

NOTE: this is the **Accepted Version** of the relevant article, available for non-commercial and no derivative uses. Please cite this article as follows:

Serino, M., Picardi, I., & Agodi, M. C. (2024). The social space of Italian leading sociology journals: A network and field-theoretic analysis of sociologists' interlocking editorships. *Current Sociology* (online first), <https://doi.org/10.1177/00113921241289607>.

The social space of Italian leading sociology journals. A network and field-theoretic analysis of sociologists' interlocking editorships

Abstract

This article focuses on the boards of Italian top-ranked sociology journals by conceiving of them as an affiliation network formed by scholars participating in the same journals' editorial boards as members. We consider the space formed by editorial memberships in these journals as a social space and analyse it by means of network-analytic and factorial techniques, providing a field-theoretic representation of such space. Through Cluster Correspondence Analysis (Cluster CA), we look at how the different clusters (network positions) relate to each other and to what extent journals' patterns of board participation differ through clusters. Our findings show how this social space is structured along dimensions that oppose journals and scholars by reason of their mutual relationships (*interlocking editorships*), thus highlighting the relative positions of journals with similar or distinct patterns of board membership and the positions of scholars linked by common participation in various editorial boards. We interpret this participation as a form of 'position-taking' in Bourdieu's sense, reflecting the adjustment of boards' composition to meet the recent demands of the journals' accreditation system.

Keywords: Academic Field, Scientific Journals, Bourdieu, Social Network Analysis, Cluster Correspondence Analysis.

Marco Serino¹, Ilenia Picardi¹ and Maria Carmela Agodi¹

¹ University of Naples Federico II

Corresponding author: Marco Serino, Department of Political Sciences, University of Naples Federico II, Via L. Rodinò 22, 80132, Naples, Italy. Email: marco.serino@unina.it

Introduction

The circulation of scientific publications is crucial to any discipline's progress, where journals play a chief role in disseminating and legitimizing research findings and in fostering the development and institutionalization of scientific communication (Grothe-Hammer and Kohl, 2020; Vanderstraeten, 2010). Citation patterns and co-authorship in journals articles can help build maps of research collaboration worldwide (Leydesdorff, 2013; Mosbah-Natanson and Gingras, 2014), while linkages between scholars and the journal boards they participate in are of key interest to study the social structures of a discipline (Crane, 1969, 1972; Merton, 1973; Friedkin, 1978; Newman, 2001; Moody, 2004; Goyanes et al., 2022). Through their participation in boards, scholars position themselves within a given scientific field and, in turn, boards compositions reveal the co-location of scholars with respect to research areas and scientific sub-fields.

This study concentrates the field of scholarly journals and its structure in the research area of sociology in Italy, aiming to unveil the system of relationships among scholars and journals. We analyse the social space of scholars participating in editorial boards of scientific journals from the two-fold perspective of social network analysis (SNA) and Bourdieu's (1983) field theory. In SNA, one of the analytic approaches that best suits this kind of inquiry is that of affiliation networks (Wasserman and Faust, 1994). An affiliation network consists of a set of social actors involved in a set of collective entities or foci of

activity called ‘events’. These latter can be joint projects or activities, memberships in groups, clubs, participation in social occasions, etc. Each of these ‘events’ represents ‘a collection of subsets of actors’ (Faust, 1997: 157). Interestingly, this research line has also been devoted to *interlocking editorships* (Baccini and Barabesi, 2010), in analogy with the analysis of *interlocking directorates* (Burt, 1978; Mizruchi, 1996).

Our empirical contribution aims at investigating this type of network through a multidimensional data analysis applied to affiliation networks (D’Esposito et al., 2014; Serino et al., 2017; D’Ambrosio et al., 2021). Cluster Correspondence Analysis (Cluster CA, see van de Velden et al., 2017) is adopted to simultaneously group scholars and journal boards and to assess the relations among these groups in a metric, bidimensional space. We then interpret the resulting clusters as *network positions* (Doreian et al., 2005), in such a way that both scholars and journals are classified relationally based on the participation of the former in the latter’s board. In so doing, we attempt to depict a subfield of Italian sociology (especially the academic one) through the social space of interlocking editorships, by looking at this affiliation network in a field-theoretic perspective, relying upon Bourdieu’s approach to academic and scientific fields (Bourdieu, 1988, 2004; see also Bühlmann et al., 2017).

We limit our attention to ‘Class A’ journals, the top-ranked journals selected via the classification adopted since 2012 by the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR), according to the Italian Law of 30

December 2010, no. 240 (the so-called ‘Gelmini Reform’). Publishing in these journals is key to managing one’s position in the relevant scientific and academic field and, first and foremost, to fulfilling the requirements for achieving the National Scientific Qualification in Italy (ASN in Italian, and henceforth). We choose this selection of leading journals in Italian sociology as we argue that they represent the forefront of the related sociological field with respect to editorial policies (for similar motivation in selecting key sociology journals, see Willis and McNamee, 1990).

The structure of the article is as follows. The next section illustrates our theoretical background concerned with the social structures of the scholarly publishing world and its analysis through SNA. Then, we describe our data and the methods and analytic techniques adopted. Subsequently, our results are displayed with a key focus on visualizations and related commentaries. Finally, we discuss our findings by framing and interpreting them with an eye to a field-theoretic understanding of the matter.

