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## Standing on the Shoulders of Giants

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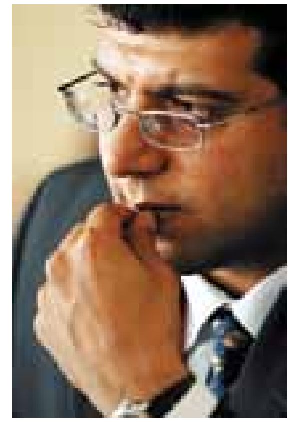

Ilan Alon, *Editor*
Rollins College
ialon@rollins.edu

**I CHOSE "STANDING ON THE SHOULDERS OF GIANTS"** (*nanos gigantium humeris insidentes*) as the theme of this Special Issue of *AIB Insights* because all of the authors are AIB Fellows reflecting on the future of international business and on research icons who have shaped the field.

In the first essay, Yair Aharoni, from Tel Aviv University, provides insight from his remarkable career in academia. He calls for a re-examination of international business theories in the context of both changing contexts and environments and the changing nature of the multinational firms, now also emerging from developing countries. Did our theories become obsolete? Aharoni concludes that international business theory should adapt, international business theory is not predictive, and international business theory is context dependent. Changing rules as well as the role of business in society will enable new business models, as well as new theorizing on the global firm.

In the second article, Peter J. Buckley, Leeds University, summarizes shortly his ongoing research on the global factory and provides a figure that visually depicts the various functions and tasks untaken by such a global firm. According to Buckley, MNEs have developed the ability to "fine slice" their activities and to locate them around the world, with various degrees of investment and control. The brand owner, who is in charge of the critical function in the beginning and end of the value chain, has the advantage by controlling both the R&D and design, on the one hand, and marketing and branding, on the other. The global factory, therefore, has decreased ownership in productive capacity and increased its stock of intangible assets: brand equity, management skills, innovative capacity and product commercialization, and distribution networks. He writes: "the global factory is an amalgam of a physical and social network, uniquely fitted to combine support for trade, technology and knowledge flows." Governance issues, locational strategies and other unanswered questions remain. Buckley urges international business professors to examine the global factory paradigm in the context of changing environments globally.

One such application of the global factory is shown by another AIB Fellow, Farok J. Contractor, Rutgers University. He provides a good example of "fine slicing" of the multinational company (MNC) in the pharmaceutical industry. To simply say that the home country will retain research and development is simplistic and may not catch all the nuances. Big pharma companies are able to chop up R&D into various phases and run them concurrently around the world as needed. The ability of the MNC to orchestrate the supply chain and value added chain in such granularity reflects the ongoing changes in the management of the MNCs pointed out by Aharoni in the first essay of this Special Issue.

The fourth essay in this Special Issue is written by Yves Doz, INSEAD, about the late CK Prahalad. Prahalad is, of course, well known for his contribution to the research on the bottom of the pyramid (BOP), which has become popular in recent years, and picked up momentum post the great recession of 2008. Doz reflects on the legendary impact of Prahalad and reflects on the personal relations he had with him as well as on the man himself. Prahalad's gift, according to Doz, was partly in being able to reframe the issues in a richer way, making a finer-grained, more discerning approach feasible. Pursuing his own way of thinking, Prahalad built on the literature without becoming hostage to the conventional wisdom. Doz proposes that international business research attempt to make bounded generalizations from specific examples leading to contingency theories. He also urges international business scholars to work in small teams with a focused agenda, because large teams often "generate large volumes of data but seldom achieve major breakthroughs."

We can learn a lot from AIB Fellows and their reflections. The changing environments, assumptions of old theories, and role of the firm in society provide a rich milieu to study international business. Let the research of the past guide us but not limit our ability to innovate and, perhaps, find indigenous theories to explain multi-local and global issues.

# Insights into the Future of International Business

Yair Aharoni, Tel Aviv University, Israel

**In 2002, Buckley argued that** past IB research has succeeded because it focused on three big research questions: (1) How to explain the flows of foreign direct investment (FDI), (2) How to explain the existence, strategy, and organization of multinational enterprises (MNEs), and (3) How to understand and predict the internationalization of firms and the new developments of globalization (Buckley, 2002: 365). He concluded that "the IB research agenda is stalled because no such big question has currently been identified" (Buckley, 2002: 370). Buckley and Ghauri (2004) elaborated on the question of globalization as a possible next big question for IB research. Peng (2004) argued that the next big question should be "What determines the international success and failure of firms around the globe?" Perhaps another big question is the ways and means nation-states can cooperate to create a global regime.

The unique contribution of IB researchers is the study of the international/multinational/transnational/global business enterprise/firm/company/corporation. These firms operate in an international environment that has changed profoundly. Technology, macroeconomics, institutions (or as North, 1990, calls them, the rules of the game) and ideological beliefs—all have changed. Existing multinational enterprises (MNEs) reacted by adapting their strategy and organization. More and different MNEs emerged. The nature of MNEs, their origins, the sectors in which they operate, their size, the drivers for their operations and many other variables have all evolved. IB research was unable to predict these changes and those reactions but did study them after they occurred. The "big questions" turned out to be a moving target. Solutions to some of them became obsolete. The future of IB research is in adapting theory to answer the same big questions given the environmental changes and the emergence of the new players.

## The Changing Environment

IB scholars are familiar with the many changes in the last fifty years. *New technologies* impacted quite a few firms. Industries, institutions and the knowledge and skills that provide comparative advantage are under the unremitting assault of change. Major new products created totally different markets and new industries – and many established products became obsolete. Recently, many innovations have originated from emerging markets. Improvements in information and communication technologies and the rapid coverage of the world with internet facilities changed fundamentally the ways people communicate across borders and the time it takes to respond to a message. They have vastly reduced the cost of managing and integrating a globally dispersed value chain and allowed the zooming of outsourcing and offshoring not only of manufacturing but also of business services and R&D.

MNEs have also grown because of fundamental changes in the *international political environment*. The multilateral trading arrangement (GATT and later WTO) has been a necessary precondition to enable zooming of world exports from $60 billion in 1950 to $16,070 billion in 2008. The General Agreement on Services opened up many avenues for FDIs in services. Deregulation of infrastructure services has created opportunities for new FDIs.

These changes stemmed to a large extent from *changing beliefs*. More and more intellectuals—and then government officials—became ardent believers in the efficiency of free markets and disillusioned with the ability of governments to plan and direct the economy. Changing beliefs led to an almost universal urge to contain government intervention, to deregulate but also to coordinate national economic policies, recognizing the fragility of the international financial system. Many economies moved from import substitution policies and domestic firm protection to export-led growth policies. In 1960, US MNEs invested to jump tariff walls and other national restrictions on trade. Since the 1990s, policy changes forced firms to benchmark themselves against best-in-class global competitors and venture abroad, in search of markets, lower costs and resources. In the 21st century world, more and more countries, including developing countries, are fostering internationalization of formerly sheltered industries. To be sure, national authorities still limit movements of labor across borders. Further, confidence in free market economics, until recently virtually impregnable, has been undermined by the financial crisis of 2007–2008.

The *macro economic environment* has also changed dramatically. The direct convertibility of the US dollar to gold and the fixed exchange regime were abandoned. Currencies moved to a full float. The 1985 Plaza Accord realigned the value of the major currencies. The Euro was born and soon rivaled the US dollar as the currency of choice. Further, capital markets became global and more efficient, allowing broadened access

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to capital for small- and medium-sized firms, including those in developing countries. These changes led also to a shift the global distribution of economic and political power.

