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How field members interactions contribute to the structuration of an organizational field.

A pluralistic approach

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Abstract

There is an increasing interest for the role of social positions to understand evolutions and change within organizational fields. This paper advances a new approach to understand how actors manage their connections within an organizational field and how this influences their ability to shape the field. To illustrate this process, we explore the Socially Responsible Investments field circa 2004-2005, at a time it had emerged but had not stabilized yet.

Organizational field is a key notion in institutional theory which accounts for communities of participating actors which interact more frequently and fatefully with each other's than with actors outside the field and eventually come to develop a common meaning system, behavior and institutions (DiMaggio and Powell, 1983; Scott, 1995: 56). While early neo-institutional research insisted on the importance of isomorphism within such fields, researchers have come over the decades to consider interactions in such communities as much more complex.

With the agentic turn in institutional theory, researchers started paying more attention to the role of field members' actions in the evolution of the field. Organizational fields then appeared as complex arenas of power relations (Brint & Karabel, 1991; Hoffman, 1999), contestation and debates within which members with conflicting opinions and interests try to impose the views and norms that suit best their interests and values (Covaleski & Dirsmith, 1988; DiMaggio, 1988). A consequence is that what has initially been presented as a natural evolution toward convergence driven by isomorphic pressures has been increasingly questioned. Researchers started to point to the diversity of behaviours, logics and strategies within an organizational field and to underline interactions between field members as what drive the evolution of the field and potentially (but not necessarily) lead to its structuration.

But how fields are structured by interactions between field members is not yet well understood. Part of the problem might lie in the difficulty to account for interactions between field members. This first relates to how relations can be analysed. While fields had initially been conceived by DiMaggio and Powell as networks, this network aspect has been delated in the initial reception of the paper (DiMaggio, 1995: 395). Second, it relates to the diversity of such relations. While researchers increasingly reconnect research on organizational fields with social network analysis to study organizational fields, most research seems to assume that there is only one social network within fields (e.g. Bertels et al., 2014; Van Wijk et al., 2015). But it is likely that multiple sorts of relations will develop in a field as it gets structured. For instance, relations between field members might initially be professional and later become friendship relations. This leads to suggest that organizational fields should better be conceptualized as multi-relational networks (Kenis & Knoke, 2002; Powell et al., 2005).

Such multiplicity should include relations between individuals as well as between organizations, relations between similar actors as well as between dissimilar ones, and relations from different nature between the same actors. How such multiple relations among members interact in the structuration of a field still remains to be investigated.

⇒ We theorize organizational fields as multi-relational network and discuss how this can be operationalized

⇒ We look at how interactions between actors through plural networks structure a field

We ask **how are institutional fields structured through their members' interactions?** To conduct this analysis we rely on a mixed methodology (Small, 2011) combining social network analysis (Wasserman, Faust, 1994) and qualitative analysis (Glaser & Strauss, 2009). These methodology are call up to uncover the connection work whereby some field members tried to maintain the existing institutional arrangement and the related field domination structure while others challenged it.

THEORETICAL FRAMEWORK

Organizational fields as pluralistic networks

Organizational fields are communities of actors engaged into common activities and subjects to similar issues, such as reputational pressures, who eventually develop a dense network of relations as they interact (DiMaggio, 1983; DiMaggio and Powell 1983; Scott, 1995: 56). Organizational fields develop as structured and structuring environments for their members (White, Owen-Smith, Moody and Powell, 2004). Because fields members interact more frequently and fatefully with one another than with actors outside of the field, organizational fields develop as networks of interactions where a plurality of relations take place among members (Kenis and Knoke, 2002; Powell, White, Koput, and Owen-Smith, 2005). Drawing from previous literature on organizational fields and social networks, we suggests that in order to account for the plurality of relations within a field three key dimensions must be considered: multiplexity, subgroups overlap, and relations within and between occupational groups.

Multiplexity refers to when two or more different types of relationships occur together among two actors (Krackhardt, 1987; Krackhardt, 1992 ; Lazega, Pattison, 1999). Multiplex relations are likely to develop within fields as interactions intensify between field members Kenis and Knoke (2002). Such exchange can happen through all sorts of relations, either formal or informal (Lazega and Pattison, 1999). Typically, a professional relation between two actors might also lead to a friendship relation as those actors interact frequently and find out they enjoy each other beyond the task they realize together. Through multiplex ties field members can exchange different forms of resources, including material resources, information and knowledge (e.g. Kenis and Knoke; 2002; McDermott et al., 2009). Multiplexity of the relations also reinforces relations between field members as such multistranded relations are more resistant to dissolution than single-stranded relations (Kenis and Knoke, 2002) and increase the likeliness of cooperation (Lazega and Pattison, 1999).

