Who takes workplace case study methods seriously? The influence of gender, academic rank and PhD training

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Abstract

We examine whether differences in the reporting of workplace case study research methods are associated with gender, experience, academic rank and PhD training. Using a random sample of published papers we find that women take more care reporting their research methods in the context of a general increase in methods reporting.

Key words: workplace case studies; qualitative research; gender; industrial relations

Word Count: 7,964

Introduction

There is a long established and much venerated tradition of research within industrial relations and the sociology of work that is characterised by detailed case studies of workplaces and the use of qualitative research methods such as observation, in-depth interviews and document analysis. This 'go and see' approach, which invariably involves intensive periods of fieldwork, has been treasured since the earliest days of these subjects for its insights into the often informal practices that maintain order in the workplace (e.g., Commons 1921, Mayo 1933). Though long associated with British scholarship, where the workplace has traditionally been a major focus (Ackers 2011), case study research has also been influential in the development of industrial relations in Europe and Latin America as well as in other Anglo-Saxon countries (Kaufman 2004: 58; 341; 395).

One of the most distinctive features of qualitative research is the distinctive role played by the researcher in the research process. This has led to an emerging body of literature in sociology on the various ways researcher's characteristics can influence the quality of the research. For instance, the gender and ethnicity of the researcher may make it more or less difficult to gain access, develop relationships and build rapport (e.g., Padfield and Procter 1996, Song and Parker 1995). Our aim is to extend this work by examining whether differences in personal characteristics such as gender, academic rank, experience and PhD training lead to differences in the attention given to research methods within journal articles. It has been claimed, for instance, that women researchers working within the male-dominated natural sciences tend to be more meticulous because of their marginal status (e.g., Sonnert and Holton 1995). As industrial relations and industrial sociology have traditionally been male-dominated fields (Wajcman 2000: 184-5), our aim is to see if it also applies to these subjects.

Examining variations in research practice is made all the more difficult by the prolonged absence of any formal discussion of the design and conduct of workplace case studies (see also Kitay and Callus 1998: 103). This is somewhat ironic for a tradition of research that is largely defined by its methods and indeed occasionally claims that these are superior to quantitative forms of research (Brown and Wright 1994: 154, McCarthy 1994: 321). By contrast, discussions about the rigour and quality of case study research are already well under way within neighbouring business school subjects (e.g., Gibbert, Ruigrok and Wicki 2008). Drawing on this literature we have devised a list of indicators to investigate possible differences in research practice by gender and academic rank. A secondary aim is to hold a mirror up to current qualitative case study research practices. Here we simply describe the way methods are reported to see if there are any common practices in a tradition of research that is occasionally accused of being a form of 'story telling' rather than a systematic form of social research (e.g. Goldthorpe 2000: 65-93).

Workplace case studies: gender, academic rank, PhD training and research practice

Occasionally labelled the 'case study method', the case study is more accurately viewed as a type of research design or research strategy that differs from correlational (survey) or experimental designs in that it involves 'intensive study of a single unit for the purpose of understanding a larger class of (similar) units' (Gerring 2004: 342). Case studies focus on naturalistic 'real-life contexts' and seek to provide a comprehensive and holistic examination of a phenomenon within its economic, political or social context. The analysis tends to include a wide range of factors rather than a few easily measured variables, which means that the research is generally characterised by small number of cases ('small N'), intensive fieldwork and multiple sources of evidence, often of a qualitative nature (Gerring 2007, Platt 2007, Yin 2009).

Within the fields of industrial relations and the sociology of work, the case study tradition is much valued for its ability to provide fine-grained analyses of labour market institutions in a subject whose dominant theoretical impulses have generally emphasized a context-sensitive understanding of the employment relationship (Brown and Wright 1994). A frequent claim, for instance, is that qualitative case study research enables researchers to uncover the often informal aspects of workplace relations that may be essential to understanding how the employment relationship works in practice. This argument is used regularly by Labour Process writers for whom the case study is generally the preferred method for understanding how workers release their labour within the 'contested terrain' of the capitalist workplace (Thompson and Harley 2008: 150).

