describes disruptive technologies in the financial services sector.* (Leong *et al.*, 2017).

As the above examples indicate, dominant framings of FinTech draw on a language of disruption, emphasising technologically driven change, transforming the traditional banking sector.

Nuancing Disruption Framings of FinTech

Despite the continuation of FinTech disruptive framings within industry media (Financial Times, 2022) (Accenture Strategy, 2018) (CB insights, 2020) (FinExtra, 2021), traditional banks have not been 'disrupted' out of existence by the FinTech sector, nor have banks lost their industry dominance. Instead, FinTech and traditional banking operate together, through acquisitions, strategic partnerships, developing new ways for consumers to experience financial services amidst multiple imaginaries of banking. In this sense, the FinTech sector is neither unbridled disruption nor business as usual. It sits somewhere in between the transformations associated with digitalisation and the continuities of a well-established banking sector. The following extract from a financial technology consultancy report, points to FinTech's ambiguous position between the tech sector and traditional finance:

> *Fintech is an elusive term. As its name suggests, FinTech inhabits the intersection of finance and tech, so it's natural to wonder whether it has a closer cousin in Wall Street or Silicon Valley.* (Mondato, 2019).

The notion that FinTech 'inhabits the intersection of finance and tech' is useful in moving past tropes of disruption, towards a focus on the relations between FinTech and traditional banking.

Beginning fieldwork in the Danish financial sector in the spring of 2019, the financial professionals I encountered took a nuanced view towards FinTech disruption narratives. Industry discourse was shifting from predictions of FinTechs replacing traditional banks towards scenarios of co-existence and collaboration. The head of a digital innovation unit within a large bank in Denmark described the view on FinTech disruption inside the bank:

> *I think that the existence of FinTech, and the threats from FinTech, and the talk of Big Techs entering the market, it has been going on now for 3 and 4 years, and I think there's a little bit of a feeling in top management that there's some cry wolf about it, and that the legislation is so heavy and costly for us, that they don't see how any business would be able to manage that, or even want to take on that responsibility or that cost, and they feel quite protected by that I think. So, I'm not working in an organisation where you see your Kodak moment approaching, right? Which I suppose they weren't in Kodak either.*

As the head of a strategic partnerships unit at another large retail bank in Denmark explained, industry understandings had moved from a focus on disruption to collaboration:

> *I'm not sure they will disrupt. I think FinTech has the advantage that they can move fast, and they can deliver fast and I think if you can… if you establish the capability to collaborate and take advantage of collaboration with FinTechs, it*

> *enables traditional banks to adjust our offerings fast. I think banks also have a lot of advantages with trust, customer relations, financial power, and so on. I actually feel like there is a lot of potential in the collaboration.*

These industry voices nuance framings of FinTech disruption, pointing to intersections between FinTech and the existing relations and regulatory frameworks of traditional banking.

Research in Intersections of Finance and Technology

Existing literature has approached intersections between FinTech and traditional finance by drawing out longer historical trajectories of technological innovation, emphasising the role of managers, engineers, politicians, regulators, operations, methods, and financial intermediaries in shaping technological change in the financial sector (Bátiz-Lazo, Maixé-Altés and Thomes, 2012, p. 6). Framings of FinTech as external, revolutionary disruption become difficult to square with historical accounts of the gradual introduction of computing within retail banking and electronic payment systems from the middle of the twentieth century onwards, seen as 'highly contingent on the social relations surrounding them and their historical context' (Stearns, 2012, p. 247). In a similar vein, the FinTech sector's uses of advanced data analytics, such as algorithmic decision-making, can be understood within an historical trajectory of credit assessment infrastructures from the late 19^{th} century, driven by different organisational interests and technological developments (Laurer, 2019). FinTech disruption framings distort continual developments and 'revolutions' within traditional banking. In reference to access to consumer credit, Nayak and Beckett (2008) argue that while retail banking was 'once the epitome of the staid world of large bureaucratic organizations, retail banking has been reconstructed over the past 25 years, radically altering how money is consumed' (p. 407). Others point to the development of economic models, electronic trading, and derivative instruments in the financial sector, which have been called a 'quantitative revolution' (Beunza, 2019, p. 6). From the 1990s, the 'quantitative revolution' in banking saw shifts in expertise towards 'data handling, manipulation, and analysis' enhancing a corresponding 'centrality of software' in the banking sector (Leyshon and Thrift, 1999, p. 436). An awareness of such historical trajectories blurs the lines between FinTech and traditional banking, suggesting intersections between ongoing technological developments and the organisational contexts of banking.

While FinTech remains a niche topic in social science literature (Knight and Wojcik, 2020), interdisciplinary discussions across fields including sociology, anthropology, science and technology studies (STS), cultural economy, political economy, and geography have begun to explore FinTech in ways that move beyond disruption narratives. Intersections between FinTech and traditional finance have been shown to combine sociotechnical relations with new ways of imagining banking and money (Langley and Leyshon 2021) (Caliskan, 2020). Such interventions highlight 'strategic couplings' between finance, FinTech, and the state (Hendrikse, van Meeteren and Bassens, 2020), and FinTech infrastructures extending beyond disruptive technology into legacy financial architecture (Pollio and Cirolia, 2022, p. 508-09). Emphasising intersections between FinTech and established finance, FinTech is framed as a 'liminal space between ideas and material factors (Bernards and Campbell-Verduyn, 2019, p. 775), FinTechs operating within 'intermediate' spheres (Tankha and Dalinghaus, 2020), with established banks 'sorting out the details' of FinTech dreams (Swartz, 2017, p. 101). These works draw out intersections between FinTech and traditional banking as fruitful sites of study.

Engaging explicitly with notions of intersections, scholars have highlighted overlaping trajectories between the 2008 global financial crisis and technological developments (Faria, 2019), FinTech's intermediary position between financial technology innovations and traditional socio-economic practices (Rodima-Taylor, 2022), the role of sociality within financial technology innovation (Clarke and Tooker, 2018), and how imaginaries tie together political, economic, and ecological issues (Levy and Spicer, 2013, p. 660). The above discussions highlight overlapping activities between firms, technological systems, and the daily lives of people using financial services, pointing to interesting sites in which attempts to reimagine banking intersect with the continued reproduction of traditional banking.

Honing in on the spaces in between FinTech and established banking, the anthropologist Bill Maurer notes:

> *People in the tech space often pitch their products in terms of revolutionary, wholesale disruption. However, what we are finding is that rather than*

> *entirely replacing things that came before, FinTech is creating new layers of possibilities.* (Maurer, 2018).

Maurer's extract captures two focal points of this study. On the one hand, the FinTech sector is characterised by future-oriented imaginaries of revolutionary or disruptive change, on the other hand, FinTech is closely connected to the established financial sector. The notion that FinTech creates 'new layers of possibilities' points to an intriguing puzzle, in which new possibilities associated with FinTech imaginaries are tied to 'the things that came before' in traditional banking. There is an interesting tension here, between claims of FinTech disruption partly muted by their intersections with established forms of traditional banking, yet nonetheless opening up transformative possibilities for how banking operates and financial services are used.

Studying FinTech and Banking as Intersections

How should we understand intersections between FinTech and traditional banking? The Cambridge Dictionary defines *intersections* as 'the point where two things come together and have an effect on each other'. This simple definition is useful in pointing to some ontological implications of exploring FinTech and traditional banking as intersections. Approaching FinTech and traditional banking as intersections implies that things encountered empirically are defined in relation to one another, and that relations defining entities studied are open to processual change. When approaching FinTech as an object of study, the revolving doors between FinTech companies and established banks, the mutual reliance on financial and technological infrastructures, the corporate innovation units, the FinTechs obtaining regulatory banking licenses, all make it diminishingly useful to think of FinTech and banks as separate entities. Lines between disruption discourse archetypes of 'challenger' and 'incumbent' give way to a focus on how FinTech and traditional banking intersect. The centrality of intersections in this thesis guides the study towards how financial technology innovation, imaginaries of industries and social life, and the organisational contexts of the banking sector come together through relations that modify one another.

The following vignette, based on fieldwork at a banking conference in 2019, dramatises the intersections studied in this thesis:

As daylight fades on a chilly Copenhagen evening, I enter the Radisson Blu Hotel for the Moneylive: Nordic Banking Conference, following signs to the pre-conference 'FinTech Evening' event. My brochure promises participants the chance to 'discover the next big disruptor', hear pitches from 'the region's leading start-ups', and 'find out what FinTechs are changing the game'. This industry event brings together two groups of organisational actors, traditional bankers and FinTech start-ups. Standing in line for my nametag, I survey a mix of conference participants, casually clad FinTech entrepreneurs in t-shirts and trainers, bankers in formal business suits. I wander into the main conference hall to the low hum of networking, as Oliver, the Head of Start-up Growth for a FinTech co-working space, takes the stage. Oliver stands before seated tables of banker suits in a white polo-neck jumper, narrating the growth of FinTech in Denmark, from 75 FinTech start-ups in 2016 to an ecosystem of over 240 in 2019. Oliver hands over to the FinTech firms pitching to the room of traditional bankers. An 'automated lending' start-up wants to provide funding where banks will not; another pitches about simplifying business admin with digital technology; a cryptocurrency firm offers 'brokerage as a service'; a credit scoring start-up boasts of their expansive data points. Oliver is back on stage, he tells the bankers to stand up and stretch to keep alert. Despite some audible grumbling, most of the room complies. The pitches continue as a 'personal finance management' firm talks about emotional v.s rational spending; a 'cloud-based, purely digital bank' tells us 'it's all about improving customer experience'; and an 'AI based payments solution' wants to combine different financial services within one platform. In the audience, the Chief Digital Officer of a large Danish bank raises a hand, a question for the AI based FinTech firm. After a brief question about revenues, The Chief Digital Officer adds 'it's impressive… for a start-up'. This comment seemed to offer a counterweight within the tussling relations of power in the room. As if to say, 'you can pitch us your alternative, futuristic visions of transformed banking, and you might even get us to stand up and jump for you, but we're the big players and it's us who decides what's impressive.

The combinations of FinTech imaginaries and traditional banking in the vignette demonstrate a puzzle posed by FinTech activities. On the one hand, we see technologically driven imaginaries of transformed banking services, on the other, organisational actors of traditional banking. The FinTech firms rely on alternative ways of imagining how financial services operate and how people use them. Yet, as suggested in the vignette, FinTech actors bring imaginaries into contact with organisational contexts of traditional banking.

Imaginative Intersections - Connecting FinTech Imaginaries and Traditional Banking

The puzzle of FinTech centres on how FinTech imaginaries of transformed financial services intersect with established organisational contexts of banking. FinTech imaginaries posits a world not yet in existence, yet the work of FinTech firms is tied to already existing elements in organisational contexts. On the one hand we have the supposedly ‘disruptive’ FinTech sector, where new technologies and ways of conducting business are seen to represent a radical break with established orthodoxies of traditional banking. Yet, at the same time, a defining feature of FinTech firms is mediating imagined alternatives with what already exists. Already existing FinTech activities are plentiful, including things like software applications, revenues, start-up offices, venture capital funding, business models, and strategic partnerships with traditional banks. This presents a puzzle because it makes FinTech activities simultaneously imaginary, speculative, promissory, and consisting of organisational activities that already exist. The FinTech elements that already exist are predicated on imaginaries of how financial services could be, while also connecting to the institutions, legal forms, and technical infrastructures of traditional banking. FinTech presents both a theoretical and methodological puzzle, concerning how to study intersections between the imaginary elements of FinTech and the established organisational relations of traditional banking.

Rather than a radical break with traditional banking, or disruption that radically overhauls dominant actors in the sector and transforms how that market operates, FinTech firms insert themselves into existing financial services markets. This is where we see Maurer’s ‘new layers of possibilities’, as opposed to the Schumpeterian ‘creative destruction’ (Schumpeter, 1943) underlying theories of disruption. A focus on FinTech’s intersections with traditional banking does not, however, diminish the significance of FinTech disruption imaginaries, they do not disappear. Rather than viewing FinTech imaginaries as discursive hype removed from the realities of organisational relations, I take FinTech imaginaries to be a significant aspect of FinTech and traditional banking intersections. I argue that FinTech imaginaries have performative effects in the contexts in which they circulate. While recent work has highlighted the performative effects of hype surrounding technological innovation on particular industries (Logue and Grimes, 2022), it is important to be attentive to the organisational work involved in making FinTech imaginaries performative (Hockenhull and Cohn, 2021a), rather than assuming hype or promissory futures to somehow be performative in and of themselves (Pollock and Williams, 2010). In saying that FinTech imaginaries have performative effects within intersections between FinTech and traditional banking, I do not mean to imply that they necessarily bring about the particular alternatives envisioned in these imaginaries. Instead, I suggest that FinTech imaginaries play a role within their intersections with traditional banking despite, or perhaps galvanised by, the apparent tension between FinTech imaginaries intersecting with the very contexts they seek to transform. In highlighting the organisational work involved in making FinTech imaginaries performative, the thesis focuses on the contingencies and activity required to bring elements of FinTech imaginaries into established contexts of traditional banking.

In response to the puzzle of how FinTech imaginaries are connected with established organisation of traditional banking, I introduce the concept *imaginative intersections.* I define imaginative intersections as sites in which financial professionals work with FinTech imaginaries and connect them to organisational contexts of traditional banking. I use imaginative intersections to conceptualise the sites studied in this thesis, drawing attention to the types of work involved in connecting FinTech imaginaries with established organisation in traditional banking.

In exploring the work carried out by financial professionals in imaginative intersections, I draw inspiration from conceptualisations of work that combine promissory and speculative elements, such as imagining the future, with daily tasks within organisational contexts (Pollock and Williams 2010) (Hockenhull and Cohn, 2021b). These influences inform a conceptualisation of work in the thesis combining imagination and daily tasks, centred on how imaginative activities are carried out in conduction with forms of planning and working out the details of FinTech products by financial professionals. I use this conceptualisation of work to explore activities such as financial professionals working with data; facilitating meetings about FinTech partnerships or products; researching emerging technological or regulatory developments; or producing documents, e.g. strategy documents. In this sense, the work explored within imaginative intersections combines speculative work concerning emerging financial technologies and the planning work involved in connecting ideas of FinTech products to established organisational contexts of banking.

Study Motivations and Research Questions

A focus on the work of financial professionals within imaginative intersections is motivated by a sense that this work plays a part in shaping how imagined possibilities associated with technologies are managed, delimited, and made durable in particular organisational contexts. If certain forms of work at imaginative intersections help to make the realisation of FinTech imaginaries more or less likely within organisational contexts, studying imaginative intersections has implications for the shaping of imaginative possibilities associated with technologies. This focus on imagined possibilities is influenced by anthropological, STS, and cultural economy work arguing that imagining financial technologies also involves imagining social relations and the worlds we think possible (Maurer, 2015), and that technological innovation can be understood as the processual opening of possibilities (Pink, Fors and Glöss, 2018). In this light, a focus on imaginative intersections opens up how transformative agendas interact with stabilities of established social, political, and organisational contexts, with implications for the kinds of social worlds it is possible to imagine. Studying imaginative intersections aims to elucidate the particularities of empirical sites in which FinTech and traditional banking come together, while opening the findings to how efforts to imagine the world transformed operate within established forms of organisation. Informed by these motivations, the thesis is guided by the following central research question:

How do FinTech imaginaries intersect with established organisational contexts of traditional banking?

The research question aims to draw out how financial professionals work with FinTech imaginaries, motivated by an interest in how work within imaginative intersections shapes imagined possibilities of financial technologies.

The central research question is explored through three sub-research questions across the articles of the dissertation:

1) *How are FinTech imaginaries disciplined at intersections between traditional banking and FinTech?*
2) *How are FinTech imaginaries implemented within a traditional bank?*
3) *How are existing forms of traditional banking used in pursuit of FinTech imaginaries?*

Each of the sub research questions corresponds with one of the three empirical articles of this dissertation. The sub research questions open up and guide empirical exploration into different kinds of work performed by financial professionals. The first question points towards how financial professionals use imaginaries for particular ends, shaping the scope of possibilities surrounding financial technology change. The second question points towards the work of financial professionals implementing particular imaginaries of financial technology change within established organisational contexts. In this sense, the second question opens the thesis to a focus on how financial professionals navigate and negotiate the contingencies of organisational contexts when trying to realise financial technology imaginaries through particular product developments. The third question is a kind of inversion of the first, opening the study to how existing elements of traditional banking are used in attempts to realise imagined forms of financial technology change. The relationship between the first and third sub-research questions keeps the focus of the thesis true to a study of intersections, in which the research questions guide us to look at different, but interrelated and complementary, activities within imaginative intersections.

Overview of Thesis

The sections above have introduced the focus of this thesis, outlining how I propose to study the coming together of FinTech and traditional banking as imaginative intersections. The remainder of the thesis is organised in the following sections:

Literature Review

Following the focus on imaginative intersections outlined in the introduction to this thesis, this literature review explores how existing research has touched on intersections between of imaginaries and established organisational contexts. The literature review section is organised into two main sections. The first section reviews interdisciplinary literature within anthropology, sociology, STS, and cultural economy dealing with connections between finance, technology, and imagination. The review draws out how studies link between the aforementioned themes to the shaping of imagined possibilities. This section also draws out the significance of conceptual discussions of sociotechnical assemblages and imaginaries, emphasising the importance of understanding imaginaries in relation to sociotechnical relations and contingencies of organisational work. The second section of the literature review draws together discussions within organisational research concerning imagination. This emerging research agenda is shown to highlight the importance of imagination as a significant element in understanding organisational activity. The two sections of the literature review complement each other by emphasising the sociotechnical relations involved in organisational imaginaries, while arguing for the need to highlight contingent forms of organisational work in understandings how imaginaries operate in sociotechnical relations. In this way, the literature review bridges literature on sociotechnical assemblages of finance and technology with organisational research on imagination.

Theoretical Framework

This section outlines the theoretical framework developed in this dissertation, in which intersections between imagination and organisation are viewed as sociotechnical assemblages. The two central concepts in the theoretical framework are *sociotechnical assemblages* and *imaginaries*. I outline how these two concepts serve as useful tools in the study of imaginative intersections. The sociotechnical assemblages concept facilitates a view of imaginative intersections as constituted by relations between organisational and technical elements. Sociotechnical assemblages also sensitises imaginative intersections to co-existing processes of transformation and stabilisation. The imaginaries concept is used to approach imaginative intersections as a particular kind of sociotechnical assemblage, one that connects FinTech imaginaries to established organisation of traditional banking. In this way, the combination of sociotechnical assemblages and imaginaries draws out the kinds of heterogeneous relations within imaginative intersections, limiting the focus to parts of sociotechnical assemblages in which imaginaries are actively involved. The theoretical tools outlined in this section facilitate a view of intersections in which financial technology innovation is directed towards both transformative agendas and the stabilisation of established organisational contexts.

Methodology

This chapter outlines how I propose to study imaginative intersections, through a research design collecting data from multiple sites across FinTech firms, traditional banks, and industry events. The Danish financial sector is introduced as a relevant context to study imaginative intersections, due to its high levels of digitalisation, a growing FinTech sector, and the continuing dominance of traditional banks in financial services. Two phases of data collection are outlined, starting with a wide interview study with participants in multiple financial institutions and ethnographic fieldwork at industry events. A second phase of data collection follows particular FinTech firms and traditional banks more closely. This empirical field is approached through an analytical strategy focused on the problematisations of financial professionals, honing in on planning practices as objects of analysis. The empirical materials are engaged with through techniques of open coding and memo writing inspired by constructivist grounded theory. These coding and memo techniques are combined with sketching techniques, used to generate connections within the data set and to map out the problematisations and concerns in the field studied.

The Three Papers

The three articles each explore empirical sites understood as imaginative intersections. Each of the three articles of the dissertation draw on empirical materials in which financial professionals work at intersections between FinTech imaginaries and traditional banking. In studying intersections between FinTech and traditional banking, the three articles draw out the work of financial professionals in shaping the forms of FinTech deemed possible in the financial sector.

Article 1

The first article of the thesis is based primarily on interviews conducted with financial professionals across multiple traditional banks and FinTech firms in Denmark. The interview data is supported by analysis of documents and participant observation at industry events, such as banking and FinTech conferences. This first paper focuses on financial professionals across multiple institutions who work at intersections between traditional banking and FinTech. This paper explores on how financial professionals discipline the scope of FinTech imaginaries, through controlling the boundaries of what kinds of FinTech innovation are deemed to be possible. The paper shows how financial professionals make some types of FinTech products and services more plausible and relevant than others. The financial professionals are shown to do this by drawing on an imaginary of traditional banking as a bureaucratic organisational form and through the vernacular articulations of 'strategic value' in traditional banks. The combination of a traditional banking imaginary and articulations of strategic value are shown to both discipline transformative FinTech imaginaries, yet also give durable form to transformative imaginaries within traditional banks. This article was published in the Journal of Cultural Economy in 2021.

Article 2

The second paper of the thesis focuses on fieldwork conducted with an innovation unit within a traditional bank in Denmark. The unit were in the early development stages of a new financial technology product based around increasing financial well-being of customers through building digital tools into banking experiences. As an innovation unit in a traditional bank, the unit studied operate at an intersection between established business units in the bank and the FinTech sector, with which the innovation unit is connected either through actual partnerships or through finding inspiration in FinTech imaginaries of financial services. This second paper explores the contingent work of financial professionals trying to implement FinTech imaginaries surrounding datafication in a traditional bank. The paper explores how future imaginaries of data-driven digital banking become part of reconfiguring relations between banks and customers lives. The work of implementing FinTech imaginaries within a traditional bank draws out ongoing negotiations between digital banking and face-to-face human interactions. The financial professionals studied are shown to balance competing understandings of banking relationships in designing new digital tools in the bank. In exploring the negotiation of digital banking relationships, the paper draws out the active work involved in financial professionals implementing FinTech imaginaries within established organisational contexts of banking. This article has been submitted to the journal Big Data and Society.

Article 3

The third paper of the thesis focuses on a FinTech start-up in Denmark attempting to transform the traditional financial sector, while also aiming to insert itself within this sector. The paper focuses on how the start-up uses existing forms in the traditional financial sector in service of realising imaginaries of a transformed global banking platform. In focusing on a FinTech firm working to both connect with and transform the traditional financial sector, this paper explores imaginative intersections from the vantage point of a FinTech firm. The paper surfaces ways in which FinTech imaginaries of 'decentralised finance' are connected to established formal organisation in the traditional banking sector. In doing so, the article brings the FinTech's strategy of using traditional banking formalisations towards transformative ends to bear on discussions of substantive change versus formal rationality, and understandings of stability and change within organisational research. This article is aimed at the journal Organization.

Discussion and Conclusions

Following the three empirical papers, the discussion section distills the findings of the thesis and maps out the contributions made to extant literature. The principle findings of the thesis centre on the development of a typology of the work and operations used to connect FinTech imaginaries to established organisation of traditional banking (see Figure 4, p. 134 of this thesis for overview). The three interrelated types of work are *disciplinary* work, *implementary* work, and *parasitic* work, each of which connects FinTech imaginaries and the organisation of traditional banking in different ways. Disciplinary work controls the imaginative limits of FinTech as it connects to traditional banking. Implementary work describes the negotiations and contingencies of implementing particular FinTech imaginaries within established banking contexts. Parasitic work uses established elements of traditional banking with the aim of realising FinTech imaginaries. The three operations - *problematising*, *projecting*, and *formalising* – refer to activities performed across the three types of work. Problematising involves critiquing or highlighting problems, projecting refers to the articulation of particular imaginaries, and formalising describes the work of dealing with organisational procedures or the language of technical systems.

The typology is used to draw out different ways in which the work conducted at intersections between FinTech and traditional banking delimits the imagined possibilities associated with financial technology. The thesis makes three main contributions. The first is to extend the emerging research agenda on imagination in organisation studies, where the contribution challenges the reliance on notions of the performativity of imagined futures in much of these discussions, emphasising instead the kinds of organisational work involved in making certain imaginaries performative. The second contribution is to organisational research interested in the contingencies of digitalisation, extending these discussions by drawing out the contingent work of organisational actors in ongoing processes digitalisation of an established sector. The thesis makes a third contribution to discussions of stability and change in organisation studies. Here, the thesis extends challenges to dichotomous understandings of stability and change, using the findings of the thesis to highlight how processes of stabilisation and transformation can be outcomes of the same types of organisational work and operations. In concluding remarks, I reflect on the potential of the findings for broader conversations concerning how imagined possibilities for transformation operate within established socio-political and organisational contexts.

Literature Review

Finance, Technology, and Imagination

The topic of imagination in the financial sector and broader economic life has formed the basis of fruitful discussions across sociology, anthropology, and STS, amidst calls to take imagination seriously as a central feature of social and cultural life (Sneath, Holbraad and Pedersen, 2009, p. 5) (Appadurai, 2013). In a context of financial innovations and crises, money has been explored as 'a medium of imagination', intimately tied to both reproducing existing societal relations and inscribing possibilities to imagine alternative forms of social organisation (Haiven, 2015, p. 179). Particularly in the wake of the 2007-08 global financial crisis, the uncertainty associated with financial innovation, and the futures it brings forth, sparked an increased focus on the imagination of financial futures (Tellmann, 2020, p. 345). Imaginaries of the global financial crisis have been shown to influence possibilities of critique and responses to societal consequences of financial innovation (De Cock, Vachhani and Murray, 2013), highlighting connections between financial systems and the kinds of social relations imagined within them.

A similar connection is found in discussions of technological innovation, where technology development has been shown to mobilise imagination (Faustino, 2019, p.478), as a processual opening of what it is possible to imagine (Pink, Fors and Glöss, 2018), and links between technological infrastructures and the social worlds imagined through their design and usage (Winthereik, Maguire and Watts, 2019). Engaging directly with the 'disruptors' of the FinTech sector, Maurer argues that financial technology innovations 'encode a host of alternatives for how we shall like to live' (Maurer, 2015, p. 13). Across these discussions, the role of imagination in technological innovation is implicated in shaping the kinds of social organisation it is possible to imagine in specific contexts.

Connections between imagination, financial technology, and social organisation are of central interest to this study. An interesting strand of work comes from anthropologists studying financial and monetary experiments. Take Bill Maurer's (2005) ethnographic work on Islamic banking and local currency projects in the United States, two different experiments with transforming financial and monetary systems. Influenced by the work of Julie Graham and Katherine Gibson's efforts to uncover non-capitalist relations occurring within dominant understandings of 'the economy' (Gibson-Graham, 1996), Maurer's work highlights imbrications and hybridisations between experimental alternatives and conventional financial and monetary systems (Maurer, 2005, p. 39). Other anthropological studies explore 'alternative forms of finance and economy', emphasising the institutional, organisational, legal, political, knowledge, and relational work involved in instantiating economic imaginaries within established systems (Nelms, 2016, p. 507). Lana Swartz's (2017) research on blockchain innovation, a technological infrastructure allowing financial exchange without trusted intermediaries, shows the work of pursuing transformative innovations to involve different imaginaries. Swartz contrasts the 'visions of an alternative society made possible by blockchain', with the less transformative imaginaries of traditional banks working to implement blockchain technology (Swartz, 2017, p. 88). Swartz emphasises, however, that the two modes of imagining blockchain development are not clearly separated, pointing to a continuum in which financial professionals pursuing more radical forms of innovation work together with traditional financial institutions (Swartz, 2017, p. 87). In the work of these anthropologists studying financial technology, we see intriguing complexities of how alternatives are imagined and instituted in established financial systems, highlighting the work required to maintain the co-existence of multiple financial innovation imaginaries deployed by different actors.

Scholars associated with the social studies of finance explore the role of finance in shaping possibilities inscribed in particular futures, focusing on the discourses and calculative devices of valuation that shape what is deemed possible to exist (Muniesa and Doganova, 2020, p. 3) (Muniesa, Doganova and Ortiz, 2017). The work of financial professionals has been implicated in shaping the limits of imagination and the moral frameworks surrounding financial investment practices (Ortiz, 2014). Imagined futures are connected to mundane procedures, devices, and organisational forms in the everyday work of financial institutions that determine what should be done and what should exist (Muniesa, 2017, p. 447) (Muniesa, 2020). In a similar vein, Tellman (2020) uses the concept ‘futures in the making’ to explore how certain futures are made durable in financial activity. Arguing that ‘futures are not just open and unpredictable’, Tellman points to the emergence of particular futures from organisational, material, legal, ecological and political modes of extending and binding time (p. 347). In drawing out links between imagination and mundane forms of work in finance, these discussions point to connections between imagined possibilities with established organisational and technological systems.

Sociotechnical Assemblages

In thinking through connections between the imagination of financial activity and technological development, questions arise concerning how diverse technological, organisational, and imaginative elements relate to one another. As we saw in the above studies of financial technology imaginaries, we are dealing with combinations of complex technological infrastructures and a diversity of relations within organisational contexts of traditional banking and financial technology innovation. A useful way of thinking about such heterogeneous relations is through the concept *sociotechnical assemblages.* This concept has previously been used to draw out connections between financial technology infrastructures, imaginaries of financial services, and the organisational relations of actors driving such projects (Rella, 2020)(Faustino 2019). In a study of transformations of retail banking in the 1990s, Leyshon and Thrift (1999) conceptualise reorganisations of the sector, along with an increasing centrality of software and data infrastructures as ‘assemblages’ (p. 436). In studies of FinTech, the concept has explored how emergent developments in finance and technology are tied together with existing practices and systems. These include studies of high frequency trading (MacKenzie *et al.*, 2012) (Zook and Grote, 2017), digital remittance payments from the global south (Rodima-Taylor and Grimes, 2019), combinations of traditional and FinTech financial practices (Rodima-Taylor 2020), and assemblages of complex knowledge and technologies in high finance (Sassen, 2017). Sociotechnical assemblages allow for conceptualising diverse elements like ‘local cooperative associations combined with internet and blockchain infrastructures, encryption software, and communication technologies’ (Lopes, 2022, p. 107), and how financial technology innovations are enacted in different organisational forms, and institutions, and configured in ways that order social action (Hayes, 2019, p. 52). Sociotechnical assemblages is thus a way of conceptualising the diverse relations constituting financial technology innovation.

With origins in STS, the sociotechnical assemblage concept challenges a priori separations between categories of technological and social, foregrounding diverse connections between machines and humans, artefacts, and technological systems (Latour 2005, p. 2) (Callon, Millo and Muniesa, 2007) (Beunza, Hardie and MacKenzie, 2006), encompassing ongoing interactions among humans and non-humans (Jarrahi and Sawyer, 2019). Within this STS approach, technological innovation is understood as sociotechnical, defined by ongoing practices of assembly, demonstration, and performance, which has seen a focus on how new objects are configured in and through technoscientific practices (Suchman, 2005, p. 163). A sensitivity to stable accomplishments and transformations as ongoing processes makes sociotechnical assemblages useful in thinking about the speculative quality of imagined technology projects, how they connect with existing technological systems and organisational relations. Latour's (1996) work on a failed technological innovation in the Parisian transport system brings these ideas together. Cautioning against a priori distinctions between signs and things, Latour explores future-oriented visions as a 'fiction seeking to come true', tracing how such visions either 'weigh themselves down with reality' or 'lighten its load of reality' (Latour, 1996, p.18- 24). We can think about 'weighing down with reality' as imagined elements connecting to diverse networks in sociotechnical assemblages (Jensen 2010, p. 21), useful in considering how imaginaries intersect with established organisational contexts and technological systems. Thinking with sociotechnical assemblages thus draws out the sociotechnical relations involved in making certain forms of imagined change durable in established contexts.