Subgroups overlap relates to how subgroups within a field interrelate as they share common members (e.g. Kenis and Knoke, 2002; Kilduff & Tsai 2003; Provan and Sebastian, 1998; Pattison, Robins, 2002). To the exception of the rare cases where the entire fields comprise a single cliquish component – i.e. a network whose members will be mutually connected directly to each other (Alba, 1982; Scott, 1991), two or more cohesive subgroups coexist within organizational fields. Overlap scrutinizes the relations between those subgroups through common members. Overlap between subgroups is likely to facilitate coordination within a field (Provan and Sebastian, 1998: 454). On the contrary, boundaries between subgroups can explain which field members or topics are marginalized (Oliver and Montgomery, 2008).

Finally, an organizational group involves the ***interactions between several occupational groups of actors who interact around common issues***. The creation of such relations is what distinguishes organizational fields from other entities such as industries and populations. While industries and populations constitute ensemble of homogenous organizations, organizational fields are ensembles of heterogeneous organizations with disparate purposes (Hoffman, 1999; Scott, 1994; 1995). DiMaggio and Powell (1983: 148) insist on this heterogeneity of field members, pointing out that organizational fields include “... those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, producers, regulatory agencies, and other organizations that produce similar

services or products". What bound all those organizations together are the common issues around which they interact and dialogue. For example, when considering issues of pollution within the US chemical industries and the related struggles, drawing the field will lead to include the members of the chemical industry and their trade associations, but also the NGOs who engaged with this issue as well as the judicial courts whose rulings influenced the behavior of companies (Hoffman, 1999). As a consequence field members can share common issues while being heterogeneous in their occupations. Another argument to consider field as articulation of positions between different occupational groups is offered by the sociological tradition focused on systems of professions (Bucher & Strauss, 1961; Abbott, 1988). Those works underlines that professions are not homogeneous but composed of different segments enliven by diversity and conflict. Those segment compete for the control of expert knowledge.

Now we have defined the three main characteristic of organizational field, we examine how those plural interactions influence two important aspects of field structuration: the core vs. periphery structure of the field and the definition of norms and certification that enlivens it.

Structuration of organizational fields

To examine how field members' interaction structure a field we opted for a structuring field rather than an emerging one. A field initially emerges when the field members emancipate from outside social conditions and start interacting more frequently with actors outside the field (DiMaggio and Powell, 1983; Rappa, 1987 cited in Van de Ven and Garud, 1993, p.205). Within such emerging fields the boundaries are not yet well defined, relations between field members are still limited as they just become aware that they share common issues and try to organize accordingly (Déjean et al., 2004; Lant and Hewlin, 2001). A structuring field is different from an emerging one in three regards. First, relations are richer as field members had time to develop the multiple ties that are arguably characteristics of organizational fields when field members interact frequently and fatefully (Kenis & Knoke, 2002; Powell et al., 2005). Second, the field boundaries are clearer and the network structure is more stable. This makes it easier to consider all its members (DiMaggio, 1986). Finally, at

this stage the internal structure of the field is emerging. This structure can be analysed through two dimensions.

First, is the structure of the field. As the field structures a more stable pattern starts emerging between a **core and a periphery**. Doing so, a distinction emerges between more and less centralized actors. This distinction eventually leads to increasing differences between the core of the field where actors are highly connected, and a periphery where they are more isolated (Leiblebici et al., 1991). How this structuration occurs is still unclear. Powell et al. (2005) exploration of the field of interorganizational collaboration in biotechnology life sciences eventually suggests that the core periphery structuration is highly dependent on the main orientation of the field. As focus on research (rather than commercialization) grew in the field, this required different skills and favoured multiconnectivity.

Second, is the **creation of norms, certifications and standards** (Scott, 1995). The structuration of organizational fields is typically marked by the creation of standards and certifications (Scott, 1995). Standards and certifications will work in two ways. Toward actors outside the field they will signal that field members managed to agree on specific standards of quality which means that the field is mature enough to have valuation systems (Rao, 1996). Such standards can be especially useful for those outside the field who might have to interact with field members but can not learn first hand about the product of service offered. When those products and services are especially complex and sophisticated, actors external to the field will have little choice but to resort to certifications and standards (Karpik, 1996; 2007). Within the field this contributes to stabilize the emerging hierarchy by setting a distinction between those field members who obtain the certification and those who don't.

While authors have acknowledged that relations between networks and structuration of the field is recursive (Owen Smith and Powell, 2008; Powell et al., 2005) how members' interactions contribute to the structuration, and further stabilization of the field has not yet been examined.

