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Circular Moonshot: Understanding shifts in organizational field logics and business model innovation

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Abstract

We aim to understand how actors respond to field logic plurality and maintain legitimacy through business model innovation. Drawing on a longitudinal field study in the fashion industry, we traced how de novo and incumbent firms incorporate circular logics in business models (for sustainability) and uncover how the intersection between issue and exchange fields create institutional complexity and experimental spaces for business model innovation. Our findings showed a shift in the discourse on circular logic that diverted attention and resources from materials innovation (e.g. recycling) to business model innovation (e.g. circular business models). By juxtaposing institutional complexity and external pressure to maintain legitimacy, we derived four strategic business model innovation responses – preserve, detach, integrate and extend – that illuminate how actors leverage shifting logics and innovate extant business models (for sustainability). We make novel contributions to the literatures on organizational fields, business models for sustainability and business model innovation.

Keywords: Business models for sustainability; organizational field logics; issue fields; legitimacy; circular fashion
To achieve its “moonshot ambition” of cutting environmental impact by half, while doubling its business, we “will need to forget the linear and move to a circular model.”

Hannah Jones, Chief Sustainability Office, Nike, quoted in GreenBiz, September 20, 2016

INTRODUCTION

Business modeling has become ubiquitous with business strategizing, representing a designed architecture that informs an organization’s value creation and capture activities (Casadesus-Masanell & Zhu, 2013; Chesbrough, 2010; Massa, Tucci & Afuah, 2017). Although the predominant underlying logic of business models is a single commercial or economic logic, increasingly business models embed social responsibility logics, so-called business models for sustainability (BMfS) (Laasch, 2018a; Laasch & Pinkse, 2020; Lüdeke-Freund, 2020), leading to organizational hybridity and dual orientations. Hybrid organizations that combine a variety of logics – market-science logics, economic-social logics, commercial-community logics – have been studied by prior scholarship which has shown that they shape and influence organizational fields (Murray, 2010; Smith & Besharov, 2019). Prior studies have also explored the link between sustainable entrepreneurship and multiple logics, highlighting the duality of the entrepreneurial orientations and the reconciling of tensions (Hahn et al, 2014; DiVito & Bohnsack, 2017; Mair, Mayer & Lutz, 2015). However, few studies have investigated how actors use BMfS, as representations of organizational hybridity, to respond to shifts in organizational field logics. Using this focus, we direct attention to the interactions between field level change and business model innovation.

Organizational fields are socially constructed constitutions of organizations that interact based on commonly understood, institutionally embedded meanings and rules, or logics of the field (Scott, 2001). Actors engage in strategic action and framing tactics that define field logics
– their shared practices, norms, and a common identity of enterprising. Recent work highlights that organizational fields form not only around central markets or technologies (exchange fields) but also around prominent issues (issue-based fields), such as climate change or environmental protection (Hoffman, 1999; Meyer & Höllerer, 2010; Wooten & Hoffman, 2008; Zietsma, et al, 2017) often requiring collective action to address the issues (Grodal & O’Mahoney, 2017). Exchange fields and issue fields intersect, triggering tensions, conflict and plurality and influencing the trajectory of field evolution. Extant literature has shown that firms devise specific responses to logic plurality to maintain their legitimacy in the field (Ansari, Wijen & Gray, 2013; Klitsie, Ansari & Volberda, 2018). Yet, we have scant knowledge about how field actors adapt their business models in response to institutional complexity and logic plurality that arises when issue and exchange fields intersect. This is a critical question important to advancing our understanding of innovation in business models (for sustainability) but also to institutional organizational theory, which has overlooked the interplay of business models and organizational field dynamics.

The plurality of logics in the fashion industry\(^1\) – an organizational field where a linear logic in the exchange field is challenged by a circular logic in the issue field – offers an ideal context to study the interaction of business models for sustainability, business model innovation and field level dynamics. Increasingly, due to the grave environmental impacts of the fashion industry that contribute excessively to greenhouse gas emissions, natural resource extraction, textile waste and chemical pollution, the extant linear logic – take-make-use-dispose – is contested (Berg et al, 2020). Actors, such as social movement organizations, consultants and firms alike, have called for a circular logic that ‘closes the loop’ and regenerates natural resources rather than depletes them (Ellen MacArthur Foundation, 2017; Global Fashion

\(^1\) We use the term ‘fashion’ broadly to include brand manufacturers of apparel or footwear, retailers, and textile manufacturers.
Agenda, 2020). We ground our study in this contested context where the linear and circular logics of the exchange and issue fields compete and co-exist. We focus on how de novo firms (startups in the industry) and incumbents (existing firms in the industry) reconcile and respond to changing field logics through business model innovation and thereby maintain legitimacy in the field.

Drawing on a longitudinal dataset from industry news items, we traced the field discourse on linear and circular logics for a five year period. We augmented our dataset with 27 in-depth interviews with field actors – startups, incumbents, material innovators and industry experts. Using rich, contextualized data from interviews and archival documentation, we uncovered a shift in discourse about circular logic in the issue field, that diverted attention and resources from material innovation (recycling waste) to business model innovation (circular business models). By juxtaposing institutional complexity and external pressure to maintain legitimacy, we derived four strategic business model innovation responses – preserve, detach, integrate and extend – that illuminate how actors leverage changes in field logics and innovate extant business models (for sustainability).

THEORETICAL FRAMING

Logic plurality in organizational fields

Prior literature has established that institutional logics, “socially constructed, historical patterns of material practices, assumptions, values, beliefs and rules”, shape and co-evolve with the structure of organizational fields (Ocasio & Thornton, 1999, p. 804). Organizational fields are contextualized and negotiated spaces where organizations purposefully interact and engage in debate, developing field level understandings or logics of shared cultural and normative practices (Battilana & Lee, 2014; Scott, 2010). They define which actors to engage with, which problems to debate, which solutions are appropriate, and result from bidirectional processes where actors influence field structures, frames, and logics and vice versa (Gray, Purdy &
Ansari, 2015; Purdy, Ansari & Gray, 2019). Whereas prior literature understood fields to have a dominant logic and homogeneous organizations due to isomorphic pressure for organizational members to create field legitimacy (Meyer & Rowan, 1977; DiMaggio & Powell, 1983), more recent literature has shown that fields consist of multiple logics causing tensions, institutional plurality, and organizational heterogeneity (Laasch, 2018b; Greenwood et al, 2010).

Recently, scholars on organizational fields have begun to distinguish between types of organizational fields – exchange and issue fields (Zietsma et al, 2017). The focal interest of exchange fields is the coordination and interaction with exchange partners, such as customers or suppliers who share common meanings, practices, and conventions. In contrast, issue fields center on common issues (e.g. climate change or plastic waste) rather than exchange relationships and may extend across different exchange fields (O’Sullivan & O’Dwyer, 2015; Quarshie, Salmi & Wu, 2019; Wooten & Hoffman, 2008; Zietsma et al. 2017). Issue fields affect institutional processes of field formation and evolution differently and have a temporary nature, as they may dissolve or eventually be absorbed into exchange fields. In issue fields, shared meanings, practices, and norms are negotiated, contested and dynamic. In contrast to exchange fields that have more shared and stable institutions, issue fields are usually highly pluralistic with a diverse set of actors and multiple, conflicting logics.

In institutional plurality, logics in exchange and issue fields co-exist, co-evolve, compete, or replace extant logics (Meyer and Höllerer; 2010). Institutional plurality generates spaces for institutional innovation and change (Battilana et al, 2015; Cartel, Boxenbaum & Aggeri, 2019; Tracey, Phillips & Jarvis, 2011; York et al, 2016), creating conditions for hybrid organizations to flourish (Mair et al, 2015; Besharov & Smith, 2014). To reconcile logics in institutional plurality, actors purposefully frame courses of action to mobilize others to follow suit and thereby maintain their field legitimacy (Cornelissen & Werner, 2016; Kodeih & Greenwood, 2014). Increasingly business models are reflections of these responses as actors...
search for ways to respond to institutional complexity and plurality (Ocasio & Radoynovska, 2016; Stál & Corvellec, 2018). We align with the argument in the literature that actors (such as sustainable entrepreneurs in de novo and incumbent firms) navigate institutional plurality, reconcile competing logics, and engage in legitimization strategies to establish business models consistent with the institutional logics of the organizational field (Laasch & Pinkse, 2020).

