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Studying Complex IT Challenges? Discuss Real Cases

JANIS L. GOGAN & DAVID M. MURUNGI

Abstract Field-based case studies are uniquely suited to exploring the complex challenges of digital transformation. We propose that real discussion cases (developed from rigorously-researched field-based case studies) can trigger useful discourse that helps scholars improve theories addressing complex digital transformation challenges. To advance this argument we undertook an extreme-case study to examine the practices and theoretical contributions of an exceptionally impactful researcher in a non-IT domain (Sumantra Ghoshal, an international management scholar who conducted many field- base case studies and produced many real discussion cases). Based on our extreme-case study findings we consider implications for research on digital transformation.

Keywords: • case research • case study • discourse • teaching cases •

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1   Introduction

Field-based case studies are uniquely suited to exploring complex challenges organizations face in adopting and implementing emerging technologies (Eisenhardt 1989). We propose that real <u>discussion</u> cases, developed from rigorously-researched field- based case studies, can trigger useful scholarly discourse. Because case discussants can interpret real cases richly, holistically, and freely, discussions can help the researcher appreciate new perspectives on study findings, particularly if disscussants vary in their backgrounds, experience, and other dimensions. New perspectives, in turn, may help the researcher identify useful new questions for further study. Thus, when real cases are critiqued through discussions among scholars and with practitioners, scholars should develop ideas that lead to stronger theories.

To advance this argument, we present an extreme-case study which examined the work and research practices of an exceptionally impactful scholar in a non-IT domain: Sumantra Ghoshal. As explained in Yin (2018) and Mills et al. (2010) an extreme-case study is an appropriate research method if the objective is to learn from a rare or unusually positive or negative example. In a 20-year academic career (1985-2004) Ghoshal published more than 70 papers, 12 books, and 36 (or more) discussion cases[1] before his death at age 55 in 2004. One of the most influential management scholars of the 20th century (Rugman 2002), Ghoshal is best known for conceptualizing the multinational corporation (MNC) as an <u>inter</u>-organizational network confronting the dual challenges of integration and differentiation (first articulated by Lawrence and Lorsch, 1967 as <u>intra</u>-organizational challenges). Later, Ghoshal's papers considered why human resources management practices were not keeping pace with socio-economic and technical forces. He also published much-cited critiques of rational-actor management theories which, he asserted, harm both business education and management practice (Ghoshal 2005).

In 2010 the Sumantra Ghoshal Conference was established at London Business School (LBS) in his honor; its annual Ghoshal Award for Research Relevance and Rigour has gone to Kathleen Eisenhardt, Michael Tushman, Ranjay Gulati, David Teece, Robert Sutton, Ron Adner, Laurence Capron, and Amy Edmondson.

Thus, the extreme case of Sumantra Ghoshal is that of a scholar who made an exceptionally strong impact on the field of international management, as well as more generally on theories of management, leadership, and organization design and business education. His documented enthusiasm for translating field-based case studies into both scholarly publications and practitioner publications – including real discussion cases -- provides an opportunity for us to consider whether and how case research and discussion cases influence research outputs and practices. In this paper we show that Ghoshal's case research was complemented by vigorous case discussions with co-authors, business leaders, and students. Consistent with ideas advanced by Vermeulen (2007), we contend that case discussions were important to a virtuous cycle of communication that improved both the relevance and rigor of his research. The extreme-case study evidence presented here supports our proposition that real discussion cases can trigger a process of mutually-informing collaboration among scholars and practitioners.

In this paper, we first define and discuss foundation concepts: discourse, case research, complex IT challenges. Next, we report on our extreme-case study (of Ghoshal as an extreme case of exemplary double-impact research). After discussing how cases informed Ghoshal's work, we consider implications for research on digital transformation. We conclude with a broader consideration of how rigorously researched real discussion cases contribute to theories addressing complex IT challenges.

2 Foundation Concepts: Discourse, Complex IT Challenges, and Discussion Cases

2.1 Discourse

Ideas are socially constructed in discourse among an "invisible college" of scholars (Paisley 1972), within and across disciplinary and geographic boundaries. Impactful research may contribute to the invisible college, to practice, or to both, and scholarly research and teaching can be synergistic: "Theory surely leads to practice, but practice also leads to theory. Teaching, at its best, shapes both research and practice. …" (Boyer 1990, p. 16). Vermuelen (2007) proposes that two communication loops help a scholar produce rigorous and relevant work (Figure 1). Consistent with this view, Tushman and O'Reilly (2007) report that doing case interviews and discussing real cases in executive programs are mutually-reinforcing activities.

