Royal Holloway
University of London

School of Management, Royal Holloway University of London

Working Paper Series

SoMWP–0806

Enabling Collaborations In Information Systems Practice

José-Rodrigo Córdoba-Pachón

October 2008

Enabling Collaborations In Information Systems Practice

Dr. José-Rodrigo Córdoba-Pachón
School of Management, Royal Holloway, University of London
Egham, Surrey, TW20 OEX
United Kingdom
Email: j.r.cordoba-pachon@rhul.ac.uk

Abstract

Information-systems (IS) has become a 'broad church' that includes academics and practitioners in several areas of theory and application. It is not only important to facilitate understanding and communication among individuals, but to be able to engage into forms of collaboration with others. This paper will highlight some important issues arisen in the practice of formulating IS projects which reflect what is also happening elsewhere in the social sciences. The paper will focus on suggesting ways of enabling collaborations to develop between those involved in exploring new projects and ideas, with a view that these could be facilitated if we assume continuous and systemic attitude of engagement with 'other' people. This attitude would require us to go beyond what we consider relevant for IS as a discipline.

Keywords: Information systems; collaboration; relevance; boundary spanning; diffusion of knowledge; systems thinking.

Enabling Collaborations In Information Systems Practice

DR. JOSÉ-RODRIGO CÓRDOBA-PACHÓN
School of Management, Royal Holloway, University of London

INTRODUCTION

Like any other profession in the twenty first century, information systems (IS) professionals are now encouraged to 'seek out' opportunities to do research and engage in other activities for their organisations. To some, this means developing and maintaining relationships with 'others', some of whom could have been considered in the past the 'enemy' (for instance practitioners). To others, it is about making activities more relevant and productive, and ultimately more accountable. Whatever the case, it seems that information systems is emerging as a 'discipline', and this generates interesting debates and positions (Baskerville & Myers, 2002; Introna, 2003). What is common through these positions is an acknowledgement that information systems people need to work inside and outside their areas of expertise. How can we work together with 'others' whilst we continue contributing to develop the IS profession?

This paper addresses this question by suggesting that engaging with 'others' poses a number of issues, challenges and opportunities. Some of these will be identified, and suggestions to facilitate collaboration will be presented. It is assumed that IS people are willing to *engage*, and in order to do so, we need to re-think our attitude and strategies towards collaboration.

We start the paper by rephrasing the above question as: 'In the practice of IS what is needed to engage with others?'. Currently, this question is being answered by highlighting the importance of 'soft skills' in one of the main activities of IS professionals: that of working in projects. Gaining and developing soft skills is an important part of ensuring good work with others and ultimately ensuring success in the practice. But as will be seen, this is only a partial picture of how engagement in collaboration should take place.

THE NEED FOR SOFT SKILLS: THE TIP OF THE ICEBERG

The development of information systems as a discipline also contributes to increasing the complexity of IS practice as a more humane activity. IS professionals now need to be able to work on *human relationships*. In information systems projects, "…skills in managing relationships are critical to achieve stakeholder satisfaction through all stages of the project (Pant & Baroudi, 2008:125). Skills associated with managing relationships include (but are not limited to) communication, leadership, problem solving, team building, flexibility, creativity and trustworthiness (ibid). The list could be extended, but for now it suffices to say that these skills are needed so that insights, values, intuitions, hunches, gut feelings, images and metaphors can be used to increase chances of success of projects. These elements come into being when 'other' people (non-IS professionals) take part in IS related activities like planning and implementing systems (J. R. Córdoba, 1998, 2002).

In some cases, the above call for relationship management has been addressed by using systemic thinking and methodologies, so that with the help of methodological tools people make sense of what is happening in projects (Checkland & Winter, 2006; Crawford, Costello, Pollack, & Bentley, 2003), or to validate the content produced by the use of traditional project techniques in line with stakeholders' concerns and values (J. R. Córdoba, 2008). With more relationship-oriented tools, it is hoped that people develop better awareness and sensitivity to the complexity of situations. IS professionals can learn to use new 'tools' and help themselves and others to facilitate their work together by promoting participative debate and decision making. In the information systems domain, there is a variety of tools that can help in this regard (Avison & Fitzgerald, 2003). They could help ensuring success in building and maintaining systems. They focus on relationships, but with a particular purpose in mind.