As indicated earlier, the qualitative form of data collection means that the person of the researcher is more prominent within the research than in other forms of research. As qualitative researchers study experiences and interpretations, they themselves become the research instrument as their ability to observe, listen and talk are all essential in gathering evidence. It should therefore be no surprise to learn that the social characteristics of the researcher can influence the quality of the research. As indicated earlier, the level of cooperation and the maintenance of field relationships may be influenced by the researcher's ethnicity (Song and Parker 1995) and gender (Padfield and Procter 1996). What interests us however is whether such social characteristics influence the way qualitative researchers describe their methods in an effort get published within a field that has traditionally been male-dominated and within a form of research that has few apparent conventions.

Specifically, our aim is to examine whether social characteristics such as gender, academic rank, experience and PhD training have an influence on the practice of case study research within the general area of employment relations. Such a question is of course in line with the Mertonian tradition in the sociology of science in which science is viewed as a social institution in which factors of a sociological kind may influence who gets funding or published or both (Merton 1973). For instance, U.S. research in the sociology of science indicates that the prestige of an author's

graduate training, the reputation of their employing university may, along with their seniority and gender, influence the kind of work they do, who they collaborate with and where they publish (Clemens et al. 1995, Frank Fox 2006, Leahey 2008). Within the social sciences, or at least within American sociology, women are much more likely than men to be the first authors of qualitative research in sociology regardless of whether it was published in article or book form. Furthermore, the modal format for first time female authors was a book based on qualitative evidence while that for men was a quantitative article in an elite sociology journal (Clemens et al. 1995: 471).

The question that we address originates in the substantial literature on the sociology of scientists which seeks to understand why female researchers still struggle to make the same progress as their male counterparts. The well-known structural 'deficit model' holds that women are *treated differently* so that they tend to have fewer career opportunities and less funding with the result that they publish less (Frank Fox 2006, Sonnert and Holton 1996). The less well-known 'difference model' set out by Gerhard Sonnert suggests that women scientists also act differently because they are still strangers in a male-dominated field. Based on extensive interviewing with male and female scientists Sonnert finds that women tend to strenuously uphold traditional standards of carefulness and replicability while insisting on the importance of fundamental ideas. The downside of such perfectionism is that women may publish more slowly because they believe their position as outsiders makes them more vulnerable to criticism and failure. Ultimately, his conclusion is that women *act differently* because their marginal status leads them to adopt noticeably higher standards so that they may be viewed as legitimate members of the scientific community (Sonnert and Holton 1995: 153-6, Sonnert and Holton 1996: 68-9).

A long-standing criticism of industrial relations as an interdisciplinary field of research is that it has been rather unreceptive to women academics, especially when they are working on questions of gender. Certainly, the vast majority of highly regarded workplace case studies published before the 1980s were written by men and while there have been some notable workplace case studies by female scholars (Cavendish 1982, Cockburn 1983, Hochschild 1983), female academics still believe that their work is undervalued within the field of employment relations (Holgate, Hebson and McBride 2006).

Our second proposition is that academic rank will be associated with research and writing practices. Here we adopt the uncontroversial position that those who hold higher positions on academic career ladders will have higher standards of research conduct. The greater experience of conducting and publishing qualitative case study research should have enhanced their knowledge and competence. Equally, we might expect their work is of such a high standard that it impresses both their peers and successive promotion committees with its rigour. If such committees include

quantitative researchers then it must also have impressed those who would not normally be sympathetic.

A further proposition is that research practices may be influenced by the author's human capital, specifically in the form of their PhD training. It is generally understood that the amount of formal methods training on PhD programmes has increased in recent years. Within the UK, for instance, the increased emphasis placed on methods training by research councils means that British social science students have begun to take a substantial amount of research training before embarking on their dissertation (Collinson and Hockey 1997). Another possibility is that the amount of research training may vary cross-nationally. Here a contrast may be drawn between the UK and European 'master and apprentice' model and the U.S dissertation committee model. The former may have limited state funding, involve only one or two advisors, and have only begun to require coursework in recent years. By contrast, the US has a large proportion of private research universities who, along with some publically funded universities, are able to offer scholarships for four or five years, provide a range of courses within relatively large graduate schools, and involve up to five academics on their advisory committees (Nerad and Heggelund 2011).

Finally, we assume that experience within the profession might also have an impact. Put simply, we do not believe that academics stop learning on completion of their doctorates and so we think they may gain from getting feedback on their work from colleagues and referees, by following developments in the literature, and indeed from their experience of teaching and doing research. Consequently, we assume that they will take more care with explaining the design and conduct of their research.

