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Globalizing Human Resource Management: Examining the Role of Networks

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INTRODUCTION

Research and practice in the field of international human resource management (IHRM) has advanced significantly in recent years. Schuler and Tarique (2007) argue that throughout this period, writing about IHRM has focused on the worldwide management of human resources (Briscoe and Schuler, 2004; Brewster and Suutari, 2005; Schuler and Jackson, 2005; Sparrow and Brewster, 2006; Stahl and Björkman, 2006; Sparrow and Braun, 2008a, b). The purpose of IHRM is to enable the firm to be successful globally and this entails being: competitive throughout the world; efficient; locally responsive; flexible and adaptable within the shortest of time periods; and capable of transferring knowledge and learning across their globally dispersed units. In achieving this, however, there is a continual tension between the requirement to standardize and the requirement to be sensitive to local circumstances.

Four academic debates are shaping much IHRM research:

- the nature of IHRM structures and strategies and the ensuing IHRM research agenda;
- the changing technological context and the impact of developments in shared services, e-enablement, outsourcing and offshoring;
- the role of line managers and business partners in the effective conduct of IHRM;
- the role of knowledge management, networking, and social capital processes.

We outline some of the key issues in each of these four areas, and then explore the latter topic in more depth through some exploratory research inside a single case study organization.

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The Nature of IHRM Structures and Strategies

It is widely accepted that within international business, HRM is the most likely activity to be localized (Rozenweig and Nohria, 1994). However, recent research has demonstrated that largely as a result of technology 'a new line in the sand' is being drawn between standardized and localized HR practices (Sparrow *et al.*, 2004). As Evans and his colleagues have put it, organizations are faced with a 'duality': they have to be good both at standardizing and at respecting the local environment (Evans and Lorange, 1989; Evans and Doz, 1992; Evans and Genadry, 1999). Even this may understate the complexity. Organizations often split HR responsibilities in these areas between a global HR department, country management, and business stream leaders. In addition, arising from research which identified a trend toward the regionalization of businesses and HRM, there is yet another layer of complexity in the mix. Definitions of the geographical nature of regions, their scope, their resources and their capabilities vary from organization to organization. An important contribution still to be made is to explain *how* organizations manage this complexity. What is the role of the regional coordination processes and structures in the way people are managed within global organizations? Research is needed to understand the trends in IHRM structures and strategies; the antecedents of those trends; the factors that are pushing organizations in one direction or pulling them in another; and the practical implications that flow from these developments.

IHR Directors also face a series of inward-facing and "operational" – yet equally challenging to answer – questions. Global organizations today are presented with multiple choices as how to structure and organize their HR organizations. The answers are unlikely now to rest in a series contingencies, but rather require us to understand what is pushing organizations in one direction or pulling them in another and with what practical implications? IHRM academics need to help global HR functions to position themselves inside the rest of the organization so that they can best achieve the needs of their (many and diverse) stakeholders. If we are to understand and advise on the positioning of global HR functions, at a pragmatic level, we need to help to advise on who should have the responsibility for the HR policies and the practice? Having considered who should have responsibility, how should such responsibility be integrated with the organizational strategy at a global and local level? What conflicts of interest can be expected between these areas and how can they be resolved? HR specialists now manage through multi-line reporting relationships, but what is really meant by the business partner role in this global context?

Changing Technological Context: The Impact of Developments in Shared Services, E-enablement, Outsourcing, and Offshoring

Questions about IHRM structures and strategies cannot be fully understood, however, without also examining the combination of a series of parallel and technologically-enabled changes – shared services, e-enablement, outsourcing, and offshoring. The combination of developments in technology, process streamlining, and sourcing are moving the focus of the IHRM function away from managing a global set of managers toward becoming a function that can operate a series of

value-adding HR processes within the business internationally. Yet, these developments are in most instances impossible to disentangle from the parallel debates about specialization, core capability, and the technological enablement of service delivery that makes some of these developments easier to implement.

Historically, considerable energy has been spent translating central initiatives into what works within different countries. Now, however, there is a much stronger focus on cross-country and cross-business border implementation issues. HR is moving toward a world where it has to satisfy line-of-business – and not just country – needs, and this is beginning to shift the way that HR professionals think about problems (Sparrow *et al.*, 2004). Brewster and colleagues (2005) have drawn attention to three distinct, but linked, enablers of high-performance that are creating a new set of pressures on IHRM specialists:

(1) HR affordability (the need to deliver global business strategies in the most cost efficient manner possible);
(2) central HR philosophies (the need to ensure a common philosophy and coherent practice across disparate countries and workforces); and
(3) e-enabled HR knowledge transfer (the use of networks and technology to assist organizational learning).

E-enablement of HRM is a significant and developing trend in international organizations (Martin, 2005) and it is already evident that there will undoubtedly be a considerable impact on the role and activities of global HR departments, centrally and locally.

However, the implementation of e-enablement has been fraught with problems, in part because practitioners lack a sound body of theory and evidence on which to proceed, particularly in the area of innovation, absorptive capacity, technology acceptance, and change management. The pursuit of this process across countries is also a relatively under-theorized one, and the consequences of ICT enablement for HR specialists, line managers and other employees is not well understood, with researchers highlighting both significant benefits and problems for these stakeholders (Cooke, 2006). This will likely affect the credibility and authority of such departments, in turn having significant implications for the roles and activities of line managers. There will also be extensive resourcing implications for global HR functions given that e-enablement is often associated with shared service structures and adjustments in terms of global outsourcing or insourcing of HR activity. Research therefore needs to address the following questions: What is the usage of e-enabled HRM? What are the implications of technical developments and process streamlining for the design and conduct of international activity? What are the specific challenges of operating shared services on a regional or a global basis? What are the implications for the role of HR departments and line managers?

The Role of Line Managers in the Conduct of IHRM

In order to help to answer these questions, we also need to address a third puzzle that faces HR functions, which is how best to build upon the role of line

managers in the conduct of IHRM and how to best achieve the HR business partner role. The role and responsibility of the line manager has been much debated over the years (Schuler, 1990; Blyton and Turnbull, 1992). There is now considerable evidence that this role varies in a significant and consistent manner across countries (Brewster and Larsen, 2000; Brewster and Mayne 1994; Paauwe, 1995; Brewster and Scullion, 1997; Gennard and Kelly 1997; Brewster and Larsen (2000); Larsen and Brewster, 2003). The opportunities and the difficulties this creates for organizations are obviously magnified across international boundaries (De Cieri, Fenwick, and Hutchings, 2005). There are many unresolved questions about the distinctions about HR work is conducted within the "line management" category: responsibilities at the different levels will vary considerably; there may well be HQ/subsidiary differences.