The issue of relationships can be looked at from a deeper and less instrumental (or goal-oriented) perspective. Information systems as a discipline is suffering from the same problem of social science research: The problem of developing *relevant* activity. This is a by-product of its own (academic) success which leads other people to become interested about IS and information technologies (Baskerville & Myers, 2002). But it is no guarantee that this relevance is the same relevance for other professionals in other areas. We need to explore how relationships and relevance can be related from diverse perspectives.

In this paper, an argument is put forward so that better collaboration implies developing an understanding of how we can transcend the boundaries of being a 'discipline', and work with other people with whom we want and need to work (hopefully these two will go together) in what we all consider relevant problems and situations. Questions of relevance are to be formulated in terms of not only how research is used but how it can be better developed.

In the rest of the paper the issue of relevance will be discussed with some elements seen as essential to enable collaboration in IS practice to develop. There is no doubt that relevance is a complex issue, and unfortunately we cannot grasp it all, so we draw on recent debates in management research. Our purpose is neither to join management and IS as 'disciplines' but to promote learning from one another. IS can also offer interesting insights into management when in comes to help understanding of the complexities of IS design and use in organisations (Baskerville & Myers, 2002; J. R. Córdoba, 2007). What follows is an attempt to bring insights from recent debates in management and reflect on their implications for IS practice.

RELEVANCE AND BOUNDARY SPANNING

As academic scholars, we get interested, excited or furious when the relevance (usability, applicability, practical implications) of our research activity is questioned. Ghoshal (2005) recently fuelled the debate by arguing that our mode of thinking in management research has led to privilege a number of theories whose use in businesses has produced less than disastrous results. The thinking behind this has 'excluded' other ways of thinking. More importantly, the notion of people as self-interested individuals

excludes any other notion or concern for 'others'. Disasters in multinationals and even now with the current financial situation make it difficult to visualise actors, their intentions and consequences.

Ghoshal's claims about how to develop relevant research have been contested as well as supported. His advocates propose more *engaging* strategies with different social actors, so that relevance (among other criteria) emerges as a by product of joint activity. Relevance emerges as a result of defining together what to tackle and how to tackle such problems (Bartunek, 2007; Gibbons, et al., 1994; Mintzberg, 2004; Nowotny, Scott, & Gibbons, 2003; Tushman, Fenollosa, McGrath, O'Reilly, & Kleinbaum, 2007). The question of what is relevant is being replaced by the question of how to define relevant research problems and strategies. We will provide details on how this is being developed later on the paper. For now, it suffices to say that those advocating engagement advocate promoting *relationships*, between researchers and users, which bring us back to the people who engage in relationships, their skills and attitude towards 'others'.

To make the above question on people and their attitude pertinent to the issue of relevance is to question with what sort of individuals we need to foster engagement. The management literature has called this sort of individual *boundary spanners* (Gulati, 2007). These are people who "do not identify themselves fully with either the academic or practitioner community and who have the courage and the interest to treat both groups as of value and as having something to contribute to the other" (Bartunek, 2007:1329). Such individuals are continuously aware of current debates on relevance in social science about making research knowledge usable to different audiences. In this regard, they are able to understand how different audiences have different criteria for making knowledge relevant, and become creative about possibilities for future action. Becoming a boundary spanner in information systems practice would require individuals to put themselves in a position that enables them to understand how others make sense of situations, how they generate and apply knowledge, and why they consider it valuable. In this respect, exploring other people's minds can also be fostered by what De Bono (2004) calls lateral thinking. This is about adding to, rather than directly challenging, other people's perceptions; affirming rather than diminishing them; complementing their thinking with new ideas; and if necessary challenging their tendency to resort to well known courses of action in the face of new situations. Boundary spanning is also about making communication more diverse, transparent and relevant for different audiences. Bartunek (2007) argues that in their management writings, researchers should provide managers with advice on practical implications of their research, however "little of the advice includes rationales for intended actions, even though there are extensive conceptual rationales for the [research] studies…" (p.1326, brackets added). De-contextualised, distant findings or implications fail to have an impact in isolation because researchers do not promote the creation and sharing of spaces where such findings could be discussed, refined or challenged. Enhancing communication opportunities should also be about enabling people to jointly define and investigate implications of the knowledge they produce or are about to produce. This has been mentioned in relation to the information systems realm, , given the impossibility of influencing practice with only one notion of 'relevance'. This is possibly derived from the rigorous use of academic theories and methods (Hanseth & Monteiro, 1996).

