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Article

Designing and Aligning Interprofessional Relations: Third-party ties and partnership formation in the silk industry of 18th-century Lyon

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Abstract

New occupations are pervasive and constantly alter fields. This paper studies how occupational newcomers and dominant incumbents confront the opportunities and constraints of field-level uncertainty by engaging in interprofessional coalition building. Using resource dependence theory to ground our arguments, we highlight that this type of uncertainty makes third-party ties the channel through which mutual dependence is assessed and power imbalance is regulated. We also claim that when dominant incumbents perceive field-level uncertainty around a new occupation, ties that regulate power imbalance overshadow mutual dependence considerations. Conversely, once occupational boundaries and norms are established through professionalization, the difference across types of third-party ties declines. Empirically, the paper uses the case of silk designers emerging as an independent occupation adjacent to the 18th-century silk guild in Lyon. Using archival data of 676 silk designers (1700–1788), we test the role of third-party ties in affecting the likelihood of a partnership forming between a designer and a merchant.

Keywords

careers, coalition building, creative industries, resource dependence theory

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Introduction

Resource dependence theory is widely used to explain how organizations reduce interdependencies by engaging in formal and informal partnerships (Pfeffer & Salancik, 1978). Its insights have generated an ample body of work on coalition building among organizations (e.g. Gulati & Sytch, 2007; Katila, Rosenberger, & Eisenhardt, 2008; Mizruchi & Yoo, 2002), and between organizations and entrepreneurs (e.g. Hallen, Katila, & Rosenberger, 2014; Katila, Piezunka, Reineke, & Eisenhardt, 2021). This research suggests that coalition building is driven by concerns of mutual dependence (i.e. the extent to which coalitions are productive in achieving economic goals) and power imbalance (i.e. the extent to which coalitions maintain balanced power – see Casciaro & Piskorski, 2005).

A key premise of this literature is that the uncertainty generated by interdependencies is managed by constraint absorption (Casciaro & Piskorski, 2005; Pfeffer & Salancik 1978). The uncertainty under discussion is related primarily to the procurement of resources needed to sustain organizational survival. These characteristics make uncertainty closer to a calculative risk around a manageable outcome (Knight, 1921), where a well-established power structure, a shared set of social norms and a settled organizational field are subsequently presumed (Wry, Cobb, & Aldrich, 2013). The existence of a settled field provides an infrastructure of rules and resources (Phillips, Lawrence, & Hardy, 2000), which enables foresight about risks and outcomes associated with the formation of a given coalition.

Yet organizational fields evolve, ‘in makeup, interconnections and conceptual frames’ (Wooten & Hoffman, 2017, p. 65) and come with new challenges and interdependencies. We start from this premise and argue that field evolution brings an enduring and profound uncertainty that challenges the foundations of actors’ decision making. While from Knight’s perspective this latter type of uncertainty may be managed by ‘better knowledge of and control over the future’ (1921, pp. 259–260), an institutional perspective on this uncertainty highlights the failure of extant rules and social norms to provide guidance and expectations in relation to a potential outcome (Fligstein & McAdam, 2012; Ruef, 2014). The consequences of field-level evolution on coalition formation are understudied in extant resource dependence literature.

The type of field-level uncertainty described often originates from the introduction of new types of actors in a field (Ruef, 2014). Several studies have demonstrated the role of new occupational actors initiating changes and reconfiguring organizational fields (Scott, 2008; see Zietsma, Groenewegen, Logue, & Hinings, 2017 for a review). New occupational entrepreneurs and incumbent professionals need not only to navigate mutual resource dependencies but also to deal with evolving professional differences, jurisdictional disputes and disagreements over authority structures. While concerns of mutual dependence and power imbalance may be easy to gauge in an institutionally settled context, they are less obvious to assess when an entrepreneur is affiliated to an emerging occupation that holds the potential to reshuffle established norms and power structures, and in the absence of a clear standard of evaluation.

How do coalitions form under field-level uncertainty generated by new occupational entrepreneurs with whom incumbent professionals are interdependent? How do the established mechanisms of mutual dependence and power imbalance operate under such conditions? We address these questions by arguing that third-party ties become the channel through which mutual dependence is assessed and power imbalance is regulated (Gargiulo, 1993; Hallen et al., 2014). Third-party ties provide useful information to manage field-level uncertainty and facilitate coalition building. Ties to existing professionals, who are already within the field, can signal potential for mutual dependency among new and incumbent professionals (i.e. through technical competences and productive capabilities). Moreover, third-party ties can also signal the familiarity of new occupational entrepreneurs

with existing institutional conventions and authority structures, thus regulating power imbalance and dampening fears of a radical change (Furnari, 2016).

Our focus on field-level uncertainty highlights the fundamental role of third-party ties – and the varying salience of different types – relating to the professionalization of a new occupation. In particular, we claim that in the early stages of occupational emergence, field-level uncertainty is highest. In this period, new occupational entrepreneurs with third-party ties that regulate power imbalance are more likely to enter a coalition than those with third-party ties that signal mutual dependence. Ties that regulate power imbalance assure incumbent professionals about the stability of the existing social order, a primary concern in face of field-level uncertainty. Once professionalization establishes the nascent occupation's boundaries and norms, field-level uncertainty declines and the primacy of power imbalance considerations in guiding coalition building dissipates.

We test our arguments using the empirical setting of Lyon's silk guild, the *Grande Fabrique* (1700–1788), during a time when silk designers emerged as an independent yet strategically-interdependent occupation within the silk manufacturing field (comprising of silk merchants and weavers as members of the guild). As entrepreneurs, silk designers were dependent on merchants and the guild to commercialize their designs. At the same time, merchants increasingly relied on silk designers' skills to differentiate their goods and compete in the market. We study how designers' third-party ties to weavers and merchants (in comparison to no ties at all), affect the likelihood of partnership formation between designers and merchants. Third-party ties to weavers indicate an operational understanding of the ins and outs of silk weaving, therefore sustaining mutual dependence. Conversely, third-party ties to merchants are effective in reinforcing social norms and sanctioning norm violations in the coalition, thus regulating fears of power imbalance. Using quantitative analysis on 676 designers seeking to build a coalition with existing merchants, we test the facilitating role of these two types of third-party ties.

Acknowledging field-level dynamics within resource dependency theory, our paper complements the role that third-party ties play in coalition building between actors. First, we present a case where coalition building occurs in the context of uncertainty generated by an evolving field. Whereas prior work considered the effects of mutual dependence and power imbalance under settled conditions, we find that ties that regulate power imbalance are particularly salient for inter-professional coalition building when a higher level of uncertainty resides at the field level. Second, we find that third-party ties play a critical role with mutual dependence and power imbalance considerations. They serve as intermediaries between incumbent professionals and emerging occupational entrepreneurs by presenting economic and political rationales for managing interdependencies. Finally, our paper contributes to a historical view of professions in creative industries by examining a premodern case of creative workers affiliated to a guild.

Field-Level Uncertainty, Resource Dependence and the Emergence of an Occupation

Resource needs and uncertainty require efforts for managing interdependencies (Pfeffer & Salancik, 1978). Extant research finds that actors face these challenges by forming coalitions with those who share mutual resource needs. The strategy is observed among organizations (e.g. Ashraf, AhmadSimab, & Pinkse, 2017; Gulati & Sytch, 2007; Katila et al., 2008), between established organizations and entrepreneurs (e.g. Hallen et al., 2014; Katila et al., 2021), and between incumbents and entrants (Cozzolino & Rothaermel, 2018). Yet previous studies primarily focused on coalition building under the assumption that an organizational field is static, potential partners are already cognitively understood to one another, the risk of a collaboration can be calculated, and that uncertainty at the dyadic level is reduced by increased knowledge and better coordination.

