Looking at the Past to Enrich the Future: A Reflection on Klein and Myers' Quality Criteria for Interpretive Research

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Abstract: In the last two decades, interpretive research has become more established and more popular in information systems field. The work of Klein and Myers (1999) consists of a set of principles for conducting and evaluating interpretive research, which provide fair and appropriate criteria for assessing the validity and reliability of such studies and, given the number of citations, has had a significant impact in the interpretive research literature. Our article focuses on understanding how this set of principles has informed research articles published in two of the highest-ranked information systems journals and, specifically, questions if these principles have been translated into common practices when conducting interpretive research in the field of information systems and whether authors incorporate them explicitly when they communicate the results of their research. We reviewed articles published in Management Information Systems Quarterly and Information Systems Research, collected any explicit or implicit evidence of quality criteria that informed the research, and highlighted direct or indirect reference to Klein and Myers criteria. We summarize and compare our findings in a comprehensive table, and note that, apparently, the principle of hermeneutic circle and the principle of suspicion are the most explicitly discussed in this sample. Moreover, Klein and Myers' set of principles seem to have had a greater influence in the papers published in the period from 2002 to 2006. This study provides a reflexion about methodological rigor in interpretive research that, to our knowledge, had never been done. Thus, the findings here presented may be useful for junior researchers and doctorate level students to understand how validity and quality criteria are enacted in high-quality interpretive research and, we hope, may encourage them to build on the exemplary work of the authors we reviewed and thus to contribute to enriching the literature of qualitative research methodology in information systems field.

Keywords: interpretive research evaluation, quality and rigor criteria, information systems, Klein & Myers' set of principles, hermeneutics, phenomenology.

1. Introduction

Research in information systems (IS) has had a long positivist tradition. However, qualitative research methods, in particular interpretive studies, have been gaining their own place within IS research community, spurred by serious and valuable contributions under various themes that have been published in past decades (Walsham 1995b) (Walsham 2006) (Trauth 2001). Publications with detailed information and practical guidelines for conducting this type of studies have also contributed to a growing confidence and to building a cumulative tradition in interpretive IS literature, as for example (Walsham 1995a), (Walsham 1995b), (Walsham 2006), (Myers 1997) (Klein & Myers 2001).

The problem of rigor and relevance of interpretive research is central in the debate about using appropriate research methods in the IS field (Mingers 2003) because interpretive researchers often face misjudgements about the rigor of their research, as they are sometimes required to satisfy criteria that are not adequate to their genre of interpretive research (Sarker 2007), (Klein & Myers 1999). The paper entitled "A Set of Principles for Conducting and Evaluating Interpretive Field Studies", by Klein and Myers (1999) is a significant contribution to the topic of quality and validity criteria for interpretive research in IS field. Several pieces of interpretive studies have been published since. We collected a sample of high-quality interpretive research papers published after 1999 and assessed the methodological rigor and quality criteria concerns that have driven the researchers. In doing so, we highlight the explicit reference to Klein and Myers' set of principles, the implicit form of the principles in the report, and any other quality and validity criteria cited by the authors.

This work aims at contributing to the literature of qualitative research methodology in IS area, in particular interpretive studies. The interested audience are junior researchers and doctorate level students that intend to undertake interpretive fieldwork. Our contribution provides an informative and educational account of how authors of these top-quality journals conceive methodological rigor when they communicate their research and, particularly, how Klein and Myers' (K&M) set of principles are enacted in the conduct of interpretive filed studies. In terms of contribution for the IS field, we attempt at mapping how well-defined quality criteria have been applied in interpretive research and we provide an annotated bibliography of field studies developed under the tradition of interpretivism. In terms of

contribution for qualitative research methods, we identify other quality and rigor criteria that have been used and that may be useful as a reference for researchers conducting this type of studies. Our contribution can help junior level researchers develop a critical view of their readings by having as a reference this sample of high quality articles while, at the same time, stimulate future interpretive studies to build on the best examples we have in the field and enrich the interpretive research literature.

