



Monographic Section

Professional Boundaries in Transnational IT Workspaces

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Abstract. In this article, I analyse the formation of professional boundaries in the dynamic of globalisation and the internationalisation of work concentrating on the question of how professional boundaries emerge in transnational workspaces constituted by heterogeneous actors from different institutional and socio-cultural backgrounds. Theoretically, I depart from Abbott's notion of 'linked ecologies' and focus on three dimensions of professionalism (the *linkages between tasks and organised action* or professional jurisdictions, the *mechanisms for legitimating work* or control over work and the *search for professional identity*) as basic mechanisms of professional boundaries formation in transnational workspaces. Retrospectively, I show focusing on the case of IT project management how employers and practitioners combining organisational and occupational professionalism contribute to form professional boundaries in workspaces that emerge in globalisation processes. Based on the research results and comparing them with the current situation of transnational IT project management, I conclude that the processes of formation of professional boundaries in the IT sector are historically situated in the first decade of the twenty-first century.

Keywords. Professionalism; professional boundaries; transnationalisation; IT work.

INTRODUCTION

IT work, particularly in the areas of software development and IT services, has experienced a very rapid occupational diversification and a broad internationalisation during the last decades fuelled by the possibilities of global working that the internet allows. Whereas the analysis of organisational implications of the internationalisation of work has very much developed, the particular consequences for the transformation of professional boundaries in emerging transnational workspaces have been widely overlooked.

Professional boundaries are meant in the sense of understanding how task areas come to be distinguished from one another (i.e. experts from laymen) and more generally how classification systems emerge and interrelate

to each other based on professionalism. Professionalism understood as both occupational value for working practice and means of practitioner/employee control (Evetts 2011) constitutes a basic mechanism of professional boundaries formation. In everyday work interactions between practitioners and employers, different sorts of boundaries (socioeconomic, moral, cultural, symbolic) interrelate leading to work differentiation and classification systems that change and remain permeable and relative regarding their importance.

Professional boundaries have for example changed due to the increasing involvement of professionals in enterprises and to knowledge and technological transformation. Occupational and organisational professionalism came closer to each other. Difficulties of management of professionals in the service sector lead to recreate professionals as managers and to manage using normative techniques (Evetts 2011; Noordegraaf 2007) as well as linking organisational discourses with professionalism, quality or customer services (Evetts 2011). Moreover, in the dynamic of knowledge and technological change, some tasks disappear while others emerge with still no abstract knowledge base (Abbott 1988) or recognised credentials (Freidson 2001). New occupations emerge and challenge those fields while at the same time they compete with each other or cooperate. In emergent occupations, organisational control through professionalism discourses replaces occupational professionalism and discretion (Evetts 2006). Market-oriented organisational objectives and culture integrated into the discourse of professionalism limit professional discretion. Professionalism can thus adopt a mixed form of occupational and organisational features combining permeate boundaries between organisations and occupations. This kind of professionalism represents the control basis of emerging occupations and constitutes an especial mechanism for facilitating and promoting occupational (Evetts 2006; 2003) as well as organisational change.

Another important factor contributing to the change of professional boundaries has been the internationalisation of work. Professionals are increasingly employed in international operating enterprises that challenge the traditionally national situated boundaries of occupational professionalism based on state licensing of abstract knowledge and practice. Processes of internationalisation cause tasks and knowledge to be redefined and redistributed, thus questioning bureaucratic and expert power as well as the balance between the normative and the ideological dimensions of professionalism. Transnational jurisdictions emerge in which experts and specialists from different occupations and organisations interact.

Particularly knowledge-based expert occupations in the service segment of the IT branch such as project, quality management or consultancy have experienced a rapid internationalisation in recent years and a growing uncertainty related to international markets and global economies. This results in the need for a social order to control work processes and outputs. Employers exert bureaucratic pressure and control over work “from above” (McClelland 1990). However, this means of control is very much limited, as short innovation cycles in production drive a steady transformation of occupation and require ongoing creative efforts and a high level of individual engagement from employees. Experts gain a relatively powerful position in emerging transnational workspaces and open chances to voice claims of professionalism due to the rapidly changing and subjective nature of their expertise, thereby resisting bureaucratic control and standardisation processes. The main question at this point is how professional boundaries emerge in transnational workspaces constituted by heterogeneous actors from different institutional and socio-cultural backgrounds.