**Field-level logics and business models for sustainability**

Business models are conceptualizations of organizational value systems representing how firms create, deliver and capture value (Emerson, 2003; George & Bock, 2011; George et al, 2021; Lüdeke-Freund & Dembek, 2017) and are shaped by a variety of institutional logics. Business models for sustainability (BMfS) are common in hybrid organizations that combine two or more heterogeneous logics, for example social and commercial logics or ecological and commercial logics or a combination thereof (Battilana & Lee, 2014; Bocken et al, 2014; Pache & Santos, 2010; Laasch, 2018b; Stubbs & Cocklin, 2008). As defined by Schaltegger, Hansen and Lüdeke-Freund (2016, p. 6), a BMfS supports “describing, analyzing, managing, and communicating (i) a company’s sustainable value proposition to its customers, and all other stakeholders, (ii) how it creates and delivers this value, (iii) and how it captures economic value while maintaining or regenerating natural, social, and economic capital beyond its organizational boundaries.” Normative elements of BMfS include having a blended value proposition that incorporates ecological, social and economic benefits, uses principles of sustainable supply chain management, maintains close relationships with customers and suppliers, and shares economic costs and benefits fairly among stakeholders (Schaltegger, Hansen & Lüdeke-Freund, 2016). It can be assumed that multiple, complex, and conflicting logics that require actors to make concessions are at play in hybrid organizations that employ BMfS (DiVito & Bohnsack, 2017; Pache & Santos, 2013).
Studies have shown that to cope with institutional plurality and conflicting logics, hybrid organizations are highly reflexive and strategically isomorphic, aligning and distancing themselves from logics when advantageous. Pache and Santos (2010) studied four social enterprises in France and showed that hybrid organizations engage in selectively coupling field logic elements to gain field legitimacy and selectively decoupling when the logic is incongruent with their values. A study from Vaskelainen and Münzel (2018) on business model development in the German carsharing industry found that logics empower some business models and inhibit others, showing that trajectories of business model development relate to the actors’ adherence to prevalent field logics. Their findings align with the claim in the literature that institutional plurality leads to greater organizational heterogeneity rather than isomorphism (Ocasio & Radoynovska, 2016) as actors prioritize logics and make distinct combinations (York, O’Neil & Sarasvathy, 2016). Business models and business models for sustainability provide opportunities for organizations to respond to institutional plurality and to create innovative solutions to complex problems (Desa, 2012; Roome & Louche, 2016).

In the literature on business model innovation (BMI), business models are argued to function as vehicles to boost innovative solutions concerning processes, products, services, or the business model itself (Boons & Lüdeke-Freund, 2013; Evans et al, 2017; Pieroni, McAloone & Pigosso, 2019; Snihur & Wiklund, 2019; Schaltegger, Lüdeke-Freund & Hansen, 2016). Much literature has theorized and studied business model innovation occurring from exogenous shocks and BMI has been applied to specific domains in need of fundamental change, such as sustainability and circular economy (Geissdoerfer et al, 2017; Pieroni et al, 2019; Henry et al, 2020). By focusing on individual organizations and their response to field level change, our study addresses unanswered calls in the literature to ground BMfS dynamics in organizational theory and to explore BMfS as a vehicle for field level change (Schaltegger et al, 2016).
METHODOLOGY

We conducted an abductive, longitudinal case study to explore the interplay of field level change and BMfS (Dubois & Gadde, 2002; Timmermans & Tavory, 2012; Yin, 2003). Our study can be characterized as intermediate theory research as we aimed to draw connections between separate bodies of literature to explicate strategic responses to institutional complexity through a business model lens (Edmondson & McManus, 2007). We focus on a single sector, the fashion industry following examples in prior studies (Grodal & O’Mahoney, 2017; Lee, Ramos & Vaccaro, 2018; Ozcan & Gurses, 2018). The fashion industry offers an ideal setting for several reasons. First the fashion industry, which generates 1.5 trillion Euros in annual revenue and employs 60 million people in its value chain (Global Fashion Agenda, 2017), garners much criticism from society, media and stakeholders for its negative social and environmental impacts. On the environmental side, the production of fashion products contributes to water overconsumption, toxic chemical use and textile waste and occurs in production countries where workers are often subjected to overtime, a lack of living wages and unsafe working conditions. The fashion industry’s pursuit of economic growth at the expense of people and planet has increasingly moved to the center of attention. Scandals such as child labor or the Rana Plaza factory collapse (Chowdhury, 2017) have raised consumer awareness of the existing perils of production and put companies under collective pressure from stakeholders and activist groups, such as Fashion Revolution,² to change.

Secondly, against this backdrop, there is a growing interest among industry players to move towards circular production and circular business models. The prevalent fast fashion business model based on the linear model fundamentally changed consumption of fashion products and increased the use of raw materials (Hvass, 2016; Hvass & Pedersen, 2019). Circular business models that extend product lifecycles, recycle and regenerate resources offer

² See https://www.fashionrevolution.org/about/
solutions to the pressing sustainability issues that plague the fashion industry (Berg et al, 2020). Adopting a circular logic that assumes growth based on regeneration of natural resources instead of a linear one that assumes growth based on natural resource extraction is particularly significant for changing the organizational field. Appendix A provides further information about recycling and circular business models in the fashion industry.

**Data collection**

We collected qualitative data over a five-year period using multiple methods. Our initial data collection focused on understanding recycled waste in textile products and business models. As we engaged in the field, our data collection was guided by continuous and iterative reflection and data analysis and we witnessed the increasing discourse around circular business models based on reusing finished products (e.g. rental, resale). We expanded our focus beyond recycled waste in business models and included circularity more broadly in product design, production, and circular business models. We gathered data from three main sources.

*Observation and participation.* From 2019 to 2021, we attended seven field configuration events (FCEs) in Denmark and the Netherlands (Table 1). By attending FCEs, we were immersed in the field and engaged with field actors that aimed to consciously and collectively shape the organizational field (Meyer, Gaba & Colwell, 2005; p. 467; Lampel & Meyer, 2018). In Denmark, all three authors attended the Sustainable Fashion Research Agenda conference in 2019 and the third author attended Copenhagen Fashion Summit in 2019. In the Netherlands, the first author attended in person in 2019 Dutch Circular Textile Valley launch event, Kingpins (denim trade fair), and Transformers (denim sustainability innovation) and in 2021 online and in-person events on circular fashion organized by Circular Economy Textiles Programme and Fashion for Good. The FCEs focused on the topics of sustainability and circularity in the fashion industry and provided valuable insights into the overall trends and predominant challenges of the industry. During the in-person events, we spoke with brands and experts to
facilitate deeper exploration of the issues discussed and the implications for their organizations. At two events, we conducted 12 informal interviews varying between 10 to 20 minutes with industry experts (see Table 1) and systematically asked the same questions to respondents (Appendix B). At all FCEs, we attended presentations, debates and panel discussions, and held many informal conversations with attendees and speakers to clarify, explain or validate our impressions and understandings of the industry challenges. Extensive field notes were taken and turned into 118 pages of field memos for data analysis. Attendance at FCEs provided primary data that informed the semi-structured interviews as well as continuous data for analytical reflection and validation.

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Insert Table 1 here.

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*Semi-structured interviews.* We conducted semi-structured in-depth interviews with sustainable fashion entrepreneurs of de novo firms and sustainability managers in incumbent firms (Table 2). We purposefully selected sustainable fashion firms that used business models to create value from waste (Bocken et al, 2014) or were experimenting with circular business models. Extensive internet research and networking at FCEs gave us access to firms that varied in size, geography, and market segments. We interviewed incumbent firms from contacts made at FCEs and selected additional incumbents from the list of firms that appeared in our dataset from news items.