The structure of this paper is as follows: the next section discusses quality and validity criteria for conducting and evaluating interpretive research in the context of IS literature. In section 3, we explain the methodology for this article, that is, how did we get to the results, and we discuss the results in section 4. The article terminates in section 5, where we draw conclusions and elaborate on limitations and future work.

2. Quality and validity criteria for interpretive research

Interpretivist research poses as epistemological assumption that knowledge about the world is acquired through social constructions such as language, consciousness, and shared meanings. The focus is on human sense making of the situations as they occur and on the meanings people assign to the situations. There are two strands of thought of interpretive research based on this epistemological assumption: one is based on language and its meaning; the other is more related to phenomenology and hermeneutics (Klein & Myers 2001).

The concerns about validity and quality of a research contribution are not exclusive of interpretive research. To establish credibility and validity of a research study for an audience is necessary to demonstrate care in reporting, which is both a matter or argumentation style and accuracy of methods used (Walsham 1995a). The justification of methodological approaches is often done on the basis of criteria utilized or developed by very experienced researchers in particular methods, disciplines or strands of thought. For example, the dimensions of authenticity, plausibility, and criticality (Golden-Biddle & Locke 1993) that ethnographic texts are required to develop in order to create a convincing argument.

Another example is the set of principles proposed by Klein and Myers (2009). These principles explore the role of hermeneutics, anthropology and phenomenology in eliciting knowledge from interpretive studies. Adherence to the principles does not guarantee interesting results per se but, instead, they are useful for orienting the conduct and report of interpretive research and "can also be used for post hoc evaluation" (Klein & Myers 1999, p. 71). However, they advert that researchers should not apply the principles mechanistically but reflect how and if they are useful to any particular project. The principles overarch the research process and provide tools for understanding the problem studied as a whole. Therefore, the resulting report will very likely be plausible and convincing.

The hermeneutic principle is a fundamental meta-principle, and the other six principles are in its dependency. The principles are as follows (in numerical order) (Klein & Myers 1999): the principle of hermeneutic circle; the principle of contextualization; the principle of interaction between the researcher and the subjects; the principle of abstraction and generalization; the principle of dialogical reasoning; the principle of multiple interpretations; and the principle of suspicion. These principles are not to be thought of in a bureaucratic way but instead in the spirit of fundamental ideas that embed insights from relevant strands of interpretivism, such as hermeneutics and phenomenology, and also from the authors' experience of anthropological research.

Even though a thorough description of each principle can be found in the cited work, we next explain briefly each one. The fundamental meta-principle is the hermeneutic circle, which suggests that human understanding is achieved by iterating between the interdependent meaning of the parts and the whole they form. The parts and the whole can be at various levels, as for example different levels of observations (researcher and participants) and their shared understanding, various historical and social aspects and the whole perspective of the context, and also the partial understanding resulting from a study and the relation with the whole of the extant literature. The principle of contextualization thus follows from this idea, in that an explanation of the situation under investigation requires a critical understanding of the social and historical aspects.

The principle of interaction between the subjects and the researchers suggests that there should be a critical reflection of how research materials were socially constructed through the interaction between

researchers and participants. On the other hand, the principle of abstraction and generalization recommends that researchers relate the idiographic details revealed by the data interpretation to theoretical and more general level concepts. Furthermore, the principle of dialogical reasoning cautions that there should be sensitivity to possible contradictions between the theoretical framework guiding the research and the actual findings. The sixth principle underscores the sensitivity to possible differences in interpretations of the events under study among the participants, and the principle of suspicion follows from this one in that the researcher should also be sensible to possible biases and distortions in the narratives collected from the participants.