A relational perspective on organisational and occupational professionalism as basic mechanisms of the formation of professional boundaries in different workspaces is needed to analyse this question. Abbott’s notion of “linked ecologies” offers a theoretical basis for such an analysis. Actors within different “linked ecologies” co-ally in so-called “hinges” influencing practices and gaining control of over particular professional policy locations. Professional boundaries and professionalism based on exclusionary closure (Saks 2015) are in continuous contested processes of defining and redefining (Abbott 1988; 2005). In this article, I apply this approach to the analysis of professional boundaries in the internationalisation of IT work focusing on software development and IT consultancy.

The question of how experts from different national settings working in transnational workspaces contribute to professional boundarying is ultimately one to be resolved empirically. Focusing on three main components of professionalism – linkages between work and organized action in transnational workplaces, mechanisms for legitimating work, as well as practitioners’ search for a particular professional identity (Noordegraaf 2007) – and taking

project and quality management in the software segment of the IT sector as empirical examples, I outline the contours of professional boundaries of these two emerging professional groups.

The article is structured in three sections. In the first section, I begin by explaining the theoretical approach for the analysis of professional boundaries in the internationalisation of IT work. Following these theoretical clarifications, which serve as basis for the formulation of my research questions, I focus on a case study in a large IT multinational enterprise in the third section. The article concludes with a discussion concerning professional boundaries for emerging professionals in transnational workspaces comparing it with the current situation of transnational IT management.

THEORETICAL APPROACH

My theoretical approach to analyse the formation of professional boundaries in the internationalisation of work emphasises the idea that the key to understanding this process is in the relational strategies between actors in linked ecologies (Abbott 2005).

Drawing from the concept of Abbott (2005), transnational workspaces can be viewed as a “linked ecology”. Ecology involves actors, locations, and a relation associating the first two elements. Locations in Abbott’s terms refer to the actors’ definition of how a concrete task should be legitimately and inter-subjectively understood (Abbott 2005). This means, what kind of strategy or replication of certain concepts should create the most legitimately practice for solving particular problems. Tasks are, in Abbott’s (2005) conception, an example for a location in the professional ecology that is not pre-existing but emerging in the process of constructing both the tasks themselves and the actors who carry them out. In this relational process, which Abbott (2005) calls “ligation”, actors and locations are constituted and delimited. In the case of professions, such a ligation takes the form of a jurisdiction, which in turn can also vary as to the exclusivity of control over work, the division of labour, distinguishing features of client bases etc. Ligations, but also actors and locations, are linked to different temporal structures. In the case of professional and occupational ecologies, particularly actors have experienced a rapid historical acceleration (*ibid.*). Abbott (2005) takes information work as an example for such an acceleration hindering the emergence of an information profession.

Particularly important for the analysis of professional boundaries in the internationalisation of work is Abbott’s idea that expertise, resources and concepts may be expanded internationally by alliances rather than in an isolated national context, which is the case in the institutional approaches (Hall, Soskice 2001) emphasising the idea of the seek for complementary partners in given institutional contexts.

The “linked ecologies” approach distinguishes between “hinges”, understood as issues or strategies that can operate within different ecologies at the same time and “avatars”, which replicate the ideas and skills of one profession or knowledge area into a new ecology. Both strategies are used by coalitions in an ecology to transform concepts and practices in another ecology, whereas they provide contestation grounds. In the inter-ecological process between professions and universities, professions can create a kind of institutional hinge, which Abbott (2005) calls an “avatar” of the professions. This is, for instance, the case in information work, in which the lack of academic foundations for the emerging practice of computer programming and system analysis gradually demanded the existence of a discipline based on mathematics and electrical engineering. However, the differing development rhythms of professional and academic spheres resulted in a permanent decoupling between the two, while professional practice retained its relative dominance. In Germany, a similar development happened in the 1970s (Ruiz Ben, Claus 2005).

In sum, the “linked ecologies” approach offers the opportunity of analysing how practices emerge across ecologies and how they contribute to form professional boundaries. Moreover, Abbott’s approach emphasis on competition between field actors rather than the reproduction of domination structures allows understanding social change and innovation dynamic in linked organisations, industrial areas and policies.

