



How knowledge brokers emerge and evolve: The role of actors' behaviour



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ABSTRACT

This article investigates how actors positioned in a network can evolve as knowledge brokers, as well as how they act to develop new brokerage roles. Our focus is on actor's behaviour while previous studies concentrate more on the structural and positional determinants of brokerage roles. This research combines brokerage roles with a broker's functions in an exploratory study of a small Italian comics publishing house. Over 20 years, the firm played different brokerage roles involving different actors at national and international levels. We find that if all brokerage roles involve transcoding functions, the ability to overcome transcoding obstacles, through the use of shared imprinting with receiving partners, could be useful for developing any brokerage role. Moreover, heterogeneity in the competences and industry experience of hired members of the management team could support the development of new brokerage roles, with differentiated effects on various brokers' functions. If a brokerage role involves new actors with no previous allegiance, the status of the broker, signalled through network relations, can have significant impacts by indirectly communicating its superior knowledge. The proposed, emerging theoretical framework has direct implications for studies of knowledge brokers and innovation in social networks, as well as for entrepreneurship research.

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1. Introduction

Studies of social networks and entrepreneurship share the notion that innovation can be created by transferring and combining extant ideas, knowledge and artefacts held by various individuals, firms or institutions. Most studies recognize the key role of knowledge brokers, such as bridging organizations or gatekeepers that mediate the flow of knowledge and information between two unconnected actors (Burt, 1992), whether they belong to the same or different subgroups or networks (Marsden, 1982). Knowledge brokers also might be individuals (Malecki, 2010; Shi et al., 2009; Uzzi and Spiro, 2005; Watts, 1999; Wink, 2008) or organizations (Graf, 2011; Hargadon, 1998; Lazaric et al., 2008; Wink, 2008).

Various studies seek the structural antecedents of brokerage roles (Uzzi and Spiro, 2005; Zaheer and Soda, 2009) by attempting to identify them in a network structure of ties, such as a geographical cluster, industry system of innovation or other social structures. These studies also tend to focus on a particular kind of broker: the gatekeeper, defined as the actor that mediates

knowledge between its own group and another group of actors, from which it acquires new knowledge. Other kinds of brokers rarely are addressed. Although such investigations might identify possible knowledge brokers, they ignore the behaviours and processes that sustain the creation and further developments of the brokers. Nor does extant research address how actors that are well positioned in their network as knowledge brokers might deliberately exploit old or explore new brokerage roles. But these questions are key for researchers interested in how innovation emerges in social networks. They also likely have implications for studies on entrepreneurship, in that entrepreneurs often are interested in benefiting from brokerage positions or seek to access such positions (Aldrich, 1999; Burt, 1992).

With this exploratory research, we investigate actors' behaviours that can support the emergence of brokerage roles. We thus contribute an initial answer to an important theoretical question raised by Dhanaraj and Parkhe (2006): How do actors act to understand, preserve and enhance their network and try to extract value from it? Research specifically focused on structural holes and knowledge brokers (Zaheer and Soda, 2009) calls for new perspectives on this agency issue. Accordingly, we adopt a twofold research question: How can actors positioned in a network evolve as knowledge brokers, and how can they act to develop new brokerage roles? Our intent is not to minimize the role of structures and positions; rather, we shift the focus to processes

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and behaviours, to complement and extend results derived from structure-centred research.

We therefore embrace a perspective that suggests brokerage roles differ for various actors (Gould and Fernandez, 1989) and for the same actor at different times (Graf, 2011). In particular, we recognize different brokerage roles, depending on the flow of knowledge within and between different groups of actors (Gould and Fernandez, 1989). Moreover, we adopt Burt's (2004) typology, which recognizes four functions through which a broker can create value, at different levels of complexity. With these two constructs, we also address outstanding demands for models that combine the brokerage role construct with other ones, to better investigate its developments and implications (Shi et al., 2009).

To build and advance theory on the agency issue in relation to the emergence and evolution of brokerage roles, we combine and apply these two constructs in an exploratory research study of an Italian comics publishing house, a small firm located in the Bologna comics cluster. For 20 years, the firm has played a significant role in brokering knowledge within its group and across other groups of actors, such that it has performed several different brokerage roles. We take the firm as the unit of analysis and observe it and its management team over a 20-year period.

In the next section, we introduce our theoretical background and the key components of our conceptual framework. After we describe our research methods and offer a brief history of the firm, we analyse the evolution of the firm's brokerage roles and functions. Furthermore, we elaborate on the relations between the firm's behaviour and its brokerage functions, which lead to several propositions. Finally, we summarize our results and highlight some implications for theory and management, along with some limitations and ideas for further research.

2. Theoretical background and conceptual framework

We investigate how actors positioned in a network evolve as knowledge brokers and how they actively work to develop new brokerage roles. Most studies of knowledge brokers instead focus on the structural determinants of brokerage roles, often related to performance implications (Graf and Kruger, 2011; Lazaric et al., 2008; McEvily and Zaheer, 1999; Zaheer and Bell, 2005). In this context, actors generally are defined as knowledge brokers or particular kinds of brokers (i.e., gatekeepers, who mediate knowledge between their own group and another group of actors, from which they acquire new knowledge). In industrial systems of innovation, such "bridging organizations" establish and maintain ties with many different actors and help overcome weaknesses of the system (Sapsed et al., 2007). Studies of innovation in geographical clusters also highlight the linkages that firms and individuals can create within and outside their cluster. Gatekeepers tend to be well connected with knowledge sources (Munari et al., 2011), though their relationships with local firms may be limited in both their number and the quality of the transferred knowledge (Morrison, 2008). When innovation research adopts a social network perspective, knowledge brokers appear well connected to different industries, rather than taking a central position in any one of them (Hargadon, 1998). Other perspectives instead grant them a central position in social networks (Hulsink et al., 2008). This attention to the structural determinants of a brokerage role is shared by Uzzi and Spiro (2005), who investigate small worlds and gatekeepers in the Broadway musical industry, and by Zaheer and Soda (2009), who study the origins of structural holes through network evolution at an individual level and highlight the roles of prior status and centrality, as well as of structural holes spanned in the past.

In brief, a structuralist perspective is diffuse and prevalent in knowledge broker studies, as it is in studies on social networks (Burt, 1992; Kilduff and Brass, 2010; Steglich et al., 2010). Challenges to this perspective appear in studies of social capital (Nahapiet and Ghoshal, 1998), though they are rather more limited in knowledge broker research. They reflect two fronts. The first considers the role of attributes; for example, a few studies combine structural determinants of brokerage roles with other factors that might affect the ability of an actor to serve in this role, including size, absorptive capacity (Giuliani and Bell, 2005; Graf, 2011; Spencer, 2003), internal skills, involvement in experimentation (Giuliani, 2011) and broader career experience (Stam, 2010). The second criticism of the structuralist approach refers to its limits in accounting for the role of an actor's behaviour, i.e. the role of agency. If actors have competences and motivation to identify and take advantage of a network position, any research interested in addressing the antecedents of a brokerage role must analyse behaviours that sustain their exploitation of this position and exploration of new ones. We therefore shift the focus from structure and position to behaviours and processes that contribute to the emergence and development of brokerage roles, with the intent of complementing previous approaches (Nohria, 1992; White, 1992).