However, when organizational fields are evolving, uncertainty takes a broader institutional twist, as the role of existing rules and social norms in guiding expectations and risk-related considerations is questioned and even challenged. In this scenario, actors need to resort to interpreting the environment more deeply, asking ‘What is going on and what should they do next?’ (Maitlis & Christianson, 2014, p. 70; Weick, 1995). Coalition building and the assessment of strategies to manage interdependencies are not obvious in these conditions as the uncertainty that surrounds interdependent organizations at the field level is profound and enduring (Fligstein & McAdam, 2012; Ruef, 2014).

Previous studies have identified the emergence of new types of agents/professionals as triggers of field-level change (Phillips et al., 2000; Scott, 2008; Zietsma et al., 2017). These professionals occupy positions within organizations and initiate field-level changes using organizations as the key vehicle (DiMaggio & Powell, 1983). ‘Professionals stimulated change . . . by mobilizing to construct the environment they could control at the level of the organizational field’ (DiMaggio, 1991, pp. 287–288). In an evolving field, incumbent professionals have a vested stake in maintaining their dominance and jurisdiction among related professions (Abbott, 1991). New occupations, often associated with new technologies and skills, emerge outside an established field (Fayard, Stigliani, & Bechky, 2017), acting as entrepreneurs, freelancers, or independent workers, and seek resources and legitimacy through partnering with established organizational professionals (Nigam & Dokko, 2018). For incumbent professionals, coalitions with new yet interdependent occupational entrepreneurs provide access to fresh ideas, proximity to potentially disruptive innovations and linkages to diverse knowledge pools required for survival (Eisenhardt & Schoonhoven, 1996). For new occupational entrepreneurs, ties with established professionals confer legitimacy (Zimmerman & Zeitz, 2002), facilitate access to markets and help transform early ideas into marketable products (Katila et al., 2008, 2021; Vandaie & Zaheer, 2014).

However, considerable field-level uncertainty surrounds the creation of a coalition between interdependent agents. First, while the existence of bilateral dependencies may sustain the development of coalitions, these are not easy to gauge in face of an emerging, not yet legitimated, profession. Second, new occupational entrepreneurs may also contest the incumbent order, introduce new rules and standards, and challenge the existing hierarchy of authority (Suddaby & Viale, 2011). Both incumbent professionals and newcomers need to grapple with making sense of new meanings, practices and social structures, and developing collective understanding of the field.¹ In this regard, if coalition building is to occur, it is based on the potential value of a partnership in an evolving yet not defined field. We propose that in face of this field-level uncertainty, third-party ties ensure the capabilities of emerging professionals and smoothen the threat of power imbalance among parties. In tempering uncertainty, third-party ties facilitate coalition formation.

Interprofessional Coalition Building and Third-Party Ties

Ties to third parties inform a range of social mechanisms that enhance the likelihood of coalition formation and enable a trusting, cohesive and stable relationship (Emerson, 1962; Gulati & Gargiulo, 1999; Polidoro, Ahuja, & Mitchell, 2011). Third parties help to delineate boundaries and interpret roles (Li & Piezunka, 2020), and discipline the relationship between actors (Hallen et al., 2014). For actors who are not familiar with each other, third-party ties can provide better access to reliable information and engender trust (Rogan & Sorenson, 2014). When obstacles constrain direct coalition formation, third-party ties help build a co-optive relationship (Gargiulo, 1993).

Building on this research, we propose that third parties are crucial for coalition formation under conditions of field-level uncertainty (induced, for instance, by the emergence of a nascent occupation that disrupts established norms and power hierarchies) (see also Furnari, 2016). Third-party

ties can be employed to reduce the threat of radical institutional change, act as a bridge for incumbents to make sense of a new occupation and ease coalition building for the benefit of both parties. Moreover, when entering an established field, new occupational entrepreneurs usually access it via third-party actors (Abbott, 1988). For instance, service designers used to work on traditional interaction design (Fayard et al., 2017), management consultants formerly worked as engineers or cost accountants in industrial companies (McKenna, 2006), or many healthcare occupations emerged from traditional medical practices (Bucher, 1988). These third-party ties help address uncertainty that pertains to understanding a new occupational entrepreneur's functionality (e.g. indicate their knowledge of existing work practices) and socialization into the existing social order (e.g. indicate their knowledge of norms and hierarchies).

Field uncertainty is a premise for the role of third-party ties in compensating the failure of existing rules and social norms to provide clear expectations about behaviours and outcomes. We argue that the evolution of the emerging occupation matters for affecting what types of third-party ties mitigate field-level uncertainty. Whereas prior work considered the effects of mutual dependence and power imbalance under settled fields, we focus on an unsettled field and examine how the salience of each given third-party tie shifts with the professionalization of the emergent occupation.

Mutual dependence and interprofessional coalition building

A resource dependence perspective highlights mutual dependence as a key driver of coalition formation. The purpose of a coalition is to choose 'the least-constraining device to govern relations with your exchange partners that will allow you to minimize uncertainty and dependence and maximize your autonomy' (Davis & Cobb, 2014, p. 24). Previous studies examined how mutual dependence smoothens supplier/manufacturer relationships (Gulati & Sytch, 2007), eases the appropriation of new technologies (Katila et al., 2008) and reduces market competition (Casciaro & Piskorski, 2005). The focus on coalitions' functionality is relatively value-free (Astley & Zajac, 1990) and is an indicator of productive mutual dependence between partners (Pfeffer & Salancik, 1978).

Under field-level uncertainty, third-party ties can signal mutual dependence, indicate a competence-based trust (Zhelyazkov, 2018) and assure incumbent professionals about the existence of productive capabilities that provide an incentive to absorb the constraint (Casciaro & Piskorski, 2005). These ties corroborate newcomers' credentials and knowledge, and validate their technical competence (Thompson, 2003). This in turn grants incumbent professionals more confidence in potential productive cooperation and increases mutual dependence between the nascent occupation and incumbent professionals (Astley & Zajac, 1990). For example, service designers as fledgling entrepreneurial professionals exhibit their knowledge of work practices in both business operation and design activities so that they are able to claim their professional mandate and secure contracts for future work (Fayard et al., 2017).

Moreover, new occupational entrepreneurs' third-party ties ensure mutual dependence by easing communication and information exchanges (Sosa, Gargiulo, & Rowles, 2015). These ties provide awareness of interdependencies and reduce information frictions (Gulati & Gargiulo, 1999). By setting up a clear communication structure, these third-party ties delineate boundaries between professions and facilitate knowledge sharing and transfer (Kenis & Knoke, 2002). Third-party ties that enhance exposure between newcomers and incumbent professionals thus sustain the formation of an interprofessional coalition. Therefore, we propose:

Hypothesis 1: Under field-level uncertainty, third-party ties that reinforce mutual dependence positively affect the likelihood of an interprofessional coalition.

Power imbalance and interprofessional coalition building

Coalition building is also a political decision involving power-balancing considerations, particularly under field-level uncertainty. After all, partnerships are ‘giving the rights to control the resources that create dependencies to the dependent actor’ (Casciari & Piskorski, 2005, p. 163). Incumbent professionals may suffer from negative consequences of coalitions because once in the partnership, new occupational entrepreneurs may behave opportunistically. Consequently, incumbent professionals not only face status loss, but also economic loss. New occupational entrepreneurs may suffer abuse of power from incumbent professionals, and a damaged reputation can constrain the professional creativity of the nascent occupation. A politically stable and socially meaningful exchange is thus needed to motivate coalition building.