Thus, a real discussion case can trigger virtuous cycles of reflection and feedback. While Figure 1 emphasizes executive education discussions, we propose a broader view of the Relevance communication loop: case discussion with undergraduate or MBA students, PhD students, colleagues, and/or people in various jobs at various levels in various industries may give a researcher new ideas that trigger new studies in the Rigor communication loop.
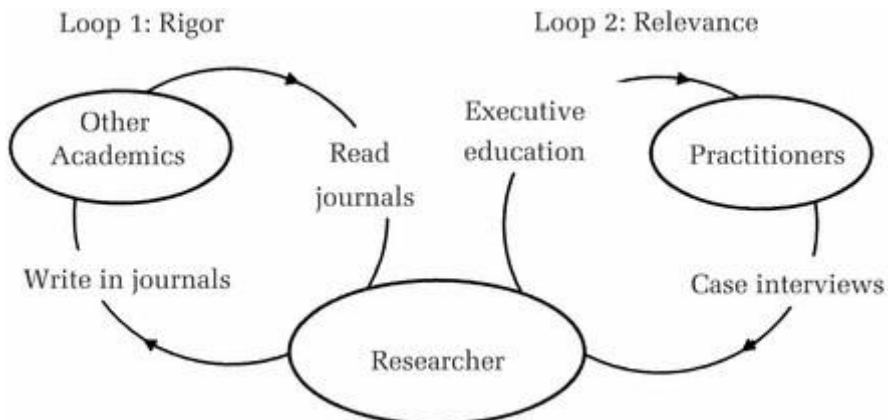

Figure 1: Loops of Communication (Vermeulen 2007, p. 757)

Vermeulen's rigor-relevance communication loops are supported by discourse theory, which explains how arguments are translated from one domain to another. "Argumentation" -- broadly construed as a way to justify knowledge claims (Habermas 1984; Toulmin 2003) – is categorized in two complementary types: Dialectical and Rhetorical (Hohman 2000; Leff 2002). <u>Dialectical</u> argumentation, corresponding to Vermeulen's Rigor communication loop, is an abstract and structured form of propositional logic that tests arguments by applying formal rules (Rowland 1987). <u>Rhetorical</u> argumentation, corresponding to Vermeulen's Relevance loop, tests the plausibility of a proposition relative to a particular audience, rather than in relation to alternative propositions (Jacobs 2000). Some theorists view the two forms of argument as <u>antagonistic</u>, since the tendency of dialectical argument is to transcend, while the tendency of rhetorical argument is to situate (Leff 2002). Aristotle saw the two forms of argument as <u>complementary</u>. He argued that rhetoric is the necessary counterpart of dialectic, since rhetoric is needed to defend decisions (you may be right, but you still need to convince others (in Krabbe 2000). Leff (2002) also sees rhetoric and dialectic as complementary, in that dialectic depends on rhetoric to "close and define the situations in which it can operate." In this view, rhetoric can provide provisional, local closure when conclusive agreements are not reached through inference. However, the addition of dialectical rationality to an argument helps achieve the goal of effective persuasion.

In the IS subfield of systems design and development, Peter Checkland's engaged scholarship (action research) resonates in ways similar to Vermeulen's Loops of Communication, particularly in the Inquiring Learning Cycle of SSM (Checkland 1999, p. A9). He states optimistically that "as long as the interaction between the rhetoric and the experienced 'reality' is the subject of conscious and continual reflection, there is a good chance of recognizing and pinning down the learning which has occurred." Yet, he cautions, "The process of learning by relating experiences to ideas is always both rich and confusing." (Checkland 1999, p. A7). The field of IS is grateful that Checkland and colleagues did not give up; their ability to rethink classic systems engineering methodology led to the important "distinction between 'hard' and 'soft' systems thinking": the world may be 'hard' but the essential 'process of inquiry' is the 'soft' and all-important 'learning system' (Checkland, 1999, p A7)

2.2   Complexity and Case Research

Complex problems (and especially-complex "wicked" problems) arise in many contexts, including government policymaking (Nickerson and Sanders 2014), corporate strategy (Camillus (2008 and 2016), software development (DeGrace and Stahl 1990), and other domains (e.g., Conklin 2005; Ritchey 2011). A wicked problem is "a social or cultural problem… that is difficult or impossible to solve for as many as four reasons:

1) incomplete or contradictory knowledge,
2) the number of people and opinions involved,
3) the large economic burden, and
4) [being] interconnected … with other problems." (Kolko 2012)

Methods of engaged scholarship, including action research (Checkland 1999) and case research (the topic of this paper) are well suited to the study of complex problems, including emerging-IT challenges. Several recent case studies show the benefit of using case research to study complex emerging-IT challenges:

- A recent multiple-case study aimed to understand how "big old" companies achieve digital transformation. That study homed in on two key capabilities: building and continuously improving an organization's "operational backbone" for highly reliable systems and data, and building and refining a flexible and responsive "digital services platform" (Sebastian et al., 2017).
- Another multiple-case study (Ma and McGroarty 2017) considered how three disruptive technologies – high- frequency trading, social network analytics and smart mobile applications – change financial markets and introduce important societal implications. Their case findings demonstrate that while innovations led to improvements (e.g., harnessing crowd wisdom, leading traders to produce more accurate price estimates) the increased transaction velocity gave rise to new or exacerbated challenges (e.g., misinformation due to complex information networks, speculative trading behavior, increased market volatility).
- An ethnographic case study (Niemimaa and Niemimaa 2017) investigated how universal best-practice prescriptions for information systems security are translated into actual organizational practices. While the literature had shown that best practices should be contextualized, little was known about how organizations actually translate these into situated practice. This case study both illuminates important translational mechanisms and reveals hurdles which an organization faced during this translation process.