The methodological rigor of interpretive research is a concern that has lingered among qualitative IS researchers. Hence, the aforementioned set of principles was received with enthusiasm and, in many cases, was included in the mandatory readings for doctoral-level qualitative research courses. Therefore, it is reasonable to expect that future interpretive research would incorporate the principles as a reference work. This last assertion is what we wanted to confirm with our study and we report our findings in the next sections.

3. Methodology

The work of Klein and Myers (1999) has had a significant impact in IS research community and accounts for an impressive number of citations in, for example, Google Scholar: more than 2600 citations in November 2012. Thus, we wanted to learn about its influence in the two most reputed journals of IS research (according to the ranking of Association of Information Systems): Management Information Systems Quarterly (MISQ) and Information Systems Research (ISR). In the next section we explain how we sampled the articles we examined and in Section 3.2. we provide a detailed account of our study of these articles.

3.1 Bibliographical search

We limited the bibliographical search to a ten-year period (1999 - 2009) and to MISQ and ISR journals because they are representative of highest-quality research in the IS area. We acknowledge this limitation and contend that this work, being exploratory, may be extended in the future in order to include a larger basket of journals. Articles were collected from the database Business Source Premier, sourced by EBSCO, where a search was done with the keywords *interpretive case stud** and *interpretive ethnograph** in all text of MISQ and ISR journals.

We retrieved 104 articles from our search with these terms – 77 articles from MISQ and 27 articles from ISR – and then we applied a two-step filtering as follows. First, we perused all the articles and categorized those that were clearly quantitative, conceptual, or editorial articles. In a second step, we read thoroughly the methodological section of the remainder articles and categorized each one according to the authors' description of the methodological approach. This categorization was based on the original terms authors used to describe the methods adopted in the article and was validated and discussed between the two authors of this paper. Our approach was similar to Mingers (2003) in that we strove to produce a small and consistent set of categories.

The results of the categorization are depicted in Figure 1 and Figure 2. We note that these percentages are relative only to the result of our bibliographical search with the aforementioned keywords and do not refer to the complete collection of articles published by MISQ and ISR during the ten-year period.

We found an interesting diversity of research approaches in the collection of 77 articles we collected from MISQ. While a significant number of articles are more on the conceptual or theoretical side or report quantitative research approaches, there is an interesting percentage of 34% of qualitative articles, including action research, critical research, interpretive case study, interpretive ethnography, positivistic case study, and other author-reported qualitative approaches (repertory grid and revealed causal mapping).

For the 27 articles from ISR, we also found a large number of conceptual / theoretical articles and quantitative research approaches. However, we could not find identical diversity in terms of qualitative approaches, with the 26% of such articles referring only to interpretive case study, interpretive ethnography, or positivistic case study.
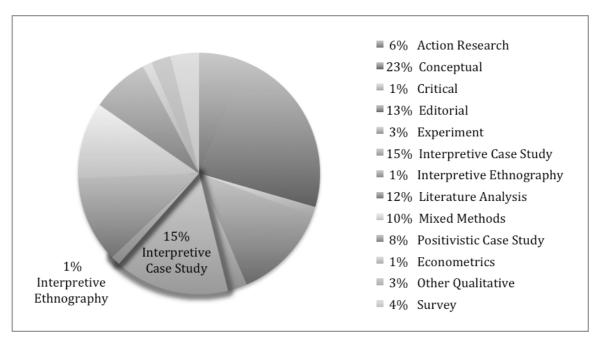
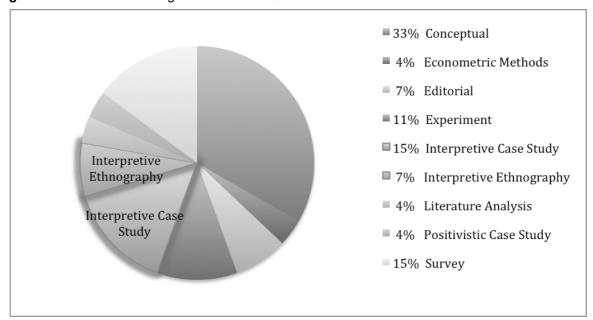**Figure 1:** Results of the categorization of MISQ articles