We have seen, then, that the role of imagination in contexts of finance and technological innovation, invites questions concerning how imagined possibilities for change are instantiated within established organisational and technological relations. Conceptualisations of sociotechnical assemblages allow us to look at how configurations of technological and organisational relations are stabilised and transformed. The theme of imagination tends to plays a background role in sociotechnical assemblages discussions, implied in the shaping of certain kinds of possibilities (e.g. political, moral, social, organisational, financial, technical) stabilised or transformed through configurations of sociotechnical assemblages. The role of imagination is, however, made explicit in related work on *sociotechnical imaginaries.*

Sociotechnical Imaginaries

Discussions of sociotechnical imaginaries introduce the role of normative visions of technologically driven societal change into understandings of sociotechnical assemblages. Defined as 'collectively held, institutionally stabilised, and publicly performed visions of desirable futures' (Jasanoff and Kim, 2015), sociotechnical imaginaries draw together visions of what is good and desirable with scientific and technological innovation. Jassanoff and Kim claim that the 'capacity to imagine futures is a crucial constitutive element in social and political life', drawing on an understanding of imagination as an 'organised field of social practices' and as a 'key ingredient in making social order' (Jasanoff and Kim, 2009, p. 122). In this sense, the sociotechnical imaginaries concept speaks to intersections between imagined possibilities associated with technological developments and social relations.

Conceptual work on *imaginaries* has different intellectual forebears. Benedict Anderson, and thereafter Charles Taylor, understand 'social imaginaries' as collective cognitive schemas (Strauss, 2006), while Cornelius Castoriadis (1987) explores the 'social imaginary' as the process by which a given society organises itself and through which new social forms emerge. While influenced by previous work on imaginaries, Jassanoff and Kim relate the concept to STS discussions, bridging work on imagination with particular assemblages of scientific and technological innovation. In particular, sociotechnical imaginaries brings together work on how imagination stabilises social orderings with techno-scientific developments (Völker, Kovacic and Strand, 2020, p. 105), making the concept useful for thinking about the interplay between visions of technological innovation and the work needed to stabilise and contest them.

Sociotechnical imaginaries have been used to explore financial technology imaginaries, such as visions of 'cashless societies', where imagined futures shape and are shaped by specific decisions and strategies in organisational contexts of traditional banking (Bátiz-Lazo, Haigh and Stearns, 2014, p. 106). In a similar vein, Mützel (2021) studies sociotechnical imaginaries in the digital payments sector, arguing for the influence of imaginaries on short term economic decisions and longer term transformations in the financial sector. Connections between emergent financial technology innovations, such as blockchain, and institutional settings of public policy development have been explored through sociotechnical imaginaries (Semenzin, Rozas and Hassan, 2022), while the 'socio-technical visions' in Wired magazine have been explored as shaping imagined futures of emerging technologies (Chan, 2021). Others have studied sociotechnical imaginaries in the Danish tech sector, with a focus on how sociotechnical imaginaries are translated into wider publics and socio-material configurations (Hockenhull and Cohn, 2021a, p. 317). Across these discussions, we see sociotechnical imaginaries of desired scientific and technological change used by professionals to inform decisions, shape public policy, and organise agendas in industry contexts. Sociotechnical imaginaries discussions are thus concerned with how particular visions of the future connect with established organisational contexts. A similar concern with how organisational actors imagine the future is found in the sociology of expectations literature.

Sociology of Expectations

At the borders of sociology and STS, scholars highlight the significance of 'imagined futures', framing capitalist competition as a 'struggle over future technology imaginaries' (Beckert, 2016, p. 169-170) (Beckert and Bronk, 2018). This agenda has been influential across social scientific studies of finance and economic life, challenging assumptions of rational expectations dominating classical economics. Beckert's work, in particular, has been useful in highlighting the significance of imagination in discussions of financial and technology innovation. Yet, the framing of imagined futures as 'fictions' runs the risk of underplaying ways in which imagined futures are tied to the realities of organisational and technical contexts.

Others have placed greater focus on connections between imagined futures and specific sociotechnical contexts. Influenced by Beckert's work on imagined futures, 'the sociology of expectations (see Borup *et al.*, 2006), shifts the analytical angle towards exploring 'how the future is mobilised in real time to marshal resources, coordinate activities and manage uncertainty (Jensen, 2010, p. 29-30). This literature emphasises the role of imagined futures in bridging 'different boundaries and otherwise distinct though overlapping dimensions and levels' (Liao and Iliadis, 2021, p. 263). Similarly, Brown and Kraft (2006) foreground the relationship between imagined futures and historical materiality, arguing for the embeddedness of imagination in networks of expertise, technique, economy and practice. These discussions support a sociotechnical assemblage perspective, where imagination can be understood as connecting to heterogeneous elements through sociotechnical assemblages.

Questions remain concerning how exactly financial technology imaginaries are tied to sociotechnical assemblages? Paving the ground to answer this question, Pollock and Williams (2010) (2016) critique tendencies in sociology of expectations work for tacitly imputing performativity to particular techno-scientific imaginaries, emphasising instead the role of 'promissory organisations' that give dimensions to an emerging future and make it more navigable. This intervention is useful in highlighting the 'forms of work in the production of expectations' (Pollock and Williams 2010, p. 531), emphasising the work involved in making imaginaries performative, rather than somehow imputing them with the capacity to shape the world in their image. This focus on the work involved in making imagined futures performative resonates with interventions in broader performativity discussions between STS and organisation studies. For example, Buenza and Ferraro (2019) propose the concept 'performative work' to draw out the 'institutional scope conditions for effective performativity' (p. 538), grounding the performativity of financial models and devices in the material and institutional associations of organisational contexts. This is an important point in relation to the sociotechnical assemblages discussion above. Shifting the emphasis onto forms of work involved in making financial technology imaginaries performative, or to put it terms used in the sections above, allowing imaginaries to 'gain reality', suggests that connecting imaginaries to established sociotechnical assemblages requires particular types of work.

Questions then follow as to what this work looks like, the sites in which it occurs, and how it shapes the futures imagined in particular organisational contexts. These are questions fleshed out throughout this dissertation, emphasising the work involved in connecting imaginaries to sociotechnical assemblages. The following section develops this emphasis on organisational contexts, focusing on how the role of imagination is dealt with in organisational research.

Imagination in Organisational Research: An Emerging Agenda

While imagination remains a marginal concern for organisation studies, an emerging research agenda affords imagination a significant role within organisational activity. We have seen calls that imagination is sorely under-theorised in organisation studies, with attempts to theorise imagination as a generative, conditioning, and enabling element of organising and organisational practice (Komporozos-Athanasiou and Fotaki, 2015). This resonates with a recent emphasis on the collective imagination of the future as a significant element of organising (Wenzel *et al.*, 2020) (Rindova and Martins, 2021). Research has drawn out intersections between imagined change and established institutions, traditions, and organisational forms (Bouilloud *et al.*, 2020) (Thompson and Byrne, 2022) (Elias, Chiles and Crawford, 2022) (Belfrage and Hauf, 2017) (Wright *et al.*, 2013). Connecting sociology of expectations literature with organisational research, Beckert (2021) argues for the general relevance of imagination for organisation studies. According to Beckert, the power of organisations stems from their 'ability to construct credible imaginaries and shape the future through them', framing imagined futures are crucial element in shaping organisational decision making, structure, competition between firms, and attempts to influence crucial stakeholders (Beckert, 2021, p. 2-3). Such interventions aim to carve a place for imagination within studies of organisational phenomena. Drawing on Beckert's 'imagined futures', and the sociology of expectations more broadly, recent work has explored the management of 'hype' in new organisational ventures (Logue and Grimes, 2022). This speaks to increasing tendencies to take seriously the more promissory or speculative elements of organisational activities, such as imagination, visions, and hype. Moreover, this work disturbs clear-cut separations between 'distant visions' and 'reality', honing in on the 'tensions that arise amid hype, and the consequences for developing durable institutions (Logue and Grimes, 2022, p. 1056). Here, imaginaries circulating around new technologies or ventures are seen to intersect with the organisational activities of new ventures.

Flyverbom and Garsten (2021) focus on how certain images of the future are 'made to stick' and thus influence decision-making, strategy, policy, and long term planning (p. 17). In doing so, Flyverbom and Garsten position imagination as a key dynamic across organisational processes and practices, in ways that 'open windows to some versions of the future, yet also put up blinders to other possibilities' (Flyverbom and Garsten, 2021, p. 20). Concerns with how organisations deal with the future build on temporality work in organisation studies, which has long insisted upon the interweaving of multiple temporalities, in which the past, present, and future are drawn into organisational practices (Helin *et al.*, 2014) (Hernes, 2014) (Kaplan and Orlikowski, 2013) (Hernes, 2022) (Hernes and Schultz, 2020). Yet, rather than theorising the temporalities of organising per se, the emerging agenda sketched in this section places greater weight on the role of collective imagination within organisational contexts. 'Imagined futures' are taken as a corner-stone of dynamics of organization (Thompson and Bryne, 2022, p. 247-248), focusing on how organisational actors engage in 'future making' practices, understood as non-rationalistic responses to increasingly uncertain futures (Whyte, Comi and Mosca, 2022, p. 3). For instance, responses to issues like digital transformation are seen to demonstrate an engagement with the future as 'problematic', spurring organisational practices that work to enact particular futures amidst a multitude of possibilities (Wenzel *et al.*, 2020, p. 1449). Similar moves have seen calls to study the 'interplay between the future and organising' (Kowalski, Danner-Schröder and Müller-Seitz, 2018, p. 232). Within discussions of organisational strategy, creative imaginative has been framed as key to understanding how certain 'possible worlds' are afforded plausibility and desirability (Rindova and Martins, 2021). Others have focused on how particular 'envisioned futures' gain stability and influence present organisational activity (Meyer, 2019). Here, particular imaginaries of the future are linked to discussions of sensemaking, in which the ability for multiple actors to interpret imaginaries differently is taken as key to their stability across industry sectors (Meyer, 2019, p. 131). In calling for greater attention to imagination in organisational research, these discussions link the imagination of the future with particular forms of work, such as planning, sense making, strategising, whereby actors connect imagined futures with specific organisational realities. These directions draw in the importance of organisational actors and contexts at intersections between current industry landscapes and imagined futures.

Scholars have argued that imaginaries play a fundamental role not only in financial projections or in organisational decisions, but also in the performing of everyday work (Adler, 2018, p. 300). Others have honed in further on types of work that involve both imaginary dimensions and practical organisational decisions concerning technical systems (Hockenhull and Cohn, 2021b, p. 264). In common with these conceptual strands is an interest in how imagination is tied together with work performed in organisational contexts, drawing out how imaginaries become part of strategic directions, raising investment, shaping beliefs, roles, and how imagined possibilities are connected with established organisational contexts. The emergent agenda on imagination in organisational research points to the role of collective imaginaries in organisational contexts, highlights particular forms of work involved in connecting imaginaries with organisational tasks and goals, and suggests that the interplay between imaginaries and organisational work shapes how particular imagined futures are deemed possible, plausible, and desirable.

Antecedents in Organisation Studies

The topic of imagination has longer roots in organisation studies. For example, Swanson and Ramiller (1997) explore 'organising visions' as key functions of organisation, or discussions of 'exploration and exploitation' (March, 1991) that focus on the balance between imagined change and existing practices. In an essay exploring 'the rigidities of imagination', March (1995) argues that 'imagination (sometimes cloaked in the drab garments of business plans) protects investors, workers, managers, customers and bankers from information that might lead them to abandon an experiment' (March, 1995, p. 437). Interestingly, the implication of this is that imagination is not only part of attempts to transform the status quo, but also used by organisations stabilise a course of action. In this sense, imagination cuts across dynamics of organisational stability and change. Themes of stability and change have, of course, been a large topic cutting across different traditions in organisational research. Advocates of 'emergent' or 'continuous' change emphasise change as the constant (Weick, 1995); (Weick and Quinn, 1999). Broadly speaking, organisational studies has tended to treat stability and change as contradictory realities (Hatch, 1997, p. 283), notwithstanding recent attempts to challenge this dualism and explore how the two intersect as a duality (Farjoun, 2010) (Pedersen, 2016). Rather than viewing either change or stability as primary in organisation activities, a focus on imagination invites us to consider ways in which imaginaries are used in established organisational contexts. Such a consideration foregrounds intersections between how imagined change is brought into and gains stability within organisational contexts.

Imagination and Established Organisational Contexts

Across the above discussions of imagination, we see concerns with imaginaries, by their nature speculative and promissory, intersecting with already existing organisational contexts, in which they are used, stabilised, and reconfigured. Recent studies have dealt with such an intersection, focusing on 'how imaginaries and practices combine in diverse ways, and how these combinations direct the social and political possibilities of alternative organization' (Roux-Rosier, Azambuja and Islam, 2018, p. 564). Organisational scholars have used the concept sociotechnical imaginaries to 'capture relations between desirable futures and contingencies in policy choices' (Völker, Kovacic and Strand, 2020, p. 105) finding EU legislation and policy to be sites in which particular imaginaries are assembled and stabilised. Imaginaries have also been used to explore 'how scientific knowledge interacts with the social imaginaries that stabilise modern societies' (Wright *et al.*, 2013, p. 648). Here, connections are drawn between the sociotechnical work of climate scientists and social imaginaries, an interaction that orders and stabilises possibilities of societal change in the face of climate change. This resonates with Levy and Spicer's (2013) claim that 'the differential fate of imaginaries reflects not only their ability to articulate an attractive vision that connects to the interests and identities of broad groups, but also to materialize these visions into viable policies and economic forms' (p. 661). The implication being that connecting visions of change to existing organisational and socio-economic forms requires active work, blurring clear-cut distinctions between the stabilities of established systems and imagined change. A similar focus on the interplay between imagined alternatives and the established organisational contexts they aim to transform is found in Hensmans (2021) study of 'fantasies' of digital transformation in an alternative bank, highlighting a tension between digitalisation imaginaries and established decentralised organisational structures in the company. Others have focusing on attempts to produce change in 'an already organised world', highlighting interrelationships between what is imagined and the nature of the world within which it is imagined (Hjorth and Reay, 2022, p. 161). These works highlight intersections between imaginaries of change and established organisational forms.

Across the studies above, we see concerns with how the intersection between imaginaries and established organisational contexts shape possibilities for change. Understanding intersections between imaginaries and established organising becomes key to how forms of change occur, while other elements of established contexts remain stable. This focus on dynamics of stability and change in intersections between imagination and established organising resonates with discussions of financial technology innovation cited above. As with the shaping of possibilities within financial technology innovation, organisational discussions of imagination highlight conditions of indeterminacy in which possibilities are plural and certain forms of imagined change are stabilised within established organisation contexts. Discussions of imagination in organisation studies bring forth a closer focus on the work conducted by organisational actors, work, for example, in which imaginaries influence planning practices, strategic decisions, or the scope of partnerships and products. The emergent research agenda on imagination invites further exploration into the kinds of work involved in connecting financial technology imaginaries with established organisational contexts, work which the empirical chapters of this thesis aim to flesh out in detail.

Distilling Literature Review

The preceding literature review engaged with discussions of how imagined possibilities for change connect organisational contexts of financial technological innovation. Discussions highlight how financial technology innovation is implicated in the shaping of imagined possibilities. Literature on sociotechnical assemblages and imaginaries opened connections between how heterogeneous relations between organisational actors, imaginaries, and technologies are continuously stabilised and transformed. The review then emphasised calls to ground the performativity of imagined futures in work performed by organisational actors. By identifying an emerging research agenda on imagination in organisation studies, the literature review drew closer to what it might mean for organisational actors to work with imaginaries. Here we saw studies highlighting the role of imaginaries in decision-making, strategy, planning, competition, and product development. A focus on the role of imagination in organisational research then emphasised the centrality of intersections between imaginaries and established organisational contexts. Here, questions remain concerning how such intersections operate and how they might vary depending on ways in which imaginaries are connected to established organisational contexts. Bridging discussions of sociotechnical assemblages with organisational discussions of imagination allows a focus on how financial professionals work with imaginaries, while maintaining a focus on how such work shapes possibilities for change within sociotechnical assemblages.

Theoretical Framework

Introducing Theory Section

The above literature review situated the thesis within discussions of intersections between imagination and organising. The following section outlines the theoretical framework of the thesis. A key component of this framework is the imaginative intersections concept, which informs how intersections between FinTech and traditional banking are conceptualised and studied. It does this by drawing out empirical activities within FinTech and traditional banking that combine collective imagination and established organising. The literature review drew out the importance of two further concepts for studying imaginative intersections between FinTech and traditional banking: sociotechnical assemblages and imaginaries (see Figure 1 for key concept definitions). The following theoretical section details how the concepts are applied in this thesis, how they serve to open up the imaginative intersections concept for study, as well as form a theoretical framework in service of the dissertation's main research question. To summarise what is elaborated below, imaginative intersections are understood as sociotechnical assemblages in which imaginaries are connected to technical and organisational elements of FinTech and Banking.

Concept	Definition
Imaginative Intersections	Sites in which financial professionals work with FinTech imaginaries and connect them to organisational contexts of traditional banking
Socio-technical Assemblage	Way of conceptualising FinTech and traditional banking intersections as constituted by heterogeneous relations, e.g. relations between technical systems, imaginaries, and forms of organising, which transcend pre-defined boundaries of organisational firms or technical infrastructures.
Imaginaries	Collectively shared ideas, images, symbols, and meanings that shape processes of both transformation and existing orderings within social formations. Imaginaries contain normative and desired possibilities and are made durable by connecting to sociotechnical assemblages that constitute particular FinTech and traditional banking intersections.

Figure 1: Key conceptual definitions used in the thesis

Imaginative Intersections as Sociotechnical Assemblages

We saw in the literature review how the sociotechnical assemblages concept has been used to study configurations of new relations and objects through techno-scientific activities (Callon, Millo and Muniesa, 2007) (MacKenzie *et al.*, 2012) (Beunza, Hardie and MacKenzie, 2006). In drawing on the sociotechnical assemblages concept, I opt for a shift in focus from stable entities that are assumed in advance, e.g. a bank, towards processes of stabilisation and ordering of heterogeneous elements. Callon (2021) describes the origins of the assemblages concept in Foucault's work on dispositifs, which has been translated variously as assemblages, apparatus, or agencements[1], in part by actor-network-theory scholars to overcome implicit binaries between humans and non-humans in Foucault's work on dispositifs (p. 358). Callon draws out some defining features of assemblages, 'heterogeneous elements, the entanglement of discourses and material entities, the possibility for each of these elements to follow its own trajectory, to enter into other assemblages' (Callon, 2021, p. 362). Through this conceptual lens, I understand both transformation and stabilisation processually, through the changing associations that occur across organisational and technical relations of FinTech and traditional banking. Given my focus on intersections between traditional banking and FinTech, the sociotechnical assemblages concept is useful in bypassing an a-priori significance of organisational boundaries or particular technologies as discrete entities in the world. Put differently, sociotechnical assemblages draw out diverse connections between organisational and technical elements in the field studied. The sociotechnical assemblage concept is useful in acknowledging relatively durable sociotechnical accomplishments, e.g. the FinTech sector in Denmark, while remaining attuned to changing configurations within assemblages of firms, financial professionals, technical infrastructures, software, devices, strategies, etc. A sensitivity to processes of stability and transformation is particularly useful in viewing the empirical field studied, in which traditional banks present themselves as stable and engage with the FinTech sector, with its claims of 'agile' flexibility. Overlapping discussions across STS and organisational research

[1] Callon prefers the term *agencement* over *assemblages* due to emphasis on agency, arguing that agencements solves the problem of human and non-human binaries in Foucault's *dispositif,* while maintaining an understanding of dispositifs as framed towards certain forms of strategic action (Callon, 2021, p.361-362).

have shaped theoretical framework of the thesis. Particularly through discussions of the processual nature of organising, the continuous, heterogeneous work involved in stabilising organisations, firms, and companies, assemblages between technical, social, and organisational elements, and the generative interplay between technology and organising (Czarniawska and Hernes, 2005) (Woolgar, Coopmans and Neyland, 2009) (Callon and Muniesa, 2005) (Jensen and Sandström, 2020) (Latour, 2013). Thinking with assemblages frames the intersections studied as cutting across organisational and technologically delineated boundaries, drawing attention to activities through which elements of FinTech and traditional banking form assemblages.

The emphasis on both stabilisation and transformation gives, I argue, the sociotechnical assemblage concept more utility in studying financial technology developments than related conceptual vocabulary such as sociomaterial entanglements. While both concepts challenge a priori dualisms between grouped pairs such as material, technical, and embodied, against social, organisational, and semiotic, I prefer to use sociotechnical assemblages in this thesis. This is due to sociotechnical assemblages making it easier to acknowledge certain durabilities within FinTech and banking, while also maintaining a sense that these intersections are processual, made up of heterogeneous elements, and subject to ongoing change. Work drawing on conceptualisations of sociomaterial entanglements tends to imply a more radical fluidity within its relational ontology, wherein boundaries between different entities are entirely eschewed in favor of 'relational entanglements' (Stengers, 2019, p. 87), and the social and technical understood as a 'ontologically inseparable', 'co-constituted reality' (Introna, 2007, p. 3). It is, of course, possible to dig into each of these 'things' and find that they dissolve into further heterogeneous socio-technical relations, but there is utility in focusing on durable accomplishments as well as the transformations, a combination well served by the sociotechnical assemblages concept. Yet, a focus on assemblages between relatively durable sociotechnical elements is not without its challenges. Callon (2021) raises some pertinent difficulties with using the concept of assemblages, arguing that:

> *By insisting too much on the constitutive complexity of assemblages, one risks abandoning too easily any hope of reaching realistic simplifications that require one to make a choice, determining the most significant variables, rather than simply celebrating the world's complexity. (p. 360).*

Callon's objection to the term assemblage*s* is certainly relevant in terms of attempts to study FinTech and banking intersections. With so many different elements – e.g. technical, organisational, discursive, legal, etc. connected to financial technology developments in traditional banking, how to avoid conceptualisations of assemblages slipping into an endless and undirected study of connections? I deal with this issue by narrowing the focus to where imaginaries connect with the sociotechnical assemblages of FinTech and traditional banking.

Imaginaries and Sociotechnical Assemblages

How should we understand imaginaries in relation to sociotechnical assemblages of FinTech and traditional banking? One way of approaching this is to emphasise that the heterogeneous elements constituting sociotechnical assemblages do not need to be in a physical form. In arguing for the use of the term 'technical' over 'material', Latour (2014) calls for an understanding of materiality that includes 'songs as well as wood, noise as well as steel, narratives as well as fences' (p. 508). The same argument can be extended to questions of imagination within contexts of financial technology innovation, where exploring such contexts through sociotechnical assemblages opens us to the connections between imaginaries of technologically transformed futures, technological infrastructures and products, and organisational contexts of financial professionals. Extending Latour's point about the materiality of ephemeral forms, we can develop an understanding of imaginaries within sociotechnical assemblages as 'cultural conceptions that have material effects (Suchman, 2007, p. 1). A focus on imaginaries within sociotechnical assemblages points to associations between imaginaries and, for example, organisational relations in the financial sector, or software and data infrastructures. By associations, I am talking about entering into relations of ongoing activity. For example, an innovation unit of a traditional bank drawing on FinTech imaginaries in developing a product. In such an instance, this traditional bank innovation unit brings a FinTech imaginary into associations with other parts of the bank, and existing IT infrastructures, which may be reconfigured by this association, or may well reconfigure the FinTech imaginary to fit existing relations. In this sense, as part of sociotechnical assemblages, imaginaries are open to change through their associations, just as they have the potential to shape the elements of sociotechnical assemblages. Thinking of imaginaries as part of sociotechnical assemblages helps to move away from a notion of imaginary versus the real world. As imaginaries form part of sociotechnical assemblages they are just as much a part of the empirical contexts studied as technical infrastructure. In studying human-machine interfaces, Suchman (2007) writes of capacities for action being ‘imaginatively and materially reconfigured’ (p. 2). Suchman’s phrase aptly captures associations between imaginaries and other material elements within sociotechnical assemblages. Through understanding imaginaries as part of the sociotechnical assemblages of FinTech and traditional banking, we are able to understand imaginative intersections as sites comprised of organisational and technical relations between FinTech and traditional banking sectors.

At this point, it is useful to specify exactly how I am using the term imaginaries within the framework of the thesis. As indicated in the literature review, I draw on discussions of sociotechnical imaginaries, a concept aiming to bridge previous work on social imaginaries with discussions surrounding sociotechnical assemblages. However, I do not deploy the sociotechnical imaginaries concept wholesale, in that I also draw on Cornelius Castoriadis’s (1987) work on the ‘social imaginary’. As I draw on different conceptualisations, I do not use the term sociotechnical imaginaries in the thesis, using simply ‘imaginaries’ instead. In so far as I wish to combine imaginaries with sociotechnical assemblages, the sociotechnical imaginaries concept is well suited. In particular, I draw on the concept’s emphasis on normative dimensions of imaginaries to develop the dissertation’s focus on the shaping of imagined possibilities associated with financial technology. It is useful to highlight the normativity of imaginaries as FinTech imaginaries often articulate desired futures, in which financial services and the lives of customers are transformed. The normativity of imaginaries resonates with STS work highlighting the inseparability of technical or organisational work from political or ethical commitments within sociotechnical assemblages (Madsen, 2006, p. 79). A focus on normativity is important, as it opens avenues for thinking about how possibilities for change are shaped by how FinTech imaginaries become associated with sociotechnical assemblages.

In addition to conceptualisations of sociotechnical imaginaries, I draw on Castoriadis’s distinction between the ‘instituting imaginary’ and the ‘instituted imaginary’, highlighting a process in which creative imagination is a generative ontological force which finds form in what already exists (Castoriadis, 1987, p. 79). This facilitates a view of imaginaries as generative and transformative, but through an intersection with what already exists.

Castoriadis explores these ideas with different examples of imaginaries that define particular societies, discussing bureaucratic organisation as one example. This example lends itself to thinking about the intersection between FinTech and traditional banking, where FinTech imaginaries posit a technological end to the bureaucracy of traditional banking, yet are only able to gain durable existence by connecting with existing elements of this sector.

What I draw from Castoriadis's understanding of imaginaries is the co-existence between the radically new and established, dominant forms. I use this notion to inform the framework for how imaginaries operate within sociotechnical assemblages of FinTech and traditional banking. A Castoriadian understanding of imaginaries suggests that radically transformative imaginaries come into existence in the world through forms that they aim to transform. In this sense, Castoriadis's work informs a conceptualisation of imaginative intersections as sites in which transformative FinTech imaginaries connect with the stability of established traditional banking organisation.

Distilling Theoretical Framework

In this thesis, I set out to study intersections between traditional banking and FinTech. In approaching FinTech and traditional banking intersections as sites of study, I develop the concept imaginative intersections, used to open sites of inquiry into how the imaginaries that seem so prominent in financial technology innovation connect with the established organisational contexts of traditional banking. Building a conceptual framework with which to explore imaginative intersections, I draw on work surrounding the concept of sociotechnical assemblages, which allows for a view of FinTech and traditional banking intersections as constituted by organisational and technical elements that cut across the two sectors. Introducing the concept of imaginaries limits the focus to sociotechnical assemblages of Fintech and banking that form associations with imaginaries. Combining normative dimensions of imaginaries with their co-existence with existing sociotechnical assemblages, draws out imaginative intersections as sites in which transformative agendas intersect with the stabilities of existing forms. Conceptualising imaginative intersections in this way paves the way for questions concerning how FinTech imaginaries intersect with established organisational contexts of traditional banking.

In building on the above overall theoretical framework, each empirical paper of the thesis employs different conceptual tools in studying imaginative intersections.

Paper 1 draws on pragmatic theories of valuation, engaging with what Muniesa (2017) calls a *semantic complex*, referring to collective understandings of value used to shape what is permissible to exist. I combine the 'semantic complex' concept with Castoriadian understandings of imaginaries, in order to draw out how the imaginative intersections studied are disciplined through financial professionals working with imaginaries and particular articulations of value.

Paper 2 draws on STS work on *attachments* (Cochoy, Deville and McFall, 2017), a concept used to explore how connections between people and things are produced across sociotechnical assemblages. Here, the attachment concept is used to explore how imaginaries of datafication in banking are brought into sociotechnical assemblages of traditional banking and FinTech.

Paper 3 draws on Michel Serres's work on the *parasite* to develop the concept *parasitic formalisation*. This concept draws out how transformative FinTech imaginaries are connected with the sociotechnical assemblages of traditional banking, in ways that utilise established formalisations towards transformative agendas.

The different concepts used across the three papers operate within the overall framework outlined in this theoretical section. The theoretical framework of the thesis has a hierarchy of concepts (see Figure 2, p. 48 of this thesis) in which imaginative intersections is highest. Imaginative intersections is the concept that opens up sites between FinTech and traditional banking for study. Below imaginative intersections, there are the concepts sociotechnical assemblages and imaginaries. As outlined above, these two concepts serve to draw out the kinds of heterogeneous relations within imaginative intersections, and focus the scope towards parts of sociotechnical assemblages in which imaginaries are actively involved. Below these two concepts, the three main conceptual tools deployed across the empirical sections of the thesis. The conceptual tools used across the three papers are all used to unfold how imaginaries become active across sociotechnical assemblages, within imaginative intersections between FinTech and traditional banking.

<table>
<tr><th colspan="6">Imaginative Intersections</th></tr>
<tr><td colspan="3">Sociotechnical Assemblages</td><td colspan="3">Imaginaries</td></tr>
<tr><td colspan="2">Paper 1</td><td colspan="2">Paper 2</td><td colspan="2">Paper 3</td></tr>
<tr><td colspan="2">Semantic Complex</td><td colspan="2">Attachments</td><td colspan="2">Parasitic Formalisation</td></tr>
</table>

Figure 2: Hierarchy of concepts within theoretical framework of the thesis

Methodology

The data collected for this doctoral research consists of interviews, observations at industry events, observations of financial professionals at work, and documents collected from financial professionals (for a full overview of the dataset produced for this study see Figure 3, p. 53 below). In line with the focus on intersections in this thesis, this data set was generated across the FinTech and traditional banking sectors. Interviews were conducted with financial professionals from established banks and FinTech firms, observations conducted within an established bank, a large technology firm with a banking license, and a FinTech start-up, and documents collected from both FinTech firms and traditional banks. In what follows, I outline the methodological approach employed in this study, detailing the research design, delimiting the construction of the empirical field, data collection methods, and analytical approach.

Delimiting and Accessing the Field

How can we study imaginative intersections empirically, and what constitutes suitable sites for data collection? The focus of this study is on sites of intersection between FinTech and traditional banking, a conceptualisation derived from empirical engagements in the Danish financial sector. My interest in connections between financial technologies and imagination is informed by an interdisciplinary position, working between STS, organisation studies, and anthropological perspectives. This interdisciplinary position steers an interest towards the technical details of FinTech innovation, maintaining a focus on organisational work, and to the meanings and practices through which social formations are constructed and maintained. Yet, before the imaginative intersections concept emerged through analytical work, the study was already interested in how FinTech and traditional banking were related, how they interacted in practice, and how we might understand the boundaries between them.