Theoretical background

Affiliation networks of scholarly journal boards

In research publication systems, the circulation of journal articles is driven by a relational process that can be seen in ‘networks of scientific papers’ (Price, 1965), namely those networks that can be drawn by linking papers that cite one another, these networks being concerned with articles, authors, or journals. According to the related literature, these are called *formal* networks, which differ from those *informal* networks that consist, for example, of communication exchanges among scientists around research problems, like the so-called ‘invisible colleges’ (Crane, 1972).

We prefer to name them *apparent* networks, because like co-citation and co-authorship networks (Gmür, 2003; De Stefano et al., 2011; Cugmas et al., 2020) they overtly permit scholars to map and analyse social structures of collaboration and communication in scientific fields¹. As Hummon and Doreian (1989: 40) point out, citations are ‘explicit linkages between papers that have some important content in common’. In fact, one of the main aims of these studies is to perform a meaningful clustering of authors, articles, or journals (Small and Griffith, 1974; Sullivan et al., 1977; Lievrouw et al., 1987; Gmür, 2003). On the same note, co-authorships signal those collaborations that reach ‘the stage of formal publication’ (Crane, 1969: 336) and lead to the building of networks that reveal

identifiable patterns of collaboration as well as community structures and clusters in different fields and sub-disciplines, like physics, biology, business and management, or sociology (Newman, 2001; Moody, 2004; Evans et al., 2011; Akbaritabar et al., 2020).

Both citation networks and co-authorship networks rest upon the role played by journals in every scientific field. However, a view of social structures in academic publishing and, hence, in the dissemination of scientific knowledge is also provided by the analysis of networks between and within journals' editorial boards. Alberto Baccini and his colleagues have studied the networks made of scholars involved in journal boards and have shown the different implications of such social structures in domains like economics, statistics, or information and library sciences (Baccini and Barabesi, 2010; Baccini et al., 2020). Their studies focus on what they termed an *interlocking editorship*, namely a network derived from 'the links generated between journals through the affiliations of scientists' (Baccini and Barabesi, 2010: 367). As the authors remark, this framework is similar to that of interlocking directorates, which occur 'when a person affiliated with one organization sits on the board of directors of another organization' (Mizruchi, 1996: 271).

As a 'network of journals generated by the presence of the same person on the editorial board of more than one journal' (Baccini et al., 2020: 278), an interlocking editorship is an *affiliation* or *dual* network (Wasserman and Faust, 1994). This type of network consists of a set of actors involved in a set of events or activities. In this case, scholars are the

actors and journal boards are the events. One of the things that count most is the ‘intersection’ of different journal boards through their board members (cf. Breiger, 1974). These intersections might imply various affinities, relationships, convergences, or mutual influences among different journals as for their respective editorial policies. In this respect, Baccini and Barabesi (2010: 379) argue that ‘if the same scholar sits on the board of two journals, those journals could have some common elements in their editorial policies. The proximity of the editorial policies of two scientific journals can be assessed by the number of common editors sitting on their boards’.

Baccini and his colleagues, however, limit their attention to journal-by-journal one-mode networks obtained by transformation of the original affiliation matrix (Wasserman and Faust, 1994). They highlight the level of interconnectedness and centralization of different scholarly journals’ networks, also analysing cohesive subgroups or communities within these networks (Baccini and Barabesi, 2010; Baccini et al., 2020). Along with similar approaches (e.g. Burgess and Shaw, 2010; Andrikopoulos and Economou, 2015), what seems left aside – at least in part – in these works are the positional and structural features of such networks, namely the degree to which both journals and scholars occupy distinct positions with respect to any other node (either journal or scholar) within a network, irrespective of their being directly connected. This issue is what the present study aims to address. In addition, as it seems that no similar research conducted in the

field of sociology can be found therein, we also aim to fill this gap in the relevant literature.

Analysing positions in affiliation networks

In SNA, the positional approach is centred upon the notion of *position* in networks, which ‘refers to a collection of individuals who are similarly embedded in networks of relations’ (Wasserman, Faust 1994: 348). This leads to partitioning the network structure in clusters named *network positions* (Doreian et al., 2005). The notion of position is closely related to that of *structural equivalence* (Lorrain and White, 1971; White et al., 1976; Sailer, 1978): ‘Two actors occupy the same position in a network when they have the same relations to and from each actor in the network. Such a pair of actors can be discussed as occupying structurally equivalent positions in the network’ (Burt, 1976: 96). In this sense, such definition stresses the structural meaning of social position: ‘Actors occupying the same position need not be in direct, or even indirect, contact with one another’ (Wasserman and Faust, 1994: 348)².

Indeed, in a network of scholarly journal boards, board members might be unaware of being directly or indirectly connected to one another in a wider structure linking different journals and scholars. In this sense, there could be an ‘invisible’ structure involving all

scholars and making them part of a whole system where relations of (op)position are at work. Further, members of the same journal board may interact with each other quite infrequently, and the same holds true for scholars contributing to different journals as authors or board members. Yet, these scholars may surely be aware of each other; they may also know who sits on different boards. What they might not be aware of is the relative *position* they occupy in the whole social space of indirect relations defined by their co-location in different boards.

Hence, our approach does not focus on communication networks but on multiple memberships. In fact, we follow Breiger's (1974) approach, namely a 'membership network analysis' that differs a great deal from conventional sociometry, which concerns person-to-person relations. Memberships are more reflexive and less dependent on direct social relations in that they represent the position one occupies in a social system by way of his/her participation in different groups. The tie between any two individuals (scholars) is defined by the number of groups (journal boards) which they both participate in, while if 'two groups share at least one member, they are mutually related' (Breiger, 1974: 184).