To the best of our knowledge, no studies address the evolution of brokers and their behaviour, with the exception of one investigation of gatekeepers (Giuliani, 2011). This single study shows that the persistence of a gatekeeper role is accompanied by an increasing number of mediated partners, with whom trust and stable relationships are created progressively.

To address our research questions, we build a conceptual framework on the basis of two constructs: knowledge brokers' roles and key functions. We start recognizing different brokerage roles, other than gatekeeper, and adopt Gould and Fernandez's (1989) typology, which inextricably ties structural positions to the roles played by actors. These roles connect different actors with unique positions in the social network. We accordingly recognize five structurally distinct types of brokers (equivalently, five types of brokerage relations) that follow from a partitioning of actors into non-overlapping subgroups:

- (a) *Coordinator*: All actors belong to the same group, so the brokerage relation is completely internal.
- (b) *Representative*: One or more members of a subgroup delegate one of their own members to communicate information to or negotiate exchanges with outsiders.
- (c) *Gatekeeper*: An actor selectively grants outsiders access to members of his or her own group.
- (d) *Liaison*: The broker is an outsider with respect to both the initiator of the brokerage relation and the receiver of the relation. This actor's role is to link distinct groups, without any prior allegiance to either.
- (e) *Cosmopolitan or itinerant broker*: The intermediated actors belong to the same subgroup, but the intermediary belongs to a different group.

Kirkels and Duysters (2010) use this framework to identify different kinds of individual knowledge brokers, and Shi et al. (2009) adopt it to propose links of different brokerage roles played by middle managers with varying strategic orientations and contributions to the strategic process. We know of no studies that have used this framework to address the behavioural antecedents of different brokerage roles.

Brokers can play these roles in different ways too, with different functions. Literature about the functions of brokers is heterogeneous in its focus and typologies. Hargadon and Sutton (1997) consider internal processes that enable a broker to innovate by benefitting from its network position and thereby suggest two

functions: transferring and combining knowledge. Other authors (e.g., Allen, 1977; Morrison, 2008) focus more on gatekeepers and identify three functions: searching external knowledge, transcoding it and sharing it internally. Some identified functions even transcend the more typical mediating functions, including various combinations of functions and roles (Howells, 2006). We adopt Burt's (2004) parsimonious typology, which recognizes four functions through which a broker can create value: (a) make intermediated actors aware of the interests and problems of the other side, which is a transcoding function; (b) transfer best practices; (c) draw analogies between intermediated actors that have not been visible or were not considered relevant to them; and (d) try to create new beliefs and behaviours by combining elements derived from the brokerage position, which is a synthesis function. Burt describes these functions as different levels of intermediation, increasing in complexity. Drawing analogies and syntheses thus are more challenging for brokers, particularly when the mediated groups are more heterogeneous. In this situation, it is more difficult to find analogies and therefore more difficult to create new knowledge through combinations, but it also offers greater opportunities for innovation. The need for the broker to be familiar with both intermediated groups makes these two functions more demanding, compared with transcoding or knowledge transfer. We use this notion of intrinsically different function levels in our research.

With Gould and Fernandez's (1989) typology and Burt's (2004) framework, we investigate actors' behaviours, which enable them to understand, preserve, enhance and change their brokerage positions in a network. We recognize that "Networks do not act, they are context for action" (Burt, 2004, p. 354), such that we directly address the agency issue that has remained largely underexplored in previous literature on knowledge brokers, despite its theoretical (Dhanaraj and Parkhe, 2006; Zaheer and Soda, 2009) and managerial relevance.

3. Research methodology

3.1. Research design and analysis

Considering the limited extent of understanding of behaviours and processes that contribute to the emergence and development of brokerage roles, we used a case study strategy (Eisenhardt, 1989; Yin, 1994). We decided to adopt a qualitative perspective, to discover more about how the firm could develop different brokerage roles over a certain period of time. Because we are interested in the behaviours that caused a brokerage role to emerge and evolve, our methodology combines historical and longitudinal case study approaches (Table 1). This combination is synergic, in that the longitudinal case study provides internal validity by enabling us to track the causes and effects, which is difficult with historical case studies (Leonard-Barton, 1990). Furthermore, our intent is exploratory, such that we seek to provide insights and propositions that can be tested. This is the case of other researches focused on processes (Burgelman, 1983; Danneels, 2011).

The case study involves the Kappa company, which served different brokerage roles involving firms and professionals belonging to the Italian authorial comic industry whose capital is the Bologna cluster, where it is located, and other international environments. It provides a good case context for several reasons. First, within the industry, Kappa was widely recognized as the company that could transfer knowledge and opportunities across different environments, and it maintained this critical role for 20 years. Second, Kappa's founding team (i.e., the Kappa Boys) shared their experiences with other entrepreneurs and professionals of the cluster, but they were generally recognized as the first to brokerage new knowledge involving firms and professionals. The diffusion of their brokered knowledge prompted the development of entrepreneurial activities by other Italian actors.

The observation period spans from 1989 to 2009. Although this study was designed in 2007, by that time we already had detailed documentation that one of the authors had started to collect in 1995 through an historical case study. The 1989–1995 period was covered in previous research, which entailed interviews with key decision makers and secondary data collection (books on comics, editors' letters in comics). The focus in this previous study was an innovation that the company introduced in the Italian comics market, namely, manga comics. The first report in 1995 was confirmed as accurate and credible by company employees at the time. The period 2000–2006 was covered with a longitudinal case study. During this period, data were collected through university conferences and presentations at industry fairs, interviews with members of Kappa's founding team, personal observations and secondary sources. By that time, the company had introduced several business model innovations to the Italian market. The conferences and interviews focused on the competitive and organizational implications of these innovations, as well as the key organizational and strategic factors supporting them. Two additional reports were released in 2004 and 2006, which again were confirmed in terms of accuracy and credibility by company members.

By 2007, the brokerage roles that Kappa played began to attract our attention, so we decided to investigate their emergence and evolution directly, using an historical case study that covered the entire period. From November 2007 to November 2009, we conducted 12 semi-structured interviews: 7 with members of Kappa's entrepreneurial team and managers and 5 with industry participants (Italian artist; editor and founder of the Granata Press, the pioneer publishing company of manga in Italy; one distributor; and two members of educational institutions). In these interviews, informants freely expressed their ideas, with no imposed prior constructs or theory, such that we were able to discover new concepts (Gioia et al., 2013).

The interviews were transcribed verbatim. To confirm the accuracy of the findings and credibility of our interpretations, we checked them with the interviewees. Although the risk of memory loss and retrospective rationalizations are minimized by the collection of interviews and data over a long period of observation, we also triangulated the information with details collected from

Table 1
Methods used.