An interest in the relations between FinTech and traditional banking is influenced by work within STS, in particular, discussions centred on connections between things and what makes them stable (Czarniawska, 2017, p. 147), emphasising that ‘stability is an achievement but also an optical illusion’ (Czarniawska, 2009, p. 156). I draw on notions of stability as an ongoing process to avoid taking organisational entities, such as traditional banks or FinTech firms, for granted, remaining attentive to active efforts by a range of actors in keeping them the same and attempting to transform them. Latour's (1990) work on technological innovation in the photographic equipment industry presents a useful example. Here, Latour approaches technological innovation as networks of associations, offering ‘a means of talking about transformations and translations not captured by terms such as ‘institution’ or ‘society’, in favor of a focus on chains of associations through which innovations and ‘unified actors’ gain reality (Latour 1990, p. 108). These STS approaches to stability and transformation inform a view that organisational actors within FinTech and traditional banking mutually shape one another, amidst competing visions of the future of banking. In this way, STS influences shaped an approach to studying FinTech and traditional banking as a phenomenon not necessarily defined by particular organisational boundaries or pre-defined organisational types, e.g. a retail bank, a technology start-up. Instead, I was interested in framing an empirical field where it was possible to study the financial technology innovations of the FinTech sector and their intersections with traditional banking.

The explanatory task in this methodology section is twofold. I detail the process of initial fieldwork engagement, and then describe how analysis of empirical materials developed a framing of imaginative intersections. The research was to be conducted in Denmark, with an initial focus on FinTech in the Danish financial sector. This offered an initial construction of the field of study, i.e. FinTech and banking in the national boundaries of Denmark. However, on closer on inspection, this framing of the field lacks precision, as there are numerous areas within traditional financial services, e.g. retail banking, payments, corporate banking, investment banking. Likewise, FinTech as a sector includes a diverse range of activities, including blockchain/cryptocurrencies, lending, digital banking, corporate infrastructure, data analytics, and investment. These different areas of financial services are provided by a multitude of FinTech firms and traditional financial institutions, many of which offer services and collaborate with actors that traverse the national boundaries of Denmark. In light of this, if Denmark is the context of the study, how to delimit the field of inquiry?

One answer to this question lies in the prevalence of collaboration between FinTech firms and traditional banks in Denmark. An emphasis on collaboration between established financial institutions and Fintech firms make Denmark an appropriate context to dig into how the FinTech sector interacts with the traditional banking sector. The Danish FinTech sector has expanded in recent years, growing 144% between 2016 and 2021 (Business insights, 2021).

The recent expansion of the FinTech sector presents a context in which the Danish traditional financial sector has been figuring out how it understands and responds to FinTech, in which relations between traditional banking and FinTech are ongoing and unsettled. Such a context creates opportunities to study ongoing contestations surrounding traditional banking provoked by the FinTech sector (Copenhagen FinTech, 2020, p. 6). Denmark ranks as the most digital country in Europe by some metrics (Finans Denmark, 2021, p. 5). Yet, in spite of high levels of digitalisation and a growing FinTech sector, Denmark has preserved historical traditions of retail banking, such as numerous small savings banks (Pohl, 1994, p. 99) or the unique 'realkredit' loan system, where property mortgages are financed through investments in obligations (Finans Denmark, 2022). Denmark thus combines the persistence of longstanding traditional banking institutions and practices, with advanced digitalisation and a growing FinTech sector, making it a relevant context to explore how FinTech and traditional banking intersect.

Narrowing to Retail Banking and Payments

The focus on intersections between traditional banking and FinTech drew me towards parts of banking where established practices and institutions mix with attempts to reimagine banking. This led to a focus on retail banking and payments, which I understood as sites where industry narratives claimed to change what banking is and how it is done, prompted by financial technologies. A focus on retail banking and payments was thus a way to narrow the broader context of FinTech and banking in Denmark. Areas like investment banking seemed to have already experienced a version of this story with the shift from physical, embodied trading floors to electronic, computer-based trading, the social, technical, and organisational dynamics of which have been well documented (Zaloom, 2006) (MacKenzie and Pardo-Guerra, 2014) (Pardo-Guerra, 2019). Retail banking and payments certainly have their own historical trajectory of computerisation and digitalisation (Batiz-Lazo et al. 2012). Yet, discourses concerning FinTech apps replacing bank branches, or blockchain technology replacing banks, suggested a context of ongoing contested meanings surrounding traditional banking and emerging financial technologies. For instance, industry reports framed the intersection of technology innovation and retail banking as raising 'the fundamental question about what a financial institution is' (PWC, 2017). Through this focus on combinations of old and new, along with contestations over the meanings surrounding financial institutions, I narrowed the field of study to focus primarily on retail banking and payments in Denmark.

Retail banking and payments, the stuff of everyday transactions, credit, and savings, is understudied in comparison to the 'high' finance of investment banking and financial trading (McFall and Ossandón, 2015). While organisational contexts of investment banking have been studied through themes like identity work (Alvesson and Robertson, 2016), 'allured by the mystique of finance', organisational scholars have paid less attention to the more mundane sector of retail banking (Mygind du Plessis and Just, 2022, p. 922). Organisational research that does study retail banking tends to focus on the branch level (Davis, Dibrell and Allen, 2012) (Disanza, 1995) (Nayak and Beckett, 2008). Notable exceptions include studies of retail banking back office operations, focusing on implementation of technologically driven change (Knights and McCabe, 1998) (Madsen 2006), and alternative career paths across different parts of retail banks in Denmark (Just, 2011). Less attention has been given to innovation units, where partnerships and products between FinTech and traditional banks tend to be developed. This neglect invites further attention to how the mundane spheres of traditional banking engage with the FinTech sector. Payments is an area in which FinTech firms engage in some of the more radical experiments with new forms of money and infrastructures, such as blockchain and cryptocurrencies. The payments sector is also strongly associated with claims that financial technology innovations make banks redundant. Including payments in the research scope was thus a means to investigate how the more fringe areas of FinTech intersected with the established banking sector.

Data Type	Description
Interviews	38x semi-structured interviews: • 29x from established banks • 9x from FinTech companies
Fieldwork observations	70x hours: • 11x hours with established bank innovation unit • 22x hours with FinTech firm • 12x hours observations with newly licensed bank Participation at 5 industry events and conferences in 2019: • *Workshop on FinTechs partnering with incumbents (Copenhagen)* • *MoneyLive Nordic Bank Conference (Copenhagen)* • *FinTech Connect conference (London)* • Bird and Bird FinTech Roadshow (Copenhagen) • Copenhagen Tech Festival
Documents	• Partnership strategy document from large Danish bank • Promotional and strategy documents from FinTech firms • Internal product development report from bank innovation unit • List of desired data sources from bank innovation unit • Consultancy documents used by bank innovation units • Internal powerpoint slides from banks relating to FinTech strategy
Online platforms	• Online interactions between FinTech firm and community on Discord and Telegram (between 2018-2022)

Figure 3: Overview of data collected in the project

Empirical Site Selection and Data Collection

In seeking to narrow the field and establish an object of analysis at intersections between FinTech and traditional banking, a multi-sited approach was useful in drawing out diverse technological developments (Hine, 2007). Given that FinTech and retail banking sectors are themselves comprised of heterogeneous elements, e.g. multiple organisational actors, technological products and infrastructures, regulatory frameworks etc., I decided to study the intersection between the two sectors from multiple vantage points. A multi-sited approach is particularly relevant given that financial activity is increasingly placeless, or at least distributed across sites (Tischer, Maurer and Leaver, 2019, p. 555). FinTech and banking intersections depend on many people and technological artefacts, a research object characterised by heterogeneity and diverse activities. In the face of this heterogeneity, data collection sites were based on being within retail banking and payments in Denmark and offering potential to explore collaborations or activities connecting traditional banks and FinTech firms. This led to a focus on innovation units within established banks, which included financial professionals not directly attached to particular innovation units, but involved in developing general FinTech strategies within the banks, such as ‘c-suite’ executives like Chief Digital Officers. On the FinTech side, there are fewer ‘sites’ to choose from within what tend to be small firms, but when engaging with FinTech firms I focused on ways they engaged with traditional banks in particular, or the established banking sector in general. In this sense, decisions for particular data collection sites were shaped by ongoing engagements with the field (Jensen 2010, p. 15), in an iterative process of collecting data and refining the sites selected.

Interview Study and Ethnographic Fieldwork at Industry Events

The data collection process was divided into two phases. The first phase consisted of a broad interview study, comprised of 38 semi-structured interviews with financial professionals across established banks in Denmark and FinTech firms. The interview study was used to build an understanding of FinTech as a concern for traditional banking. The interview study provided a broad overview of how financial professionals in traditional banks work with and understand the FinTech sector. I selected participants who either worked in innovation or partnership units, had a role relating to digital strategy, or worked in a business unit engaged with an innovation or partnership unit to develop financial technology products. Further participants were selected from recommendations of previous interviewees. Building on interview participants' knowledge of the field helped to discover sites within traditional banks and across the FinTech sector relevant for my research focus. Interview questions focused on the daily work involved in partnerships between banks and FinTech firms, and on how FinTech is understood in relation to traditional banking. Questions focused on how FinTech and traditional banking interact, aiming to elicit concrete stories and reflections of everyday work (Humle and Pedersen, 2015, p. 588). By asking about the details of particular financial technology innovation projects and their interplay with daily work tasks. The interviewing process alerted me to the prevalence of innovation units in banks, as intermediary sites connecting traditional banking products with developments in the FinTech sector.

In parallel with conducting the broad interview study, I conducted ethnographic observations attending industry events. I participated in five industry events (detailed in Figure 3, p. 53 of this thesis), including a workshop at a FinTech lab, a banking conference, a FinTech conference, and a technology conference. All of these events were attended by financial professionals across both traditional banking and FinTech, with the exception of the FinTech lab workshop, which was attended by FinTech entrepreneurs discussing how to partner with traditional banks. I took inspiration from ethnographic work transcending the boundaries of single organisations, construing industry events as sites to explore how industry actors come together, define issues, and develop relations (Tammar B. Zilber, 2007) (Leivestad and Nyqvist, 2017) (Hockenhull and Cohn, 2021a). Industry events are also a way of navigating the challenges of studying relatively elite groups who may not wish to be studied (Souleles, 2018, p. 7). I used the industry events studied as sites of data collection, taking observational notes from networking rooms, talks, and panel discussions, as well as opportunities to develop new and existing contacts. For example, some of the attended industry events have a networking app, with which conference participants can arrange coffee meetings. When participating at the 'MoneyLive Nordic Banking Conference 2019', I conducted eleven 'networking' meetings via the conference app, with a combination of financial professionals from traditional banks and FinTech firms. These meetings generated reflections on the conference talks and panel discussions, and developed contacts for subsequent interviews.

Participating in industry conferences generated field notes and promotional documents handed out by financial professionals.

The combination of the interviews, field notes, and documents collected during the first phase of data collection, provided the study with a broad understanding of the activities taking place at intersections between traditional banking and FinTech in Denmark, as well as how the financial professionals involved understood these activities.

Second Phase of Data Collection: Following Particular FinTech and Banking Projects

The contacts developed during the first phase of data collection were used to identify sites for the second phase of data collection. This second phase involved observations of the work of financial professionals at intersections between traditional banking and FinTech. After a bumpy process of access negotiations, I selected two focal points for the second phase of data collection. The first, an innovation unit in a large Danish bank, developing a financial technology product. The second, a Danish FinTech firm developing a banking and payments platform, aiming to connect the FinTech sector with traditional banking. These two focal points allowed for exploration of intersections between traditional banking and FinTech from each side of the intersection. The traditional bank unit engages with FinTech firms and draws inspiration from FinTech sector imaginaries. The FinTech firm pursues imaginaries of a transformed financial sector by working to connect to traditional banking.

Fieldwork with the traditional banking unit took place online in spring 2021, due to ongoing covid-19 physical restrictions. My position in these meetings was as an observer, following online meetings and workshops in a development phase for a financial technology product. The observations were supplemented by interviews with financial professionals involved in the project and documents shared by informants. The fieldwork conducted with the FinTech firm stretched between December 2020 and May 2022. This included a combination of physical presence at the firm’s offices, industry events participated in by the firm, as well as observations of online Teams meetings.

In addition to the observations conducted with the traditional bank and the FinTech firm, I conducted 12 hours of observations with a newly licensed FinTech bank. These observations were with a team working on the technical details of backend payment systems. While the data collected here did not become the focus of any of the three papers, the experience was valuable in clarifying my focus on the active work that goes into maintaining intersections between FinTech and traditional banking.

The two main cases outlined above were selected after a longer process, in which I attempted to gain access to a traditional bank for the second phase of data collection. This proved to be a time consuming process involving access discussion meetings, drafting project proposal documents, receiving strategy documents, and communications via email and telephone. The difficulties of gaining research access to institutions of retail banking in Denmark have been highlighted elsewhere (Madsen 2006, p. 9), which is one possible explanation for the lack of focus on these sites of the financial sector, when compared to the extensive empirical literature on investment banking (Muniesa and Doganova, 2020, p. 2). Indeed, despite enthusiasm for the research project and assistance from many financial professionals in traditional banks, access to observe teams at work in the bank was repeatedly blocked by senior leaders after prolonged discussions.

The process of interacting with banks during these access negotiations proved, however, to be useful engagements with the field. The detailed notes taken from phone calls discussing project proposals and meetings at the bank provided insight into how financial professionals situate FinTech within historical narratives surrounding the digitalisation of banking. As my contacts were affiliated with innovation departments in traditional banks, I began to get a sense of how these innovation units grappled with competing concerns from other business units in the banks and senior leaders. For instance, from the vantage point of the innovation unit, FinTech represented ways to change product offerings or internal operations in other parts of the bank. While these units aimed to align FinTech innovations with existing desires and requirements within traditional banks, FinTech nonetheless suggested ways in which banks needed to change. This represented a conflict between agendas of innovation units to improve and expand FinTech capabilities within the banks and concerns of senior leaders, such as reducing operational costs.

Parallels emerged between my position as a researcher, attempting to convince decision makers in banks of the relevance of my research, and the position of innovation workers pushing their own FinTech-oriented agendas in the banks. While I sent proposals offering banks insights into their collaborations with FinTech companies, these innovation workers made the case to senior decision makers for banks to change partnership and funding processes. In both cases, it seemed concerns with FinTech competed with other concerns in the banks, where 'disruption' narratives had less purchase than they did in the start-up hubs and conferences of the FinTech sector. These fieldwork access encounters thus contributed to the research in drawing out how FinTech as a concern drew out particular organisational dynamics between different parts of financial institutions, e.g. between business and tech, innovation and core banking, c-level managers and senior leaders.

Analytical Strategy

Studying Problematisations

In generating the data set described above, I considered how to approach intersections between FinTech and traditional banking, deciding to focus on the problematisations of financial professionals. Initial engagements with the field highlighted the prominence of problematisations stemming from the FinTech sector, which claimed that traditional banking needed to change in line with different technological imaginaries of the future. Yet, as suggested in the above discussion of access negotiations, these critiques operated alongside problematisations from within the banks and shareholders about the need to reduce costs. I used a focus on problematisations to guide towards sites where intersections between FinTech and banks were active, following the problematisations of actors as an analytical strategy.

When financial professionals discussed the relationship between FinTech and banking, they often articulated a problem, with FinTech firms or traditional banks framed as the solution. This is particularly visible in the FinTech sector, as the animating narrative of FinTech is based on various critiques of traditional banking, justifying the existence of FinTech. Examples of FinTech problematisations of banking include: banks are too slow, banks are inefficient, banks do not provide good digital experiences for customers, banks increase financial exclusion, banks facilitate financial crime, technology makes banks unnecessary etc.

From traditional banks, I found some of the same problematisations of banking, such as: banks are slow, banks do not provide good experiences for customers, but also encountered problematisations of the FinTech sector, often centred on FinTech companies lacking the levels of security or capital requirements to operate in the banking sector.

Reflecting on what these problematisations were doing in the contexts studied (Ossandón and Ureta, 2019); I focused my ongoing data collection towards documenting how financial professionals used problematisations of banking and FinTech in their work. The problematisations encountered were treated as an activity used to shape understandings of FinTech and traditional banking intersections and the kinds of work conducted in connecting FinTech with established organisational contexts of banking. As with the financial professionals studied, I sought to critically rethink assumptions and claims I encountered in the field. In this sense, I was situated on the same ground as the actors studied, embroiled in similar practices of problematisation (Maurer 2005, p. xv). A focus on problematisation activities facilitated a shift from the contested claims concerning FinTech disruption and the future of traditional banking, towards attentiveness to what these problematisations are doing. The point is not to say who is correct, in terms of whether FinTech disruption will happen, but rather to explore what is actually taking place, at the intersection of organisational processes and technologies, across diverse activities that constitute intersections between FinTech and traditional banking.

Studying Planning Practices

An additional consideration in studying FinTech and banking intersections, relates to the future oriented temporality characterising FinTech activities. As described in earlier sections of this dissertation, studying FinTech presents a puzzle in terms of how activities concerned with reimagining the future of banking connect with organisational contexts of traditional banking. Methodologically, this raised questions concerning the object of analysis in the thesis. In exploring the intersection between FinTech imaginaries and established organisational contexts of banking, what exactly is it I study?

One answer to this question is that I was studying financial professionals concerned with the future. This meant that the empirical materials collected focused on financial professionals planning, strategising, and imagining the future. The activities studied are conducted within workshops and meetings, working out details of financial technology products, shaping bank and FinTech partnerships, or discussing the future of banking at industry events. I approached such activities as ‘planning practices’ (Wenzel et al. 2020, p. 1449), through which financial professionals engage in the work of coordinating, negotiating, and assembling people and resources towards developing a FinTech product or strategy. Approaching the work of the financial professionals in this way views imagination as a process that can be studied empirically as a process and ‘need not be posited in metaphysical terms as a source of ‘meaning’’ (Sneath, Holbraad and Pedersen, 2009, p. 9). For instance, scholars have argued that ‘imagined futures’ can be explored through common organisational instruments such as strategic planning tools (Beckert, 2021, p. 5). In this sense, I study financial professionals imagining ongoing financial technology developments and connecting them to the organisational realities they navigate.

Coding, Memos, and Sketches

The overall analytical approach of the thesis took inspiration from elements of grounded theory. For example, I employed an open coding technique with interview and document data, producing codes that stay close to the utterances of interview participants or document authors (Strauss and Corbin, 1998). This approach assumes that research participants are ‘knowledgeable agents’ about the field studied, and adds a degree of systematic rigor to working inductively with data (Gioia, Corley and Hamilton, 2013, p. 17). Such an approach allowed me to draw out the various problematisations deployed by different actors in the field. First order codes derived from open coding were then grouped codes into thematic categories, where connections between the categories were explored. As this last point implies, the systematic techniques of grounded theory were not adhered to beyond initial coding techniques, as I preferred instead to use aspects of grounded theory techniques strategically, aiming to open data sets to particular patterns and themes. In this sense, the analytical approach drew inspiration from Charmaz’s (2006) ‘constructing grounded theory’, which adopts a pragmatic emphasis on language, meaning, and action, and counters the mechanical application of grounded theory techniques found elsewhere (Järvinen and Mik-Meyer, 2020, p. 199). After producing categories of grouped 'first order codes', I drew out connections between themes and conceptual directions that resonated with ethnographic fieldwork encounters, documented in the form of field notes. This indicates a shift from the more systematic coding techniques associated with grounded theory, towards a more general thematic analysis, understood as a 'form of pattern recognition within data, with themes identified becoming categories of analysis' (Bowen, 2009, p. 33). This process was conducted alongside ongoing data collection, where emergent themes and conceptual directions came into contact with, and were subsequently shaped, by new forms of data.

In developing connections between themes generated, I drew inspiration from Charmaz's emphasis on memo writing, a technique used to develop ongoing analytical insights and patterns in the data (Charmaz, 2006, p. 72). Memos produced would often be based on a group of codes, or an emergent theme, and would draw out potential ideas relating to different empirical materials (for examples of memos written during the research process, see Appendix Item 1). I combined memo writing with sketching techniques inspired by Fortun (2017) (see Appendix: Item 2 and Item 3 for examples). 'Sketches' are different techniques used to draw out analytical connections and patterns across scales, within diverse elements of a phenomenon. I employed sketching techniques to map out different problematisations among actors in the field (Fortun 2017). For instance, the 'Mapping Subject Positions' sketch (Appendix: Item 3) was a useful means of connecting statements within the interviews and documents to the wider context studied. This sketching exercise involved articulating what elements of the context studied facilitate or hinder particular statements. Similar to memo writing, sketching techniques served as a useful analytical tool to draw out thematic connections and conceptual directions from my data set. In this way, I combined the aforementioned coding techniques with memo writing and sketching methods within a thematic analysis approach. Doing so, allowed a systematic engagement with the entire data set, without an overly mechanical approach, preserving space for thematic connections that emerge through 'looser' techniques like memo writing and sketching.

Section Two

Article One

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The significance of boring FinTech: technology imaginaries and value vernaculars in established banks

Jack Kværnø-Jones

Department of Organization, Copenhagen Business School, Copenhagen, Denmark

ABSTRACT
How do financial professionals work with technological visions of the future of banking? Such visions are prompted by the technology sub-sector known as FinTech, a broad phenomenon of start-ups and technological innovations aimed at financial services markets, characterised by claims that banking could be radically different. Drawing on pragmatic studies of finance and Cornelius Castoriadis's theory of creative imagination, this paper explores the imaginative limits of technology innovation in established banks. Through analysis of semi-structured interviews with banking and FinTech professionals, observations at industry events, and analysis of documents obtained from banks, the findings highlight an interplay between dominant vernaculars of 'strategic value' and organisational imaginaries of traditional banking. This interplay delimits the boundaries of technological imagination through reshaping the moral and temporal claims of FinTech disruption discourse. This entails a move from the moral modality of what should be, found in FinTech disruption narratives, to a modality of what can be; a shift from the dramatic narratives of changing powerful structures, drawing on the discursive repertoires of social movements and religious myths, to the non-heroic, pragmatic expectations of the art of the possible.

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Introduction

A dry-ice mist hangs in the air as the CEO of FinTech company Snowdrop Solutions takes the stage at London's FinTech Connect 2019 conference. 'The future is already here, it's just not evenly distributed,' he tells the audience of financial industry workers and technology specialists, quoting science fiction author William Gibson. This kind of evocation of the future, as inevitable to the point of somehow already part of the present, is typical of how evangelisers of the Silicon Valley-influenced FinTech sector represent the impact of their work. Like many FinTech companies, Snowdrop Solutions rely on infrastructure from 'Big Tech' firms, in this case, Google's Maps platform, as well as partnering with financial institutions, blending financial and location data to produce new mobile-banking products. Snowdrop Solutions claim to reimagine value in financial services, in this case, 'locating value from Maps and data in FinTech' (Snowdrop Solutions 2021), a theme common to the sector more broadly.

A portmanteau of 'financial' and 'technology,' the term FinTech describes the niche tech sector leveraging digital technologies in financial services markets, often accompanied by Silicon Valley tropes of 'disruption,' emphasising the technological transformation of banking (Langley and Leyshon 2020, p. 1). We see this in discussions in the financial press of FinTech disrupting, threatening,

CONTACT Jack Kværnø-Jones jjo.ioa@cbs.dk Department of Organization, Copenhagen Business School, Solbjerg Plads 3, Frederiksberg, Frederiksberg, Fr, Frederiksberg, Copenhagen 2000, Denmark

or otherwise transforming banks (Wolf 2016, Summers 2017, Marous 2019) and in academic-practitioner literature emphasising FinTech disruption or revolution (Gomber *et al.* 2018, Kazan *et al.* 2018, Leong *et al.* 2016, Gozman *et al.* 2018). A tendency proliferated through consultancy reports on the urgency of digital innovation in banking (e.g. Accenture 2015, KPMG 2020), and the future visions echoing through industry conferences, such as Copenhagen's 'FinTech Disruption Summit.' These accounts imagine a future where technology-driven change radically transforms banking, whether at the hands of FinTech, or increasingly pervasive digital infrastructures. Despite the continuation of disruption discourse (e.g. PWC 2020), a consensus has emerged among traditional banks in recent years advocating collaboration with FinTechs over outright competition (Deloitte 2017, p. 1), leaving questions concerning how this potential disruption is understood within banks.

Despite the prevalence of disruption discourse across media, academic, and industry contexts, critical investigation into the 'disruption' of global finance is lacking (Bernards and Campbell-Verduyn 2019). Geiger (2020) explores the 'end game' narratives of Silicon Valley disruption as 'political technologies' foreclosing particular innovation trajectories and potentially shaping markets, while others point to social imaginaries animating the FinTech sector (Nelms *et al.* 2018). We have seen that FinTech actors and their platforms dynamically entangle novel ways of imagining and organising value with a continual reliance on the institutional and infrastructural imaginaries of established banking and monetary systems (Caliskan 2020a, 2020b). Yet, questions remain about the operations of imaginaries and technological visions in established banks cast as victims in disruption narratives. Faria (2019) explores the application of FinTech to current banking systems, highlighting the conceptual work involved in aligning technological visions to dominant philosophies of value and the 'pain points' of established financial institutions. Swartz (2017) highlights the 'alternative to the futurism of Silicon Valley and the radical blockchain' offered by 'incorporative blockchain' projects funded or housed within established banks (p. 98). These 'incorporative' FinTech projects have not received the same attention as more radical experiments with techno-social forms of money (e.g. Rella 2020, Faustino 2020). Perhaps owing to a sense that FinTech in traditional banks is 'boring,' seeking to remedy existing 'pain points' in the current banking landscape rather than remake society (Swartz 2017, p. 96). Yet, a focus on FinTech projects in established banks might reveal how certain innovations come to seem inevitable, while others unimaginable. How do incumbent banks imagine financial technology change and what discursive resources do they draw on to do so? In light of FinTech claims to reimagine banking, how should we understand the work of traditional banking imaginaries in their engagement with the technological futures provoked by the FinTech Sector?

This paper explores these questions through an empirical study of how banking professionals in Denmark understand and articulate their collaborations with FinTech companies. Drawing on interviews, document analysis, and participant-observation at industry events, the analysis engages pragmatic approaches to financial value with Cornelius Castoriadis's philosophy of creative imagination. The findings suggest a vernacular of 'strategic value,' relying on an organisational imaginary of traditional banks, partially shapes and delimit possibilities of technological change, while simultaneously giving form to imagined transformative alternatives associated with FinTech. The paper contributes to discussions of the operation of theories of value and their devices, emphasising their entanglements with the imaginaries of organisational contexts. The next section situates the paper in discussions surrounding the future in financial and technology contexts; expanding these discussions through Castoriadis's theory of creative imagination and pragmatic approaches to finance. A brief historical context of FinTech and banking in Denmark follows, leading to an account of the research methodology and data collection. The fourth section communicates the paper's findings through an engagement with empirical materials, followed by a concluding discussion.

Imagination and value

In empirical contexts of technology and financial innovation, the future tends to be operationalised in ways both conspicuous and intriguing. Beckert characterises capitalist competition as 'a struggle over imaginaries of future technologies' (Beckert 2016, pp. 169–170), where fundamental uncertainty requires imaginative capacities, or 'fictional expectations.' A growing literature has fruitfully made research objects out of this role of the future in science and technology contexts (see Borup *et al.* 2006). These include expectations concerning financial technologies (Meyers and Van Howeghen 2018); discursive and material technological futures (Selin 2008); technological hype and disappointment (Brown 2003, Dedehayir and Steinert 2016); and imaginaries of speedy data analytics (Beer 2017). These works generally focus on the promissory or hyperbolic side of the future visions at play, where questions remain concerning the interaction between imaginaries of radical technological change and existing imaginaries in established institutions. Similarly, work employing the 'socio-technical imaginaries' concept highlights entanglements of collective visions and technical innovations in imagined future social orders (Jassanoff and Kim 2015, Bátiz-Lazo *et al.* 2013). This concept lends itself to FinTech visions of transformed futures, yet leaves something of a blind spot in understanding technological visions that seem to constrain the change deemed possible.

Despite challenging the dominance of rational expectations in orthodox economic theory, Beckert and Bronk (2018) understand the constraining of such visions as a desirable governing of imaginaries by calculative reason (p. 4). An alternative understanding of the imaginary and the rational is found in Cornelius Castoriadis's philosophy of creative imagination. For Castoriadis, creative imagination is a fundamental, generative force in society, and rationality its products (Castoriadis 1987, p. 3), making the social capacity for imagination a crucial aspect in understanding both radical transformation and relative stability in social formations. Crucial to this theory of imagination is the notion of an organising social imaginary and its continual institution by a society or group.[1] Creative imagination amounts to a radical critique of determinist ontologies that take the 'new' as determined by what already exists (Klooger 2009, pp. 4–5). Indeterminacy becomes a key aspect of social reality, since the organising principle of social forms is 'the imaginary,' understood as undetermined by what already exists and thus capable of creating genuinely new forms. However, while undetermined by what already exists, the imaginary can only emerge through a process in which what already exists gives form to the imaginary.[2] These ideas insist upon the possibility of radical transformation, even in the 'most unsuspected nooks and crannies' of society (Castoriadis 1987, p. 373). Yet this potential for radical transformation is entangled with the 'grooves, lines of force, veins, which mark out the possible, the feasible, indicate the probable and permit action to find points of anchorage in the given' (Castoriadis 1987, p. 79). Castoriadis guides attention towards the activity required to continually institute dominant imaginaries of traditional banks, and the entanglement of transformative possibilities for change within the significations of traditional banking imaginaries.

In an effort to shed light on the entanglement of creative potential for new forms of banking and the discursive work of maintaining established banking imaginaries, I bring Castoriadis's ideas into dialogue with pragmatic approaches to finance. This literature focuses on a 'peculiar form of valuation' intervening in a variety of settings beyond financial markets (Muniesa and Doganova 2020, p. 3) (Muniesa *et al.* 2017). A common move within this literature is making analytical objects out of the categories employed by economists and financial professionals, such as 'uncertainty' or 'value creation' (Doganova 2018, p. 3). Ortiz's (2013, 2014) work with French asset managers takes moral cosmologies underlying financial theories of value to shape the limits of financial imagination. Muniesa explores vernaculars of value creation as a 'semantic complex,' viewed as a 'political technology' used to inform, justify, and defend what should be done and what should exist (Muniesa 2017, p. 447). Bringing these literature together facilitates an analytical framework incorporating the role of generative imaginaries and vernacular representations of FinTech value among banking professionals. While Castoriadis privileges imagination in generating rationalities, both literatures take representations as ontologically entangled with the real, in contrast to the 'fictive' or 'rational' images *of* reality underlying Beckert's work. The performativity assumptions of these pragmatist approaches, concerning types of realities brought about or modified through instituting capacities of scientific and technical knowledge (Muniesa 2014, p. 10), speak to the instituting of imaginaries through social imaginary significations central to Castoriadis's work. Castoriadis offers a lens to rethink the role of imaginaries in these performative value vernaculars, where organisational imaginaries of traditional banks become more significant and generative in articulations of FinTech value and the worlds they perform. Placing these works in dialogue opens thinking about the interplay between imaginaries and valuation in the empirical contexts studied, expanding enquiry into the governance and limits of technological imagination in banking.