Despite there being clear specifications about the nature of the business partner role, '. . . the challenge lies in creating the contexts and practices through which the strategic partner role can be realized' (Smethurst, 2005: 25). In his original conception, Ulrich (1997) outlined four HR roles of employee champion (which were later split into two roles of employee advocate and human capital developer), administrative expert (later re-termed functional expert), strategic partner, and change agent (later combined into a broadened strategic partner role and accompanied by a new leader role). In all of these roles HR acted as a business partner but the practical realization of the job title "business partner" became that of "strategic partner" or "strategic business partner". Exactly what was involved in this role was unclear. The boundaries between the attention given simply to business issues (i.e., working with line management but with an HR background, and focusing therefore on strategic execution) as opposed to higher level strategy formulation advice, has once more become vague. The strategic business partner role has become opportunistic in its delivery.

While the complexities and strategic centrality of the international business partner role often affords the necessary context to create understanding, demonstrate value and relevance and acquire support from line managers, it also risks removing strategic influence of HR previously exerted by a central board-level role and subsuming it in a decentralized and more anonymous line relationship, dependent on the idiosyncratic skills and unplanned opportunities negotiated by HR practitioners. Clearly there is an opportunity now to address a number of important questions. Who has the responsibility, authority and accountability to set HR policies, and at what level? Who is responsible for carrying out the policies through into practice? How are we to understand the responsibilities of the different levels of line management that may be involved in these processes?

The Growth of Networking to Manage Demands on IHRM Functions

The fourth and final strand of research that needs to be understood results from the growth of networking as a way of managing the extensive demands of HRM

in international organizations. One component of these demands clearly concerns that of knowledge management. Bonache and Dickmann (2007) have argued that knowledge management is still loosely defined in the literature. They characterize the field as focusing on three issues: the generation of new knowledge through processes of acquisition and creation; taking stock of and understanding knowledge assets through processes of knowledge capture and storage; and the capacity of the firm to distribute knowledge flows among parts of an international network through processes of knowledge diffusion and transfer. The resource-based view of the firm and institutional theory have been used as dominant theoretical frameworks (Kostova, 1999; Martin and Beaumont, 2001; Kostova and Roth, 2002). Five main forms of global knowledge management, or integration mechanisms, have featured in the literature (Sparrow, 2006b), namely: organizational design and the specific issue of centers of excellence; managing systems and technology-driven approaches to global knowledge management systems; capitalizing on expatriate advice networks; coordinating international management teams; and developing communities of practice or global expertise networks.

The developments noted earlier – such as real and/or virtual shared service centers and centers of excellence – draw particular attention to the need to understand the role of networks in enabling many of these knowledge management mechanisms. Global organizations can pursue different models to organize and manage their formal and informal international networks. It is clear that network and project-based structures also have a range of significant impacts beyond knowledge transfer, such as on the conduct and quality of international HR interventions and on the career trajectories of HR professionals (Fenwick and De Cieri, 2004). Harvey and Novicevic (2004) observed that global leaders must possess a complex amalgamation of technical, functional, cultural, social, and political competencies (see also Harvey and Novicevic, this volume Chapter 6). They made a distinction between human, social, and political capital. Human capital leads to competencies. This is an area that is well researched and is quite well understood, but less well understood are the areas of social and political capital. Social capital leads to trust. It is typically reflected in the standing the manager has in the organization and his or her ability to use that standing to influence others. It helps to build on and meld the many cultural norms that exist in a foreign subsidiary. Political capital by contrast leads to legitimacy. Global leaders have to accumulate political capital – which as subsets includes reputational capital (i.e., being known in the network for getting things done) and representative capital (the capacity to effectively build constituent support and acquire legitimacy by using traditional forms of power) simply in order to be in a position to remove obstacles to cooperation.

Recent empirical work has helped to explain the role of these networks in IHRM and a fair amount is now known about the extent to which networking is used by international organizations and the field has also developed frameworks and taxonomies to describe how they conceive of and use networks. Tregaskis *et al.* (2005) described the function, structure, and process typically associated with international HR networks, which may be run through top-down or more collaborative remits and operate through leadership, project or special event team structures. They can serve a range of functions including policy development and implementation,

information capture, exploitation of knowledge, sharing of best practice, achieving political buy-in and socialization of members. Face-to-face contact is important in the process of relationship and reputation-building but is often supplemented by virtual working as a way of signaling more global cultures. The level of localization is generally driven by the politics of acquisition, size, expertise, and level of resistance in subsidiaries. HR leadership through networks can facilitate more collaborative solutions, but this depends on the strategic capability of the function, board-level support and strength of international HR networks.

Given that different types of networks can be categorized, we now need to understand how protocols for managing these networks may be established, and how such protocols impact the other areas explored in the symposium – i.e., international HRM structures and strategies; the potential impact of the technological context: shared services, e-enablement, outsourcing and offshoring; the role of line managers in the effective conduct of IHRM; and the role of knowledge transfer and social capital processes.

The Advantages of Using Social Network Analysis Research Methods

Given the above analysis, we believe that a useful avenue of research is to explore the conduct of IHRM through the analyses of social networks. Before doing so, we briefly review some key principles of social network analysis as a research tool.

Social network analysis serves a powerful role in helping to model complex real world phenomena (Borgatti and Foster, 2003). Over time, however, various forms of network theory have been imported into the social sciences. The earliest work looked at interpersonal influence and the way that people think about relationships (their cognitions). Sociologists then introduced more mathematical approaches to graph the social structures of such relationships, moving the study of social network beyond description and into a more analytical mode. Anthropologists then began to look at the emergence of these social structures inside organizations. Throughout these developments, the range of algorithms, programs, and procedures used to map networks expanded massively.

The essence of network approaches is to look at the patterns that exist within relationships and to see if these patterns relate to other important factors such as power, knowledge or capital. A range of factors can be considered to be related to social capital and its development (Kilduff and Tsai, 2003). Typically these have included the centrality of an actor to a network, which in turn may be analyzed through:

- ascribed qualities (for example, how competent they may be perceived as being);
- their betweenness (acting as a go-between for others not directly connected); or
- their eigenvector (the extent to which they are connected to others who are highly central).