	Method	Sources	Output
1995	Historical case study	Archival Interviews	Report on the period 1989–1995
2000–2006	Longitudinal case study	Archival Interviews Personal observation Presentation and conferences of entrepreneurial team	2 reports: 2004 and 2006
2007–2009	Historical case study	Archival Interviews Personal observation	Database, memos, tabular materials

other key actors, documentation and secondary data. Further documentation, secondary data and direct observation at the company site and at comics festivals (in Lucca and Bologna) complemented our data collection. We thus constructed a database of documents, memos and tabular materials (Gibbert et al., 2008).

We proceeded through many cycles of comparison between data and theory, accessing new data and acquiring new theory and concepts as required (Burawoy, 1991; Danneels, 2011). After confrontation our emerging theoretical framework with empirical evidence, we accessed literature on different topics, such as imprinting, managerial team composition, entrepreneurship and status. Our propositions emerged from this iterative process.

3.2. A brief history of Kappa

Although Kappa was founded in 1995 in the Bologna comics cluster, its history goes back to 1989, when Kappa's founding team – a group of friends and colleagues – initiated a brokerage role as an entrepreneurial team, which they later transferred to their company. The Kappa Boys began their activity in Bologna; whereas Milan may be the Italian city with the most profitable comics publishing companies, Bologna is the capital for Italian comics with greater authorial priority (Boschi, 2007). This comics scene focuses especially on niche and experimental genres, rather than traditional, serial comics. Table 2 summarizes key events in Kappa's development, according to comments from founding team members, management team and other professionals, which offer vivid images of the firm and its key actors.

4. Results and discussion

We organize our findings by starting from the different brokerage roles that we identified for Kappa, in which it performed different functions (transcoding, knowledge transfer, analogy finding, synthesis). In following parts we relate different functions and roles to the firm's behaviours.

4.1. Brokerage roles and key functions

During the observed period, Kappa developed different brokerage roles. Specifically, we identified four of the five brokerage roles presented by Gould and Fernandez (1989): gatekeeper, coordinator, representative and liason. In these roles, we defined Kappa's group as the set of Italian firms and professionals involved in the production and distribution of authorial comics. We found an intrinsic correlation between the development of the firm's business model and the evolution of its brokerage roles; in Table 3 we summarize the evolution of Kappa as a knowledge broker across three phases, according to the evolution of its business model, key functions, intermediated actors and transferred knowledge.

In particular, we identified evidence of a gatekeeper role in both the first and second phases of Kappa's life cycle. Initially it functions as a gatekeeper, bringing ideas about a new business model (manga comics for a highly differentiated market) from Japanese publishers to the members of the group to which it belonged, namely, Italian publishers and distributors, with whom it collaborated by providing consulting and editorial services. This role was performed according to three functions: a transcoding function, a transfer of practices and the drawing of analogies between the Japanese and the Italian comics markets.

Early on, the entrepreneurial team invested a lot of effort to explain the richness (quantity and quality) of Japanese manga production to the Italian consumers, publishers and distributors, because "In the Eighties, people even did not know that anime [Japanese movies based on manga] were Japanese. Japan was out of the geographical map of most people!" (Andrea Baricordi,

member of the management team). This transcoding function included several tools, such as editorial letters published in their magazines, day-to-day interactions with publishers and distributors who asked for their advice and the creation of an early catalogue with descriptions and comments on Japan's production of anime (which later was translated in different languages and continues to be published). Kappa also started to transfer best practices, such as the translation and adaptation of Japanese manga directly from the original version (not from poorly adapted U.S. versions), the adoption of the un-reversed version (i.e., Japanese books are read back to front, whereas a reversed version could spoil the quality of any animated cartoon) and an identification and careful focus on specific segments of customers.

Another important function was the identification of analogies between the mediated groups. The Japanese comics market was large and differentiated, with many different segments (i.e., in term of age, gender, religion, profession, sport), whereas in Italy, the existing comic market seemed homogeneous. Kappa detected possible analogies between the Japanese market and the Italian one in terms of segmentation though. Initially, Kappa started to identify different cohorts of customers in terms of age: "I am very happy that for *Sailor Moon* and *Game Over* we have 8–12-year-old customers, who were non-existent up to a few years before" (Barbara Rossi, member of the management team). In following years, Kappa introduced different genres of manga and thereby "discovered" new segments of Italian customers, which made the drawn analogies into reality.

In the second phase, Kappa developed a new gatekeeper role by introducing the graphic novel business model from Europe and North America to Italy. The role involved European and North American publishers and Italian publishers and distributors. Graphic novels were attracting a lot of attention² in North America and Europe at the time; Kappa was the first publishing firm to promote Italian artists in the periodical comic *Mondo Naif* and then publish the same artists in graphic novels. Both decisions were innovations for the Italian market. The new business model required the identification of a new value proposition for customers (new content, new format), a new distribution system (bookstores instead of comic shops), a new market and possibly a new revenue stream for publishers. In this brokerage role, we observe the same functions: transcoding (making Italian distributors and publishers aware of the new opportunity), transferring (knowledge about the new business model and its benefits) and identification of analogies (between Italian and other Western markets).

Beyond these three functions, we found evidence of some combination of elements across intermediated groups. Following the example of Japanese manga, Kappa decided to publish *Mondo Naif* in a format that was somewhere in between the pocket and French formats, with soft covers and black-and-white pages. Thus its look was more similar to traditional books and novels sold in bookshops, where it was actually sold:

"In the eighties, a comics was not considered as a work of art if it was not coloured, this happened most of the time with only a few exceptions... The decisions of Kappa Edizioni were certainly inspired by their experience with Japanese comics but, above all, it was in line with the tastes of a new generation of Italian readers that, by the end of the nineties, were much more

² A graphic novel is a book made up of comic content, whether fiction, non-fiction or anthologized work. It is distinguished from the term "comic book", which applies to periodicals.

Table 2
Kappa's history, 1989–2009.