Case researchers disseminate their findings via three routes: scholarly journals (e.g. *EJIS, MISQ*), practitioner outlets (e.g., *MISQe, Harvard Business Review*), and discussion cases (distributed by CaseCentre, HBS Publishing and others). We argue that these varied publication outlets make it possible for case researchers to produce stronger and more useful theories about complex IT challenges, by triggering discourse among scholars, practitioners and future leaders (e.g., MBA students). Real discussion cases are particularly well suited to this process, as we discuss next.

2.3   Discussion Cases

An ideal high-quality real discussion case (per Naumes and Naumes 2012) is based on primary data gathered in the field (via interviews and observation, data from an organization's web site, annual reports, internal memoranda, etc.). The case provides truthful evidence about multiple facets of a focal situation (that is, it is *real)*. It takes the point of view of a particular protagonist at a point in time and (if written well) it has a story-like tone that helps readers empathize with the protagonist. Skilled case discussion facilitators encourage discussants to "stand in the shoes" of this manager at this organization, facing this particular challenge. The problem the manager faces *"has not yet been solved, and may even remain to be identified"* (Naumes and Naumes, 2012 p. 33). As is true of most complex problems, there is no single "right" answer, and the

discussion case does not explicitly state the author's interpretation (thus freeing discussants to offer their interpretations). In discussion, participants usually come to appreciate facets they did not consider during individual case preparation (Andersen and Schiano 2014).

These characteristics make the preparation of a real discussion case a useful (maybe optimal) early step in a program of research on a complex emerging-IT problem. Emerging IT challenges involve *equivocal* technologies: IT appplications for which "information is incomplete, hyperbolic, or highly ambiguous" (Berente et al. 2011). Most emerging IT challenges are equivocal because of the essential flexibility of software; its potential is limited primarily by the imagination and skill of its developers. Similarly, the potential of a flexible IT-enabled platform is limited primarily by the imagination and skills of its end users. Consider the many emergent forms that an Excel spreadsheet or Word document (examples of end-user platforms) can take through use. ERP and other enterprise and inter-enterprise software may be tightly restrictive, but other IT platforms offer great flexibility -- so much so that Cash et al. (2008) observe that every IT organization faces a continual challenge of effectively managing known technologies and applications (with low or manageable equivocality), while exploring a continuous stream of new equivocal technologies (via separate processes, structures and controls that are conducive to experimentation).

Relevant individual and collective sensemaking about equivocal technologies is supported by collective discourse, in which varied interpretations of use and value are aired. Reporting on a case study of sensemaking in a virtual world (Second Life), Berente et al. (2011, p. 705) concluded: "From rational argumentation around conceptual capabilities to the metaphorical association with earlier waves of innovation, individuals draw upon a rich tapestry of sensemaking strategies to confront the equivocality that they encounter. "

Having laid out our arguments for the importance of discourse for making sense of equivocal technologies in general, and for how real discussion cases support flexible sensemaking that may improve theory, we next report on the extreme case of an exemplary double-impact researcher: Sumantra Ghoshal. Our findings will reveal how real discussion cases support the dual communication loops of rigor and relevance (or of dialectic and rhetoric).

3 The Extreme Case of Sumantra Ghoshal

3.1 Case Study Overview

This study is part of a broader investigation of how exemplary double-impact scholars in several management disciplines use case studies to investigate complex problems. Our investigation began with an exploratory single-case study, in which we examined the extreme case of an influential international management scholar (Sumantra Ghoshal's home discipline was management, not IS management). We drew primarily on archival sources (his papers, discussion cases, and books, as well as presentations, articles and

books about him). We also conducted a one-hour telephone interview with his main collaborator, Christopher Bartlett, who co-authored four books and ten *Financial Times* (FT)50 journal publications with Ghoshal.