To investigate this issue we conduct a case study based on the developing of socially responsible investment as we develop further in the next section.

METHOD

This paper draws on a case study of stabilization within the field of socially responsible investment (SRI) in France around 2004-2005, at a time where field had emerged but existing institutional arrangement were challenged and new power relations were drawn within the field. Our aim is theory elaboration by developing our understanding of specific dynamics of stabilization in organizational fields. To do so, we use a mixed method approach, combining social network analysis and qualitative research. As we want to highlight the role of interactions on stabilization, social network analysis is necessary to investigate those interactions, as well as their effects on the whole field network, whereas qualitative research methods are appropriate to investigate poorly understood phenomena and obtain rich and detailed analysis that take into account the views of the people under study (Lee, 1999). Mixing methods also helped us obtain a more complete understanding. To do so we collected two kinds of data, qualitative data and network data, and consistently used two sorts of analysis (Small, 2011).

The results presented here are based on qualitative and quantitative research carried out in the SRI field mainly between 2003 and 2007. In order to capture interactions between the field, we used a two-stage methodology. As part of the first stage, we carried out an ethnographic study of French SRI. It uses three methodological tools: first, a documentary analysis; second, a series of exploratory interviews with key players; and third, an 18 months participant observation in a SRI lobbying organization. SRI brought together heterogeneous actors from different **occupational groups**, including financial institutions and trade unions. As part of this process we were able to attend workshops and meetings where the trade unionists' definitions of SRI were discussed.

The second stage was influenced by one of the results of that ethnographic study. The field of French SRI consists of around a hundred people who often meet, talk and exchange views at professional but also personal events. We gathered information about attendance and membership of different **groups that can overlap**. The social interactions in those groups is related to a definition of SRI that is still being established. People need to interact to gather information about companies' social and environmental behaviour, but also to reduce uncertainty around the meaning of social responsibility. Then, among those people, we

collected more quantitative data, using a questionnaire including sociometric questions. We conducted directed face-to-face interviews with 78 individuals who agreed to name the relationships, both personal and professional, that they maintained in the French SRI field. As a result, we are able to draw and analyze **multiplexity** of the French SRI networks.

Finally, we came back on the fieldwork for restitution and checking the result of the institutionalization process. We conduct several results presentation for interviewed field actors, all opportunities to strengthen our results and check the orientation of the institutionalization process. To clear the most unpredictable variable at the time of the inquiry, the norm that was establishing, we have also conducted 2 very recent interviews with key actors about the institutionalization process. Our major concern during these interviews was related to the fate of normalization, what happen to the controversy we could have observed, was the debate over?

Research context

To investigate a structuring field, we focused on interactions within the developing field of socially responsible investment (SRI) in France circa 2004-2005. Previous research has established that by this period SRI in France was already a field well engaged into the institutionalization process and was becoming a recognized area of institutional life (Arjaliès, 2010; Déjean, 2005). Central to this institutionalization process, and to the structuration of the field, was the development and institutionalization of a system to rate companies on extra financial dimensions, established by a social rating agency named Arese. Arese's rating became a necessary resource for any SRI fund manager, as it was a way to legitimize one's seriousness in this activity toward both other SRI fund managers and executives in the larger financial community (Déjean et al., 2004). In 2003, ARESE had reached an 85% marketshare among SRI fund managers and buying ARESE rating was almost mandatory for fund managers willing to run an SRI fund and be considered as a trustworthy professional in this domain. As its rating system became institutionalized, the rating agency reached a prominent position in the field.

Yet, in 2002, two major events led to change in context. First, ARESE's main shareholder, the *Caisse des Dépôts et Consignations*, decided to replace ARESE's CEO. A crisis ensued and ARESE was eventually renamed Vigeo. As a new CEO was nominated, most of the founding team decided to leave and started working for brokers and other intermediaries. Second, most of the major workers unions decided to enter within the field through a coalition named CIES and to give funds a special label. Indeed, since an employee savings funds law (law of 19 February 2001, *aka* Fabius law) promoted SRI for this kind of savings funds, Unions have decided to enter SRI field and to act through an Employee Saving Funds labelling Committee (named the CIES). The Committee aims at offering a label to funds that respect their vision of employee savings, especially on the responsible side.

An example of criterion that is noticed in the CIES call for labelling is hiring an analyst inside the asset management company. Actually this criteria only appeared at the second call in 2015. It was absent from the first one. But interviews with CIES members at that time are very informative. They recognized that the first call was an attempt to get in touch with the finance responsible sector, as they were not very familiar with financial process and products. During that first call, they met financial candidates during face-to-face interviews. Those interviews create interactions between asset managers and unionists. A result of those interactions was the decision to make compulsory inside analysis in the next call for labelling. The second call came out only a little time after the first one, which had labelled very few funds. The CIES introduced it as a trial and error process, the first call was an attempt and its goal was to learn how to do a socially responsible label. The second call was a more robust process, because it had been through the interaction with the funds managers.