FinTech disruption discourse

Contested visions of the future have long since framed relations between Silicon Valley and the financial sector. Bill Gates's 1994 proclamation that 'banking will be necessary, but banks will not' (Ghandi 2016) became a rallying cry for FinTech companies in the early twenty-first century, finding expression in J.P Morgan Chase CEO Jamie Dimon's (2014) warning to shareholders that 'Silicon Valley is coming.' These disruption narratives owe a debt to Schumpeter's (1943) 'gale of creative destruction,' often via Harvard Business School scholar Clay Christensen's influential claim that failure to adjust to 'deadly technologies' lead otherwise successful and well-managed firms to fail (Christensen 1997, pp. ix–xii). FinTech disruption narratives combine these antecedents with the cultural frame epitomised by the 'regenerative mythologies' Silicon Valley provides Western capitalist imaginaries (Morozov 2019, p. 33). In the wake of the 2008 global financial crisis, the FinTech sector emerges with an origin myth centred on collapsing trust in established banks, the transformative power of innovations like Apple's iphone, and a moral critique of 'the wrong kind of financial innovation' (11FS 2020). At times they were drawing explicitly on mythological archetypes of 'Digital Davids' against the 'Financial Goliaths' of traditional banks (The Banking Circle 2020), or notions of a 'digital mindset' in which a compelling story about purpose and values is lauded over making a profit (Copenhagen FinTech 2020).

The Danish context is no stranger to disruption discourse. Between 2017 and 2019, the Danish government established a 'Disruption Council' tasked to anticipate challenges and exploit 'the opportunities that robots, artificial intelligence and new business models provide' (The Danish Government 2019, p. 4). Professor Jan Damsgaard (2017), a member of the now-disbanded Disruption Council, commended the Danish Financial Services Union's engagement with the FinTech sector and acknowledgement of the disruptive threat of Big Tech. Despite the number of banks in Denmark falling from 210 to 63 between 1991 and 2019 (Finans Danmark 2021), and pressures on annual profits, the Danish banking sector is not understood to have experienced systemic disruption (Nielsen 2020). Instead, actors within the Danish financial sector emphasise advanced digital infrastructures, bank openness to collaborate with FinTechs, and the ability for FinTech disruption to embrace the industry (Jensen 2020). The Danish financial sector, in which visions of transformative disruption operate alongside a growing consensus that established banks will remain dominant, is an interesting context to explore the shaping of financial technology imagination.

Data collection and analysis

This paper is based on twenty-six semi-structured interviews with banking professionals across four financial institutions in Denmark. Conducted between July 2019 and October 2020, interviews focused on participants' everyday working collaborations with FinTech companies and their understandings of technological change. The analysis also drew on internal documents from bank and FinTech partnership activities, as well as participant-observations at five industry events: a banking conference; a FinTech conference; a technology festival with FinTech panels; a workshop at a FinTech hub; and an AI networking session for financial professionals. Twenty-one of the interview participants were selected from four financial institutions, two large international banks operating in Denmark, one mortgage credit institution, and one investment bank. The remaining six interviews were conducted with participants from FinTech Start-ups, co-working hubs, bank IT vendors, and so-called neo-banks. Initial participants were selected based on terms associated with FinTech in their LinkedIn Bios, such as 'AI,' 'Machine Learning,' and 'digital transformation.' These preliminary interviews snowballed into further interviews, where participants advised on relevance and assisted with contact. Later participants were selected due to direct work or managerial oversight on digital innovation projects. These roles tended to mediate FinTech companies and business units, presenting opportune sites to explore the discursive work involved in FinTech and established bank collaborations.

The interview participants reflect on and analyse developments in FinTech and banking in their daily work, making the interview encounters a form of 'studying sideways,' defined by the 'co-construction of common discursive horizons' (Plesner 2011, p. 473). Participants would sometimes assume I held views about the superiority of FinTech companies over banks and gesture towards building some common discursive foundations during interviews. This precipitated a strategy of challenging what I learnt were commonly held assumptions about banks and FinTechs among industry actors, contributing to the development of an analytical focus on the struggles over meanings surrounding banking.

All interviews were recorded, transcribed, and analysed with qualitative data analysis software. First-order codes stayed close to participants' own terminology, which were then grouped into second-order themes, aiming to strike a balance between the participants' articulation of experience and the researcher's identification of patterns in the data (Gioia *et al.* 2013, p. 17). To protect the anonymity of participants, the names of people and companies are altered in this paper.

Findings

Incumbent reality

FinTech is understood in diverse ways within the banks studied. A rhetorical device promoting organisational agendas; a means to increase the speed of innovation; a remedy for 'pain points'; a potential threat to revenue in specific areas; a new mindset and culture; the current iteration of historical trajectories of banking technology innovation. Uniting this definitional ambiguity of FinTech is its association with transformation and change. The following sections explore how the scope of this technological transformation is imagined and delimited in established banks.

Blockchain projects in established banks are useful sites to explore the interaction of multiple imaginaries concerning the future of financial technologies. Originating as the infrastructure behind the cryptocurrency Bitcoin, a blockchain is a distributed ledger or database, where records of transactions cannot be altered without network consensus, allowing transaction verification without a trusted intermediary, such as a bank. Blockchain emerges out of complex relations and intersecting political imaginaries (Dodd 2018), but a central motivation for its design was to disintermediate money from banks. Blockchain is thus an aspect of the FinTech sector in which contestations over the nature of banks and banking are highly visible.

Disputes over the relevance of blockchain for established banks played out during a Copenhagen banking conference in 2020. One Danish banking professional used a panel discussion to denigrate blockchain as 'great solutions to problems we don't have.' Another panelist challenged the suitability of blockchain's distributed ledgers to banking, arguing that 'money is about centralised ledgers.' As these statements suggest, FinTech innovations prompt contestations over what money and its infrastructures are 'about.' These contestations extend to questions of how banks operate as organisations. At the same conference, for instance, an Executive Vice President at a large bank in Denmark (henceforth Bank A) proclaimed that 'a good bank is agile' and that banks need to radically innovate to compete with Big Tech. Banking professionals point to 'organisational agility' as a key difference between established banks and FinTechs, more so than technological capabilities, where images of slow, cumbersome entities are central to organisational imaginaries of traditional banks. These conference discussions reflect contestations over what banks are, provoked by technology company interventions in banking. The closing of these semantic openings points to the active discursive work involved in maintaining dominant assumptions about money and banking.

To illustrate this, we turn to a particular blockchain project involving Bank A. Victor is a blockchain specialist within the bank; he defines his role in terms of general governance, research, and stakeholder management to all things involving blockchain technology. Victor spent the last year on an inter-organisational project between multiple banks, aiming to incorporate the entire mortgage process within a blockchain platform. An example of 'enterprise blockchain,' where, unlike the original Bitcoin blockchain, participation is limited to selected actors, the platform was developed by a FinTech company and a consortium of financial services institutions. Victor reflects on understandings of blockchain technology inside the bank:

> We kind of quickly realised, after our first few years involvement, that public blockchains, such as, you know, from Bitcoin, or Ethereum, or whatever, didn't really suit our needs. That's because we, as a financial institution, simply have a different problem that we want to solve than, you know, something like Bitcoin wants to solve, right? Bitcoin, essentially, is trying to create a censorship resistance peer-to-peer network, where any party can transact without any official authority doing anything about it, right? That's not really … you know, when you look at that … a use case, or a problem, that they're trying to solve … as a bank, you're like this doesn't really … it's not really what we want to do is it, right?

Victor highlights a transformative potential within blockchain of circumventing the authoritative position of banks as trusted financial intermediaries, pointing to the mild absurdity of banks working with a technology built specifically to circumvent them. This framing paints blockchain as unaligned with what constitutes a relevant problem and solution within the bank, pointing to a collective imaginary of the bank and its problems. Victor views the value of blockchain solutions as negligible due to privileging the hyped communication of possibilities at the expense of connecting blockchain to banking 'reality':

> It's probably that they were a lot focused on the technology and doing something cool with it, rather than the actual reality of working within the financial services environment and dealing with actual, you know, daily reality that we have to deal with, such as regulation, and so on.

How should we understand the notion of the 'daily reality' of banking and its relationship to the limits of financial technology imagination? It suggests a framework of shared meaning tied to the everyday work of banking, through which the value of FinTech technologies are evaluated and justified, which are closely tied to an imaginary of what traditional banks are, how they work, and the practical realities of deploying technologies within them.

Carl, Chief Digital Officer at another large bank in Denmark (henceforth Bank B), saw his role as 'educating' and 'evangelising' about FinTech within the bank. Carl also emphasises a shared imaginary of how things work, justified with quarterly profit metrics:

> This is how it works, right? And that is written. And by the way, that's how it worked last quarter, a quarter before, this quarter coming. Anything you care to mention, you are wrong unless you are specifying this method, or this is how it's done. It's real. And to be clear, that's how Mette and I are paid, right? The incumbent reality.

As someone whose role involved attempting to change certain things in the bank, such as processes for partnering with FinTech companies, Carl's response demonstrates the kind of resistance, he experiences when pushing these agendas through the bank. His theatrical rebukes of 'you are wrong' and 'it's real' suggest shared understandings of how the bank works and how his digital innovation activities are evaluated. Interestingly, despite Carl's role advocating transformative innovations difficult to measure in short-term profits, he does not suggest his colleagues are incorrect. Rather, he insists on the 'realness' of this 'incumbent reality,' it exists and does things, like pay Carl and his assistant Mette's salaries, as well as provide ground from which to legitimate claims and stifle disagreement. Yet, this 'reality' concerning what banks are and how they work is not static. While Victor's Bank A project involves shaping blockchain technology to established mortgage products, it also requires novel collaborations with competitors and a sensitivity to platform logics, such as network effects. This points to openings for new meanings concerning how banking is done, emerging within projects seemingly closing down transformative potential and maintaining established meanings surrounding traditional banking.

In this sense, the significations of traditional banking are active and indeterminate, containing the constant possibility of slippage and change, rather than a static resistance to meanings and definitions of banking.

The emergence of FinTech companies reimagining specific aspects of financial services prompts contestations over what is 'core' for banks, illustrated in the following from William, the head of a FinTech partnerships unit in Bank B:

> We are still banks, we are not really IT developers in that sense. So that is also where we saw the struggle, and there is … this could actually be the answer, right? If you can actually define what is core and what's not core, you know where you want to engage, where you want to actually do partnership and then you actually create yourself being adaptable to actually do that.

William refers to his unit's vision for an expanded and flexible use of FinTech partnerships. The perceived danger of FinTech superior IT capacities prompt considerations over which activities are fundamental to the bank. Senior leaders did not approve William's plan, preferring an approach that justifies FinTech funding in terms of the value produced by traditional business units. The contested meanings surrounding FinTech rely on a collective imaginary of the bank within the organisation, which along with certain conceptualisations of value, delimit the contours of technological possibilities. The following section explores this relationship in more detail, focusing on the role of a particular vernacular of 'strategic value' concerned with shaping FinTech to solve specific problems within the banks.

Start-up working at the speed of an elephant

During a 2019 workshop at a FinTech hub, the co-founder of a sustainable pensions company gave a presentation around a small table of Danish entrepreneurs, focused on experiences and tactics for FinTech companies partnering with established financial institutions. One participant compared the relationship to 'a start-up working at the speed of an elephant.' This encapsulates dominant understandings across the Danish financial sector that FinTech must adjust to the temporalities and different ways of working within established banks. How should we understand these narratives of adjustment? Perhaps, the following section proposes, through an attentiveness to the vernaculars of 'strategic value' and its reliance on imaginaries of banks as large and slow organisations.

While blockchain remains at the periphery of 'core' banking, other FinTech projects find themselves closer to the concerns of key business areas. The common approach in the banks studied emphasises tailoring partnerships to specific problems in business units. FinTech strategy documents from Bank B chart an initial 'discovery' phase, connecting business needs with potential partners, where ongoing interactions between a centralised partnership unit and particular business areas, e.g. Personal Banking, identify problems that a FinTech company could solve. Oscar heads a similar partnerships unit in Bank A, tasked with shaping external FinTech activities to fit different parts of the bank:

> We have, for example, a case in Mobile Bank, where we have a company called Subscription FinTech, which is owned by the FinTech Interaction team. But, it's a requirement from the Mobile Banking teams, saying 'we want to make it easy for our users to cancel subscription, manage subscription and get better deals throughout the mobile bank'. Then, we handle everything and make sure that, when you come in for the workshop, you need to prepare this, this, and this. And, you need to … and we make sure that the stakeholders from Mobile Bank and from Risk and Legal and Compliance are in place, and so on. So, we … actually … we just hold hands with the FinTechs and, like, show them the path. Because, I think … What I also experienced, working

> from the other side, is that when you talk to Bank X, you need to talk to that department, you know … that department and this department, and maybe this … and those people should also be involved in some of the processes, and so on. And you have no clue about how they are actually working inside the walls. So, we are actually just the ones that have the keys to the different rooms.

Oscar describes how the selection of FinTechs is based on the perception they can solve a particular problem of the mobile-banking business unit, in this case, the mobile-banking team wish to improve their subscription management products. Oscar then describes his role as facilitating the collaborative encounters between this unit and the FinTech company. The metaphorical leading of FinTechs along a particular path illustrates the emphasis on moulding to fit particular ways of working and organisational relations in the bank. Oscar's emphasis on the careful navigation of different internal stakeholders and bureaucratic processes illustrates the entanglement between understandings of the 'value added' of FinTech actors and a collective imaginary of the bank as a particular kind of organisational formation.

Rather than discourses of 'disruptive' change, one finds cautious tinkering in which past technical achievements dominate present decisions and future planning. This is further illustrated in an interview with Magnus, a manager working with digital investment products in Bank B:

> Two years ago we were doing accelerators as well, had them very close in-house, trying to build and breed this kind of start-up, already from the idea stage. Some of those have moved on and grown a bit, but never … we never kept them close in the house, because it was just too much work. It's like raising kids, they require a ton of work and we're not set up like a partnership VC structure to do that. That hasn't been our interest to approach them as a financial investment. So I think we realised early on that we wanted strategic value, which meant we wanted to fix holes in our proposition, or fix holes in our tech stack, or fix whatever we needed in our value chain.

The term 'strategic value' encapsulates understandings of value created through shaping technological innovations to solve existing problems in the bank, relying on an imaginary of banks as large, cumbersome organisations with holes that can be fixed. Early stage FinTechs require too much work, likened to the relational work of parenting, where potential is nurtured and given space to flourish. Instead, Magus advocates selecting and shaping companies to 'fix holes,' a language of repair over transformation. However, the institution of traditional bank imaginaries through 'strategic value' vernaculars does not preclude contestations over how banks should work, seen in the following from Oscar:

> In a project where we are making a lot of money on the specific area, but where we … in the FinTech teams have a bigger potential of earning money, but also need to cannibalise the business on an 18-month basis. But, the business case is better when we go out on the other side. So, where we are not aligned on … Because, that also needs … there, you have some senior vice presidents, and so on, that have owned that area, and where they feel that we are challenging them a bit too much, and where they feel that they … I think it's very cultural, because, if you have been in the bank for 20 years, you feel like the bank is you and you are the bank, right? And that kind of ownership is important if you want to have people that also challenge status-quo, but, sometimes, also makes your mindset a bit protective about your areas. And, I think, that is where they see it as a very narrow scope, but we see it as Bank B. Because, it wouldn't benefit their specific areas that much, but the bank as a whole is a much better business case.

Oscar's team are using FinTech to improve an existing business case, which requires a radical rethinking of what a specific part of the bank does. The reference to both an idea of the bank as a whole, along with the need to navigate the competing agendas of senior vice presidents, demonstrates the reliance of this vernacular of 'strategic value' on an imaginary of the organisational form of traditional banks. While the contestations of meaning surrounding how certain areas of the bank operate, points to the indeterminacy and active work involved in banking professionals continuously performing these significations through 'strategic value' vernaculars.

In these vernaculars of 'strategic value,' rather than value creation as a valorised component of societal progress (Muniesa 2017, p. 447), FinTech value is articulated through situated concerns of improvement and 'fixing' existing technical and organisational elements in banks. The language of 'strategy' within this value vernacular is key to understanding the relationship between established banking imaginaries and performative articulations of value. 'Strategy' bridges the disciplinary shaping of possibilities by value vernaculars with its reliance on the collective imaginary of traditional banks. In this sense, we can see the traditional banking imaginary, and its institution through the vernacular of strategic value, operating across several levels of analysis. On the one hand, it utilises the broad concept and discourse of value creation, and with it the capacity of a political technology to make claims onto what can and should exist, while tailoring this articulation of value in the organisational and technical specificities of everyday contexts of work in established banks.

Henrik, a senior vice president at Bank A, whose role included responsibility for Oscar's Strategic Partnership unit, explicates these vernacular understandings of FinTech value:

> So I think if we had used, you know, DCF models, or whatever, when we went into investments in FinTechs we would never have done it. And I think that is also probably a learning from some of the other venture capital units in the bank and also outside the bank, that you also need to learn how to invest and collaborate with FinTechs, especially some of the early stage companies. So it's much more … in terms of if you want to invest in those companies, at the same time when you're partnering up, you also need to recognise that this is relatively high risk, both in terms of your investment, but also in terms of the collaboration because I think what you often underestimate is … again the whole, you know, compliance part of it, so the kind of the whole due diligence or the tech due diligence, and the integration of that specific solution into your own interface or your own solution.

Henrik draws on an imaginary of banks as large, bureaucratic organisations, where imperatives of 'partnering' and 'integration' demand an understanding of value attuned to navigating organisational processes and compliance requirements, rather than valuation devices like Discounted Cash Flow (DCF) formulas. Henrik highlights how the banking vernacular of 'strategic value' differs from an 'investor's gaze' that anchors value in the future (Doganova 2018, p. 3). The vernacular of strategic value orients itself to the past through an understanding of value tied to a collective imaginary of banks as cumbersome, bureaucratic organisational relations and the insistent presence of existing technical infrastructures.

It's the elephant in the room

Where the previous two sections outline strategic value vernaculars within the banks studied, this section demonstrates ways in which this 'political technology' operates in governing the limits of financial technology imagination. These operations, as illustrated below, involve both temporal and moral manoeuvres.

Images of seismic technological-driven change in banking animate narratives in which the FinTech sector draws on a privileged relationship to transformative futures. 'Strategic value' vernaculars displace this future-oriented temporality through an emphasis on adding value to what came before. A common articulation of this is through a temporal shift from future transformations to a concern with speed. Magnus, the Bank B manager, quoted above, illustrates this concern with speed:

> My initial definition of FinTech is they're just doing the basic things large corporates should've been doing 10 years ago, 20 years ago, given where technology has been. But the backlog is just too big, so many big banks just don't reach those simple improvements fast enough before neo-banks or others come out and do it.

Magnus frames FinTech as a tool to allow banks to move faster, towards where they were ultimately already heading. The idea that FinTechs move faster than banks is an industry trope, also heard from the FinTech side. The founder of the sustainable pensions company described earlier elaborated on their approach of moving fast:

> It's not us copying that stupid Facebook slogan at all, ideally we would love to have money and only do slow thinking, like a different approach. But in the beginning we would have runways of like 2 months where if we didn't raise money we would go bankrupt, Michael and I both went for half a year without pay, and there are

> tons of different things that stress you. So the money … you start seeing the future, getting closer and closer to launching the partnership, you really have to be very solution oriented to make sure it gets off the ground, because the partners will keep delaying it.

This couches the disruptive power of the path-breaking innovator in an understanding of unequal access to capital and the power to dictate time schedules. In order to combat draining coffers, the start-up founder articulates a need to adapt to the slowness of the established financial institution. In discussion with another banking professional, who ran a unit responsible for Bank B's investments in FinTech, this asymmetry of access to capital was referred to as 'the elephant in the room,' a situation in which banks could simply buy FinTechs if they wanted to. In this understanding of bank and FinTech relations, the combination of unequal access to capital and the partner's organisational slowness means the start-up must work at the speed of the elephant in the room. Lana Swartz identifies the slowed temporality of incumbent bank blockchain projects with what she terms a 'fiduciary ethic' (Swartz 2017), and this risk-averse temporality is certainly framed as necessary for banks to meet their responsibilities to customers and society. Yet, the temporal parameters of 'strategic value' vernaculars also derive meaning from the need to navigate the slow, bureaucratic organisational forms of traditional bank imaginaries, justifying and legitimating what can exist and the forms of change deemed possible.

The temporal shift from future-oriented transformation to speed also has a moral component, steering visions of how things should be, towards a limited framework of what is possible. Moving from the moralising discourse of FinTech disruption towards a pragmatic art of the possible. Carl, the Chief Digital Officer, cited above, describes this understanding of FinTech innovation in terms of aligning change with what came before:

> That's why you'll often see a system that oh my God is amazing, this is a bank doing this, this is amazing. And everything works apart from there's no approve button, right? And that's because you need to do it, or you've got to phone us, or that it's because there's only five, we can only give you five, and you want the sixth function, and that doesn't exist. That is often where you will see really beautiful systems developed. And it does everything but that one thing you actually expected it to do. And that's because, you know, it's going to take us 32 million Euro, and six months of engineering to do that one change. So we're not doing that.

Here, the vernacular of 'strategic value' relies upon aspects of a traditional bank imaginary emphasising slowness and resistant infrastructures. This serves to limit technological imagination, exemplified by Carl's negation of the 'sixth function,' countering techno-social visions of how banking should be by shaping the boundaries of possibility. Magnus further elaborates this limiting of technological imagination to paths of least resistance:

> I was hanging out with my friend yesterday from Bank A and he's like 'I just finished our 2022 strategy', and I was like 'great, 0% of it will happen, but it's, you know, probably a really nice looking slide deck'. And, I think, incumbents, regardless of division, operate like that, and that includes IT spend and IT planning. So, because of that, that locks the machinery for anyone to come into play. So that means usually it becomes really opportunistic when you try to work with FinTechs and find the least pain, the least integration needed, the least change needed, so you by definition are almost looking for low hanging fruits.

The 'low hanging fruits' of strategic value vernaculars delimit visions of how things should be in the future, relying on an imaginary of the bank as a large, slow organisation in which change and integration are painful. Whether in relation to internal strategy documents or purveyors of FinTech disruption discourse, these operations govern the imagination of financial technology change, delimiting moral claims of how banking should be by establishing the parameters of the possible. We can view 'strategic value' as a rationality, shaping possibilities associated with FinTech to functional requirements of technical and organisational systems of incumbent banks. However, drawing on Castoriadis, 'strategic value' is not only a rationality, as a political technology, it also relies on symbolic elements defining the 'incumbent reality' and the imaginary of traditional banks, neither of which can be reduced to or entirely contained by these rational forms. While 'strategic value' may preclude the '6th function,' or attempt to 'lock the machinery' towards 'low hanging fruit,' the fact remains that encounters with FinTechs still lead to new products, interfaces, ways of using data, and partnership strategies. Aspects of the radically new find form in even the most 'boring' FinTech.

Discussion

In the banking professionals facing claims of 'disruption,' we have seen a tendency that limits technological visions of change and shapes what is legitimate to imagine. Interestingly, despite divergent understandings of the role of technology as an agent of change, the imaginaries of both Silicon Valley disruption and incumbent bank innovation lead to forms of inevitability. While Silicon Valley disruption positions itself within an inexorable trajectory towards imagined technological futures, 'strategic value' vernaculars in bank FinTech projects position an organisational imaginary of traditional banks as an unavoidable means of enacting FinTech innovation. The instituting of this imaginary through 'strategic value' vernaculars weds developments in digital technologies to what came before, suggesting a significance of the past in financial imagination, often underplayed in a sociology of finance focused on the relationship between the future and the present.

To the extent that 'strategic value' is used to evaluate and justify which FinTech innovations are invested in, partnered with, or acquired, we may be tempted to view FinTech activity as creative imagination governed or schooled by the calculative reason of banking professionals. However, a Castoriadian view of imagination shifts this relationship, as the calculative reason found in the 'strategic value' vernacular is both generated by and makes the traditional bank imaginary a conceivable framework through which to shape technological development. FinTech's provocations over what it means to be a bank require continual contestation from banks, making even the discursive institution of the traditional banking imaginary a productive activity rather than a passive containment. It takes indeterminate creative imagination to keep FinTech boring in banks, always in danger of generating different meanings and rationalities than those typically associated with traditional banking. Combining pragmatist approaches to financial value with Castoriadis's work highlights one way in which banking imaginaries generate the vernacular understandings of value used to delimit, albeit temporarily, the parameters for imaginable technological change. The same rationalities that seem to close down and discipline technological imagination are thus inextricably tied to and give form to elements of potential transformation stemming from the creative imaginary. In conversation with pragmatic approaches, this framework emphasises the role of particular organisational contexts and the imaginaries that support their dominant value vernaculars. This invites greater attention to the particular organisational contexts through which value vernaculars emerge, while highlighting the indeterminacy of both these political technologies and the limits of financial imagination. Further research might explore what happens to finance's 'peculiar form of valuation' as it becomes embroiled with the performative instituting of different imaginaries. In this case, the entanglement of strategy and value creation delimit the contours of legitimate technological change in relation to an imaginary of traditional banking.

Conclusion

This paper has highlighted the relevance of exploring imaginaries of technological change beyond the alluring drama of Silicon Valley-inflected hype. Drawing on interviews, documents, and observations at financial industry events, the paper has shown that in working with new financial technologies, actors in established banking contexts continually reinforce an imaginary of what banks are and how they work amidst the semantic contestations opened by the FinTech sector. In doing so, they deploy vernacular discursive frameworks concerning FinTech's value within the bank. The tools provided by Castoriadis's theory allow for a view of this activity as more dynamic than it first appears, in contrast to the inevitability characterising accounts of technological change, both within established banks and Silicon Valley. Understandings of imagination governed and disciplined by reason, such as in Beckert's work, afford discursive frameworks and rationalities, like the value vernaculars explored above, a privileged capacity to determine what exists. In contrast, the Castoriadian concepts used in this paper facilitate a view of these value vernaculars as generated by and reliant on the traditional banking imaginary, which is undetermined and therefore open to generating meanings expanding beyond dominant understandings of banks. These findings and analysis, the paper argues, suggest an underexplored role played by imaginaries in particular organisational contexts in understanding valuation practices and the worlds they perform. The paper's limitations in engaging directly with the materialities of FinTech and banking contexts point to further research avenues investigating the performativity of technology imaginaries and value vernaculars in shaping the materialities of innovation in established banks.

In a context in which the Covid-19 pandemic seems to have accelerated digitalisation processes across societies (Nielsen 2020), there is a pressing need to understand the mechanisms delimiting what societies view as possible in digital technology transformations. The Covid-19 crisis has many dimensions in need of critical scholarship (Hardin 2021), one of which may involve struggles over collective imaginaries of technological change and a critical reimagining of disruption. Critical accounts of Silicon Valley disruption visions are an important part of this discursive arena. Yet, we would be remiss to ignore the quiet shaping of imaginative possibilities within the powerful institutions responding to their ostensible disruption. As contestations over the meanings of banks, money, and value proliferate contemporary digital finance and capitalism, an attunement to vernaculars of value, and the imaginaries of banking they articulate, offers a route into understanding how visions of transformation are delimited and how they might be expanded.

Notes

1. Castoriadis explores this notion with diverse examples including early Christian imaginaries of God and the institution of Abrahamic laws, as well as examining imaginaries tied to modern bureaucratic institutions.
2. Castoriadis conceptualises this through the notion of 'social imaginary significations,' a process through which the already 'instituted' forms existing in a society are in a dynamic relation with new 'instituting' forms, they are inextricably entwined and it is only through established forms that the radically transformative potential of creative imagination exist and 'gains flesh' (Castoriadis 1987, p. 163).

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Notes on contributor

Jack Kværnø-Jones is a PhD Fellow at Copenhagen Business School. His research explores the imaginaries, discourses, and material infrastructures constituting the FinTech sector in Denmark, opening the concept of disruption to the complexities of these empirical contexts. Jack's research lies at the intersection of science and technology studies, organisation studies, and anthropology.

ORCID

Jack Kværnø-Jones http://orcid.org/ 0000-0002-8941-9988

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Article Two

"How is Your Financial Well-Being, Give Me a Number?" Datafied Financial Attachments and Emotional Banking

Abstract

This article explores how financial professionals in a large Danish bank work with FinTech visions surrounding datafication of financial services and everyday life, within an established organisational context. The paper is based on a combination of observations, interviews, and documents from fieldwork with an innovation unit in the bank. The unit studied are developing a product aimed at increasing the 'financial well-being' of bank customers, by offering different ways of viewing their financial lives and connecting banking services to emotions, significant life events, and dreams. Drawing on conceptual work within science and technology studies on 'attachments', the analysis draws out the work involved in, and relationships configured through, a particular modality of datafication. The concept 'datafied financialisation' is suggested to capture visions of datafication centred on the financialisation of greater aspects of customer lives. Pursuing visions of datafied financialisation in a traditional bank is shown to involve work of negotiating meanings surrounding bank and customer relationships, provoked by digital banking. Financial professionals work out ways to reconcile traditional understandings of banking relationships within the development of financial technology products, while aligning new possibilities stemming from data analytics with established banking practices and rationalities. The article concludes by suggesting that drawing out the work of pursuing FinTech visions presents a challenge to smooth accounts of datafication, grounding discussions of surveillance in the contingencies of organisational work.

Introduction

Imagine your online banking system notices a 20% rise in your monthly utilities bill and arranges an insulation or plumbing checkup for your house, or the coffee shop you walk past tries to lure you in through targeted advertisements on your phone. These are some scenarios discussed during a MoneyLive webinar (2020) focusing on ‘capitalising on the potential of data analytics in debit payments’. A panel from both traditional banks and the technology sector known as FinTech discuss the changing relationship between banks and their customers. ‘I feel like payments are moving from being transactional to being relational’ muses Ann Carøe Hald, Bank Development Manager at Danish ‘neo-bank’ Lunar. Customers want financial institutions to ‘show me that you know me’, agrees Rene, a Senior Vice President at a global FinTech company. Concerns with new kinds of banking relationships proliferate industry discourses, such as notions of ‘emotional banking’, a method allowing banks to ‘use FinTech and build real brands, thus winning at the relationship game’ (Blomstrom, 2018, p. 71). At the same time, our emotional relationship to finances is problematised through industry concerns with ‘financial well-being’ (Deloitte, 2021) (Ernst and Young, 2020), amidst claims that ‘people’s relationship with their money is broken’ (Red Associates, 2017, p. 4). These discussions speak to a broader sense percolating the banking industry that FinTech, with its visions of datafied finances, open bank-customer relationships to new meanings and configurations.