Distinct from the functional dimension of coalition building, the political dimension emphasizes reconciling the potential oppositions between new occupational entrepreneurs and incumbent professionals. Third-party ties serve as tools to organize politics and smoothen power imbalance. Certain types of third-party tie can help discipline and align actors’ relations within partnerships (Hallen et al., 2014), by reinforcing social norms and sanctioning norm violations even when they are not economically rewarded (Fehr & Fischbacher, 2004). We argue that in the interprofessional context, new occupational entrepreneurs’ third-party ties can play the role of public arbiters, ensuring that neither party behaves in an opportunistically political manner, by imposing material and symbolic sanctions on normative disruptions.

In addition to exercising justice, third-party ties can also align relations by identifying mutually beneficial relationships where opportunism is less of an issue (Samila, Oettl, & Hasan, 2016). For instance, Mizruchi (1992) found that firms that share ties to financial institutions are similar in political contribution patterns. And more recently, Li and Piezunka (2020) suggested that a third-party tie can facilitate intergenerational leadership succession by staying nonpartisan and trustworthy in family businesses. Therefore, we suggest that new occupational entrepreneurs’ third-party ties that provide structural protections and political safety to both groups of professionals encourage coalition building between the representatives of a nascent and an incumbent profession.

Hypothesis 2: Under field-level uncertainty, third-party ties that regulate power imbalance positively affect the likelihood of an interprofessional coalition.

An evolving field: The professionalization of a nascent occupation

Our reasoning presumes that most of the uncertainty surrounding coalition formation between nascent and incumbent professionals is driven by the lack of rules and social norms that provide clear expectations about the behaviours and outcomes associated to partnering with emerging professionals. At the time of a new occupation’s emergence, the potential value of a partnership is unclear, as much as whether the new occupational entrepreneurs will acknowledge institutional conventions and behavioral underpinnings of ‘how things work’ (Becker, 1974).

Our reasoning therefore implies that third-party ties that regulate power imbalance are expected to be particularly useful in easing coalition formation during times of high field-level uncertainty. By objectifying a consensual understanding of implicit and explicit rules in social interactions, ties that regulate power imbalance create an agreed-upon meaning of professionals’ roles and shared identity of the coalition. Third-party ties that reinforce mutual dependence are important too, but comparatively less so during this time. First, new occupational entrepreneurs need time to develop their skills and demonstrate their complementary abilities to incumbent professionals. Second, mutual dependence is most fruitful to incumbent professionals if the nascent occupation is functionally productive and compliant with existing social norms within the professional landscape.

Conversely, as an emergent occupation evolves, professional codes are established and cognitive structures specific to the occupation become defined. Prior research finds that professionalization is enabled by the emergence of a trained pool of experts, the development of a body of knowledge (Dunn & Jones, 2010), related organizations and associations (Lounsbury, 2002), increased information flows between actors (DiMaggio, 1991) or symbolic frameworks defining new fields (Espeland & Hirsch, 1990; Casanovas & Ferraro, 2021), all delineating how new occupational actors diverge from preexisting groups (DiMaggio, 1991). Professionalization implies that a nascent occupation is socialized into a set of norms that regulates the behaviour of its members and their interactions with other actors, feeding a recognition of the occupation as a defined entity with discernable boundaries (Anteby, 2010). Professional boundaries enable interprofessional collaboration when they help anticipate others' expertise and roles (Farchi, Dopson, & Ferlie, 2022). Due to these changes, the political structure is more consolidated and agreed upon, professional jurisdictions are perceived to be clearer and better-defined.

Therefore, we argue that while under field-level uncertainty both types of third-party ties sustain coalition formation; when this uncertainty is at its peak however, the effect induced by ties that control power relations dominates over the one related to mutual dependence.

Hypothesis 3: At higher more than at lower levels of field-level uncertainty, the positive effect of third-party ties that regulate power imbalance prevails over that induced by mutual dependence in affecting coalition formation.

Lyon's Silk Guild in the 18th Century: The rise of designers, merchants' dominance and designers' third-party ties

To test our arguments about the role of third-party ties in coalition building under conditions of field-level change, we draw on the unique historical setting of Lyon's silk guild, *Grande Fabrique*. We examine the guild at a time (1700–1788) when a new occupation of silk design emerged adjacent to those of weavers and merchants in the guild, eventually flourishing to become a valuable and an inimitable axis of competition for the guild in the latter part of the century. Lyon's renowned reputation in the late 18th century came from designs of 'intangible quality of good taste' (Miller, 1988, p. 2), an effective method of product differentiation that foreign imitators could not preempt (Poni, 1997; Sewell, 2010).

Nevertheless, designers depended on silk merchants to commercialize their designs. An occupation distinct from weaving, silk design required unique technical and drawing skills. Making designs to be translated into woven patterns on the loom demanded a skillset that was different from that of weavers (Miller, 1988). Once designers learned the rudiments of design (often drawing and flower painting) and weaving, they needed to search for employment associated with merchants from the guild. Other than selling their designs to foreign silk manufactures, silk designers had few employment opportunities but working through the guild. This limitation strengthened in 1711, when the *Fabrique* declared that designs were to be treated as any other physical asset of silk production (e.g. raw silk, gold thread) and set the penalty for stealing or copying designs at corporal punishment and a 500 livres fine (Miller, 2017). Therefore, silk designers were effectively dependent on merchants and the guild for manufacturing silks after their designs and subsequently selling the silks.

However, merchants too became increasingly dependent on silk designers. Besides offering their design skills, some designers also worked with merchants to extend their markets, carrying out market research on aesthetic trends, and negotiating with potential consumers (Poni, 1997). For while merchants were free to travel and commercialize their silks, they were inherently tied to

Lyon and the guild. Designers, inversely, were positioned on the edge of the *Fabrique* and had a certain level of flexibility, becoming essential commercial mediators between the guild and the expectations of the market (Sewell, 2010). When a new fashion was launched, designers would often travel to Paris to see how the market was reacting, making adjustments for next season's designs. These frequent trips to Paris meant that silk designers often brushed shoulders with European nobility, the elite customers targeted by the guild (Poni, 1997). Merchants, less fluent in the world of art and aesthetics, were tasked with procurement and sales of silk manufacturing, and thus leaned on designers to develop and propagate novel spring and fall fashions (Sewell, 2010).

To offset their interdependencies, designers and merchants increasingly formed commercial partnerships throughout the century. Upon entering a partnership, a designer as an entrepreneur brought expertise and skills, designing exclusively for the merchant house. Final designs were made in consultation with the merchant. In cases where a designer was particularly valuable and provided sufficient non-financial contributions, he was sometimes exempt from providing any initial capital to the merchant, while still receiving equal or slightly reduced dividends as his partner (Miller, 1988). For designers, this position provided the same social and economic position as the largest silk merchants in Lyon (Sewell, 2010), and thus was an attractive opportunity. For merchants, exclusive designs brought differentiation from competing merchants and also a way to control influential and increasingly powerful designers.