Social network analysis in essence serves to analyze social structures and the role of people within these structures (Cheuk, 2007). The social structure of a network is also important. Networks may be analyzed to look at (Freeman, 1979; Wasserman and Faust, 1994):

- the nature of cliques (blocks of actors with a tendency to interact with people similar in some way);
- the overlaps, symmetry or density (tightness) of connections between and within cliques; and
- the role and nature of important dyadic (paired) relationships within the network.

Indeed, a number of recent studies have started to address the role of social networks to research generic IHRM issues. For example, Singh (2007) used patent citation data to examine the bi-directional knowledge flows between foreign multinational companies and host county organizations in 30 countries. They used micro-level observations to explain macro-level knowledge diffusion patterns by assessing the career history of patent inventors. As a matter of general interest to the IHRM literature, they considered patterns if interfirm mobility as a driver of knowledge inflows and outflows, and found that these indeed appeared to track personnel flows within the organizations. Cheuk (2007) examined the role of social network analysis as a support tool for the British Council's knowledge management program, analyzing the social networks of 30 global leaders, while M'Chirgul (2007) examined the complete network structure of smart card firms, the strategic value of interfirm collaborations, and how these networks evolved over time.

The value of social network analysis to the field of international HRM, then, lies in its ability to look at both micro- and macro-level linkages between individual actions and institutional outcomes, and vice versa. For this to be the case, a plausible set of hypotheses must be developed to link micro individual actions to successively macro organizational or institutional outcomes. It is an approach, therefore, that can be used to link social capital theory with institutional theory and knowledge management theory – all approaches that have recently begun to influence the IHRM field (see Stahl and Björkman, 2006; Lengnick-Hall and Lengnick-Hall, 2006; and Sparrow, 2006b).

Research Methodology

Case study organization

The case study organization is a global information company providing information tailored for professionals in the financial services, media, and corporate markets. In 2006 its revenues were £2.6 billion. The information provided drives decision making across the globe. More than 90% of revenues are derived from financial services businesses. The organization has grown through acquisitions. It employs 16 900 staff in 94 countries with nearly 200 in-country sites and establishment. It has a population of over 800 expatriates, which at around 5% of the workforce signifies the

high levels of international mobility needed. There are three regional headquarters in: Europe, Middle East and Africa (Switzerland); the Americas (the USA); and Asia-Pacific (Singapore). The organization has been transforming its core business after completing a major change program. Strategic issues concern improvements in time to market, product quality, network resilience, and customer service. It has been concentrating its product development into fewer centers; continuing to improve the timeliness and breadth of data by streamlining content management, modernizing customer administrator, and simplifying its network of data centers. It operates through business divisions, a series of geographic sales and service channels and shared resources. The business divisions are aligned with the user communities and cover sales and trading; research and asset management, enterprise, and media.

Interviews

A sample of 13 interviewees was preselected by the organization to represent their significant lines of business, the main corporate HR functions and the regional layers of HR coordination. The interviews, which were tape recorded, and lasted on average for one hour each, were with senior managers (Global Heads or equivalent level) with the roles shown in Table 18.1.

Eight of the 13 interviewees were senior line managers responsible for running key global businesses within the case study organization. Two were leaders of corporate HR functions and three held roles at the regional HR level.

Each interview focused on five key themes – the respondent's perceptions of: evolving HR strategies and structures (in the context of your business); the role of line managers; the role of e-HR; the management of diversity; and finally (to help to interpret the subsequent social network analysis exercises) the role of networks and knowledge management. For each theme we explored: the business rationales behind the five core research issues, via the link to organizational strategy and

TABLE 18.1 Role of 13 interviewees.

Line Functions	*Corporate HR*
Head of Asian Development	Global Head of HR Operations
Global Head of Customer Service	Global Head of Performance and Reward
Global Head of Divisional Technology Group	*Regional HR*
Managing Director, Global Sales and Service Operations	Head of HR EMEA
Global Head of Finance, Group and Shared Services	Head of Human Resources Japan
Senior Company Officer, Pacific	Senior VP Human Resources, Americas
Senior Company Officer Japan	
Managing Director Italy and Iberia	

effectiveness (value creation, value improvement, value protection) and the criteria for success; and the political, process and technical skills that have to be brought to bear to manage these interventions.

Social network analysis instrument

The social network analysis exercise uses analysis of egocentric data (Kilduff and Tsai, 2003), i.e., we are collecting data from the same sample of HR and line managers who were made available for our interview. The exercise had two parts. In exercise one respondents listed all the key people/units that formed part of their network. In exercise two, for each person or unit they identified, respondents provided some key information (in the form of ratings) about the dyadic relationship. Respondents spent up to 5 minutes generating a list of (up to 10) people/units/stakeholders that they dealt with (each person/or unit was called a *node*). They were asked the following questions:

- In order to execute your HR strategy, who is the target, i.e., with whom do you interact?
- Why do you interact with them?
- How important is the relationship?

In the second exercise respondents were asked to select their top five interactions and to answer the following 13 questions for each one:

1. How *frequently* do you interact with this node? (1 = not very frequently; 5 = very regular contact)
2. To what extent do you *transfer expert knowledge* to/from this node? (1 = not very frequently; 5 = very frequently)
3. To what extent do you *broker information* to/from this node? (1 = not very frequently; 5 = very frequently)
4. To what extent do you *provide consulting support* to/from this node? (1 = not very frequently; 5 = very frequently)
5. To what extent do you *have to persuade* this node to do something? (1 = not very frequently; 5 = very frequently)
6. How *deep is the relationship*? (1 = surface level; 5 = very deep)
7. How much *power* do you have in the relationship? (1 = very little; 5 = considerable)
8. What would happen if interaction *never took place*! How serious would the consequence be for international HRM? (1 = we could find a work-around; 5 = very serious impact)
9. To what extent is *value added or created for the HRM function* from this relationship? (1 = low; 5 = high)
10. To what extent is *value protected through this relationship* (e.g., brand/reputation, corporate social responsibility, risks controlled); (1 = low; 5 = very high)
11. What is the *level of reciprocation* in this relationship? (1 = very low; 5 = very high)

12. Who *most influences what is delivered*? (1 = I do; 2 = joint negotiation; 3 = they do)
13. How *central to (the case study's) strategy* is the relationship? (1 = very central; 5 = of some importance to the strategy).