Conceptually, positions in affiliation networks 'may also be defined by participation in common events or experiences [...]. Thus, positions can locate actors within the social space defined by participation in events' (Field et al., 2006: 98). More formally, actors in an affiliation network are *structurally equivalent* (and thus share the same position) if they take part in the same groups; the same holds true for these latter, which are

structurally equivalent if they share the same members (Borgatti and Everett, 1992). This reasoning makes perfect sense for the analysis of a network of journal boards: a scholar's position in such a network is defined by his/her editorship in the journals composing this network. But the reverse is also true: a journal's position depends on the board members it shares with other journals.

Network positions can, however, also be read as a special case of field positions (Serino et al., 2017). For Bourdieu, 'a field may be defined as a network, or a configuration, of objective relations between positions' (Bourdieu and Wacquant, 1992: 97), these objective relations being concerned with the structure of the distribution of capital at the disposal of agents (Bourdieu, 1983), apart from any proper network conceptualization (see Bottero and Crossley, 2011). In the present framework, network positions are contingent upon the whole structure of the various affiliations to journal boards. Therefore, like Bourdieu, we conceive of the scientific field by analogy with physics (and in line with the principles of correspondence analysis): 'The weight associated with an agent, who undergoes the forces of the field at the same time as he helps to structure it, depends on all the other agents, all the other points in the space, and the relations among these points, that is to say, the whole space' (Bourdieu, 2004: 33). At the same time, we distinguish our approach from Bourdieu's because network positions do not rely upon agents' attributes – that is, indicators of capital forms – to be defined, but rather on the differential participation in journal boards.

Data and method

We formalize the social space of sociologists in Italy as a set of linkages between them and the editorial boards of Italian sociology journals in which they participate. We rely upon data gathered from selecting 32 journals currently classified as top-ranked ‘Class A’ journals by the ANVUR agency (see above) with respect to the four sociological scientific-disciplinary sectors (SDSs) established in Italy’s regulation, according to the classification released by November 2019³. These 32 journals have been selected among those included in the ‘Class A’ list for their relevance to sociological areas and according to their ‘aim & scope’ declarations. Journals whose publisher is not based in Italy were excluded. This decision is motivated by the focus on the national field of sociology: as contributing to journals issued by international publishers boosts the recognition of scholars abroad, this would require considering transnational fields – an important task that, however, goes beyond the scope of this paper.

We then collected all the names of Italian scholars participating in the boards of these journals, obtaining a total of 934 scholars from different disciplines. Among these scholars we selected 594 academic and non-academic sociologists about whom we gathered information to set the following variables: gender, academic/institutional affiliation, SDS⁴, and academic/research position, via the database of the Ministry of Education, University and Research (MIUR)⁵, or through the webpages of Italian

universities and research centres. As for journals, we included in our analysis the number of board members and the year of foundation (see Table 1, where also each journal's publisher is shown). With these data we constructed a 'sociologist-by-journal' affiliation matrix where each row represents a sociologist, and each column represents a journal's board. The latter is treated as a binary variable indicating participation ('1') or non-participation ('0') of a scholar in that board.

To assess the topology of the network and of the most prominent sociologists/journals in terms of basic *degree centrality* for affiliation networks (Faust, 1997; see below), we first provide a visual inspection of the affiliation network. Visualization of the network graph is obtained through *Gephi 0.9.2*. In order to detect clusters of equivalent units in the affiliation network – which represent, as said above, the positions within the network – we identify clusters of both scholars and journals on the basis of their respective affiliation patterns through a factorial technique recently adopted by D'Ambrosio et al. (2021), who applied the method proposed by van de Velden et al. (2017), namely Cluster Correspondence Analysis (Cluster CA), to affiliation networks. Cluster CA is a combination of *k-means* cluster analysis (MacQueen, 1967) and simple correspondence analysis (Greenacre, 1984) which permits 'to simultaneously obtain a cluster allocation as well as optimal scaling values (i.e. coordinates) for the categories of p categorical variables, that maximize the between groups variation' (van de Velden et al., 2017: 159).

Referring the reader to van de Velden et al. (2017) and D'Ambrosio et al. (2021) for further technical details about Cluster CA, by this procedure we first identify the optimal solution as for the number and size of the clusters and then perform the analysis starting from an initial cluster allocation generated by randomly assigning individuals to clusters (cf. van de Velden et al., 2017: 163), namely a *random start*. By doing so, we are able to group simultaneously sociologists and journal boards and to evaluate the relations among the groups thus obtained in terms of proper distances in a metric space. That is, we classify sociologists and journals specifically based on their relational patterns. Cluster CA is performed through the *R* package *Clustrd* (Markos et al., 2019).

The above strategy lies in the theoretical and methodological conjunction between field theory and SNA (De Nooy, 2003; Bottero and Crossley, 2011; Serino et al., 2017). There is a principle behind this reasoning that lies both at the theoretical and methodological levels and works well with Bourdieu's (1988) elaboration on academic fields: 'properties, which are subjected to correspondence analysis (for example, having a post at the Sorbonne), can be treated as relations (an affiliation between a professor and the Sorbonne) in network analysis' (De Nooy, 2003: 313).

In addition, in line with Breiger's (1974: 181) proposal, we consider the idea of 'group' related to journal boards in a restrictive way, namely 'those groups for which membership lists are available-through published sources'. In this sense, we focus on *formal* (overt,

apparent) networks – which, as also Crane pointed out, refer to formal collaboration as it results from publication records (Crane, 1969: 336).