Despite the role of partnerships to absorb some of the interdependencies between designers and merchants, the emergence and growth of silk design provoked uncertainty within the greater field of silk manufacturing. 'As soon as the silk industry became design-intensive – became an integral element in an emerging empire of fashion – the relations between the social categories that had made up the industry were transformed' (Sewell, 2010, p. 98). Intervening within the middle of the guild's value chain, between weavers and merchants, designers influenced both primary professions. Thus, on a practical level, before partnerships could be formed, designers needed to signal their productive and complementary capabilities with weavers. Without any formal credentials or training, early designers had limited means of highlighting these operational skills to merchants.² Even more, while the guild kept registers of the names and addresses of every merchant, designers' names were not accessible to the public domain for most of the century (Miller, 2017). In addition to being difficult to evaluate, designers needed to reassure merchants that they would not behave opportunistically once given the status of partner. Being external to the guild meant that designers were not held accountable to the same rules and regulations as weavers or merchants,³ provoking doubt over whether designers could challenge merchants' dominance or even weaken the guild's competitive standing. Examples of designers selling valuable designs to rival European silk centres existed, as was the case with François Farcot who was caught selling designs in Lisbon to help the Portuguese establish their own silk manufacturing.⁴

Given the difficulty to evaluate designers, the lucrative opportunities for selling designs abroad, and the weak extension of the guild's control mechanisms, merchants were uncertain about a designer's social and cultural fit; could they be trusted to respect merchants' norms and dominance? With this level of uncertainty affecting the field of silk manufacturing, designers' guild connections to weavers and merchants were an important source of information to discern both mutual dependence and the risk of power imbalance. Designers' ties to weavers indicated a familiarity with the technical nature of weaving and the feasibility of commercialization, such that designs on paper would be easily transferred to valuable products (Sewell, 2010). Similarly, designers with social ties to merchants provided a type of social insurance in partnerships not found with disconnected designers.

Therefore, designers' third-party ties served as vital sources of information for prospective merchant-partners to make sense of designers as a separate but interdependent occupation to the guild,

as well as discern their sensitivity to existing power structures. Still, as silk design became professionalized mid-century, the extent of uncertainty within the field of silk manufacturing declined as designers slowly integrated alongside other members of the guild. This dynamic setting of silk designers' evolution provides an ideal case to investigate the changing role of third parties on coalition formation.

Data and Methods

We assembled the dataset on partnership formation and third-party ties from two main sources. First, archival records of the *Grande Fabrique* (1700–1788) are from Lyon's municipal and departmental archives, which have recently been digitized (<http://www.archives-lyon.fr/>). These archives contain annual records that note apprentice contracts and promotions within the guild. In addition to membership records, the archives contain numerous regulations and royal orders concerning the *Fabrique* during the 18th century. Second, third-party tie information was obtained from Lesley Miller's extensive dictionary, which accounts for most silk designers actively working during the 18th century and their social ties (Miller, 2015). For each designer, Miller lists designers' family background, personal life milestones, career trajectories, residential addresses and bibliographic information. This information is determined by notary documents and records from parish registers (i.e. entries for baptism, marriage and death).

The focus on designers is justified on three grounds: (1) designers are the new entrants that lack legitimacy and normative standards in the eyes of incumbent professionals; (2) their entrance into the field and the associated interdependencies that they generate represent the main trigger of field-level uncertainty; (3) although resource interdependencies hold true on both sides of the partnership, reliable data is only found from the designers' side. The chosen time period of 1700–1788 contains information on 676 designers. We used this period of history for several reasons. Concerning the beginning of our observation window, systematic records before the 18th century are difficult to obtain, resulting in only a scattering of registers. As the occupation of silk designers began to develop in the beginning of the century, designers before 1700 were few. Concerning the ending, we chose 1788 for political reasons. The French Revolution began in 1789 and profoundly changed the *Fabrique*, shifting it from a traditional guild organization to a corporation. Using the sample of 676 designers, information is coded on a yearly basis until a designer experienced either the event (i.e. partnership), dropped out because of missing information, or was right-censored. In its entirety, the dataset amounts to 9,524 designer-year observations.

Dependent variable

Our study aims to understand the likelihood of a designer entering a partnership with a merchant. For all 676 designers, we read through their biographies and searched for indications of partnership. The dependent variable *Partnership* is coded as '1' in the year declared in the first partnership, otherwise '0'. Of the 676 designers in the dataset, 97 designers (14.3%) became partners. In the rare case of multiple partnerships, we focus on the first-known partnership, because this implies the most critical improvement of social and financial position of a designer.⁵ Figure 1 provides a visualization of the dependent variable alongside the population of designers across the observed time period.

Independent variables

To capture third-party ties that reinforce mutual dependence and regulate power imbalance, we relied on register records that document designers' social ties. We built a categorical variable

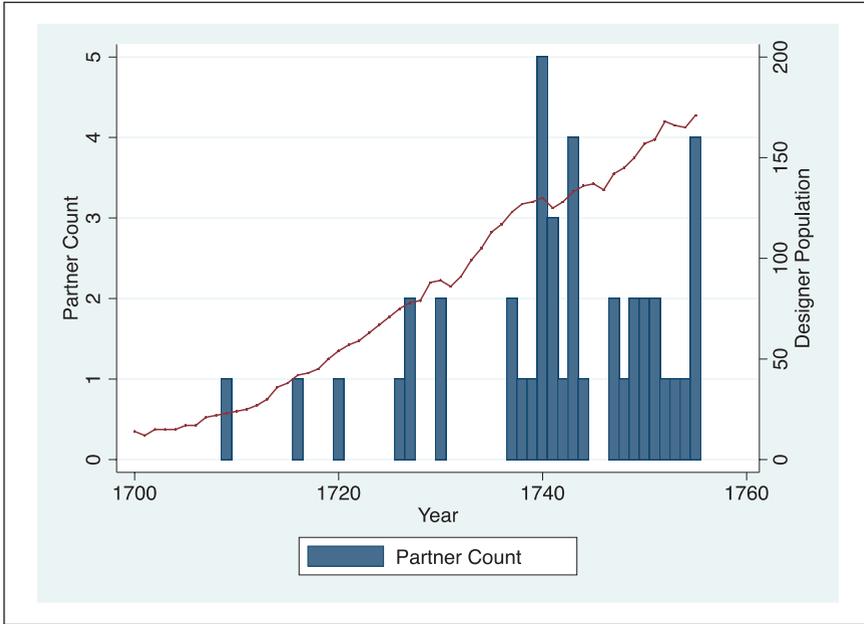


Figure 1. Designer Population and Number of Partnerships.

encompassing three types of third-party ties: (1) *Weaver tie*, a third-party tie reinforcing mutual dependence; (2) *Merchant tie*, a third-party tie representing the regulation of power imbalance; and (3) *No ties*.⁶ In some specifications, we collapsed (1) and (2) into a variable called *Guild tie* that encompasses both merchant and weaver ties.

Weaver tie captures whether a focal designer is connected to the guild through a silk weaver, a third-party tie which reinforces mutual dependence with merchants-partners. A designer has a weaver tie in one of the following ways: either a designer's father is a weaver, or the designer had a five-year apprenticeship with a weaver. Designers having weaver ties are proximate to the operational tasks of weaving silk: they understand the ins and outs of silk weaving and know-how of technical drawings that can be transferred easily onto the loom, desirable skills to bring to a partnership with a merchant. Of the designers in our sample, 173 have a weaver tie, helping to reinforce mutual dependence with merchants-partners.

Merchant tie captures whether a focal designer is connected to a silk merchant (independent of the focal partner), a third-party tie which can regulate power imbalance with merchants-partners. Merchant tie is coded 1 if a designer's father is a merchant in the guild, else coded 0.⁷ As previously mentioned, merchants controlled the Lyon silk industry, having majority role in deciding the guild's rules and regulations, and were the dominant professionals in the guild (Miller, 1988). Third-party ties with merchants (particularly through kinship) signal designers' familiarity and socialization with merchants' political dominance. Any power overthrows or opportunistic behaviour towards a merchant-partner is less likely from designers already intimately connected to a merchant. Thus, merchant ties regulate power imbalance by affirming designers' familiarity with an existing power structure and providing an indirect governance measure hindering designers from opportunism. In our dataset, thirty designers have fathers who are merchants, helping to regulate power imbalance with merchant-partners.