Figure 2: Results of the categorization of ISR articles

Since the set of K&M' principles addresses specifically the quality standards of interpretive field studies, for this paper we selected only articles reporting this type of studies, that is ethnographic or case studies of interpretive nature. Thus, our bibliographical search resulted in a sample of 12 articles from MISQ and 6 articles from ISR reporting ethnographic or case studies of interpretive nature. Table 1 provides the details of each article and our comment on the quality and validity criteria evoked or implied from the report. For the sake of readability, articles' details are displayed sequentially.

3.2 Examination of articles

Interpretive research articles are typically long and dense. In our case, the articles in the sample have an average of 25 pages length. We learned from the examples provided in Klein and Myers (2009) how to identify the principles in the narrative. Some articles are not explicit about any validation or quality criteria that informed their research and we tried to infer them in an implicit form, as Klein and Myers (2009) explain. Furthermore, we complemented our analysis with the operationalization of the principles as explained by O'hEocha et al. (2012), which is based on questions derived from

keywords in Klein and Myers' article. In the following table, articles 1 to 6 are from ISR and the remainder 7 to 18 are from MISQ.

Table 1: Details and methodological criteria of sampled articles

Article 1	(Choudhury & Sabherwal 2003)
Research Method	Multiple case study
Research Site	1 diversified services company; 1 financial services firm; 1 software manufacturer; 1 large county in Southeast US; 1 large food product firm
Focus	Evolution of portfolios of control over the duration of outsourced information systems development (ISD) projects
Main Contribution	New insights for the use of portfolios of control in the clients' perspective
Methodological criteria	The report does not refer explicitly to Klein and Myers' criteria. The analytical process is described as interpretive and an explanation of the data analysis process is provided together with the reflection of how the findings relate with the known literature, adding parallels, highlighting differences and drawing new questions.
Article 2	**(Levina 2005)**
Research Method	Ethnographic field study
Research Site	Web-based application development project
Focus	Understanding the actual collaborative practices on multiparty information systems development (ISD) projects, and how the diversity of professionals involved influences the system being designed
Main Contribution	Theoretical constructs to understand the cycle of multiparty collaboration on ISD projects
Methodological criteria	Strong in terms of theory building, generalization and reasoning. Multiple viewpoints are critically presented. Refers to an inductive, grounded fashion way of developing theory. Does not refer explicitly to Klein and Myers' set of principles.
Article 3	**(Sarker & Sarker 2009)**
Research Method	Case study
Research Site	Multinational high tech organization
Focus	Understanding how agility is developed and enacted in a globally distributed ISD team
Main Contribution	Development of an empirically grounded framework of agility in ISD settings and identification of some actionable tactics for enhancing agility within such settings
Methodological criteria	Authors refer specifically to Klein and Myers' set of principles in the methodological section and illustrate with examples from how they conducted the study. In the same section, they refer also other methodological considerations and cite other authors, namely (Bryant & Charmaz 2007), (Charmaz 2000), (Flick 1998), (Myers & Newman 2007), and (Patton 1990).
Article 4	**(Schultze & Orlikowski 2004)**
Research Method	Ethnographic field study
Research Site	A bricks-and-clicks dot-com that uses self-serve technology
Focus	Implications of inserting self-serve technology into embedded relationships at the inter-firm micro level
Main Contribution	Managing the complementarity between relationships and IT in practice is fraught with tension at the micro-level with negative consequences for business strategies
Methodological criteria	The intellectual basis of the research is clear and mindful of the findings being contradictory with some established theories. Moreover, the article examines alternative views and notes different values and opinions expressed by strategic and tactical teams. Authors do not refer explicitly Klein and Myers' set of principles.
Article 5	**(Vaast & Walsham 2009)**
Research Method	Case study
Research Site	Public Health Administration of France
Focus	Practice-based learning dynamics that emerge in networks of practice
Main Contribution	Formulates a model of trans-situated learning supported by an information infrastructure