The space of leading sociology journal boards in Italy

The affiliation network of sociologists and journals

The network of sociologists and journals is made for the most part of male sociologists (61,3%) and of scholars working in universities or research centres based in northern (58,6%) or central (26,9%) Italian regions. Board members are mainly at the top of the academic hierarchy (Figure 1), being mostly full professors (21,9%) or associate professors (20,9%) and, quite interestingly, retired professors (16,7%). The last ones are often still active in their field and do provide symbolic recognition even by simple appearance of their name on a journal board. This is also peculiar to emeritus professors (8,4%), who, after having completed their formal career, gained an official entitlement witnessing their prestige and scientific authority (as a form of symbolic capital: see Bourdieu, 2004)⁶. The remainder of academic positions are rather underrepresented in our dataset and consist of positions of lower rank in the academic hierarchy, particularly the most insecure ones – i.e. post-docs, adjuncts, non-tenure-track and tenure-track

researchers (Assistant Professors A and B, respectively)⁷, all having fixed-term contracts or even no contract at all, like many teaching or research assistants. As shown in Figure 2, sociologists participating in the journal boards under investigation belong for the most part to the sectors of general sociology and sociology of cultural and communication processes.

The size of boards (Table 1) indicates the degree centralities of each journal board, while the number of journal boards to which a sociologist belongs (see Figure 3) is her/his degree centrality (cf. Faust, 1997). Indeed, this is a first indication of network positioning for both sociologist and journals. Focusing on these latter, the network under investigation can be visually inspected to have a preliminary sketch of the various journals' network positions. Figure 4 shows the network graph representing the affiliation network, where bigger nodes and node labels denote the journals with the highest degree centralities. It can be easily seen that some journals are located closer to each other in the network. This is due to the joint membership of sociologists in different journals. That is, the higher the number of members two journal boards have in common, the closer their location in the network graph. The densest area of the network is centred upon the three journals with the highest degree centralities, namely *Studi_Soc*, *Salute_Soc* and *SocPolSoc*, which are also linked to each other because of the joint participation of some sociologists to their boards. Other journals are closer to each other in the graph as well, like *MondiMigranti* and *IJSE*. These journals have no proper 'aim & scope' in common; what they share is,

instead, the joint participation of several scholars in their boards (which will be seen in the clusters' composition shown below).

Table 1. Italian 'Class A' sociology journals selected for this study (updated Nov. 2019).

[Insert Table 1.]

Table 1. (continues) Italian 'Class A' sociology journals selected for this study (updated Nov. 2019).

[Insert Table 1. (continues)]

[Insert Figure 1.]

Figure 1. Proportion of sociologists participating in Italian 'Class A' sociology journal boards by academic/research position (percentage).

[Insert Figure 2.]

Figure 2. Proportion of sociologists participating in Italian 'Class A' sociology journal boards by scientific-disciplinary sectors (percentage).

[Insert Figure 3.]

Figure 3. Number of sociologists by the number of journal boards in which they participate.

[Insert Figure 4.]

Figure 4. Affiliation network of Italian ‘Class A’ sociology journal and the sociologists participating in their boards: bipartite graph (*Gephi* layouts: *Noverlap*; *Label adjust*).

Clusters (network positions) of sociologists and journals

The procedure named ‘tuneclus()’ implemented in the *R* package *Clustrd* (Markos et al., 2019) aids the researcher to select the appropriate number of clusters and dimensions for the factorial solution. In our analyses, the best solution provided by the ‘tuneclus()’ procedure was made of 6 clusters in 5 dimensions. Table 2 illustrates the results for the Cluster CA solution performed with a random start and a number of clusters and dimensions as specified by the ‘tuneclus()’ procedure. The value of the between sum of squares/total sum of squares ratio is 82.37%, while the objective criterion value is 5.3565; these values are indicative of a maximized variance between groups and a minimized objective function, respectively. The six clusters are, thus, well separated and represent six distinct network positions, which denote differential patterns of participation of sociologists in journal boards.

According to Markos et al. (2019: 16), interpretation of clusters can be enhanced by identifying ‘attributes that deviate the most from the independence condition’, these attributes being, in this work, the participation or non-participation on sociology journal

boards. In fact, the bar plots in Figure 5 show the extent to which participation (or non-participation) in some specific journals is peculiar to a given cluster by displaying, for each cluster, those membership of journal boards which mostly deviate from the independence condition. Bar plots depicted in each diagram ‘correspond to the highest (in absolute value) standardized residuals from independence of the attribute distributions conditional to clusters. A positive (negative) residual means that the attribute has an above (below) average frequency within the cluster’ (Markos et al., 2019: 16). In the case of this affiliation network (see D’Ambrosio et al. 2021; D’Esposito et al., 2014), each journal board is a binary variable with a positive pole (participation) – denoted by labels ending with ‘.1’ – and a negative pole (non-participation) – labels ending with ‘.0’. Hence, since each bar plot can show positive or negative poles on either side of the diagram (i.e. for positive or negative values of the residuals), a cluster can be characterized by participation to journals having the largest positive residuals and, conversely, by non-participation to the same journals, which show, in this case, the largest negative residuals. By the same token, participation in journal boards exhibiting the largest negative residuals does not definitively characterize the cluster itself.