We conducted interviews face-to-face and on video calls lasting from 30 to 75 minutes. Interviews were guided by semi-structured interview protocols and included open, probing, specific and closed questions (Appendix B). By using semi-structured interviews, we captured what the interviewees considered to be relevant and gained insights into underlying perspectives and individual perceptions of the phenomenon, while remaining sufficiently
flexible about the process of data collection (Ostrander, 1993). We asked questions about the opportunities and challenges of using recycled waste materials and circular business models. All interviews were recorded and transcribed for coding and analysis. In total, we conducted 27 interviews with different industry actors – sustainable entrepreneurs, material suppliers, incumbents, and field experts.

Archival data. We augmented the rich data from our interviews with archival data from web sites, practitioner-oriented reports (e.g. Global Fashion Agenda, Ellen MacArthur Foundation and government reports) and other publicly available information such as podcasts and video interviews. We also collected secondary data from the Fashion Sustainability Week in Review (FSWIR) newsletter for a five-year period between June 2016 (when FSWIR was launched) to June 2021. FSWIR aggregates fashion sustainability news worldwide from a variety of trade, popular, and financial news sources. We performed keyword searches for ‘circular’, ‘recycling’, ‘waste’, ‘resale’, ‘rental’ and ‘take back’ in 318 FSWIR newsletters. The search terms resulted in 309 news items published in trade journals such as Sourcing Journal, FashionUnited, Ecotextiles News and popular press outlets such as The Guardian, BBC, Vogue Business, Wall Street Journal. The 309 news items covered 26 countries, although heavily concentrated in Northern Europe, USA, and Australia. The FSWIR news items contained headlines, short summaries from the FSWIR editor, and links to the news articles. The headlines allowed us to tease out the general cadence of industry discourse and when needed we accessed the full article or report. From this data, we compiled a list of incumbents (Table 3) and collected additional data on selected incumbents from web sites, media and reports.
Data analysis

The stages of data analysis occurred iteratively throughout the data collection period. Although we present our data analysis in a chronological order, the stages were highly abductive with a continuous back and forth between data collection, data analysis and theorizing. All interview transcripts, field memos and FSWIR news items were coded using MAXQDA. We began coding interviews with thematic codes derived from theory and proceeded with iterations of open coding (Boyatzis, 1998; Strauss & Corbin, 1997). This process of thematic and open coding resulted in detailed codes, such as “product design for longevity”, “buy-back incentives”, and “barriers and challenges to change”. Following the Gioia method (Gioia et al, 2013), we moved from the detailed codes to axial codes and identified 11 second order themes (Figure 1) to make sense of the data and illuminate connections and patterns of field logics and business model innovation. For example, we identified themes such as rental or resale business models, take-back schemes, product and market strategies and field logic complexity. As we were interested in explaining the intersection of issue and exchange fields and business model innovation responses, we reviewed our coded data and searched for relationships between the second order themes. We aggregated the themes into three dimensions – circularity, recycling and drivers of business model innovation – to uncover how de novo and incumbent firms make strategic choice to innovate their business model (for sustainability) in response to shifts in field logic.
To aid our analysis, we also developed temporal mapping of the industry based on the news items in the FSWIR data (Figure 2). We juxtaposed our coded data with temporal analysis of events, such as new collections or products, collaborations, announcements of sustainability ambitions, industry criticism, which helped us to understand the overall industry trends and situate the highly contextualized data from FCEs and interviews in the broader field. From this analysis, we identified trends in the industry discourse (Figure 3). We observed that recycling is a contested concept between closed-loop and open-loop waste streams (e.g. from textile or plastic waste streams respectively). In industrial ecology, open-loop recycling is referred to as “… a secondary material that cannot be used in the same product as in the previous service life …” (Haupt, Vadenbo & Hellweg, 2017, p. 617), such as recycling single-use plastic bottles or ocean waste into new polyester fabrics. The discourse criticized open-loop recycling as not “closing the loop” since it’s not textile-to-textile recycling and that some open-loop sourcing may not lead to positive environmental gains. We also saw a rise of criticism about overproduction and overconsumption in the fashion industry with the fast fashion model becoming symbolic for the linear model. The rising sentiment called for more than recycling alone and shifted attention and discourse to circular business models, particularly rental and resale business models. We grouped the news items into four categories – recycling and circularity that represent the conflicting field logics and rental and resale that represent circular business model innovation.

The combination of analyses allowed us to reflectively tease out meanings and findings and guided our theorizing about the interplay between institutional complexity, BMfS and business model innovation.

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Insert Figures 2 and 3

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FINDINGS

We observed how logics compete and co-exist in exchange and issue fields and how de novo and incumbent firms respond to shifts in dominant field logic, which in our study is the linear logic manifested in fast fashion. The fast fashion model has been consistently challenged since the mid 2000s when de novo firms entered the industry with BMfS focused on using sustainable virgin materials (e.g. organic cotton) or recycled materials. The rise of the issue field around textile waste, associated with overproduction and overconsumption in the linear fast fashion model, directed attention to a circular logic that underlines circular strategies (e.g. reduce, reuse or recover resources) and circular business models. Our data analysis and findings traced how the discourse about the issue field shifted, first framing recycling as a circular ‘closed loop’ solution to textile waste (phase 1), then reframing recycling as ‘open loop’ that fails to address the issue (phase 2), and finally replacing recycling with circular business models as the ‘closed loop’ solution (phase 3). Our findings show how de novo and incumbent firms responded to the institutional complexity and how they maintained legitimacy in the field through strategic responses of business model innovation. In Appendix A, we summarize elements of circular strategies and business models in the fashion industry that provide contextual background for the discussion of our findings. Table 4 provides an overview.

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Insert Table 4
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Phase 1: Framing recycled materials as ‘closed loop’

From our FSWIR data, we saw that field discourse initially focused on recycling and material innovation as ‘closed loop’ circularity, and particularly on the recycling of pure natural fabrics (e.g. cotton) or polyester from plastic waste. In this initial phase, recycling dominated the
discourse and fashion firms used recycled materials in product collections to incorporate environmental sustainability into their BMfS. One of the industry experts we interviewed, GOOD, echoed the discourse and defined the circular economy as being able to “close the loop … [and] refill resources back into the system …”.

De novo firms began incorporating the use of recycled textiles in product collections as far back as 2008 and claimed to be more sustainable than incumbents because they used organic virgin materials (e.g. cotton) combined with recycled polyester from polyethylene terephthalate (PET), ocean waste fishing nets (Econyl) or recycled pre-consumer and post-consumer textiles. Several de novo firms in our sample established their BMfS on using organic or recycled materials. YUKI started in 2001 as one of the first sustainable denim brands and based their BMfS on the use of 100% pure organic cotton, and today has products that contain up to 40% post-consumer recycled cotton. NAVE, a swimwear firm, was established on a BMfS that uses recycled polyester from ocean waste and fishing nets (Econyl).

The founder of DEEL, established in 2008, emphasized the importance of using pure materials, explaining that the materials they use are:

“… either 100% organic cotton or 100% recycled polyester, … because [they] can theoretically put a synthetic product back into the cycle, provided it is pure fiber, 100% polyester … [or] 100% cotton … has to be as pure as possible.” (DEEL)

The use of pure materials indicated the intention to be sustainable (organic materials) and circular (recycled materials), returning materials back into the production cycle for remanufacturing. However, most textiles are composed of blended fibers which poses limitations to recycling textile waste back into textiles. GOOD clarified, “...most of these materials are blended materials and that’s where they dilute their value because it’s so difficult to separate.” DEEL offered insights into the rationale for firms, also those with BMfS, to use blended materials:
“… in the sustainability sector [natural textiles are blended with recycled polyester] … because recycled polyester is much cheaper than organic cotton. They like to use it for hoodies and stuff … to drive down prices …” (DEEL)

By 2016 several incumbent firms had launched collections with recycled materials, for example denim products with a mix of recycled and virgin cotton (Guess and Lindex) and sportswear products that incorporated recycled PET in polyester blends. The sportswear brand adidas launched a shoe consisting of 95% recycled plastic picked up off beaches of Maldives and Patagonia launched the Re\Collection with products made from as many recycled materials as possible, including 100% recycled down, 100% recycled wool, 100% recycled polyester, 85% recycled polyester labels, 80% recycled zippers and 50% recycled buttons. H&M also introduced a line of activewear made from recycled polyester.