To summarize, the social network analysis is based on a dataset consisting of the questionnaires filled in by 13 managers (*egos*) of the case study organization. Each manager was asked to list from 5 to 10 others (*alters*) with whom they interacted. Furthermore, additional questions were asked about the relationship between the *egos* and their five most important *alters*.

Plotting the network

The first observation that has to be made is the complexity of network actors involved in practice in the delivery of IHRM (Table 18.2). The social networks necessary to enact HR for just 13 *egos* involved 76 significant *alters*. These included 11 nodes covering corporate HR roles and functions, 21 nodes covering corporate business roles, 2 corporate leadership nodes, 4 regional HR roles, 7 country business roles, 8 country HR roles, 6 HR business partner roles, 9 strategic teams, and 10 external advisers. The second observation is that the majority of these *alters* are not part of formal HR structures. They include external advisers, and a very high proportion of line management roles.

In order to best convey the structural features of these networks, the usual practice is to develop some form of visual display. In social network analysis, two options tend to be used to assist visualization (Huisman and van Duijn, 2005). The first is to use UCINET. This is probably the best known and most frequently used software package for the analysis of social networks and other proximity data. The program contains a large number of network analytic routines for the detection of cohesive subgroups (such as completely mutual cliques, or clans) and regions (components, cores). These may be used for centrality analysis, for ego network analysis, or for structural holes analysis. A centrality analysis can plot the in- and out-farness from a node to and from every other node. The program finds the most central subgroup of fixed size, or tests the (degree) centrality of a specified group.

A second option is to use Pajek, which is a network analysis and visualization program specifically designed to handle large datasets. Large networks are hard to visualize in a single view. Therefore meaningful substructures have to be identified, which can be visualized separately. Pajek uses six different data structures:

(1) networks (nodes and arcs/edges),
(2) partitions (classifications of nodes, where each node is assigned exclusively to one class),
(3) permutations (reordering of nodes),
(4) clusters (subsets of nodes),
(5) hierarchies (hierarchically ordered clusters and nodes), and
(6) vectors (properties of nodes).

TABLE 18.2 Network nodes.

Corporate HR roles	*Corporate business roles*	*Corporate leaders*	*Regional HR roles*	*Country business roles*	*Country HR roles*	*HR business partner roles*	*Strategic teams*	*External advisers*
1. Group HR Director 2. Global Head of HR Operations 3. Global Head of Performance and Reward 4. HR Executive Team 5. HR Operations Team 6. Head of Remuneration 7. Head of Talent Management 8. Remuneration Committee Chairman 9. Legal HR 10. Head of UK and International Graduate Programs 11. Learning and Development in UK HR	1. Group Legal Counsel 2. Group Diversity Counsel 3. Managing Director, Global Sales and Service 4. Channel Review Team, Global Sales and Service 5. Group Finance Team 6. European Middle East and Africa Business Leadership Team 7. Head of Asian Development 8. Business Leadership Team European Middle East and Africa 9. Senior Company Officer Pacific	1. Chairman 2. Chief Executive Officer	1. Head of HR Europe, Middle East and Africa 2. Head of HR Asia 3. Head of HR Pacific 4. HR Manager South Asia	1. Manager Sales Japan 2. Head of Account Management Japan 3. Head of Specialist Sales Japan 4. Lead Business Head 5. Head of Technical Support Japan 6. Head of Finance Japan 7. Head of Business Development Japan	1. HR Manager Italy 2. HR Manager Spain 3. HR Manager Portugal 4. HR Manager Thailand 5. Bangkok HR Team 6. Head of HR China 7. Head of HR Japan 8. Review Manager Japan	1. Head of HR Business Divisions 2. Divisional Technology Group HR Support 3. Business Unit HR leads 4. Global HR Business Partner Data 5. High reputation HR Business Partners 6. Ask HR e-enabled support centre	1. HR Administration 2. Avian Flu Steering Group 3. Merger Integration Team 4. Indian HR Team Start Ups 5. Channel Review Team 6. Key Talent Forum 7. HR specialist Roadmap Teams in organization development 8. HR specialist Roadmap Teams in Remuneration 9. HR Specialist Roadmap Teams in Management Development	1. Consulting Firm Advising Remuneration Committee 2. Consulting Firms Advising on Methodology for Business Integration processes 3. External consultants work-life balance 4. Best in class thinking but independent external consultants 5. Learning and Development specialist 6. Organization development and organization effectiveness consultants

(*Continued*)

TABLE 18.2 (*Continued*)

Corporate HR roles	*Corporate business roles*	*Corporate leaders*	*Regional HR roles*	*Country business roles*	*Country HR roles*	*HR business partner roles*	*Strategic teams*	*External advisers*
	10. Global Head Divisional Technology Group 11. Global Head of Customer Service 12. Head of Operations Bangalore 13. Bangalore Leadership Team 14. Remote line managers Bangalore 15. Data Management Team 16. Operational Centres Leadership Team 17. Managing Director Italy and Iberia 18. Leadership Team for Italy and Iberia 19. Senior Company Officer Japan 20. Managing Director, Asia 21. Head of Financial Information Division Asia						7. External HR colleagues 8. Important customers 9. High performing companies 10. Business schools	

We have included in Figure 18.1 a single visualization of the HRM network within the case study organization, which for ease of interpretation is the smaller network based on the 13 *egos* and their five most important *alters*. The legend is shown in Figure 18.2.

We have categorized the actors, i.e., *egos* and *alters*, with respect to two dimensions:

(1) Geographical/internal structure (the actor's activities are primarily Global/HQ, (sub)continental, regional/national, or external/not applicable); and
(2) HR being the focus of the actor's activities: (yes/no).

The nodes shown in Figure 18.1 are mostly a person (by name, sometimes only a job title, such as head of . . .), sometimes only a team or group.

Findings

In the following section we present some exploratory analysis of the features of the networks involved. It is important to note here that we have to refer to specific roles, positions or teams, and to the external reader the importance of these teams is difficult to assess. In order to appreciate the utility of a social network analysis, one has to be able to imagine that the organization is capable of looking at these actual (realized) interactions, and be able to assess this pattern against a master-view of what interactions were intended by the organization structure. Put simply, are the brokerage roles, structural holes, centrality, and importance those that would be expected, and if not, what is the consequence on the efficiency and effectiveness of the structure-in-practice?

