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THE MULTINATIONAL'S NEMESIS: THE RISE OF ICT-ENABLED DISTRIBUTED COLLECTIVE INTELLIGENCE?

*La Némésis des multinationales:
les TIC et les formes modernes d'intelligence collective*

Panel

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Abstract

The Multinational Corporation bestrode the 19th, 20th and early 21st centuries like the Colossus of Rhodes. Through their efficiency in organizing and effectiveness in achieving goals, multinationals have shaped the world in which we live perhaps even to a greater extent than governments and the people they purport to represent. Yet just as the Rhodes colossus was toppled from below, the rise of grass roots, virtual groups represents a similar seismic nemesis to the modern multinational. In this panel we will debate whether ICT-enabled distributed collective intelligence organizations are truly a challenge to the multinational's hegemony in three areas: 1) are these new organizational forms as efficient and effective as traditional multinationals at enabling coordinated action, 2) are these new organizational forms superior to multinationals in providing social community, and 3) are these new organizational forms qualitatively more effective than multinationals as drivers of social change. Is the hierarchical colossus about to meet its nemesis: the rhizomorphic virtual collective?

Résumé

Les multinationales ont été édifiées au XIX^{ème}, XX^{ème} et début du XXI^{ème} siècle comme le Colosse de Rhodes. Elles ont réussi à s'organiser et à réaliser leurs objectifs pour un impact mondial. Les multinationales ont façonné le monde dans lequel nous vivons avec un impact encore plus fort que les gouvernements et les populations qu'ils prétendent représenter. De même que le colosse de Rhodes a les pieds d'argile, le développement des réseaux souterrains, des groupes virtuels sont comme une épée de Damoclès au-dessus des multinationales. Lors de cette session, nous débattons sur les TIC (Technologies de l'Information et des Communications) pour savoir si les formes modernes d'intelligence collective peuvent remettre en cause l'hégémonie des multinationales. 3 parties : 1.) Ces nouvelles formes d'organisation sont-elles aussi efficaces que des multinationales traditionnelles pour délivrer des actions coordonnées ? 2.) Ces nouvelles formes d'organisation engendrent-elles des communautés sociales plus cohérentes que les multinationales ? 3.) En quoi les changements sociaux induits par ces nouvelles formes d'organisation sont-elles différentes de celles induites par les multinationales ? Les anciennes organisations hiérarchiques, dont les multinationales sont les champions modernes, ont-elles trouvé leur Némésis sous la forme des communautés rhizomorphiques virtuelles ?

Keywords: Multinational, collective intelligence, innovation, community, virtual organization, social responsibility

The above panelists hereby state that if this panel submission is accepted, we will all attend the ICIS 2008 conference and serve on the panel and debate the issues at hand.

THE MULTINATIONAL'S NEMESIS: THE RISE OF ICT-ENABLED DISTRIBUTED COLLECTIVE INTELLIGENCE?

The multinational corporation (MNC) has been heralded for decades as being the superior organizational structure compared to alternative forms for the cross-border transfer and creation of knowledge and innovation (Almeida, Song, & Grant 2002; Kogut & Zander 1993). Further, this age-old organizational form has held a state-sanctioned hegemonistic advantage. This was so evident that in their seminal work, Bearl and Means (1932) projected that the corporation may supersede the state as the dominant social organization. However, recent advances in information and communication technologies (ICTs) are enabling alternative organizing forms to challenge this dominant position of the MNC. In the article, *The dawn of the E-lance economy*, Malone & Laubacher (1998) argued that the emergence of new electronic media allows economic activity to be coordinated through “fluid and temporary networks” of independent contractors rather than traditional firms. These ICT-based networks are emerging as an alternative to the monolithic structure of the MNC and are based on distributed collective intelligence, enabling the “large-scale mobilization of individuals to self-organize and innovate outside of formal organizations” (Lakhani 2006). One of the most well known examples is the open source movement and the development of the Linux operating system, which IBM subsequently used to replace its more than \$3 billion investment in its own proprietary system (Business Week, 2001). This threat is so substantial to MNCs that they are now co-opting the very models being used by these disruptive ICT-based networks to federate (Harrison, 1997) into a form of distributed capitalism (Zuboff and Maximin, 2004). *Thus, the central topic that this panel will debate is whether ICT-enabled distributed collective intelligence organizations are challenging the MNC as the superior organizing form for knowledge transfer and innovation.* Below we present three underlying questions that inform the debate: 1) Are these new organizational forms as efficient and effective as traditional multinationals at enabling coordinated action? 2) Are these new organizational forms superior in facilitating social community? 3) Are these new forms qualitatively more effective as drivers of social change?