With specific regard to the internationalisation of IT work, I consider transnational IT workspaces as those “inter-ecological” spaces where experts (from the ecology of IT occupational groups) and companies from different

national settings interact in project-based work. I argue that ligations, using Abbott's (2005) term, emerge due to project imperatives and can take the form of a business area with the characteristics of a "jurisdiction". This means that both employers and experts compete for the control of work and expertise in such a business area. Thus, ligations can be very fragile depending on the degree of temporal stability that project tasks and related expertise requirements accrue in a given business area. Due to the permanent desynchronisation of knowledge development between academics and experts, whose work is mostly situated in company projects, companies play a crucial role in the governance of knowledge and expertise through "hybrid professionalism" (Faulconbridge, Muzio 2006; Evetts 2006), and in the institutionalisation of professional boundaries. In turn, due to the predominance of project-based work organisation and the heterogeneity of the actors involved, experts are accorded a key position in the control of emerging expertise and professional boundaries. IT Experts from different international settings contribute through the day-to-day practices to form professional boundaries claiming for the exclusiveness of their knowledge and expertise. Institutional professionalism domains in which IT experts work are not congruent in international companies. They have different temporal and spatial reach that employers supervise. Thus, employers also contribute through organisational discourses of professionalism and the definition of career paths to the formation of professional boundaries.

In sum, both IT experts and employers from different institutional backgrounds struggle for the formation of professional boundaries that are reflected in the following dimensions of professionalism¹.

First, the *linkages between tasks and organized action* or professional jurisdictions (Abbott 1988; Fourcade 2006) that employers (through the definition and categorization of tasks as well as through allocation of work) and practitioners (such as project or area managers or potential entrants into the emerging professional jurisdiction through, for instance, the diffusion of norms or the pursuit or not of established careers) attempt to demarcate.

Second, the *mechanisms for legitimating work* or control over work (Freidson 2001) that employers (in form of bureaucratic established norms and rules such as those included in quality management systems) and practitioners (in form of expertise and their decision autonomy for the application and implementation of quality standards and quality management systems' rules) aim to establish in relation to the market pressure from clients and competing jurisdictional fields (Abbott 1988).

Third, the *search for professional identity* based on a knowledge corpus that employers (formal qualification requirements, internal training) under market-related time pressure and practitioners (tacit knowledge, continuous training, experience, competences) use for justifying career prospects and that states with increasing pressure from supranational institutions implement in official curricula.

And fourth, the professional associations in which practitioners engage and which support a particular occupational identity and from a long term view a "professional project" (Witz, 1992).

The focus on these professionalism dimensions serves as an operational empirical heuristic to analyse how professional boundaries form in the transnational workspaces that emerge due to the internationalisation of work. Thus, for example, the strategies for linking ecologies in the process of internationalisation of work will be reflected in the linkages between tasks distributed in different geographical locations.

In this article, I focus on the first three dimensions mentioned above in relation with IT work in Germany and more concretely IT project management. In the next pages, I illustrate this case with empirical results of my research about the internationalisation of the IT industry in Germany and the transformation and categorisation of tasks and employees. In the next section, I focus on the particular case of the internationalisation of IT work in Germany.

¹ Following Abbott (1988: 30), professionalism relates to abstraction power of the professions' knowledge systems and their ability to «define old problems in new ways». I consider professionalism as a particular way of organising work (Freidson 2001; Noordegraaf 2013) by heterogeneous "jurisdictions" (Abbott 1988) struggling to establish a definition of work and a recognised effective way to implement it.

THE INTERNATIONALISATION OF IT WORK IN GERMANY

Rapid growth in terms of value added, employment, wages, R&D intensity, patents and investment has characterised the IT sector since the last decade (OECD 2002). This situation was also reflected in the development of international labour markets: employment increased significantly in the whole sector. New tasks emerged, in particular after 2000, because of the development of the internet and its expansion into diverse fields and everyday life and in global value chains (Castells 2001; Alvesson 2005; Walby 2007; Shire 2008; Huws 2013; Lee *et alii* 2016).

Such an emergence of new tasks necessitated an increasing supply of IT workforce with new skills' profiles difficult to find and to define due to the rapid dynamic of knowledge development and project work demands. In Germany, in particular, the lack of IT specialists was especially acute during the late nineties (Dostal 2002). The development of special programmes to encourage the immigration of foreign IT specialists (Green Card Action) started in Germany in 2000 represents an example of how the sector reacted to this problem with government support. In addition, numerous other official initiatives aimed at handling the shortage of IT specialists during this period of expansion. Established university credentials had to compete with a huge number of technical credentials granted by companies, business associations and commercial IT groups. The high number of side-step workers employed in the software sector without an academic computer science background grew and influenced both expertise in software development and professionalisation. The gap between established qualification standards offered by recognised institutions and the requirements of the IT industry widened.

An additional strategy to face the lack of IT specialists during this expanding period was next to the development of numerous official initiatives the beginning of private ones (on a smaller scale) in order to achieve the enrolment of women who are traditionally at a distance from computing in the IT industry and in the IT educational field.