Case study rigour: some criteria for methods reporting

Given the lack of discussion on case study research within industrial relations, we have had to invest some considerable time in selecting a set of concepts and related indicators that would enable us to undertake a survey of research practice. To clarify the aims of this activity, we find it helpful to draw on the old distinction between methods and methodology. Our focus is on the tools and techniques of research as well as on questions of research design. That means the emphasis is on concrete research decisions and practices rather than on the epistemological principles that underpin a particular methodology such as critical realism or feminist methodology. As our focus is on what researchers actually do (or report that they do) this inevitably entails some accommodation to the constraints of research relationships and organizational politics. It follows that research decisions and practice cannot be explained fully by referring to philosophical positions (Platt 1996: 107-110). In short, our position is that social research should be viewed as a craft skill that is relatively

autonomous from philosophical disputes, which means that research practices may be evaluated on pragmatic grounds (Seale 1999: 30-31).

Fortunately, formal organizations are highly conducive to case study research and the growth of business schools has contributed to an upsurge in case study research and an accompanying literature on its evaluation. While it is frequently assumed that qualitative research is riven by epistemological differences we were struck by the surprising degree of agreement on indicators of research rigour across such diverse fields as information systems (Dubé and Paré 2003), international business (Piekkari, Welch and Paavilainen 2009), marketing (Beverland and Lindgreen 2010), operations (Barratt, Choi and Li 2011) and organization studies (Gibbert, Ruigrok and Wicki 2008). Nonetheless, we adopt a slightly different approach in that our focus is on the methods outlined in case study papers rather than on rigour *per se*. We do this primarily because we do not wish to provide a rigid normative position with a checklist of indicators that we expect researchers to follow in its entirety. Nevertheless, we believe that research decisions and practices need to be outlined in order to understand how the research was undertaken, the process by which it produced a particular set of findings, and why those findings should be given credibility.

Research Methods

To capture the current 'state-of-the-art' we focus on papers published in the leading American, Australian, British, Canadian and European journals on work and employment relations between 2000 and 2014. These include the *British Journal of Industrial Relations* (BJIR), *Economic and Industrial Democracy* (EID), *European Journal of Industrial Relations* (EJIR), *Industrial & Labor Relations Review* (ILRR), *Industrial Relations* (IR), *Industrial Relations Journal* (IRJ), *Journal of Industrial Relations (JIR) New Technology, Work & Employment,* (NTWE) *Relations Industrielles (RI), Work & Occupations* (W&O), and *Work, Employment & Society* (WES). While the selection of journals has a strong international orientation our major concern was to enhance our chances of finding substantial numbers of case study papers and so we included five British edited journals because workplace industrial relations is an enduring feature of British research (Frege 2007: 54-5).

Using simple random sampling, we selected a single issue from each journal for each year between 2000 and 2014.[1] We took this approach because we wanted to control for differences across journals and over time. Of course, the overall population of articles, including case study articles, is unknown and so randomly selecting issues from each year provided the best chance of a drawing a representative sample from a hidden population. On this basis 165 issues were drawn from a population of 678 issues. Articles were then selected from these issues for coding if they a)

[1] We used a random number generator to select each issue from a range of numbers whose upper limit matched the total number of issues that each journal published per year.

were full-length articles and not Research Notes; b) drew on primary research; c) focused on specific organizations or workplaces (or workplace-based unionism); and d) the research was either exclusively or primarily of a qualitative nature. Of the 973 articles that were contained in the 165 issues, 174 met these criteria (17.9%).

Our conception of research methods reporting is based on three dimensions, namely research design, validity and transparency. Though this paper takes a quantitative form, we must emphasize that we are not imposing quantitative criteria on qualitative research. And even though the qualitative tradition in employment relations is not known for divisions between positivists and interpretivists, we have tried to be sensitive to both traditions.[2] In this respect, our approach is consistent with that of Silverman, a leading figure in interpretivist research, who insists that 'the two central concepts in any discussion of the credibility of scientific research are 'validity' and 'reliability' (Silverman 2011: 360). For Silverman, validity represents 'the extent to which an account accurately represents the social phenomena to which it refers' (2011: 367). The indicators that we use for validity are conceived in this spirit as opposed to the narrower measures of construct or criterion validity used in quantitative research.

Our second dimension relates to the transparency of the case study evidence and its analysis. Scholars within every tradition accept that research conclusions have to be based on evidence rather than assertion. Accordingly, we think it important that articles describe how the evidence was obtained, the amount of evidence, and how it was analysed. Such transparency also makes it easier to replicate the research, though this latter aspect is not essential for our purposes.