Phase	Key actors	Kappa's history	Quotations from the original interviews
1989–1995 Introducing Japanese manga in Italy	Andrea Baricordi Massimiliano De Giovanni Andrea Petroni, Barbara Rossi (i.e. “the Kappa Boys”) Alessandro Pastore	Andrea Baricordi, Massimiliano De Giovanni, Andrea Petroni and Barbara Rossi (i.e., the Kappa Boys) are four high school-mates in Bologna with a common passion for comics and Japanese manga. In 1989 they start Anime, the first Italian magazine dedicated to Japanese comics and cartoons. Anime collects news and drawings from original manga, which the Kappa Boys receive directly from Japan by a common friend who live there. This home-brewed magazine is distributed by the Kappa Boys mainly in comics stores in Bologna.	“We used to love Japanese cartoons, and thanks to a friend of ours that moved to Japan, we discovered that behind any Japanese cartoon there was a comics series. We found that all the cartoons we used to love were actually inspired by comics and, above all, that the original comics series were much better than the cartoons.” (Massimiliano De Giovanni)
	Luigi Bernardi	The Kappa Boys start to collaborate as amateurs with Alessandro Pastore, the founder of Alessandro Distribuzioni, the biggest Italian comics store and a renowned comics distributor, based in Bologna. Together they manage to visit the headquarters of some major Japanese comics publishers in Tokyo. In 1989 the Kappa Boys participate in the Children's Book Fair of Bologna with their magazine Anime. They meet Luigi Bernardi, who is about to start his new publishing house Granata Press. Bernardi is interested in acquiring licenses from Japanese comics to publish manga in the Italian market. In 1990 the Kappa Boys start to direct the manga department of Granata Press. They select, translate and adapt Japanese comics for the Italian market. Granata Press is the first Italian publishing house to import and adapt in Italian Japanese comics.	“The intention of our visits in Japan with Alessandro was to bring in Italy a few numbers of original Japanese manga to be sold in his store; but actually it gave us the change to establish a stable relation with real Japanese comics-publishers.” (Andrea Baricordi) “In 1989 Anime was the only magazine available in the Italian language completely dedicated to Japanese comics. We thought it was important for us to take part at the Children's Book Fair of Bologna, even if we could not afford to rent a stand for our magazine. ... exposing Anime right next to the stand of important Japanese publishers such as Kodansha, was the best way to find people attracted by manga.” (Massimiliano De Giovanni)
	Edizioni Star Comics	In 1992 the Kappa Boys leave Granata Press and join Edizioni Star Comics as editorial managers for the publication of Japanese manga. By the middle of the 1990s, Star Comics becomes the largest importer of Japanese manga for the Italian market. In 1995 the Kappa Boys start their own company to perform editorial services (e.g., translation and adaptation of foreign comics for the Italian market). 1995 sales reach 400,000 Euros, earned from seven monthly publications.	“There were several reason behind the departure of the Kappa Boys from Granata, but mostly were related to our divergent opinions on how to publish the Italian versions of Japanese comics.” (Luigi Bernardi) “Japanese comics are read back to front. The first translations we made in Italian for Granata Press though, were published in a reversed way, in order to facilitate the Italian readers. We didn't really agree with this view, we always wanted to be as closest as possible to the original comics.” (Andrea Baricordi)
1996–2004 Introducing graphic novels and promoting young Italian artists	Serena Varani	In 1997 Serena Varani joins the company. Varani has a substantial experience in the comics sector: she had worked for Marvel Italia and Panini Comics as licensing manager. With her contributions, Kappa enters publishing sectors with its own products: manuals to learn Japanese through reading manga, essays and encyclopaedias describing Japanese culture and other publications inspired by Japanese comics. In the middle of the 1990s Kappa Edizioni also starts to promote the production of Italian comics—two of the Kappa Boys (De Giovanni and Baricordi) are renowned cartoonists themselves—and become a point of reference for a new generation of cartoonists based in Bologna, thanks to the publication of the new magazine <i>Mondo Naïf</i> .	“One of the first book we published was a manual for learning Japanese by reading manga. The Kappa Boys had clear in mind that they could not compete with Edizioni Star Comics. In Italy Star Comics is the Italian biggest manga's importer, moreover, is one of the most important customer of the editorial service department of Kappa. Competing with it would have involved a huge loss. On the other hand, the Kappa Boys noticed that there were many other kind of publications that were somehow related to Japanese manga but were completely ignored by any Italian publisher” (Serena Varani) “It happened that in the same time and in the same city there were a group of cartoonists interested in narrating stories with adolescents as the main characters. We wanted to investigate a more intimate and private dimension of the everyday life, and focus on young people as a mean to describe our society.” (Vanna Vinci, artist)

Table 2 (Continued)

Phase	Key actors	Kappa's history	Quotations from the original interviews
2005–2009 Promoting cartoon as a brand	Giovanni Mattioli	Beside the content, <i>Mondo Naif</i> contributes to introduce another innovation: an editorial format inspired by Japanese manga, in a soft cover with black-and-white pages. This format resembles paperback novels and propels the distribution of the magazine in more traditional bookstores. <i>Mondo Naif</i> was one of the first examples of graphic novels, a new format that shortly becomes popular in Italy. In 1997 Giovanni Mattioli, an Italian comics scriptwriter, joins Kappa Edizioni to coordinate the production of manga. In 2003 he becomes a firm stockholder.	"By the end of the nineties, the most common format for popular comics was the pocket one (12 cm × 17 cm) or the so called "alla Bonelli" (16 cm × 21 cm) since all the comics published by Sergio Bonelli Editore have this feature. Comics as these are usually printed in paperback with black and white pages. The design of more niche and authorial work instead, was inspired to the French tradition of comics, and consisted in bigger volumes (20 cm × 25 cm), with coloured pages and hardcover." (Giovanni Mattioli) "The idea of publishing also authorial comics in black and white with soft cover was quite disruptive". (Vanna Vinci, artist)
	Andrea Plazzi	In 2003, Kappa Edizioni buys the whole catalogue of the publisher Punto Zero, a company specialized in translating and adapting comics by North American cartoonists. Kappa launches a new series of graphic novels with American authors. Andrea Plazzi, the founder of Punto Zero becomes an external member of the management team as a responsible for these new products. In 2004 the marketing manager Vincenzo Sarno joins Kappa, with a temporary assignment to improve all activities related to the promotion of the company brand Kappa Edizioni. 2004 sales reach 1,200,000 Euros; 3 employees; 60 freelancers; 30 monthly publications	"Today, comics magazines are no more attractive for readers. Now people look for graphic novels that offer long and complete stories to be read in a chunk. This is what is asked by the market, and this is why authorial comics are now sold in bookstore rather than in newsstands and comics shops." (Vanna Vinci, artist)
	Vincenzo Sarno	Vincenzo Sarno is the first employer of Kappa Edizioni to join without previous experiences in the comics sector. He was a marketing manager for different service firms. Sarno initiates a new department dedicated to consultancy activities for companies interested in the acquisition and management of property rights related to Japanese manga. In 2005 Kappa has a pivotal role in re-launching the Dragon Ball property in Italy. By leveraging a strong and lasting relationship with the original Japanese publisher Shueisha, Kappa organizes a licensing meeting with all the Italian holders of the Dragon Ball's licenses (more than 30 companies), with the aim of re-launching the brand in Italy. Kappa proposes a series of actions intended to facilitate a synchronized re-launch of the whole property, focusing on peculiar aspects of the cartoon's characters that had been ignored. This marks a moment of renewed success for Dragon Ball in 2005. Given the success of the Dragon Ball meeting, Kappa is named to develop and coordinate the production of TV series, as well as merchandizing products for a variety of intellectual properties based on both existing Italian comics and new characters. 2006, sales reached 1,300,000 Euros; 3 employees; 60 freelancers; 30 monthly publications	"I believed that the most important contribution I gave to Kappa was to make the company aware that along years of activities, it had developed such a deep and extensive knowledge of the Japanese manga, that it could offer high quality services to many other companies in many different sectors, rather than only publishing houses. I told Kappa that nowadays most of the manga it manages both as a publisher or an editorial service, are not only comics, are also brands!" (Vincenzo Sarno)

Table 3

Brokerage roles, actors, key functions and transferred knowledge.