Another strategy to confront workforce shortage in the German IT sector and at the same time to reduce costs was the export of work into lower costs countries. Particularly after the global crisis of the sector at the beginning of the new millennium, the externalisation of work known as outsourcing that began during the late eighties became crucial for supporting changing labour demands. Moreover, outsourcing, as well as the immigration of foreign IT specialists supported by the Green Card Action, represented to some extent a preparation for the internationalisation wave of the sector. Such internationalisation wave was also enabled through the expansion of the internet as global virtual work platform as well as by standardisation of production processes allowing the migration of tasks to lower cost countries. Multinational corporations used their long experiences in international arenas to rapidly expand in new markets such as, from the particular perspective of Germany, Eastern Europe (Bitkom 2009; DB Research 2005).

However, IT workforce shortage persists (Bitkom 2016). German computer science graduates represent a minority within the national IT workforce. The curricula in educational institutions, and especially in universities, are not designed to respond to the current demands and developments in the IT market (Dostal 2006; Bitkom 2016). At the same time, the standardisation of work processes, especially in software development, has made it easier to export tasks to foreign countries. After 2004, IT companies, mostly multinationals, used their previously built capacities in lower-wage countries, optimised with technical support, to tackle labour shortage risks and to save costs, starting by exporting standardised tasks (Ruiz Ben 2005; Boes 2006). Since then, numerous projects have been developed involving diverse international partners. Currently, companies export not only standardised tasks, but also crucial management tasks in order to increase their competitive edge in new and expanding markets (Boes, Kämpf 2010).

From a long term perspective, the internationalisation of the IT industry has led to the creation of transnational workspaces and to a broad occupational change in the national contexts it involves, challenging the already fragile professional identities of IT specialists in different countries. However, the question of how professional boundaries in these transnational workspaces are formed is still open.

In the next section, I concentrate on the empirical approach used for the analysis of this question based on the three dimensions of professionalism explained above.

EMPIRICAL STUDY

Design and methods

The empirical research that I present in this article is based on a case study developed in the framework of an analysis about the transformation of tasks and demands for related qualifications and skills ensuing from the internationalisation of the German IT sector with a whole sample of six IT companies. The case study took place in one German software company (B1) with subsidiaries in Poland.

The quantitative data for the case studies is comprised of internal personnel data from the enterprises and was used as a basis for the design of the qualitative interviews and interpretations of the qualitative materials. The qualitative materials are based on document analysis, including the long-term analysis of homepages and online job announcements over a six-month period, as well as expert interviews (12 personnel and area managers, 6 project and 6 quality managers, 16 software developers, 4 labour council delegates and 6 external consultants), 3 group discussions and workplace observations in different national settings (Germany, Slovakia, Romania). I interviewed two different employee groups: the first group consisted of employees involved in personnel issues, including personnel and area managers, as well as employee representatives. The second group was composed of personnel directly employed in software development, including project and quality managers, and software developers. The interviews lasted between one and two hours and were conducted during 2006 and 2007 (the formation phase of professional boundaries in the transnationalisation of IT work which is crucial for understanding the global professionalization processes of IT work) using an open-ended, semi-structured questionnaire, focused on thematic blocks and reflecting the perspective of the groups of experts under consideration. The interviews and group discussions were subsequently fully transcribed.

The methodology for analysing the expert interviews was distilled from the theoretical corpus of Meuser and Nagel (1991). According to this perspective, experts are consulted as suppliers of insider information. After the early analysis and coding of the transcribed interviews supported by the software package Atlas.ti, I focused, in a second analytical step, on two thematic groups: the first group consisted of the employment and labour-related decisions as well as interpretations given by personnel managers and labour council delegates. The second thematic focus was comprised by working practices, control aspects related to distributed work and the career aspirations of project and quality managers, software developers, and external consultants. The results were internally discussed among the members of the research group, beginning with each case separately and moving on to compare the two cases of software development and IT services, and finally comparing the different sub-areas of the IT sector, including IT consulting. We discussed the results of our analysis with the interviewed experts in the respective companies.

My focus in the following discussion is threefold. First, I examine the related perspectives of personnel and project managers regarding the linkages between work and organised action. Concretely, I examine the demarcation of tasks and the status of project management work, as well as systems used to acknowledge expertise in project and quality management.

Secondly, I look at the mechanisms for legitimating work and, concretely, definitions of expertise as well as the characteristics of quality systems used to evaluate work practices. Thirdly, I focus on the search for professional identity, thereby concentrating on the perspectives of software developers and project managers with regard to becoming "situated professionals" as project managers in international environments. The focus on these three dimensions serves as a basis for the further discussion on professional boundaries in the internationalisation of work. Before commenting on the interview results, I explain the characteristics of the company in question, referred to in the following as Enterprise B1.