In this first phase, the use of recycled materials was an initial step towards circularity that claimed to close the loop. Recycled materials were integral to the BMfS of small sustainable fashion firms and fully integrated in their product collections. In contrast, large incumbents launched capsule collections but for the most part the linear logic in incumbents’ business models dominated, leading to criticism from various field actors, such as activists and small firms, about their sustainability ambitions and claims, and questioning their legitimacy. One of our respondents expressed her criticism.

“The big firms are now, in the last couple of years, they are pushing [sustainability]. I also wonder [about] the percentage that they are actually doing and the percentage that the [press is] covering it, that doesn’t add up always. That is a kind of greenwashing. Even if they are doing it, how much of the percentage of the collection is really green.” (YUKI)

GOOD also reflected about why large incumbents lagged in incorporating innovative materials into their product collections. She explained:

“These [innovative] materials have higher prices than virgin materials. On the one hand this goes against SMEs since their budget is usually smaller, but on the other hand it could be an opportunity especially for the smaller ones because they don’t have these strict margins as the big ones. The larger corporates cannot afford to have big variations in their margins …” (GOOD)
This view resonated with other evidence from our data. Large brands, primarily multinational incumbent firms, provided volume and economies of scale but lacked flexibility to experiment with new innovative materials. A respondent from an incumbent elucidated:

“If you think of small brands that are on the leading edge and trying to prove that things are possible …, it can be hard for larger brands like ourselves to follow that same strategy. We have a really hard time being first to market with much of anything. With materials that are new, you see brands like Allbirds able to have this pipeline of cool product launches with novel materials, but they are small and nimble and able to invest. We are just a different beast … They [small firms] can partner with material innovators, prove that something is gonna work for a commercial grade product and maybe they can’t give that supplier the largest volume, [but] then I’m totally happy being a fast follower.” (PAGI)

Large fast fashion incumbents also responded in this phase by implementing textile waste collection programs with the intention to recycle discarded textiles. For example, H&M and Zara started extensive in-store textile collection or take-back schemes to collect unwanted clothing from consumers. In this way, the incumbents could reconcile their fast fashion linear business models with an emerging logic on circularity and recycling, maintaining legitimacy in the field. H&M also established a collection and sorting factory in Germany, where “25 to 30 trucks drop off 14 metric tons daily from recycling bins at H&M’s thousands of locations [in Europe].” Even though incumbents collected discarded clothing, they were not able to recycle the volume of collected textile waste. The majority was routed to landfill or incinerated as most textiles contain blended fibers and recycling technology is not yet capable of processing high volumes. Furthermore, H&M aimed to maintain legitimacy by investing in Renewcell, a chemical recycling technology innovator, to scale textile recycling, and in their 2018 sustainability report, they announced their mission to ‘close the loop’.

**Phase 2: Reframing recycling as ‘open loop’**

We demarcated this phase by a rise of criticism from activists, industry consultants and expert organizations about the limited environmental benefits of recycling. In 2016, Greenpeace brought attention to the ‘illusion’ of recycling and called out, “Fast fashion is drowning the world”, arguing that the volume of recycled fibers is not sufficient to have sustainable impact
given the growing consumption and disposal of clothing. As reported in the 2016 article by Greenpeace:

H&M’s recent World Recycling Week, in which their aim is to collect and recycle 1,000 tons of used clothing, is an “illusion” of what true sustainability is, as only one per cent of collected clothing can be used as recycled fibers.

Shortly thereafter, Greenpeace published two reports, *Timeout for Fast Fashion* and *Fashion at the Crossroads*, intentionally shifting the discourse in the industry away from the ‘myth of re-use and recycling’ and towards the problem of overconsumption fueled by the fast fashion linear model. Particularly the latter report, *Fashion at the Crossroads*, spelled out the reality of recycling in the textile industry:

“Recycling technologies for the one hundred percent recycling of both natural and synthetic textile waste into new fibre are at an early stage. Much of the current recycling of polyester by the textile industry does not even deal with textiles waste; instead this “open loop” recycling focusses on PET bottles, removing responsibility from the food and beverage industry for single use plastics.”

The report also criticized initiatives from brands that focused on using plastic ocean waste, like G-Star’s “RAW for the Oceans”, as a communication tool to raise awareness about plastic pollution rather than as a serious initiative towards circularity. First, because initiatives such as these are insignificant compared to the problems of textile and plastic pollution and second because it avoids strategies to prevent the problem upstream in textile production. Instead, *Fashion at the Crossroads* reported that “design for longer life and promoting extended use of clothing are the most important interventions to slow down the material flow by reducing purchases of new products while addressing the environmental challenges of the current fashion system.”

Other mainstream news outlets, like *The Guardian*, *Vogue*, *Forbes* and *FastCompany*, also published stories on the shortcomings of recycling to solve the industry’s sustainability problems. For instance, an article published in *FastCompany* pointed out “… while recycling is important, it misses the mark” in reducing emissions. Criticism about using recycled plastic waste in textiles also came from another angle as researchers and experts published studies
highlighting the harmful effects of microfibers from recycled PET in fabrics ending up in oceans through laundry wastewater.

As the industry and public discourse continued and emphasized recycling as only a partial circular solution to the growing sustainability issues in the industry, attention shifted to slowing fashion down. In 2020, the United Nations Environment Programme published a report about “the effects of an industry that is engineered to overproduce”. The media (Reuters) drew parallels between the fashion industry and ‘big oil’, stating that fashion finds itself in the same conundrum, “the only way to save the planet is to scale back production”.

The industry discourse in this phase made a sharp distinction between closed-loop recycling, which is textile-to-textile recycling that contributes to a circular fashion system, and open-loop recycling from other waste streams, primarily single-use plastic bottles, that does not. Critics argued that open-loop recycled textiles from plastic bottles or ocean waste, did little to address overproduction, overconsumption and textile waste. On the contrary, open-loop recycling allowed fast fashion to maintain a linear (fast fashion) business model that relied on new product production. Open-loop recycling, with the exception of input materials from biodegradable waste streams, was viewed in opposition to closed-loop circularity, that focused on maintaining the material flows and finished products within the textile value chain. The discourse of closing the loop in fashion shifted from a perspective of using recycled materials to a more ‘holistic’ perspective that included slowing material flows through modular product design for disassembly and remanufacturing as well as systems and new business models that recirculate products.

Our data showed various responses to the criticism of recycling as a solution to the industry’s sustainability challenges. The founders of de novo firms in our sample had deep convictions about sustainable fashion products and considered themselves to be on the periphery of the industry. They dissociated their firms and BMfS from fast fashion or general
fashion industry. The founder of NAVE referred to this dissociation explicitly as, “… so in the real fashion industry, not the sustainable fashion industry …” and emphasized that in the real fashion industry the problem is, “that people don’t value their clothing, which translates into overconsumption.” All de novo firms considered their BMfS to be opposed to the (fast) fashion industry, focusing on slow fashion, classic styles, and durable quality. This sentiment is captured in the following quotations:

“I wanted to do classic styles also to support the slow fashion.” (TELCAR)

“[We] believe that clothing should be of a high quality and last a long time, instead of being cheap and disposable.” (SUDRI)

“… we make to order. So that is kind of my principal theory … that we're not mass produced. We don't even manufacture small amounts and then sell them, we wait until someone actually wants that piece … and then we produce it for them.” (NAVE)

However, deriving value from waste and using recycled materials was an essential component of their products and the rationale of their BMfS. Their responses to changing industry discourse around recycling as an open-loop and incomplete solution, varied depending on their specific context and product markets. For example, the founder of AIR aligned with the changing discourse as she focused on upcycling textiles for the upper part of shoes specifically to avoid discarding usable textiles, “… before recycling, there should be another step. Like before we start … breaking it down to the fiber level, we have all these fabrics that are in really good condition that we can actually use.” She also held strong opinions about ocean plastics in fabrics, stating that she “would not use it for fashion” but for other products like “… chairs … that do not release microfibers as much as clothing”. In her view, a circular logic considered more than “what we use [recycled materials] for, not just re-circulating to reach circular, but re-circulating in the right way.”