Methodological criteria	Authors acknowledge that the study was informed by the set of principles of Klein and Myers, and explain that the data analysis was made in consideration of the principle of abstraction and generalization, principle of hermeneutic circle and principle of suspicion. We could also find implicit evidence of the other 4 principles.
Article 6	**(Vidgen & Wang 2009)**
Research Method	Multiple case study
Research Site	Two software development teams
Focus	Study the factors that enable or inhibit agility in agile software development
Main Contribution	Framework for the organization of agile software development
Methodological criteria	There is no explicit reference to Klein and Myers' set of principles. The study is accounted as interpretive and we could find implicit evidence of principle of abstraction and generalization and principle of multiple interpretations.
Article 7	**(Backhouse, Hsu & Silva 2006)**
Research Method	Case study
Research Site	British standard in information systems security
Focus	The influence of exogenous contingencies for the creation of a de jure standard and reflection about the power mechanisms required for a standard to evolve
Main Contribution	Deep understanding of how human, social and economical aspects influence the development of a standard and theorization about power circuits
Methodological criteria	In the research methodology section authors provide a table with their reflection of how they validate their interpretations in the light of Klein and Myers set of criteria.
Article 8	**(Davidson 2002)**
Research Method	Case study
Research Site	Health care insurance company in Eastern United States
Focus	Requirements processes in organizations and the socio-cognitive basis of power in ISD
Main Contribution	Develops a socio-cognitive process model of how frames and shifts in frame influence sense-making during requirements identification on ISD projects
Methodological criteria	The researcher provides an appendix with criteria for assessing the quality and rigor of her work, where she directly refers to Klein and Myers' set of principles and to criteria used in ethnographic texts, namely authenticity, plausibility, and criticality (Golden-Biddle & Locke 1993)
Article 9	**(Davidson & Chismar 2007)**
Research Method	Case study
Research Site	Hospital in United States
Focus	Interaction between changes in social structures of an institution and changes in technology to engender alignment
Main Contribution	Uncovers two processes of institutionally-triggered changes and one process of technology triggered change related with the implementation of a computerized physician order system
Methodological criteria	The article elaborates on how the authors applied the principle of hermeneutic circle and refers to Klein and Myers' set of principles. The other principles were not explicitly illustrated in the report, but we could find them in an implicit form.
Article 10	**(Garud & Kumaraswamy 2005)**
Research Method	Naturalistic inquiry wherein insights are induced through interpretive means
Research Site	Infosys Technologies
Focus	Employs a system perspective as an interpretive frame to explore how Infosys manages knowledge processes at and across the individual, group, and organizational level
Main Contribution	The organizational initiatives undertaken to harness existing knowledge systems in general generate a virtuous cycle of knowledge accumulation, reuse, and renewal but unintended consequences may arise because of the mutually causal knowledge processes unfolding at and across different organizational levels. Knowledge managers need to intervene to steer the knowledge system and address the interactions among knowledge process drivers.