Enterprise B1

Enterprise B is an affiliated company of a multinational IT service enterprise comprising many establishments in diverse locations around the world. Enterprise B1 was founded in the early 1980s by former academics in computer science and electronics. The company's academic origins are still evident and reflected, for example, in the links to academically based professional federations (GI – Gesellschaft für Informatik) and the strikingly high portion of academic personnel amongst the enterprise staff (90 per cent). During the 1980s and 1990s, the enterprise expanded, establishing six further locations in Germany, Switzerland, and most recently in Eastern European countries. In particular, the availability of infrastructure in diverse countries provided by the leading enterprise represents an important advantage for the acquisition of projects and the ability to offer competitive prices when compared with other service providers. The primary motivation for the internationalisation of work is represented by concomitant cost reductions which serve to stabilise the demand for projects, but also the expansion of the firm's market base and, moreover, the opportunity to remain innovative in the rapidly internationalising environment of the ICT sector.

The two main working areas of B1 are software engineering and IT consulting. The company's main clients are large companies in diverse industrial and service sectors. Software engineering relates to the adaptation of software products to the individual client needs in order to attain a competitive advantage or due to the lack of necessary products and features on the market. IT consulting relates to the entire technical (architecture, security etc.) adaptation process of the client firm and the individual software products.

B, the leading enterprise, and B1 are independent companies, although they exchange resources for the different projects that they develop together. Since 2004, the German enterprise B1 has experience exporting work to Eastern European countries (nearshore regions) as well as to further located countries (offshore regions) of the leading enterprise, B, including India and South Africa. The experiences with nearshoring in Poland have provided a basis for further developments related to the enterprise's work exporting practices and relationships. During the initial construction phases of the Polish nearshore centre, the enterprise was able to use the platforms of the multinational enterprise of which it is a member, which brought advantages regarding the availability of adequate personnel, infrastructure, and knowledge management. In 2006, B1's nearshore establishment employed almost 50 people. These employees spent an initial training year in Germany, where they were introduced to the project and the quality standards of the enterprise. Today the whole company belongs to a multinational IT consulting company with headquarters in France. This integration of a former German IT company into a large multinational company belongs to a very rapid and dynamic process of expansion of large international IT companies (see the section *Discussion*).

Following the three dimensions mentioned above (linkages between tasks and organised action; mechanisms for legitimating work; search for professional identity), I show the results of the analysis of the qualitative materials of the case study in the next sections.

The linkages between work and organised action

A highly significant transformation regarding the reorganisation of work due to offshore processes in B1 is the increasing demand for tasks whose profile presents a mixture of consulting and management. IT project managers working in the German headquarters of B1 must maintain direct contact with clients and, at the same time, manage several projects involving specialists in various locations. The expertise required in this case is thus not limited to strong qualifications in computer science. Instead, for the enterprise, such qualifications represent a basic entrance factor that must be complemented by soft skills training. For B1, it is very difficult to find personnel with these types of mixed profiles on the German labour market due to the persistent skill gap between university qualifications and the skills demanded in the workplace (Dostal 2006; Ruiz Ben 2005; 2013; 2017). Thus, there is a high pressure to recruit software developers for managerial careers, as these positions, in particular, are suffering the consequences of the workforce shortage:

the young computer scientist with a good or very good university degree and at the same time with a will to work in both engineering and consulting. So, there are not enough persons with such a profile in Germany. We would like to get more. (Personnel Manager in Germany)

A distinctive characteristic of B1 regarding qualification and skill requirements is its “generalist principle”. Employees in all company locations (in Germany) must have actively worked in every phase of software development, rather than specialising and only working in one particular area. With this philosophy, the firm can implement personnel capacities more flexibly for different projects or, in other words, it can time the availability of its expertise. On the other hand, this philosophy only enables German employees to change among the different tasks to a certain extent:

Because tasks will not necessarily be offshored for every project, every software engineer should be ready to work in every project phase. (Female Area Manager in Germany B1)

Moreover, in B1, task allocation practices are strongly oriented towards the subjective impressions of the area managers, quality managers, and, most intensively, project managers, who directly observe employee performance in running different projects. The project managers gather on a weekly basis in a “disposition round” to discuss the performance and potential of the employees as well as possible vacancies in the near future for promising candidates.