The *prevailing views on MNEs* were also altered. In the 1960s, MNEs were perceived as new forms of colonialism and as an arm of American Hegemony (e.g., Levitt, 1970; Saari, 1999: 2). Many scholars portrayed national governments as impotent pawns in the hands of powerful MNEs (Barnet & Műller, 1974). Anxiety about the possible dominance of MNEs over countries led to nationalizations and to calls for UN intervention—and the creation of UNCTAD. Since the 1980s MNEs have been increasingly recognized as a prime engine of economic development. Their potential to inject capital without debt servicing obligations, create jobs, transfer technology (including management skills), enhance exports and raise productivity became widely acclaimed in a knowledge-based global economy. The possible conflict of power between the MNEs and the nation-states seems to have been forgotten (but see Eden & Lenway, 2001). The "storm over the multinationals" (Vernon, 1977) has subsided. Instead, MNEs are courted. Nations compete intensively to get MNEs to locate value-added activities within their borders. Governments also encourage home-based MNEs. Government policies in emerging markets have become more welcoming of FDI, not just in manufacturing but also in services. International agreements covering both goods and services FDI are proliferating at the bilateral, regional and multilateral levels. In addition, cross-border social networks among locals and overseas nationals have accelerated the cross-border flow of information and tacit knowledge and helped new MNEs from emerging economies to penetrate developed markets.

## The Changing MNEs

As the industrial world transformed to a knowledge- and information-driven world, established MNEs adapted to different environments and new MNEs were able to emerge. MNEs have proliferated in numbers, areas of operations, national origin and size distribution, and they have changed considerably. First, their numbers grew 11-fold. The UN counted 7,276 MNEs in 1969 (United Nations, 1973) and 82,053 in 2008 (UNCTAD, 2009: 222–223). Second, MNEs were originally dominated by resource seeking and manufacturing MNEs. More recently, MNEs from the service sector have been steadily increasing their share. Third, the home country is now spread. In 1914, 93 percent of MNEs were from Europe (and 50 percent from England). By 1969, 55 percent were US MNEs (Aharoni & Ramamurti, 2008). Today MNEs come from 137 countries (UNCTAD, 2009: 222–223). In 2008 only 2,418 parents out of 82,000 were from the US, while 3,428 were from China (out of 21,425 parents from developing countries). Fourth, in the 1970s, multinationals were regarded as giants, with sales that dwarfed the GNPs of most countries. This is still true of the largest MNEs. However, the vast majority of MNEs counted by UNCTAD are small in size. MNEs are increasingly recognized as market seekers, efficiency seekers and strategic asset and innovation seekers—looking for new ideas. Finally, new MNEs are being spawned at earlier stages of a firm's evolution than before—many are "born global" firms.

Established MNEs have also learned how to collaborate in strategic alliances rather than seeking to be stand-alone superstars. Western MNEs seek knowledge and ideas as keenly as they once sought natural resources or access to closed markets. Managers of MNEs orchestrate assets, coordinate development of new products, eradicate inefficiencies and allocate resources within the firm. They decompose their supply chain, moving the labor intensive production to low labor cost countries and distributing other activities to the best location across the world. Today, half of all trade takes place within the hierarchy of the same MNEs or among different MNEs. In addition, the sales of MNEs' overseas affiliates (international production) are almost double that of world exports. All these changes eradicated certain products and industries that became redundant as a result of new innovations.

## Theories Becoming Obsolete

One result of the environmental (and the institution) changes coupled with MNEs' learning is that many theories rooted in an earlier context became obsolete because context and circumstances changed. Thus, the idea that governments can nationalize MNEs because the power of these firms is reduced with time after the large initial investment has been made—the so-called obsolescing bargain model—may be relevant, if at all, for oil and minerals but not for today's innovative MNE. MNEs' advantages today are less based on factors vulnerable to rapid obsolescence and more on the capability to innovate, generate new technologies and manage knowledge across a global network.

> "*. . . many theories rooted in an earlier context became obsolete because context and circumstances changed.*"

As another example, the product life cycle theory (Vernon, 1966) assumed demand led innovations from the home developed country. Vernon himself acknowledged the impact of some changes in Vernon (1979). Cantwell (1995) has shown that clusters of innovations occur in many centers and the greater capability of many MNEs is the broader degree of cross-border specialization that they are able to manage. Today, MNEs search actively for technologies, ideas and products from outside the firm (Huston & Sakkab, 2006; Jones, 2005). Many innovations by MNEs stem from subsidiaries rather than from headquarters. Teece (1986) analyzed how an inventor can profit internationally from his new invention. He suggested the need for what he termed "appropriability regime"—or available patent protection—but also the possession of complementary assets and capabilities. Recently, Hennart (2009) acknowledged that theories are too MNE centric—assuming the choice of entry is unilaterally determined by the MNE. He called for recognition of the need to bundle FSA of MNEs with complementary local assets. Hennart still assumes that the source of innovation is the MNE, and knowledge is transferred from its headquarters. For some MNEs today, FSA lies in distribution. The innovator is a local firm—in many cases one in a developing country (Govindarajan & Ramamurti, 2011).

Other obsolete theories include descriptions of organization of the MNE as portrayed by Stopford and Wells (1972) (see Egelhoff, 1988) or the evolutionary theory of internationalizing (Johanson & Vahlne, 1977).

Further, many theories turned out to be true for manufacturing but not for services. Thus, IB theory posited that MNEs possess a firm-specific exploitable factor that creates an oligopolistic advantage. Based on this line of reasoning one may assume that firms would invest abroad when they possess a clear ownership advantage to compensate for what Zaheer (1995) termed "liability of foreignness." However, world famous universities did not create subsidiaries abroad, despite their clear advantage. Parenthetically, liability of foreignness may be less than it used to be. Further, IB theory assumed that firms seek to control their subsidiaries, demanding full ownership to protect their intellectual property. Only because government, having the advantage of bargaining obsolescence, demands joint ventures, does the firm use this route. Yet hotel chain management seems to prefer joint ventures and use this form even when the government allows full ownership.

As to industries, according to Porter, when competition in each nation is essentially independent the industry is multi-domestic. In contrast, in global industries firms are compelled to compete internationally to achieve or sustain competitive advantage. "But choosing a domestic focus in a global industry is perilous, no matter what the firm's home nation" (Porter, 1990: 54). Yet in most professional services many domestic firms operate alongside of a few multinationals. Is the theory wrong or the definition of industry erroneous? Further, according to Porter (1990) and many others, experience in a (large) home country is essential to gain ownership advantages and then invest abroad. However, ISS offers worldwide cleaning services—although its home market (Denmark) is small. Theories may be industry- or home-country specific. Therefore it is essential to clearly define the population discussed.

## Definition of Terms

Despite much research on "the MNE," different researchers define the term differently. Vernon looked at giant US-based firms listed in Fortune 500. He required an investment in at least six countries. His data bank of 187 so-called US MNEs was the source of much important research work. He refused to include, e.g., International Flavors and Fragrances even though it operated in dozens of countries, because it was not in the Fortune 500.