As shown in Table 2, Cluster 1 is the largest in size (210 scholars; 35.4%), also due to the size of the journal boards that mostly characterize this cluster, namely *Salute_Soc* and *Studi_Soc* (see Figure 5). Sociologists belonging to this cluster are then positively associated with these journals in terms of editorial membership and not associated with

journals like *SD*, *SocLavoro* or *Sociologica*. Over half of this group are of a highly ranked status, with full professors and retired or emeritus professors occupying the most frequent positions. Almost a half of the scholars in the cluster are general sociologists, which is consistent with the orientation of the journals characterising it: *Salute_Soc* is a journal specialized in medical sociology/sociology of health (which is included in general sociology in the Italian regulation of SDSs), while *Studi_Soc* is one of the oldest sociological journals in Italy (est. 1963) and is oriented towards theory and research in the field of sociology.

Cluster 2 comprises a large group as well, with 131 sociologists (22.1%), among whom retired/emergitus, full and associate professors are equally represented (around 20% for each position). Among the journals that best characterize this cluster are *SD* and *IJSE*, which specialise in the sociology of education, i.e. a subfield of the sociology of culture and communication sector in Italy's regulation. The latter sector also informs *ComSoc*, while *MondiMigranti* focuses upon migrations. Further, *SocLavoro* and *Stato.Mercato* are devoted to the sociology of work and occupations, and to the interplay between economy and institutions, respectively. This is reflected in the disciplinary affiliation of the members of this cluster, which is almost completely related to general sociology, the sociology of culture and communication, and economic sociology. This cluster is also negatively associated with the journals mostly characterizing Cluster 1, which means that the two clusters denote opposite patterns of participation in journal boards.

In Cluster 3 (98 scholars; 16.5%), associate professors are the most frequent position (27.6%), while retired-emeritus and full professors are represented the least, compared to all other clusters. Here, urban or environmental sociologists constitute the majority, followed by cultural sociologists. Interestingly, this network position is also best characterized by some of the youngest journals in the Italian sociological field, like *Sociologica*, *ERQ*, *Studi_Cult* and *Tecnoscienza* (see Table 1), while *SUR*, a journal specialized in the field of urban and rural sociology, reflects the related composition as for SDSs. Like Cluster 2, this network position is inversely related to Cluster 1, because of the journals negatively associated with it (e.g. *Salute_Soc* and *Studi_Soc*).

Cluster 4 includes almost the same portion of scholars as Cluster 3, with 92 sociologists (15.5%), most of whom are retired/emmeritus (35.9%) or associate professors (30.4%). Here, general sociology (39.1%) and the sociology of culture and communication (38%) are the most frequent SDSs. The largest residuals of six journals – *SRS*, *ProbInf*, *ComPol*, *Polis*, *QdS*, *Studi_Org* – parallel the specialties gathered in this cluster. Again, negative residuals concerning participation in other journal boards like *Salute_Soc*, *Studi_Soc*, *SUR* or *SD* reveal oppositions or distance between Cluster 4 and the first three clusters.

When it comes to Clusters 5 and 6, group size shrinks (6.4% and 4.2%, respectively) and scholars' sociological subfields become more concentrated. While in Cluster 5 academic roles are more balanced, in Cluster 6 established figures are the dominant ones

(36% of retired/emeritus professors and 28% of full professors). Participation in the boards of *QTS* and *ReliSoc*, and partly in those of *Daedalus* and *RIS* as well, is strongly associated with Cluster 5, where scholars work the most (around 90%) in the subfields of general sociology and the sociology of culture and communication. In Cluster 6, social policies and economic or organizational matters are key subjects for the journals having the largest residuals: *PolSoc*, *RPS*, *SocLavoro*, *Stato.Mercato*. Consistently, more than a half of the scholars in this cluster are economic sociologists and 28% are general sociologists.

Table 2. Clustering results.

[Insert Table 2.]

Table 3. Description of clusters’ composition by sociologists’ academic role and SDS (percentage).

[Insert Table 3.]

[Insert Figure 5.]

Figure 5. Cluster CA: Largest standardized residuals for each cluster.

The space of network positions

Representing cluster centroids in a metric space, i.e. on the bidimensional map of Cluster CA (Figure 6), can foster interpretation of clusters as network positions⁸. The first three cluster centroids lie closer to the origin, meaning that the patterns of participation in journal boards within these clusters are more proximate to the average profile. In fact, Clusters 1 to 3 are the largest ones and the journal boards that best characterize them are among those with the highest number of members (see Tables 1-2). This means that since many scholars participate in those boards the corresponding patterns are indicative of ‘unstructured’ participation (cf. D’Ambrosio et al., 2021). Instead, centroids of Clusters 4 to 6 lie farther from the origin and thus denote more peculiar, ‘rare’ patterns of participation on several journal boards.

On the first dimension, Clusters 2 and 6 are opposed to Clusters 1, 3, 4 and 5, on the basis of sociologists’ participation on the journal boards that best characterize them (see Figure 5). This helps us highlight distinctions between different groups of journals. In fact, the clusters whose centroids are located on the right-hand side of the map denote editorial memberships of those scholars who are mainly involved in journals like *SD*, *SocLavoro*, *Stato.Mercato*, *PaCo*, or *PolSoc*, in line with the specialties of the scholars comprised in Clusters 2 and 6 (mainly economic, general, or cultural sociology). Cluster 6 is, however, the farthest from any other cluster, meaning that its quite different pattern

tends to set apart the sociologists and journals it gathers, particularly *PolSoc* and *RPS*, which are chiefly concerned with social policy and welfare⁹, while some journals in this cluster also characterize Cluster 2. In sum, economic sociology and related topics do characterize the right-hand side of the space, in contrast with the other side, where they are far less represented.