Project managers thus play a crucial role in allocation practices, while at the same time this role is very important for their own career opportunities, because the quality of their own projects, which serves as a criterion to evaluate their own career potential, depends on the personnel resources they receive for their own projects in such “disposition rounds”. Moreover, in the course of these negotiations, the budget and the stability of the project in the firm are crucial factors in defining the relative power of the different actors involved in these meetings.

Task definitions depend, in part, on project demands. Short-term needs are defined by project managers and subsequently integrated into the career structures of the enterprise once they gain stability through the consolidation of the project and client contacts:

After some time, or when we feel that something is needed, then we make the roles explicit. (Personnel Manager in Germany)

On the other hand, the definition of tasks is linked to existing career paths in the enterprise. B1 basically has two general career paths: a professional track (“Fachlaufbahn”) and a managerial track (“Linienlaufbahn”) which are accorded comparable levels of acknowledgement and esteem. Both career tracks exhibit a similar hierarchy in terms of internal incentives; in the professional track, however, employees do not have any managerial responsibilities. Moreover, participation in external professional communities is expected of persons working in the professional track:

These are no lone fighters in the sense that they are alone in their discipline. They are popular experts who are called to work in projects for particular technological questions, but they have also to be available for the company in general, in the so-called communities. (Personnel Manager in Germany)

Project and currently also quality managers follow the managerial track. At the top of the hierarchy in such a path, project managers eventually become directorates. Thus, project managers are integrated into a clear hierarchical structure. While they are required to have strong qualifications in computer science or related disciplines, other explicitly formulated requirements for project managers include a high level of motivation and social skills. The latter requirements can be attributed to needs for both internal and external communication in different contexts of the enterprise, as well as of coordination of work, persons, and projects.

Project and quality managers are accorded a central position within the managerial track. The tasks they carry out are increasingly time-consuming and complex. Particularly challenging are the positions occupied by project

and quality managers who are required to coordinate several projects in different locations while working with middle-project managers. The latter actors, however, are not on a managerial, but a professional track. For this challenging task, project and quality managers often need additional intercultural skills.

Managerial performance in several different projects and project phases is particularly important for climbing career-related ladders. Demonstrated achievements serve as evaluation criteria for ascending to successive career levels.

For employees working in the nearshore centre in Poland, the enterprise plans a long-term integration of particular specialists into project management careers. The reason for this is threefold. First, B1 wants to position itself in the flourishing Polish IT market and, for that, the company needs experts who are socio-culturally based in Poland. Second, long-term career perspectives represent a source of motivation to prevent attrition, which has become a common occurrence in offshore Eastern European locations. Moreover, career perspectives represent a basis for approximating Polish and German specialists, and thus avoiding transnational conflicts in everyday project work emerging among “pseudo” or “would-be experts.”

Considering the links between tasks and organised action, project managers have certain autonomy when it comes to the definition and allocation of tasks, as well as the evaluation of work and, with that, the construction of business areas as types of long-term work jurisdictions (Abbott 1988; 2005). However, the increasing importance of quality systems places limits on project managers’ discretion. Both quality and project managers, as well as all B1 employees, must legitimate their work based on the recently established B1 quality management system.

Mechanisms for legitimating work

For the coordination of international teamwork between German and Polish software developers in its nearshore centre, B1 implements institutionalised German best practices and especially a strong hierarchical system for quality management issued by the multinational owner enterprise. This system was developed and established within the enterprise over the years using internationally recognised quality standards as its basis. The system works as an internal control instance for work processes and outputs.

However, a project manager responsible for a business area in B1 argues that these kinds of systems can tend to render the organisation “blind” to its own functioning. This critique is based on the argument that the quality system does not permit reflexive action from the bottom up which would lead to specific solutions for problems that emerge in everyday project work. The system is also purported to restrict the general overview of complex international projects. In addition, due to the strong fragmentation of work in offshore projects, project documentation ends up being highly fragmented and difficult to interpret as a whole:

the larger picture is lost, that means, what is really important at this moment? What is the “whole thing” doing? How does it work together as a whole? This aspect is clearly lacking. (Quality manager, Germany)

Thus, quality managers not only use formal quality criteria when they evaluate work processes in international projects. They act as “reflective practitioners” drawing from different knowledge sources including informal talks with practitioners while trying to form “project communities” in order to create a productive and communal transnational work dynamic.

