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## IDENTIFYING KEY ROLES IN THE INFORMAL ORGANIZATION: A NETWORK ANALYSIS APPROACH

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### Introduction and background

The fundamental role of informal relationships inside an organization has been widely recognized in organizational studies. The concept of informal organization comes from organizational studies and it was likely conceived in the “human relations school” founded by Elton Mayo and deepened by Barnard (1938), Roethlisberger and Dickson (1939) and Argyris (1957). Simon (1976) revised this concept stressing the relationship with the formal organization and studying the emerging of roles within an organization.

An informal organizational network is a network of relationships that employees form across functions or divisions to accomplish tasks quickly (Krackhardt & Hanson, 1993). Inside an organization, the activities and the work processes coordination principally occur through informal relationships rather than on the formal structure (Cross *et al.*, 2002b; Cross & Parker, 2004). As a matter of fact many researchers has demonstrated the strong impact of informal structures both on individual performance (Brass, 1984; Burt, 1992; Krackhardt & Brass, 1994; Cross & Cummings, 2004), internal organizational network performance (Krackhardt & Hanson, 1993; Cross *et al.*, 2002a; Cross & Prusak, 2002) and external organizational network performance (Mizuchi & Galaskiewicz, 1994; Bouty, 2000; Baker & Faulkner, 2002).

The paper illustrates the results of a research carried out on the topic of informal networks. In particular, the paper proposes the case study of an Italian knowledge-based enterprise. The research focused on the in-depth analysis of the informal structure of the different companies of the group using the social network analysis methodology and a framework proposed by Cross *et al.* (2002a). The paper presents an adaptation of the proposed framework in order to enhance the comprehension of the informal organization by identifying a new key role called *pilus prior* (first lancer) synthesis of problem-solving, knowledge and accessibility characteristics.

### Research purpose and methodology

The aim of the research was to promote the comprehension of the company informal organization through the identification and characterization of the key informal roles. Above all we were interested in finding and characterizing a new key informal role synthesis of problem-solving, expertise and accessibility characteristics.

Literature has widely recognized the importance of these characteristics in leaders (both formal and informal) inside an organization. Nevertheless if neither an expert nor a problem solver is available, he/she is obviously not able to influence network performances. Similarly, accessible and experienced individuals, who are not problem solvers, are not able to help their colleagues. As a matter of fact, there is a significant difference between the ability to solve problems and the experience. An individual who is very skilled in one subject might not be able to profitably interact with his/her colleagues in order to solve a problem. On the contrary,

a qualified individual might fulfil a task thanks to his/her relational qualities which allow him/her to collect the necessary information.

Social network analysis (SNA) is the fundamental methodology used to analyse and visualize informal networks, which would be otherwise invisible. In the research, we focused on an in-depth analysis of the informal structure of a group of companies. The SNA methodology (Figure 1) has been applied in the case study of an Italian knowledge-based enterprise, the Euris Group, operating in the information systems industry, in order to represent and to better understand its informal organizational structure. The enterprise studied has been selected for its belonging to the knowledge-intensive industry in which the informal relationships are even more fundamental.

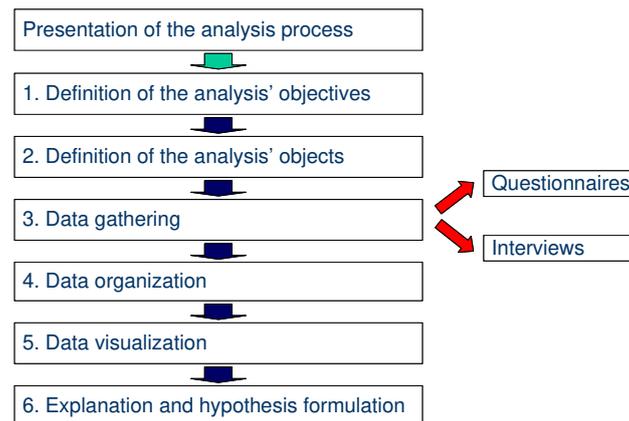


Figure 1 - Steps of the SNA methodology in the Euris Group.