We consider research design or strategy to be an essential element of research quality regardless of whether the research is of a qualitative or quantitative nature. We need to know that the evidence obtained is appropriate for the question to hand and, furthermore, that it answers the question as unambiguously as possible (Yin 2009: 25-35). Measures of external validity or representativeness have not been included as these are generally considered a weakness of case study research (Gerring 2004, King, Keohane and Verba 1994). Doing so would also leave us open to the charge that we are imposing a quantitative bias on qualitative research. Here we wish to emphasize that most of the indicators we use for research strategy, validity, and transparency draw heavily on evaluations by case study researchers in other fields (Figure 1). These generally aim to capture objective information about the research such as whether or not the rationale for selecting cases was outlined, whether different methods were used, how the informants were chosen, how the evidence

[2] In terms of epistemology, the vast majority of articles in our sample are overwhelmingly of a descriptive – explanatory or positivist orientation, with only a small proportion - mostly ethnographies - being of an interpretative nature (5.2%).

was analysed, etc. However, we added six original items of which three were essentially about the amount of evidence. Specifically, we examined whether articles described the volume of evidence, whether this was specified for each case in multi-case studies and whether excerpts from interviews were attributed to different individuals rather than non-attributed interviewees.

FIGURE 1 ABOUT HERE

We fitted OLS linear regressions to the data to explore the association between methodological reporting and a number of explanatory variables. The dependent variable is a summary index of 18 indicators that was computed by adding the six indicators from each of research design, validity and evidence transparency into a single measure (see Table 2). The explanatory variables are intended to account for the variation in the data in terms of the attributes of the paper and its authors.

Gender, academic rank, experience and PhD training are the four variables that we use to capture the social and personal characteristics of the authors. Information on these variables was obtained from a variety of sources including the biographical details listed in the articles (see Appendix 1). For multiple authored papers, we restricted the information to the most highly ranked author at the time of publication. We also include a simple grouping of the doctoral subject area. Our aim here was to test the claim that scholars trained in sociology brought a greater degree of theoretical and methodological sophistication to workplace case studies, at least in Britain (Ackers 2011). The final explanatory variable is that of professional experience which is measured by the number of years since the author completed his/her PhD.

Our control variables include two that seek to capture processes of peer review. For journals, we use the rankings contained in various versions of the Association of Business Schools (ABS) Journal Guide (Harvey et al. 2010). The stability of the rankings across the 2000 – 2014 period meant that we could divide the journals into three categories of ‘high’, ‘medium’ and ‘low’ quality. Our second peer review variable asked if the research received external funding which we assumed to be a based on a competitive review process (we did not include internal funding for that reason even though it may be competitive on occasion). We also control for the possibility of changes in the amount of attention given to methods over time. When compared to the early 1980s, for instance, the amount of writing and reflection on qualitative methods has increased dramatically with the arrival of numerous textbooks, specialist journals and regular conference sessions.

Significantly, some of the more prominent trends over the past two decades have included greater formalization of methods and data analysis, the latter aided by the growing use of specialist software packages (Mangabeira, Lee and Fielding 2004). Other controls are added for the year that the article was published and for the number of cases described in the study. The latter is on the basis that authors who report more cases may believe they have less space to describe their methods. Details of other variables used in the analysis are given in the Appendix. We begin with some descriptive data before presenting the results of the multivariate analysis.[3]

Case study research practices

Research flow and author characteristics

Despite the fear that qualitative case study research is being displaced by the analysis of large scale surveys (e.g., McCarthy 1994) we found that the proportion of case studies ranged from fifteen to twenty per cent of the papers published over the period 2000-2014. If anything there was a slight increase of around three percentage points in the average for the final five years when compared to the first five (2000-04, 15.2%; 2010-14, 18.1%). Even though we did not include case studies of occupations, industries or national union organizations, this compares favourably with other subjects such as information systems (15%, 1990-99) (Dubé and Paré 2003:601), international business (10.5%, 1995-2005) (Piekkari, Welch and Paavilainen 2009), operations management (6.8%, 2003-2007) (Barratt, Choi and Li 2011: 334), and general management (6.0%, 1995-2000) (Gibbert, Ruigrok and Wicki 2008: 1470). As expected, British journals (NTWE and WES) make up two of the three leading case study publishers along with the Swedish-based journal *Economic & Industrial Democracy*. Together they account for just over half of the total sample (57.5%).