Born in 1948 in Calcutta, Ghoshal studied physics at Delhi University, and worked for Indian Oil for about a decade, before moving to the United States to pursue graduate studies. His MIT Master's thesis (1983) asked 32 US managers in Fortune 500 multinational corporations (MNCs) about their external information needs. Similar to Aguilar (1967) Ghoshal reported that competitive and market information were important to these managers; however, respondents' rankings of other factors differed from prior studies. Ghoshal built on this initial work while earning two doctorates: a PhD from MIT in 1985 and a DBA from Harvard in 1986. His rise was meteoric. His scholarly career began at INSEAD in 1985 and he also was founding dean of IBS- Hyderabad. He joined the LBS faculty in 1994 and remained at LBS until his death in 2004. Our case study time period covers his doctoral studies until his death. Exhibit 1 summarizes Ghoshal's work over his two-decade scholarly career. His Top Ten most highly-cited journal publications for his career (four with Bartlett) yielded more than 38,800 citations.

3.1   Sumantra Ghoshal's Two-Decade Scholarly Career, 1985-1995

Our purpose is to elucidate how Ghoshal successfully blended rigorous case research, story-like discussion cases, and practitioner articles and books, leading to strong and useful new theories of international management. However, this section should not be approached as a literature review, since our purpose is to illustrate the value of conducting rigorous case research, producing discussion cases, and discussing them -- not to fully inform the reader about international management research.

Ghoshal's MIT PhD dissertation reference list shows Ghoshal (1985) was influenced by many scholars in the "invisible college" (175 works cited). This was a multi-method study (surveys, cases, non-case interviews) of environmental scanning at both individual and organizational levels of analysis. It aimed to answer two questions: RQ1) What environmental, organizational, and individual attributes affect the way managers scan their business environments? RQ2) How might a firm organize the environmental scanning function? Ghoshal saw organizations as complex systems and noted that organizational complexity is second only to a "transcendent" level of complexity in general systems theory (Boulding, 1956), similar to a wicked problem (Rittell and Webber 1973). To learn how managers allocated time to various informational tasks, Ghoshal surveyed 55 managers at six Korean global trading companies and 56 managers at 10 Korean manufacturers (similar to Mintzberg, 1978 and 1990). To learn why, he interviewed 36 managers in three Korean firms, and visited environmental scanning departments at two firms which each used a scanning methodology that was pioneered by a former Samsung employee. Ghoshal also reported in detail on a Samsung case study that, he stated, led him to believe that organizational capabilities are heavily affected by individual competencies/behaviors. This theme pervades much of his later work.

For his Harvard DBA Ghoshal worked under the supervision of Christopher Bartlett, who had already launched what would be a nine-case study in three industries and three countries (US, Europe, Japan):

Electronics	Telecom	Packaged Goods
GE	ITT	Unilever
Philips	Ericsson	P&G
Matsushita	NEC	Kao

Bartlett's project aimed to create teaching cases and a book for a new course, *Managing International Business* (MIB). "Everything we worked on showed up in that MIB course," Bartlett told us. The nine cases (of which, the Matsushita case was led by Ghoshal) are the "core" of *Managing Across Borders* (Bartlett and Ghoshal 1989). Before being made available via HBS Publishing[2], they were taught in a short executive education course and the MIB course, and described in three early practitioner publications (Ghoshal & Bartlett 1986; Bartlett & Ghoshal 1987a and 1987b). By 1991, four discussion cases from their work were in the HBSP system: GE (391-144), Komatsu (390-037), Matsushita (388-144), and P&G (384-139).

Ghoshal's DBA thesis (Ghoshal 1986) asked: "How can relations between the headquarters and subsidiaries of a large multinational corporation be organized so as to facilitate innovations in the company?" His study was conducted in three stages:
1) 100 interviews on 38 innovation cases at Ericsson (Sweden), Matsushita (Japan), NEC (US), Philips (Netherlands).
2) Surveys of 300 + managers at Matsushita, NEC, and Philips.
3) Survey sent to 500 N American and European multinationals, with 65 responses.

The case studies revealed four innovation processes (center-for-global, local-for-local, local-for-global, global-for-global) and three MNC subsidiary types: Innovator, Contributor, Implementer. Ghoshal (1986) stated: "The organizational factors that facilitate each process are not only different but mutually contradictory. Herein lies a key challenge for MNC managers: designing an organization that can facilitate all three innovation processes simultaneously. … Based on both case and survey research, a framework is developed to suggest a basis for differentiation in allocation of subsidiary roles and structuring of headquarters-subsidiary relations…."

In the *Acknowledgements* section of his 1986 DBA thesis, Ghoshal's praise for his supervisor points to how their discussions helped him form and reform ideas. He stated: *"Professor Christopher Bartlett, the chairman of my thesis committee, must share both credit and discredit for this thesis, not only because of his personal involvement with the research ... but also because of his overall influence on the ways in which I have come to think about the task of business administration in general, and about management of multinationals, in particular. … Many of the ideas and concepts presented in this report arose in the course of many, many hours of discussions with him in the lobbies of strange hotels in three continents, in deserted class rooms of Aldrich and Cotting, and in overcrowded airplanes. …"*

The thesis, centered on the 38 cases in four companies (an embedded-cases study design), launched both his career and Bartlett's. Together, they published 16 case-infused journal publications by 1995. Meanwhile, Ghoshal authored seven other case-infused FT-50 publications and 14 discussion cases (alone or with other co-authors) by 1995. In the second decade of his career Ghoshal produced another five scholarly FT50 papers (none with Bartlett), 11 practitioner papers (seven with Bartlett), 20 real discussion cases (none with Bartlett, who produced 36 other cases during the same time[3]), and nine books with six sets of co-authors (some with Bartlett, including new editions of books).