Datafication and Financialisation

While building relationships with customers has always been part of retail banking, mythological beliefs attributing Big Data with power to produce previously impossible insights (Boyd and Crawford, 2012), draw different ways of imagining banking into the work of financial professionals. Associated with the transformation of Big Data into operational insights, datafication is broadly understood to reshape the relationship between knowledge, action, and new forms of value (Mayer-Schönberger and Cukier, 2013), associated with attempts to 'guide our attention and convince us in subtle ways' (Flyverbom and Murray, 2018, p. 6). Emphasising particular capacities to 'search, aggregate, and cross reference' (Boyd and Crawford, 2012, p. 663) and a ubiquity of reach into daily lives (Ball and Webster, 2020, p. 3), Big Data is framed as a new era of 'surveillance capitalism' making 'experience available to datafication' (Zuboff, 2019, p. 234), or 'dataveillance' (Esposti, 2014). This expansion of datafication has been shown to encompass increasingly intimate spheres of life, involving attempts to connect data analytics with our emotional experiences (McStay, 2020, p. 2) (Davies, 2017) (Steeves, 2020). These datafication discussions highlight a sense that everyday lives and emotional spheres become a resource for actionable knowledge used in the design and monetisation of digital products.

The focus on increasing reach into everyday life in datafication discussions finds parallels in work on financialisation, in which the penetration of financial logics into fields of everyday life is seen to transform these spheres into a resource for financial practices (Pellandini-Simányi, 2021, p. 279-280) (Aalbers, 2008). As with everyday lives becoming a resource for datafication agendas, domestic finances become a concern to be acted upon by financial institutions (Ossandón *et al.*, 2022, p. 4) where financial technologies and products 'strategically attach' to the rhythms of domestic life (Husz, 2021, p. 141). These parallel discussions raise questions concerning the work involved in turning everyday life into a resource for datafication or financialisation agendas, along with how these agendas operate together in particular organisational contexts.

Challenging Smooth Accounts of Datafication and Financialisation

Critics within both discussions have challenged overly smooth accounts of datafication and financialisation. Claims surrounding datafication are nuanced as neither 'a clean revolutionary break with past forms of knowledge production nor a balloon of pure hype' (Thylstrup, Flyverbom and Helles, 2019, p. 2). Others have situated datafication agendas in particularities of established industry practices and organisational practices (Jeanningros and McFall, 2020) (Plesner and Justesen, 2022), highlighting power relations and political dynamics shaping implementation of datafication agendas in established contexts (Ball and Webster, 2020, p. 2). Notions of new paradigms of surveillance are challenged by longer historical trajectories of surveillance and financial infrastructures (Laurer, 2020, 2)[2]. Acknowledging historical trajectories of surveillance and data infrastructures provides a useful remedy to the novelty often associated with digital technologies, inviting an attentiveness to assemblages between novel elements of data technologies and existing forms of organising. In a similar vein, recent interventions nuance the transformation of everyday life by financial logics, highlighting contradictory work in processes of domestication, appropriation, and reinterpretation (Pellandini-Simányi, 2021, p. 288). Others have drawn attention to operations involved in making domestic finances an object of governance, such as how 'attaching consumers to financial products requires work not only on the production of more attractive products, but also on the actual ties that make consumers attached to these products (Ossandón *et al.*, 2022, p. 12). These interventions challenge smooth accounts of both datafication and financialisation, inviting attentiveness to the work undertaken by actors in specific organisational contexts.

Attachments

Exploring combinations of datafication and financialisation in retail banking, this paper draws on discussions of 'attachments' in science and technology studies (STS), which focus on the mutually constitutive relationships formed between people and things (Cochoy, Deville and McFall, 2017) (McFall, 2019) (Hennion, 2017). Attachments capture the 'orchestration of sentiments' through digital assemblages (Ossandón, 2015) (McFall, 2015), through activities like the digital experiments set to work on configuring relationships between financial institutions, credit products, and customers (McFall and Deville, 2017, p. 122). Conceptualising attachments draws out how the increasingly emotional registers of digital markets connect with what came before, where the 'centers of big data' are tied into traditional selling techniques connecting people and goods (Callon, 2021, p. 29). By pointing to the work of configuring attachments across assemblages of people, companies, and

[2] For an extensive exploration of this history see (Laurer, 2019)

products, conceptual work on attachments is useful in opening connections between the work of professionals pursuing imaginaries of data analytics and products aimed at attaching to the everyday lives of consumers.

Drawing on fieldwork conducted with an innovation unit within a traditional Danish bank, this paper explores how this unit attempt to develop a product aiming to increase the 'finansiel tryghed' [3] (financial well-being) of their customers. Strategies concerned with increasing customer 'tryghed' is a trend across the Danish banking sector, where concerns with how customers feel about their finances are pursued as part of business product development. The paper explores this empirical context by asking how digital relationships are reconfigured in pursuit of datafication and financialisation agendas in established organisational contexts. The following section describes the methodological design and analytical approach taken, followed by a communication of findings through engagement with empirical materials, and a concluding discussion.

Methods

This paper is based on data collected with a large bank in Denmark (henceforth Bank X) between the period August 2019 to December 2021, consisting of 9 interviews; 11 hours of observations of online workshops and Teams meetings; and documents collected during fieldwork with the bank. This data is part of a broader data set, conducted across nine financial institutions and FinTech firms operating within the Danish retail banking sector, with particular focus on its points of connection and collaboration with the FinTech sector, a broad term generally used for technology companies developing financial services products. This broader data set is comprised of 70 hours of observations with traditional banks and FinTech firms, conducted in working contexts and at industry events; along with 38 semi-

[3] The Danish phrase 'finansiel tryghed' translates most literally as 'financial security', but informants also described it as encompassing 'financial health' and 'financial well-being'. 'Security' in this sense refers to the emotional state of being secure and at ease with one's finances. I find these meanings are best captured in the English language through the term 'financial well-being'. The latter is used throughout the paper for the sake of consistency.

structured interviews; and documents acquired from both traditional banks and FinTech firms. Within Bank X, data collection focused on an innovation unit within the bank, which worked with imaginaries of future-oriented technology trends. The innovation unit mediated FinTech imaginaries with the capabilities of currently existing FinTech companies, the demands of core business units, and senior leader strategies. Innovation units in retail banking represent underexplored sites, in which concerns with digital customer relations are articulated in relation to the strategies and concrete operations of business units and traditional banking. The innovation unit included bank employees with technology and design competencies who collaborate with colleagues from business units and financial advisors on early stage financial technology innovation projects.

Inspired by methodologies developed at Google, the unit studied developed a three-phase process, first delineating a problem, then developing and testing a concept, and finally building a rudimentary form of solution, described as a 'minimum viable product' (MVP). I focused primarily on an early-stage digital innovation project with the stated goal of increasing financial well-being of bank customers. Other observations centred on innovation workshops run by members of the unit studied, exploring themes like the future of work within banking. The financial well-being project was centred around developing a co-operative digital tool for bank advisors and customers, imagined as containing various features, including tools to get a holistic overview of finances; to calculate future financial scenarios; and calculate how certain 'dream' purchases can be achieved through the setting of financial goals.

I observed meetings and workshops between March and April 2021. The primary activities observed involved testing the 'financial well-being' concept through different group exercises, within 'design challenge' workshops; meetings with, and evaluations of, potential FinTech partners; mapping of technical possibilities and business rationales; and qualitative research with bank customers conducted by the innovation unit. Observations were analysed along with interviews with those participating in the project, as well as documents produced by the team and visual materials produced during the workshops. The materials were coded with a thematic analysis approach, establishing themes pertinent to the research question that become categories of analysis (Bowen, 2009, p. 33). The data collected were coded in a way that remained close to what was said or written, and these codes were placed into second order codes. The relationships between second order codes were then explored thematically, by returning to the material and seeing how the emergent thematic analysis resonated with the data. When themes were refined and a sense of preliminary themes established, memos were written and iteratively brought into contact with the literature, which shaped the analytical story presented in this paper (Charmaz, 2006). Further data was collected to follow up on themes emerging from the analytical process. For instance, the emerging theme of 'emotional banking' prompted follow up discussions with informants in the innovation unit to explore this theme further, while the growing focus on datafication prompted an additional interview with a data specialist in the unit, to deepen understandings of how data is structured within the bank.

In exploring the work of banking practitioners delineating problems like 'financial well-being' and trying to develop solutions, the analysis focused on the problematisations of those studied. This strategy is influenced by approaches that make the problematisations of actors studied, understood as practical, uncertain, and productive situations, into an 'object of inquiry' (Ossandón and Ureta, 2019, p. 176). This approach directed the analysis towards ways in which the bank innovation unit problematise customer domestic finances, along with ways of working and technical infrastructures in traditional banking. The financial professionals studied are concerned with delineating problems within the specific context of product development, within which the products developed are framed as solutions to these problems. Informants drew on the language of 'wicked problems', resonating with technocratic approaches to problems which, despite being understood as complex and lacking definable contours, manage to be delimited as 'shadows of their proposed solutions' (Savransky, 2020, p. 6). Studying the innovation unit through their problematisation activities opens up ways in which semiotic and material forms of banking are reconfigured, making innovation units useful sites for exploring the work involved in reconfiguring banking relationships.

Analysis

Problematising Digital Banking

Amidst digitalisation in banking, recent years have seen financial professionals problematising the relationship between banks and customers. This is exemplified in the following interview extract with a Chief Data Officer of a Scandinavian bank, who describes his message to a Private Banking unit during a discussion concerning 'emotional connections and relationships with their customers':

> *Okay, you've done a great job at going digital, but that's not good enough now. So you used to meet your customers face-to-face and ask questions, and you kind of listened to what their responses were, but today you've gone digital and you're not listening. They're transacting with you every single second of the day and you're not listening.*

The thrust of this discourse is that the digitalisation of banking moved a great deal of bank-customer interactions from face-to-face to digital platforms, and that relationships articulated through existing banking platforms lack emotional depth and connection. This discourse challenges grand narratives of digitalisation as continuous improvement, problematising their effects on the relationships underpinning banking.

During an interview with Magnus, working within a Private Banking unit at Bank X, he insisted upon the importance of human interaction for his work, placing this in opposition to digital interactions:

> *Everybody's very excited and there's always some frontrunners starting to build a robot advisor or something and they go to the market and a lot of it hasn't… in my opinion… it's kind of old-fashioned, almost boring, but it's a people business. It's about talking and understanding each other.*

Magnus holds up similar relational capacities of 'talking and understanding' as essential to banking relationships, problematising the capacity of digital advisors for 'talking and understanding'. This frames 'going digital' as lacking relational connection, articulated in terms of conversational interactions, pointing to dilemmas provoked by digital banking.

When following the financial well-being project at Bank X, I observed a workshop run by the innovation unit studied, in which the digitalisation of bank and customer relations became a subject of discussion. One commentator from the tech team honed in on a story told by a customer involving a loan rejection via the bank's digital app. The customer recounted a situation in which, after a divorce, they sought two forms of credit financing, one of which was rejected. A discussion ensued between the tech team and business unit over why the customer had not followed the digital rejection in the app with some human interaction, to see what other options were available. The business unit participant interpreted this as demonstrating that bank customers have a fundamental anxiety around being rejected, a fear of being 'found not good enough on paper' which 'runs deep', and that mishandling this will surely lead to customers going elsewhere. These discussions articulate the bank-customer relation in quasi-moral terms, where the customers' worth, their sense of being 'good enough', is complicated by an imbalance in the human-digital divide. The participant from the business unit stresses the significance of understanding and managing the complexities of human relationships. In this sense, digital banking is problematised as failing to treat the bank-customer relationship with sufficient care.

Mette, head of the innovation unit studied when interviewed in 2019, draws out how the care involved in maintaining customer relationships is understood in terms of attentiveness to particular details of daily life.

> *It's very obvious that there's an incredible discrepancy between what customers experience in other parts of their lives, and what they experience in finance. But also quite an interesting forgiveness. So we talk to a lot of customers, who say 'well, it's true I'd be able to do more self-service if I was with Bank Y, but I was with Bank Y for 20 years, and then I had a meeting with Bente in Glostrup, and she looked at my stuff, and all my papers I brought, and she said well if we change your mortgage a little bit you can pay a lower interest a month and you'll get the 100,000 for a new kitchen, how about that? So people are quite forgiving, because I think we spend… we're not as digital as the others, but we have a very dedicated team of advisors.*

This extract upholds the same dichotomy between digital experience and human-based interactions, this time in highlighting the positive implications for the bank-customer relation of being 'not as digital as the others'. The 'Bente in Glostrup' anecdote frames a relationship in which the bank knows enough about a customer's life, in this case dreams of 'a new kitchen', in order to make personalised interventions. The lauded relational qualities of 'forgiveness' and 'dedication' associated with human forms of banking are maintained by bank advisors demonstrating knowledge of this particular customer's life and intervening by altering a credit-based financial product.

Connecting Digital Banking and Customer Lives

The above examples illustrate how lauded aspects of bank and customer relations are associated with human interactions set apart from a problematised digital relationality. This divide is challenged by the innovation unit studied, who work to reconcile human relationality within digital banking products and platforms.

The work of the innovation unit in reconciling digital and human banking relationships leans into the sense that desired aspects of bank and customer relations rest upon knowledge of, and ability to intervene in, the details of daily life. When following the financial well-being project, the innovation unit shared a report written by a FinTech firm, suggesting that it would give me an idea of the vision animating the project. The report argues that future financial services will go 'beyond repositioning in customers lives, they'll be able to truly integrate into every aspect of them' (Cognizant, 2020, p. 7). The following extract from the report encapsulates this FinTech imaginary of banking and the daily lives of customers:

> *Seamless financial services that require little more than a tap or a swipe, customers who feel secure in their financial futures, and financial institutions at the center of it all. So when John gets offered that job as a professor of Past and Present Financial Development, his phone will map out the financial implications, the changes to his mortgage payments, and his updated expense projections. So all he has to do is choose, with all the facts in the palm of his hand.* (Cognizant, 2020, p. 7).

This is a visions of a technologically-enabled future, in which financial services are 'seamlessly' woven into everyday life, financial products automatically respond to events with updated calculations, and financial institutions, concerned with how customers feel, are positioned 'at the centre of it all'. An internal report on the financial well-being project, produced by the innovation unit, expresses concerns with connecting the bank to customers' lives. The report highlights the potential for digital tools to increase opportunities for selling additional services, arising from increased synergy between key customer life events and the bank's relational proximity to customers' lives, focusing on the bank-customer relationship:

> *The solution will be a good tool for proactive dialogue between customer and the bank and create greater insights into customers' dreams and considerations.*

The 'solution' here refers to a digital interface between bank customers and financial advisors, allowing customers to get an overview of their financial situation, run simulations for different future scenarios (e.g. job loss, death of partner), and plan for how to achieve particular dreams (e.g. buying a house, taking a holiday). In this sense, the concept of the digital solution disturbs the divide between human and digital, in that it upholds the valorised emphasis on qualities associated with human interaction, i.e. 'dialogue', while pointing to new possibilities, i.e. 'greater insights into customers' dreams'. This emphasises that maintaining the bank-customer relation across digital technologies relies upon generating knowledge about customers' lives.

A Service Designer within the innovation unit frames this work of further integrating the bank into customers' lives in terms of connecting digital applications to customer emotions:

> *A lot of people think of banks as transactional they need to put money from one account to another account, but what we want to do is create more of a bond, kind of, between our customers. Also because a lot of our research shows that people don't really involve the bank in any of their decisions before it's pretty much too late to have an influence on their decisions. Not that we should influence them in that sense… but maybe we could advise them to make decisions that would benefit them. Or, if we were there earlier. So, to speak to their emotions, and to speak to…. Yeah these softer values rather than just numbers, is kind of what we want to do.*

Here the Service Designer articulates an understanding of emotional banking as moving beyond the transactional, juxtaposing a quantitative rationality against an appeal to influence customers by connecting the bank to their emotions. Activating customer emotions is articulated as part of a vision for digital banking platforms, framed as sites that combine transactional experiences of banking with the emotional lives of customers. Connecting with the emotional lives of customers is understood in terms of the bank making the right kind of interventions through digital platforms, framed by the Service Designer as 'influence'.

This sense of connecting digital banking to the emotional lives of customers is expanded upon by a Business Analyst working on the financial well-being project:

> *We work a lot with life situations. When does a customer contact their bank? They do it when something changes in their life. It could be they have kids. It could be they want to buy a house, they want to buy a car. It could also be that they need to loan some money to start a business, it could also be they get divorced, they die. A lot of things happen, but it's typically there one has some touchpoints with the bank. It would be nice for us to be able to predict these touchpoints and be on the front foot. So we could, for example, say to you, yeah you have two kids, it looks like you live in an apartment in Copenhagen, it could be you should buy a bigger house. Should we help you with that? Instead of you coming to us and saying, "now I'm interested in buying a house", it could be we could help you a bit towards it, and we can use data for that. So, some predictive analytics that can tell us, where is the customer heading?*

This delineates an understanding of the bank-customer relation in which the bank is able to use data analytics to understand customer lives, in order to proactively connect significant life events with financial products. It speaks to a sense in which the problematisations of digital banking relationships are reconciled through increased knowledge and intervention in the details of key emotional events. Rather than the dialogic relationality in traditional understandings of 'face to face' banking, we see concerns with attaching the bank to key moments in customer lives. Attachments between the bank and customers lives are maintained by the knowledge produced by predictive data analytics, which would allow the bank to be ready to intervene at the right time.

Banking Relationships through Data infrastructures

The increased connection to emotional, everyday lives of bank customers is facilitated by the knowledge produced via digital applications and data infrastructures. The financial well-being digital tool would rely on capacities of a FinTech firm who are able to quickly and flexibly bring together and calculate diverse forms of data relating to customers finances. As demonstrated above, the innovation unit frames the digital solution in terms of its potential to modify the customer and bank relation, intensify knowledge of customer lives while maintaining aspects of human banking relationality. In this way, data infrastructures allow for a concept like 'financial well-being' to be translated into action within the bank. A Solution Architect who participated in the financial well-being project describes this process:

> *It allows us to act on the concept of financial well-being, to say "how is your financial well-being, give me a number?" which we cannot do today. Today, we could potentially verbalise it talking to the customer, but we don't have the… I mean, you will have to probably do all this stuff in an Excel spreadsheet or some Power BI solution. So, it will be very individually and very manually heavy based. And then you could talk about it. But then the customer says, okay, what if we change that number and that number? Okay, you go back and do some more hours of work, whereas the new system will provide that functionality.*

Through the financial well-being product, the bank is responsive to particular knowledge about individual customers, rather than human modes of relationality like 'talking to the customer', the new system allows for automated response to knowledge about customers' lives.

There is a curious puzzle here, in which decreased involvement from bank advisors is understood as leading to more intimate bank and customer relations, increasingly responsive to individual customers. The Solution Architect makes a connection between acting on the concept 'financial well-being' and the limitations of manual human labor over automation. 'Acting on the concept' seems to refer both to communicating with customers, the kinds of dialogic relationality associated with traditional banking, and automated actions occurring as a result of the calculations performed. The digital solution collapses distinctions between communicating and acting. This allows digital banking to maintain the positive associations of human relationality, obtained through automated interventions.

The role of data infrastructures in maintaining connections between digital banking and customer lives is demonstrated further by a Data Analyst within the innovation unit, describing another project focusing on increasing financial literacy among young people:

> *The digital tool is probably a good example because it's a banking product on one side, it's an account and a card, and then on the other side, you have an application where you can, you know, you can send tasks to children, like 'empty the dishwasher'. They can send you a picture of an empty dishwasher, and then you transfer, like, I don't know, like 5kr or something like that, and then they've done the tasks. And so, we have all the data from the banking product, the account, the card, all these data we already have. But on the application side, this is data we do not have inside the bank. It lives in the application. The application is done by a third party, and we would love to have all the data in the application available for making decisions regarding further development of the application. So, that would be user, user age, user gender, use of functions in the app, anything you can imagine. Where do they live? Where, you know, geographical markers. So is there a difference between living in one place to living in another place and stuff like this. All this is accessible through the application.*

We see here how digital applications and data infrastructures become tools to bring the bank-customer relation closer to the lives of customers. The Data Analyst highlights a division of labor between a banking product on one side and a digital application on the other, used by parents and their children in domestic chores. Due to a GDPR issue, the bank are not able to operationalise the application data for development purposes. However, the issue of data access is framed as a technical problem, which the Data Analyst's team aim to overcome by building consent mechanisms into the application. The extract demonstrates an ambition to use data from everyday lives of customers in banking products. This is the kind of 'listening' that augments the dialogic relationality of traditional banking, through which the bank aims to connect to domestic spheres of familial relations. Connecting to these spheres requires the work of developing applications, data infrastructures and navigating data access limitations. It also involves the work of connecting the digital interactions of customer lives to business rationalities of traditional banking.

Being both a banking product and a digital application tied into spheres of family relationships, points to an interweaving between the business rationalities of traditional banking and products aimed at connecting with emotional registers. The Business Analyst articulates the profit making rationalities driving the financial well-being project:

> *There are a bunch of elements in it. It's definitely this thing about creating some overall well-being, it's also about bringing some money to life with customers in a sensible way. It can be that we can tweak some buttons that mean that they can get a better life tomorrow, and it should also hopefully in the end give some profit to Bank X by getting more loan kroner put in play, but it could also be other products, it could be insurance products. You have a need for all kinds of other things that you get a sense that you need when you look more holistically at your finances.*

It is not surprising that a bank aims to turn a profit from its products, but it does point to interesting connections between concerns with emotional well-being of customers, via digital financial technologies, and the business rationalities surrounding credit products of traditional banking. In this way, the innovation unit is an organisational site where the work of connecting everyday life with traditional banking products takes place. Digital financial products are developed with the aim of reconfiguring banking relationships, combining digital interventions in customer lives with the continuation of rationalities underlying traditional banking products.

Inviting Your Bank to Facebook

We have seen how the work of reconfiguring the bank-customer relationship involves efforts to attach traditional banking rationalities with the lives of customers through data infrastructures, but how do digital banking platforms produce these attachments?

An interview with the Solution Architect working on the financial well-being project, suggests that the need to gain knowledge of customers' lives transforms digital banking platforms into sites of data extraction:

> *Imagine Facebook, okay. Imagine your own group, and Facebook, just you. And then you invited your bank. We are trying to build another place where you can create that relation. So, we need to figure out what can we put in that universe that extracts the customer… that encourages the customers to go in there and to provide some data.*

Here, the Solution Architect is describing a vision to expand the bank's online banking platform with the aim of creating a different kind of relation. Using social media as an example, the Solution Architect points to potential for interactions through online platforms to influence behaviour in particular ways. The digital platform is imagined as both sites in which bank-customer relationships take place, but also as a means to deliberately reshape these relationships.

During an innovation unit workshop within the financial well-being project, participants were divided into three groups corresponding to their job roles and areas of expertise: Business, Tech, and Design. Each group was tasked with ranking different features imagined for the digital solution and commenting on both the feature's impact and resources demanded to develop it. During the discussion, the design team gave their feedback on a feature allowing customers to calculate and plan for different future scenarios, e.g. a wedding or car purchase. The Service Designer emphasised the need for:

> *A lot of design resources to get to a solution that can show this in a simple and understandable way and simultaneously contain quite complex data.*

(Field notes, April 2021)

The complexity at the data level underlines an increasingly detailed picture, built up of different aspects of a customer's life, providing the basis for the customer to explore different desires and dreams through the digital product, while simultaneously sharing them with their bank. The innovation unit works to bring the experience of using this product closer to forms of human relationality, connecting with customers at an emotional level. At the same time, the bank-customer relationships performed through the digital product are understood as malleable. A UX designer in the workshop was more explicit about this, following on from the discussion above they stressed the importance of making sure the tool is relevant to customers and something they would repeatedly use:

> *So make sure, maybe through nudging, notifications, inspiration, to get them to interact with the solution again and again.*

(Field notes, April 2021)

We see here how the digital banking relationship imagined in this solution rests upon a mutual dependence between data infrastructures, which provide the detailed knowledge of customers and their desires, and the digital product aiming to extract data.

The financial professionals studied were acutely aware of treading carefully with the potential ethical concerns relating to both customer data and practices aiming to influence customer behavior, stressing the importance of customer consent and ethical data practices. Yet, as with the GDPR example above, ethics tends to be reduced to a technical issue, a question of obtaining consent. The 'influence' in customer lives is framed in terms of helpful interventions, such as increasing financial well-being, financial literacy, or encouraging environmentally sustainable behaviour. Through themes like financial well-being, the innovation unit justifies reconfiguring digital banking relationships, combining data infrastructures with traditional banking products, designed to extract data and intervene in customers' lives.

Discussion

Datafied Financialisation

Drawing on an analytical lens of 'attachments' (Cochoy, Deville and McFall, 2017), the above analysis draws out how financial professionals seek to reconfigure relationships between banks and customers. I suggest the notion 'datafied financialisation' to name the imaginaries of datafication and financialisation animating the financial professionals studied.

Datafied financialisation points to a specific modality of datafication, aimed at attaching everyday lives of bank customers to the financial products of traditional banking. Drawing out the kinds of work involved in pursuing datafied financialisation in a traditional bank, surfaces the contingencies and uncertainties involved in attempts to realise imagined forms of datafication in the established organisational contexts of traditional banking. The financial professionals studied problematise grand narratives of digitalisation, which assume the gradual removal of the human within increasingly automated and digital banking services. They do so by negotiating boundaries between human and non-human relationality, continuing the movement of banking interactions onto digital platforms and seeking to make digital interactions closer to emotive human experience. Drawing out how financial professionals work towards reconfiguring digital relationships, emphasises how the organisational work involved in pursuing datafication imaginaries connects with the embeddedness of data collecting functionalities in everyday life. Rather than replacing human relationality, we see a reconfiguring of both the human and the technological through the development of digital banking products, combining the calculative capacities of data analytics with emotional attachments between people and products.

Implementing Datafication Agendas in Organisational Contexts

The above analysis empirically draws out the organisational work of pursuing visions of datafication, while exploring the resulting relational configurations distributed across relations between people, products, and infrastructures. A focus on changing relationships speaks to claims that implementation strategies demand a rethinking of roles and relationships of those involved in the transformation (Ball and Webster, 2020, p. 2), supporting attentiveness to changing roles and expertise prompted by engagements with data analytics in established organisational contexts (Merendino *et al.*, 2018). In the case presented in this paper, the relationships in question are negotiated across different roles and forms of expertise in the bank, extend banking relationships further into the lives of customers.

The interweaving of emotional experience, and the rationalities of financial products in datafied financialisation, connect the everyday lives of customers with the organisational contexts of financial professionals. As recent studies indicate, practices of financial attachment are not confined to single organisations, but operate as assemblages of activities through which domestic finances are made into concerns and governed (Ossandón *et al.*, 2022). At the same time, a focus on particular organisational contexts is important in understanding how certain aspects of datafication imaginaries are delimited. In highlighting the contingencies of concrete actions and decisions within particular organisations, the analysis challenges assumptions of datafication as an inexorable process, highlighting the contingencies and fragilities involved in pursuing datafication imaginaries.

Datafication and Surveillance

Through surfacing the work involved in pursuing datafied financialisation, this paper's analysis grounds discussions of datafied surveillance, which aims to 'modify human behaviour in proactive and hidden ways' (Flyverbom and Garsten, 2021, p. 11) (Zuboff, 2019), in particular forms of work aiming to attach financial products with the everyday lives of bank customers. In doing so, the analysis builds on efforts to historicise contemporary digital capitalism in longer trajectories of data surveillance (Laurer 2020), honing in on the particularities of one organisational context. Emphasising particular organisational contexts of datafication allows for a grounding of ethical critiques of 'creepy information practices' (e.g. Steeves, 2020, p. 10), and the influence of data structuring on our 'free will' (Flyverbom and Murray, 2018, p. 10), in concrete organisational dynamics. Such a grounding has potential to deepen critiques of datafication, highlighting contingencies of processes that could have been otherwise. Honing in on the contingencies of particular modalities of datafication challenges a sense that the rise of surveillance logics alone are enough to transform industry sectors, facets of everyday life, and perhaps capitalism itself (Morozov, 2019). In this way, the analysis argues with Thylstrup, Flyverbom and Helles (2019) that 'datafied knowledge production' and hyped claims of disruptive paradigm shifts are shaped by existing practices in organisational contexts. A focus on datafied financialisation interrogates the work of attaching visions of datafication to our everyday lives, challenging the inevitability of particular forms of datafication.

Conclusion

This paper has explored the work of pursuing a particular modality of datafication – datafied financialisation - in an organisational context of traditional banking. Drawing on a lens of 'attachments', this was shown to involve reconfiguring banking relationships through digital products. The focus on attachments in a context of reconfiguring digital banking relationships highlights the contingent work of financial professionals pursing datafication imaginaries. The paper suggests that, along with new forms of governance and control cultivated through datafication, we should be attentive to configurations of relations through the work of connecting digital technologies with particular organisational and social contexts. Exploring datafication agendas in organisational contexts of traditional banking, grounds hype surrounding the transformative power of datafication in the contingencies of organisational work. Rather than an inexorable process, the paper suggests that processes of datafication are open to diverse configurations, calling for greater attentiveness to the mundane forms of organisational work that shape them.

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Article Three

Making Dumb Money Smart: Parasitic Formalisation in the Danish FinTech Sector

Abstract

This paper explores a conundrum at the intersection of FinTech and organisation studies, focusing on how transformative agendas of FinTech engage with established elements of traditional banking. Drawing on fieldwork in the Danish FinTech sector – technology firms claiming to reimagine traditional financial services through digital technologies – the paper shows how self-identifying 'disruptive' innovators work to connect with existing formalisations in the traditional banking sector. The FinTech studied does not simply work *against* traditional banking; it expects to insert itself into traditional banking, with the purpose of transforming it from within. The paper's main contribution is an attempt to theorise this particular strategy and its practical component. To do that – and inspired by Michel Serres' conceptualisation– the paper proposes the concept *parasitic formalisation*. Parasitic formalisation in the case studied consists of two strategies: the first is the FinTech firm's attempt to construct what they call 'modules' - a type of financial product where customers can recombine existing retail banking services. The second strategy is the FinTech's ongoing attempts to acquire a banking license, in order to comply with legal banking regulations, in pursuit of their vision of a modular financial future. More generally, the paper suggests that parasitic formalisation could be a useful notion for organisation scholars interested not only in FinTech but also in how 'anti-formal' organisations organise. Not *against* formalisation, but through a parasitic form. The paper concludes with discussions of how innovation and formalisations come together in empirical contexts, and how transformative agendas connect to established organisational contexts.

Introduction

A common trope in discussions of organisation consists of a series of pairs: formalisation, bureaucracy and stability, against informality, flexibility, and innovation. Research within organisation studies has long paid critical attention to the anti-formal organisation stance across contemporary public and academic discussions of management, which positions change, innovation and entrepreneurial freedom against the stabilities of formal and bureaucratic organisation (Du Gay and Vikkelsø, 2018) (Pedersen, 2016) (Du Gay and Vikkelsø, 2012) (Lopdrup-Hjorth, 2015). In a 'Schumpeterian world' of competition and relentless change, formal organisation and bureaucracy continue to be cast as anachronisms and the source of dysfunctions (Du Gay and Lopdrup-Hjorth, 2016, p. 6-7). In emphasising innovation and change, classic understandings of formal organisation are relegated to 'a nostalgic idea of the organisational world as in some sense stable' (Du Gay and Vikkelsø, 2012, p. 8). In part, rejection of formality rests on Weberian distinctions between formal and substantive rationality, associating formal organisation and bureaucracy with rigid adherence to formal rules above the pursuit of substantive goals (Hodson *et al.*, 2012, p. 257). This assumption of an inevitable disconnect between substantive goals and formal organisation has been challenged by scholars emphasising the embeddedness of substantive rationality within formalisations (Stinchcombe, 2001), highlighting complementarities between innovation and formalisation (Farjoun, 2010), and unfolding the so called 'paradox of stability and change' (Pedersen, 2016). Yet, the nuances and complexities of how actors connect new innovations with established formalisations remain under-theorised (Smith *et al.*, 2017, p. 306), with implications for understanding how attempts to change the world operate within established, formalised contexts.