The figures often used—and those quoted above—are based on UNCTAD and its definition of an MNE. UNCTAD requires investment in only one country. Its definitions are based on the balance of payments statistics. Non-equity forms of FDI, e.g., sub-contracting, management contracts, turnkey arrangements, franchising, licensing or product sharing, as well as different forms of strategic alliances are reflected only as receipts of royalty and management fees. In many services non-equity forms are much more important than equity investments.

Rugman (2005: 85) presented the Fortune Global 500 as if it "is an annual ranking (by sales) of the world's 500 largest MNEs," claiming these firms "are the 'unit of analyses' for research in international business" (p. 3).

The proper definition of MNEs "depends to a large extent on the problems discussed" (Aharoni, 1971: 36). Given the diversity of MNEs it is crucial that future researchers specify the population they discuss, e.g., Chinese outward FDI (Wei, 2010). Very few characteristics are true for all MNEs. The pioneers of scientific management attempted to discover general rules of behavior, such as number of hierarchical levels, assumed to be pertinent to all organizations. Only decades later were contingent variables introduced. The future of IB is in the introduction of relevant contingent variables and a clear specification of the context in which a certain study has been carried out.

## The Future of IB Research

IB is about how firms behave and how managers of firms decide. The firm learns, and it is operating within an environment, including a political and institutional regime. All of these dimensions, except the way managers decide, have seen fundamental changes. MNEs are very different than they used to be and are quite heterogeneous. MNEs are transforming themselves. They learn and adapt to the changing environment. Clearly, theory should adapt too.

IB theory does not have the ability to predict the future. It is context dependent. It does not necessarily apply to different environments and diverse contexts nor is it independent of these factors. It follows that IB research should specify the context to which it applies. A major task of future IB research is to understand the drivers of these differences and their impact on strategy.

IB research should also delineate the differences if any, e.g., in firm specific advantages of firms from different home countries and cultural origins, different size, different sectors and different experience in international operations. IB research should shed light on such questions such as how salient are experience, knowledge and path? Does the home environment shape the pattern of international operations? Are firms based in different countries behaving differently? If so, how? R&D is now globally organized. We need to understand the impact of such outsourcing on intellectual properties and FSAs. In the past, the theoretical constructs and the data led to a concern for the explanation of a Marshallian "representative firm." The temptation of additional rigor

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called for analysis of a large number of observations. Unfortunately, to achieve rigor researchers find themselves very distant from reality—which is socially constructed rather than objectively determined. The task of IB researchers should not be to gather facts and measure how often certain patterns occur, but to appreciate the different constructions and meanings that people place upon their experience.

## Final Reflections

Past IB research ignored managerial behavior and processes. Also, IB often neglects to acknowledge that the MNE is also a political actor, exerting more political power than some governments. Far too much attention—from Vernon to Rugman—has been devoted to the Fortune 500 firms. Researchers may find it rewarding to look at the outlier rather than search for central tendencies in a population of MNEs. The outlier changes the rules of the game and may achieve immutable and sustainable high profits. Careful case studies may unearth rules for identification of successful breakthroughs, means of achieving firm-specific advantages, a better understanding of the behavior of top management teams as well as the interaction of IB and governments.

The success of MNEs is at least as much a function of management ability as it is of industry characteristics or environmental factors. Managers behave according to different rules than those assumed in much of the IB literature. They are not part of a herd, but unique. The result of such a lacuna is that theory failed to predict actual behavior and did not allow the best guidance for policy options (Aharoni, 2010). Environments were treated most of the time as objective facts, independent of the firms. The ability to generate oligopoly rents by political action or through collusion is almost always ignored. The ability to change the environment by innovation of new products that alter the structure of the market was recognized only recently. Hopefully, future IB research will avoid these pitfalls.

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**Yair Aharoni** (yairah@post.tau.ac.il) is Professor Emeritus at Tel Aviv University, Israel. In addition to more than thirty books and monograph he has authored or edited, he has published more than a hundred papers in various journals and chapters in books and has written more than 150 cases. He is a Fellow of the Academy of International Business and of the International Academy of Management.

# Insights into the Global Factory

Peter Buckley, University of Leeds, United Kingdom

**The conceptual structure of the** global factory is designed to elucidate changes in the organisation and strategy of multinational enterprises (MNEs) as globalisation progresses. Its analytical underpinnings derive from Buckley and Casson (1976) and centre on the two key strategic decisions – where should an activity be located and how it is best integrated and controlled within the focal firm's network? The principles are unchanged, but their applicability differs as external circumstances and strategies change.

The key insights arising from this new view of MNEs include new strategies that both respond to and shape globalisation. New strategies employed by global factories include "fine slicing," where increasingly small slivers of activity are separated from the value chain and each is tested for optimum location and control against feasible alternatives. The overall value chain is optimised by lateral managerial thinking. The role of central management is not command and control but "orchestration," where the different instruments (activities) are harmonised by a central conductor. Attention to the whole value chain has radical implications for the span of control of the top management—and the perception of this control by outsiders has important ramifications, for instance in the realm of corporate social responsibility (CSR), where the management of the focal firm in the global factory is held responsible for the policies and conditions of its suppliers. The idea that "you don't have to own something to control it" does not mean that a "hands off" strategy is acceptable. Branding and the control of information are two key aspects of the global factory; both relate to the returns from intangible assets that fund the growth of global factories. The majority of profits accrue to the global factory in the early stages of the value chain (e.g., R&D) and in its final stages—marketing returns connected to the brand name. These activities are likely to be internalised. Returns from the control of information—not just technological information but strategic information on markets, competitors and consumers – are also key revenue earners, and the global factory has evolved in parallel with information control.

## New Strategies for Global Competition

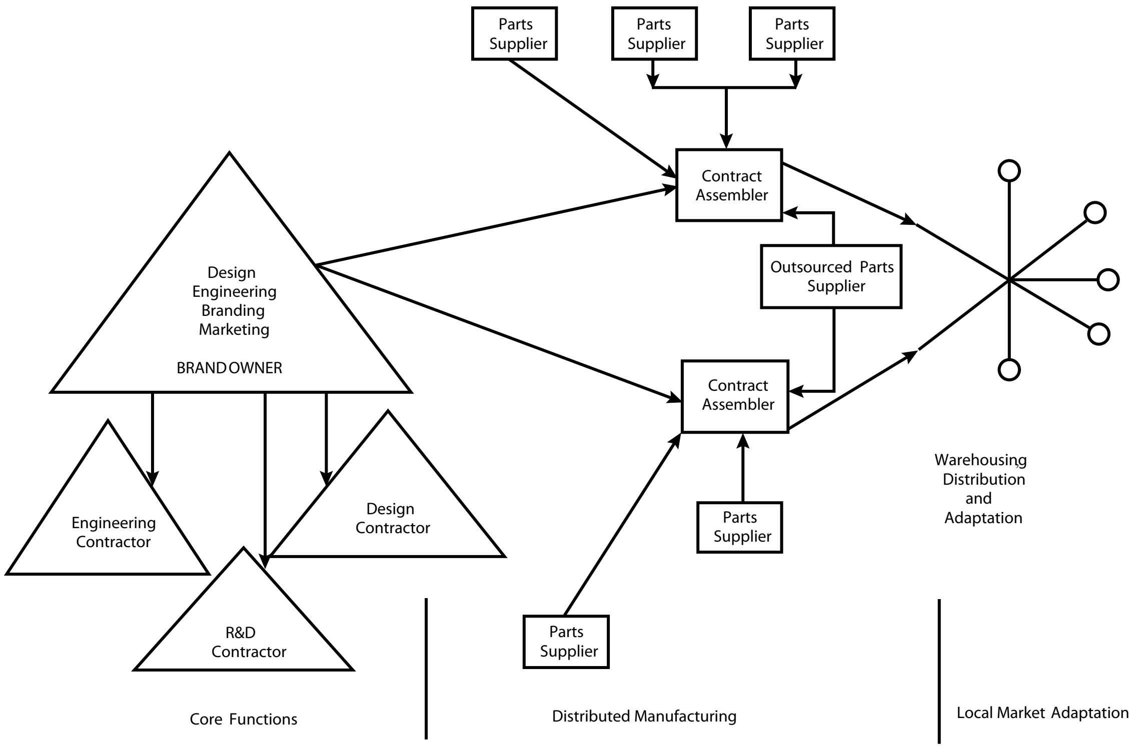
The notion of the global factory was introduced in Buckley (2004) and developed in Buckley and Ghauri (2004) and Buckley (2007, 2009). The basic theory, derived from Buckley and Casson (1976), is that MNEs exploit their intangible knowledge by internalising imperfect international intermediate product markets. The greater the internalisation of such markets across international borders, the more specialisation can occur so that ever finer slices of intangible knowledge can be exploited by the MNE. But now MNEs are becoming much more like differentiated networks. They choose location and ownership policies so as to maximise profits, but this does not necessarily involve internalising their activities. Indeed, they have set a trend by outsourcing or offshoring their activities. Outsourcing involves utilising "buy" rather than "make" in the Coasean "externalize or internalize" decision (Coase, 1937). Offshoring involves both the externalisation option and the "make abroad" location decision (Buckley & Casson, 1976). MNEs have developed the ability to "fine slice" their activities on an even more precise calculus and are increasingly able to alter location and internalisation decisions for activities which were previously locationally bound by being tied to other activities and which could only be controlled by internal management fiat.