Phase	Brokerage roles	Intermediated actors	Key functions	Transferred knowledge	Facts
1989–1995 Introducing Manga	Gatekeeper	Italian publishers and Japanese publishers	Transcoding, knowledge transfer, drawing analogies.	New business model for Italian publishers	A segmented market is revealed and addressed with a differentiated strategy
	Coordinator	Providers of editorial services	Transcoding, knowledge transfer	New product technology knowledge	A passion for manga is transformed into a professional activity or business
1996–2004 Introducing graphic novels and promoting young Italian artists	Gatekeeper	American and European publishers and Italian publishers and distributors	Transcoding, knowledge transfer, drawing analogies.	New business model for Italian companies	International cartoonists become known in Italy and graphic novels impose as a new product-market
	Coordinator	Italian cartoonists, providers of editorial services	Transcoding, knowledge transfer	Product and market related knowledge	Emerging publishers produce graphic novels with a new editorial format and distribute them in specialty stores and bookshops. Young Italian cartoonist are discovered and become national talents
	Representative	Italian cartoonists and European publishers	Transcoding, knowledge transfer, drawing analogies, combine knowledge	Emergence of a new Italian artistic offer	New professionals and entrepreneurial firms are created. Young Italian cartoonists are discovered and become European talents
2005–2009 Promoting “Cartoon as a brand”	Liason	Italian firms with property rights of cartoons for commercial use	Transcoding, knowledge transfer, drawing analogies, combine knowledge	New business model for Italian companies	Dragon Ball is a brand and coordination of marketing is strategic. A great renew success for Dragon Ball in Italy.

familiar with the design of manga than with the one of French authorial comics (Vinci Vinci, Italian artist)”).

During the same two phases, Kappa twice developed a role as a coordinator. As the manga market grew, Kappa started to work with young professionals based in the Bologna cluster and transferred knowledge about product characteristics to them, such as translation, text editing, graphic work and lettering. Some were selected from among the readers, driven by their passion for manga to contribute to its diffusion. Kappa’s interaction with these professionals was frequent, and the transfer of practices was an ordinary activity. The transcoding function was often mediated by the newsletter that Kappa would add to the Italian editions of Japanese manga, with the clear intention of helping Italian readers understand the essence of this artistic expression. Some of the professionals developed capabilities (mostly related to the product) that enabled them to start entrepreneurial activities in the Italian manga industry. In turn, Kappa began a new role as a coordinator, with the same functions as previously, when new market opportunities emerged for graphic novels and Italian cartoonists. The transfer of best practices also was facilitated by Kappa’s strong involvement in the education of young cartoonists and comic professionals, through the creation of its corporate school and later involvement in the creation of and contributions to the first Italian undergraduate course in comics at the Academy of Fine Arts in Bologna.

In the same period, Kappa started exploring a brokerage role as a representative. It intermediated between young Italian cartoonists, mainly based in the Bologna cluster, and European publishers, and communicated knowledge about the emergence of new Italian talents that could be distributed in the dynamic European comics market. Here Kappa’s functions were transcoding (i.e., making

European publishers aware of the richness of the emergent Italian cartoonists), transfer of knowledge about the product for better positioning and drawing analogies between different European markets to help spot new opportunities.

In the third period, we find evidence of Kappa playing the role of liason. The idea to manage comics as brands whose adoption in the Italian market could be facilitated by Kappa was not new. From the early 2000s in Japan, the use of consortia of different firms interested in the promotion of manga animation started to diffuse, involving publishers, animation studios, television broadcasters and other partners (e.g., producers of toys and games; [Wakabayashi et al., 2010](#)). It was not unusual for the toy and game manufacturers to pay part of the production costs of a movie ([Masakazu, 2002](#)). Kappa, as a liason broker, helped transfer the idea of a new business model for licensed comics from Japanese publishers to the different firms, such as those holding *Dragon Ball* licensing:

“Kappa had been managing the property rights for Star Comics for many years and it knew what the market wanted, it had already identified the evolution of the target market. ... We showed [the CEOs] all our evidences and suggestions to enhance the management of the brand *Dragon Ball*. The CEOs remained astonished” (Vincenzo Sarno, member of the management team).

As this comment suggests, different functions were involved in this new brokerage role:

- Transcoding, to show Italian firms belonging to different industries how they could benefit from a shared strategy.

- Transferring knowledge, such that Kappa proposed a series of actions intended to facilitate a synchronized re-launch of the property that focused on peculiar aspects of the cartoon's characters that previously had been ignored and provided licensees with know-how related to the target market, as well as the best marketing strategies for improving brand management.
- Identifying analogies, to make clear that what was well known in Japan and in other brand-related industries could be used as an opportunity for innovation in the comic industry in Italy.
- Synthesis, to combine what Kappa knew about the product *Dragon Ball* and its market in Italy with the brand strategies already used in Japan by comic publishers and other brand-related industries.

Overall, we thus find evidence of more functions in all the brokerage roles that Kappa developed during its life cycle. The transcoding function enabled it to translate and make complex knowledge meaningful to others, which characterizes any brokerage role, not just gatekeepers (Morrison, 2008). In our case study we consistently find the transfer of knowledge among intermediated actors, even if the kind of knowledge varied in quality and quantity.

A less frequent function relates to the combination of different knowledge belonging to different, mediated groups. The functions related to the identification of analogies and the combination of knowledge, not surprisingly, only characterize brokerage roles that span different groups (i.e. gatekeeper, representative and liason). From Burt (2004), we know that these functions are considered more challenging for brokers, particularly when the mediated groups are more heterogeneous. The need for the broker to be familiar with both groups makes these two functions more demanding than either transcoding or knowledge transfer.

In the following paragraph we relate these results to broker's behaviours looking for those behaviours that seem more coherent with the request of different functions.

4.2. Use of shared imprinting and the emergence of brokerage roles

If, as also our case study indicates, any brokerage role implies the capability to transcode, i.e. make other actors aware of opportunities and challenges belonging to their same or to different groups, the founding team's past experience should have significant impacts on the emergence of their brokerage roles, particularly in early developments. Past experience refers to different types of experience with the industry and technology (Rerup, 2005), as well as problem-solving capabilities (Starr and Bygrave, 1991) and network contacts (Aldrich and Kim, 2007). The founding team's prior experience can influence resource appropriability, the identification of opportunities (Aldrich, 1999; Burton et al., 2002), reputation resources and the strategy of the emerging organization, as well as its subsequent developments (Beckman, 2006; Eisenhardt and Schoonhoven, 1990). For example, prior experience significantly moderates the link between industry event participation and network brokerage activities by entrepreneurial ventures (Stam, 2010), because it influences perceived uncertainty (Burt, 2000) and the ability to connect to diverse actors (Nahapiet and Ghoshal, 1998).