We link the extent of field-level uncertainty to the professionalization of silk designers, taking the year 1756 as the turning point. Recognizing that related organizations and associations facilitate professionalization (Lounsbury, 2002), we chose the opening of Lyon's independent free tuition school of design in 1756 as a turning point in the recognition of silk design as an independent and valuable occupation. By creating a local school of expertise, the city's prospective silk designers no longer needed to travel to Paris for training but could cultivate skills in proximity to the looms of the *Fabrique*. In making the design school tuition free (financed by royal and municipal sources), the city developed its own specialized labour pool regardless of designers' financial means. Subsequently, a trained pool of experts emerged (Dunn & Jones, 2010), developing a body of knowledge around silk design. With an increasing number of occupational experts, and the development of an organized institution (i.e. Lyon's design school), these conditions contributed to the professionalization of silk design. Accordingly, we created a dummy variable that flagged the period *Before 1756* to account for the field-level instability during the years preceding the professionalization of silk designers.

Control variables

In our models we control for alternative explanations potentially related to various levels of analysis, ranging from individual-, guild- and neighbourhood-levels.

With regard to individual designers, three control variables were included. First, the location where a designer is born. Being born and raised outside Lyon may have social disadvantages, particularly through social connections that transcend the silk industry. At the same time, not originating from Lyon may bring novel and unconventional ideas to the guild-centred and locally bounded industry. Accordingly *Born outside Lyon* is coded as '1' if a designer is not born in Lyon, '0' otherwise. In our sample, the majority of designers, 616, were born in Lyon but 60 designers originated from areas outside the city. Second, we control if a designer has *Travel Experience*. Travelling served as not only a source of improving design skills but also a channel to connect creativity, from production in Lyon to marketplaces in Paris and overseas. When a designer has a travel record in a year, we code the designer as '1' indicating the travelling year. In the sample of 676 designers, 63 designers temporarily spent time outside of Lyon. To control for designers' human capital, we rely on the *ordonnance consulaire*, which admitted designers directly to the status of designer-merchant, without passing through guild ranks and exempt from paying membership fees. This apprenticeship bypass is entirely based on the merits of designers' talents (Miller, 1988). In our sample, 32 designers have an *ordonnance consulaire*, reflected in the variable *Talent* coded as '1' ('0' otherwise).

We control for the size of the guild through the annual number of new registrations in the *Weaver population* and *Merchant population*. Because of the lack of data on the number of new weaver and merchant registrations, we use linear extrapolation to impute several missing years. We also consult multiple original sources on the general history and the silk industry in Lyon to double-check our measure. To account for the supply of designers able to engage in a partnership, we control for designer density with the variable *Designer population*. Finally, the cumulative count of designers entering partnerships in the guild until a focal year – *Partner tendency* – is also included as a control variable. This variable captures the degree of institutionalization of partnerships between designers and merchants in the city. Density variables are log transformed and lagged by one year.

At the neighbourhood level, we control for the unobserved heterogeneity across designers' residential neighbourhoods (e.g. social classes, economic conditions, living standards, etc.). Using

designers' home addresses (coming from census records, marriage certificates, or other types of notarial documents), we coded each street as a dummy variable belonging to one of the three neighbourhoods: North Presqu'île, South Presqu'île and Central/Old Lyon, the traditional demarcation of Lyon in the 18th century (Garden, 1970; Miller, 1988). The division of Lyon into three neighbourhoods is based on socio-economic differences reflected in tax roll records.⁸ Since many street names of the *Ancien Régime* changed after the French Revolution, we consulted reference material to match 18th-century street names with their corresponding contemporary name (Vanario, 2002). Once a designer's address is known, it is positioned within one of the neighbourhoods. In our dataset, few designers moved across neighbourhoods, indicating a relatively stable mobility. In addition to the three neighbourhoods mentioned above, *Missing neighbourhood* is coded as a fourth category. When a designer's neighbourhood is coded as missing,⁹ we are confident that they resided in Lyon, but are unable to identify which of the three neighbourhoods a designer resided. Lastly for each designer-year, we count how many other designers also live in the same neighbourhood in the same year (*Neighbourhood designer density*). This variable captures any competition among designers that may affect their appeal to merchants. The variable is log transformed and lagged by one year.

Estimation strategy

We focus on the first transition to partnership; if a designer enters a partnership he is dropped from the risk set. We model our data with a discrete-time event-history methodology (Allison, 1982). We estimate the hazard of an event (i.e. partnership formation) occurring in any one of t discrete time periods as a function of covariates that are allowed to vary over time.

The discrete-time model, unlike the continuous-time model, does not require exact information on the timing of events and is appropriate when measurement is based on discrete time in larger intervals, as in our case (Allison, 1982). Since the event of partnership only occurs for 1% of our sample, we opted for a complementary log-log specification, particularly appropriate for relatively rare events (Box-Steffensmeier, 2004; Jenkins, 1995). The standard errors reported in the tables are clustered by designer.

Results

Descriptive statistics and bivariate correlations of the variables included in our models are shown in Tables 1 and 2, respectively. We computed the variance inflation factor to check for collinearity. All VIFs of the independent variables are well below 10 with a mean VIF of 1.63, indicating that multicollinearity is not a serious concern.

Table 3 presents the models that test our hypotheses. Among the control variables (model 1), *Designer age* is curvilinearly associated with the likelihood of forming a partnership: the hazard of collaborating increases up until the age of 55 of a designer but declines soon after. At an aggregate level, higher *Merchant population* and, in some model specifications *Designer population*, point to a higher hazard of partnership formation between designers and merchants. Individual designers recognized as having design *Talent* are also positively associated with partnership formation (24 times higher than those not holding this recognition, according to the estimates of model 1). We find that increasing *Neighbourhood designer density* is instead negatively associated to partnership. Regardless of any socio-economic differences across neighbourhoods, increasing local agglomeration of designers decreases the hazard of a partnership forming between designers and merchants. We read these results as indicative of localized competition among designers.

Table 1. Descriptive Statistics.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Year	9,524	1755.619	19.73143	1701	1788
Partnership	9,524	.0089248	.0940537	0	1
Guild tie	9,524	.3878622	.4872885	0	1
No tie	9,524	.6121378	.4872885	0	1
Weaver tie	9,524	.3384082	.473193	0	1
Merchant tie	9,524	.049454	.2168254	0	1
Before 1756	9,524	.4709156	.4991796	0	1
Designer age	9,524	32.18858	12.76922	13	85
Born outside Lyon	9,524	.1347123	.3414339	0	1
Talent	9,524	.0069299	.0829612	0	1
Travel experience	9,524	.1230575	.3285205	0	1
Partner tendency	9,524	3.441813	1.092651	0	4.532599
Weaver population	9,524	5.273028	.1663235	4.795791	5.70711
Designer population	9,524	4.920884	.4701123	2.564949	5.365976
Merchant population	9,524	399.3621	33.68857	318	530
Designer neighbourhood density	9,524	1.077927	1.538745	0	4.007333

As expected from our reasoning, holding a third-party tie via the guild (*Guild tie*, which encompasses both merchant and weaver ties in a single variable) ensures a two times higher hazard of entering a partnership with a merchant in comparison with designers without any tie to the Guild (exp 0.715). This result speaks to the prominent role of third-party ties for the establishment of partnerships between merchants and designers.