The development of the global factory has provided new opportunities for new locations to enter international business. Emerging countries such as India and China are subcontracting production and service activities from the brand-owning MNEs. The use of the market by MNEs enables new firms to compete for business against the internalized activities of the MNE. This not only subjects every internalized activity to "the market test," but it also results in a differentiated network (as presented in Figure 1), which we term "the global factory."

## The Global Value Chain

The global supply chain is divided into three parts.[1] The original equipment manufacturers (OEMs) control the brand and undertake design, engineering and R&D for the product (although there may be outsourced; see Figure 1). They are customers for contract manufacturers (CMs) who perform manufacturing (and perhaps logistics) services for OEMs. In this so called modular production network, CMs need to possess capabilities such as mix, product and new product flexibilities while at the same time carrying out manufacturing activities at low costs with mass production processes. Flexibility is necessary to fulfil consumers' product differentiation needs (local requirements) and low cost for global efficiency imperatives (see Wilson & Guzman, 2005). The

**Figure 1: The Global Factory**




third part of the chain is warehousing, distribution and adaptation carried out on a "hub and spoke" principle in order to achieve local market adaptation through a mix of ownership and location policies.[2] Ownership strategies are used to involve local firms with marketing skills and local market intelligence in international joint ventures (IJVs) whilst location strategies are used to differentiate the wholly owned "hub" (centrally located) from the jointly owned "spokes."

Casson (1997a) highlights the importance of information costs in the structure of the business organisation. He sees the brand owner as essentially a specialist in the search and specification functions (for customers and products respectively).[3] "The brand owner, by intermediating between the producer and the retailer, coordinates the entire distribution channel linking the worker to the final customer" (Casson, 1997b: 159). This intermediation by the brand owner/market maker is intermediation of information, not production. The information structure of the global factory shows that the brand owner is the information hub of the global factory. The brand owner organises the market process itself. The organisation of production is conventionally within firms but the organisation of the whole production and trade sequence is intermediated by the market making global factory. In many industries, particularly service industries, such as banking and insurance, the essence of competitiveness is the processing of information.

Fragmentation of the production chain can be accompanied by spatial dissaggregation if: (1) there are technological discontinuities between different stages, (2) the stages are characterised by different factor intensities, and (3) the costs of coordination and transport are sufficiently low to make the process economic (Deardorff, 2001). Each of these elements has a technical, a managerial and a political dimension. Strategies of "fine-slicing" the production chain have combined with technological change, notably the development of the internet and other communications technologies, to allow control at a distance (and without ownership) to become more feasible even for elements of the chain requiring fine control. The opening up of China (and now India) creates access to cheap, well disciplined labour, and the development of logistics practice reduces costs.

Products with standard manufacturing interfaces and services with standard processes are ideal for outsourcing. A lack of interaction of the offshored facility with other functions enables a clean interface to be created and a "fine slicing" cut to be made. Products which should not be outsourced include those where protection of intellectual property is crucial, those with extreme logistics requirements, those with high technology content or performance requirements and those where consumers are highly sensitive to the location of production (Boston Consulting Group, 2004).

## Network Structures in Modern MNEs

Strategies used in the global factory require a rethink of our notion of the stock of investment. Focal firms have decreased their ownership of productive capacity and increased their stocks of intangible assets. Thus production is outsourced to firms that specialize in maintaining

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and expanding production capacity. Focal firms invest in intangible assets such as: (1) brand equity, (2) management skills, (3) innovative capacity (R&D labs, design facilities), and (4) distribution networks. These assets are embedded within the firm. They are difficult to disentangle and disengage from the firm as a whole, and they have an element of non-substitutability. It is difficult for other firms to copy or to replicate these intangible assets. Particular types of intangible assets that have achieved salience and value in the global factory are brand image, embedded supply chain management, design and new product development facilities, distribution networks with local adaptation capabilities and the ability of the management team to achieve customer lock-in.

Casson (2006) notes that networks typically involve stocks and flows. The stock components comprise network *infrastructure*, whilst the flow constitutes *traffic*. The stock components of the global factory are assets, such as production units, R&D laboratories, design centres and offices. The flows generated are of goods, semi-finished products and knowledge. Physical networks are important in sustaining trade, whilst social networks are important in sustaining technology transfer, marketing and managerial communications (Casson, 2006: 6–7). The global factory is an amalgam of a physical and social network, uniquely fitted to combine support for trade, technology and knowledge flows. It is able to orchestrate supply chains (Hinterhuber, 2002) without necessarily owning all the elements in the chain. The nexus of innovation (in its widest sense, to include marketing) and globalisation is the source of the viability and resilience (to shocks) of the global factory (Bhide, 2008).

## Global Governance Issues

Two key issues interact to provide governance issues arising from the globalisation of business. The first is the existence of unpriced externalities. These impose costs (e.g., pollution) on the local economy and environment. The second is the remoteness of production and service activities from their ultimate owners or controllers (e.g., the shareholders). These two factors interact because the mechanism for correcting negative externalities becomes difficult to implement due to remoteness and lack of immediate responsibility.