As a matter of fact, all the asset managers companies in France had started to hire inside analyst to re-work the Vigeo dataset. To do so, they needed to cross Vigeo information with other sources of information. This is why other kind of stakeholders (journalists, NGO etc.) finally entered the field.

This brief history of SRI confirms the period of time in which we place our analysis: stabilization time. Emergence had occurred thanks to Arese institutional work, but now the borders had been defined, making room for Unions and other stakeholders in the wake. But there is still some uncertainty about how to apply extra-financial criteria. CIES attempt of certification shows that there is not yet one taken-for-granted way to think to do SRI.

Data

To measure interactions in this field, we can use three networks collected thanks to two name generators in the questionnaire and a membership data collection realised during the questionnaire, on the internet and thanks to members' catalog.

The first two are the co-work network and the friendship networks. The co-work network is the result of the name generator question: "*With whom do you regularly work, that is to say you participate in working groups, you think on the subject together in discussions of work, in forums or business lunches, you share your views on the market in general, how to work on the news of this market, the goal of SRI?*". The friendship network corresponds to the name generator: "*Who have you developed relationships other than professionals? When you meet, you might talk about SRI, but also one thing and another, you happen to share your trips and leisure.*" It was also specify by the investigator when asked that the friendship network did not have to be included in the co-work network but that co-workers and friends may be different people.

The third network is the result of the observation of key professional association on the SRI market. We success in gathering information on membership among those associations during the questionnaire and on the internet or thanks to an observation of those association life. In order to clean our data we select people who were active in those associations that is to say they have a seat at the governing bodies of those associations (board of directors, bureau, SRI working group in larger professional association, etc...).

This social network analysis concerned a set of 78 actors who were previously identified as members' of the SRI market, belonging to different occupational groups and who answered our questionnaire during a face-to-face interview.

The membership network is composed of 338 edges¹ and it is 12.9% dense². The co-work network shows 1397 arcs, among which 447 are reciprocal, which reflects a 32% reciprocity rate. This network is very dense, people need one another in SRI and everybody

¹ An edge is an undirected tie, an arc is a directed tie. Membership is by definition an edge: you share a seat at the same table. Co-work is an arc: A can declare that he or she co-work with B, whereas B does not declare the reciprocate case. This asymmetry enables social network analysis to consider status.

² The density of a network is the number of existing links reported to the possible ones.

works together. This may be explained by the newness of the market. Everything is still uncertain, information does not flow through institutional channels. Those facts may increase tremendously collaboration that is shown by the co-work network. Yet, only a third of those co-work relations are reciprocal, which mean that if collaboration is spread, it is also hierarchical. This is a pecking order in this network. The friendship network is composed of 441 arcs, among them 108 reciprocate ones, which corresponds to a 24.5% reciprocity rate. The density is 7.3% which is lower than the co-work network, but still quite high for a friendship network in a professional world. This figure underlines the pertinence of the informal resource in the institutional work. The lower reciprocity in friendship than in co-work is a clue that friendship has a role to play in the institutionalization of the market through the exchange of informal resources. That resource exchanged through the friendship network is specific and preserved from all the participant of SRI. It is preserved for some “happy few” (Penalva-Icher, 2007).

To conduct our investigation, we now are going to check if we find our two indicators of stabilization: a core vs. periphery structure and a certification; in the three field characteristics: mutliplexity, subgroup overlaps and heterogeneity or homophily among occupational groups. The centralized structure can be described by visualization and measured with indicators as indegree (number of received relations) or star and bridge centrality (Freeman, 1978; Wasserman and Faust, 1994; Burt, 2009). The certification is still occur in stabilization process. To measure it, during the quantitative questionnaire, interviewees were asked to list, from the most important to the less important, what was their vision of SRI through a list of practices: negative screening, positive screening, best-in-class, shareholder advocacy etc. From this list, we conducted a Hierarchical Ascendant Classification and ended up with two main visions: niche (25%) versus mainstream (75%). Indeed, the debate among SRI participant at that time was to know whether SRI should remain a niche market, whereas it was a technical process among other and should integrate mainstream finance. This statistical classification is concomitant with qualitative data which underlines the debate about SRI norms. It was a heated debate, for instance the trial and error process of CIES shows that certification was a working process.

RESULTS

Multiplexity

We first examine multiplexity of those three networks to understand the weight of multiple interactions in the institutionalization and how it happens.