However a more nuanced picture emerges from model 3. In this model, we split the *Guild tie* variable into its various components, namely ties that reinforce mutual dependence (i.e. *Weaver tie*, used to test H1) and those that regulate power imbalance (i.e. *Merchant tie*, used to test H2); *No tie* is the reference category. We find that designers having a *Weaver tie* increases the hazard of partnership formation ($b=0.568, p<0.01$), 76% higher than the no tie counterpart. *Merchant tie* is also positively related to partnership formation ($b=1.307, p<0.01$) by almost a threefold increase in the hazard compared to the baseline. The statistically significant increase in the fit of the model to the data (χ^2 test comparing model 2 and model 3, $p<0.05$, 1 d.f.) points to the value of splitting across various types of third-party ties. This trend of results appears aligned with Hypothesis 1 and Hypothesis 2.

Hypothesis 3 proposes that the effect of third-party ties that regulate power imbalance is stronger than ties that reinforce mutual dependence under conditions of high field-level uncertainty. This difference is expected to be magnified in the period before 1756, when field uncertainty is highest. Models 4 and 5 test this hypothesis through a split sample. As advanced by Hypothesis 3, the effect of *Merchant ties* is stronger than that of *Weaver ties* in model 4 (Chi2 test = 7.40, $p<0.01$). The positive effect of *Merchant tie* instead fades away after 1756 and becomes statistically indistinguishable from that associated to *Weaver tie* (Chi2 test = 0.01, $p>0.10$ – see model 5). A separate test of the hypothesis in a full sample specification using an interaction with *Before 1756* supports a similar conclusion (see model 6). Qualitatively comparable results are obtained when using 1750 and 1760 as cutoff points. Because interactions in non-linear models are difficult to interpret from their statistical significance (e.g. Brambor, Clark, & Golder, 2006), we chose to plot this effect (Figure 2). The plot suggests that *Merchant tie* predicted value is more than twice as large as the *Weaver tie* effect at

Table 2. Correlations.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Partnerships	1.0000														
2 Guild tie	0.0321	1.0000													
3 No tie	-0.0321	-1.0000	1.0000												
4 Weaver tie	0.0171	0.8985	-0.8985	1.0000											
5 Merchant tie	0.0350	0.2865	-0.2865	-0.1631	1.0000										
6 Before 1756	-0.0023	0.1470	-0.1470	0.1637	-0.0270	1.0000									
7 Designer age	0.0266	-0.0148	0.0148	0.0094	-0.0538	-0.3302	1.0000								
8 Born outside Lyon	0.0116	-0.0982	0.0982	-0.0983	-0.0063	0.1274	0.0518	1.0000							
9 Talent	0.1401	-0.0145	0.0145	-0.0169	0.0043	-0.0306	0.0045	-0.0107	1.0000						
10 Travel experience	0.0018	-0.0338	0.0338	-0.0146	-0.0442	0.1473	0.1113	0.6685	-0.0120	1.0000					
11 Partner tendency	0.0112	-0.0626	0.0626	-0.0862	0.0475	-0.7631	0.3509	-0.0993	0.0441	-0.1320	1.0000				
12 Weaver population	0.0064	-0.0221	0.0221	-0.0337	0.0240	-0.3843	0.2297	-0.0561	0.0423	-0.0819	0.7084	1.0000			
13 Designer population	0.0116	0.0108	-0.0108	-0.0139	0.0547	-0.5766	0.2579	-0.0508	0.0249	-0.0785	0.8969	0.6545	1.0000		
14 Merchant population	0.0236	0.0084	-0.0084	0.0079	0.0016	0.0221	0.1411	-0.0281	0.0265	-0.0380	0.3847	0.4687	0.2660	1.0000	
15 Designer neighbourhood density	0.0122	0.0535	-0.0535	0.0684	-0.0291	-0.2660	0.3315	-0.0536	0.0138	-0.1225	0.3002	0.1974	0.2526	0.0762	1.0000

Table 3. Likelihood of Partnership Formation as a Function of Third-Party Ties.

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Partnership	Partnership	Partnership	Partnership Before 1756	Partnership After 1756	Partnership
Designer age	0.220** (0.069)	0.223** (0.070)	0.223** (0.070)	0.283* (0.136)	0.207* (0.090)	0.230** (0.069)
Designer age # Designer age	-0.002** (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.003+ (0.002)	-0.002* (0.001)	-0.003** (0.001)
Born outside Lyon	0.596 (0.385)	0.686+ (0.376)	0.608 (0.388)	1.021* (0.503)	0.367 (0.672)	0.778* (0.386)
Talent	3.187** (0.348)	3.235** (0.323)	3.194** (0.325)	3.076** (0.555)	3.212** (0.461)	3.156** (0.349)
Travel experience	-0.584 (0.450)	-0.604 (0.429)	-0.522 (0.423)	-0.942+ (0.556)	-0.111 (0.788)	-0.593 (0.421)
Partner tendency	-0.498* (0.241)	-0.300 (0.237)	-0.358 (0.245)	-0.455 (0.555)	-1.852+ (1.086)	-0.608 (0.448)
Weaver population	-1.021 (0.956)	-1.092 (0.980)	-1.079 (0.984)	-0.591 (2.225)	-1.796 (1.510)	-0.998 (1.018)
Designer population	1.235+ (0.641)	0.858 (0.584)	0.946 (0.623)	1.117 (1.114)	-0.929 (2.366)	1.256 (0.774)
Merchant population	0.008+ (0.004)	0.007+ (0.004)	0.008+ (0.004)	0.006 (0.020)	0.009 (0.009)	0.010+ (0.005)
Neighbourhood designer density	-0.363** (0.130)	-0.381** (0.127)	-0.374** (0.125)	-0.604** (0.200)	-0.072 (0.239)	-0.357** (0.125)
Guild tie		0.715** (0.215)				
Weaver tie			0.568* (0.232)	0.378 (0.359)	0.743* (0.312)	0.854** (0.306)
Merchant tie			1.307** (0.338)	1.773** (0.564)	0.753 (0.507)	0.716 (0.525)
Before 1756 (dummy)						-0.247 (0.534)
Weaver tie # Before 1756 (dummy)						-0.494 (0.471)
Merchant tie # Before 1756 (dummy)						1.179 (0.802)
Constant	-10.198* (4.935)	-8.667+ (4.771)	-9.279+ (4.908)	-11.998 (11.012)	9.643 (17.992)	-11.232+ (6.016)
Observations	9,524	9,524	9,524	4,485	5,039	9,524
Neighbourhood dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-440.7	-435.7	-433.8	-190.7	-235.5	-430.8

Robust standard errors in parentheses, errors clustered by designer.

** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

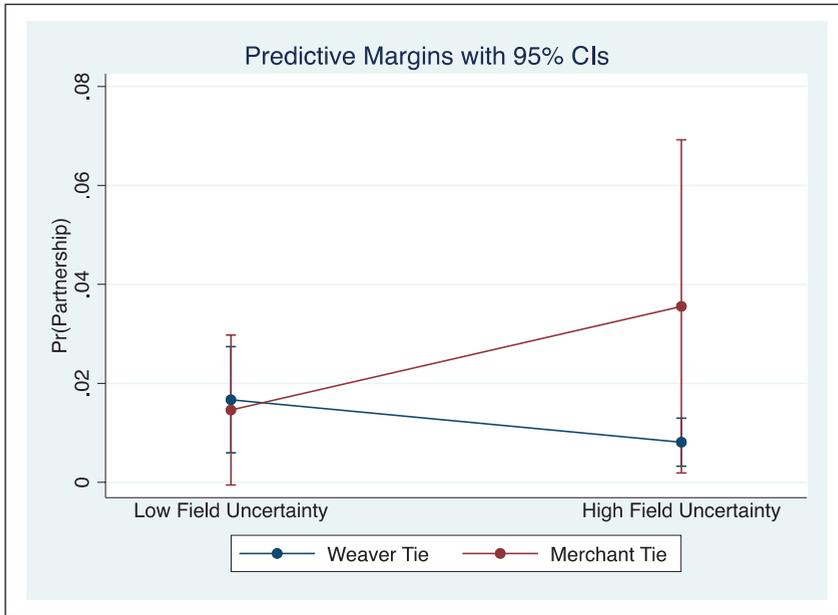


Figure 2. Interaction Effect of Third-Party Ties and Field-Level Uncertainty.

a higher level of field-level uncertainty (*Before 1756*). The coefficient intervals between the two estimates overlap though. At lower field-level uncertainty, the predicted value of the two type of tie also becomes indistinguishable (a result consistent with model 5).¹⁰ We interpret these results as providing support for Hypothesis 3.