The same anti-formal framings characterise discussions of FinTech, a technology sector claiming to reimagine and 'disrupt' traditional banking through innovations in digital technologies. FinTech is discursively framed as a force for industry and social change, both as a catalyst for competition in financial services markets and claiming to improve social issues, such as giving poorer demographics better access to financial products (Bulger and Rouen, 2022). Dominated by tropes of disruptive innovation, transformation, or revolution (Gomber, Robert J. Kauffman, *et al.*, 2018) (Lee and Shin, 2018), academic discussions tend to frame

FinTech as an external force of technological innovation against the stabilities of formal banking. The transformative capacities associated with FinTech rest on the distinctions between formality and substantive change described above. Journalists frame FinTech as a remedy to regulatory 'bureaucracy' (Liddell-Grainger, 2020), or as one Financial Times article (Hill, 2016) writes about FinTech, 'left unchecked, an overdose of bureaucracy could stifle innovation and silence initiative'. Heterodox studies of FinTech from fields such as anthropology, sociology, cultural economy, and science and technology studies (STS) nuance this picture. Framings of FinTech as a transformative force diminish in lieu of intersections between FinTech and the established financial sector (Swartz, 2017) (Nelms *et al.*, 2018), complementarities between FinTech innovation and forms of traditional political governance (Gruin and Knaack, 2020) (Gruin, 2019), and dependencies between formalised financial technology markets and informal socio-economic practices (Tankha and Dalinghaus, 2020) (Rodima-Taylor, 2022). These interventions challenge framings of FinTech as entrepreneurial, disruptive innovation, unshackled by the rigidities of established formalisations, suggesting FinTech as an interesting case, animated by the anti-formal organisation stance, yet in practice muddying distinctions between substantive change and formal rationality supporting this stance.

This paper explores a conundrum at the intersection of FinTech and organisation studies, focusing on a how a FinTech firm uses organisational and legal formalisations in its attempts to transform the traditional banking sector. Based on ethnographic fieldwork with a FinTech firm in Denmark, the paper moves from the level of general narratives of FinTech to the way in which FinTech firms organise and understand their organisational problems. The FinTech firm studied does not simply work against the formalisations of traditional banking; it aims to insert itself into traditional banking, using existing formalisations with the purpose of transforming the sector from within. In exploring the case studied, the paper asks how existing forms of traditional banking are used within FinTech attempts to reimagine and transform banking. The paper main's contribution is an attempt to theorise this particular strategy and its practical component. To do that – and inspired by Michel Serres' (1982) conceptualisation of the parasite and organisational research that uses his work (Brown, 2013) (Espinosa-Cristia and Brown, 2017) (Rhodes and Price, 2011)- the paper proposes the concept *parasitic formalisation*. The concept draws on the double meaning Serres attributes to the term parasite, at once extracting from what already exists and distorting existing systems to produce transformations. Parasitic formalisation in the FinTech case explored consists of two strategies: firstly, the FinTech's attempt to construct what they call 'modules', through which customers can recombine existing retail banking services - and secondly, the firm's ongoing attempt to acquire a banking license, in pursuit of their vision of modular finance. More generally, the paper suggests that parasitic formalisation could be a notion useful to organisation scholars interested how organisations animated by an anti-formal stance engage with existing formalisations within transformative agendas.

Literature Review

The Anti-Formal Stance

The anti-formal stance described above finds challenge in scholars arguing that formal organisation is an essential part of purposeful activity, including activities aiming to enact change in the world. Du Gay and Vikkelsø (2016) recast bureaucracy as 'a supple, multifaceted organisational device', in which 'rigidity' could well be a condition for 'flexibility' (p. 24). In a similar vein, Stinchcombe's (2001) 'When Formality Works' uses examples like organisational budget allocations and legal reasoning in appeal courts to argue that 'organisational flexibility at a given time depends on the structure of rigidities, just as running depends on a stable relation between flexible muscles and rigid bones' (Stinchcombe, 2001, p. 132). Rhodes and Price (2011) draw out a similar tension, where 'post bureaucratic organising' in local government is shown to 'complicate bureaucracy while at the same time reinforcing the foundations on which it is based (p. 242). Concepts like 'enabling bureaucracy' in studies of technological innovation (Adler and Borys, 1996) (Adler, 2005), or 'bureaucratised activism' in social movement studies (Hensby, Sibthorpe and Driver, 2011, p. 812), suggesting that formal organisation enables forms of action when aligned with broader social and organisational dynamics (Hodson *et al.*, 2012, p. 262). These discussions point to longstanding concerns with the tension between attempts to enact change and formalising structures, such as routines or rule-bound behaviour. In common with the studies cited above is a nuancing of binary separations between formal organisations and attempts to enact change in the world, whether in social movements, or the 'disruptive' innovation of entrepreneurs. In defending formality from claims that it stifles innovation and change, such interventions nuance understandings of formal organisation and its relationship to activities aimed at achieving particular purposes.

Substantive and Formal Rationality

Scholars defending the formal emphasise how formalisations must adapt to the world to remain a functional part of pursuing desired social action. As Stinchcombe (2001) puts it:

> *One can create flexibility by strategically rigidifying things by governing them with abstractions. But one had better adjust the rigidifying abstractions to the world, or one will go broke. (p. 137).*

Approaching the relationship between change and formalisation in this way challenges enduring distinctions between substantive and formal rationality, derived from Max Weber's critiques of bureaucracy. Based on assumptions that formal organisation involves rigid adherence to formal rules above the pursuit of substantive goals, this Weberian legacy distinguishes between formal rationality (following a particular plan) and substantive rationality (flexible behaviour seeking a broad goal) (Hodson *et al.*, 2012, p. 257). Stinchcombe argues that Weber's failure to recognise the adaptability of formalisations to a changing world lead to misunderstandings about the role of formal organisation in pursuing substantive goals. Remedying this requires a definition of the formal that brings substantive purpose and adaptability back in. For instance, Du Gay and Vikkelsø (2018) understand the formal as 'organisation that is purposeful and which it is possible to explicate', where 'principles are articulated (rather than unarticulated), and that they will be changed if necessary' (p. 605). Stinchcome (2001) emphasises a similar ongoing interaction between the substantive and the formal, defining formality and formalisation as abstractions deployed 'to preserve what is essential in the substance' for specialised uses (p. 3). In drawing out the adaptability of formalisations to substantive organisational goals, Stinchcombe's work challenges tropes that juxtapose creative, flexible, and innovative activities with systems of formalisations. In nuancing the dichotomies of the anti-formal stance, these discussions highlight the complexities of relations between formal organisation and attempts to change the world. Such a focus raises questions concerning how formalisations and attempts to change the world co-exist and operate together in particular empirical contexts.

Change in an Already Organised World

I have suggested that unpacking the anti-formal stance requires engagement with underlying distinctions between substantive and formal rationality, or more broadly, the relationship between activities seeking change and formal organisation. If attempts to change the world, whether construed in industry vernaculars of innovation, or through activist notions of transformative change, have a complementary and contradictory relationship to formalisation, how should we approach such a relationship? Recent work in organisation studies has honed in on this tension, pursuing the interesting puzzle of how new forms of organising can be created in the cracks of an 'already organised world' (Hjorth and Reay, 2022, p. 160). Hjorth and Reay's (2022) focus on how new forms are created in 'already organised' contexts resonates with discussions of change and formal organisation, connecting the 'already organised world' with classic organisation theory 'principles of organising, such as the ethos of office, bureaucracy, structures, power and culture' (p. 161). A focus on how change occurs in 'already organised' contexts draws on 'institutional entrepreneurship' approaches to change in contexts characterised by particular institutional logics (van Gestel and Hillebrand, 2011), highlighting dualities and paradoxes in activities that simultaneously maintain and disrupt the institutional order (Zilber, 2007, p. 1036). Where Stinchcombe points to alignments between substantive and formal rationalities producing desirable outcomes, Hjorth and Reay hone in on tensions and paradoxes arising from attempts to produce change in interaction with established formalisations. In this sense, attempts to produce change may utilise formalisations designed for entirely different substantive purposes. Such a view presents a challenge to anti-formal understandings of innovation occurring outside of formalisations, such as routines, pointing instead to creative change within already organised, formalised contexts (Hjorth and Reay, 2022, p. 167). An attentiveness to how organisation is simultaneously stable and novel (Hussenot and Missonier, 2016, p. 525), invites further study into how transformative agendas operate through stabilised formalisations. These discussions help to think about empirical contexts in which attempts to change the world have a complex, intersecting relationship to established formalisations, raising questions concerning how established formalisations are utilised towards divergent substantive goals, through particular kinds of organisational activities.

FinTech Innovation within Established Formalisations of Banking

As we saw in the introduction, FinTech activities are dominated by framings of entrepreneurial innovation in opposition to formal organisation of traditional banking. Yet, a body of FinTech literature has drawn attention to intersections between 'disruptive' FinTech and the stable bureaucracies of traditional finance. FinTech studies highlight the co-existence of old and new, tied to how people interpret and negotiate the financial instabilities of broader political economies (Tankha and Dalinghaus, 2020, p. 348-50). FinTech innovation has been linked to established political governance, where the disruption associated with FinTech technologies, such as algorithmic credit scoring, is shown to reinforce stabilities of authoritarian governance traditions (Gruin 2019) (Gruin and Knaack 2019). In a study of the FinTech sector in South Africa, Rodima-Taylor (2022) explores the 'interface' between formal and informal financial practices, the 'entanglement of FinTech with informal economies', where formalisation is seen to serve purposes of quasi-colonial extraction (p. 417). Here, we see an example of that overcomes oppositions between formal and informal, supporting Stinchcomb's argument that formalisations are utilised to serve substantive purposes, albeit in this case exploitative goals characterised by legacies of power asymmetries. Yet, as Rodima-Taylor (2022) argues, 'FinTech does not simply formalise informal lending relations', but creates new assemblages that disturb binary categories of formal-informal, of stability and change (p.417). These discussions alert us to sites of intersection between FinTech innovation and the formalisations of existing financial, social, and organisational contexts. The avenues opened up by these studies invites further research into how FinTech firms, with their discursive claims to transform both formal finance and informal financial practices, engage with processes of formalisation towards particular purposes. The FinTech sector thus represents an empirical context in which anti-formal organisation narratives are prevalent, while FinTech attempts to change established contexts operate within and utilise established banking formalisations.

Study Design and Method

The Case

This paper draws primarily on fieldwork conducted with a FinTech start-up in Denmark called Future Bank[4], between December 2020 and May 2022. Founded in 2017, at the time of fieldwork Future Bank had five employees and several interns. The firm was initially located in a FinTech co-working space, but during the fieldwork period moved into their own offices in central Copenhagen. Future Bank are building a banking platform aiming to transform traditional banking in a number of ways. Firstly, in the Future Bank vision, banking becomes highly composable and modular. Meaning that as a customer, one can tailor your banking services by choosing particular modules, much like an app store. Secondly, Future Bank aim to connect what is known as the De-Fi sector [5](Decentralised Finance) – a world of alternative digital currencies such as Bitcoin – and traditional banking, within the Future Bank platform. Thirdly, Future Bank are producing their own alternative currency, Future Cash, which aims to change the underlying value of electronic money. The development of Future Cash is

[4] The names of informants and companies are altered to ensure anonymity of those participating in the study.

[5] *decentralized finance' is an umbrella term referring to cryptocurrency and blockchain communities, entrepreneurs, and innovations. Forbes offer the following definition: 'Decentralized finance, also known as De-Fi, uses cryptocurrency and blockchain technology to manage financial transactions. De-Fi aims to democratize finance by replacing legacy, centralized institutions with peer-to-peer relationships that can provide a full spectrum of financial services, from everyday banking, loans and mortgages, to complicated contractual relationships and asset trading'* (Napoletano and Curry, 2022).

bound up with Future Bank critiques of the traditional banking sector, which typically lends out more money than banks have as deposits. Future Cash responds to this by using an alternative currency form in the De-Fi sector known as 'stable coins', which have their value tied to a collection of assets, such as government bonds (Federal Deposit Insurance Corporation, 2021, p. 1). Future Bank's attempts to transform the traditional banking sector are motivated by discourses of democratisation, based on giving people greater access and increasing 'inclusion' in financial services, as well as by claims to increase stability in the banking sector. Arguing, for instance, that technological innovations, such as Future Cash, reduce the risk of people losing their money if banks go out of business.

Data Collection and Analysis

Fieldwork was conducted during meetings with the FinTech firm at co-working labs and office spaces; participant observations at conference events and team meetings; interviews with employees; documents relating to the firm's strategy, vision, legal considerations; and online interactions on the firm's online community platforms (Discord and Telegram). These materials are part of a broader data set from which this paper also draws, generated within a larger research project exploring intersections between FinTech and traditional banking in Denmark. This broader data set is comprised of 70 hours of observations and ethnographic encounters; along with 38 semi-structured interviews; and strategy documents acquired from both traditional banks and FinTech firms.

The overall analytical approach took inspiration from Charmaz's (2006) 'constructivist grounded theory', particularly its emphasis on an iterative, comparative, emergent, open-ended approach, with a pragmatic emphasis on language, meaning, and action (Järvinen and Mik-Meyer, 2020, p. 15). In line with this approach, coding of interviews, documents, and field notes was conducted in parallel with ongoing data collection, where memo writing was used as a technique to actively engage with data and fine-tune the focus of subsequent data gathering (Charmaz, 2006, p. 72). The coding process took inspiration from initial coding techniques that stay close to the formulations of actors studied, opening up possibilities for new conceptual insights (Gioia, Corley and Hamilton, 2013, p. 17). These codes were used strategically to develop a thematic analysis open to the complexities of multi-sited contexts, and the significance of materialities and ambiguities (Clarke, 2003). From the themes identified, memos were written to flesh out analytical strands and the connections between themes. This process established themes such as ‘bridging different financial spheres’ and highlighted tensions arising from the FinTech firm having specific social and political purposes, while also aiming to be a universal, agnostic infrastructure for all kinds of financial products and transactions. A thematic focus also emerged centred on the interplay between change and stability and the operations of the start-up connecting with and maintaining the apparent paradox between the two. Analysis of the materials through the themes generated gave rise to the concept ‘parasitic formalisation’, naming Future Bank’s work in maintaining tensions between its transformative agenda and efforts to connect to the established banking sector.

Analysis

Sorting Things Together

At the time of study, Future Bank were developing different product offerings and constructing the infrastructure for their vision to be a global banking platform. One product was an application with which users can compose personalised financial services consisting of different modules, another was a new digital currency. Alongside developing these products, Future bank were busy with efforts to obtain a banking license through the acquisition of a traditional bank. Attempts to acquire a banking license involved discussions about how to navigate different regulatory procedures and how to meet expectations in the traditional banking sector concerning corporate governance and organisational structure.

In pursuing their vision to be a global banking platform, Future bank engage with different technological infrastructures, legal regulations and organisational forms across De-Fi and traditional banking. As described in documents from the firm, Future Bank aims to establish itself as an intermediary between traditional banking and the De-Fi sector:

> *We are breaking down the silos in the financial system to facilitate interoperation between traditional banks, FinTechs, blockchains, and whatever other stakeholders come along.*

Within their intermediary position between traditional banking and the De-Fi sector, Future Bank rely on existing financial services and infrastructures, using what already exists to build their own product offerings. Sebastian, an IT and Business Developer at Future Bank, describes this work:

> *We're not really revolutionising and we're not creating our own technology with our own hardware, we're actually utilising the best people, doing the best stuff, and we're just sorting them together in a smart way.*

Through the work of 'sorting things together', Future Bank use existing elements in the financial sector, partnering with firms offering infrastructural services, such as cloud computing, IT security, auditing, identify verification, digital wallets, and payment processing.

During a team meeting in January 2022, Future Bank employees discussed a plan to acquire an existing bank. The meeting participants constructed a timeline in planning for this goal, where the focus was on attracting further financial investment for the bank acquisition. Ben, Future Bank CEO, argued that while attracting additional investment in the firm, there should be simultaneous efforts to launch an early version of the banking application. This initial version of the product, would be made possible by what Future Bank employees describe as 'piggybacking' on the licenses and infrastructures of existing firms:

> *Even after series A, we still don't have a bank license on hand, but if we find a way to market through some provider while we build our own bank license in the back end, once we do have our license it will be a question of transferring infrastructure from one license to another, but we wouldn't have to wait to launch the product.*

'Series A' refers to a round of financing associated with a start-up moving to a more developed stage, after the 'angel' or 'seed' investments in very early stage start-ups. The series A round of investment was to be used for Future Bank's plan to buy a bank, and thereby acquire a banking license, but Ben insists on finding other ways to market before the bank license is obtained. Coming to market in this way requires 'piggybacking' on the regulatory licenses, existing infrastructures and products of a range of different firms operating in both traditional banking and De-Fi. Using existing elements in the financial sector involves building connections with banks and technology firms, as described by Ben in the following interview extract:

> *The way that we've got under the skin of, for example, the banks, was not to start contacting banks directly. You won't go very far with those kinds of cold calls, you often get a no. So, what we did is, we looked into the innovation labs that we are members of and we saw what banking institutions are members of the same programs. And then through, specifically this time through the Payments Association in the UK, we identified 10 potential banking partners. We did our due diligence on the ones that we wanted to speak with, and then we've managed to get a friend of ours from the payments association to make the connection.*

Here we see active work to 'get under the skin' of banks, establishing relations with traditional banks in order to utilise regulatory licenses of existing companies. Future Bank entered into partnerships with established banks, cryptocurrency exchanges, blockchain specialist firms, and firms specialising in connecting traditional banking payment infrastructure with the De-Fi sector. Sorting existing elements in the financial sector together is referred to by the firm as a strategy of 'modularity', referring to the idea of constructing banking services from different modules, similar to selecting combinations of applications on a smart phone. As Ben explains in the following interview extract, approaching FinTech innovation through a modular strategy allows elements of both traditional banking and De-Fi to be incorporated into Future Bank's offerings:

> *I see two ways of lending in the Future Bank kingdom. One of them is a lending module. Get a Citibank lending module. Get a Nordea lending module. Get a Danske Bank lending module. There are lenders. Get a Lendino[6] lending*

[6] While the three former financial institutions listed are large traditional banks, Lendino is a small Danish FinTech, operating as a market place for lending through crowdfunding, i.e. raising money for loans through many people lending small amounts.

> *module, let's integrate with the lenders. And if we want to go to the De-Fi way, once we have sufficient users, you can imagine lending from others. So, if you got money in your account, you can choose a percentage of the funds you want to lend out to a certain pool. And then other applicants can tap into their lending pool, pay the interest back to the pool and you can get a payment back according to your loan.*

Through a modular strategy, traditional banking credit products are combined with emergent decentralised lending practices in the De-Fi sector, all within the Future Bank platform. Rather than produce traditional lending or De-Fi products, Future Bank sorts elements of both together as modules on its platform. Through modularity, Future Bank is both 'integrating with the lenders' of traditional finance and connecting with De-Fi experiments that seek to transform lending practices. Future Bank's modular strategy helps to maintain tensions between Future Bank's socio-political aims of monetary reform, reducing financial instability, and increasing financial inclusion, while still connecting with traditional banking institutions and practices. This work requires a view of financial services as modules to be sorted together, achieved through the building of partnerships with diverse firms across traditional banking and De-Fi, 'piggybacking' on what these firms already provide. Through the modular strategy, different elements of banking, both those associated with transformative agendas and established traditions are used as modules within a Future Bank platform.

During the team meeting described above, Future Bank employees were joined by a developer, Mike, from a large technology company providing Future Bank with cloud computing services. Towards the end of the meeting, Mike raised a concern about Future Bank's plan to 'piggyback' on the licenses and infrastructures of existing firms, stating that 'there is one thing missing in our architectural picture':

> *We do not have any CRM [Customer Relations Management] capabilities- and we need to investigate how we deal with that –because you cannot operate a bank without CRM capabilities.*

Here, Mike pushes back against the smooth picture of modularity envisioned by Ben, arguing that in breaking everything into modules some essential elements of 'operating a bank', may get lost. Mike's intervention points to something important in how Future Bank work with a modular strategy. In highlighting elements of banking that might resist distillation into a modular form, Mike's comment reminds us that Future Bank's 'sorting' work must be done within certain limits, shaped by established expectations of what banking is and how it operates. Approaching financial services as modules may provide flexibility, but this must be done in ways that maintain a connection to dominant forms of traditional banking. This points us towards a key part of Future Bank's work. In their attempts to become a modular banking platform, Future Bank must maintain a fidelity to the accepted practices, procedures, and expectations of traditional banking.

The Formalities Have To Be There

The previous section described the work engaged in by Future Bank in sorting together existing elements across traditional banking and the De-Fi sector, aiming to use these existing product offering, infrastructures, and regulatory licenses within a modular vision of financial services. We then suggested that sorting together in this way was not without constraints. When aiming to use parts of traditional banking, for example, Future Bank carefully adhere to procedural and institutional norms. Future Bank's reliance on existing products and infrastructures in the financial sector is thus not a passive endeavor. It requires active work to align with the legal and institutional rules of the traditional financial sector.

When an opportunity presented itself to acquire a small bank in the UK, Ben describes how Future Bank viewed the process:

> *We are in the process of buying, acquiring, hiring, what is left over of a bank which has been winding down. So, we're not buying the bank essentially, we don't need everything which is within a bank, so to speak. What we need is the team, the people, the compliance people, the board, you know, the components of a bank.*

Here we see the modularity strategy applied to a licensed bank Future Bank aim to acquire, with a traditional bank being distilled into 'components', where formal elements of corporate governance like 'the board', or particular forms of expertise like 'the compliance people', are separated out to be used by Future Bank. When ‘sorting things together’ involves elements of the traditional banking sector, Future Bank must engage in diligent work to ensure that they follow certain legal procedures and that the formal elements of Future Bank’s organisation fit expectations within the traditional banking sector.

During another team meeting in January 2022, Ben and Sebastian, along with the community manager and a law student intern, sit physically in Future Bank’s offices in central Copenhagen. Oliver, The Chief Financial Officer (CFO), and Mike, the representative from the large technology company, join the meeting virtually. Mike begins by asking Oliver about the timeline for the bank acquisition plan. Oliver explains that he is optimistic, but that there is ‘a lot of work to be done to present Future Bank as corporate entity worth investing in’, because ‘when we talk about big guys, big investors, corporate governance and the formalities have to be there’. Ensuring ‘the formalities are there’ led Future Bank to establish a corporate governance structure with a board in which Oliver sits as chair, ‘you now have to call me Mr. Chairman’.

Sebastian types notes on a ‘scum log’, shared virtually via the teams meeting. The team use the scrum log to organise work around different Future Bank projects, divided into labels such as ‘UK bank acquisition’ and ‘stable coin exchanges’, and delineate specific tasks within projects to be acted upon. Oliver and Ben stress the importance of getting the right documents in place, both for being taken seriously by investors and for getting their products listed on De-Fi trading exchanges. The discussion centres on how to ensure Future Bank meet expectations surrounding corporate governance. Oliver asks Sebastian to make a new label on the scrum called ‘legal’, before Ben interrupts with more specific instructions, ‘make a new task in the backlog, call it Corporate Governance’. The financing for the bank acquisition is to start the following Monday and Future Bank need to get documentation in place. Sebastian adds a new task in the scum log called ‘corporate governance’, while Ben tells him to add the following items in the checklist under tasks:

- *2022 articles of association in English*
- *Corporate ownership chart – (those more than 10%)*

- *Incorporated document signed by Erhvervsstyrlsen* [7]
- *Shareholder registry*
- *Owners agreement*
- *Master policy document (to be defined)*
- *Doc file management*

The team agree that these articles will be produced in Danish and English, and made available for Oliver's work in raising the 'series A' financing, as well as Ben's work in finding De-Fi exchanges to partner with. Organising these documents and making them readily available for financing and partnerships requires work, as this documentation did not exist before.

While Future bank use existing elements in the financial sector to realise their modular vision, connecting with traditional banking requires the active work of adhering to formal procedures and expectations. For instance, Future Bank's aim to acquire a traditional bank and its components is extractive. Yet this extractive activity demands organisational work from Future Bank in order to 'get the formalities in place', officially organising the firm's governance structure and producing documentation that shows the firm follows the expected legal and governance procedures in traditional banking.

A week later, Oliver updates a Future Bank team meeting on the bank acquisition project. Cleaning a whiteboard at the back of the meeting room, he begins drawing a corporate ownership structure. 'Future Bank Company DK will soon own a company called Future Bank Company UK'. The CFO explains the value of owning this new banking entity outright and keeping it separate from the parent company:

> *That bank… this is completely siloed into an SPV[8], this same entity. That way there's no noise, so if we need to sell it again, if we're running out of capital.*

- [7] *(Danish Business Authority)*

[8] Special Purpose Vehicle - a legal entity created to fulfill narrow, specific or temporary objectives, and isolate the parent company from financial risk.

> *Or corona kills everyone in the world or whatever, then we have an asset we can sell, as a neo-bank/challenger bank with a full bank license.*

This sketch on the meeting room whiteboard shows us that Future Bank's aim to take a traditional bank and use it as a module involves work of connecting with forms of corporate ownership structures in traditional finance. The acquired bank is approached as an 'asset', an extractive approach which breaks down existing elements of traditional banking into potential sources of future value. Yet, extracting value from the existing banking sector requires Future Bank to articulate their acquisition process, and how they present themselves as a firm, in the dominant categories of corporate ownership structures, such as 'special purpose vehicles'. Future Bank follow the expected procedures for good corporate governance and articulate their modular strategy in the language of financial assets.

In the strategy sketched by Oliver, acquiring a bank and turning it into a special purpose vehicle paves the way to producing a new form of digital bank ('neo-bank/challenger bank'), while retaining the regulatory status necessary to operate in the traditional banking sector. Using an existing banking license to produce a new form of bank points us towards a third aspect of Future Bank's work. By turning existing elements of financial services into modules, through adhering to established formalities of traditional banking, Future Bank use existing elements in the financial sector towards efforts to transform the sector.

Making Dumb Money Smart

A post from Future Bank's community manager on their online discussion platform describes the firm's aim to combine old institutions of banks and money with new digital technologies:

> *Our mission has always been to build the bridge between traditional finance and De-Fi by making dumb (analog) money smart (programmable). Future Bank is committed to leading the way in FinTech and blockchain innovations.*

'Making dumb money smart' points to the work needed for Future Bank to implement the innovations of the De-Fi sector in established contexts of traditional banking. We have seen how Future Bank aim to sort together existing elements of financial services into modules, and how trying to turn elements of traditional banking into modules requires the work of adhering to dominant procedures and expected governance practices of the traditional banking sector. We now turn to how Future Bank engages with established 'formalities' of traditional banking in ways not only aiming to use what already exists, but also to pursue transformative agendas.

A Future Bank strategy document shows how the firm engages with different regulatory frameworks categorizing financial institutions across traditional banking and the De-Fi sector:

> *Depending on the type of financial infrastructure, different regulatory standards and licensing is required. Banks' primary purpose is to store and lend value, so they have to follow stringent regulatory policies. Companies like Currencycloud, TransferWise and Monzo, which transfer money, are often required to be regulated as electronic money (e-money) institutions. Since cryptocurrencies like Ethereum or stablecoins like DAI identify not as money but as a platform, network, utility, or service, regulatory standards vary widely. Some FinTechs that create stablecoins are licensed and regulated as e-money institutions, and their partner banks are regulated as banks. Since Future Bank will be operating as a full-reserve bank, it will be regulated as a bank. Digital Money represents existing currencies, so we must follow the regulatory guidelines already existing for those currencies.*

This extract highlights Future Bank's efforts to navigate the regulatory frameworks governing FinTech actors, where there is a certain amount of categorical flexibility. Despite the possibility of being regulated as an 'e-money institution', a regulatory category with less stringent demands, Future Bank insist on being 'regulated as a bank'. Operating as a 'full reserve bank' refers to Future Bank's critique of dominant lending practices in traditional banking, which only hold a small fraction of the funds they lend out as credit products. In operating as a 'full reserve bank', Future Bank would maintain a 1-1 relationship between funds deposited with them and money lent out through credit products. Motivated by this purpose to change the sector, Future Bank adhere to existing legal frameworks regulating traditional banking, while aiming to change a fundamental aspect of traditional banking models by 'operating as a full-reserve bank'. We have seen that Future bank use existing elements of the financial sector, such as the banking license of an established bank, as modules within the Future Bank platform, and that doing so involves the work of adhering to formal requirements in the traditional banking sector. We see here that this work serves the aim of transforming how banks operate. To transform traditional banking, Future Bank must closely adhere to the formal requirements of the sector, following the expected procedures and norms surrounding traditional banking, while building in transformative elements.

Future Bank's work of connecting to traditional banking forms in order to transform them is demonstrated further through the firm's digital currency product, which are digital representations of traditional currencies, such as Euros, US Dollars, and Pound Sterling. Documents produced by Future Bank describe the product:

> *Future Bank always holds enough assets with government guarantees, such as US T-bills, Cash, or European Bonds, to cover the amount of Future Cash. Future Cash is not subject to wild swings in value and can always be redeemed for traditional fiat currency. Our full reserve infrastructure will help eliminate bank runs, remove credit risk, and create a secure alternative to cash.*

Future Bank's digital currency is tied to established forms of value within traditional banking, such as government debt or physical cash, yet transformative alternatives to the existing system are built into the product, such as the 'full-reserve banking model'. In this way, key elements of the established monetary system are combined with De-Fi attempts to transform traditional finance.

These examples demonstrate the different operations involved in Future Bank's work. Future Bank use elements of what already exists to build their product offerings, separating different elements of financial services into modules to be used by the firm. Attempting to turn elements of traditional banking into modules involves the work of adhering to procedures and regulatory frameworks within traditional banking. By adhering to formal requirements and connecting with established elements of traditional banking, Future Bank insert themselves as a transformative alternative within the traditional banking sector. In drawing out how Future Bank works to insert itself into traditional finance, we see how ostensibly divergent practices, such as following formal expectations for corporate governance in traditional banking and pursuing transformative innovation in the De-fi sector, are coherently combined in the work of Future Bank.

Parasitic Formalisation

In order to conceptually distill the analysis above, I propose the concept 'parasitic formalisation', which captures the work performed by Future Bank in using existing formalisations of traditional banking in attempts to transform the sector. Parasitic formalisation draws on Michel Serres's (1982) understanding of the parasite as a ubiquitous aspect of a system that both uses what others produce and transforms relations it enters. Serres's parasite emphasises the role of a third, intermediary space, one that allows for stabilising interaction between innovations and established formalisations, yet always 'threatening to disrupt the existing order' ((Espinosa-Cristia and Brown, 2017, p. 3). In relation to the work of Future Bank, the word 'parasitic' at once captures how Future Bank extracts existing elements of traditional banking, while simultaneously attempting to transform traditional banking. The word 'formalisation' speaks to the means by which Future Bank engage in parasitic relations within traditional banking. For instance, formalisation becomes part of parasitic relations as Future Bank use existing elements of traditional banking to, for example, present the firm as a legitimate actor and investment opportunity.