Table 1: Networks matrix correlation

	Professional Association	Co-Work	Friendship
Professional Association	1 ***	0,287 ***	0,242 ***
Co-Work	0,287 ***	1 ***	0,492 ***
Friendship	0,242 ***	0,492 ***	1 ***

Table 1 shows the correlation between the 3 sets of relations. The 3 networks are positively correlated but it seems that Friendship and Co-work are more correlated than other. On the set of the three relationships, there are 2614 ties and a 43% very high density, among those 2614 relations, 857 are multiplexes. Between the co-work network and the friendship network there is 428 multiplex links among 441 friendship ties. Only 13 friendship relationships are just friendship. So, there is no friendship without co-work, But every co-work tie do not drive to friendship. That can be interpreted as a form of utilitarianism of friendship (Penalva-Icher, 2010). Furthermore, there are only 184 multiplexes links between friendship and professional association ties. Friendship do not lean on a professional association link as it lean on co-work. That is to say, friends are not met in professional associations. Those relations can be based on another history between two individuals that come out the organization borders.

The professional association network contain 425 multiplex ties with the co-work networks. We can deduce that co-work is not governed or contained by organizations such as professional association, as co-work ties exist without them. People meet and work outside

the organizational frames and meetings or working-groups provided by professional associations.

The co-work network and the professional association network measures different social phenomenon, the first one retrace a dense and quite spread collaboration, the second give access to organizational resource only to a core of the field. We are now going to examine this core and see that it is quite overlapping and heterogeneous.

Subgroup overlap: A core association is a star and bridge

We now offer to analyse the 2-mode the professional association network. In this network, there is a link between an individual and an association if he or she belongs to this association.

Figure 1 : 2-Mode Professional Association network

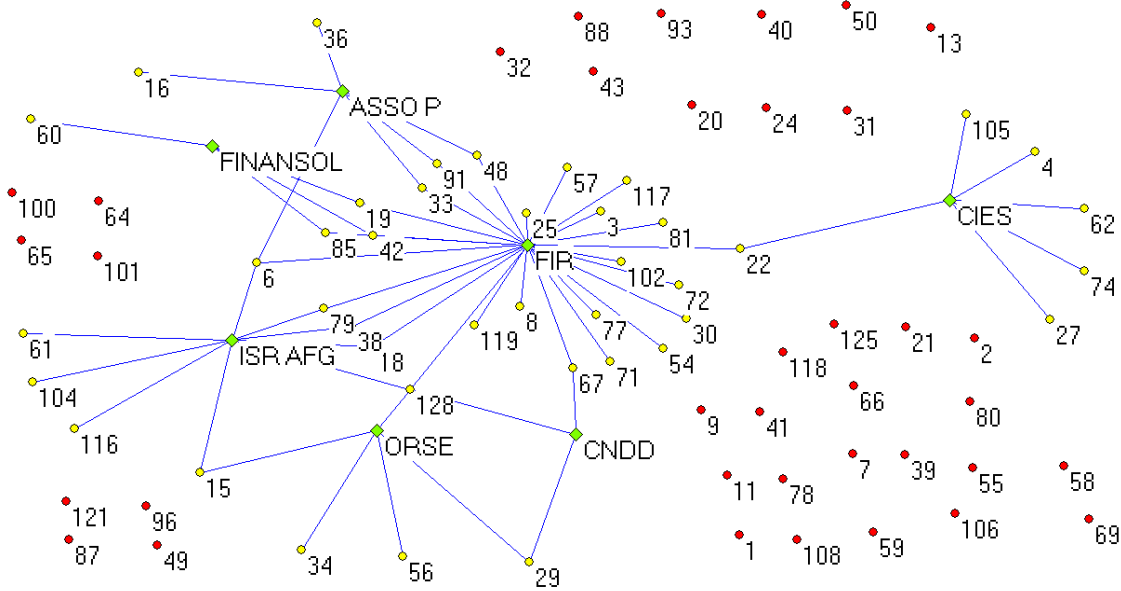


Figure 1 shows the 2-mode Professional Association network visualization, nodes show individuals and the association to which they belong. Circles are the individuals: red circles are individuals not belonging to any association, so they are isolates; yellow ones are individuals belonging to at least one association (up to 3). Green diamonds shows professional

associations. First, we can underline that there is a lot of isolates, a high number of people in that market do not have access to the resource provided by associations, approximately half the market. The market is divided between a **core and a periphery** and only the core has access to the resources provided by the professional associations.