Perceived difficulties of global governance in multinational firms are exacerbated by the current crises in governance of firms in the West. The shareholder return–driven environment that prevails today is very much the creature of the merger wave of the 1980s (Buckley & Ghauri, 2002). The feeling that corporations are outside social controls and that current forms of governance benefit only executives (and owners) rather than other stakeholders contribute to the concerns of critics. MNE–host country relations in middle-income countries have fully emerged onto the world stage, leaving behind a group of largely inert, less developed countries which have so far been bypassed by globalisation. Large, emerging countries, which contain significant middle class markets, cheaper and well educated labour and stabilising political regimes (India, China, Brazil), are no longer seen just as new markets for old products (Prahalad & Lieberthal, 1998) but as significant locations requiring reconfigurations of the economic geography of MNEs' operations. Not only do MNEs adapt products to local markets, but local markets also provide ideas for new global products (Murtha, Lenway, & Hart, 2001). Increasing location "tournaments" to attract FDI may have reduced the benefits to the host countries as have the increasing skill of the *managers* of MNEs in making their investments more "footloose." Corresponding skills on the part of host countries to make FDI "sticky" are not developing at the same rate. Differences within developing countries may lead to divergence between those that can develop the velocity to catch up and those that will fall behind as the world economy becomes more interdependent.

> *"Differences within developing countries may lead to divergence between those that can develop the velocity to catch up and those that will fall behind as the world economy becomes more interdependent."*

## Changing Locational Strategies

Hitherto, theorising on the MNE and the global factory has implicitly assumed that, although transport costs increase with distance, transaction costs are invariant to physical distance but vary with cultural (psychic) distance. The "liability of foreignness" literature (Zaheer, 1995) implicitly assumes that discontinuities of (some aspects of) transaction cost occur at national frontiers. However, it is now clear that we need to take a more fine-grained view of the geographical impact on transaction costs. It is also the case, in view of our discussion of national frontiers above, that management across frontiers (national, regional, technological, knowledge) is a key skill of global factories. Empirical work on the relationship between geographic distance and transaction costs (the spatial aspects of internalisation) is urgently required.

The fundamental trade-off of a spatial economy is between increasing returns and transport costs. Global factories have been shown to be a response to this trade-off in all its complexity—including the integration of activities with varying degrees of increasing returns and transport costs that include psychic distance. The flexibility of the global factory organisation is what allows such structures to respond to changing trade-offs over time, and this is reflected in a changing spatial (locational) response.

## Unanswered Questions

Several intriguing questions arise from this analysis. How far should a company be responsible for its supply chain (first tier supplies, second tier, etc.)? Are non-equity forms of MNE operation an effective means of avoiding regulation? FDI is easier to regulate than non-ownership forms of operation, and this may partly explain the shift to non-equity forms (an idea that dates back to Hymer, 1960). The methods of exercising control without ownership are worthy of deeper investigation. Many public policy issues are currently unresolved or opaque, and even our best statistics are ownership based (FDI driven) and do not recognise the full range of power and influence of the global factory.

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## Endnotes

[1] The literature on global commodity chains, latterly "global value chains," has much in common with the analysis of the global factory and has much to offer in furthering the research agenda (Barnes et al., 2004; Gereffi, 1999, 2001; Gereffi et al., 2005; Gereffi & Memedovic, 2003; Kaplinsky, 2001, 2004; Kaplinsky et al., 2003).

[2] Much of the work on first "commodity chains" then "value chains" is strongly empirically based and provides a well thought out research programme, as exemplified by *A Handbook for Value Chain Research* (Kaplinsky & Morris, 2001). This research programme has gone beyond the original distinction between "producer driven" and "buyer driven" chains (Bair, 2005; Gereffi, 2001).

[3] We should also note the growth of specialist data warehouses (global consumer information databases) such as Acxiom (located in Little Rock, Arkansas) that provide information to global factories (Mason, 2009).

**Peter J. Buckley** (P.J.Buckley@lubs.leeds.ac.uk) is Professor of International Business and Director of the Centre for International Business, University of Leeds (CIBUL), UK. He has published numerous books and over 120 refereed articles in European, American and Japanese journals. He is a Fellow of the Academy of International Business and a former AIB President.

# Global “Chop Shops” Slice, Dice and Outsource the Value Chain

Farok J. Contractor, Rutgers University, United States

**Recently New York Senator** Charles Schumer raised ire by calling Indian outsourcing companies “chop shops,” yet he unwittingly offered an accurate description of how economies are being integrated. He probably meant to say “body shop”—shopping for workers around the world who offer services under temporary visas. A “chop shop,” on the other hand, refers to an operation that dismantles cars, sometimes stolen, then sells the individual parts for profit—with the value of components greater than the assembled product.

The restructuring of some modern companies resembles “chop shops,” as the value chain is chopped into fine slices and distributed worldwide, and employees are relocated and reduced. Older firms in wealthy nations face competition from low-wage countries and downward price pressures so severe that the high payrolls in the US or elsewhere can no longer be sustained.

The trend is apparent in manufacturing, computers and architecture, but is spreading to other industries like biopharmaceuticals.

**Figure 1: Global Disaggregation of the Firm: Simultaneous Offshoring and Outsourcing**


*To remain competitive, the global firm must decide on how to distribute portions of its value chain over the four cells shown in Figure 1: (A) critical and proprietary operations kept in-company and in the home nation; (B) domestically outsourced portions of the value chain; (C) portions relocated to the firm’s foreign subsidiary; (D) a contract provider or external vendor to perform an operation abroad. Firms decide which operations are best performed in which category in terms of organizational restructuring and geographical relocation.*

The announcements of such initiatives are similar to Johnson & Johnson’s in November 2009: “…to increase its operational efficiency and generate annualized, pre-tax cost savings of \$1.4 – \$1.7 billion when fully implemented in 2011….” Rather than relocate the entire production lock-stock-and-barrel to India or China, which a few firms have done, managers look for *parts* of the operation to relocate, offshore or outsource, while keeping critical portions in-house and at home. (See Figure 1 for the categories.)

Embracing the chop-shop model, the “big-pharma” industry is slated to shed more than 100,000 jobs in advanced economies.

Operations considered the “core competence” of the firm—processes using proprietary technology, R&D that could be leaked to competitors—were once considered sacrosanct, not to be outsourced or offshored. But no more—pressures for efficiency extend even to the R&D portion of the value chain, no longer treated as a monolithic block and now amenable to “chopping” and dispersal.

Until a decade ago, if offshoring or outsourcing were undertaken, entire major blocs of the value chain would be relocated abroad, for example, all of production or all of customer service. While the majority of Western firms still retain R&D at home, the pharmaceutical industry is willing to “slice” R&D operations more finely, spreading them around the globe. Besides cost savings, foreign researchers and technicians are a source of innovation.

Despite R&D/sales ratios already averaging over 13 percent, many pharmaceutical firms face a “dry pipeline,” with few new products headed to market. Certification processes are more stringent worldwide. Hence many companies desperately search for lower costs and speed in R&D by outsourcing and offshoring. Pharmaceutical R&D includes highly skilled scientific endeavors such as molecular sensing, virtual 3-D screening and genomics such as proteomics. Moreover such high-level expertise requires personnel not abundant outside rich nations.

But other aspects of R&D are mundane and less sensitive. Figure 2 illustrates how R&D in the biopharmaceutical sector can be chopped into at least 18 pieces which are then distributed worldwide.