Methodological criteria	Authors do not refer explicitly to K& M' set of criteria or any other criteria. They acknowledge that grounded theory tenets informed their choice of methodology. The system perspective they introduced resemble, in terms of how they present the results, the principle hermeneutical circle.
Article 11	**(Gopal & Pushkala 2000)**
Research Method	Field study under the methodology of symbolic interaction
Research Site	Western Canadian School
Focus	Explore the alternative epistemological stance of symbolic interactionism to look at GDSS use phenomenon
Main Contribution	In order to improve our understanding of the GDSS phenomenon, it is necessary to shift the focus from the technology itself to the symbolic context in which it is enacted, that is the arena of human interaction. Moreover, the multiple meanings arising from this context make it unsuitable for generalization because it leads to inconsistent results, and calls for investigation focusing on technology in action.
Methodological criteria	Authors provide a table where they list the guiding principles that can be used to evaluate symbolic interactionist research. There is no explicit reference to K&M' set of criteria. One salient principle under symbolic interactionism is that of capture of multiple realities, which could be mapped to the principle of multiple interpretations of K&M. In fact, throughout the article we could found some implicit evidence of some of the others K&M' principles, even though we know that these particular criteria were not applied in this study.
Article 12	**(Hanseth et al. 2006)**
Research Method	Case study
Research Site	Norwegian hospital
Focus	The intended and unintended consequences of the implementation of a standard for an electronic patient record
Main Contribution	Demonstrate the socio-technical complexity of IS standardization and the related disorders created by multiple actors that generates reflexive mechanisms and undermine the creation of a standard
Methodological criteria	Authors acknowledge that Klein and Myers' set of principles informed data analysis and collection and illustrate with the fundamental principle of hermeneutic circle, though without naming it. We could find implicit evidence of the other principles.
Article 13	**(Levina & Vaast 2005)**
Research Method	Multiple case study using grounded theory techniques
Research Site	Insurance company and an interorganizational IS development project involving an Internet consulting firm and its client
Focus	Improved understanding of the dynamics involving agents and artifacts becoming boundary spanners-in-practice and boundary objects-in-use.
Main Contribution	Investigation of how organizational competence in boundary spanning emerges in practice, which is related to the engagement of boundary spanning agents in a new joint field through which these agents discover an interest in spanning boundaries.
Methodological criteria	The article particularizes the principle of suspicion of K&M' set of principles. Another guiding principle explicitly acknowledged was radical doubt (Bourdieu & Wacquant 1992), and authors also mention that they used grounded theory techniques to compare and contrast the independently-created case descriptions, both within and across cases. We found implicitly evidence of some other K&M' principles in the report.
Article 14	**(Levina & Vaast 2008)**
Research Method	Draw on practice theory to analyse and interpret data from two empirical cases
Research Site	Large multinational, financial services firm headquartered in United States and Western Europe that outsourced projects to Russia and India
Focus	How differences in organizations and countries give rise to boundaries and status differences in offshore ISD projects and what practices alleviate these differences to establish multiparty collaboration
Main Contribution	Theory-based practice framework that explains how boundaries and status differences limit collaboration effectiveness in offshore ISD and the key role of on-shore middle managers in engaging others in shared practices