Robustness checks

To better identify the effect of mutual dependence and power imbalance between designers and merchants, we perform several additional tests. To account for shifting opportunities in the evolution of silk manufacturing, we constructed a variable *Resource scarcity* that encompasses two main factors, times of war and mourning.¹¹ Considering that the *Fabrique* was financed by royal funding for economic support in conjunction with the Crown being its main commercial benefactor, times of war and royal mourning meant that merchants needed to seek funds and patrons elsewhere. To capture the varying demand for silk products from Lyon, we took into account the annual number of days the court of Versailles was in mourning. Times of mourning meant that the royal court were obliged to wear black (in lieu of opulent silks). Thus the variable *Resource scarcity* is measured at the year level, coded '1' if either war occurred or death of a monarch forced European courts into mourning. Inclusion of this control variable did not affect our main results (Table 4, model 2).

Second, but related, partnership formation may be driven by other than functional and political considerations made via third-party ties. For instance, spatial distance across merchants and designers can also play a role. While having a third-party tie to merchants in social space may confer normative adherence to existing hierarchies, proximity in the physical space shapes who interacts with whom at which frequency and provides rich information about social control (Grannis, 2009), which may ensure safety in a partnership. Accordingly, we coded whether a focal designer resided in the neighbourhood of Lyon that was densely populated with merchants: South

Presqu'île. As the coefficient estimate of the variable *Merchant spatial proximity* shows, we do not find support for this alternative explanation; it is worth noticing that our results remain unaffected (Table 4, model 3).

Third, we employ an alternative operationalization of uncertainty. Acknowledging the institutional importance bestowed upon a designer through *ordonnance consulaire*, we created a variable *Guild recognition* to capture the cumulative number of the *Fabrique's* formal recognitions of designers up until the focal year (for the over-time frequency of this variable, see Figure 3). A comparison of the main effect of the *Weaver tie* and *Merchant tie* confirm the existence of a stronger effect of *Merchant tie* over *Weaver tie* at lower levels of *Guild recognition*, meaning at higher levels of uncertainty elicited by a limited recognition of the value of the designers' profession (Chi2 test = 7.95, $p < 0.01$). The estimates of this model specification remain consistent with the trend of results discussed earlier (Table 4, model 4).

Discussion and Conclusion

In this paper we investigate how field-level uncertainty brought by new occupational entrepreneurs affects coalition building with incumbent professionals. In particular, we highlight the existence of third-party ties that reinforce mutual dependence and regulate power imbalance as drivers of coalition building, and underscore the shifting salience of those types of tie over the evolution of a nascent occupation. We find support for our arguments in a population of 676 designers in Lyon from 1700 to 1788.

Contribution to resource dependence theory

Our paper contributes to resource dependence theory. In this respect, it is useful to consider the study of Casciaro and Piskorski (2005), whose main contribution lies in separating power imbalance and mutual dependence, originally collapsed together in the concept of interdependence (Pfeffer & Salancik, 1978). According to the authors, both components 'determine the structural conditions under which an actor will not only be motivated but also be capable of restructuring dependencies by absorbing constraint' (Casciaro & Piskorski, 2005, p. 171). The results of their empirical study points to mutual dependence and power imbalance as having opposing effects on M&As.

Our study contributes to this reasoning by exploring the use of coalition building that involves *field-level* uncertainty above and beyond *firm-level* uncertainty. Our case concerns uncertainty that transcends the focal actor (i.e. designer) and addresses the field as a whole (i.e. silk design). This level changes the optic of resource dependency theory, where uncertainty is primarily 'about what the actions will be of those with which the organizations [are] interdependent' (Hillman, Withers, & Collins, 2009, p. 1405). In our case, field-level uncertainty makes the nascent profession difficult to evaluate by incumbent professionals who, however, are aware of their growing interdependencies with them. Our results suggest that under these conditions, third-party ties that regulate power imbalance are particularly relevant for coalition building. We attribute this effect to the assurance that comes from familiarly with existing normative and behavioral expectations which mitigate field-level uncertainty.

Our approach thus enriches the work of Casciaro and Piskorski (2005) and of resource dependence in general (Pfeffer & Salancik, 1978) in several other ways. First, our approach to power imbalance operates via third parties. This adds to the existing theory that calls for a deeper investigation into the conditions when third parties become relevant for reducing uncertainty (see also Rogan & Sorenson, 2014). We believe that these considerations reach beyond the context of nascent occupations and involve various scenarios already explored by resource dependence (for a

Table 4. Robustness Checks.

Variables	(1)	(2)	(3)	(4)
	Partnership	Partnership	Partnership	Partnership
Designer age	0.223** (0.070)	0.223** (0.070)	0.223** (0.070)	0.226** (0.069)
Designer age # Designer age	-0.003** (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.003** (0.001)
Born outside Lyon	0.608 (0.388)	0.604 (0.389)	0.604 (0.389)	0.765* (0.386)
Talent	3.194** (0.325)	3.211** (0.326)	3.211** (0.326)	3.019** (0.362)
Travel experience	-0.522 (0.423)	-0.526 (0.423)	-0.526 (0.423)	-0.596 (0.418)
Partner tendency	-0.358 (0.245)	-0.378 (0.248)	-0.378 (0.248)	-0.627 (0.456)
Weaver population	-1.079 (0.984)	-0.971 (1.002)	-0.971 (1.002)	-0.984 (0.989)
Designer population	0.946 (0.623)	0.994 (0.606)	0.994 (0.606)	1.480+ (0.866)
Merchant population	0.008+ (0.004)	0.008+ (0.004)	0.008+ (0.004)	0.007+ (0.004)
Neighbourhood designer density	-0.374** (0.125)	-0.374** (0.124)	-0.374** (0.124)	-0.359** (0.123)
Weaver tie	0.568* (0.232)	0.571* (0.231)	0.571* (0.231)	0.856* (0.381)
Merchant tie	1.307** (0.338)	1.308** (0.338)	1.308** (0.338)	2.425** (0.617)
Resource scarcity		-0.393 (0.511)	-0.393 (0.511)	-0.452 (0.510)
Merchant spatial proximity			-0.434 (0.542)	-0.368 (0.543)
Guild recognition				0.016 (0.014)
Weaver tie # Guild recognition				-0.009 (0.010)
Merchant tie # Guild recognition				-0.052* (0.026)
Constant	-9.279+ (4.908)	-9.701+ (4.953)	-9.701+ (4.953)	-11.192* (5.551)
Observations	9,524	9,524	9,524	9,524
Neighbourhood dummies	Yes	Yes	Yes	Yes
Log likelihood	-433.8	-433.5	-433.5	-430.6

Robust standard errors in parentheses, errors clustered by designer.

** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

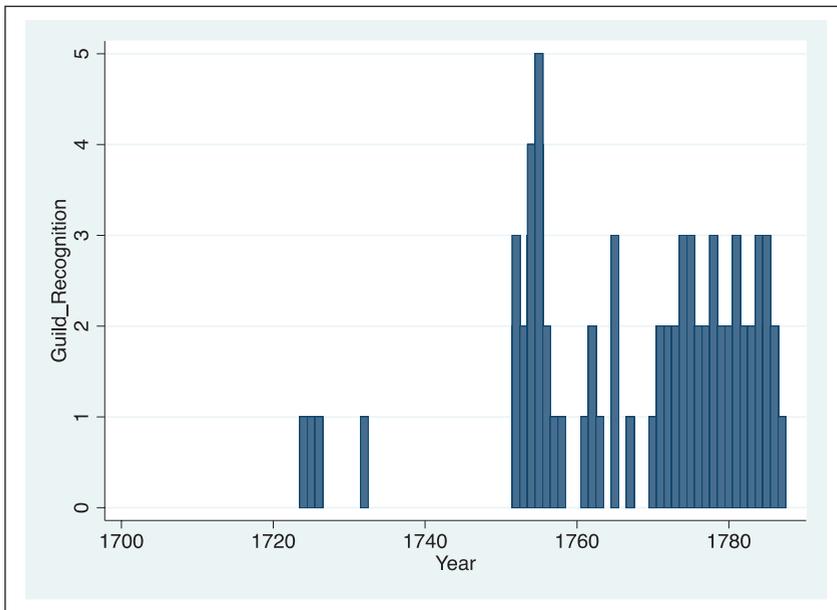


Figure 3. Number of Guild Recognitions *Ordonnance Consulaire* Given to Designers.

review, see Hillman et al., 2009). Second, we show that the effects of third-party ties, whether facilitating or constraining interprofessional coalition building, vary with the professionalization of newcomer professionals. Our results highlight the primacy of political considerations in face of high levels of field-level uncertainty. We look forward to future research that probes our reasoning under conditions of field- and actor-level uncertainty and in the presence of different types of third parties to further empirically test the time-varying trade-offs involved in coalition building.

Contribution to professionalization of creative workers

Our paper mobilizes a unique historical setting and investigates career dynamics associated with the emergence of a group of premodern creative workers. In addition to its historical value, the paper showcases how creative workers' careers evolve through ties to neighbouring professions and how professionalization shifts the value of such ties. Given that 'professions are not discrete and enduring things but relational and contingent processes constantly in flux' (Spillman & Brophy, 2018, p. 157), we document the process underlying how a nascent creative occupation grafts its recognition through social ties to adjacent professions. This complements previous literature which primarily focuses on creative workers' careers under conditions of a legitimate and widely recognizable occupation (Jones, Svejenova, Strandgaard Pedersen, & Townley, 2016; Zuckerman, Kim, Ukanwa, & Rittmann, 2003).

Previous studies suggest that creative workers' careers are based on a mixture of commercial expectations, aesthetic motives and moral concerns (Janssen & Verboord, 2015). For instance, criteria such as styles and tastes (Hitters & van de Kamp, 2010; Mears, 2014), status matching (Godart & Mears, 2009), prototype matching (Elsbach & Kramer, 2003) and reputation (Ebbers & Wijnberg, 2012) have been proven as signals of the quality of creative workers. Our paper underscores the importance of socio-political expectations as essential to the development of creative

workers' careers, particularly when a creative occupation is nascent. We find that net of the creativity criterion (*Talent*), designers with ties to merchants are favoured for partnerships due to the politically stabilizing effect of having familiarity with a preexisting hierarchical ordering.

While these patterns are unique to our empirical setting, they may shed light on how social organization of creative industries evolves as the nexus of expertise, mobility, jurisdiction and socio-political conditions reconfigure. More interestingly, it is worth asking whether the types of third-party ties studied reflect certain characteristics intrinsic to creatives, and when the effects of professionalization reach limitation (Becker, 1976).

Limitations

As any study, our paper is not exempt from limitations. First, our analysis is limited by the availability of data on merchants, who constituted the other critical party in forming partnerships. Admittedly, an assessment of partnership choice from both sides provides a more fine-grained representation of the process under study. Second, while we hint at the existence of different types of creative workers, we lack data on how the different types of ties and the quality of these ties generated creative sparks and affected the performance of partnerships (Daskalaki, 2010). For instance, it would be interesting to investigate which types of tie turned out to be more effective for the performance of both actors and how the partnerships between designers and merchants impacted the evolutionary dynamics of the Lyon silk industry as a whole. We are convinced that the empirical shortcomings of our paper are balanced against the opportunity to conduct a rare historical study of partnerships formed between commercial and creative workers. We look forward to future research that will expand our theorization and explore the consequences of different types of third-party ties involved in partnership formation between commercial and creative workers.

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Notes

1. Coalition building under field-level uncertainty and evolving interdependencies is distinct from existing studies which focus on how uncertainty and resources needs change as entrepreneurs and incumbent firms gain experience (Hallen et al., 2014; Katila et al., 2021). While different professional norms, hierarchies and practices are implicit in prior research on resource dependency, field-level uncertainty has not directly been accounted for in explaining coalition building and related concerns of power imbalance and mutual dependence.

2. The lack of designer credentialing changed with professionalization and the opening of the design school in 1756; see further section on field-level uncertainty (moderator variable).
3. Throughout their existence, silk designers were never officially part of Lyon's guild, which was dominated and regulated by merchants.
4. In 1725, a Lyonnais councilman wrote to the *Fabrique* on the subject of *l'infidélité des dessinateurs* (disloyal designers) and the difficulty of legislating effectively against them selling designs to foreigners (Miller, 1988).
5. For example, Francois Suleau (1714–1757) entered a partnership with Denis Rigod and Denis Chaumas between 1751 and 1757, and he formed a new partnership with Jean Duperrel in January 1752. In this case, we only code the 1751 partnership as our dependent variable.
6. Given the structure of the guild, it is unlikely that a designer has a third-party tie to both a merchant and a weaver in the manner in which we have coded these variables (i.e. kinship or mentorship tie). If a designer has a father who is a weaver (or merchant), the guild allows sons of guild members to skip out on an apprenticeship (and thus not have a mentorship tie) and enter directly in a journeyman position (Miller, 1988). Thus with respect to kinship or mentorship ties, our coding of weaver and merchant ties is mutually exclusive.
7. While the data is not systematic in recording the merchants' names with whom designers partner, partnerships between fathers and sons are rare. If a designer's father is a merchant and the designer is recorded as being in a commercial partnership, these are independent ties.
8. While North Presqu'île was mostly inhabited by silk industry workers, South Presqu'île was a richer quarter resided by bourgeois and nobilities. Central/Old Lyon was historically the neighbourhood of the poor (Garden, 1970).
9. Of 676 designers, we have neighbourhood information of at least one year for 475 designers.
10. A similar trend of results is found by using a continuous 'clock' variable counting years from 1700 to 1788. In early years (before professionalization), the effect of *Merchant ties* on the likelihood of partnership formation is stronger than *Weaver ties*. The stronger effect diminishes over time. In later years of the clock, the effects of both types of tie become indistinguishable (similar to results shown in Figure 2).
11. Lyon's silk guild experienced financial hardships during both the War of the Austrian Succession (1740–1748) and the Seven Years' War (1756–1763). After the Seven Years' War, the French Crown found itself in debt and losing much of its North American conquests.

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