Ghoshal's view of organizations as complex social systems was strongly linked to his belief in the value of case research, both in terms of the data gathered in each case study and discussions about them with students and colleagues. In a paper published the year after he died, Ghoshal urged business schools to embrace Boyer's recommendations for pluralistic scholarship[4]: "We need to … reengage with the scholarship of integration, application and pedagogy to build management theories that are broader and richer than the reductionist and partial theories we have been developing over the last 30 years." (Ghoshal, 2005, p. 87). In this paper he cites Friedrich von Hayek's 1989 Nobel Memorial Lecture, in which Hayek asserted that a dangerous "pretense of knowledge" is often produced when positivist "scientific" methods are applied to complex social phenomena (such as institutional change). Physical systems, Hayek explained, operate independent of research; the earth is round and gravity exerts its pull regardless of what or how we think about these phenomena. Thus, Hayek asserted, positivist research on a <u>physical</u> phenomenon can change our understanding but does not change the phenomenon. In contrast, when positivist research is applied to a <u>social</u> phenomenon, people who believe the resulting theory may change their actions based on it – in turn, changing the phenomenon. Ghoshal urged management scholars to "temper the pretense of knowledge" through engaged scholarship, including through conducting and discussing rigorous field-based case studies (Ghoshal 2005, p. 87).

3.3 Christopher Bartlett Reflecting on his Research Collaboration with Sumantra Ghoshal

A conference presentation or journal publication can trigger a useful discussion about a complex phenomenon, and, we suggest, another valuable way to trigger useful scholarly discussion is to prepare real discussion cases as part of one's program of case research. Our extreme-case study of Ghoshal, an extraordinarily impactful scholar in the field of international management, reveals that case discussion among scholars and with leaders, managers, and business students can yield useful insights about a complex problem, which in turn can improve theory or generate new theory.

Christopher Bartlett, who has produced 74 real discussion cases in his career so far (most recently in 2017) also believes cases trigger fruitful conversations that improve theory. In 2007 Bartlett gave a talk at the inaugural Sumantra Ghoshal Conference at London Business School. A summary and commentary about this talk (Rynes 2007) restated Bartlett's view that Ghoshal exemplified several characteristics important to engaged scholarship, including "1) A commitment to field research, built on a profound respect for

practitioners. 2) Engagement and ongoing dialog with practitioners … 3) Teaching and research as interdependent activities, with teaching cases being the first output of field research."

We conducted a telephone interview with Bartlett, in fall 2017. Asked to reflect on his collaboration with Ghoshal, he stated: "Case research, teaching, and publications are tightly bound and closely intertwined. I've always thought of a three-legged stool: academically engaging plus managerially engaging plus pedagogically engaging. All three are always an explicit part of the case research engagement." Bartlett's first publications with Ghoshal were "driven by both our three-industry research design and the ability to come into the MBA and executive classrooms with cases. Also, we were doing a lot of outside consulting activity. ...We were not, at first, led by a strong conceptual model in this research…"

Bartlett described their collaboration: "We beat each other up in discussions; pushing ideas back and forth. Out of these cases came a belief that a very different managerial model was developing at companies." Discussions with students and with each other led Bartlett and Ghoshal to ideas discussed in their books and many of their journal publications. Bartlett stated, "I learned a huge amount from my MBA students. Discussing a case was a way to test ideas; students would push back. Executive Education participants would push back especially hard; they were quite a reality check on the ideas. ... Sumantra and I could really push each other to go far deeper. ... It was intense ... yet we had such an easy rapport." Their work practice was punctuated by energetic conversations: "I would take the lead on managerial articles; Sumantra would take the lead on the academic papers. Once a first draft was written, we would switch; I'd work on his, he'd work on mine. We beat each other up in the process, butting heads until we agreed we had a compelling story to tell. … It was a pretty constant ongoing collaboration."

All 20 papers that Bartlett published in the FT50 during his career were co-authored with Ghoshal (in addition, Ghoshal produced 16 other FT50 papers, alone or with others).