Alternatively, DISTOC, who produces sustainable hosiery with up to 88% of recycled polyester, distanced their firm from the changing discourse by acknowledging the challenges of producing fully circular hosiery. Hosiery material is very delicate and although they “employ
strategies that will make them last longer”, like toe enforcements, the product has a relatively short life cycle and is discarded after a few uses. A lack of technological innovation made it difficult to recycle hosiery products consisting of blended materials into new fibers.

To address the issue of microfibers from recycled plastics in textiles, DISTOC generalized the problem, stating, “… I mean, all synthetics will release micro plastics … there’s nothing that I know of that we can do to help stop that, other than don’t wear synthetics. [But] … we are moving into more of the natural fiber line.” The respondent redirected to issues that they could impact, and that the microfiber issue was not the appropriate problem for them.

“… there are many problems to be solved … and you can’t solve them all. … We have to focus on other things like making sure that hosiery does not end up in landfill.” (DISTOC)

In phase 2, we observed changes to the broader industry discourse that reframed recycling, especially open-loop recycled materials, as an incomplete solution to achieving circularity. The discourse touted the advantages of a circular fashion system rather than circular materials and circularity permeated industry fora, such as Copenhagen Fashion Summit. Incumbents and de novo firms committed to pledges and agreements to transform to a circular fashion system and multistakeholder collaborations focusing on circular solutions increased. Leading incumbents announced ambitious sustainability and circularity goals. For example, Nike announced it would double its business while reducing by half its environmental impact and, in an interview in Vogue, the CEO of H&M argued that moving towards circularity would allow H&M to “decouple growth and production of garments from the use of natural resources” and to address overproduction.

**Phase 3: Integrating circularity in business models**

In this phase, the discourse catalyzed into a conceptualization of circularity as business models, including rental, swap, libraries or resale, as opposed to conceptualizing circularity as
recycling. Integral to circular business models are take-back schemes and repair services. Take-back or collection programs provide feedstock that is sorted according to quality for resale, rental, repair, upcycling, downcycling, recycling or incineration. Our findings show that responses from de novo firms to adapt business models to the reframing of circularity as business models were more constrained compared to incumbents who were able to hybridize their extant business models.

To start with take-back schemes, the small de novo firms in our sample, that established BMfS on products from recycled waste, faced difficulties in starting take-back schemes to reclaim their own products and support circular business models. One of the incumbents we interviewed summed up the advantage large firms have in establishing take-back schemes:

“… larger firms have the advantage of reaching more customers and if they are going to play a role in [the] take back and collection side of things, they can do so much more so much faster than a small firm doing the same.” (PAGI)

The limitations small firms faced in establishing take-back inhibited the potential to create circular business models. NAVE provided insight into this barrier stating:

“I thought about offering incentives for our customers to return the product, … potentially the same way H&M does it, offering a discount on the next purchase if they return just any piece of swimwear or nylon that we could recycle, but that does get tricky … that means we're basically becoming our own recycling plant and that's a big effort.” (NAVE)

DISTOC and MOWS were the only de novo firms in our sample that incorporated take-back at the time of their founding. The products they collected, however, were downcycled as they were unable to use the waste for new textile products. For MOWS, they collected their products (sneakers) from their customers through bins in retail outlets and downcycled the soles into floors for playgrounds and the upper parts into insulation. They tried to produce new soles from the old soles, but the quality level was unsatisfactory. DISTOC also downcycled but for different reasons. Hosiery “doesn’t last very long”, it’s worn “maybe once or twice and then you throw it out in the garbage …”. To prevent their products ending up in landfill or being incinerated, DISTOC started a Recycling Club for its customers to return discarded
hosiery at end of life for a discount on the next purchase. DISTOC then downcycled the hosiery into insulation for fiberglass tanks. DISTOC explained that downcycling “… is kind of an interim solution” but there were technological limitations to recycling hosiery fibers back into textiles.

Turning to circular business models, de novo firms also faced barriers in their product markets that inhibited their response to creating circular business models. For example, NAVE and DISTOC considered their products, hosiery and swimwear respectively, not suitable for secondary markets.

“… people don't necessarily want to buy swimwear … second hand … because [you] don’t know … how many times it’s worn or who it’s worn by … It’s not like you’re buying an overcoat or something. So, it’s a tricky thing to keep it in … the system …” (NAVE)

However, TELCAR, a de novo firm in our sample that also produced swimwear, recognized the opportunity for circular business models and intended to start a marketplace for resale.

“I’m thinking about … building a marketplace inside of the web shop. So, you can kind of swap. If you don’t want this color anymore, or whatever, you can sell it to another. … Normally kids only wear it for one summer because they grow so fast, and normally there’s nothing wrong with [it] … We’re talking about giving a voucher because that’s the easiest solution right now. You can send it back then you … get 50% discount on your next purchase or something like that.” (TELCAR)

Even though de novo firms faced limitations in establishing take-back schemes or circular business models, the responses showed how they selectively incorporated design principles of circularity into their BMfS to maintain their legitimacy. For example, NAVE used scraps and waste from production for upcycling and designed products “… specifically to use up, strips here and scraps there … [to make] beautiful pieces that otherwise wouldn't have existed.” AIR, that also uses upcycling for shoes, responded by incorporating design for disassembly and sourced an innovative glue and thread that dissolves when heated to disassemble the shoe components. The founder elucidated:
“Design is so very important for what happens to the garments … afterwards, if you design a garment that has 1000 zippers, and is impossible to take apart, nothing good can happen in the end. You have to throw it away … that was especially what I found with shoes … they're made of plastic, plastic, plastic, and they're glued together with toxic and extremely strong glue, we had to take them apart to analyze them, … and it was impossible to actually get them apart.” (AIR)

Incumbents, on the other hand, engaged in business model innovation that incorporated circular business models, hybridizing a linear logic with a circular logic. Incumbent front runners Patagonia and Eileen Fisher were pioneers of circular business models, being the first brands to incorporate take-back, repair services and resale models. Large incumbent brands, however, lagged behind and experienced external pressure from the increasing criticism about linear models to maintain legitimacy. The large fast fashion incumbent brands such as Zara (Inditex), H&M, Target and Primark had scaled up their take-back systems worldwide, but only H&M engaged in circular business model innovation. They experimented with rental for women’s dresses, children’s wear and men’s suits, and with resale by partnering with the online resale platform Farfetch. Large retailers such as Tchibo, Nordstrom, Galerie Lafeyette and Selfridges also introduced rental models by partnering with online rental platforms such as HURR Collective or Rent the Runway.

From the large incumbents’ perspective, circular business models were compatible with the growth model that is inherent in fast fashion. The incumbents we interviewed were “excited about the potential for circularity to grow”, describing it as different than the “usual sustainability work” and as a “business opportunity”. Resale and rental business models extended the use of clothing by selling the same product multiple times and offered new revenue streams without having to produce new products. The incumbent PAGI expressed being inspired by “… the firms that have started to create white label sites within their products, like North Face’s Renew program, Patagonia’s WornWear …”.