The early and essentially coincident experience of Kappa's founding team members with that of many professionals and entrepreneurs active in the mid-1980s suggests the need to consider another, more focused construct, namely, imprinting. The notion of imprinting was introduced by Stinchcombe (1965), who recognized the importance of pioneers, initial competitive conditions and network structures in determining the strategic and organizational choices of firms. The issue has attracted rekindled interest (Higgins, 2005; Marquis, 2003; Milanov and Fernhaber,

2009), and a recent study defines it as the result of brief periods of time, during which an actor's sensitivity to the environment is particularly high, such that this actor develops elements coherent with its environment during the brief period, and then the imprints persist, even after environment changes (Marquis and Tilksik, 2013). Career imprinting entails, for example, a unique set of capabilities, connections, cognitions and confidence that get cultivated by employees working in an organization during a specific period. These career imprints follow employees throughout their careers and influence their subsequent work experiences persistently, even if they move across organizational boundaries (McEvily et al., 2012).

In our case study, Granata Press was a breeding company (see Table 2). Although it went bankrupt in 1996, many of the professionals that were part of the company contributed to populate the authorial comics scene with new organizations related to comics. Not just the Kappa Boys but the majority of the new generation of cartoonists published by Kappa, editors and managers of comics and professors started their professional activity with Granata Press. Its key characteristics were a wide definition of its business, a strong international attitude in purchasing property rights and an outsourcing strategy for services, all of which were sustained by its organizational culture and systems that strongly supported strategic entrepreneurship. At the peak of its success around 1993, Granata Press was one of the most innovative Italian publishers, in terms of the number of new authors promoted and different editorial products commercialized. It also was the first company in Italy to import and commercialize videos of Japanese cartoons series.

Granata Press's imprinting likely had a significant impact on the absorptive capacity of Kappa and the organization, which represents a key characteristic of any knowledge broker (Giuliani, 2011; Graf, 2011). In performing their first professional activity as the managers of the manga department of Granata Press, the Kappa Boys probably absorbed that company's logic of action regarding successful strategies.

The career imprint construct also offers a rich foundation for addressing our research question related to the emergence of brokerage roles. In early gatekeeper and coordinator roles, the use of imprinting might have enabled the reduction of any cognitive distance between Kappa and other Italian actors, such as publishers, professionals, entrepreneurs and managers involved in the comics industry. That is, career imprinting potentially creates a shared language (Higgins, 2005), which enables reciprocal understanding and similarities between the broker and receiving partners. If different actors already possess the necessary absorptive capacity, the need for transcoding decreases, due to shorter cognitive distances (Lazaric et al., 2008). If the broker and receiving partners share similar imprinting, they may even experience more trust and less perceived uncertainty about a new activity (Higgins, 2005). Similar results, in terms of shared capabilities, connections, cognition and trust, might be achieved through access to the same schools or industrial incubators. Accordingly, we refer to a general construct of imprinting:

Proposition 1. The use of shared imprinting between a broker's entrepreneurial team and receiving partners could enable its transcoding function and therefore sustain the emergence of any brokerage role.

4.3. Hiring strategies and brokerage role evolution

A positive correlation exists between the level of absorptive capacity and the gatekeeper role (Giuliani and Bell, 2005; Morrison, 2008). Absorptive capacity (Cohen and Levinthal, 1990), as expressed by gatekeepers, mainly pertained to key human resources, in terms of both quantity (Graf, 2011) and quality (Giuliani, 2011). We showed that Kappa's founding team's past

Table 4

New managerial team recruits, by functional/product competences and industry experience.

	Comics industry	Other industry	Same functional/product competences	Different functional/product competences
Mattioli Script writer and editor	X		X	
Plazzi Publisher of North American comics	X		X	X
Varani Property rights manager	X			X
Sarno Marketing manager		X		X

experience had a significant impact on its absorptive capacity. In this paragraph we will show that its hiring strategies had at least an equal impact on the development of its absorptive capacity. As a consequence, the basic broker functions of transcoding and knowledge transfer were fostered. We will also show that hiring strategies, by impacting on the managerial perspectives of the management team, could enable other more complex broker's functions and the emergence of new roles.

During the study period, four professionals joined Kappa as members of its top management team or close collaborators. Table 4 synthesizes their key competences, classified according to their proximity to the existing competences of Kappa' entrepreneurial team, as well as their relation to the comic industry. The hiring strategies evidently pursued people with proximate competences and the same industry experience (Giovanni Mattioli), those with new and complementary competences and the same industry experience (Andrea Plazzi and Serena Varani) and others with new and complementary competences but with a different industry experience (Vincenzo Sarno).

Consider Giovanni Mattioli, a scriptwriter with experience in the production of comics, who by 2003 had joined the firm as a stockholder (Table 2). He took charge of production of manga for Star Comics. New opportunities were arising, and by hiring Mattioli, Kappa could continue to exploit its coordination role with local firms and professionals. Here we find that absorptive capacity increased in term of quantity. No new competences and relations were added though, and no new brokerage roles developed.

The situation differed in 2003, when Andrea Plazzi, the founder of the small comics publisher Punto Zero, became a new external member of the management team (Table 2). He brought to the organization new knowledge about and relationships with the North American comic industry. This new competency fostered the development of Kappa's network in terms of relations and its absorptive capacity (with different product competences), which in turn exerted a positive impact on its transcoding and transfer functions.

During the same period, another key member joined the management team, with the same industry experience (comic publishers of North American comics based in Italy) but with new functional competences for the organization (Table 2). When Serena Varani first joined Kappa, by adding her know-how about licensing management, she helped sustain its new publishing activity. Because "Kappa wanted to start publishing independently Italian cartoonists and different editorial products besides Japanese series ... they needed a person that was able to speak different languages, with international relationships, that knew how to negotiate and make a contract with international publishers" (Serena Varani). Similar to the Plazzi recruitment, this addition had a positive impact on Kappa's absorptive capacity (new functional competences) and therefore on its transcoding and knowledge transfer functions. It also affected the network relations from which Kappa benefited. With these new members of the management team, Kappa was able to exploit its previous brokerage role (gatekeeper with Japanese publishers) but also developed new

brokerage roles: gatekeeper, brokering between North American and European publishers and Italian publishers and distributors, coordinator of Italian cartoonists and service providers and representative, brokering between Italian cartoonists and European publishers.

All Kappa's brokerage roles benefited from the recruitment in 2004 of a new expert in marketing, Vincenzo Sarno, who joined Kappa without any prior experience in the comics industry. Sarno came from Naples and had previously been a researcher at a local university and a freelance marketing professional with a strong interest in brand management (Table 2). Kappa's absorptive capacity increased, and transcoding and marketing knowledge transfer functions were enabled with his addition.