Centrality measures

This first task of course can be attempted by analyzing three positional attributes of the network. In this ongoing research we use a positional analysis of the first seven out of the total 13 *egos* in the HRM network dataset to demonstrate the potential utility of social network analysis to explain the relative prominence of actors (centrality), their degree of closeness, and the level of betweenness. In the following sections, we present some of the main findings that can be derived from the analysis. In the final section we relate these back to more generic observations about the utility of such social network analysis in IHRM research.

The prominence or importance of an actor is indicated by the centrality of his or her position in the network. There are a number of different centrality measures. The best known, and used in this analysis, are the degree centrality, closeness and betweenness (Wasserman and Faust 1994). The centrality measures of the actors in the HRM network are based of the reversed rankings of the (maximally) five most important *alters* by the first seven *egos* (data taken from Exercise 2).

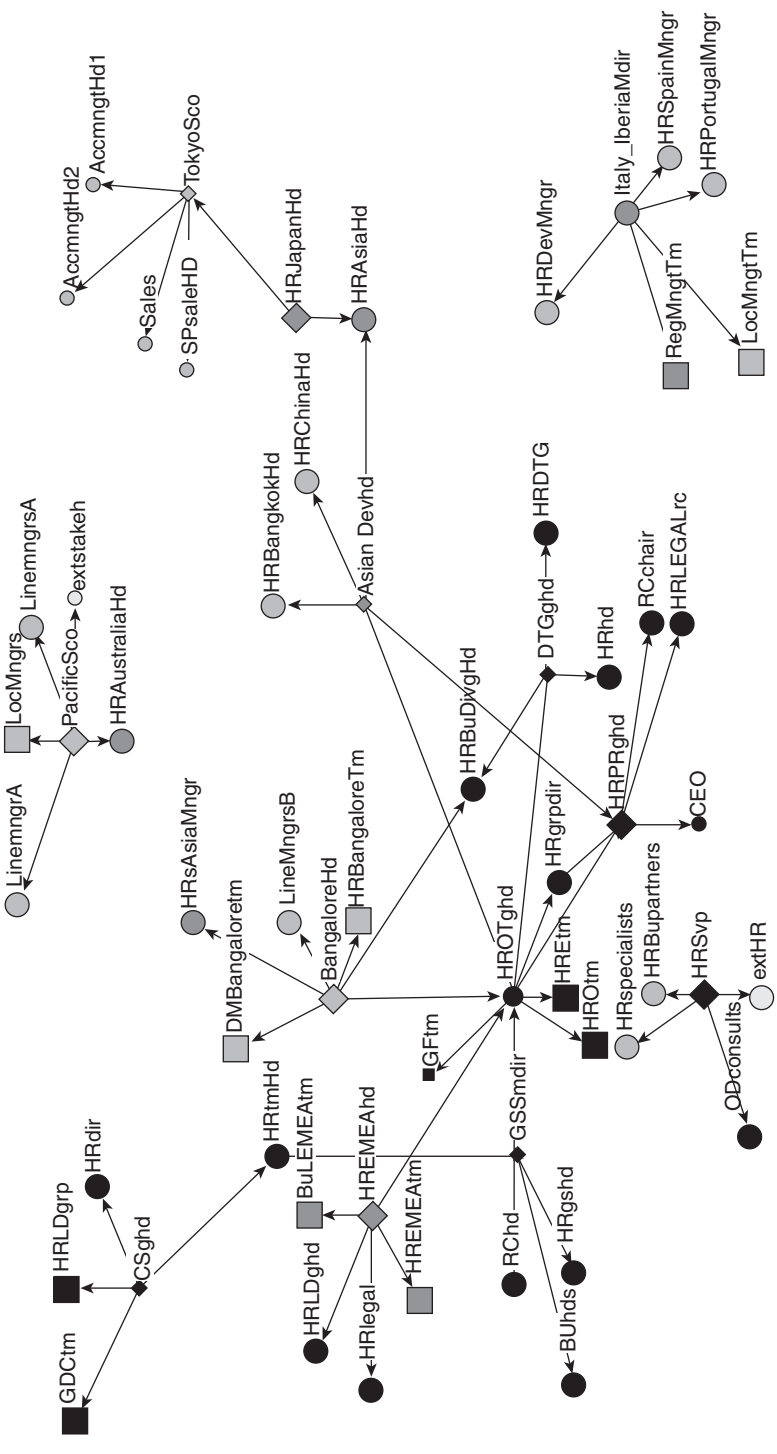

FIGURE 18.1 The network based on the 13 *egos* and up to 5 *alters*.