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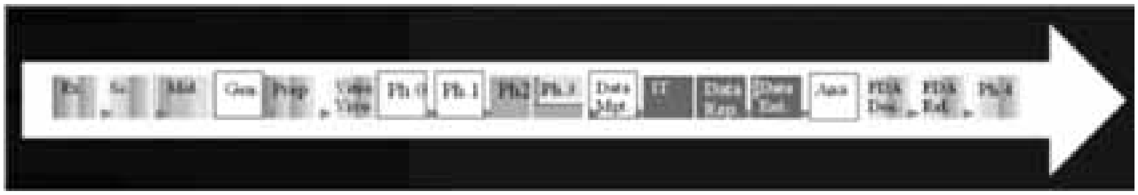
**Figure 2: "Chopping Up" Research & Development**



*The 18 R&D tasks shown in Figure 2 can be segregated and selected for possible outsourcing, or offshoring: Exploration; pharmaceutical screening; molecular analysis (biotech); genetic research; preparation of compounds; vitro/vivo lab testing; Phase 0 limited human microdosing; Phase 1 trials (of 20 to 100 human volunteers for safety, food or other interactions); Phase 3 multicenter trials of 500 to 4000 human subjects; data design and management; IT technology hardware and software; data reporting from hospitals or health personnel; data entry via call centers and emails; analysis of clinical trial data; documentation for various nations' FDAs; management of relations with FDAs; Phase 4 post-launch monitoring, risk-reporting systems and risk assessment.*

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R&D activities critical to ongoing competitiveness of the firm—such as genetics, Phase 0 and Phase 1 clinical trials, or the aggregation and analysis of test data for risk factors and regulatory filings—continue to be done in the company's headquarters nation. On the other hand, codified and routine portions of the R&D value chain, such as IT work, or the reporting of field clinical trial and sales data, can today safely be handled by outsource contractors in nations like India, Bulgaria and China.

Other components, or slices, of the chopped value chain, such as exploration and screening of compounds, in-vitro and in-vivo testing, assembly of data and documentation for various nations' regulatory agencies, are activities that can be conducted jointly with foreign subsidiaries or with outsource providers both home and abroad.

The geographical and organizational relocation has already begun in the global dispersal of clinical trials, which account for 42 percent of overall pharma R&D costs. Phase 3 trials are today increasingly conducted *outside* the headquarters nation of the pharmaceutical company, by a combination of its foreign subsidiaries and contract providers, working from a standard "template" distributed to hospitals and clinics worldwide.

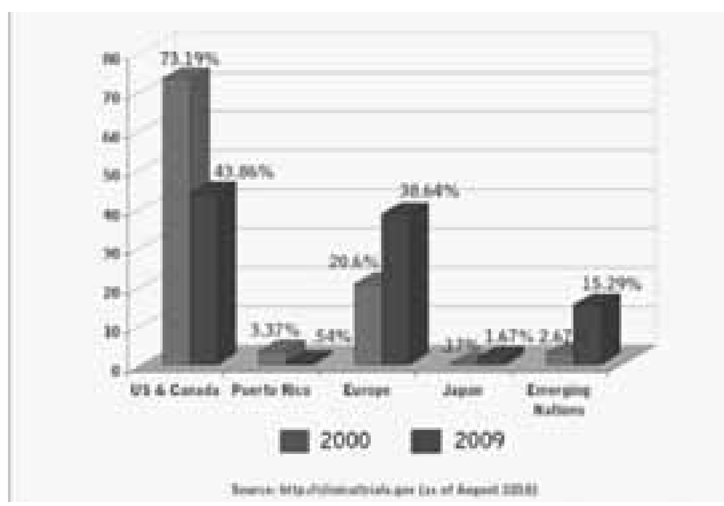
Recent trends show trials conducted in the US and Canada showing a remarkable decline, with the greatest rate of increase in emerging nations (see Figure 3).

## Implications for International Business Research and Teaching

A new geography and global reorganization of companies is underway. In general, companies in all industries must decide how far to go in "fine-slicing" themselves. By separating out particular operations where the company is least efficient and allocating them to external providers who are proficient at those particular tasks, the firm enjoys lower overall costs and may also gain additional benefits in terms of creative external ideas and foreign market goodwill. How to allocate pieces of the firm's value chain over the four cells in Figure 1 is one of the key research and strategy questions of our day.

Another concurrent research question is how finely should a company's value chain be chopped, in the first place? The finer a company is chopped, the greater may be the efficiency gains, over all. But a larger number of slices also entails greater coordination, overhead and transportation costs as operations are geographically and organizationally dispersed. If a firm is chopped into too many slices, the overall increase in costs may be greater than the incremental benefits of disaggregation. Hence each firm must figure out for itself its optimal degree of disaggregation.

**Figure 3: Regional Distribution of Clinical Trials**




*The figure is drawn from a data base of around 95,000 clinical trials filed at www.clinicaltrials.gov, (an agency of the US National Institutes of Health), and compares geographical dispersal of clinical trials in 2000 and 2009. Note: clinical trial numbers in this database are not strictly comparable over time as company reporting mandates changed over this time period. Nevertheless, the general conclusions about the geographical spread of trials are valid. (Image: Courtesy of Debbie Campoli, Yale Global)*

## Conclusions for the Global Economy and Jobs in Advanced Nations

One salient economic fact remains that companies today are micro-dissecting themselves into finer and more slices than ever before – because of improvements in transactional efficiencies in dealing with external providers, greater codification of corporate knowledge in templates, procedures and software that can be shared with external agents, a somewhat reduced fear of technology misappropriation because of better intellectual property enforcement worldwide, improvements in the technical capacity of personnel in emerging nations, and the rise of emerging countries as large markets in their own right.

Behind Johnson & Johnson's "global restructuring initiative" is the loss of many thousands of jobs in New Jersey and the US, and that's only one example. However, the fundamental restructuring of the global economy currently underway does not necessarily mean the loss of competitiveness for multinational companies based in advanced nations. By retaining, and nurturing key components of their business—for example by pharmaceutical firms focusing on high-level areas like genetics, molecular sensing, virtual screening, data architecture and certification expertise—while externalizing or relocating other slices to other countries, the firm can improve its overall competitive posture.

A flexible economy is a more creative economy. Jobs that are outsourced can be replaced by creative new and well-paying jobs, and where whole new industries can germinate and flourish.

Johnson & Johnson, by chopping itself, will end up more efficient, perhaps with fewer employees in the U.S. But other new jobs elsewhere in the U.S. will be created. As routine, codifiable functions in biopharmaceutical R&D are offshored, the sector can intensify its focus on advanced genomics research.

This also explains new jobs in ancillary supplier companies like GE Healthcare, which produces medical imaging and molecular-level sensing equipment. There's a direct correlation between the offshoring of routinized R&D operations in pharma R&D, a consequent greater focus on genomics research in advanced nations, and the rise of GE Healthcare, which has doubled its employment in the past decade. Today GE Healthcare is a $17 billion company with 46,000 highly skilled, well-reimbursed employees. By redefining its core competence as the ability to sense and manipulate at the molecular level, Applied Materials, a semiconductor foundry equipment supplier, branched out into new areas such as photovoltaic solar panels and flat-screen displays.

Overall, this fine chopping of companies reallocates the more mundane and routinized jobs internationally. Gains from this economic efficiency allow higher-level new jobs and industries to grow in advanced nations. Some individual careers are disrupted, but this dynamic and virtuous cycle ultimately leads to a more efficiently performing global economy.

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**Farok J. Contractor** (fjcontractor@embarqmail.com) is professor of management and global business at Rutgers University in New Jersey. His latest (co-edited) book *Global Outsourcing and Offshoring: An Integrated Approach to Theory and Corporate Strategy*, was published by Cambridge University Press in November 2010. A Fellow of the Academy of International Business, he has served on the Executive Boards of the Academy of International Business, Academy of Management (International Management Division) and is on the editorial boards of eight scholarly journals.