Song et al. (2003) argue that organizations can learn by hiring experts from other companies and that, if hired experts possess expertise that is distant from that of the hiring firm, their impact should be strong. We propose that Kappa learned by hiring new collaborators whose competences were diverse and somehow complementary with that possessed by the founding team. Hiring people with diverse competences and industry experience increased the absorptive capacity of the firm therefore fostered transcoding and knowledge transfer functions. It also affected the number of the firm's partners. Its hiring process thus contributed to the evolution of Kappa's brokerage roles, which leads into our second proposition:

Proposition 2. Hiring new members with diverse competences and industry experience, with respect to the founding team, by affecting the firm's absorptive capacity, better enables the firm to transcode and transfer knowledge and thereby fosters the exploration of new brokerage roles.

As anticipated, hiring strategies also influenced the managerial perspectives of the management team, with implications for the development of new brokerage functions and roles. The recruitment of Sarno provides an excellent example. Sarno had a great passion for manga and, thanks to his professional experience, understood that manga were not only cartoons but brands. This new perspective prompted Kappa to intervene in its new framework by playing a liaison role among the Italian licensors of *Dragon Ball*, that is, 30 separate firms from different industries. When in 2005 Kappa joined a licensing meeting with the licence holders, its goal was to combine its knowledge of the cartoon and its market with other firms' knowledge of how to manage property rights. "They (licensors, added by authors) are not evaluated on their know-how about the product, but only about their capability to economically manage the property rights. They show a deficit respect to Kappa!" (Vincenzo Sarno, member of the management team).

The success of this role was clear, but to emerge, it had required a new perspective on Kappa and the evolution of its business. As Sarno noted,

"In the past I had developed a very similar passion for comics, but in comparison with Kappa Boys I had a different education that

provided me with tools useful to analyse their competences. ... My basic idea was to provide the founding team with tools that showed them that the know-how they had developed could be very interesting for large firms and that consulting was the new path to follow. ... Nobody had ever told them: 'your knowledge could be very important for other firms'! As a first important step I gave to Kappa a central position in its network. ... I gave Kappa the possibility to use its contacts in a different manner".

Because he came from a different industry, with different competences, Sarno was able to address Kappa's network with a new perspective about what different actors needed and how these needs could be fulfilled: "in a close system the potential energy is not completely fostered. By being part of the system you absorb and distribute that energy. As an outsider you can evaluate that potential energy and see how it can evolve" (Vincenzo Sarno). In a sense, this new manager helped the founding team gain a more conscious awareness of the value of their knowledge for other groups of actors and overcome inertia.

By hiring Sarno, Kappa was not only able to foster its transcode and transfer knowledge functions but also identify useful analogies and combine knowledge to explore new brokerage roles that involved new actors. Prior literature that cites management team composition as a factor influencing innovation and entrepreneurship provides interesting support for this claim. For example, top management teams with extra-domain expertise undertake more relevant technological change than teams with intra-domain expertise, likely because domain outsiders bring novel perspectives, different analogies and lower affective commitment to the receiving firm (Furr et al., 2012). Other studies indicate similar results and motivations (Eisenhardt and Schoonhoven, 1990; Talke et al., 2010). If for knowledge brokers, drawing analogies between groups can be difficult, "especially for people that have spent a long time inside one group" (Burt, 2004, p. 355), hiring managers with diverse industry experience could help the firm adopt a new perspective, introduce new analogies and lower affective involvement. These developments might be especially relevant when the new groups of actors differ more from the broker's own group. The impact could be similar for the combination function, which requires familiarity with the activities of the mediated groups (Burt, 2004). Hiring managers with diverse industry experience thus might have positive impacts on more complex knowledge broker functions, namely, drawing analogies and combinations. For our previous proposition, the main factor was an increased absorptive capacity. Here, the main factor is access to a new perspective on the firm's network and on its possible development. Thus Proposition 3 is an extension of Proposition 2 that focuses on brokerage roles involving functions that are more complex (Burt, 2004)

Proposition 3. Hiring members with diverse industry experience, with respect to the founding team, by affecting the managerial perspective, better enables the firm to find analogies among different groups of actors and combine elements, and thereby fosters the exploration of new brokerage roles.

4.4. Status and brokerage role evolution

By finding a close relation between the gatekeeper role and a superior knowledge of the broker, prior literature has indirectly addressed the relation between reputation and the brokerage role, suggesting that for gatekeepers, "their advanced knowledge acts as a signal to other firms about which firms to consult for advice" (Giuliani, 2011, p. 1339). At the intra-organizational level, gatekeepers' reputation for technical competence affects their brokerage roles (Allen, 1977). That is, reputation has strong relevance for determining the willingness of other actors to receive advice or knowledge from the broker. We believe reputation was

important for the development of most of the brokerage roles that Kappa developed over time. Its reputation depended largely on its superior knowledge about manga, as well as about Italian cartoonists and the authorial comic market – particularly within its own group (i.e., Italian firms and professionals producing and distributing comics). Kappa's founding team shared career imprinting and long-term relations with professionals and managers of the industry, fostered appreciation for Kappa's superior knowledge and reputation, which in turn enabled the request for advice and knowledge transfers. Beyond these previously developed relations, new brokerage roles involved the creation of relations with new groups of actors. Again, Kappa's strong reputation in the small comic industry, recognized at the international level, helped it take on a representative role in the second phase.

However, the situation changed when Kappa sought a liaison role across firms in very different industries. It was not enough to have drawn analogies and found useful combinations of knowledge that could improve the competitive advantages of different firms using *Dragon Ball* comics as a brand. Kappa's reputation, built in the international authorial comic market, was not appreciable to firms from very different industries. Moreover, it faced the problem of size and managerial professionalization: "There is a communication problem: if I am a manager and I talk with a 'manga fan' after a few minutes I find that conversation not anymore satisfactory. You are not at my level!" (Vincenzo Sarno). In economic literature, reputation refers to an expectation about an actor's behaviour that is based on past demonstrations of that behaviour, while status has a sociological meaning and refers to an actor's position in a hierarchical order (Podolny, 2005). Status can be inferred independently of behaviours, so it becomes particularly critical when others perceive substantial uncertainty. In these situations, a firm's relations with high status partners can signal its own status (Podolny, 2005). Kappa's status thus became critical: because it lacked reputation in other industries, it turned to its partners. That is, "We were looking for a medium to enter into the new domain. ... In this situation the medium was Backstage [the property holder in Italy]. Our relationship with Backstage came through Shuesha. Kappa knew Shuesha. Kappa showed itself with Shuesha. Backstage said 'if Kappa is Shuesha's partner, then Kappa is interesting'" (Vincenzo Sarno). Thus, Kappa purposely took advantage from its strong relationship with the Japanese publisher to enter into the new domain and develop its liaison role with actors that had no prior allegiance to it. This status helped lower uncertainty among the firms from other industries, a finding that coincides with prior literature related to status and structural holes (Podolny, 2005). This result also sheds light on how a firm can deliberately act to initiate a new brokerage role which involves actors with no prior relations.