On this dimension, the field of the sociology of culture and communication seems to be divided in two fractions. *SD* and *IJSE*, which belong to the subfield of the sociology of education, stand on the right-hand side of the map, whereas *ProbInf* and *ComPol*, which are centred upon media and communication, are located on the left-hand side, along with *Tecnoscienza* (a journal focused on Science and Technology Studies). Further, and coherently with the composition of Cluster 3, also *SUR* is among the journals depicted on this side.

The second dimension shows a clear-cut opposition between Clusters 1, 5 and 6, at the bottom of the map (with negative coordinates, see Table 2), and the other three clusters on the upper side (with positive coordinates). Here, one can notice the same oppositions among the clusters as shown in Figure 5, as is the case with Clusters 2 and 3 vs. Cluster 1 with regard to their inversely related participation in the different boards.

On this factorial plane, distinction between younger (above) and older (below) journals is apparent: those lying on the upper side of the map are more often journals with a foundation dating back to no earlier than the 2000s, with noteworthy exceptions that result

from the very nature of this networked academic field. *QdS* is, in fact, among the oldest sociology journals in the dataset, but it turns out to be positioned beside other newer journals because of the interlocked editorships in which its board is involved.

Finally, the second dimension splits up the domain of general sociology, with contrasting patterns of participation in journal boards like *Salute_Soc*, *Sociologia*, *Studi_Soc*, at the bottom, and *QdS*, *Sociologica*, *SRS*, at the top.

[Insert Figure 6.]

Figure 6. Cluster CA: Representation of cluster centroids and units (symbols), and participation in journal boards (dots) in a bidimensional space (dimensions 1 and 2).

Conclusions

The rise of scientific journals has been historically crucial for the constitution of both university and scientific research as (partly) autonomous fields. In Italy, scientific journals have contributed most to the institutionalization of sociology as a discipline. Yet, nowadays these journals are subject to classifications that make researchers more concerned with publishing in highly evaluated ones, as is the case with those ‘Class A’ journals with which the present inquiry is concerned, and at expense of other types of publication once credited favourably, like monographs and edited books. Hence, mapping

the social space of board memberships in these journals sheds lights on how scholars and journals compete for success through their positioning in this space, where an important part of the relevant partisanship and political/intellectual struggles of the Italian sociological field occur.

Indeed, the analytical strategy we pursued provides insights into the way such an intellectual field is structured: scholar-by-journal relations contribute to constituting the field of Italian sociology, where overlapping memberships in editorial boards denote joint positioning in a space of opportunity for exerting symbolic power. This has clear implications for a Bourdieusian perspective on interlocking editorships. Participating in journal boards is, in fact, a form of ‘position-taking’ (*prise de position*), in Bourdieu’s sense: the space of position-takings is ‘the structured set of the manifestations of the social agents involved in the field’ (Bourdieu, 1983: 312), and that means choosing – or being chosen – to be a member of a given group and of a specific publication outlet, with its own history and cultural/ideological orientation. Some position-takings seem, indeed, mutually exclusive, such as those related to board memberships in Cluster 1 vs. Cluster 2.

Hence, in the map of Figure 6 each cluster identifies not only a given network position but also an ensemble of specific position-takings, by which members take part in the game while attempting to redefine and restructure the field itself. Directly connected with such a perspective is the relational nature of symbolic capital – ‘a good candidate for a network

analytic approach' (De Nooy, 2003: 320) – in that symbolic struggles for scientific recognition among scholars might occur in the space of available memberships in journal boards: 'Because symbolic capital is connected to groups or to the names of groups, alliances with groups through social ties are effective weapons in this battle' (De Nooy, 2003: 78).

The present study also revealed how intellectually proximal or far apart these journals are to one another by reason of joint board memberships, which meant considering what such proximity would tell us regarding the 'social communities gathered around the journals', as Baccini and colleagues wrote (Baccini et al., 2020: 277). Cluster CA helped us unveil not only the extent to which subsets of scholars and journals are (more or less) well separated in the whole field of 'Class A' journals, but also the interconnections among the different areas of such an intellectual landscape. The relational patterns of the six clusters, and their positions in the factorial map (Figures 5-6), reflect the structure of the affiliation network (Figure 4), with different areas to be distinguished within it but, at the same time, no disconnected components. In this sense, we identified six subgroups which might be part of the same 'community' that, thanks to the use of Cluster CA, can be seen as a social space divided up into 'regions' (Bourdieu, 1989).

In addition, the differential positioning of the younger vis-à-vis older journals – as for both their foundation and academic rank of board members – reflects the adaptation of journals' editorial policies in response to the regulation of the field based on the recent

evaluation criteria of scientific productivity, which meant assembling or restructuring editorial boards by involving younger and more productive scholars. This is apparent from the proximity between established and younger journals on the factorial map: the former updated their editorial boards, thereby overlapping memberships drive their proximity to the latter on the plane. No doubt, the foundation of a new journal or the reorganisation of a journal board are forms of position-taking which also arise in response to new evaluation criteria. Nonetheless, while the new ‘class A’ journals emerged fulfilling the new criteria, the older journals strove to meet the classification requirements while still maintaining their position in the field. In fact, the persistence of prestige (of both journals and board members) is a leverage to preserve recognition in the field albeit this is subject to evaluation criteria.