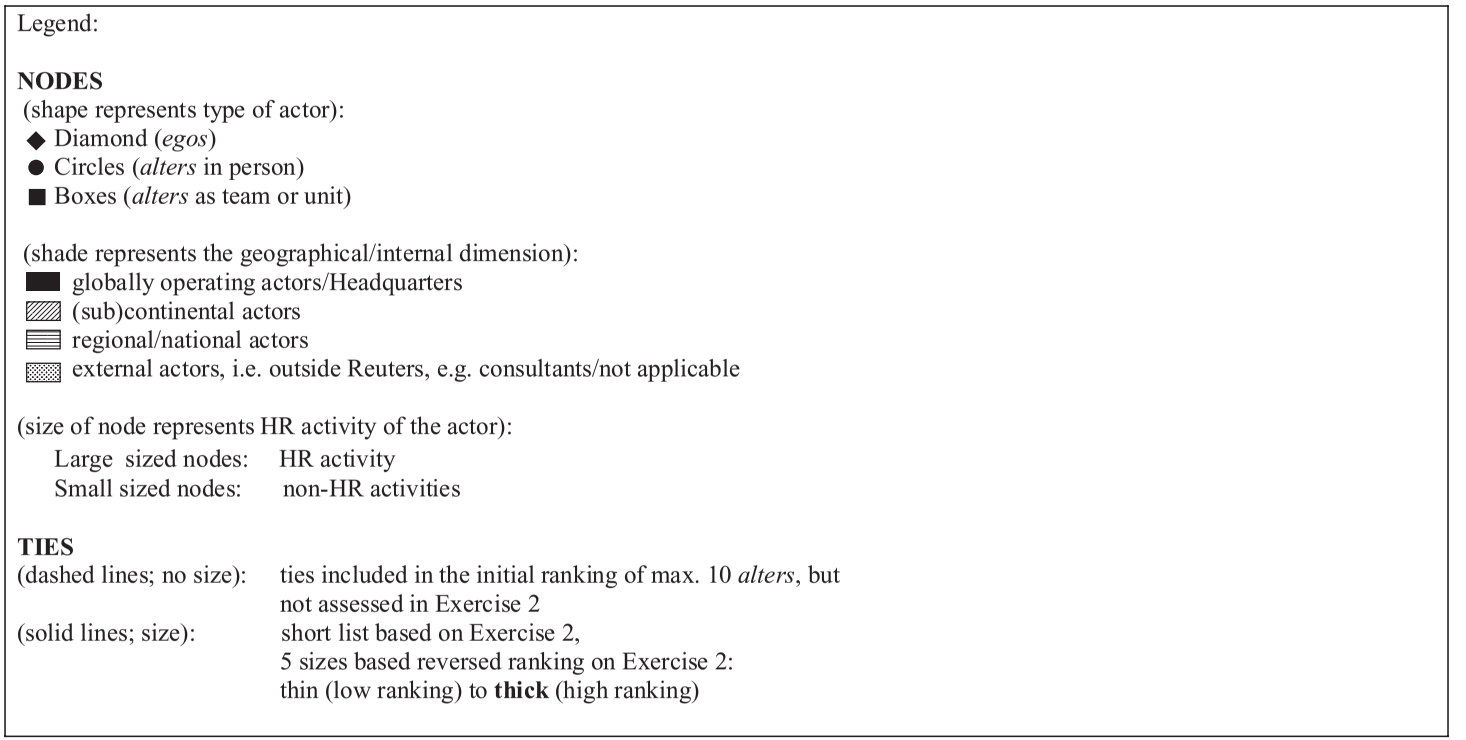

FIGURE 18.2 Legend for the social network analysis.

A high level of degree centrality indicates the presence of highly valued ties between an actor and his first-order *alters*. On average, the HRM-network has a degree centrality of 6.25 (min. 3.125, max. 25). Within the group of *egos*, two (the Global Head of HR Operations and Head of Asian Development) are particularly well connected. The Global Head of Customer Service and Global Head of the Divisional Technology Group have relatively low levels of degree centrality. Within the group of *alters*, a high level of degree centrality exists for the Group HR Director, the Business Partner for development transformation, the Global Head of HR Business Divisions and the HR Operations Team. All the other *alters* have equally lower levels of degree centrality.

Closeness refers to the nearness of an actor to all *alters* in the network. On average, the HRM network has a closeness centrality of 11.3 (min. 3.4, max. 14.9). Within the group of *egos*, the Global Head of HR Operations has a relatively short path distance to the *alters* in the HRM network, the Global Head of Customer Service has a relatively lower level of closeness. Within the group of *alters*, the Group HR Director, HR Operations Team, Global Finance Team, and HRET have relatively high levels of closeness, whereas some teams (Group Diversity Counsel, Group Learning and Development, and Head of Talent Management) have low levels of closeness.

Betweenness measures the extent to which an actor lies 'between' the various other actors in a network. On average, the HRM network has a betweenness of 5.1 (min. 0, max. 56.7). Within the group of *egos*, again the Global Head of HR Operations has an important 'intermediary' position in the HRM network, whereas the Global Head of Customer Service is relatively at the periphery. Within the group of *alters*, the HR Operations Team is relatively central. Every other *alter* has a low level of betweenness.

Brokerage analysis

The second task is to identify who are the most important brokers of exchange within this HRM network. A brokerage-analysis of the different roles that *egos* can have connecting groups shows that only the Global Head of HR Operations appears to be a representative broker between the central division of the case study organization and the organization's foreign groups (notably Geneva and Bangkok). The analysis of the structural holes in the smaller HRM network also points to the Global Head of HR Operations (as well as the Managing Director Global Sales and Service Operations) being the one who is the least constrained by the HRM *alters*.

Component analysis of the HRM network

The third task is to see if comment can be made about the key components within this HRM network? Centrality of the complete HRM network is 14.53% (expressed as a proportion of the possible ties that are actually present in the network). The HRM network contains two completely connected cliques. One clique has the Global Head of Asian Development, Global Head of HR Operations and Global

Head of Performance and Reward as members. The other clique, which largely overlaps the first, includes the Group HR Director, the Global Head of HR Operations and the Global Head of Performance and Reward.

Statistical findings

Finally, a fourth task, based on the correlations between the tie-characteristics, is to see if any important statistical relationships can be established within the network data. Indeed, some important relationships could be seen:

- The Frequency (Q1) and Deepness of the Relationship (Q6) appear to be the two most important characteristics. The frequency characteristic affects to a high level most of the other characteristics. Frequency is highly correlated with the Deepness (Q6) of the relationship, which has a similar coverage, but on average lower correlation coefficients and a less clear-cut meaning.
- Frequency (Q1) almost equals transferring information to the *alters* (Q7). They correlate extremely highly, i.e., 0.911.
- The higher an *alter* is ranked by an *Ego* (Exercise 2), the deeper (Q6) is the relationship, the more serious the effect on IHRM (Q4), and the more information that is received (Q8) from the *alter*. The ranking based on Exercise 2 is significant and negatively correlated with these three characteristics.
- The less central (Q3) the relationship with the *alter* is, the more support that is provided to (Q9) the *alter* (or vice versa).
- The characteristics referring to providing expert knowledge to/from, information to/from, and support to/from are highly correlated (except for receiving expert knowledge and providing support).
- The easiness to get what the *ego* needs (Q13) is highly correlated with helping to achieve objectives (Q14).
- The extent of created HRM value from the relationship (Q14) is positively correlated with the centrality of the relationship to the case study organization's strategy (Q3).
- Protection of the case study's reputation through the relationship (Q15) is positively correlated with providing expert knowledge (Q5)/information (Q7)/support (Q8), and the effect of absence of interaction in the relationship (Q4).