Proposition 4. Some brokerage roles involving groups of actors without any prior relations benefit from the knowledge broker's status, signalled through its relationships with partners that are known to the mediated groups.

5. Conclusion

With this research, we have attempted to investigate how actors positioned in a network evolve as knowledge brokers, as well as how they act to develop new brokerage roles. By focusing on behaviours, we respond to an important theoretical demand raised by Dhanaraj and Parkhe (2006), namely, the need to investigate how actors act to understand, preserve and enhance their network and try to extract value from it. In addition, we address calls for a perspective that focus on knowledge brokerage processes and behaviour, thereby complementing and extending structure-centred research (Zaheer and Soda, 2009).

All brokerage roles involve various functions even if the identification of analogies and knowledge combinations only characterize roles involving different groups. The transcoding function is central to any brokerage role. Transcoding can require great effort by the broker and influence knowledge transfers to intermediated partners. A broker's founding team thus should consider and try to extract value from its network position by deliberately building on its imprinted capabilities, linkages, cognition and trust shared with other members of the receiving network. The ability to overcome transcoding obstacles and reduce cognitive distance, through shared imprinting with receiving partners, could be useful for any brokerage role.

If transcoding is a key function of brokers and knowledge transfer often accompanies it, we assert that heterogeneity in the competences and industry experience of newly hired members should enable the development of new brokerage roles, by fostering the absorptive capacity of the firm, which is an unalienable attribute of brokers. Hiring strategies also could enhance the number of new relations, further sustaining this process. These strategies affect the structure of the broker's network, therefore increasing the set of opportunities accessible to it and its partners.

Hiring team members with a different industry experience, by introducing new perspectives on the firm and its network, also could enable the firm to draw analogies across different groups of actors and combine their elements, which represent higher level brokerage functions (Burt, 2004). This ability could become even more relevant when new groups of actors are more diverse or distinct from the broker's original group.

Reputation, based on past behaviour, is very important for most brokerage roles, especially those involving groups that are already familiar with this broker. This finding extends previous results related to the gatekeeper role to other brokerage roles. If the brokerage role involves actors without any prior allegiance, the broker's reputation has a limited impact. Instead, the firm's status, signalled by its links to a high status partner known to the actors, can have a significant impact by indirectly communicating the broker's superior knowledge.

In turn, this study has implications for both theory and research on knowledge brokers, innovation in social networks and entrepreneurship. We show that becoming a knowledge broker and developing new brokerage roles can result from deliberate behaviours. We collected notable evidence of purpose in Kappa's development, as it sought to understand, preserve and enhance its network and create value through it, by performing different brokerage roles and functions. We share with Nohria (1992) and White (1992) the idea that actors in networks are influenced by both their structural position and their own behaviour.

Even if actors are constrained by their position, they can do more than manage or use the network; they can shape their network through their own behaviour. Our case study shows, for example, that hiring strategies at the management level had systematic effects on the number of relations accessed by the actor. Therefore, an actor's behaviour and network structure appear to co-evolve. We thus believe that theories on innovation and networks in general and knowledge brokers in particular could benefit from combining structural and behavioural approaches and recognizing their interplay.

Our emergent, theoretical model benefitted from the combination of two constructs: brokerage roles (Gould and Fernandez, 1989) and brokerage functions (Burt, 2004). The former had been used to explore the relations between different brokerage roles and different strategic involvement of middle managers (Shi et al., 2009). From what we know we are the first to use it to address the issue of the behavioural antecedents of brokerage roles, with besides a focus on brokers as firms, and not individuals. Across the two constructs, we also find a means to respond to the requests to develop

models that combine brokerage roles with other constructs, to clarify its developments and implications (Shi et al., 2009).

Furthermore, by integrating literature on knowledge brokers with literature on imprinting, management team composition and entrepreneurship, and status, we enriched our emergent, theoretical framework, which can be further developed and empirically tested.

Moreover, we found an intrinsic correlation between the development of the firm's business model and the evolution of its brokerage roles, coherent with the idea that actors with brokerage relations have easier access to diverse, contradictory information, which provides them with an advantage for identifying and pursuing opportunities (Burt, 2004; Obstfeld, 2005). Creativity in business model definition and entrepreneurship could result from an import–export activity in which knowledge brokers appear better equipped to identify or even create opportunities (Alvarez and Barney, 2007).

By focusing on small firms as knowledge brokers we provide more evidences to the idea that size is not a significant pre-requisite of any brokerage role (Giuliani, 2007; Hulsink et al., 2008; Stam, 2010; Giuliani, 2011). Moreover we show that for small firms, with their relatively limited resources and little organizational slack, a brokerage role could have a very significant impact on the ability to detect/create opportunities, such that they might better overcome their liabilities of newness (if smallness is related to their start up status) or smallness (lack of economies of scale or experience).

From a managerial perspective, our study provides actionable suggestions for recruiting new members of a management team to exploit previous brokerage roles and explore new ones. As we have suggested, these behaviours could have positive impacts on entrepreneurship too. Moreover, our research suggests the need to invest in status-laden links if the firm plans to mediate among groups of actors without previous allegiance with it. Firms in a brokerage position within their own group or between groups, if embedded at the local level, can begin their brokerage role more easily if they benefit from shared imprinting with some local actors, which can ease transcoding. This trend might explain why so many brokers have been identified in geographical clusters.

Our study also suggests some indications for policy makers responsible for encouraging entrepreneurship and knowledge transfer. Cooper and Park (2008) find that incubator organizations strongly influence attitudes towards relationships and access to resources. Our evidence reveals a relationship between imprinting and knowledge brokering in spun-off organizations. Thus, policy makers should support incubators if they want to sustain the emergence and growth of knowledge brokers and entrepreneurship.

Generalizing from a single case study, even a revealing one, can always be misleading. Nevertheless, our analysis provides a framework and propositions that can be further developed and empirically tested. Comparisons of different case studies of firms that play and develop new knowledge broker roles could offer a richer and a more solid framework, as well as more theoretical and managerial implications. Our propositions thus might help bridge the “often wide gulf between qualitative and quantitative researchers” (Gioia et al., 2013, p. 25).

We hope further research also examines the relationship between different brokerage roles and functions and the value appropriation of the broker, in terms of both performance and innovation. A similar approach already appears at the intra-organizational level (Shi et al., 2009). Researchers should investigate the relationship between different brokerage roles and the firm's strategic orientation, – *iungens* versus *gaudens* – whether per se or in reference to its impact on the broker's performance (Obstfeld, 2005).

Finally, our study suggests the possibility of a sequence in the evolution of brokerage roles. For example, it seems difficult to start

with a liaison role if the knowledge broker, as an outsider to the mediated groups, cannot demonstrate a status that legitimates its role. Previous knowledge broker roles might sustain the process; further research is needed to confirm these possibilities.

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