Limitations of this study might reside in the focus on ‘Class A’ journals only, excluding sociology journals classified in the wider category of ‘scientific’ journals, and on journal board memberships, without considering relevant collaboration networks. Our interest in highlighting a narrower sub-field of Italian sociology journals is due to the prominence these journals have because of the greater attention scholars and evaluators put on them (consistent with the evaluation criteria). Focusing on other related forms of scientific networks, such as interlocking authorships and co-citation networks among these journals (Baccini et al., 2020) – would be of great interest and can represent a prospect for future research.

Notes

¹ We would suggest naming *formal* networks those which result from a specific and intentional association of researchers aimed at a clear goal – such as the networks of researchers cooperating in projects or labs (Bellotti et al., 2016; Lazega et al., 2008). Informal networks, on the other hand, may be those that are not elicitable through official documents and associations' membership, but only through interviews and (web)ethnographic observation.

² Structural equivalence is found only very rarely in empirical networks. Relaxing this notion leads to speak of *regular equivalence* (Sailer, 1978; see also Borgatti and Everett, 1992 and Doreian et al., 2005).

³ This classification is updated periodically. We relied upon the list of journals applicable to the IV round of the ASN 2018-2020 (September 2019 – January 2020).

⁴ Sociological SDSs are the following: General Sociology (SPS/07); Sociology of culture and communication (SPS/08); Economic sociology (SPS/09); Urban/Environmental sociology (SPS/10); Political sociology (SPS/11); Sociology of law, deviance and social change (SPS/12).

⁵ <https://cercauniversita.cineca.it/php5/docenti/cerca.php>, accessed between April and October 2019.

⁶ Emeritus professors include, in our data, also those professors who are still teaching in universities after their retirement.

⁷ These two research positions have been established by the 'Gelmini Reform' in 2010 upon abrogating the former position of academic researcher with a stable contract.

⁸ For the sake of better visualisation, not all labels in the map are shown. Note that when a point on the map denotes two or more journals (i.e. with more than one label), these journals are structurally equivalent and the corresponding points tend to collapse. Unfortunately, the output does not provide values of inertia of the factorial dimensions.

⁹ Note that *PolSoc* is linked to 'ESPAnet Italia', a network of Italian social policy scholars.

References

- Akbaritabar A, Traag VA, Caimo, A and Squazzoni F (2020) Italian sociologists: A community of disconnected groups. *Scientometrics* 124: 2361–2382.
- Andrikopoulos A and Economou L (2015) Editorial board interlocks in financial economics. *International Review of Financial Analysis* 37: 51–62.
- Baccini A and Barabesi L (2010). Interlocking editorship. A network analysis of the links between economic journals. *Scientometrics*, 82(2): 365–389.
- Baccini A, Barabesi L, Khelfaoui M and Gingras Y (2020) Intellectual and social similarity among scholarly journals: An exploratory comparison of the networks of editors, authors and co-citations. *Quantitative Science Studies* 1(1): 277–289.
- Bellotti E, Kronegger L and Guadalupi L (2016) The evolution of research collaboration within and across disciplines in Italian Academia. *Scientometrics* 109(2): 783–811.
- Borgatti SP, Everett MG (1992) Regular blockmodels of multiway, multimode matrices. *Social Networks* 14 (1-2): 91–120.
- Bourdieu P (1983) The field of cultural production, or: the economic world reversed. *Poetics* 12(4-5): 311–356.
- Bourdieu P (1988) *Homo Academicus*. Stanford: Stanford University Press.
- Bourdieu P (1989) Social space and symbolic power. *Sociological Theory* 7(1): 14–25.
- Bourdieu P (2004) *Science of science and reflexivity*. Cambridge: Polity.

- Bourdieu P. and Wacquant LD (1992) *An Invitation to Reflexive Sociology*. Cambridge: Polity.
- Bottero W and Crossley N (2011) Worlds, fields and networks. Becker, Bourdieu and the structures of social relations. *Cultural Sociology*, 5(1): 99–119.
- Breiger RL (1974) The duality of persons and groups. *Social Forces* 53(2): 181–190.
- Bühlmann F, Benz P, Mach A and Rossier T (2017) Mapping the power of law professors: The role of scientific and social capital. *Minerva* 55(4): 509–531.
- Burgess TF and Shaw NE (2010) Editorial board membership of management and business journals: A social network analysis study of the Financial Times 40. *British Journal of Management* 21(3): 627–648.
- Burt RS (1976) *Positions in Networks*. *Social Forces* 55: 93–122.
- Burt RS (1978) A structural theory of interlocking corporate directorates. *Social Networks* 1(4): 415–435.
- Crane D (1969) Social structure in a group of scientists: A test of the ‘invisible college’ hypothesis. *American Sociological Review* 34(3): 335–352.
- Crane D (1972) *Invisible Colleges: Diffusion of Knowledge in Scientific Communities*. Chicago: University of Chicago Press.
- Cugmas M, Ferligoj A and Kronegger L (2020) Scientific co-authorship networks. In: Doreian P, Batagelj V and Ferligoj A (eds) *Advances in Network Clustering and Blockmodeling*. Oxford: Wiley, pp. 363–387.