Then, we can say that a specific association, the FIR (Forum for Responsible Investments) gather most of the members. Its position in the network is a star structure and it attracts half of the members of the field. Nonetheless, the FIR is not the only association, other associations attract members but half of the time, their members are already members of the FIR (nodes 48, 91, 33, 19, 42, 85, 6, 79, 38, 18, 128, 67, 22³). So, we observe an overlapping and centralized structure around the FIR, because, only two actors 15 and 29 do belong to 2 professional associations which are not the FIR. And, there is no need to multiply overlapping up to 3 memberships because only two actors (6 and 128) belong to 3 professional associations, including the FIR. Other associations have also less members. The network is centralised around the FIR and at the same time overlaps are created from the FIR.

Who are those overlapping actors? Table 2 offers a description of those overlapping actors in terms of attributes (their occupational group; their vision of SRI) and network measurements. They are the most central actors in the co-work network. Degrees indicators are used in social network analysis to measure the centrality of actors (Freeman, 1978), the degree is the sum of the relations (received and sent) of one node, the indegree measures only the received relations and is usually interpreted as a prestige indicator. Knowing the mean degree in the co-work network is 23 (sum of received and sent links) and the mean indegree (sum of received links) is 23.3, we must underline that the mean degree and indegree in this subset of overlapping actors is much higher; respectively 35.7 and 36.7.

Let's take a look at the CIES position. It gathers all the trade union members and only one have link to other association through the FIR (node 22).

³ The node label does not correspond to an ID number from 1 to 78 in order to respect anonymity

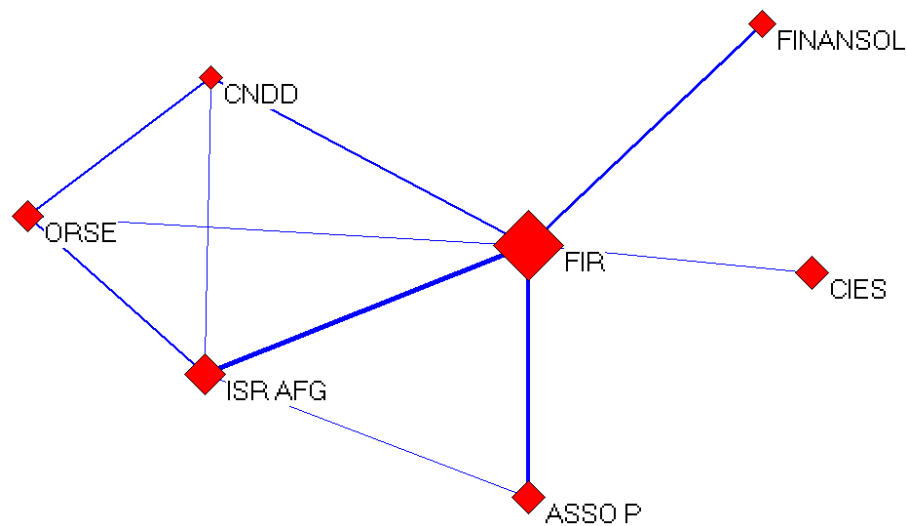
Table 2: The overlapping actors

Node	Degree Co- work	Indegree Co- work	Occupational group	Vision of SRI	Friendship E-I index
6	43.5	45.4	Finance	Mainstream	0.250
15	40.3	46.7	Finance	Mainstream	0.333
18	45.5	50.0	Finance	Mainstream	0.333
19	24.7	35.1	Other Stakeholders	Mainstream	0.556
22	31.8	33.8	Other Stakeholders (CIES)	Mainstream	-0.059
29	9.7	7.8	Other Stakeholders	Mainstream	0.000
33	31.8	33.8	Finance	Niche	0.200
38	63.0	49.4	Finance	Mainstream	-0.067
42	5.2	2.3	Finance	Niche	0.000
48	30.0	35.1	Other Stakeholders	Mainstream	0.286
67	11.7	15.6	Other Stakeholders	Niche	1.00
79	49.4	46.8	Finance	Mainstream	0.500
85	33.7	37.7	Other Stakeholders	Niche	0.167
91	50.6	49.4	Other Stakeholders	Mainstream	0.500
128	65.0	62.3	Finance	Mainstream	0.500

From this 2-mode affiliation graph we can draw the 1-mode graph, where a link between 2 professional associations is trace by a common membership (Davis et al., 1941; Galaskiewicz, 1985; Mizruchi 1988, Mizruchi, 1996, Mische, Pattison, 2000; Mizruchi et al., 2006). Here again, we can underline the central star position of the FIR. Every links are centralized towards the FIR as the branch of a star. Moreover, there is an overlapping clique (i.e. nodes are all connected together; composed by FIR, CNDD, ORSE and ISR_AFG). Yet, that second network able us to identify another clique composed by the FIR, the “asso P” and ISR AFG. “Asso P” is a private association based on friendship, which is quite discrete in the SRI

market. Beyond the FIR star position, we notice that the only association that make other kind of link possible, through overlapping is the FIR. The path reaching “asso P” or CIES must go through the FIR. This is the reason why we conclude the FIR is a star but also a bridge. It describes the core of the field as it centralises interactions and connects different kind of members.