Enabler of Coordinated Action

An emerging and increasingly common view is that the MNC is a globally dispersed and differentiated network of units (Bartlett & Ghoshal 1989; Hedlund 1986), which is unique due to its ability to transfer knowledge *between* levels of analysis - e.g., from the individual level to the firm level and vice versa, as well as its ability to combine “separate knowledge pieces” from across the organization to initiate new tasks (Hedlund 1984). This is, of course, consistent with established theories of the firm. Barnard (1938) spoke in terms of conscious, deliberate, and purposeful cooperative action between individuals as the reason for the existence of the firm. He further argued that organizations are cooperative systems that serve to integrate the contributions of individuals. As stated by Grant (1996), for example, the firm’s primary task is “integrating the specialized knowledge of multiple individuals” – through various coordination mechanisms such as rules, sequencing and routines. In addition, a high degree of team interdependence involving group problem solving and decision-making is required (Grant 1996).

Transaction Cost Economics would argue that cooperative action can be achieved most efficiently within the firm when the complexities of specifying the contracts between the cooperating parties becomes too great (Williamson 1981). It is important to be specific about the nature of cooperative action because individuals contracting with one another in the market economy can also cooperate. However, market-based cooperation is typically a form of pooled or sequential interdependence (Thompson 1967), whereas reciprocal interdependence, which requires mutual and ongoing adjustment by the cooperating parties, has been argued to typically only be achieved through the MNC (Conner & Prahalad 1996; Grant 1996).

On the other side of the debate, relevant examples in addition to open source activities include 1) Wikipedia, which uses unsophisticated technology yet some very clever organizational principles and motivational techniques, to enable thousands of people from all over the world to volunteer their time to create an online collection of knowledge that has been argued to be comparable or even better to that of Encyclopedia Britannica (Giles 2005), 2) Wikitecture¹, the open architecture collaborative process, that may challenge the likes of multinationals such as WSP, and 3) ABE Books, an online marketplace for books representing thousands of booksellers from around the world – a collective so effective that it is being acquired by Amazon.com, itself a challenge to traditional retailers. Finally, there are indications that the fashion industry is beginning to move towards collective intelligence models, spurred on by the rapid development of virtual worlds (Lombardi 2007).

Facilitator of Social Community

Kogut & Zander (1992) argue that the firm should be understood as a social community, writing “We suggest that organizations are social communities in which individual and social expertise is transformed into economically useful products and services by the application of a set of higher-order organizing principles. Firms exist because they provide a social community of voluntaristic action structured by organizing principles that are not reducible to individuals” (1992:384). The main idea is that MNCs are communities within which the transfer and combination of knowledge are facilitated through a shared common stock of knowledge, shared coding schemes, and a shared language. Costs of communication are lower between the firm’s members due to a shared identity, which also results in shared organizing principles reflected in the firm’s explicit and tacit rules of coordination and which influences the direction of search and learning (Kogut & Zander, 1996). Moreover, it has been argued that the most effective means to transfer deeply tacit knowledge is actually *not* to codify it, but rather to transfer it through an implicit mode in which the acquisition of knowledge takes place largely independently of conscious attempts to learn” (Reber 1993). This transfer of implicit valuable knowledge requires frequent, face-to-face interaction that occurs within small groups or communities within the MNC (Kogut & Zander 1992). Thus, MNCs are argued to be more efficient vehicles than the market in their transfer of tacit knowledge and in their ability to combine varieties of functional expertise for innovation.