Methodological criteria	The article refers to Klein and Myers' set of principles but does not explicitly particularize any principle. We could imply from the report that the principle of interaction between the researchers and the subjects was applied to improve inductive theory. Authors also refer that the principles of grounded theory informed data collection and analysis.
Article 15	**(Olsson et al. 2008)**
Research Method	Multiple case study
Research Site	Irish sites of two large companies based in United States
Focus	Investigates and develops a theoretical model of the dual bridge role in a two-stage offshoring relationship
Main Contribution	Theoretical model that illustrates the off-shoring bridge model, where companies differ in terms of their approaches to team integration, organizational level implementation, and site hierarchy.
Methodological criteria	The principle of dialogical reasoning and the principle of multiple interpretations are explicitly evoked. Moreover, the principle of abstraction and generalization is clearly demonstrated in the description of the approach to data collection and analysis. The principle of interaction between the researchers and the subjects can be implied from the account of how the data was collected, and the principle of suspicion is demonstrated through quotes. Other criteria, besides Klein and Myers' set of principles, are also explicitly justified and demonstrated namely reliability, construct validity and external validity.
Article 16	**(Pawlowski & Robey 2004)**
Research Method	Case study
Research Site	Large manufacturing and distribution company based in United States
Focus	The role of IT professionals in internal knowledge transfer, in particular as knowledge brokers
Main Contribution	Formulates a conceptual framework that shows the conditions, practices and consequences of knowledge brokering by IT professionals
Methodological criteria	We found explicit reference of Klein and Myers' set of principles in the method section another section entitled "evaluation", where the authors provide a reflection about their conformance to established principles for evaluating interpretive research. Besides demonstrating the strengths of their work in terms of adhering to some principles, as for example the hermeneutic circle, they also account for how the work could better reflect the principles of multiple interpretations and the principle of suspicion.
Article 17	**(Puri 2007)**
Research Method	Case study
Research Site	A district situated in the rain-shadow zone of peninsular India
Focus	The importance of knowledge alliances between multiple knowledge systems in order to support effective development and implementation of a GIS to address the problem of land degradation in India
Main Contribution	Provides an articulation of the concept of building knowledge alliances across communities of practice and broadens the concept of boundary objects
Methodological criteria	Author cites Klein and Myers' set of principles but does not elaborate explicitly on any particular principle. We could find implicit evidence of the principles in the report.
Article 18	**(Schultze 2000)**
Research Method	Ethnographic field study with a confessional genre and a social constructionist stance
Research Site	Large Fortune 500 manufacturing firm headquartered in the Midwest of United States
Focus	Explore the work practices of knowledge workers
Main Contribution	Identifies three informing practices of knowledge work: ex-pressing, monitoring, and translating, and highlights the fundamental underlying logic of balancing subjectivity and objectivity; Further, the article demonstrates that these practices are trans-situational, meaning that they occur irrespective of "types" of knowledge workers.
Methodological criteria	We found no explicit reference to K&M' set of principles. The general evaluation criteria of ethnographic research (Golden-Biddle & Locke 1993) – authenticity, plausibility, and criticality – is deemed as inappropriate for a confessional genre of ethnography and thus the author elaborates on the following evaluation criteria: authenticity; plausibility; criticality; self-revealing writing; interlacing actual and confessional content.

4. Discussion

In Table 2, we summarize our detailed assessment of quality and validity criteria in the articles. This process had two phases: in the first phase, we examined carefully all articles and registered our impressions about the methodological criteria reported by the authors for each article (see Table 1). We also registered, (in Table 2), explicitly evoked principles (X) and any other criteria (yes (Y) or no (N) when no other criteria was referred). In the second phase, we did a comparison among the articles in terms of the type of implicit support we could find for each principle: either strong implicit support (S), or weak implicit support (W) and registered the results of that comparison in Table 2.

Table 2: Summary of results

Articles	Hermen. circle	Context.	Interact..	Abstract. & General.	Dialog. Reason.	Mult. Interpret.	Suspic.	Other criteria
1. Choudhury	W	W	W	S	S	S	W	N
2. Levina	S	S	S	S	S	S	S	Y
3. Sarker & Sarker	X	X	X	X	X	X	X	Y
4. Schultze & Orlikowski	S	S	S	S	S	S	S	N
5. Vaast & Walsham	X	S	S	S	S	S	X	N
6. Vidgen & Wang	W	W	W	S	W	S	W	N
7. Backhouse	X	X	X	X	X	X	X	N
8. Davidson	X	X	X	X	X	X	X	Y
9. Davidson & Chismar	X	S	S	S	S	S	S	N
10. Garud & Kumaraswa	S	S	S	S	S	S	S	N
11. Gopal & Prasad	S	S	S	S	S	S	S	Y
12. Hanseth et al	S	S	S	S	S	S	S	N
13. Levina & Vaast 05	S	S	W	S	S	S	X	Y
14. Levina & Vaast 08	S	S	S	S	S	S	S	Y
15. Olssom et al	S	W	S	S	X	X	S	Y
16. Pawlosky &	X	X	X	X	X	X	X	N
17. Puri	S	S	S	S	S	S	S	N
18. Schultze	S	S	S	S	S	S	S	Y

Legend: W – weak implicit support; S – strong implicit support; X – explicitly evoked; Y – yes; N – no.