With regard to gender, eighty-two (47.1%) of the papers were authored by men either on their own or in collaboration with other men while fifty-three (30.5%) were by women either on their own or with others. The remaining thirty-nine (22.4%) had mixed authorship of male and female. In terms of academic rank, one third of the papers were (co-)authored by a full Professor (35.6%) and half were written with an Associate Professor, Reader, Senior Lecturer or Principal Research Fellow (52.3%). That leaves around one in ten papers in the lowest category of Assistant Professors, Lecturers and Research Fellows (12.1%). Combining gender and rank we find that only one in ten papers had full professors who were female (11.3%) whereas women made up half of the authors at the bottom of the academic ladder (52.4%). The authors of the papers in this sample had PhDs from ninety-nine different awarding universities spread across eighteen countries. PhDs in industrial or labor relations (33.0%) and sociology (27.0%) were the most popular. Half of the papers (51.7%)

[3] A latent trait model (factor analysis for binary data) was also fitted to the data to find clusters of practice but the results were inconclusive and the outcome model not parsimonious.

were by British authors, with around one-fifth from North America (i.e. US and Canada, 18.4.0%) and under a third from the Rest of the World (i.e. Europe 21.3% and Australia 8.6%). Finally, the workplace case study tradition is far from dying as two-fifths (40.8%) of the papers were produced by authors who had obtained their doctorates since the year 2000. A gender shift is also apparent as an average of eleven years (11.3) have passed since male authors completed their doctorates compared to approximately seven and a half (7.45) for female authors.

Common methods reporting practices

One of the aims of this research is to hold a mirror up to the workplace case study tradition and provide a general descriptive map of reported research practices (Table 1). When we examine the individual indicators, we find that the vast majority of papers undertake the straightforward tasks of providing a clear unit of analysis (86.2%), a clear research question (80.5%) and a description of the case study context (76.4%). Significantly, half of the practices are present in at least half of the papers while seven of the eighteen practices are evident in two-thirds.

TABLE 1 ABOUT HERE

While we would not insist that every paper should include all of the practices, we were encouraged by the fact that summary statistics of the overall reporting index of eighteen indicators show that the median paper reported on more than sixty per cent of the indicators. This, along with the fact that some of the papers had an explicitly interpretative orientation, suggests that our selection of indicators has some face validity as a general set.

Turning to the three components that make up the overall index, we found that some forty-two papers contained all of the validity items, though only six papers contained all those relating to research design while transparency had none (six papers contained five of the six items). Overall, the frequencies for the validity indicators tend to be larger than those for research design and transparency. This is confirmed when we combine each set of six indicators into a simple summary index for research design, validity and transparency. These reveal that the average for the validity index is indeed higher than those for research design and transparency (4.58 compared to 2.57 and 2.01), which is generally what is expected of intensive, qualitative field research. Taken together,

these findings go some way to challenging the idea that qualitative papers do not have anything like the reporting conventions of quantitative papers. The regularities that we have identified may not be explicitly recognized as conventions, and while they may appear in different combinations, their prevalence, especially with regard to validity, suggests more similarities in research practice than previously acknowledged.

Nonetheless, there are strikingly low frequencies on some of the more fundamental aspects of research design, such as the reasons for using qualitative methods (21.8%), or even for choosing a case study approach (25.3%). The reluctance to outline methods of coding (19.0%) and analysis (29.3%) is surprising given the prevalence of specialist software packages (Mangabeira, Lee and Fielding 2004). What is also striking is the general failure to discuss the amount of access (26.4%), including how informants were selected (25.3%), even though the level of access has long been recognized as a major influence on research quality (e.g., Bryman 1988). And we must acknowledge that the inability to name the organization makes it difficult to undertake either replication or 'revisits' (e.g., Burawoy 2003).

Beyond peer review: gender, academic status, professional experience and doctoral training

We now turn to the relationship between descriptions of methods and the characteristics of the published papers and their authors. To that end we conducted a series of regressions using a range of explanatory variables with the combined index as the response variable. Again, gender, academic rank, experience and the three variable relating to doctoral training ('PhD Year', 'PhD Country Groups' and 'PhD Subject') are the response variables while the control variables include journal ranking, external funding, year of publication and the number of cases. We present three models. The first model contains the explanatory variables only, the second model includes the control variables and the final model includes a revealing interaction between gender and year of publication.