Therefore, the quality managers have suggested the integration of software developers in developing of the company quality management systems in order to increase their motivation to document their work more consistently and precisely and, at the same time, to give them feedback on the quality of their work and their role in B1. Such a practice has been implemented sporadically in individual projects, also as a means to prevent or dampen existing conflicts between Polish and German software developers. Thus, project and area managers have designed common “corporate rules” for international projects that were developed “ad hoc” within the projects, while also drawing from international quality standards as their basis. Moreover, a repository was built up for encoding,

updating, storing and retrieving codified project-related information such as documentation, quality management patterns, coding standards and reviews or recommendations for intercultural collaboration.

In sum, project and quality managers correspond to the image of «bureaucracies in action» suggested by Courpasson (2003: 14). On the one hand, they are aware of the ad hoc practices and expertise which emerge in projects; at the same time, they use existing organisational bureaucracies as a basis to control expertise and to legitimate their own practices, thereby preventing potential resistance on the part of specialists. Both project and quality managers contribute to the establishment of corporate communities in transnational workspaces. At the same time, they develop their own expertise in interaction with peers, who do not work exclusively for the corporation, but come together in transnational workspaces “ligated” through projects. Common quality criteria developed ad hoc in such projects serve as a legitimate source for their work practices and expertise.

The search for professional identity

The work of the project and quality managers has changed due to the internal division of tasks in terms of expertise requirements, formalisation and intensification. Both project and quality managers are responsible for linking tasks and organised action. In addition, they must coordinate mid-level project managers in international locations. Thus, they must combine communication and intercultural skills with technical competencies in order to optimise the definition of project tasks and coordinate project processes and outputs, and further selling them to customers. Required skills for this task go beyond their normal activities as computer scientists and also do away with “normal” time schedules. Working overtime is expected by the firm, a fact that is taken for granted by quality managers, and particularly project managers:

it is practically the expected attitude and, I mean, in the higher career levels the wages are higher. (Project Manager in Germany)

Pressures to adapt individual profiles to B1s increasingly international needs did not present a problem from the perspective of the interviewed project and quality managers. These two managerial groups consider this transformation a normal process. Particularly, the project managers exhibited and voiced a strong personal identification with their tasks and, more concretely, with the establishment of a practice domain in the form of business areas to which they feel they belong and are responsible for constructing on their own. Thus, the relative freedom to build long-term business areas and criteria to judge the quality of work processes has identity-related and motivational effects for project and quality managers, even if they must implement external or corporate rules in the course of their constructive efforts as well. At the same time, the feeling of responsibility for the trajectories of future experts working in their business areas in transnational workspaces serves to create a sense of community among expert project managers and potential experts with the common goal of establishing a kind of transnational “jurisdictional area” (Abbott 1988; 2005).

However, it remains to be seen when and how candidates in Poland will officially become experts, not least because the IT specialists in B1’s Polish nearshore centre are still very young, and their qualifications must be adapted to German requirements:

If in the end the Polish overtake the complete implementation and we make the specification, with it the complete environment will be shifted towards consulting, towards professional head designers and project managers, away from development and technical design. Well, when that change will come ultimately depends on the qualifications of the Polish. (Quality Manager in Germany)

Thus, questions regarding the stability of emerging professional identities in the transnational workspaces of business areas remain unanswered.

Regarding the professional associations capable of supporting the establishment of an occupational identity beyond the organisational identity (Hodgson 2008), project and quality managers comment that membership in professional associations is rather unusual in the enterprise. However, several German employees are in contact

with universities or with the Society for Informatics (Gesellschaft für Informatik), which has a very academic character. Since its foundation, the enterprise has traditionally been linked to academic institutions. B1 uses such contacts both for the recruitment of personnel and knowledge transfer, and to build a kind of common identity for the employees, who have sometimes known each other from their shared time in university classrooms.

Specialisation in a business area (for instance, automotive) represents an incentive for knowledge exchange between experts from different companies at specialised conferences and for potential horizontal mobility beyond organisational boundaries.

Moreover, attrition at higher levels of the managerial hierarchy is very low and at the entry level, the quota personnel who returned after a period of working in other enterprises is relatively high, according to a German personnel manager.

Considering that career opportunities in Germany and in Poland are expanding in both the managerial and professional tracks due to B1's expansion plans in new areas requiring specialist expertise (automotive, finance, medicine etc.), there is an added potential to prevent attribution, among both German and Polish employees:

It is, of course, a perspective for the others, who see that if it (the company) grows further, then there are more good positions (...) and this is, of course, a perspective for those who are waiting in the eaves. These tasks initially emerge in projects, but also in the line.
(Project Manager in Germany)

However, the transfer of tasks and projects to the nearshore centre in Poland depends on market needs or, in other words, on client orders. One Polish software developer commented that the projects delivered to Poland normally are those that are already in the red, whereas important and strategic projects remain in Germany.