Figure 2 : the FIR and its star and bridge position



To go further in the analysis of the characteristics of field members, we now analyse the heterogeneity of interactions related to occupational groups. Is the network homophilous, people sharing the same profile get in touch together?

Occupational groups: success of heterogeneity, failure of homophily?

As SRI rely on three main expertises (financial, social and environmental), no one can experience a complete threefold expertise necessary to socially responsible judge or rate firms. So SRI market is an interdependent milieu where heterogeneous actors need one another. Who are those actors? We propose a typology based on three categories of occupational groups. First, finance members as funds managers (n=30); second, socially

responsible rating agencies (n=19) and third other stakeholders, ie: NGO, Trade unions, consulting, brokers... (n=29).

Previous works in social network analysis indicate that homophily is one of the major known attachment between actors. Studies show that people interact most frequently on the basis of sharing the same characteristic (Kandel, 1978; Ibarra, 1992; McPherson et al., 2001). In order to check whether interactions in this field are homophilous or heterogeneous, we operate a partition on the co-work network related to occupational groups. If actors interact with actors from the same occupational group, there is homophily (see the diagonal of table 3), on the contrary if they share co-work with other occupation, the network is heterophilous. Because the graph is very dense we refer to the partition and shranked matrix rather than the graph which is not very meaningful by itself. As there is not the same effective of individuals in each category, we normalized the partition result according to the number of possible senders and receivers in each group. See Table 3 for the matrix of the co-work network partition due to occupational group and shranked group by group. Diagonal indicate homophilous (intra-group) co-work relations.

Table 3: Who co-works with whom ?

	Rating Agencies	Finance	Other Stakeholders
Rating Agencies	34.6	20.3	17.8
Finance	32.8	23.4	22.5
Other Stakeholders	25.2	18.0	20.0

This table shows that this highest intra-group collaboration concerns rating agencies and extra-financial analysts working there: extra-financial analysts share 34.6 links with extra-financial analysts. There is a strong homophily principle among that group. Those analysts ask a little work outside their occupational group: 17.8 with the other stakeholders. Yet they are also asked by the other actors of that market which is coherent with their institutional role (32.8 and 25.2).

The other stakeholders is the professional group which is the less homophilous. (20.0 so lower than 34.6 and 23.4). They are requested by the financial actors. So we can say that

the strategy of the financial actors is to bypass the extra-financial rating agencies by looking for co-work ties elsewhere and specially with the other stakeholders. It seems that there are different rules of attachment for financial actors and for extra-financial rating agencies: the first one maintain heterophilous ties, whereas the second answers to more homophilous logics.

Now, we can test with an E-I Index and a QAP test the homophily in the friendship network. The E-I index offers a partition of a network into a number of mutually exclusive groups then calculates the number of ties external to the groups minus the number of ties that are internal to the group divided by the total number of ties. This value can range from 1 to -1: 1 is heterophily (links with actors different from me) and -1 is homophily (link with same categorical actors) (Krackhardt et al. 1988). A QAP test is performed to see whether the network E-I index is significantly higher or lower than expected (Dekker et al. 1987. Krackhardt et al. 2007). Table 4 shows the result of the E-I index for the Friendship network. This network is slightly heterophilous and significant. Back to the table 2, we show the E-I index for each overlapping actor. If an actor tends to -1 he is heterophilous, if he tends to 1 he is homophilous. Only 2 nodes have more homophilous relations, including the member of the CIES (see table 2). All the overlapping actors are heterophilous. We count 9 homophilous nodes in the friendship network: 4 from rating agencies, 4 from other stakeholders, 1 from finance.

Table 4: Friendship E-I index : a slight heterophily

	Obs	Min	Max	Avg	SD	P >= Ob	P <= Ob
Internal	0.411	0.249	0.337	0.441	0.025	0.003	0.998
External	0.589	0.559	0.663	0.751	0.025	0.998	0.003
E-I	0.177	0.117	0.326	0.502	0.049	0.998	0.003

Finally, we check the effect of those two different hetero- or homophilous logics of attachment in the field. Does heterophily enables finance to convince other actors? Does homophily shorten the range of nodes that are reached by agencies in the normalization process? Table 5 crosses the

occupational group and the vision of SRI. Adding this figure to what we know about the CIES, we can assume that the heterophilous logic of finance helps them to convert other stakeholders to their vision of SRI. Other Stakeholder are more on the mainstream side as finance opposed to agencies. On the otherside, interactions with other stakeholders help finance in gaining legitimacy in the rating process: they offer other information and help inside analyst to re-analyze the agencies datasets.