Although a variety of communications are proposed to foster relationships (Bartunek, 2007; Hanseth & Monteiro, 1996; Tushman, et al., 2007), in practice (and in other countries than the US), we feel it is difficult to ascertain how boundaries have been transcended and not temporarily joined to achieve particular outcomes. According to Ghoshal (2005), boundary spanners have to deal with a generalised problem in social research i.e. the impenetrable logic of each discipline. Often their research is based on providing causal or functional knowledge explanations that talk about phenomena, not individuals or their intentions. Research that is stripped from intentional explanations, according to Ghoshal, is that from which moral and ethical aspects are omitted. In the information systems arena, there is still concern about how to assess the (logical) validity of truth claims (Introna, 2003), possibly because of a strong motivation to find 'external' (e.g. practitioner approved) criteria to assess research quality. This is unfortunate, because intentions, emotions or values are not yet fully included as elements that can help researchers or other people convey what they want to convey to improve their, and other people's practice.

Thus, relevance in IS practice will then have to leave aside focusing on building temporary bridges and be more inclusive of intentions, values and other human aspects that are not normally included when we design joint efforts or apply traditional approaches to research. This could become part of our agendas as IS professionals if we also look at how knowledge is diffused in the context of diverse and complex relationships, expectations and goals between professionals producing knowledge. It is necessary also to transcend institutional boundaries with a view that collaboration takes place across organisations. To do so, we now look at knowledge diffusion.

DIFFUSION OF KNOWLEDGE

By advocating collaborative work that transcends boundaries of disciplines and institutions, it is necessary then to develop a more holistic perspective on how collaboration can be fostered and thus assessed. Green (2004) proposes that diffusion of knowledge can be better studied as a language-based process that involves different rhetorical stages: Pathos, Logos and Ethos. Pathos refers to appeals that connect to the emotions of individuals. They can sustain people's attention to something to be diffused and ultimately be accepted for a limited period of time. Logos refers to pleas to justify action by appealing to their effectiveness/ efficacy. These pleas require more time to be explained and be accepted. Ethos refers to pleas that appeal to socially accepted norms and mores. Their character is social rather than individually oriented. Once accepted, they become the 'norm', or what is taken-for-granted knowledge.

In management research, ideas about building communities of practice (Wenger, 1999) seem to resonate with the importance of establishing and maintaining connections around a particular 'domain'. However, it is far from clear how such communities can be built and nurtured. We would need to ensure that engagements give people the different elements (emotional, logical and ethical) they need to continue being engaged. This is even more important in information systems practice, where we still rely on the logical (logos) component of our claims. Claims to the 'truth' are often backed by rigorous ways of arriving to them (Introna, 2003), or by following what social theories state about reaching moral validity (Ulrich, 2001). To become more comprehensive in collaboration would mean to look at these different aspects at the same time.

Following Green (2004) and his ideas about diffusion, as well as Pan et al (2006) with their ideas on freezing, moving and re-freezing commitment to change, it would be interesting to develop IS collaboration activities on emotional, logical and ethical grounds, so that knowledge gets more appropriately diffused across audiences (academics, practitioners, users, other stakeholders). To facilitate collaboration in these terms, a continuous attitude of engagement should be promoted which considers how we engage in producing knowledge and how we do it. Different aspects should be considered in this process, and therefore a more systemic way of thinking about collaboration could help.

SYSTEMIC THINKING

Systems thinking has been seen as a reaction to traditional mechanistic thinking (or goal-seeking based thinking) ((Jackson, 2003), which is argued, generates (possibly in an unintended way) isolationistic approaches to science (Jackson, 1985). In reaction to mechanistic thinking, systems methodological pluralism as well as the notion of systems boundaries has been developing within systems thinking (Jackson, 2003; Midgley, 2000). By referring back to the importance of boundary spanning, transcending boundaries could be re-phrased in terms of which boundaries we adopt to guide our thinking and action. These boundaries also make us privilege *what and who* we consider important (J. Córdoba & Midgley, 2008; Midgley, 1992). These boundaries come to debate when people are given the chance to raise issues of concern about a current situation.