For incumbents, circular business model innovation also stimulated broader organizational change towards a circular logic. For instance, Lindex reported that they would
train all designers, buyers, production teams in circularity. One of the incumbents we interviewed conferred:

“Circularity is very important and the ultimate goal is to be circular by design. It’s a business enabler for us, and systemic and the industry needs to be circular.” (STEL)

Our findings elucidate different responses from de novo and incumbent firms to reconcile institutional complexity and maintain legitimacy when issue field logic intersects with exchange field logic. Our findings also highlight the extent to which business models (for sustainability) adapt to shifting logics and how actors selectively couple congruent logics and selectively decouple incongruent logics in business model innovation responses.

RECONCILING INSTITUTIONAL COMPLEXITY THROUGH

BUSINESS MODEL INNOVATION

Our study traced the circular logic discourse – that represents the logic of the issue field – and uncovered a shift that diverted attention and resources from recycled materials to circular business models. The circular logic arising from the issue field co-existed, complemented, and conflicted with the dominant linear logic of the exchange field and actors reconciled the institutional complexity through a variety of strategic business model innovation responses. By juxtaposing institutional complexity, on the vertical axis, and pressure to maintain legitimacy, on the horizontal axis, we identified four strategic responses of business model innovation – preserve, detach, integrate and extend – that illuminate how actors use business model innovation and hybridization as a strategic response to changing field logics (Figure 4). Institutional complexity represents the compatibility of a focal firm’s business model (for sustainability) logic and the issue field logic. High institutional complexity represents tension and incompatibility between the logics; low institutional complexity infers that the logics are aligned or complementary. External pressure to maintain legitimacy represents the extent to
which stakeholders and other external field actors place pressure on the focal firm to adhere to the changing field logic. Prior work shows that increased institutional complexity and logic plurality lead to increase organizational hybridity as actors selectively couple or decouple (subsets of) emerging field logics (Ocasio & Radoynovska, 2016). We also know that actors are enabled or constrained in their strategic responses (Laasch & Pinkse, 2020). We build on these studies and posit that business model innovation response to institutional complexity is constrained when pressure to legitimize is low and is enabled when pressure to legitimize is high.

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Insert Figure 4

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**Constrained business model innovation**

In the lower left quadrant of Figure 4, the *preserve* response represents a strategic choice to maintain the status quo of the business model. Institutional complexity, from a focal firm perspective, is low implying that business model logics and field logics are congruent and the pressure to gain legitimacy is low. Due to the congruence of the business model with the emerging field logic, actors that follow this strategic response are often front runners and role models for other actors in the field. For instance, frontrunner incumbents, such as Patagonia or Eileen Fisher, were often cited in our data as examples to follow as they had exemplary business models (for sustainability) that were congruent with emerging field logic on circular fashion, for instance for take-back, repair or resale. Small de novo firms also fell into this category when their business model was consistent with the emerging logic. For example, AIR founded its business on a BMfS of upcycling textiles that is compatible with closed-loop circularity as discarded textiles are re-used in new textile products (footwear). AIR’s founder emphasized the congruence of their BMfS logic with the textile waste issue, “… we’re trying
to solve [the] waste problem … giving textile waste a second chance …”. The strategic response of firms in this quadrant is to preserve their business model; however, the lack of urgency and external pressure for legitimacy limits business model innovation.

In the upper left quadrant, there is a high level of institutional complexity implying incongruence between business model logics and field logics and low external pressure for legitimacy. In this quadrant, the strategic response was to detach the business model logic from the emerging logic. Here, actors distanced their business models by selectively decoupling incongruent aspects of the emerging logic with their business model logic. We observed that de novo firms following this response were constrained in business model innovation for several reasons, including limitations in product markets, technology and organizational capabilities and resources (e.g. scaling). For example, the BMfS logic of NAVE and DISTOC relied heavily on recycled polyester from plastic waste, that was criticized as open-loop recycling. Yet they were unable to source other materials due to the nature of their products, swimwear and hosiery, respectively. They also both lacked secondary resale markets for their products. The founder of NAVE stated, “… people don’t necessarily want to buy swimwear through a second hand store …” and DISTOC emphasized that the delicate nature of hosiery contributed to short life cycles and were discarded after use. DISTOC was also constrained by technology limitations, “… right now, the reason why hosiery can’t be separated [for recycling] is because [of] … the blend of nylon with elastane …”. Although NAVE expressed intentions to establish a take-back scheme, a lack of organizational capabilities and resources constrained these efforts, “… [that] means we’re basically becoming our own recycling plant and that’s a big effort.” As focal firms in this quadrant experienced low external pressure for legitimacy, they reconciled BMfS logics with emerging field logics by selectively decoupling incongruent aspects of emerging logic; however, their business models (for sustainability) remained unchanged.
Enabled business model innovation

In the lower right quadrant, the *integrate* response represents low institutional complexity and high external pressure for legitimacy. In this quadrant the incompatibility of business model logics and field logics is low suggesting that business model innovation is incremental and complementary to existing business models. Opposed to detaching, we observed that firms selectively coupled aspects of the emerging circular logic such as biodegradable materials, repair, upcycling or zero-waste design, since it could be easily integrated as additional value propositions in existing BMfS. For example, SUDRI introduced a t-shirt made with biodegradable yarn that once disposed of “returned to nature within three short years.” By integrating aspects of the emerging circular logic, actors gained additional legitimacy that increased credibility and reputation as a sustainable or circular business in the field. This quadrant also suggests that the emerging logic provides opportunities for business model innovation, which contrasts with the preserve and detach responses.

Lastly, the *extend* response in the upper right quadrant represents a high level of institutional complexity and logic incompatibility and high pressure to maintain legitimacy. In this quadrant, we posit that business model logics and field logics are conflicted and we expect business model responses to include hybridization. From our data, the extend response was used primarily by incumbents as they experimented with business model innovation, developing and implementing value propositions that adhere to the emerging logic but do not replace their existing business models. Examples from our data include many incumbents brands like North Face (VF Corp), adidas, Nike, Tommy Hilfiger (PVH) and H&M that incorporated textile-to-textile recycled materials in value propositions or launched circular business models. We also categorized the investments from H&M in recycling technology and waste collection and sorting in this quadrant as the investments were intended to scale textile recycling in H&M’s business model. The extend response of business model innovation and
hybridization occurred primarily in incumbents; however, theoretically, small de novo firms founded with BMfS may also respond to high institutional complexity and high pressure to maintain legitimacy by extending their BMfS. TELCAR and YUKI expressed intentions to include resale business models, but both firms have not yet launched resale models, which suggests that small firms may face limitations in extending and hybridizing BMfS. YUKI explained that organizational capabilities and resources were constraining factors, especially for take-back. They planned to “do the sorting” themselves but, as they expressed, “… the transportation costs, the label to send it back …, the warehouse costs, the cleaning costs, the repair costs, … the voucher that you give to the person who is returning it, all together it is pretty high cost … it will be quite a challenge to get a little profit.”

The strategic responses to institutional complexity that we uncovered suggest that the intersection and convergence of issue field and exchange field logics stimulate business model innovation when the legitimacy of firms is challenged by external actors. It also suggests that the interplay is dynamic and dependent on the evolution of the field logics and the discourse that frames them. As such, the strategic response chosen at one point of time may become disadvantageous at another point of time. Our model extends extant theory by nuancing the strategic responses of business model innovation that actors engage in and how they leverage institutional complexity.

DISCUSSION

Our findings make contributions to the extant work on organizational field logic and business models for sustainability, highlighting the interplay of actors in establishing, reinforcing and renegotiating spaces for experimentation and innovation (Ansari, Wijen & Gray, 2013; Le Ber & Branzei, 2010; Litrico & David, 2017). By showing how business models (for sustainability) adapt to shifting field logics, we advance our understanding of how logic plurality co-exists
and persists in organizational fields. We discuss the contributions of our findings focusing on
the organizational field and business models literatures.