With regard to a Reliability analysis of the tie-characteristics, based on the responses of the *egos*, the tie-characteristics (Q1 to Q12) show a high level of consistency/reliability (Cronbach's Alpha is 0.85; 13 items, number of ties: 33). Based on regression analyses of the rankings in Exercise 2 (the smaller HRM network), the deepness of the relationship has the largest effect on the ranking of the *alters* in Exercise 2. This effect is significant (Deep $F_{(1,31)}$: 5.0; $p < 0.032$). *R*-square is 11.2%. On entering this characteristic in the regression model, the other characteristics do not have additional explanatory effects.

Discussion

For Kilduff and Tsai (2003) a number of concepts – each of which may in turn be considered as an important structural or design feature for an organization – lie at the heart of social network analysis. We draw upon six of these features in this discussion: social capital; structural holes; density of connections; level of centralization; reachability; and the level of reciprocity.

The first concept used to discuss the findings is social capital, which may be individual or collective. For Kilduff and Tsai (2003) social capital reflects the potential set of resources inherent in the social ties that an individual holds and the advantages that may be created (be this advantage in terms of economic outcomes, value creation or other specified outcomes) by the activation of particular links (to individuals, groups, units, etc.) in a social network. Although the activation of these links may not always be in the control of individuals and may be dependent upon the actions of others, this potential is still regarded as capital because it may be traded for other forms of capital (such as money or career advancement). The reality that activation may be dependent on others means that it is the configuration of the social network that produces different levels of social capital at the individual level. Moreover, at a collective level (for example the social capital of an HR function) it is the maintenance of effective relationships that determines the level of capital. We caution that our findings have to be seen as exploratory at this stage, but the statistical analysis of the tie qualities showed just how important social capital was. Frequency of ties is the main capital being traded, affecting most all other qualities, and having a dominant effect on the level of knowledge transfer. The depth of ties has independent effects on the amount of information received and the seriousness of consequence for IHRM provision.

The second concept that we use is structural hole theory (Burt, 1992). This theory explains how the bridging or liaising across disconnected networks may be important. Therefore it is the kind of ties that connect networks that may best be used to classify the type of structure that the network represents. The same principle applies to bridging roles, where the notion of centrality becomes important. In the act of go-between, how central is any one actor? This centrality reflects the level of reciprocated interactions or connections to others who have beneficial ties. Looking at Figure 18.1 it is clear that there are two structural holes, both of which in fact have no brokerage roles to cross the divide, creating structural islands with regard to IHRM. In both instances, there is poor coordination at regional level. The first structural island concerns the Pacific–Australian operations, and the second the Iberian regional operations. It could be hypothesized that there are relatively low levels of HR standardization within these regions and a highly devolved, autonomous form of IHRM. One other region, that of Asia (Japan and China) is only connected to the mainstream HR network via the spanning role of Head of Asian Development. It is clear from this analysis that the health of regional layers of IHRM regional coordination may be examined via such social network analysis. In the case of this organization, the structural ties are weak.

A third important concept is that of density. Density may be seen in terms of the number of connections between actors as a proportion of the total number of connections that could mathematically exist. Loose networks have low density, tightly-knit networks have high density. The role of important dyads can take on especial importance in this context. In some instances, the nature of an important relationship – say, between an HR Director and a senior line Director – can only be understood by examining the network of relationships that surround the pair. Based originally on studies of married couples, the use of mutual dependence on loosely-knit networks, where organizational actors may be '. . . thrown on each others' resources', has been understood as an important way of coping with and reducing significant role differences (Kilduff and Tsai, 2003: 50).

Where loosely knit networks that are relatively unconnected exist around both members of the dyad, the two members of the dyad become more reliant and dependent on each other than if they were surrounded by relatively unconnected (independent) but tightly-knit surrounding networks. If surrounding networks are tightly-knit, members of the dyad can reduce their mutual dependence by relying on their respective networks (and the role differences they may sustain). In short, the embeddedness of a relationship may also depend on the looseness and tightness of surrounding networks. A useful avenue for research on the effectiveness of HR–line management relationships therefore would be to examine the network qualities that surround important dyadic relationships.

The likely significance of this for the effectiveness of IHRM in this case study organization can be seen by an examination of some loose, but important, ties evidenced in Figure 18.1. Consider that the relationship between the Global Head of Customer Service (CSghd) and the Head of Talent Management (HRtmHd) provides some very important brokerage, tying the more distant concerns of the diversity counsel and learning and development into the mainstream network. Similarly, the relationship between the Global HR Operations Director (HROTghd) and the Head of HR EMEA brings the HR capabilities associated with legal and learning and development activities into the central fold. Finally, the Global Head of Performance and Reward (HRPRghd) brokers contacts from the spider-in-the-web HR Operations Director to the CEO.

A fourth concept is the level of centralization that exists within a network. This is the extent to which interactions are focused around one or two actors, or the extent to which coordination is around a single center or multiple centers. We would note that this concept could be important to judge, for example, whether a center of excellence established within an HR structure (Sparrow, 2006b) is indeed a real center of excellence. Do the bulk of interactions naturally gravitate to a few central points of reference? Is a center of excellence formally constituted as an organizational unit, or is it more the case that such centers are charismatic (Moore and Birkinshaw, 1998) – focused around a handful of individuals (talent) who operate as spiders-in-the-web? The data analyzed in this study did not manage to assess the networks surrounding the few (newly established) formal centers of excellence in this case study organization. However, the presence of at least one charismatic spider-in-the-web, to whom many interactions gravitate, is clearly evident in

Figure 18.1. The Global HR Operations Director has network arms reaching out into the Asia region (China and Japan), EMEA region, and to South Asia (Bangalore), and these powerful regional webs are supported by similar network arms extended out into two important business partners, the Divisional technology Group and Global Sales and Service.

A fifth related concept is that of reachability. Reachability reflects the proportion of people who may be interacted with through a "friend" (an immediate and proximal linkage), or through a "friend of a friend" (a linkage that is one-removed). High reach structures are considered to be more efficient as there is less message distortion in the transmission across ties. The spider-in-the-web role associated with the Global HR Operations Director would seem to have very high reachability in this organization, suggesting little message distortion between the regions and business functions connected via this reach.