Recent advances in ICTs have led to the development of inter-organizational electronic networks. These electronic networks enable the creation of relationships between geographically dispersed individuals, who come from diverse organizational, national, and demographic backgrounds and who have typically not interacted in face-to-face settings (Sproull & Faraj 1995). Despite their diversity, there is increasing evidence that these electronic networks may even provide more effective channels for community building and knowledge flow than those within the MNC due to a common practice and shared understanding of the network’s members. For example the Firefox community has, with each release of the open-source browser, produced a more innovative, stable, and secure software package than their rival Microsoft’s Internet Explorer (Lacy 2008). And in terms of innovation, InnoCentive¹ enables companies with difficult research problems they are unable to solve themselves to harness the collective intelligence of thousands of scientists, in a network all over the world, to help solve those problems.

Driver of Social Change

MNCs have been one of the driving forces of globalization in which local, national, and regional relations and networks have become increasingly interconnected through the flows of ideas, goods, information, capital, and people. While on the one hand, MNCs have facilitated the improvement of working and living conditions in some areas of the world due to their employment offerings, investments, and innovations, they have also been able to wield a powerful influence over local policymakers and national governments due to their sheer size. In some cases, their financial resources may even exceed those of national governments. Of late, MNCs have come under attack due to their disregard for the local environment and abuse of local working conditions. Governments, activists, and the media have become increasingly adept at holding MNCs accountable for the social consequences of their activities (Porter & Kramer 2006). For example, Nike was faced with an extensive boycott after reports of abusive labor practice in Indonesia were released by the media in the early 1990s, and pharmaceutical companies have been expected to respond to the AIDS pandemic in Africa despite the distance from its primary product lines and markets (Porter & Kramer 2006).

While many MNCs are taking the issue of corporate social responsibility seriously, the question is whether their impact on local societies supersedes those of individuals working together through electronic means to develop sustainable innovations. One example is the electronic communities that are facilitated by the Globe Forum Business Network², in which individuals from across the globe discuss and develop sustainable innovations. A second example is Kiva³, the world’s first person-to-person micro-lending website, that empowers individuals and communities to lend directly to and support unique entrepreneurs in the developing world.

Panel Overview

In this panel we will debate whether ICT-enabled distributed collective intelligence organizations are truly challenging the multinational’s hegemony in three areas: 1) are these new organizational forms as efficient and

¹ www.innocentive.com

² www.globeforum.com

³ www.kiva.org

effective as traditional multinationals at enabling **coordinated** action, 2) are these new organizational forms superior to multinationals in providing social **community**, and 3) are these new organizational forms qualitatively more effective than multinationals as drivers of social **change**. Thus, the central topic that this panel will debate is whether ICT-enabled distributed collective intelligence organizations are challenging the MNC as the superior organizing form for knowledge transfer and innovation. Is the hierarchical colossus about to meet its nemesis: the rhizomorphic virtual collective?

Session Structure

The panel chair, Johan Gorecki will briefly provide an overview of the topic and introduce the panelists (10 min). He will then facilitate two rounds of panel discussion where during each round a pair of panelists will, in turn, take on the positions of the MNC and the ICT-enabled distributed collective intelligence organizations.

In the **first round** Brian Donnellan will take on the case of the MNC (10 min) and Philip DesAutels the case of the ICT-enabled Distributed Collective Intelligence (10 min) to explore two of the core questions we seek to probe – 1) are these new organizational forms as efficient and effective as traditional multinationals at enabling **coordinated** action and 2) in this context are these new organizational forms superior to multinationals in providing social **community**.

In the **second round**, Robin Teigland will take on the case of the MNC (10 min) and Pierre Berthon the case of the ICT-enabled Distributed Collective Intelligence (10 min) to examine whether these new organizational forms are qualitatively more effective than multinationals as drivers of social **change** and to understand in this light if these new organizational forms superior to multinationals in providing social **community**.