First, our findings build on recent work on institutional complexity in organizational
fields and business model heterogeneity (Laasch & Pinkse, 2020; Ocasio & Radoynovska,
2016; Vaskelainen & Münzel, 2018) and provide empirical evidence of business model
innovation responses and hybridization of business models to leverage logic plurality.
Although our findings are in line with findings from Laasch and Pinkse (2020) that show
particular institutional spaces constrain or enable strategic responses, our study highlights
nuances in constraints and enablers of de novo and incumbent firm responses and shows a
variety of strategic business model innovation responses to institutional plurality. Our study
also extends our knowledge about trajectories of business model development, building on the
findings from Vaskelainen and Münzel (2018) and uncovering why and how actors adhere to
prevalent logics.

Our study also makes contributions to the interaction of issue and exchange fields, and
how fields change and evolve over time. By tracing the shift towards circular logic in the
fashion field, we begin to uncover the process of how issue field logic is incorporated into
exchange field logic (Zietsma et al, 2017). To this end, our study takes an initial step towards
understanding field evolution when issue and exchange fields intersect and how field discourse
shapes the speed at which field change occurs defining the negotiated space of experimentation.
We also show that issue field logic evolution, where shared meanings and understandings are
continuously contested and redefined, is not linear. The pattern of field evolution that we
observed oscillated between contested and complementary logics that push and pull the field actors towards change.

Our findings also speak to prior work on hybrid organizations, where firms and entrepreneurs grapple with dual or multiple orientations and logic plurality (DiVito & Bohnsack, 2017; Pache & Santos, 2010). Recent work has begun to tease apart social logic by highlighting underlying logics such as responsibility logics (Laasch & Pinkse, 2020) or community logics (Vaskelainen & Münzel, 2018). Our focus on circular logic contributes to an enhanced understanding of social logic and extends extant work on organizational hybrids and logic plurality beyond a dichotomy of social and economic logics.

Second, our findings also contribute to the literatures on business models for sustainability and business model innovation, extending our understanding of business models (for sustainability) as not only representations of organizational value systems but also as mechanisms for field level change that actors use to reconcile emerging and shifting logics. In this regard, we provide empirical evidence to the theoretical assumptions put forth in the literature that business models mediate innovation in processes, products, or services (Boons & Lüdeke-Freund, 2013; Chesbrough & Rosenbloom, 2002; Doganova & Eyquem-Renault, 2009; Lüdeke-Freund, 2020; Snihur & Wiklund, 2019), unlocking and capturing innovative potential to improve economic, ecological, and social sustainability. Our findings suggest that the innovation mediation function of business models for sustainability extends beyond individual organizations towards a field function and influences organizational field evolution and change, as field actors seek to maintain legitimacy in the changing field (Snihur, Thomas, & Burgelman, 2018). Our findings, however, also highlight the limitations of BMfS to mediate innovative change. For example, small firms were limited in how far they could extend their existing business models for sustainability. In contrast, incumbent firms were better positioned to use business model innovation to respond to logic plurality through hybridization and
mediate potential opportunities. This resonates with the view in the sustainable entrepreneurship literature that although sustainable entrepreneurs may disrupt and challenge the status quo, field level change co-evolves from the interplay between incumbent and entrepreneurial de novo firms (Bohnsack, Pinkse & Kolk, 2014; Bohnsack et al, 2020; Ciulli & Kolk, 2019; Hockerts & Wüstenhagen, 2010).

Our findings also contribute to a branch of the business model for sustainability literature that focuses more specifically on circular business models (Henry et al, 2020). Prior work asserts that incorporating circularity in BMfS creates tensions and opportunities primarily with regards to products and processes (Murray, Skene & Haynes, 2017). While our results are aligned with this view, we find that circular business models comprised several components that could be disaggregated and adopted as isolated parts or as a holistic system. In line with Bocken and colleagues (2016) and Geissdoerfer and colleagues (2017), our findings show that systemic field change can only be achieved when circular thinking is implemented in both products and business models.

Additionally, our findings have useful applications for practitioners as we explicate strategic responses of business model innovation to changing field logics. Our model provides four strategic business model innovation responses that firms can use to leverage institutional complexity and maintain legitimacy. Our study also provides insights into how firms can play a role in shifting field logics through business model innovation and hybridization strategies. For policymakers, our findings can inform policy schemes and funding around textile recycling and industry regulation aimed at keeping resources in the production system for as long as possible. Additionally, policy and incentives aimed at facilitating and supporting the intersection of issue and exchange fields may help to increase the pace and scope of circular transitions.
CONCLUSION

To conclude, we conducted a field study of the fashion industry and focused on the intersection of issue and exchange field logics and business model innovation responses to the resulting institutional complexity. Our findings showed that the discourse used to define circular logic in the issue field shifted attention from recycling materials to circular business models. We uncovered how de novo and incumbent firms responded to the changing circular logic of the field through business model (for sustainability) innovation. The meanings and understandings of circular logic, that co-exist, complement, or conflict with existing linear logic of the exchange field, are dynamic and continuously negotiated by field actors. Our study brings together disparate literatures on organizational fields and business models for sustainability and shows how field actors use business models to respond to institutional complexity and maintain legitimacy.

As a study focused on a single field, the generalization of our findings has limitations, and the findings may be idiosyncratic to the dynamics and structure of the fashion industry. We also collected data from a sample of de novo and incumbent firms. While our archival data is extensive and a comprehensive source of aggregated news about sustainability in the global fashion industry, we cannot make causal inferences between our sampled firms and the archival data. Future research could focus on examining causal relationships between field logics, business models and systemic transformation in the fashion or other sectors. Process studies would also unveil mechanisms involved in shifting logics of organizational fields. Our study contributes to viewing business models for sustainability as constellations of conflicting and complementary logics and generates new insights on the interplay of logics in issue and exchange fields and the opportunities for business model innovation.
References


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<td>&lt; 10</td>
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<td>Corporate Responsibility Manager (1)</td>
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<td>1993</td>
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<td>CSR &amp; Sustainability Manager (1)</td>
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<td>Currency</td>
<td>Nr. of employees¹</td>
<td>Country of headquarters</td>
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¹ in 2020; ² in 2019
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<th>Feature</th>
<th>Description</th>
<th>Circular mechanism</th>
<th>Illustrative cases</th>
<th>BM innovation response to changing institutional complexity</th>
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<td>Recycling</td>
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<td>Pre-consumer and post-consumer textile waste recycled into new fabric</td>
<td>Closed loop</td>
<td>YUKI, Incumbents (e.g. Lindex)</td>
<td>Preserve, Extend</td>
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<td>Open loop</td>
<td>NAVE, TELCAR, DEEL, SUDRI, DISTOC</td>
<td>Detach</td>
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<td>Byproducts from agri-food waste</td>
<td>Plant waste or byproducts (e.g. apple skins, pineapple leaves) manufactured into yarn</td>
<td>Open loop</td>
<td>SUDRI, MOWS</td>
<td>Preserve</td>
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<td>Downcycling textile waste</td>
<td>Textile waste recycled into lower value new products (e.g. insulation)</td>
<td>Open loop</td>
<td>DISTOC, MOWS</td>
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<td>Take-back system</td>
<td>Brands/Retailers taking back used textiles before discarded as waste</td>
<td>Closed loop</td>
<td>DISTOC, MOWS, Incumbents (e.g. H&amp;M)</td>
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<td>Selling, trading products on secondary markets</td>
<td>Closed loop</td>
<td>Incumbents (e.g. Patagonia, Eileen Fisher, Incumbents (e.g. Tommy Hilfiger)</td>
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Figure 1. Analytical coding scheme of concepts, themes and aggregated dimensions
Figure 2. Temporal mapping of FSWIR news items on material innovation and business model innovation
Figure 3. Percentage of recycling, circularity, rental and resale news items by year, n=309

Figure 4. Strategic choices of business model innovation responses to changing field logics

BM(fS): Business Models (for Sustainability); BMI: Business Model Innovation
APPENDIX A

Recycling logic in business models

A recycling logic focuses on reusing or repurposing waste into new raw materials or new final products, resulting by upcycling or downcycling.