Finally, the sixth construct used to discuss the impact of networks on IHRM is that of the level of reciprocity, whereby relations may be mutual (symmetric) or non-reciprocated (asymmetric). We found that the less central the relationship with the *alter*, the more support that was provided to the *alter* (or vice versa). Providing expert knowledge to/from the *alter*, information to/from the *alter*, and support to/from the *alter* were all highly correlated and clearly operate on a reciprocal basis. There were two exceptions to this – where there is a much more asymmetric relationship, and these were the receiving of expert knowledge and the provision of support. This seems to make eminent sense – those attributes of networks that are concerned with capability building activity (and providing expert knowledge and support reflect this) understandably operate on a one-way basis. The comments made about reverse transfer (see Edwards, this volume, Chapter 11) may be seen is this context. Asymmetric transfer in IHRM may need to happen by design, a process handled by network structure. Of course, it is still possible that asymmetric networks, as observed in this case study, simply reflect a blindness, whereby reverse capability transfer is possible but is structurally ignored.

Kilduff and Tsai (2003) draw attention to some other important concepts, that while not discussed here, may have important implications for IHRM. The first of these additional concepts is the notion of embeddedness (where work-related transactions may be seen to overlap with other forms of social relations which might not initially be the purpose of study). They showed, for example, that knowledge communicated between business units in a large food company in reality flowed around a small central network of family-led business units, i.e., in this instance knowledge transfer was embedded in kinship ties. The strength of ties may also be expected to be important for IHRM. Strength may be judged on different grounds or criteria, such as the temporal, emotional, communicational, or reciprocal qualities. Weak ties may, however, still facilitate knowledge transfer (Hansen, 1999). Finally, another potentially useful construct for future exploration is the level of multiplexity (the extent to which a tie between actors might be judged differently depending on the range of particular stakeholder perspectives), i.e., the stability of a tie across different social arenas.

Conclusions

We believe that the use of social network analysis in IHRM research has the potential to open up very valuable new streams of theoretical development. We have discussed the role that social networks in this case study organization play with regard to IHRM through examination of six structural features. We noted at the beginning of the section that examined the structural features of the HRM network that such analysis might be focused on what interactions were intended by the organization structure, the identification of key brokerage roles or the existence of structural holes, the centrality and importance that would be expected from key roles, and the consequence on the efficiency and effectiveness of the structure-in-practice. However, future research should be able to move beyond such pragmatic analysis toward a deeper theoretical understanding of the capabilities that such networks help to create for the organization.

Sparrow (this volume Chapter 1) argues that the field of IHRM would benefit from theoretical extension at the micro-level, but only where that extension aids and assists the understanding of international phenomena. We have noted that social network analysis helps to bring together theoretical perspectives driven by social capital, knowledge transfer and institutional explanations of organization-level behavior. We would note also that the analysis of these networks could be looked at from a social cognitive perspective. What do the networks say, for example, about the level of sense-making within international strategy, the role of information markets in helping to execute appropriate strategy and structure within international organizations, and the existence (or not) of any collective cognition within the organization? The rather old and tired global–local debates about international strategy and structure may be enriched by a more realistic understanding of how networks not only provide the glue between structures, but also create mindsets that are more appropriate to the complexity that surrounds current globalization processes. We briefly signal some social cognitive theoretical perspectives that might help researchers to understand the conditions that effective global networks need to create inside organizations.

The first perspective is that of sensemaking. Sensemaking is the process whereby members of an organization confront surprising or confusing events, issues, and actions (Gioia and Chittipendi, 1991). It both precedes decision making and also follows it, but it is still a relatively unexplored social process (Maitlis, 2005). Pfeffer (2005) has recently argued that HR needs to help to manage this process inside organizations, i.e., help to manage the mental models in the organization. Strategies – and global strategies and structures are no exception – are the product of a negotiated order, in turn associated with a process of sensemaking. This sensemaking of course is a collective process. There has been discussion in the IHRM literature about the role in particular of expatriates as sensemakers, but also the importance of reverse knowledge flows provided by inpatriates (Reiche, Kraimer and Harzing, this volume Chapter 8) or via practice transfer (Edwards, this volume Chapter 11). This role of collective sensemaking is also now provided by multiple forms of international working (see Suutari and Brewster, this volume Chapter 7). Global

networks are in some sense just one very important vehicle through which these insights are provided. From this perspective, a global mindset might just reflect the ability of key individuals to be able to ensure and enable collective dialogue; either by:

(1) possessing the appropriate social and political capital that their position in the network affords them (see Harvey and Novicevic, this volume Chapter 6); or
(2) having the ability to be able to understand and model the connections and interactions revealed by the social network analysis, thereby short-circuiting learning about appropriate execution of strategies.

The analysis of social networks may show that relevant social and political capital resides at singular points or at several levels of the organization. However, in future, such research might examine the linkages between actual networks (structures-in-practice), the sensemaking advantages that this provides key global leaders, and the sensegiving messages that these individuals have to convey through their knowledge and insight into the reality of global operations.

A second conceptual development could be to link analysis of social networks with an understanding of the information markets that they create inside organizations. The scarcest resource in organizations is attention to information in what is an overloaded environment – the various nodes revealed through the social network analysis in this chapter are in competition with each other for the attention of line managers. Organizations are therefore considered to be designed around markets because there are distinct sets of suppliers of information (practice groups, networks, functions, etc.), but these suppliers have to compete for attention in a crowded space. Both information suppliers and users have to receive rewards to participate in this market. For Kang *et al.* (2007), knowledge brokering within these information markets gains access to divergent knowledge that is valuable or unknown to important parts of the organization. The ability to control and manage the quantity and quality of information that flows through these markets is central to organizational survival (see, for example, Hansen and Haas, 2001). Considerable strategic importance is now attached to the brokering of information across internal (intra-) and external (inter-) organizational information markets necessitated by a global operating model.

To conclude, social network analysis can provide some very powerful insights into the reality of IHRM-structures-in-practice. Moreover, the structural qualities that such analysis reveals can provide useful insight into the underlying levels of capability that an IHRM might (or might not) truly possess. Future research must move on to examine the extent to which networks serve to merely glue together existing capabilities, or to create new and previously untapped ones. Do networks serve to correct deficiencies in formal IHRM structures, do they create their own deficiencies, or do they, via the connectivity they can bring, offer the opportunity for new modes of IHRM delivery? To answer such questions, in addition to understanding the structural benefits and knowledge transfer properties that these networks bring, we believe it will also become necessary to understand the social and cognitive capabilities that these networks create for their members.

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