The chair will summarize the positions regarding the core questions of Coordination, Community, and Change (10 min). Additionally, the audience will be taken on a brief tour of online communities such as Globe Forum and of virtual worlds such as Second Life to illustrate ICT-enabled distributed collective intelligences. Having presented the arguments, the debate will be opened up to the audience (30 min), who will be encouraged to give their views on the debate and query the panel about the ongoing “organization war”!

Conclusion

We will make the provocative statement that the days of the multinational as we know them are limited despite their hegemonic advantage. ICTs have enabled, for the first time in human history, radically new modes of distributed organizing, which have been seized upon to drive radically new forms of businesses. These new forms of business have challenged the very essence of the MNC advantage. This has, in turn had an effect on MNCs, driving them to federate loose confederations of enterprises into mega-corporations depending on ICTs to enable them to take on radical distributed forms. Given that most of us spend half our lives working for organizations, and the other half trying to escape them, the topic will be of interest both intellectually and emotionally to the ICIS audience.

Panelists

Pierre Berthon, the Clifford F Youse Chair of Marketing at Bentley College. Professor Berthon has held academic positions at Columbia University in the US, Henley Management College, Cardiff University, and the University of Bath in the UK. His research is eclectic appearing in journals such as *Sloan Management Review*, *California Management Review*, *Information Systems Research*, *Journal of the Academy of Marketing Science*, *Journal of Business Research*, *Journal of International Marketing*, *Technological Forecasting and Social Change*, *Long Range Planning*, *Business Horizons*, *European Management Journal*, *Journal of Interactive Marketing*, *Journal of Information Technology*, *Information Systems Review*, *Journal of Business Ethics*, *Marketing Theory* and others.

Philip DesAutels, an Academic Evangelism Manager for Microsoft and pursuing PhD research at Bentley College. Philip holds MS and BS degrees in Industrial and Management Engineering from Rensselaer Polytechnic Institute. Philip was founder and CTO of Ereo an image retrieval search company; he has also worked as Chief Scientist for Excite@Home and was a team member of the W3C. In the Peace Corps, he served in Uzbekistan, where he lectured, establishing a micro-lending program, and installed part of the country's email infrastructure. His research interests lie in the areas of conscious capitalism and social entrepreneurship.

Brian Donnellan, Lecturer in IS Innovation in the Business Information Systems group at the Cairnes Graduate School of Business and Public Policy at the National University of Ireland, Galway. Brian's research interests lie primarily in the area of innovation systems, a broad area that encompasses knowledge

management, new product development, and technology management. Prior to joining NUI Galway faculty in 2004 he spent 20 years working in the high-tech industry for various multinationals.

Johan Gorecki, Chairman and Founder of the Globe Forum Business Network. Johan previously worked for the international entertainment broadcasting group, Modern Times Group (MTG), was the founder of the consultancy firm Springfellow, and was part of the developing team of Skype, the world's leading IP Telephony Company. He is also member of the Board of Directors of the Swedish-Polish Chamber of Commerce in Sweden and member of the jury for the Globe Award. Johan is currently pursuing PhD research studies at the National University of Ireland, Galway.

Robin Teigland, Associate Professor, Department of Marketing and Strategy, Stockholm School of Economics. Robin has a BA in Economics from Stanford University, an MBA with a focus on operations and multinational management from the Wharton School, an MA in International Studies from the University of Pennsylvania, and a PhD from the Institute of International Business at the Stockholm School of Economics. Prior to her PhD she worked for several multinationals such as Esso in addition to working as a consultant with McKinsey & Company on several international assignments for MNC clients. In her recent years as an academic, Robin has extensively researched the areas of knowledge sharing and networks and their relationship with performance within multinational corporations. She has published articles on these topics in journals such as *Decision Sciences*, *Management International Review*, and the *Journal of International Management*. She is also a guest editor of the forthcoming special issue on virtual worlds for *MIS Quarterly*.

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