# When Less Is More: A Personal Perspective on CK Prahalad's Accomplishments

Yves Doz, INSEAD, France

**I ENJOYED THE PRIVILEGE OF BEING** a friend of CK Prahalad for thirty-six years and of having worked with him on research, on writing a book and a number of papers and articles, as well as on teaching and consulting projects. A year ago I lost a dear friend, the international business community lost a non-conventional researcher, and we all lost an activist for a better, fairer world.

What follows is not an attempt to summarize CK Prahalad's work, or career, but merely a few personal observations on how he worked and perhaps indirectly on why he gained such broad influence without being a conventional researcher. My purpose here is to outline what set him apart and also what we may learn from his approach.

In reflecting on his accomplishments, one key overriding theme surfaced in my mind about CK's work: achieving more with less. I will organize my personal comments around this theme: *when less is more*. It is perhaps most succinctly summarized by CK and Gary Hamel in the introduction (p. 9) of their book *Competing for the Future*: "A company must not only get to the future first, it must get there for less."

I was also trying to articulate in my own mind what we can learn from CK that would impact our own way of doing research. Does doing research "the CK way" require exceptional skills and intelligence, or to what extent is it more widely replicable? I have had the privilege to see CK in action on various research topics and managerial issues, which gave a perspective on what is unique and what may be replicable in his approach. To preface the broad argument, although his approach was unconventional, and often not well understood by academics, the main points in how he worked can provide useful food for thought for most academic researchers. A few key points are developed below.

First, when confronted with a question, coming from his own intellectual curiosity, senior executives, students, or fellow academics, he would think deeply about problems and issues around the question and about their formulation and framing. He would take time to reflect on the question and related issues. He would nourish that thought process through the interplay of insights from the field and concepts borrowed from theory or created to address the question. In that respect, he was not different from many others: most management researchers get the questions and the insights that frame and motivate their research from interactions with the field, both academic colleagues and managers, not (just) from their own reflections. The stream of *Harvard Business Review* articles co-authored with Gary Hamel and the book on *Competing for the Future* (Hamel & Prahalad, 1996) came originally from the experiences of teaching and consulting for Western companies confronted with intense Japanese competition—Ford (vs. Honda and Toyota), ICL (vs. Fujitsu) and Motorola (vs. Matsushita and others)—and observing their Japanese competitors. Striving to analyze Japanese competition (a major concern in the West in the 1980s) and the relative inertia of Western companies led him and Gary Hamel to conceptualize non-conventional competitors, intent-driven, relying on core competencies, and considering strategy as stretching and leveraging scarce resources. The seeds of the *Competing for the Future* argument were there.

Second, CK was able to see differences in the premises of strategy, or to reframe questions away from pat answers, because he never took conventional wisdom for an answer but rather took the situation he researched as a challenge; "there has to be a better way" might have been his motto, both for research and for practice. He was both descriptive and prescriptive. *Competing for the Future* was not an academic research monograph nor a simple managerial "how to" book but a manifesto inviting executives to think differently about strategy and global competition by recognizing the different ways in which various competitors conceived strategy. I also recall this search for a better way from personal experience. In 1974, CK had defined his dissertation as a detailed clinical process analysis of how relative power between business, regional, and functional executives affected strategic priorities in a multinational firm (Prahalad, 1975). Breaking away from the structural

> *"In reflecting on his accomplishments, one key overriding theme surfaced in my mind about CK's work: achieving more with less."*

form perspective that had come to dominate the early research on international management to consider change dynamics within a structure and adopting an individual (or small group) perspective opened the path to a finer-grained analysis of decision-making processes and of roles, responsibilities, and relationships in MNCs, a path which proved quite fruitful in understanding how multinational companies actually operated. Of course he lost some ability to generalize, but he gained deeper insight than a conventional cross sectional survey would have allowed.

At some point in that process analysis work, the idea of national responsiveness and global integration emerged. It was perhaps inspired by the differentiation-integration framework provided by Lawrence and Lorsch (1967). CK initially thought of these as mutually exclusive but expressed frustration at such a simple trade-off. He encouraged me, who followed him by a year in Harvard's doctoral program, to explore industries where both had to be high such as, at the time, Telecom and electrical power equipment. Both industries were characterized by high economies of scale in R&D and manufacturing and strong host government influence requiring a high responsiveness to local forces. This led to the concept of multifocal organization (Doz, 1976).

Third, CK was a parsimonious but influential researcher, another aspect of more for less. He did not so much attempt to develop new theories as he applied available theories to address various challenges of multinational management. In that sense, CK was an abductive theorizer (Van de Ven, 2007). He achieved breakthroughs in addressing issues, such as global integration vs. national responsiveness, not by creating or conceiving new theories, but by framing the issue in a richer way, making a finer-grained, more discerning approach feasible. Bringing Michel Crozier and the French school of organizational theory to bear on the interaction between executives in a multinational matrix organization was but an example of that approach (Crozier, 1964).

> "*CK was a parsimonious but influential researcher, another aspect of more for less.*"

In his own, very polite but extremely intellectually forceful way, CK was an independent thinker, challenger, and a quiet rebel. (Something he may have picked up from his father, a High Court judge in Madras who opposed British rule.) Although he had a deep respect for academics (e.g., Bower and Chandler when he was a doctoral student, his colleague Karl Weick and many others later on) and for peers (e.g., our relationship and friendship was always mutually respectful), he was free from academic conformism. He pursued his own path in thinking (significantly, if one goes back to his dissertation, the literature review comes last, almost like an afterthought or an appendix). In other words, he was able to build on existing literature without becoming hostage to that literature. He could break free from conventional wisdom by developing deeper, more managerial frameworks based on the phenomenon and the question at hand. That did not earn him much credit among academic scholars but led to valuable new insights and managerial implications. Had he been a more conventional scholar he would have been better recognized in the academic community but probably less influential.

His more recent work, summarized in *The Fortune at the Bottom of the Pyramid* (Prahalad, 2004) is perhaps the starkest example. Until that book gained widespread influence, the conventional wisdom both in academic circles and among practitioners was that only the burgeoning middle class offered profitable market opportunities in developing countries. Decades of applying a developed economy–centric model of product life cycle had turned into conventional wisdom. CK's insight was to reject that "given" and ask, from scratch, a different question: "What does it take to serve profitably 'bottom-of-the-pyramid' consumers?" Of course as pointed out by critics (such as Karnani, see Karnani, 2006, 2007), not every business opportunity at the bottom of the pyramid is truly going to benefit the poor, and some companies will exploit the "doing good" theme while doing the opposite. But CK had the merit to raise the issues of poverty alleviation for executives and provide them with food for thought. Like some of his earlier work the book is mostly a manifesto, a call for action.

Fourth, like good management process researchers, CK was patient with the data. I recall CK and I spending a summer doing in-depth interviews in a major European multinational. What struck me first was that CK was very respectful of managerial work and of managers. Perhaps his experience as a manager in India or his natural modesty made him so. He was also very careful to be a disciplined field researcher. We did most interviews together, some separately in parallel. But every night we would spend a long evening comparing detailed notes, exchanging impressions and emerging conceptualizations and poring over the next day's list of interviewees to adjust and, in some cases, redefine an interview guide in light of what we had learned in the past days. We spent considerable time afterwards in preparing for several reporting sessions to the Management Board of the company. CK was tireless in reviewing critically our emerging findings and making sure our interpretations and conceptualizations were theoretically and factually right. Raw data and theories were iteratively used as selection filters for our observations and emerging conceptualizations. That process is a lesson I learned from CK early in my academic career and keep applying to this day (e.g., in the recent *Fast Strategy* book co-authored with Mikko Kosonen [Doz & Kosonen, 2008]).