Parasitic formalisation draws out the work of connecting Future Bank as a 'parasite', using their modular strategy to take what they need from existing elements in the system, *and* Future Bank as distorting or interrupting this system, composing existing elements in pursuit of novel forms of action and possibilities within the established financial sector. As Serres puts it, 'the town makes noise, but the noise makes the town' (Serres, 1982, p. 14), encapsulating an understanding of the parasite as something dependent on production elsewhere, yet also playing a role in co-producing its relational ties. Parasitic formalisation allows us to think through Future Bank's ostensibly paradoxical activities of simultaneously trying to become a bank and transform banking. The concept helps to understand how the firm simultaneously develops alternative, de-centralised financial infrastructures and formalises its operations in line with established standards, legal regulations, and institutional expectations of traditional banking. In this way, we see how these activities are in fact mutually reinforcing, Future Bank conducts its work of formalisation in line with the traditional financial sector to combine elements of financial services into modules to be used within their transformative agenda.

Discussion

The preceding analysis of parasitic formalisation draws out the organisational work maintaining intermediary spaces between technological innovation, attempts to transform an established sector, and formal organisation. Parasitic formalisation surfaces engagements with organisational and legal formalisations, and technical infrastructures, showing the work involved in connecting existing formalisations to transformative agendas. In studying organisational activities in the FinTech sector, parasitic formalisation may have broader relevance for scholars studying empirical contexts rife with claims that technological innovation replaces formal organisation, pointing to particular strategies and forms of engagement with established formalisations. The FinTech sector offers some extreme examples, such as cryptocurrencies and their underlying 'blockchain' infrastructures used in claims that centralised, formal organisations are a relic of the past (Hsieh, 2019). Yet, beyond this niche tech sector examples of organisational activity renouncing the formal are plentiful, where 'bureaucracy' has become something of a dirty word in contemporary parlance, regardless of what the bureaucracy might be trying to achieve (Hensby, Sibthorpe and Driver, 2011, p. 811). The analysis in this paper invites further attention to the engagements between transformative agendas and established systems of formalisations.

Nuancing the Anti-Formal Stance

Existing challenges to the anti-formal stance have nuanced binaries between the stabilities of formal organisation and innovative change, arguing that while stability and change may be analytically separable, they are deeply intertwined in empirical contexts (Pedersen, 2016, p.

1181). In drawing out the work of parasitic formalisation, we see dynamics between stability and change in action, whereby, through particular strategies, Future Bank are able to both tie itself to existing formalisations and combine them in service of a transformative vision. Parasitic formalisation challenges binaries between innovation and formal organisation, resonating with questions of how organisation is constituted by both novelties and enduring stabilities (Hussenot and Missonier, 2016, p. 525). Surfacing the work of parasitic formalisation nuances dominant assumptions that contexts of innovation are most appropriately defined by change and flexibility (Pedersen, 2016, p.1184). Weberian critiques of bureaucracy centre questions of whether formal organisation inevitably diverges from the substantive goals it seeks to achieve (Hensby *et al*., 2011, p. 813). The case analysis in this paper introduces a slightly different focus, less on whether bureaucratised or formalised systems remain aligned with their goals, but towards what actors are trying to do with existing bureaucracy. The analysis of parasitic formalisation captures an engagement that cuts across the purposes of traditional banking formalisations, reproducing some elements and seeking to transform others.

Despite a prominent critique of bureaucracy, FinTech actors operate in ways that rely on a Weberian ideal-type conceptualisation of bureaucracy, in that they depend upon 'the discharge of business according to calculable rules and without regard for persons' (Hodson *et al.,* 2012, p. 258). As technology start-ups entering financial services markets, FinTech firms benefit from clear procedures and transparent legal frameworks, facilitating strategic action like the obtaining of regulatory licenses. Formal procedures and rules are diligently adhered to as a means to gain access to and operate within the traditional banking sector. Yet, rather than the established formal organisation of traditional banking usurping the substantive goals of the start-up, a strategy of parasitic formalisation brings formal elements in service of transformative agendas. This analysis supports challenges to binaries between substantive and formal rationality (Stinchcombe 2001), but also suggests that organisational strategies such as parasitic formalisation can produce complex alignments between substantive goals and formalisations, leading to potential conflicts between different substantive goals adhering to the same formalisations. While Stinchcombe (2001) understands formality as 'preserving what is essential in the substance' for specialised uses (p. 3), parasitic formalisation highlights a complex relationship in which formalisations are connected to divergent purposes, involving a strategy of preserving the 'essence' of some formalised elements, while seeking to transform others.

In this way, parasitic formalisation suggests the need to study the particular organisational work involved in connecting substantive purposes to formalisations, with implications for how the relationship between the two is configured. Drawing out the work of parasitic formalisation reframes discussions distinguishing between formal and informal activity as a route to understanding dynamics of formalisation and change. For example, suggestions that actors within formal systems 'look to pathways outside formal rules to resist exploitation, control the work process, and protect their interests' (Hodson *et al.*, 2012, p. 260). Instead, parasitic formalisation draws out ways in which Future Bank look to pathways *inside* formal rules, engaging them as a means to pursue transformative visions of alternatives within traditional banking.

Transformative Agendas in Established Contexts

In addition to nuancing critiques of the formal, the preceding analysis of parasitic formalisation has implications for broader discussions of transformative agendas in established organisational contexts, or how change is produced in an 'already organised world' (Hjorth and Reay, 2022, p.160). Where recent discussions highlight tensions inherent in bringing about transformations within particular socioeconomic contexts (Wright *et al.*, 2013) (Elias, Chiles and Crawford, 2022), the concept of parasitic formalisation helps to think about the work involved in producing change within established, formalised systems. Organisational studies have drawn out the complementarities between formal organising and transformative agendas in the tech sector (Monteiro and Adler, 2021) (Adler, 2005); and social movements (Husted and Just, 2022) (Hensby *et al.,* 2011, p.812). From these studies, we know that attempts to change the world, whether by 'disruptive innovators' or social activists, involve complex engagements with existing forms of established organised systems, often the very forms these transformative agendas animate themselves in opposition to. Our analysis of parasitic formalisation draws out the kinds of work that intermediate transformative agendas and established contexts. This is relevant for thinking about how political possibilities may be embedded in stabilised, established forms, even those that seem to reproduce the dominant power structures of established systems.

Honing in on the relationship between attempts to change the world and 'already organised' forms, parasitic formalisation has implications for discussions of the dualities and paradoxes highlighted in discussions of institutional entrepreneurism (Zilber 2007). In one sense, it may be tempting to view Future Bank's engagement with traditional banking formalities as a means to gain symbolic legitimacy. Yet, drawing out the work of parasitic formalisation muddies clear distinctions between formalisation as symbolic legitimacy and innovation. Such a distinction upholds separations between substantive purpose and formal rationality, implying that engagements with the formal serve a kind of ritualised function, acting as a veneer over the actual innovation activities taking place (Stinchcombe, 2001, p. 179). In drawing out how formalisations are used towards particular transformative purposes, the analysis of parasitic formalisation points to complexities in the relationship between innovation and formal organisation. Such an understanding suggests organisational activities in which it may be possible for actors to symbolically adhere to formal procedures within an industry, and for such formal engagements to remain aligned with substantive transformative agendas.

Conclusion

This paper has explored the empirical context of FinTech, a context dominated by narratives of change, innovation, transformation, and disruption. The paper moved beyond the FinTech sector's rhetoric, emphasising disruptive innovation and agile entrepreneurs as a remedy to the rigid stabilities of bureaucratic, formal organisation in traditional finance. The paper explores an interesting puzzle in which FinTech actors seek both insert themselves within established formalisations of traditional finance and transform this sector. In drawing out the work of FinTech actors, the analysis honed in on empirical sites that nuance the binaries between innovation and formalisation underlying FinTech rhetoric. The FinTech firm's engagement with the traditional financial sector was conceptualised as parasitic formalisation, describing how existing formalisations are used towards transformative agendas. This was shown to involve a strategy of approaching financial services as 'modules', diligently adhering to established formalisations in order to use parts of the traditional banking sector as modules in a broader transformative FinTech platform. The paper's analysis of parasitic formalisation extends previous attempts to nuance dichotomous understandings of innovative change and the stabilities of formalisations. In doing so, the paper speaks to discussions challenging Weberian distinctions between substantive and formal rationality, drawing out the complexities involved in pursuing transformative agendas within the established formalisations of an 'already organised' world. The paper's findings have broader relevance in thinking about the kinds of work involved in producing change within established organisational contexts. In drawing out the work of parasitic formalisation, this paper speaks to broader themes of how change and established power are mediated, where possible alternatives exist within established financial systems, mediating what changes and what remains stable in contexts of transformation. Surfacing this organisational work thus becomes an important part of understanding how political possibilities are shaped across mundane sites of financial technological innovation.

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Section Three

Overall Thesis Discussion

Distillation of Findings across the Three Papers

As described at the start of this dissertation, the three empirical articles of the thesis sought to answer the research question: *How do FinTech imaginaries intersect with established organisational contexts of traditional banking*?

The first paper sought to answer this question through an empirical focus on established banks in Denmark, exploring the use of imaginaries by traditional bankers working with financial technology innovation and FinTech partnerships. The main finding of this paper is that financial professionals use imaginaries, combined with particular articulations of strategic value, to limit the scope of FinTech innovation. Based on an imaginary of traditional banks as slow, bureaucratic, and locked into existing technological systems, financial professionals use vernaculars of 'strategic value' to select FinTech innovations that fit into this traditional banking imaginary. However, the paper also suggests that in bringing limited versions of FinTech imaginaries into traditional banks, financial professionals also give durable form to transformative elements of FinTech imaginaries. For example, while traditional banks develop limited versions of blockchain technologies, removing elements like radical decentralisation, traditional bank blockchain projects nonetheless open new possibilities and meanings concerning how banks operate and collaborate with competitors. These findings draw out an interplay between imaginaries and rational calculation of strategic value, where transformative elements of FinTech imaginaries become part of sociotechnical assemblages of banking through attempts to discipline them in line with the existing status quo of traditional banking.

The second paper focuses on an innovation unit within an established Danish bank, focusing on the development of a product influenced by FinTech imaginaries relating to the datafied financialisation of everyday life. Implementing FinTech imaginaries within the bank is shown to involve negotiations over understandings of relationships between the bank and customer lives, as well as efforts to reconfigure these relations through the design of digital products. In laying out this finding, the paper draws out contingent work of financial professionals trying to implement FinTech imaginaries in a traditional bank, where the imagined possibilities of, in the case of this paper advanced data analytics, are negotiated in relation to established banking practices. This finding highlights the contingent work involved in intersections of imagination and organising, where attempts to connect FinTech imaginaries with existing organisational processes, systems, and products are by no means guaranteed to succeed.

The third paper of the thesis focuses on FinTech entrepreneurs bringing their imaginary of a financial sector transformed into personalised modules into contact with the traditional banking sector. The paper finds that the FinTech firm uses existing elements of the traditional banking system in pursuit of FinTech imaginaries. In doing so, the FinTech firm works to insert itself into the traditional banking sector, connecting with existing formalisations, such as norms of corporate governance and regulatory frameworks. In emphasising the inseparability and mutual reliance between FinTech and traditional banking, the findings of this paper emphasise the relevance of an intersections focus in this thesis.

In this way, the first and third papers mirror each other in drawing together FinTech and banking intersections as a research object. While Paper 1 points to the imaginative work of bankers to keep things stable, i.e. manage technological innovation to the advantage of established banking, Paper 3 highlights the organisational, legal, and technical formalisations used by FinTech entrepreneurs in pursuit of transformational change. Guided by the question of how imaginaries are used, the three papers explore FinTech and banking intersections from different angles, each highlighting a different aspect of the sociotechnical assemblages that connect FinTech imaginaries with established organising. In drawing out these intersections across different organisational sites and levels, the findings of all three papers highlight the forms of work involved in delimiting the possibilities of financial technology innovation across FinTech and traditional banking.

Each paper draws out work performed by financial professionals within imaginative intersections between FinTech and traditional banking. As outlined at the top of the thesis, I define imaginative intersections as sites in which financial professionals work with FinTech imaginaries and connect them to organisational contexts of traditional banking. In exploring imaginative intersections across the three empirical papers, the papers focus on financial professionals connecting FinTech imaginaries with sociotechnical assemblages of banking in different ways.

Formalising the findings across the three papers, I develop a typology of the work conducted by financial professionals within the imaginative intersections studied (see Figure 4, p. 135 this thesis for examples). Formalised in this way, the findings of this dissertation highlight three types of work: *disciplinary*, *implementary*, and *parasitic*. Actors from both traditional banking and the FinTech sector perform each types of work, describing different ways in which FinTech imaginaries are brought into the sociotechnical assemblages of banking.

Disciplinary work describes the work of delimiting FinTech imaginaries, narrowing the scope of what is considered possible in financial technology innovation, selecting elements of FinTech imaginaries that align with existing elements of traditional banking. For example, a partnerships unit in a traditional bank choosing FinTech firms to invest in, partner with, or acquire based on alignment with existing technical systems and business operations of traditional banking.

Implementary work describes the work of bringing a FinTech imaginary into the organisational contexts of traditional banking, highlighting the negotiations between different expertise areas (e.g. data experts and designers) or functional units (e.g. innovation units and business units) over the scope of FinTech products. For example, which product features to include when designing a FinTech product. Depending on the particularities of different contexts, i.e. which interests, strategies, contingencies of existing technical systems etc. become associated with the implementation of FinTech imaginaries, implementary work could either expand or limit the extent that a FinTech product reimagines established parts of traditional banking.

Parasitic work describes the use of already existing elements in sociotechnical assemblages of banking with the explicit aim of transforming them. For example, work involved in FinTech firms gaining banking licenses, which they aim to use to realise imaginaries of transformed financial services, e.g. imaginaries of democratic, decentralised financial services.

In addition to the three types of work, I identify three operations within imaginative intersections: *problematising*, *projecting*, and *formalising.* In talking about 'operations', I

Operations	Types of Work	Disciplinary	Implementary	Parasitic
Operations	Problematising	Shaping FinTech partnerships around identified problems in established banks and social use of financial services. Selecting particular external critiques of traditional banking, limiting to non-transformative implications, e.g. efficiency, speed, profit maximising.	Critiques of traditional banking framed in terms of customers and users of financial services. Focus on specific problems for customers that financial technology product should solve. Collaborative, dialogic mode of refining problems across different inter and intra organisational interests and concerns. Negotiating competing problematisations concerning the banking sector. Problems refined and negotiated through internal processes.	Critiquing established financial system as cause of societal issues, e.g. financial inclusion, money laundering, financial inclusion. Criciticising technological innovation projects that fail to operate in ways seen as legitimate established actors, e.g. regulators. Critical of lack of connection between systems, e.g. 'too much friction/ financial activity is siloed'.
	Projecting	Articulating visions of the future in which traditional banks remain dominant. Framing traditional banks as arbiters of technological change.	Negotiating visions of future across different forms of financial professional expertise Connecting visions of financial futures with lives of customers. Time span of technological developments dependent on organisational processes, e.g. project phases, awaiting approval from senior management.	Connecting future visions of radically transformed financial services with dominant imaginary of traditional banking Visions of transformed financial services deployed alongside shorter term goals, e.g. launching particular product, raising investment, establishing partnership. Adapting vision to changing situation across industry and in terms of exploiting particular opportunities as they arise.
	Formalising	Using dominant valuation devices to decide what visions should be realised. Making connection to certain technological infrastructures mandatory, e.g. banking data infrastructures. Using cost cutting targets to shape FinTech partnership strategies. Following partnership procedures.	Making choices regarding features and scope of a product. Producing minimum viable products, open to continual, iterative change.	Following regulatory procedures Adhering to institutional expectations surrounding corporate governance. Constructing corporate structure based on norms of traditional finance sector. working in between established forms of traditional banking and FinTech, creating intermediate spaces of possibility in persuit of particular financial visions.

Figure 4: Examples of Types of Work and Operations within Imaginative Intersections

draw inspiration from work using this term to designate ‘forms of action, methods of control, acts of configurations’ (Muniesa et al. 2017) (Ossandón *et al.*, 2022). Through the operations identified, I highlight forms of action across the three types of work, describing different kinds of activities involved in each type of work. *Problematising* describes activities of critiquing or highlighting problems, either within traditional banking or the FinTech sector. *Projecting* describes the articulating of particular imaginaries, either in written, spoken, or audiovisual forms. *Formalising* describes activities dealing with formal organisational procedures or the language of technical systems.

The typology of forms of work and operations are present across the different sites explored as imaginative intersections, connecting the findings across the individual papers of the thesis. I understand the types of work and operations as interrelated, supporting and enabling one another, although one type of work is more prominent in each of the three papers. For example, disciplinary work is most prominent in the first paper, focusing as it does on financial professionals fitting external FinTech innovations within a scope defined by traditional banks. Yet, parasitic work is also discernable in the first paper, seen in the ways financial professionals connect selected FinTech partners with already existing elements of the banks they work in. For instance, the paper describes how actors in traditional bank innovation units aim to arrange existing products and services from business units in combination with offerings from particular FinTech companies. This is *parasitic* work in the sense that it is work through which existing elements of traditional banking are used with the aim of transforming traditional banking, albeit in this case within a limited scope delimited by the ‘disciplinary’ work of the innovation unit. There is also *implementary work* present in this paper, seen in how financial professionals navigate different forms of expertise and competing interests within the particular organisational contexts of traditional banks. The interrelatedness of the types of work and operations identified through the findings of this thesis emphasise the view of FinTech and traditional banking as intersections, rather than separate sectors.

Continuing with the first paper as an example, the three operations - *problematising*, *projecting*, and *formalising* – are also present. For instance, FinTech partners are brought into traditional banks based on their perceived ability to solve problems identified within the banks. Imaginaries of both traditional banking and imagined futures of financial services articulated by financial professionals, seen within interview testimonies and documents.

Formalisation activities are seen in this paper in, for example, the valuation formulas in relation to which FinTech partners are considered, or the specific onboarding processes for FinTech partnerships in the banks.

The findings generated through the three empirical papers of this thesis, formalised in the typology of work and operations, delimit the possibilities associated with FinTech in different ways: by disciplining FinTech imaginaries to fit traditional banking; by developing FinTech imaginaries within contingencies of particular organisational contexts; and by using what already exists in service of transformative FinTech imaginaries. Having outlined the overall findings of thesis, the next section discusses how the findings of the thesis contribute to existing discussions in the literature.

Contributions

While building on previous insights, the topic of intersections between imagination and organising remains an underexplored area, in which either the significance of imaginaries are neglected entirely by organisational research, or the work involved in connecting them with organising is overlooked in lieu of a focus on the performative effect of imaginaries in shaping particular futures. The key contribution of the thesis is to advance understandings of the role of imagination within organisational research, by showing how imaginaries are connected with established organisational contexts. The findings also challenge smooth narratives of digitalisation through a focus on contingencies of sociotechnical relations shaping digitalisation processes within organisational contexts. In addition, the thesis contributes to discussions of stability and change within organisational research, through drawing out organisational sites in which stabilisation and transformation are tied into processes in which imaginaries connect to established organisation.

Imagination in Organisational Research

One of the main contributions this dissertation makes is to extend a burgeoning agenda in organisational research interested in theorising the role of imagination (Komporozous-Athanasiou and Fotaki, 2015); (Beckert, 2021); (Krämer and Wenzel, 2018)(Wenzel *et al.,* 2020); (Thompson and Byrne, 2022); (Flyverbom and Garsten, 2021). This research agenda is united by calls for organisation theory to be attentive to how organisations use imaginaries to manage the future. In a recent intervention in the journal Organization Theory, Beckert (2021) argued for the role of imagination within a range of organisational instruments, such as strategic planning, capital budgeting, and technological projections. In calling for future research on imagination, Beckert asks:

> *What makes an imagined future credible? What degree of novelty is necessary or permissible? To what extent are the imagined futures socially anchored in prevailing organisational structures, institutions and habits? Which futures become suppressed, and why? How are the interests of organisations shaped by imagined futures? (Beckert, 2021, p. 14).*

The findings of the thesis offer some tentative, empirically grounded answers to Beckert's questions. Implicitly concerned with the intersections between imagination and organising, Beckert's questions enquire into how imaginaries connect to what already exists. In drawing out the types and operations of work at imaginative intersections, my findings point to how imaginaries are made to connect with existing organisational contexts, thereby conceptualising how imagined futures may be 'anchored in prevailing organisational structures, institutions and habits'. My typology of work and operations points to how imagined futures are made credible, and how some futures become suppressed. For instance, a predominance of disciplinary work might make certain imaginaries likely to be suppressed, while parasitic work might increase the chances of its realisation.

Yet, it is also here that the contribution of the dissertation challenges the contours of the research agenda laid out by Beckert. In drawing out the work connecting imaginaries with organisational contexts, the thesis challenges some of Beckert's assumptions regarding the role of uncertainty as the pivotal factor shaping relationships between imagination and organising. While Beckert theorises a relationship between imaginaries and rational instruments used by organisations in which the latter is a response to the fundamental uncertainty of the former, my findings highlight aspects of imaginaries in organisational activity that are not necessarily driven by future uncertainty. For example, the conservative 'incumbent imaginaries' outlined in the dissertation's first paper point to the use of imaginaries by an established organisation as they come in contact with other imaginaries of alternative, multiple, and indeed uncertain futures. Along with the imagined futures under conditions of uncertainty described by Beckert, seen for example in FinTech imaginaries, my findings also highlight conservative, 'incumbent' imaginaries based on an inevitability concerning banks as the arbiters of financial technology change. The 'incumbent' imaginaries drawn out in the thesis rely on imagined certainties about what banks are and how they work.

We see, for example, in the first paper of the thesis that an imaginary of traditional banking is tied into the disciplinary work of suppressing transformative FinTech imaginaries. In this sense, this is an example of an imaginary in traditional banking used to limit the scope of technological possibilities, allowing for an imagined future in which banks remain dominant. In the case of this dissertation, this involved an imaginary of traditional banking as slow, bureaucratic institutions, in which navigating intra-organisational interests and power dynamics of different parts of banks is framed as an inevitable component of future technological change. This suggests that it is not only imagined futures generated under conditions of uncertainty that are 'engines of imagination' (Beckert, 2021) and processes of organising, but also imaginaries predicated on the stabilities and certainties generated in established sectors.

Linking imaginaries to processes of stabilisation does not replace the significance of uncertainty within work on imagined futures, and organisational research on imagination more broadly (e.g. Wenzel *et al.,* 2020; Thompson and Byrne, 2022). Instead, it invites scrutiny of particular intersections between imaginaries and established organisational contexts. As my findings highlight, imaginaries can be part of both transformative and stabilising processes, depending on the types of work that are dominant in particular imaginative intersections. In this sense, the findings of the thesis support Beckert's call for the relevance of imaginaries in different organisational contexts, beyond sites, such as the tech sector, where imagined futures are particularly instrumentalised and visible. This would mean acknowledging the significance of imaginaries in sectors or institutions that may appear highly stable and resistant to change. In showing how imaginaries are tied to stabilising, as well as transforming, established assemblages, my findings open ways of understanding the organisational work involved in using both imaginaries of desired futures made possible by technoscientific advancements (Jassanoff and Kim, 2015), and the more conservative imaginaries that become part of organisational efforts to limit the scope of transformation.

Beckert's approach rests on the idea that conditions of uncertainty characterising imagined futures leads to the generation of 'fictional expectations', which organisations use to manage this future uncertainty and to proactively shape what is to come (Beckert 2021, p. 13). Expectations are 'fictional' due to being based on imaginaries of the future that can never correspond to the actual reality to come, but pretend that they do (Beckert 2021, p. 4). Central to the contours of the research agenda proposed by Beckert, 'fictional expectations' establishes a onto-epistemological distinction between the 'fictions' of imaginaries in the present and the 'actual reality' to come. The findings of the thesis challenge the distinction between 'fictional' imaginaries and 'actual reality', by highlighting how imaginaries are connected to technical and organisational assemblages. Rather than Beckert's distinction between fictions and reality, that ultimately imbues fictive instruments with a performativity to shape actual realities, the thesis shifts the emphasis onto the forms of work that give certain imaginaries more or less durability in particular organisational contexts.

Making Imaginaries Performative

In emphasising how certain imaginaries gain durability, I draw on recent discussions challenging a performativity lens in understanding how financial professionals manage the future (Tellman, 2020). Tellman pushes back against notions of uncertain and open futures as the decisive condition in how financial professionals work with future-oriented activities. Advocating instead for a focus on the organisational, material, legal, ecological, and political modes of extending and binding time, Tellman argues for a focus on how certain futures are made more durable (Tellman 2020, p. 347). My contribution to organisational research on imagination complements such a move, demonstrating how durabilities are constructed across organisational sites understood as sociotechnical assemblages. In theorising an approach to temporality that takes materiality seriously, Tellman's work also points to intersections that, although not explicitly formulated in this way, resemble those studied in this dissertation. For instance, in advocating for a 'material temporality of duration', Tellman wishes to better attune us to the politics of making certain imagined futures performative. Arguing that 'financial futures are both radically bound and full of volatility, fixed and flexible', Tellman draws out dynamics of stability and change at intersections between imagination and organising. In dialogue with understandings of performative futures that have influenced organisational research on imagination, Tellman points to exploring the socio-technical organisational work involved in giving certain imagined futures more durability. My findings extend this focus on how imaginaries are made durable, through drawing out the work occurring at intersections between imagination and organisation.

Each of the three papers in this dissertation draw out different ways in which imaginaries achieve more or less durability in organisational contexts. Paper 1 highlights the way that future imaginaries of FinTech find form in the strategic innovation activities of incumbent banks, thus giving these transformative imaginaries durable form, albeit while being disciplined by conservative imaginaries of traditional banking. Paper 2 highlights the work performed by a bank innovation unit, as it connects FinTech imaginaries of datafied banking to the contingencies of established organisational contexts. Crucially here, the emphasis is not only on how imaginaries have a performative effect on the course of the future, but on how these imaginaries intersect with established organisation. In this way, we see how imaginaries go from being images of the future, similar to Beckert's 'fictional expectations', to having a certain degree of durable reality through being connected to particular socio-technical assemblages. To take an example from Paper 2 of the thesis, the innovation unit studied are influenced by a consultancy document articulating a vision of datafied financial services. By drawing out the implementary work of the innovation unit, we can think about how the FinTech imaginary articulated in the consultancy report becomes connected to the organisational context of the bank, as the unit attempts to negotiate the imaginary into existing relations, strategies, technical systems etc. in the bank. Paper 3 draws out the work involved in giving transformative imaginaries durability, as the company inserts itself into the established forms of the traditional banking sector. Challenging distinctions between performative images of the future and actual realities may seem like a minor point of theoretical contention, but I argue that it is a useful means of extending the emerging agenda on imagination in organisational research. It expands this agenda by dampening the over privileging of performativity afforded by Beckert's conceptual framework and work influenced by it, highlighting instead the particular kinds of work involved in imaginaries becoming significant aspects of organising.

The contributions of this thesis resonate with earlier calls within organisation studies to build a richer picture of what is happening in organisational engagements with imagined futures (Pollock and Williams, 2010) (Pollock and Williams, 2016). Focusing less on the hyperbolic nature of innovation imaginaries, and more on their increasingly organised coordination, has been a useful means of challenging tendencies to tacitly impute performativity to particular imaginaries (Pollock and Williams, 2010, p. 528). The findings in this dissertation hone in on sites in which such 'organised coordination' of imaginaries takes place, across intersections of FinTech and traditional banking. The differences in aims and approaches of the two works notwithstanding, this dissertation builds on and extends the interventions of Tellman (2020) and Pollock and Williams (2010) in delineating empirical sites in which organisational work involved in the use of imaginaries can be described and analysed. In doing so, the thesis offers tools for thinking about how certain transformative imaginaries come to take hold in particular organisational contexts, while other organisational contexts appear resistant to change. In proposing 'imaginary intersections' as sites in which we can study the work of connecting imaginaries to existing organisational contexts, the dissertation emphasises intersections between imaginaries and organising in thinking about performative futures. In discussions of performative imaginaries, 'the specific ways that futures get deployed and move across levels to 'stabilise' is still an open empirical question' (Liao and Illiadis, 2021, p. 263). Elucidating the work at imaginative intersections in the thesis offers tools for understanding how stable connections between imaginaries and organisational contexts may occur. The thesis thus highlights the empirical complexities of what can sometimes appear to be hyped imaginaries and visions, while at the same time calling for a greater attunement to the role of imaginary elements in organisational activities.

Contingencies of Digitalisation

Others shaping the emerging research agenda on imagination in organisational research include Flyverbom and Garsten (2021). While these authors focus on ‘anticipation’ over the explicit language of imaginaries, there are parallels here in their understanding of anticipation as ‘the envisioning of a future event or state in the present’ (Flyverbom and Garsten, 2021, p. 2). Flyverbom and Garsten contribute to carving out an emerging research agenda exploring imaginaries within organisational research, pointing to future research avenues focused on knowledge practices through which organisations engage with the future, and the relationship between this and how certain ‘images of the future’ are made to ‘stick’ (Flyverbom and Garsten, 2021, p. 16). The findings of the dissertation contribute here by empirically demonstrating how connections between imaginaries and organisational practices operate. The thesis also makes a theoretical contribution by emphasising that it takes particular forms of work to establish connections between imaginaries and organisational relations, and that such connections can be understood as sociotechnical assemblages.

For instance, in relation to Flyverbom and Garsten’s question concerning how imaginaries are made to ‘stick’, how they become significant for decision making, policy and long-term planning, my findings highlight the work of financial professionals in working with FinTech imaginaries in particular organisational contexts. Through the empirical examples across the three papers of the thesis, we see that making imaginaries ‘stick’ involves coordinating and planning work, e.g. meetings between FinTech firms and traditional bankers negotiating the scope of FinTech products, or ensuring that a FinTech firm complies with the expectations in the traditional banking sector surrounding things like corporate governance. In dialogue with Flyverbom and Garsten (2021), activities like the examples just given can be viewed as making ‘certain images of the future’ more or less durable.

The different forms of work brought out in the findings of the thesis show ways in which the durability of certain imaginaries may be accomplished. For instance, through *disciplinary* work we see imaginaries gain durability within organisational contexts, but with limited imaginative scope. With *implementary* work we see the malleability of imaginaries and contingent attempts to give them a durable positon in particular organisational activities, while *parasitic* work shows ways in which the durability of imaginaries may be achieved through using existing elements in organisational contexts to try and realise a transformative imaginary.

The second paper in this dissertation, for example, unfolds the *implementary* work of making certain future imaginaries of banking stick, or giving them more durability in the organisational contexts of retail banking. Here, *implementary* work is shown to involve combinations of different expertise and negotiations surrounding the relationships and boundaries between banks and their customers. Drawing out the work of implementing imaginaries highlights the complexity and fragility of the work needed for imaginaries to become connected to organisational activity, such as product development within broader strategic directions.