*Raw material recycling* takes waste streams and breaks down the final product into input to produce new raw material. Waste is categorized broadly into post-consumer and pre-consumer waste. Post-consumer refers to waste from finished products that served their intended use, for example discarded plastic bottles (PET) or used textiles from consumers. Pre-consumer refers to industrial waste that has been discarded before consumer use, like factory scraps, defect products or overstock. Through a process of mechanical or chemical recycling, post and pre-consumer textile waste is recycled into yarns that are woven into new fabrics or knitted into new garments. The use of plastic bottle waste (e.g. rPET) or ocean plastic waste like fishing nets (e.g. Econyl), so-called open-loop sourcing from industrial waste streams outside of the textile system, is widely used in recycled polyester and other synthetic fabrics. Textile-to-textile recycling of polyester or cotton textile waste (fiber-to-fiber recycling) has been increasing due to advances in technology and innovation. Yet, most textiles consist of blended materials which limit the potential to recycle textile waste into new textile products. Yarns also lose their tensile strength with each round of recycling and need to be blended with virgin material to improve durability. All the de novo and some incumbent firms in our sample incorporated recycled textiles into their product collections.

Additionally, food waste streams are being used to produce new *bio-based fibers*. Byproducts such as pineapple leaves, banana stems, sugarcane bark, citrus juice waste and even manure are being used to produce leather and textiles. One of the de novo firms in our sample uses textile from coffee grounds waste in sportswear, which has the added benefit of a natural deodorizer. The founder of SUDRI explained, “… coffee grounds lend themselves
perfectly to becoming sportswear as the transformed yarns have special technical qualities like anti odor, anti-bacterial …”. In addition to textiles, shoes soles are being made from algae and Nike has experimented with shoes soles made of carbon dioxide. Bio-based materials also need to be blended with other virgin materials, like cotton or plastics, to make them stronger.

*Downcycling* refers to using pre- and post-consumer waste in lower value products; for example, textile waste that is recycled and used as insulation. Several of the de novo firms in our sample downcycled by collecting end-of-life products back from their customers and finding new uses for the product materials. For example, DISTOC offers a Recycling Club where customers send back hosiery and receive a discount on their next purpose. DISTOC sells the end-of-life hosiery to a company that uses it for insulation in fiberglass tanks. Tables have also been made from the discarded hosiery. Similarly, MOWS collects end-of-life sneakers from customers and the raw materials of the soles are used in floors for playgrounds and the upper textiles for insulation in building.

Recycling, although certainly more sustainable than linear models that extract natural resources, are not entirely closed-loop circular systems. Recycled material may be based on open-loop input materials that enter or leave the original fashion system. Recycled materials may also be blended with virgin materials or other fabrics that limit the potential for continued recycling. Circular closed-loop systems aim to close the loop by designing and assembling products that allow for recirculation within the fashion and textile system.

**Circular business models**

Circular business models – repair, rental and recommerce – extend the use and life of products but also offer new opportunities for secondary product markets. However, to implement such
models, products need to collected and therefore take-back systems are essential to circular business models.

*Take-back systems* require collection services, reverse logistics and incentives for consumers to return unwanted textiles. Textile waste is sorted and categorized into value streams, such as incinerate, recycle, donate to charity, or resell in secondary markets. In recent years, large firms have set up their own take-back schemes. Large retailers, such as Zara, H&M, Target, have partnered with collectors and sorters who provide in-store collection bins where consumers drop off unwanted clothing. Fashion brands have also implemented take-back schemes to specifically collect their own branded products, facilitating customers to send products back directly or drop them off in selected retail outlets. For example, Patagonia and Eileen Fisher, as frontrunners, started in 2005 and 2009 respectively to take back their own products, through in-store and send back options. Online retailers and small brands use reverse logistics to collect end-of-life (branded) products from consumers and online service platforms, such as Thrift+, offer consumer pick up collection services.

*Repair.* Repairing products to extend product life cycles is common to many industries, like automobiles, computer hardware or durable consumer goods. For clothing, the fast fashion model made it economically more attractive for consumers to purchase new products rather than repair old ones. Repair is integral to circular business models in the fashion industry, not only as a customer service so that consumers can use a product longer but also in repairing returned or collected items for rental and resale. Brands are developing repair capabilities in-house (e.g. Patagonia, Nudie) and others are outsourcing repair.

*Upcycling* refers to using pre- and post-consumer textile waste as materials, before it is broken down to a fiber level, to create unique higher value products. The founder of AIR explained how they used pre-consumer textile waste to upcycle textiles for shoes, “We want to use this textile waste and then we want to make shoes out of it and not break it down to the
fiber level.” NAVE also used upcycling, “We've got a couple of pieces in the next collection that were designed specifically to use up … strips here and scraps there. They are kind of a patchwork of a bikini, but it turns into this beautiful piece that otherwise wouldn't have existed.” YUKI also planned to upcycle jeans sent back to them into unique designer products and resell them at a premium price.

Rental and recommerce (or resale) models have created secondary markets that are growing rapidly. ThredUp, a worldwide leader in the resale market, estimated the resale market to be worth $41 billion in 2022 and to exceed fast fashion by 2030. Examples of rental models include leasing products (e.g. Mud Jeans), clothing libraries (e.g. HURR Collective), occasional use (e.g. H&M dresses, suits) and most recently clothing swops (e.g. LSWOP, Nuw). Examples of recommerce models include online platforms such as ThredUp, Second Life, TheRealReal which offer peer to peer clothing resale. Fashion brands have introduced resale models in their retail outlets, web shops and by partnering with online platforms such as Gucci with TheRealReal. Tommy Hilfiger (a brand from PVH) introduced Tommy for Life and is an example of an incumbent firm reselling its own deadstock, defective products, or returned items directly to consumers.
APPENDIX B

We differentiated our interview protocols according to the type of respondent – de novo firms, incumbents and experts at field configuring events. Below we summarize the topics of the questions included in the protocols.

**Interview Protocol for de novo firms**

- Introductory and background
  - Explain purpose of research, confidentiality, etc,
  - Gather information, facts and narrative about the company founding, size, unique selling points, sustainability principles
- Business model for sustainability and circularity
  - How circular or sustainable it is, how it creates value, how it is differentiated from competitors, opportunities for circular business models
  - Challenges they face as sustainable entrepreneurs
- Waste materials
  - Motivations for using waste materials, what kind of waste materials, how using waste materials impacts business and stakeholders, advantages and challenges to using waste materials
- Industry transformation
  - How the role between small firms and incumbents differs, their firm’s role in transforming sustainable industry
- Closing
  - If there is anything they would like to add, who else could be interviewed
  - Copy of research, thank respondent

**Interview Protocol for incumbent firms**

- Introduction and background
  - Explain purpose of research and confidentiality
  - Ask for an overview of how sustainability and/or circularity is incorporated into their strategy and products
- Business model and strategy
  - Extent and scope of sustainability/circularity, when they started, sustainability/circularity goals,
- Circular business/products
  - Motivations for using more circularity (waste materials, business models)
  - Triggers for sustainability/circularity, opportunities for circular business models
  - Inspirational firms, why
- Partnerships with other firms
  - Who, what, when, why
- Industry transformation:
  - How the role between small firms and incumbents differs, their firm’s role in transforming sustainable industry
- Closing

**Interview Protocol for experts at field configuring events**
• Introductory and background
  o Explain purpose of research and confidentiality
  o Short description of their firm, what they do, what their position is
• Circularity and sustainability
  o Their definition of circular economy and sustainability, what it means to them
  o Why they think firms should use more waste materials, what are the challenges and opportunities for firms to use more waste materials and circular business models
  o Examples and firms using waste materials (or their alternative materials) and why, probe for specific materials like Econyl, Pinatex, orange fibers, etc
  o Opinion about recycling ocean plastics in textiles
• Industry transformation
  o How the role between small firms and incumbents differs, their influence on the transformation of a sustainable industry
• Closing