Table 5: Becoming mainstream

Occupational groups/ vision	Niche	Mainstream	Total
Rating agencies	36.8%	63.2%	100.0%
Other Stakeholders	20.7%	79.3%	100.0%
Finance	23.3%	76.7%	100.0%

Conclusion

Through a multi-dimensional analysis of social relations, this paper provides several insights on the way relations structure organizational fields. Doing so, it highlights the micro processes whereby an organizational field is structured and the sort of relations developed in it. To sum up, seeking for a core/periphery structure and a certification on the three field characteristics, first, we found that some links are multiplex, some are not; second one professional association is star and bridge and overlapping actors are more central; third homophilous ties do not tend to certification, whereas heterophilous ties (Finance and other stakeholders) succeed more in certification.

The importance of informal relations

Previous network analysis of organizational fields have insisted on the need for multiple professional relations to access different resources in particular in fields where co-

work is necessary to achieve the task at hand. For instance, Powell et al. (2005) have showed that in biotech where organizations needed to become 'multivocal' and manage at first commercialization and finance, and then latter R&D and venture capital, they could only do so by developing multiple partnerships with a diverse set of partners. The present study explores the multiple relations among organizations, and individuals, going beyond the professional relations.

In particular, it reveals that while there are different relations between field members, they are not all equal. More specifically the analysis shows the importance of informal relations within organizational fields. In the SRI field, a large and inclusive co-work network exists. This network is made necessary by the novelty of the task, the related uncertainty and its relative complexity as methods for SRI are not well stabilized and need to go beyond the traditional investment method. Yet, the analysis also reveals a much narrower friendship network which connect some of the more central actors. This friendship network seems to work as an informal governance network, which only include a subset of those actors engaged in co-work.

The importance of field forum

The analysis also highlights the importance of associations in the structuration of the field. The existence of associations in organizational field is well documented. Yet, most research focuses on professional associations where homogenous actors of the same nature gather (e.g. Suddaby and Greenwood. 2005). The present study points to the central role of an association which gathers heterogeneous actors. We suggest that such associations can be named ***field forum*** to account for their specificity as organizations where heterogeneous field members can meet and share, and distinguish them from other professional associations here members of the same nature gather.

Field forums operate both as stars and bridges. As a star field forum gathers multiple field members with different occupations. Because those different members who overlap between the forum and other associations, the field forum also operates as a bridge. This is the organization where one can meet members of other, more heterophilous, associations. In

the present case, the FIR, which is the field's specific forum operates as an intermediary between the different worlds, of finance, stakeholders and trade unions.

A consequence is that the field forum is also where major conversations regarding the future of the field and its regulation take place. The field forum also stabilizes the field, setting a distinction between a core of field members, who belong to the forum, and a periphery of members who don't.

The strength of heterogeneous ties in structuring fields

Consistently with previous research on organizational fields (Powell et al., 2005). The present analysis highlights the importance of diverse attachments. While the dominant view in network analysis is that actors are **homophilous** and tend to develop links with 'birds of the same feather' (McPherson and Smith-Lovin 1987). The present analysis insists on the importance of heterogeneous ties.

The more central actors are also those with the more heterogeneous ties. They develop such ties through co-work networks, the participation to field forum but also the creation of friendship ties which are heterogeneous. This allows them to access to a variety of resources through a variety of ties, both formal and informal. This also allows them to exchange with a diversity of actors and have their position considered when standards emerge such as the CIES label.

On the other hand isolated actors do not access those diversified resources. While the lack of ties might be considered as intentional by rating agencies to avoid being influenced and remain independent, a consequence is that their interests is not well represented in the CIES label that they are unable to influence. Isolation is either an intentional strategy or a lack of attention to the importance of heterogeneous ties in a field structuration process, but in both case prove to be a bad choice.

This might be due to the nature of organizational fields, which are communities where different actors assemble because they have a crucial task that demand multiple resources and diversified knowledge to be done. This is a major distinction between organizational fields and industries which members with common sets of knowledge and resources compete. This might also be due to the step in the evolution of the field. As the field is not well structures

and lacks stable standards, formal and informal ties are especially useful to make sense of situations and when trying to reduce uncertainty.

Eventually, the study suggests that heterogeneous links are those which contribute to the structuration of the field.

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