We studied the five social relationships proposed by Cross *et al.* (2002a) and the five corresponding informal networks:

1. Communication network: network of working and not-working communication within the organization;
2. Information network: network of working communications within the organization;
3. Problem-solving network: network of advice relationships within the organization; the focus is on relationships which allow to solve working issues;
4. Know network: network of knowledge within the organization, describing how knowledge and expertise are spread;
5. Access network: network of accessibility to knowledge within the organization.

The central actors in these five networks are people with endowment like leadership and capabilities, i.e. expertise and problem solving abilities, recognized by others actors. These people have important informal roles within the organizations.

The five networks have been chosen because they allow to analyze the three informal relationships (problem-solving, expertise and accessibility) required to identify the key role objective of the research. This key role is played by those people who are seen as problem solvers, experienced and accessible by their colleagues. Beside the study of single networks, jointly different social networks may be the topic of further analysis, which would help to better understand the dynamics regulating informal relationships within organizations.

In order to identify this new key role, we apply an original approach by studying the intersection of the problem-solving network, the know network and the access network. We multiplied the three networks in order to study their intersection. In this way, if a relationship between two actors is null in one network – which means that it doesn't exist – the relationship between these actors is also null in the final network.

## Findings

The SNA methodology allowed both an analysis of the informal organizational structure (informal networks) and the identification and characterization of the key informal roles within companies and among companies of a group, namely opinion leaders, central connectors, bottlenecks, experts, consultants, or “available” people.

The intersection among problem-solving network, the know network and the access network has allowed us to identify a new leading key role in the company hierarchy. Table 1 shows the ten actors with the maximum centrality degree in the joint network, their company and their formal role.

Table 1 – Centrality degrees in the intersection among Problem-solving, Know and Access networks.

EURIS GROUP				
Name	N°	Centrality degree	Company	Role
Elena	173	86	CORES	Administrative manager
Luigi	139	81	PROGETTI	Senior business executive
Alessandro	187	76	CORES	Senior programmer
Massimo	172	67	CORES	Senior systems analyst
Stefano	100	63	SOLUTIONS	Senior business executive
Antonina	71	55	SOLUTIONS	Senior technical executive
Alessandra	170	55	CORES	Human resources manager
Egisto	149	54	EURIS	Chief Executive Officer
Stefano	133	51	PROGETTI	Senior business executive
Luisa	169	51	CORES	Project manager

Five of them (Luigi, Stefano Z., Antonina, Egisto and Stefano C.) are senior executives. This is a positive fact, because they are properly recognized as experts and still accessible, even though they retain a high hierarchic position. It is not surprising that Alessandra, Elena and Luisa are in central positions (Elena retains the top position) because they belong to Cores (the administrative department). However, their colleagues consider them as qualified and problem solvers. Surprisingly, Massimo and Alessandro, who are actors without a leading role in the company, are in a central position in the network because their colleagues rely on them. They are workers who jointly own three qualities which make them the emerging individuals inside the company.

We named this role *pilus prior* (first lancer). The pilus prior was a roman legionary seen as a leader on the field by his companions-in-arms. He commanded a roman cohort, coordinated his companions during battles, made himself accessible to them and offered rapid solutions to unexpected criticalities. This role can be compared to the playmaker in the basket.

The case suggests that *pilus priors* are the emerging leaders in the company. As a matter of fact the pilus prior is not necessarily a manager of the “formal” organization; he/she assumes the leading role of “informal” manager recognized by his/her colleagues and emerges from the working domain. A fundamental aspect is that this leading role emerges from the working domain and is informally acknowledged by the other colleagues. The pilus prior assumes the important role of “informal” manager and leader inside an organization.

Questionnaires have been administered to the managers in order to evaluate performance of individuals. Results of the analysis, afterwards confirmed by interviews, has highlighted that pilus priors outperform other colleagues in the quality and the quantity of their work and, in general, the performance of their working activities are higher.

## References available upon request