4 Discussion and Implications for Research on Complex IT Challenges

4.1 Main Findings from the Extreme Case of Sumantra Ghoshal

Our extreme-case study of one scholar's work practices and influence illustrates how rigorous case research – and, importantly, real discussion cases produced from this research-- contribute to understanding complex challenges and to helping researchers identify plausible solutions and build better theories. Ghoshal and Bartlett produced many cases about international management, and discussing them was essential to developing their influential theories. We also observe that Ghoshal's extensive reference lists point to his respect for the "invisible college" (a form of asynchronous scholarly discourse). Cases were central to his work, but not the only tool in his kit. His respect for other research methods is evident in his other qualitative studies (questioning managers in similar jobs in many organizations) and quantitative studies (surveys).

Ghoshal's engaged scholarship helped him deeply understand the messy complexity of organizational life and to avoid Hayek's "pretense of knowledge." Both his papers and discussion cases triggered important conversations about management and (later) management education (in his later years Ghoshal criticized managerial theories and teaching approaches that, he felt, over- emphasize analytic techniques and a rational-actor perspective, while underemphasizing behavioral and social aspects of organizational life). Evidence of his impact on theories that address complex challenges of global management is incontrovertible (nearly 40,000 citations to his Top Ten FT50 papers; see Appendix 1), as is the evidence (presented here) of how case research contributed to his (and Bartlett's) thinking.

Ghoshal's body of work, combined with Bartlett's description of their work practices, point to the potential that real discussion cases offer for helping managers and scholars avoid faddish discourse –in any managerial domain, including IS management. Based on the extreme case of impactful research described here, we propose that a program of research on a complex IT phenomenon should include some field-based case studies, from which it is helpful to produce some real discussion cases.

4.2   Case Studies, Case Discussions and Discourse

Case research demands cognitive flexibility. When evidence pointed in new directions, and/or when other scholars and practitioners offered alternative interpretations, Ghoshal looked in those directions. For example, an early paper (Ghoshal 1987) explained that strategic competencies and organizational structures for international operations vary, yielding three enterprise archetypes: multinational, global, international. Later, Ghoshal proposed that effective leaders of <u>transnational</u> enterprises master multinational, global, and international strategic competencies and structures (all of these, not just one). Importantly, this insight arose from discussing cases with his students and his main collaborator. Bartlett and Ghoshal had many vigorous and productive conversations, with each other and with MBA and executive students and other scholars.

Case discussions often reveal new facets of a phenomenon. Discussants are encouraged to identify with the case protagonist and to recognize that there are usually several right answers (and also many wrong answers) to a complex situation. To some extent, discussants are free to focus on aspects that interest them and to argue why these matter. Conventional scholarly discussions (such as those triggered at conferences) can also produce helpful insights, but if these discussions are confined to small circles of interested scholars, diverse voices may not be mixed into the stew of ideas they stir. Discussing a case with students or practitioners can help a scholar see other facets. Thus, real discussion cases can play a useful role in triggering conversations that scholars have with other scholars and with business or public leaders, managers, and students.

Addressing the problem of IT fads (unreasonable expectations and irrationally skewed perceptions of IT innovations), Hirschheim et al. (2012) argue that while scholarly analysis can validate reasonable claims about an innovation, the analysis can also help prevent detrimental "flighty" claims from taking off. However, lengthy peer review

processes delay publications, which in turn can delay the emergence of scholarly discussions about new IT phenomena. How to get scholars involved sufficiently early to influence the trajectory of a management fad? Hirscheim et al.'s answer: don't wait for the final journal publication; improve discourse by making fine-grained scholarly analysis available at an earlier stage in a program of research. That argument assumes that ideas flow from one scholar to another as we read each other's works. However, we caution that an important earlier study based on discourse analysis reported that only about 5% of papers that cited *"*Power, Politics and MIS Implementation (Markus 1984) had engaged with that study's central tenets. In its *Conclusion* section this paper glumly asked: "Does the IS discipline support a true and active dialogue around concrete research questions about phenomena of interest? Or are we just ships passing in the night, using selected referential spotlights to see the shape and direction of other vessels?" (Hansen et al. 2006, p. 419). We argue that real discussion cases might more quickly help scholars and practitioners jointly evaluate complex IT phenomena -- such as cognitive computing initiatives, digital transformation tactics, or rapidly changing cyber-attack practices and related incident response practices. For fast-moving topics like these, scholarly theorizing can greatly benefit when scholars and practitioners talk with each other about practices in the field.

To study complex IT phenomena, curious scholars with complementary expertise and interests, who are skilled in various methods and theories, may produce very helpful case studies. Subsequently, when smart people from multiple theoretical and methodological perspectives argue vigorously about the cases, good ideas should emerge. Sumantra Ghoshal greatly valued his collaboration with Chris Bartlett, and Bartlett greatly appreciated how "butting heads" together produced great ideas.