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What he wrote about the perils of a dominant logic for corporations, he applied to his own research (Bettis & Prahalad, 1995; Prahalad & Bettis, 1986). CK was no cookie-cutter researcher. He was inductive and abductive when it came to theory. It would have been much easier for him to apply a well-recognized dominant theory in fashion—say, transaction cost economics or organizational economics—and that would have given him stronger recognition in academic circles. This might also have dampened his creativity and relegated his contribution to that of a run-of-the-mill successful but relatively unknown academic.

He owed to both his upbringing in India and to Professor Bower (with whom he worked closely at Harvard) the self-confidence to, as he would say, affirm that "there are no sacred cows; let's make sense of the problem." Obviously, the price to be paid for this iconoclastic attitude was the development of contingency theories proposing bounded generalizations from specific examples rather than "grand" general theories. In some cases this led to underachievement. For example, when we worked closely together around 1980, the model of change we cast at the time as applying to the headquarter-subsidiary relationships could have been framed much more widely as a model of change applying to partially recomposable systems. This was left to develop for theoretically more rigorous researchers, such as Gunnar Hedlund, Christopher Bartlett and Sumantra Ghoshal (Bartlett & Ghoshal, 1993; Hedlund, 1986).

Indeed, CK was unpretentious, staying close to the data (see how richly *The Fortune at the Bottom of the Pyramid* book is illustrated with multiple detailed examples). Only perhaps when it came to the work of the CEO was CK more willing to draw on his vast experience of consulting and coaching CEOs to propose broader and more normative generalizations. His perspective was pluralistic—away from traditional hierarchies—stressing the importance of the values and the moral timber needed to be a CEO. He did not write much on CEOs, partly out of a deep respect for the privacy of their action, partly out of his own modesty. When others would use the leverage provided by CEO access as a spring board to be (self?) proclaimed "gurus," CK always modestly waited to be called upon to join CEO circles (like the Aspen Institute Summit or exclusive events in Europe and India). The same description was true of his growing involvement with government, in India of course, but also in many other countries.

What can we learn from CK, as researchers concerned with both insight and impact? First, I believe, is the value of relentless intellectual curiosity. CK was an avid reader with a purpose and a very serious conversationalist (no small talk with him!). But intellectual curiosity was not torment, but fun, with CK. I recall vividly when we were developing *The Multinational Mission* (Prahalad & Doz, 1987) argument and outlining our book spending long, frustrating days in very serious conversations with a flipchart by CK's fireplace until he would break the conversation with a "let's go for a walk." And off we would go around the lake, or along the river in Ann Arbor, continuing the conversation as we walked, or sometimes jumping to a lesser topic, such as French politics. Coming home, CK would open a bottle of fine wine, and the conversation would continue. We would break for a wonderful Indian dinner his wife, Gayatri, would have prepared, and she would join in the conversation about our work. Typically, at some point, sometimes much later, CK would jump to grab a yellow pad, exclaim, "I think I have it" (referring to our argument on outline), and start writing, sketching almost as in a flow diagram what one chapter or another of the book should really be. Then we could relax and finally call it a day! Sometimes it would be days before we reached the critical insight, but we would take the time, iterating between data and conceptualization, rereading our interview notes and case studies, and being patient, but intense.

> "*CK saw as part of his role to improve man to provide us with more enlightening perspectives that would help us make fewer mistakes and be more aware of our actions and compassionate about their consequences.*"

So patience and intensity of effort is perhaps the second lesson I learned from CK. Later on, working with other strong inductive process researchers, such as Robert Burgelman when I visited at Stanford, I noticed they had that same quality: a restless curiosity and a discipline and humility (when considering data) that left no place for conceptual shortcuts or approximations.

A third key lesson, for us as management educators, I will label as enlightenment. CK did not see his role as providing pat answers to complex managerial questions. His contribution was to help other managers and scholars alike frame their work and the reality of its context more richly, accurately, and constructively. Steeped in the Hindu tradition of the south of India, CK saw as part of his role to improve man to provide us with more enlightening perspectives that would help us make fewer mistakes and be more aware of our actions and compassionate about their consequences. This higher order moral commitment matured as CK aged and gained influence on others, starting with his MBA students at Michigan who were and remained his first constituency, but it extended to PhD students, colleagues, and, last but not least, the many executives who fell under his benevolent spell.

With executives, CK was of infinite patience, staying with a company and its leadership the time it took to have a real impact (when so many "gurus" are of the "fly-in-give-an-inspiring-speech-fly-out" variety). It took at least a decade and two CEO changes for CK to really help in reviving Philips. Although he was very demanding for himself, and set very high standards, CK was all too deeply aware and understanding of human frailties. That gave him a deep empathy and respect for executives. Again, it's a personality trait I have observed in most successful field researchers. So many academics hide their vulnerability behind their PhD as an academic shield ("we must be smarter; aren't we?"). Not CK. He was levelling with executives, but he also expected them to raise interesting challenges and to engage in sustained, high-level, difficult conversations. The same was true of co-authors and co-researchers. Here, too, CK applied a "more for less" principle. He needed sparring partners and others with whom to share the intensity of fieldwork, but he was not a man of big research teams. The right perspective, combined with a high number of IQ points, was enough to make progress, and sometimes to achieve breakthroughs. Conversely, he would argue that large teams generate large volumes of data but seldom achieved major breakthrough. So perhaps another lesson is that, in our trade, strength does not reside in numbers.

CK was also a kind individual, being very careful to distinguish intellectual disagreement from personal disagreement, but always working with co-authors he liked and who liked him. And, he was willing to tolerate their weaknesses and own idiosyncrasies. He grew on his partners. I will always recall, in the 1980s, a puzzled British senior executive turning to me, and referring to Gary Hamel giving a speech, asking: "how come this man with a French name has an Indian accent?" It then dawned on me that Gary had emulated CK to the point of borrowing his South Indian accent!

So last year we lost a great contributor not just to IB but to the management field in general. CK pioneered a more process-oriented approach to the management of multinational companies. He provided an alternative perspective on strategic management. He also gave us a different perspective on emerging economies, both as markets and as sources of innovation. His contributions did not fit our academic canons, and sometimes went unrecognized by academics, but he was more influential on the world at large than on our profession.

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**Yves Doz** (Yves.DOZ@insead.edu) is the Solvay Chaired Professor of Technological Innovation at INSEAD and Visiting Professor at Aalto University. His research on the strategy and organization of multinational companies led to numerous publications, including several books, in particular *The Multinational Mission: Balancing Local Demands and Global Vision*, co-authored with CK Prahalad (1987) and *From Global to Metanational: How Companies Win in the Knowledge Economy* co-authored with José Santos and Peter Williamson (2001). He is an AIB Fellow and a past AIB president.

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Academy of International Business
7 Eppley Center
Michigan State University
East Lansing, MI 48824-1121
USA

Tel: +1-517-432-1452
Fax: +1-517-432-1009
Email: aib@aib.msu.edu