There is a range of systems-thinking based methodologies that enable people to articulate and express what is important about a situation and jointly debate or design possibilities to improve such situations (Ackoff, 1981; Checkland, 1981; Mason & Mitroff, 1981; Ulrich, 1983). Moreover, systemic thinking is also about promoting 'fitness' between landscapes of possibilities in a given situation (Stacey, Griffin, & Shaw, 2000). This means that actions to promote change can be developed at a 'local' level, where boundaries are not that different (or surmountable) between disciplines. For instance, some 'neighbouring' activities can take place between people working in similar areas. Discussions on ideas, projects and implications for collaborative activity between IS professionals operating at the same level of analysis (e.g. software, hardware) could be developed as part of collaboration.

The above 'neighbouring' type of collaboration activity can be complemented with more 'challenging' or 'chaotic' ones, in which people (looking at the same phenomenon from different perspectives and focus) engage with each other. It could be that IS academics and practitioners as well as technology suppliers engage in exploring possibilities about a new phenomena, for instance the potential use of technology in other areas with professionals from those areas (e.g. tele-medicine). In principle, it could be difficult to get this type of collaborative going. However in the long-term, and if it works[1], it has proven to lead to more innovative and creative collaboration initiatives (Fuqua, Stokols, Gress, Phillips, & Harvey, 2004).

---

[1] It should be said that not every conversation between different people will spark further possibilities for collaboration that can be implemented.

The promotion of systemic fitness in collaboration is not an issue that can be simply derived from using methodologies, products or services to articulate different perspectives. It should not be solely fuelled by short term goals (e.g. funding). Fitness entails a reflective attitude towards what we can 'include' or marginalise. As discussed above, an attitude of boundary spanning should support exploration of possibilities. For information systems practice, boundary spanning should also imply that professionals should relinquish their ownership of a particular type of knowledge (e.g. a methodology) to develop a joint solution with other people (Hanseth & Monteiro, 1996). It becomes important to promote engagement, to use approaches and tools that enable sharing of values, perspectives and possibilities, and ultimately to enable us to *converse* with each other as human beings, finding empathy and mutual collaboration possibilities (Maturana & Varela, 1987).

In this regard, information systems research has still much to develop and to promote inside and outside its own boundaries. As we see it, this could be the beginning of a different perspective on academic and practitioner work. There might be new issues to be considered when promoting collaboration, also fuelled by technological advances in society. However, there is hope in that what happens in the world 'out there' can help us understand that collaboration can work and is necessary for the advancement of information systems practice.

CONCLUSION

This paper has discussed collaboration in information systems practice from a perspective that considers the importance of continuous engagement with 'other' people. The perspective has identified a number of issues to be addressed if collaboration is to take place. Issues of relevance, boundary spanning, diffusion of knowledge and systemic thinking should inform the design of better and more fruitful opportunities for collaboration between different information systems professionals and their related stakeholders. As we see it, this is the beginning of a research agenda. We hope the content of this paper can inspire the reader to put collaboration at the top of their future agendas in co-research and co-practice.

REFERENCES

Ackoff, R. (1981). *Creating the Corporate Future: Plan or to be Planned for*. New York: John Wiley and Sons.

Avison, D., & Fitzgerald, G. (2003). *Information Systems Development: Methodologies, Techniques and Tools*. London: McGraw-Hill.

Bartunek, J. (2007). Academic-practitioner collaboration need not require joint or relevant research: Toward a relational scholarship of integration. *Academy of Management Journal, 50(6)*, 1323-1333.

Baskerville, R., & Myers, M. (2002). Information systems as a reference discipline. *MIS Quarterly, 26(1)*, 1-14.

Checkland, P. (1981). *Systems Thinking, Systems Practice*. London: John Wiley and Sons.

Checkland, P., & Winter, M. (2006). Process and content: two ways of using SSM. *Journal of the Operational Research Society, 57(12)*, 1435-1441.