4.3 Study Limitations and Suggestions for Further Research

Ghoshal's scholarly journey leads us to believe that, for a program of research about a complex IT challenge, an optimal starting point is to conduct one or more rigorous field-based case studies and to produce a few real discussion cases from these. However, our research has limitations. We conducted a single extreme-case study, whereas a more comprehensive embedded- cases study could use content analysis to trace specific Ghoshal ideas through his discussion cases, practitioner articles and scholarly papers (each stream of Ghoshal research would be treated as an embedded case).

We have not yet deeply considered rival explanations. For example, could Ghoshal's strong impact be a function of his superior intelligence or superior ability to persuade, independent of his choice to conduct case research and his enthusiasm for discussion cases? Other rival explanations may emerge from further studies of how other exemplary scholars' ideas propagate and develop - such as by considering Kathleen Eisenhardt (first recipient of the Ghoshal Award), other recipients of that award, and various influential IS case researchers. Thus far, no IS researcher has received the Ghoshal award, so to identify exemplary dobule- impact scholars to study, it will be necessary to apply similar criteria as those which are used by the Ghoshal Award committee to identify influential researchers in other domains who exemplify both rigor and relevance. By studying other

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influential scholars we will have an opportunity to learn to what extent conversations about real discussion cases help shape theory, compared with other forms of individual and collaborative sensemaking.

One could also choose to study the contrasting case: research practices of influential management and IS scholars who never conduct case research. By examining how these scholars engage in individual and collaborative sensemaking, compared with case researchers, we might be able to home in on the unique contribution played by real discussion cases and also identify alternative mechanisms that support discourse which improves theory. We acknowledge that many influential scholars (and many good-enough scholars) in the field of IS are neither case teachers nor case researchers. Surely other forms of discourse contribute to how scholarly ideas are aired and shaped and considered in terms of their potential to extend or build management theory or IT management theory.

Another limitation arises from our choice to focus on an extreme case, from which we cannot easily generalize -- Ghoshal set a nearly-unattainable standard of research productivity and excellence, whereas most scholars produce far fewer papers and books, and with modest impacts. We also recognize that case research skill is honed with practice and tempered by the researcher's deep knowledge of his/her field and related business fields. Discussion leadership skill is also honed through practice and tempered by broad knowledge. So, a scholar who seeks to emulate Ghoshal's approach to research first needs to read deeply and widely, and to develop expertise in carrying out high quality field case research, and to become skilled at writing real discussion cases, and become skilled at facilitating case discussions. It may be useful to study the scholarly journeys of good (not great) case researchers, to learn whether and how good-enough case research produces ideas that benefit theory and practice, and whether extensive discussion involving participants from multiple occupations and representing mulitple perspectives is fruitful in this context.

Prior studies that employed discourse analysis in social media and other IT-enabled contexts suggest opportunities for future research that would explore whether and how case discussions trigger theoretically-important ideas. For example, a three-case Wikipedia study of editing and written discussion on three topics -- Armenian Genocide, Ethanol Fuel, Intellectual Property - analyzed the findings in light of the Theory of Rational Discourse (Habermas 1984) and concluded that it is possible to design an information system that supports "the emancipatory objectives of critical social theory ... [by circumventing] much of the influence of relations of power and domination." (Hansen et al. 2009). Examining how "software development team members achieve a level of understanding that allows them to work in parallel yet create interdependent components or modules that work together seamlessly" another study (Hansen and Rennecker 2010) sought to understand how hermeneutic interpretation takes shape through collaboration. Further building on prior work by Weick (1995) and Weick et al. (2005), a third study proposed that "individuals make sense of new information technologies through discourse." It concluded: "In making sense of innovations, individuals present, negotiate and argue for a range of perspectives on the value of the emergent techology ... in a

sensemaking process ... ultimately influencing the adoption and evolution of a technology." (Berente et al. 2011, p. 686).

Just as the three studies described above captured peoples' arguments about new IT or IS work, an important next step in our program of research could be to conduct a study which analyzes transcripts of one or more recorded discussions (by MBA and/or executive participants) of real cases that address complex IT challenges. That study could examine the arguments advanced in discussions, in light of each argument's potential for extending or building relevant theory. Once this first step is taken (to verify that theoretically-important ideas are aired and shaped in case discussions), a next step would be to conduct further studies to investigate whether, how, and to what extent ideas aired in case discussions actually do inform theorizing, and whether, how and to what extent the theorizing actually informs influential research on complex IT challenges.

Based on one extreme-case study of an extraordinary scholar in the field of international management, we have argued for how discussion of rigorously-researched real cases may help IS scholars propose and improve theories addressing complex digital transformation challenges. We hope we have identified a way for the field of IS to avoid the fate of "ships passing in the night."

Acknowledgments

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This list includes those Ghoshal papers and books that are cited in the text of this paper, whereas Appendix 1 lists all of his papers and books.