In emphasising the importance of contingent work for connecting imaginaries with organisational contexts, the thesis also contributes to literature concerned with the contingencies of digitalisation and datafication in organisational contexts (Thylstrup, Flyverbom and Helles, 2019). Datafication literature argues for a nuanced position in the study of data technologies in organisational contexts, suggesting that we neither dismiss the transformative potential associated with datafication or overlook the existing organisational practices and contexts in which data technologies operate. The findings of this thesis can be applied to thinking about how processes of datafication relate to organisational contexts, and how we might understand tensions between the transformative potential of datafication and the continuation of established organising in which technologies are implemented. Given work that shows datafication to be characterised by 'mythological beliefs' (Boyd and Crawford, 2012) and 'knowledge production imaginaries' (Madsen, 2018), one can see overlaps with the imaginative intersections studied in this thesis. This dissertation contributes to datafication discussions by empirically elucidating sites in which the hyped imaginaries of datafication - often centred on new forms of sociality, digital interactions, and forms of governance – intersect with established organisational contexts. The empirical elucidation of imaginative intersections gives in turn insight into discussions of digitalisation in organisational contexts (Plesner and Justesen, 2022), offering tools that show how imaginaries surrounding digital technologies intersect with existing forms of work and organisational relations.

Applying the findings of this dissertation to discussions of digitalisation in organisational contexts, my findings suggest that it takes active work for transformative imaginaries surrounding digital technologies to connect with established organisational contexts. Drawing on the typology of work and operations formalised in this thesis, we can say that the different types of work may have implications for the extent to which digital technology imaginaries are realised in particular organisational contexts. A related and more general contribution of the thesis can be elaborated from this last point, which is to insist on historicising the often-hyped claims and imaginaries surrounding technology innovation, particularly those drawing on themes of 'digital disruption'. For instance, the findings across the three papers show ways in which digital disruption imaginaries are contingent on the particular organisational contexts through which they connect and gain durability.

In this sense, the findings of the thesis do not entirely refute the transformative claims of technology imaginaries so much as they ground claims of transformation in the contingencies of socio-technical assemblages. The transformations contained within particular imaginaries can indeed be realised, but this is not given. Such possibilities are instead contingent on the work across sociotechnical relations in established contexts. Emphasising the contingencies of digitalisation imaginaries challenges overly smooth accounts of technological change, insisting instead on the role of organisational work in realising transformative imaginaries.

Processes of Stability and Change

A final contribution made by the dissertation is to discussions of stability and change. The contribution here is primarily to discussions within organisation studies, where, as we saw in the literature review at the top of the thesis, the relationship between change and stability have formed the basis of longstanding discussions in the field. As highlighted in the third paper of the dissertation, a persistent trope continues to hold influence in organisation and management studies concerning the relationship between change, innovation, and flexibility on one side, and stability, formal organisation, and rigidity on the other. While discussions of stability and change are dealt with explicitly in the third paper, the theme runs through the entire dissertation. The findings of the thesis highlight work across sociotechnical assemblages that determines whether processes of stability or change are most active in contexts of technological innovation. For instance, through the *disciplinary work* of traditional bankers in Paper 1, we see how professionals working with technological innovation shape a situation characterised by relative stability, i.e. traditional banks control the kinds of FinTech innovation developed. Yet, an understanding of *parasitic work* suggests that connecting FinTech innovations with what already exists in banking can be used in service of more transformative agendas. Across the empirical chapters of the thesis we see a similar interweaving of the different forms of work shaping processes of stability and change. In this sense, the findings suggest that processes of stability and change are not oppositional, but outcomes of particular forms of work across sociotechnical assemblages.

As engaged with in Paper 3, a growing body of organisational research has challenged dichotomies between change and stability, highlighting the enabling capacities and flexibilities of bureaucracies (Stinchcombe, 2001) (Adler, 2005) (Pedersen, 2016) (Farjoun, 2010b). This dissertation extends challenges to binaries between stability and change by showing ways in which processes of stability and change are closely related within the empirical contexts studied. Paper 1 and Paper 3 of the thesis illustrate stability and change dynamics from two complementary perspectives. The financial professionals in Paper 1 are shown to rely on creative imagination in order to maintain stability in established banking engagements with FinTech innovation, while Paper 3 shows how a FinTech start-up uses established organisational, technical, and legal forms of traditional banking in order to enact transformative imaginaries. The complementarity between stability and change processes is also present in Paper 2, discernable in the way financial professionals work to reconcile datafication imaginaries with existing products and how the bank understands its relationships with customers.

In this way, the thesis contributes to stability and change discussions, by drawing on empirical analyses to suggest that imagination is used by organisational actors to ensure continuity, while bureaucratic elements of formal organisation are employed in the service of transformative imaginaries. Building on claims that under certain circumstances, stability can be a medium of change (Farjoun, 2010, p. 203), the thesis extends challenges to binary understandings of stability and change in organisation studies, showing how work connecting imaginaries and organising involves interrelated attempts to transform and stabilise traditional banking. Drawing out how processes of stability and change are tied into the same activities is made possible by the development of the concept *imaginative intersections* in the thesis. The concept opens sites to study how imagination connects with established organisation, and through which I develop a typology of the different forms of work and operations involved in delimiting possibilities of technological innovation. The forms of work and operations developed in the dissertation's findings can then become tools for thinking about how certain forms of change become possible in some organisational contexts, while other organisational contexts maintain a convincing veneer of stability.

Concluding Remarks

The dissertation began by introducing a curious puzzle in which the FinTech sector is dominated by transformative imagines, yet closely connected to established organisational contexts of traditional banking. Responding to the puzzle of FinTech, I pondered how best to understand, study, and theorise organisational activities that appear dominated by imaginative activity, and at the same time connect to organisational and technical contexts of the established banking sector. The thesis thus set out to understand organisational activity that seems at once driven by imaginaries and contingent in existing organisational forms. How does one study intersections between imagination and organisation? This study has approached this question by constructing an object of analysis at intersections between ostensibly conflicting elements, imaginaries and established organisation, between what exists and what is imagined. In honing in on intersections between FinTech and traditional banking, the thesis identified multiple sites for data collection, facilitating the empirical description and analysis of sites in which imaginaries connect to established organisation.

The thesis conceptualised intersections between FinTech and traditional banking as imaginative intersections, which paved the way for a study of how FinTech imaginaries are connected to established organisation in traditional banking. I developed a theoretical framework that approached imaginative intersections as imaginaries connected to sociotechnical assemblages of FinTech and traditional banking.

The main findings of the thesis centre on the development of a typology of work and operations within *imaginative intersections*. The typology of different kinds of work includes three types: *disciplinary work*, *implementary work*, and *parasitic work*. Across each type of work, three operations were identified: *problematising*, *projecting*, and *formalising*. The typology is a useful tool for thinking about how imaginaries intersect with, and mutually shape, the sociotechnical relations in organisational contexts, and how imagined forms of financial technology change are shaped across intersections between FinTech and traditional banking.

The findings offer insight into why some intersections between imaginaries and organisation appear to reproduce the established organisational stabilities, while others organisational contexts appear more susceptible to, and indeed driven by, imaginaries of change. The findings of the thesis develop theoretical contributions that speak to discussions in organisation studies concerning imagination, the organisational contingencies of digitalisation, and stability and change. In insisting on the centrality of intersections, the findings of the thesis suggest that imaginaries play a significant role in established and stable organisational contexts, just as the stabilisation of sociotechnical relations plays a significant role in organisational contexts ostensibly defined by transformative imaginaries.

Limitations of Study and Avenues for Future Research

While I have introduced and provided empirical analysis of underexplored sites at the intersections of FinTech and traditional banking, there are many areas of the work conducted at these intersections not included in the scope of this research. The empirical materials included in this study mainly focus on the planning work and reflections of financial professionals who are working with financial technology innovations and how they fit into existing organisational contexts. It could therefore be beneficial for future research to explore imaginative intersections at other stages of technological development and implementation. This study also only focused on the materiality of intersections studied to a limited extent. The material elements of imaginative intersections informed both the empirical and theoretical contributions of the thesis, and were understood in terms of their connections with organisational, discursive, and imaginative elements in sociotechnical assemblages. However, future research with a greater attentiveness to the particularities of different materialities in imaginative intersections could open up further avenues of inquiry. For instance, what role could different materialities play within intersections between imagination and established organisation? Moreover, due to access issues that, in part, stemmed from a PhD study coinciding with a global pandemic and multiple 'lock-downs', the data produced through participant observation is limited. This is another way in which future research could go beyond the limits of this study, opening possibilities to explore how the study's findings may be altered by the particularities of longer term immersion in particular field sites. This limitation of fieldwork access did, however, lead to greater emphasis on data collection across multiple sites, which was beneficial for the central role played by conceptualisations of intersections in the thesis.

Broader Relevance of the Study

A thread running through this thesis has been the problem of how imagined possibilities emerge and gain durability within established organisational contexts. Here, the focus has been on a rather niche technology sector, FinTech, and its relations with traditional banking. However, the theme of how imaginaries intersect with and gain durability within established organisational contexts has implications beyond the empirical context studied. The findings of the thesis speak to broader discussions of the shaping of possibilities within social change and alternatives in broader spheres of life. Not least, due to the increasing imbrication of digital technologies and our everyday lives. In this sense, the implications of this study go beyond the anxieties and jubilations of financial professionals in their internecine competitions over market shares, or the particular attempts to expand or delimit technological imaginaries across the financial sector. In addition to the contributions outlined in the above discussion section, and the small extensions to research agendas therein, the study speaks to broader questions surrounding how change can be imagined, how alternatives can be brought to bear within established contexts they seek to reimagine, and how to think about the power and politics influencing such processes. In this way, this dissertation cuts across an issue integral to some of the most pressing problems or 'grand challenges' of our time, such as reimagining the economy in the face of climate disaster, or the reimagining of work and life in the face of global pandemics. Intersections between imagination and organisation come to bear on a great number of societal problems, where understanding the work involved in shaping and maintaining these intersections may be decisive.

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Appendix

Item 1: Examples of Memo Writing

1.12.2019 – Flexibility of financial infrastructures

Reading the Banking Circle report on digital financial infrastructures – there is a line about how new financial infrastructures are essential to ensure organisations have the flexibility to respond to future change. Quotes include: "The world was completely different five years ago. Trying to set direction for five years from now is very difficult. So, you have to be flexible." And "Bypass old, bureaucratic and expensive systems and enable global banking services for your clients." This is one way in which contested imaginaries of the future intersect with the materiality of infrastructures. This also chimes with M's agenda of setting up a partnership third party system that was flexible enough to respond to change easily. This emphasis on flexibility in face of changing future is quite fundamental to how contemporary FinTech (as a mindset, organisational forms, ways of doing things, technological stacks) differentiates itself from the traditional bureaucratic organisational forms of banks. In exploring emerging FinTech infrastructures, it would make sense to **explore bureaucracy and formal organisation, in a way that seriously takes the technical into account** (some kind of ANT methodology). There is something interesting within this concerning 'learning'. Weber associated bureaucratic organisations with ability to learn, whereas now this is associated with a temporality of 'real time' data analytics, which come to rely on cloud computing technologies (for a industry perspective on this see Deloitte report on cloud computing and future of FSI). Ethos of Bureaucracy as 'way of thinking' –(Rohr – see Formal organization powerpoint), which is interesting as FinTech – defined by a kind of anti-bureaucracy sentiment – often described as a 'mindset'.

22.10. 2020 – Need to map the concrete relationships at field level in Danish context

It is worth keeping in mind that the progression of FinTech in Denmark, and the approach taken towards it from Danish banks, is an interesting thing to be able to document in PhD. This would be a kind of field level process, whereby initial hype, fears of FinTech as a disruptive threat, subsequently transform into banks treating FinTech as a tool to solve bank problems. This is on the one hand a question of organisational change, sensemaking, and socio-technical networks. How do banks as organisations, financial technologies (what makes something a financial technology? Does cloud computing become a financial technology when bankers or FinTech companies utilise AWS?). This could be an interesting process to try and map out as a historical progression, with different public and private actors. Where you have things like the Disruption council and government involvement with the Singularity University, and high points of FinTech investment at Bank X for example, followed by greater concerns with cutting costs and reorganising. In one sense it is a story of the bureaucracy of banks, and perhaps the visions and interests of senior leaders, coming into contact with what could be construed as a threat to this way of doing things, this understanding of what a bank or banking is. Should remember to make this the focus of interview with L tomorrow. L, for example, cited the emergence of digital infrastructures in Denmark as the central condition for the emergence of FinTech partnering activity in the bank.

Item 2: Example of 'Mapping Subject Positions' sketch, conducted by author in 2021, template from Fortun 2017)

ETHNO ANALYTICS

SKETCHING ETHNOGRAPHY
Mapping Subject Positions

In this sketch, compile statements made by a particular subject or type of subject you are studying. On the left, list myriad forces and factors that compel or catalyze the subject to say these things (instead of some other things, as Foucault would say). On the right, list what undermines or corrodes the force of these statements in the world.

catalysts	statements	corrosions
Raising capital, financial regulation, speed of blockchain processing, framing of NGO 'problems', global platform imaginary	'Scaling through partnerships'	bank unwillingness to partner, dependence on big tech infrastructure , transformative potential of partnerships/collaborations,
discourse of seamless experience, platform logics, viewing aim relation with user through 'stickiness' lens (entangling with user lives)	'We want to be the interface for everything'	existing dominance of certain platforms, limits of system interoperability, ideological bubbles (divisive libertarianism)
Anti-bureaucracy discourse, automation discourse, influence of silicon valley imaginaries, criques of human falibility	'let's get rid of the 20,000 compliance officers and replace them with a bot'	regulation, limits of automated technology, norms concerning value of human interactions
business strategy of acquisition, working with regulators, raising capital, disruption discourse, satisfying community focus on change	'once we get in can start poking the beast' 'buy a bank that's been a bank for 100 years and convert it to a digital bank'	regulatory obstacles, limitations of action once regulated,
	speaking subject	
IBM cloud-native microservices, programmeable smart contracts, crypto memes, open source networks	"When money becomes fully digital, it can enable endless opportunities for creation, customization, and adaptation'	erosion of diversity in scaled platform, entanglement of particular problem formulation into platform solution
creation of own digital currency, funding raised, market making actors, dissatisfaction with payment fees, fintechs with high market valuations	'we will scale our solution to different currencies and jurisdictions worldwide'	amount of work required to make these conncetions and relationships relies on early adoption and network effects - people need to use it.
designing platform and vision around problematisations of certain actors, harnassing networks of expertise and influence, coming quickly to market.	'To scale our products and solutions globally, we target organizations (such as fintech labs, community networks, and NGO interest organizations)'	difficulty of speaking outside of these networks, limitations of 'global scale discourse' in relation to current reality of existence.

Item 3: Example of Mapping sketch technique

Performed by author in 2021, template found in Fortun (2017)

deutero	Reflective/learning capacity	- Through a lens of 'disruption' – i.e. that inexhorable technological change is the significant element in any theory of change. - Through a lens of institutional power and state regulation – i.e. that banks are protected by regulatory barriers, and have the power to acquire or out compete other actors providing financial services. - In engagement with open-source discourses and organising. - As a question of the concerning power and influence of 'Big Tech' and its infrastructures. - Through ideological articulations of libertarian freedom. - Through articulations of fiduciary responsibility. - Through justifications of unfairness and a need for change.
meta	Dominant discourses	**Disruption discourse** – narrowly defines technologies as catalysts for change, has determinist underpinnings of historical change, erases politics of technological development, or limits it to notion of competing interests within a field. **Financial Inclusion –** animates much activity and organising in start-up scene, tied to funding pitches and community building, as well as motivating future visions

		tied to technological products. Limits idea of inclusion to one without agency or critique of dominant systems. Participation reduced to question of access. **Slow, powerful, bureaucracy –** animates traditional banking sector. While traditional banks are problematised, and many problematisations of fintech sector are shared, the durability of existing institutional structures is taken for granted. Questions of transformative change are shifted to questions of speed.
macro	Law, political economy	Financial regulation – e.g. banking license as prerequisite for certain types of action and animating particular collaborations. Political economy of VC funding, and Token based capital raising in crypto space Digital business models – aims to explicitly reconfigure relationship between customer and financial institution.
meso	organizations	States, central banks, established banks, neobanks, start-ups, incubators, accelerators, investment funds, consultancies, universities, people using financial products, regulators.
bio	bodies	Entanglments of digital financial technologies and daily bodily movements. E.g insurance pricing tied to wearables.
micro	practices	Arbitrage – practices of the start-up moving diverse entities across contexts to capatalyse of this difference. E.g. people’s skills and expertise, movements of money across borders, transfer of national currency to cryptocurrency.
nano	Language /subjectivity	the embattled entrepreneur actors bridging diferent worlds – e.g. traditional banking and crypto

		potential shaping of subjectivities of users of fintech products (e.g. financialization)
edxo	Education and expertise	Computer programming Storytelling Marketing Mentoring Knowledge of financial regulation and workings of traditional banks
data	Data infrastructure	Blockchain ledgers IBM cloud servers Price algorithms Fintech products mixing capacity to calculate from diverse customer data and visualize in 'user friendly' ways in apps.
techno	Roads, transport	Digital infrastructures in Denmark – coupled with blockchain infrastructures and international payment infrastructures.
eco	ecology	ESG investment as new hyped object of concern replacing Fintech disruption environmental costs of cryptocurrency mining. Absence of ecological issues that shape technologies in white papers
geo	Earth systems	Blockchain/crypto future-oriented mythologies brought into situations dealing with fallout of earthquake in 2020. Crypto

		investors tying humanitarian assistance with utopian (or dystopian, depending on viewpoint) of crypto territory.

Item 5: English Summary

This PhD project studies intersections between the financial technology sector (FinTech) and traditional banking, approached as sites in which imaginaries, such as those pointing to ‘disrupted’ futures of banking, intersect with established organisational contexts of traditional banking.

The focus on intersections departs from a curious puzzle presented by the FinTech sector, in which activity in the sector is characterised by both imaginative visions of transformed financial services and connections to traditional banking.

The thesis suggests the concept *imaginative intersections*, which hones in on intersections between imagination and established organisation. In studying imaginative intersections, the thesis is guided by the question: ‘How do FinTech imaginaries intersect with established contexts of traditional banking?’ This research question is motivated by a broader interest in how imagined possibilities are delimited within established organisational contexts.

The thesis engages with discussions across science and technology studies (STS), anthropology, and cultural economy concerned with finance, technology, and imagination, thinking about the kinds of worlds instituted through actors grappling with financial technological developments. A burgeoning research agenda on imagination in organisation studies is then fleshed out, drawing together different works that point to a growing interest in the significance of imagination in organisational activities. Within the emerging research agenda on imagination in organisational research, the thesis hones in on a particular tension between imagination and established organisational contexts, arguing that we should be attentive to the organisational work involved in making certain imagined futures performative.

The project is based on empirical work conducted with banking and technology professionals across multiple financial institutions and FinTech firms in Denmark, including fieldwork with an established bank, a payments start-up, and across industry conferences. Focusing on retail banking, the thesis highlights sites of organisational activity conducted across FinTechs, established banks, and the lives of customers. The analysis is based on 70 hours of fieldwork observations at industry events, an innovation unit at a traditional bank, and with a FinTech start-up; 38 semi-structured interviews with financial professionals across FinTech and traditional banking; and documents shared by informants. Data collection progressed in two phases. The first phase was a broad interview study across FinTech and traditional banking in Denmark and fieldwork at industry events, the second phase comprised of observations within a traditional bank and a FinTech firm.

The first article of the thesis *The Significance of Boring FinTech: Technology imaginaries and value vernaculars in established banks* is based primarily on interviews conducted with financial professionals across multiple traditional banks and FinTech firms in Denmark. The interview data is supported by analysis of documents and participant observation at industry events, such as banking and FinTech conferences. This first paper is focused on financial professionals across multiple institutions who work at intersections between traditional banking and FinTech. This paper focuses on how financial professionals discipline the scope of FinTech imaginaries, through controlling the boundaries of what kinds of FinTech innovation are deemed to be possible. The financial professionals are shown to do this by drawing on an imaginary of traditional banking as a bureaucratic organisational form and through the dominance of articulations of 'strategic value' in traditional banks. The combination of a traditional banking imaginary and articulations of strategic value are shown to both discipline transformative FinTech imaginaries, yet also give durable form to transformative imaginaries within traditional banks.

The second article of the thesis *"How is Your Financial Well-Being, Give Me a Number?": Datafied financial attachments and emotional banking* focuses on fieldwork conducted with an innovation unit within a traditional bank in Denmark. The unit were in the early development stages of a new financial technology product based around increasing financial well-being of customers through building digital tools into banking experiences. The unit studied operate at an intersection between established business units in the bank and the FinTech sector, with which the innovation unit is connected either through actual partnerships or through finding inspiration in FinTech imaginaries of financial services. This second paper explores the contingent work of financial professionals trying to implement FinTech imaginaries surrounding datafication in a traditional bank. The paper explores how future imaginaries of data-driven digital banking become part of reconfiguring relations between banks and customers lives. The work of implementing FinTech imaginaries within a traditional bank draws out ongoing negotiations between digital banking and face-to-face human interactions. In focusing on how financial professionals balance competing understandings of banking relationships in designing new digital tools in the bank, the paper draws out the active work involved in financial professionals implementing FinTech imaginaries within established organisational contexts of banking.

The third and final article of the thesis *Making Dumb Money Smart: Parasitic formalisation in the Danish FinTech sector* focuses on a FinTech start-up in Denmark attempting to transform traditional financial sector, while also aiming to connect with and insert themselves into traditional banking. This third paper explores a start-up aiming to transform the future of banking, exploring how the start-up uses existing forms in the traditional financial sector in service of realising imaginaries of a transformed global banking platform. In focusing on a FinTech firm working to both connect with and transform the traditional financial sector, this paper explores imaginative intersections from the vantage point of a FinTech firm. The paper exploring ways in which FinTech imaginaries of 'decentralised finance' are connected to established forms of traditional banking, shown to involve work with existing elements in the financial sector in ways that aim to transform them.

Formalising the findings across the three papers, the thesis develops a typology of three interrelated types of work conducted within intersections between FinTech imaginaries and established organisation in traditional banking: *disciplinary*, *implementary*, and *parasitic*. Disciplinary work focuses on the delimiting of FinTech imaginaries, narrowing the scope of what is considered possible in financial technology innovation. Implementary work describes how FinTech imaginaries are incorporated into the organisational contexts of traditional banking. Parasitic work is characterised by the use of already existing elements in traditional banking, with the aim of transforming them. In addition to the three types of work, I identify three operations within imaginative intersections: *problematising*, *projecting*, and *formalising*. Problematising describes activities of critiquing or highlighting problems, either within traditional banking or the FinTech sector. Projecting describes the articulating of particular

imaginaries, either in written, spoken, or audiovisual forms. Formalising describes activities dealing with formal organisational procedures or the language of technical systems.
The thesis discusses the relevance of the findings for discussions of imagination in organisational research, the contingencies of digitalisation in organisational contexts, and discussions concerning stability and change in organising. The thesis concludes with reflections on the broader relevance of the study for understanding how transformative agendas might be realised in established contexts of organisation.

Item 6: Dansk Resume

Dette ph.d.-projekt undersøger 'skæringspunkter' mellem den finansielle teknologisektor (FinTech) og traditionelle banker. Afhandlingen studerer de steder hvor forestillinger, som dem der peger på disruption af banksektoren møder eksisterende organisatoriske forhold i traditionelle banker. Afhandlingens fokus på skæringspunkter udspringer fra en undren relateret til FinTech, idet sektoren på én gang er præget af visioner om transformerede finansielle tjenesteydelser og forbindelser til traditionel bankvirksomhed. Afhandlingen foreslår begrebet 'imagined intersections' (forestillede skæringspunkter) som en måde at begrebsliggøre og studere skæringspunkter mellem forestillinger og organisation inden for FinTech og traditionelle banker. Undersøgelsen af 'imagined intersections' styres af spørgsmålet: Hvad sker der i mødet mellem FinTech forestillinger og den traditionelle banksektor? Dette forskningsspørgsmål er motiveret af en bredere interesse for, hvordan 'forestillede muligheder' begrænses af etablerede organisatoriske sammenhænge.

Afhandlingen baserer sig på videnskabs- og teknologistudier (STS), og den del af antropologi og kulturøkonomien, der beskæftiger sig med finansiering, teknologi og forestillinger, med fokus på verdener skabt af aktører, der er medskabere af den økonomiske teknologiske udvikling. En spirende forskningsdagsorden om 'forestillinger' i organisationsstudier introduceres og diskuteres, og inden for denne nye forskningsdagsorden fremhæver jeg en særlig spænding mellem forestilling og etablerede organisatoriske sammenhænge. Her argumenterer afhandlingen for, at vi skal være opmærksomme på det organisatoriske arbejde, der er involveret i at gøre visse forestillede fremtider performative.

Afhandlingen er baseret på empirisk arbejde udført med bank- og teknologiaktører på tværs af flere finansielle institutioner og FinTech-virksomheder i Danmark; herunder feltarbejde med en etableret bank, en FinTech-start-up og på tværs af branchekonferencer. Med fokus på detailbankvirksomhed fremhæver afhandlingen steder for organisatorisk aktivitet udført på tværs af FinTech-virksomhed, etablerede banker og deres kunders liv. Analysen er baseret på 70 timers observerende feltarbejde ved branchebegivenheder, ved en innovationsenhed i en traditionel bank og i en FinTech-start-up; 38 semistrukturerede interviews med bank professionelle på tværs af FinTech og traditionel bankvirksomhed, samt dokumenter. Dataindsamlingen forløb i to faser, hvor den første var en bred interviewundersøgelse på tværs af FinTech og den traditionelle bankindustri i Danmark, samt deltagelse i branchearrangementer. Den anden var fokuserede observationer i en traditionel bank og i en FinTech-virksomhed.

Den første artikel i afhandlingen *The Significance of Boring FinTech: Technology imaginaries and value vernaculars in established banks* er primært baseret på interviews med bank professionelle på tværs af flere traditionelle banker og FinTech-virksomheder i Danmark. Interviewmaterialet understøttes dokumentanalyse og deltagerobservation ved branchebegivenheder, såsom konferencer om FinTech og bankindustrien. Denne første artikel fokuserer på finansielle aktører på tværs af flere institutioner, der arbejder i skæringspunkter mellem traditionel bankvirksomhed og FinTech. Artiklen fokuserer på, hvordan bank professionelle begrænser omfanget af FinTech-forestillinger ved at kontrollere grænserne for, hvilke former for FinTech-innovation der anses for at være mulige. Det viser sig, at de finansielle fagprofessionelle trækker på en forestilling om traditionel bankvirksomhed som en bureaukratisk organisationsform og gennem dominerende artikulationer omkring 'strategisk værdi' i traditionelle banker. Kombinationen af en traditionel bankforestilling og artikulationer af strategisk værdi viser sig at disciplinere transformative FinTech-forestillinger, men giver samtidig en holdbar form til transformative forestillinger inden for traditionelle banker.

Afhandlingens anden artikel "*How is Your Financial Well-Being, Give Me a Number*?"*: Datafied financial attachments and emotional banking* er baseret på feltarbejde udført i en innovationsenhed i en traditionel bank i Danmark. Enheden befandt sig i de tidlige udviklingsfaser af et nyt finansielt teknologiprodukt som skulle skabe 'øget økonomisk velvære' for kunder gennem opbygning af digitale værktøjer, der skulle levere nye typer bankoplevelser. Som innovationsenhed i en traditionel bank opererer enheden i et skæringspunkt mellem etablerede forretningsenheder i banken og FinTech-sektoren, som innovationsenheden er forbundet med enten gennem egentlige partnerskaber eller ved at finde inspiration i FinTech-forestillinger om finansielle tjenesteydelser. Denne anden artikel undersøger arbejdet hos bank professionelle, der forsøger at implementere FinTech-forestillinger omkring dataficering i en traditionel bank. Artiklen undersøger, hvordan fremtidsforestillinger om datadrevet digital bankvirksomhed medvirker til at omkonfigurere forholdet mellem banker og kunders liv. Arbejdet med at implementere FinTech-forestillinger inden for en traditionel bank illustrerer de igangværende ændringer i forholdet mellem en digital bankvirksomhed og menneskelige interaktioner. Ved at fokusere på, hvordan finansielle fagprofessionelle balancerer konkurrerende forståelser af banker og deres relationer til kunder i udformningen af nye digitale værktøjer i banken, sætter artiklen lys på det aktive arbejde, der udføres af bank professionelle når de artikulerer FinTech-forestillinger i etablerede bankers organisatoriske kontekster.

Den tredje og sidste artikel i afhandlingen *Making Dumb Money Smart: Parasitic formalisation in the Danish Fintech sector* fokuserer på en FinTech-start-up i Danmark, som forsøger at transformere den traditionelle finansielle sektor, samtidig med at den sigter mod at forbinde sig med og indsætte sig selv i selvsamme sektor. Denne tredje artikel udforsker en start-up virksomhed, der sigter mod at transformere fremtiden for bankvirksomhed og fokuserer på, hvordan virksomheden i startfasen bruger eksisterende former i den traditionelle finansielle sektor til at realisere forestillinger om en transformeret global bankplatform. Ved at fokusere på en FinTech-virksomhed, der arbejder for både at forbinde sig med og transformere den traditionelle finansielle sektor, udforsker denne artikel 'imagined intersections' fra FinTech-virksomhedens synspunkt. Artiklen undersøger, hvordan FinTech-forestillinger om 'decentraliseret finansiering' er forbundet med etablerede former for traditionel bankvirksomhed. Det viser sig at indebære et arbejde med eksisterende elementer i den finansielle sektor på måder, der sigter mod at omdanne dem.

Ved at abstrahere resultaterne på tværs af de tre artikler udvikler afhandlingen en typologi af tre indbyrdes forbundne typer arbejde, der udføres inden for skæringspunkterne mellem FinTech-forestillinger og den etablerede organisering af traditionelle banker: disciplinært, implementerende og parasitisk. Disciplinært arbejde beskriver arbejdet med at afgrænse FinTech-forestillinger og indsnævre omfanget af, hvad der anses for muligt inden for finansiel teknologiinnovation. Implementeringsarbejde karakteriserer arbejdet med at bringe en FinTech-forestilling ind i de organisatoriske sammenhænge i traditionel bankvirksomhed, mens parasitisk arbejde beskriver brugen af allerede eksisterende elementer i traditionel bankvirksomhed med det eksplicitte mål at omdanne dem. Ud over de tre typer arbejde identificerer jeg tre processer inden for 'imagined intersections': problematisering, projicering og formalisering. Problematisering beskriver aktiviteter, der kritiserer eller fremhæver problemer, enten inden for traditionel bankvirksomhed eller FinTech-sektoren. Projicering beskriver artikulering af bestemte forestillinger, enten i skriftlige, talte eller audiovisuelle former. Formalisering beskriver aktiviteter, der beskæftiger sig med formelle organisatoriske procedurer eller sproget i tekniske systemer. Afhandlingen afrundes med at foreslå, hvordan resultaterne er relevante for forskningsdagsordenen om forestillinger i organisationer; forankring af digitalisering i organisatoriske sammenhænge; og diskussioner om forholdet mellem stabilitet og forandring i organisationer. Afhandlingen afsluttes med refleksioner over undersøgelsens bredere relevans i forhold til, hvordan transformative dagsordener kan realiseres i etablerede organisatoriske kontekster.

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