Notwithstanding the fact that the number of MISQ articles is superior in our sample, our results seem to show that Klein and Myers' set of principles had a greater influence in the articles published in MISQ (art. 7 to 18), specially in the period shortly after the publishing of K&M' article, where we could find several articles that explicitly state their conformation to that set of principles. These articles usually provide a highly structured explanation in the form of a comprehensive table or an annex where they justify their methodological considerations and provide examples for each principle.

Another finding is that the principle of hermeneutic circle and the principle of suspicion are, individually, the most cited and explicitly developed by the authors, probably due to the fundamental nature and overarching importance of hermeneutical process for interpretive research and to the significance of critical thought when building an integrated and coherent research report. On the other hand, it seems that, in most cases, when authors explicitly demonstrate the adherence to K&M' set of principles; they choose to illustrate all the principles and not only a subset of these.

In terms of the implicit form of the principles, we found that the principles of abstraction and generalization and the principle of multiple interpretations can be implied in all articles. Indeed, the articles examined strive to generate a theoretical contribution that builds on the extant literature and to convey multiple accounts of the events under study. Conversely, the principle of contextualization is sometimes disregarded and minimized in the reports as some authors describe the case sites very broadly and do not provide a critical account of the historical context.

In terms of other quality and rigor criteria, we note that half of the papers we reviewed mention other criteria, which we believe is representative of diversity and richness of methodological literature within interpretive tradition. Particularly, we highlight article 11, because it lists criteria to evaluate symbolic interactionist studies, which are part of the phenomenological and social constructionism tradition of interpretivism (K&M' principles also draw on phenomenology). We also note that four articles draw on grounded theory techniques (Glaser & Strauss 1967) and that seems to resonate with K&M' principles because grounded theory incorporates techniques that are well suited to support the fundamental principle of hermeneutic circle, namely open and axial coding (Klein & Myers 2001).

Finally, a curious aspect is that four researchers authored more than one study in this sample of articles. In this respect, we could find some regularities in their reports. For example, articles number 2 and number 14 do not explicitly refer any K&M' principle but acknowledge the adherence to grounded theory principles. Articles 8 and 9 are a different example. In this case, article number 8 explicitly refers to K&M' set of principles, but the most recently published article (number 9) only explains how the hermeneutic circle was applied and does not delve into the other principles. Finally, articles 5, 13 and 14 also share one author but in this case we could not find a salient pattern in the report style.

5. Conclusion

Whereas the principles of Klein and Myers are based on best practices of interpretive research that have been developed for decades in other disciplines, the question remains as to why the two journals analyzed do not promote more compellingly their operationalization by publishing articles that make clear reference to those principles. This question is not answered in our article and lacks other kind of research that inquires the international research community about the real value assigned to the principles of Klein and Myers in their research.

Future research should perform the same search in other information systems journals, in order to identify the quality and rigor criteria applied not only in field studies but also in other methods of interpretive research. Another interesting avenue for future research is a visualization of the network of collaboration among researchers who are co-authors of articles that report interpretive research studies and refer to the principles of Klein and Myers in order to understand the area of influence of these authors within the international research community of information systems and how it has evolved. Moreover, there is a need for understanding more clearly how rigor is demonstrated in articles in which the principles of Klein and Myers are not explicitly reported, so as to perceive the way rigor has been encouraged in the information systems journals. Interviews with editors of journals on this topic may help to understand the efforts that have been made to publish interpretive research in high quality journals.

Finally, we argue that articles that make explicit reference and operationalize the quality and rigor criteria used are, in fact, providing a dual service to the information systems research community (and to interpretive research community at large): not only they contribute to build a cumulative tradition of interpretive studies but, and most importantly, they are also helping other researchers who want or need to learn about interpretive methodology by giving them finest exemplars of interpretive studies that they may emulate in order to enrich the future of interpretivism.

Acknowledgements

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