DISCUSSION

In this article, I have explored the question of how professional boundaries emerge in transnational workspaces constituted by heterogeneous actors from different institutional and socio-cultural backgrounds. Departing on Abbott's notion of "linked ecologies" and focusing on three dimensions of professionalism as basic mechanism for professional boundaries formation, I have shown an empirical example of how project and quality managers, as well as employers in a German IT company, contribute to the construction of professional boundaries in transnational workspaces emerging due to globalization processes. Tasks and organised action are dynamically linked through international projects at the lower levels of the hierarchical occupational structure of the enterprise. Particularly for project managers, the management of these variable dynamics is part and parcel of their expertise, since they are directly involved in the allocation of personnel resources. These managers negotiate the organisational trajectories of the employees, while at the same time retaining the responsibility for coordinating projects and creating and maintaining contacts with clients in different countries. Thus, they combine organisationally established bureaucratic rules with ad hoc decisions in projects. They also contribute to establishing professional boundaries in the negotiation with personnel managers through the international allocation of tasks and expert evaluation of international employees on the basis of quality systems and in terms of organisational career options. Similar to Hodgson's (2008) ideas about "projectification" and, particularly, in line with his research about project management, the results of the analysis show that, in the case of international IT software development, project management professionalism establishes mixing organisational rules and occupational knowledge from other management areas. This combination enables emergent project manager professionals in transnational IT workspaces to define «old problems» of IT project development in new ways (Abbott 1988: 30).

Project managers combine bureaucratic organisational rules with occupational professionalism based on management and computing expertise as a particular hybrid professionalism that corresponds with the forms of legitimating work in international project work. Project managers construct a kind of "soft bureaucracy" involving the employees in the development of working rules as a rationale for increasing tasks' standardisation by motivating

documentation practices, which functions as a non-coercive basis for controlling emerging expertise. Quality criteria present grounds for legitimating work practices as well as for supporting a hybrid professional ideology. Both project and quality management emerge as “hinges” (Abbott 2005) linking not only diverse organizations, but also different knowledge, expertise areas and geographical locations.

Regarding occupational identity, project and quality managers in my empirical example do not seek out the support of professional associations in order to establish their occupational identities outside the enterprise. These findings contradict the assumed importance of international project management associations for professionalism in the area of project management (Hodgson 2008). Knowledge exchange at conferences and through academic associations, with former study colleagues or with peers and potential experts in common thematic areas are more important for the construction of a common expert identity, which facilitates horizontal as well as vertical mobility. Professional boundaries remain thus permeable.

In sum, hybrid professionalism as the combination of organizational and occupational expertise to organizationally, occupationally and individually controlling work represents an appealing foundation for the identity of international IT experts working in transnational workspaces in the IT third sector, in which they build a sense of common experiences, understandings and knowledge as well as shared ways of perceiving problems and possible solutions (Evetts 2006; Hughes 1958; Huws 2013).

Project managers apply bureaucracy and contribute to its development creating “soft bureaucracies”, whereas at the same time such “soft bureaucracies” serve to legitimate their own practices and are a part of their professional identity.

Nevertheless, the analysis I have presented here is limited to a single enterprise in the context of IT work, which also represents a very specific form of project management (Ruiz Ben 2013). The analysis of the other five case studies in German IT enterprises in different industry segments results in a less cohesive and more dissonant picture regarding control over work and expertise and professional boundaries. Moreover, the international expansion of IT consultancy that has taken place since the end of the analysis presented in this article has contributed to globally establish the expertise of project managers in the IT sector. Project management is nowadays a crucial expertise in the company in which the presented case study was carried out which merged into a multinational IT consultancy. Project management has expanded its hybrid characteristics however with other expertise (software development, quality management) building the more flexible and “generalizable” profile of IT consultants as professionals who can “translate” knowledge from different areas in which digitalisation requires computing skills applied in a particular domain area (i.e. automotive, health, public administration, infrastructure security, urbanism in the case of smart cities etc.). Moreover, recent research about the transnationalisation of IT project management work (Schulz-Schaeffer, Bottel 2017) shows that technology and standards (i.e. scrum methods) have contributed to establish flexible “soft bureaucracies” for remote software development that constitute a current crucial source of legitimising professional boundaries for project management already formed during the first decade of the present century.

A presentation and discussion of such related issues exceed the available space and main thematic focus of this article.

Finally, the question remains of whether similar forms of professional boundaries are exhibited by other areas of project management and further expert occupations which also play an active role in international work contexts.

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