- D'Ambrosio D, Serino M and Ragozini G (2021) Studying affiliation networks through Cluster CA and blockmodeling. In: Balzano S, Porzio GC, Salvatore R, Vistocco D and Vichi M (eds) *Statistical Learning and Modeling in Data Analysis. Methods and Applications*. Heidelberg: Springer, pp. 57–68.
- D'Esposito MR, De Stefano D and Ragozini G (2014) On the use of multiple correspondence analysis to visually explore affiliation networks. *Social Networks* 38: 28–40.
- De Nooy W (2003) Fields and networks. Correspondence analysis and social network analysis in the framework of field theory. *Poetics* 31: 305–327.
- De Stefano D, Giordano G and Vitale MP (2011) Issues in the analysis of co-authorship networks. *Quality & Quantity* 45(5): 1091–1107.
- Doreian P, Batagelj, V, Ferligoj, A (2005) *Generalized blockmodeling*. Cambridge: Cambridge University Press.
- Evans TS, Lambiotte R and Panzarasa P (2011) Community structure and patterns of scientific collaboration in business and management. *Scientometrics* 89(1): 381–396.
- Field S, Frank KA, Schiller K, Riegle-Crumb C and Muller C (2006) Identifying Positions from Affiliation Networks. Preserving the Duality of People and Events. *Social Networks* 28(2): 97–123.
- Faust K (1997) Centrality in affiliation networks. *Social Networks* 19(2): 157–191.

- Friedkin NE (1978) University social structure and social networks among scientists. *American Journal of Sociology* 83(6): 1444–1465.
- Gmür M (2003) Co-citation analysis and the search for invisible colleges: A methodological evaluation. *Scientometrics* 57(1): 27–57.
- Goyanes M, De-Marcos L, Demeter M, Toth T and Jordá B (2022) Editorial board interlocking across the social sciences: Modelling the geographic, gender, and institutional representation within and between six academic fields. *Plos One* 17(9): e0273552.
- Greenacre MJ (1984) *Theory and Applications of Correspondence Analysis*. London: Academic Press.
- Grothe-Hammer M and Kohl S (2020) The decline of organizational sociology? An empirical analysis of research trends in leading journals across half a century. *Current Sociology* 68(4): 419–442.
- Hummon NP and Doreian P (1989) Connectivity in a citation network: The development of DNA theory. *Social Networks* 11: 39–63.
- Lazega E, Jourda MT, Mounier L and Stofer R (2008) Catching up with big fish in the big pond? Multi-level network analysis through linked design. *Social Networks* 30(2): 159–176.

- Leydesdorff L, Park HW, Wagner C (2014) International Co-authorship Relations in the Social Science Citation Index: Is Internationalization Leading the Network? *Journal of the Association for Information Science and Technology* 65(10): 2111–2126.
- Lievrouw LA, Rogers EM, Lowe CU and Nadel E (1987) Triangulation as a research strategy for identifying invisible colleges among biomedical scientists. *Social Networks*, 9(3), 217–248.
- Lorrain F, White HC (1971) Structural equivalence of individuals in social networks. *Journal of Mathematical Sociology* 1: 49–80.
- MacQueen J (1967) Some methods for classification and analysis of multivariate observations. In: Cam L and Neyman J (eds) *Proceedings of The Fifth Berkeley Symposium on Mathematical Statistics and Probability. Volume I*. Berkeley: University of California Press, pp. 281–297.
- Markos A, Iodice D’Enza A and van de Velden M (2019). Beyond tandem analysis: Joint dimension reduction and clustering in R. *Journal of Statistical Software* 91(10): 1–24.
- Merton RK (1973) *The Sociology of Science: Theoretical and Empirical Investigations*. Chicago: University of Chicago Press.
- Mizruchi MS (1996) What do interlocks do? An analysis, critique, and assessment of research on interlocking directorates. *Annual Review of Sociology* 22(1): 271–298.
- Moody J (2004) The structure of a social science collaboration network: Disciplinary cohesion from 1963 to 1999. *American Sociological Review* 69(2): 213–238.

- Mosbah-Natanson S and Gingras Y (2014) The globalization of social sciences? Evidence from a quantitative analysis of 30 years of production, collaboration and citations in the social sciences (1980–2009). *Current Sociology* 62(5): 626–646.
- Newman ME (2001) The structure of scientific collaboration networks. *Proceedings of The National Academy of Sciences*, 98(2), 404–409.
- Price DJ de S (1965) Networks of scientific papers. *Science* 149(3683): 510–515.
- Sailer LD (1978) Structural equivalence. Meaning and definition, computation and application. *Social Networks* 1: 73–90.
- Serino M, D'Ambrosio D and Ragozini G (2017) Bridging social network analysis and field theory through multidimensional data analysis: The case of the theatrical field. *Poetics* 62: 66–80.
- Small H and Griffith BC (1974) The structure of scientific literatures I: Identifying and graphing specialties. *Science Studies* 4(1): 17–40.
- Sullivan D, White DH and Barboni EJ (1977) Co-citation analyses of science: An evaluation. *Social Studies of Science* 7(2): 223–240.
- Van de Velden M, Iodice D'Enza A and Palumbo F (2017) Cluster correspondence analysis. *Psychometrika* 82(1): 158–185.
- Vanderstraeten R (2010) Scientific communication: Sociology journals and publication practices. *Sociology* 44(3): 559–576.

Wasserman S and Faust K (1994) *Social Network Analysis*. New York: Cambridge University Press.

White HC, Boorman SA, Breiger RL (1976) Social structure from multiple networks. I. Blockmodels of roles and positions. *American Journal of Sociology*, 81(4): 730–80.

Willis CL and McNamee SJ (1990) Social networks of science and patterns of publication in leading sociology journals, 1960 to 1985. *Knowledge* 11(4): 363–381.