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Appendix 1: Sumantra Ghoshal

Books (later editions noted)

2006	A Bias for Action (Bruch & Ghoshal)
2005	Organization Theory and the Multinational Corporation (Westney and Ghoshal)
2004	The Future of the Multinational Company (Birkenshaw, Ghoshal, Markides, Stopford, Yip)
2002	Managing Radical Change: What Indian Companies Must Do … (Ghoshal, Piramal, **Bartlett**)
2002	World Class in India: A Casebook of Companies in Transformation (Ghoshal, Piramal, Budhiraja)
2000	Transnational Management: Text, Cases and Readings (co-author with **CA Bartlett** on first 5 editions)
1999	Managing Across Borders: The Transnational Solution (2 editions, co-authored with **CA Bartlett**)
1997	The Individualized Corporation (Ghoshal and **Bartlettl**)
1987	The Strategy Process: Concepts, Contexts, Cases (Mintzberg, Lampel, Quinn, Ghoshal).
1997	The Differentiated Network (Nohria, Ghoshal)

Career Top Ten Journal Publications, per Google Scholar (last two considered a tie for 10th)

16,862	1998	AoM Review	Nahapiet, Ghoshal. Social capital, intellectual capital, and organizational advantage.
6,347	1998	AoM Journal	Tsai, Ghoshal. Social capital and value creation: The role of intrafirm networks
3,562	2005	AoM L&E	Ghoshal. Bad management theories are destroying good management practices
2,970	1996	AoM Review	Ghoshal, Moran. Bad for practice: A critique of the transaction cost theory
2,474	1990 *	AoM Review	Ghoshal, **Bartlett**. The multinational corporation as an interorganizational network
1,745	1987	SMJ	Ghoshal. Global strategy: An organizing framework
1,100	1986 *	HBR	Ghoshal, **Bartlett**. Tap your subsidiaries for global reach
1,127	1989	SMJ	Ghoshal, Nohria. Internal differentiation within multinational corporations
971	1988 *	JIBS	Ghoshal, **Bartlett**. Creation, adoption and diffusion of innovations by subsidiaries
838	1994	SMJ	Nohria, Ghoshal. Differentiated fit and shared values: Alternatives for mananging HQ-subsidiary relations
826	1993 *	SMJ	Bartlett, Ghoshal. Beyond the M-form: Toward a managerial theory of the firm

38,802   citations   1 AoM Journal, 3 AoM Review, 1 JIBS, 1 HBR, 2 SMJ 4 co-authored w CA Bartlett

37 Papers in the FT 50 journals (20 papers co-authored with C Bartlett indicated with *)

Academy of Management Review   1999 1996 1990
California Management Review   1998* 1997* 1992 1988
Harvard Business Review   2004 2003* 2000* 1995* 1995* 1994* 1992* 1990* 1986*
Journal
of
Internat
ional
Busine
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Studies
1998
1988*
Journal
of
Operati
ons
Manag
ement   2006 *Management Science*   1994
Strategic Management Journal   2000 1994 1994* 1993* 1991 1991* 1987
MIT Sloan Management Review   2005 2003 2003 2002* 1999* 1996* 1995* 1993 1987a* 1987b*

36 Discussion Cases (in CaseCentre and HBS Publishing Collections, Feb 2017)

396-142	Lufthansa: The challenge of globalization.	902-020	Ogilvyone: Integrating the enterprise.
389-025	Scandinavian Airlines Systems (SAS) in 1988.	390-037	Electrolux: Acquisition & integration of Zanussi.
389-021	The Dunlop-Pirelli Union	393-007	Cartier: A legend of luxury
394-140	The transformation of AT&T.	396-028	Felix Constructions SA.
392-031	Canon: Competing on capabilities.	396-050	SA Chupa Chups
396-138	Philips Semiconductors: Breaking with the past.	396-154	The LG Group: Leaping to the Future.
392-055	Andersen Consulting (Europe): ….PRIZE WINNER	302-124	The transformation of Bajaj Auto.
394-019	ISS – International Service System A/S.	399-088	Housing Development Finance Corp. (HDFC)
396-153	Indian Oxygen Ltd: Transformation in India.	302-035	Nicholas Piramal LTD: Integrating diversity.
394-051	General Electric synopsis.	397-065	WIPRO Corporation: Balancing the future.
388-144	* Matsushita Electric Industrial (MEI) in 1987.	396-048	Reliance Industries Ltd
301-040	Lufthansa 2000: Maintaining the change momentum.	302-034	Sun Microsystems: Driving innovation …
392-049	Kao Corporation PRIZE WINNER	396-140	Revitalisation of the Bank of Montreal.

302-199	Hindustan Lever Limited: Levers for change.	399-054	VIP Luggage: "It takes a lot to be a VIP"
396-141	British Telecommunications PLC …	305-149	Emirates Airline: Hub of the world.
396-139	Standard Chartered Bank.	302-090	Natura: The magic behind Brazil's ….
399-053	Siemens Nixdorf IS.		
392-033	The transformation of BP		