Córdoba, J., & Midgley, G. (2008). Beyond organisational agendas: Using boundary critique to facilitate the inclusion of societal concerns in information systems planning. *European Journal of Information Systems, 17*, 125-142.

Córdoba, J. R. (1998). The autopoietic notion of the 'other' for IS implementation. *Systemist, 20*, 64-78.

Córdoba, J. R. (2002). *A Critical Systems Thinking Approach for the Planning of Information Technology in the Information Society.* Unpublished Doctoral dissertation, University of Hull, Hull (UK).

Córdoba, J. R. (2007). *Learning from information systems.* Paper presented at the Young Operational Research Conference, Bath (UK).

Córdoba, J. R. (2008). Developing Project Management Skills
Skills at Work, 2(1), 119-128.

Crawford, L., Costello, T., Pollack, J., & Bentley, L. (2003). Managing soft change projects in the public sector. *International Journal of Project Management, 21*, 443-448.

De Bono, E. (2004). *How to Have a Beautiful Mind*. London: Vermillion.

Fuqua, J., Stokols, D., Gress, J., Phillips, K., & Harvey, R. (2004). Transdisciplinary collaboration as a basis for enhancing the science and prevention of substance use and abuse. *Substance Use and Misuse, 39 (10-12)*, 1457-1514.

Ghoshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning and Education, 4*, 75-91.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London: Sage.

Green, S. E. (2004). A rhetorical theory of diffusion. *Academy of Management Review, 29*, 653-669.

Gulati, R. (2007). Tent poles, tribalism, and boundary spanning: The rigor-relevance debate in management research. *Academy of Management Journal, 50(4)*, 775-782.

Hanseth, O., & Monteiro, E. (1996). Navigating future research: Judging the relevance of information systems development research. *Accounting, Management and Information Technology, 6(1-2)*, 77-85.

Introna, L. D. (2003). Disciplining information systems: Truth and its regimes. *European Journal of Information Systems, 12*, 235-240.

Jackson, M. C. (1985). Present positions and future prospects in management science. *Omega,* **15(6)**, 455-466.

Jackson, M. C. (2003). *Creative Holism: Systems Thinking for Managers*. Chichester: John Wiley and Sons.

Mason, R., & Mitroff, I. (1981). *Challenging Strategic Planning Assumptions: Theory, Cases and Techniques*. New York: John Wiley and Sons.

Maturana, H., & Varela, F. (1987). *The Tree of Knowledge: The Biological Roots of Human Understanding*. Boston (Mass): Shambala.

Midgley, G. (1992). The sacred and profane in critical systems thinking. *Systems Practice,* **5**, 5-16.

Midgley, G. (2000). *Systemic Intervention: Philosophy, Methodology and Practice*. New York: Kluwer Academic/Plenum.

Mintzberg, H. (2004). *Managers Not MBAs*. Indianapolis (IN): Financial Times Prentice Hall.

Nowotny, H., Scott, P., & Gibbons, M. (2003). Mode 2 revisited: The new production of knowledge. *Minerva,* **41**, 179-194.

Pan, G., Pan, S., Newman, M., & Flynn, D. (2006). Escalation and de-escalation of commitment: A commitment transformation analysis of an e-government project. *Information Systems Journal,* **16(1)**, 3-21.

Pant, I., & Baroudi, B. (2008). Project management education: The human skills imperative. *International Journal of Project Management,* **26**, 124-128.

Stacey, R., Griffin, D., & Shaw, P. (2000). *Complexity and Management : Fad or radical challenge to systems thinking?* London: Routledge.

Tushman, M., Fenollosa, A., McGrath, D., O'Reilly, C., & Kleinbaum, A. (2007). Relevance and rigor: Executive education as a lever in shaping practice and research. *Academy of Management Learning and Education,* **6(3)**, 345-362.

Ulrich, W. (1983). *Critical Heuristics of Social Planning: A New Approach to Practical Philosophy.* Berne: Haupt.

Ulrich, W. (2001). A philosophical staircase for information systems definition, design and development. *The Journal of Information Technology Theory and Application (JITTA),* **3(3)**, 55-84.

Wenger, E. (1999). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.