TABLE 2 ABOUT HERE

The models reveal systematic differences in methods reporting by gender and academic rank but not for the variables relating to professional experience or PhD training. It is worth remembering that the dependant variable is a count measure of research reporting practices. Papers authored by women are noticeably more inclined to describe their research strategy and methods when compared with those authored by men. Indeed, a female authored paper is associated with an increase of almost two points in the methods reporting index after controlling for other variables (model 2), all else being equal. We do appreciate that this refers to descriptions of how the research was conducted rather than the actual amount of research. Might there be a gender difference in the amount of research that women do to get published? When we examined the number of case studies presented in each paper we found that male or male only authored papers tend to contain an additional case study on average (4.36, 3.08, respectively). However, female authored papers have more interviews per case study on average (22.4, 19.0). Again, the latter finding supports the idea that female researchers act differently in that they are more thorough in the conduct and reporting of their research, especially in male-dominated subjects (Sonnert and Holton 1995). This inclination may be compounded by the idea that qualitative methods hold a subaltern status and, as women are more inclined to specialize in these methods (Clemens et al. 1995), this may also encourage a tendency to emphasize the procedural aspects of qualitative case study research in order to enhance the credibility of the work.

It would not be unreasonable to wonder if the gender difference evident in model 2 might have reflected the recent entry of women into these fields of study at a time when working towards a doctorate began to include formal research training. We find, however, that the coefficient for year of PhD completion has a small and non- significant effect and this was still the case when we included an interaction between gender and this variable (separate analyses not shown).

Leaving aside doctoral training, another possibility was that the results might reflect an evolution in thinking about research methods within the fields of study. Consequently, papers that were published more recently might have more information on methods and happen to have more women as authors because of their increased entry into this area of research. In other words, this tradition of research is itself evolving in a direction that is much more methods conscious. To address this issue we ran an interaction between gender and year of publication in model 3. The negative and significant coefficient can be interpreted as follows. *Ceteris paribus*, starting from 2000, male-only papers were associated with a 0.3 yearly increase in the reporting index, while women-only papers reported an estimated yearly increase of only 0.06. That is, men's papers improved considerably in the period while women-only papers improved only slightly (Figure 2). So, women have constantly been better at describing the methods used to collect the data but papers by male authors are improving over time.

FIGURE 2 ABOUT HERE

Turning to the other explanatory variables, we find that academic rank also matters though the effect is not as strong as gender. The articles by full professors are likely to report one more indicator than those of the lowest rank (i.e. Lecturer, Assistant Professor or Research Fellow). Also, when we examined the amount of research undertaken by academic rank, articles with full professors among the authors generally contained an extra case study than those in the lowest category (4.08, 3.19) and were likely to do an additional interview per case study (29.7, 28.3). In sum, the results by academic rank are in the expected direction though the difference is only evident through a contrast between those at the top and bottom of the career ladder.

None of the variables relating to experience or PhD training attained any level of statistical significance. While the entry of sociologists into industrial relations in the 1970s and 1980s may have invigorated the subject, doing a doctorate in sociology is not associated with greater attention describing research methods. And despite the leading role that is often attributed to American scholarship, those trained on that continent did not give noticeably greater attention to questions of research design and method than those who trained in the U.K. Nor did the year in which the senior author did his/her PhD have any noticeable effect.

Though the year of publication was included as a control variable, it is worthy of comment as it relates to the question of improvement over time. Here there are grounds for optimism as our models point to noticeable improvement in the way articles describe their research as we move from 2000 to 2014. Models 2 and 3 both have a positive if moderate coefficient (.30, significant at the .001 level). Separate analyses (not shown) suggest that the changes relate to validity and evidence transparency but not to the reporting of various facets of the research design. To illustrate the finding, Figure 3 sets out the year-specific averages for each of the indices relating to research design, validity and transparency. Although there are fluctuations, the fitted trend lines indicate that the reporting of validity and evidence transparency have increased over the period while that for research design remains fairly stable.

FIGURE 3 ABOUT HERE

Conclusions

The finding of gender differences in research practice may come as a surprise to those not familiar with the literature on the sociology of science and its account of the challenges women face in a male-dominated field. We would therefore like to note that they are consistent with cross-national research indicating that women have to work harder than men in order to be seen to meet the same performance standards (Gorman and Kmec 2007). Even so, the findings raise an obvious question about the beliefs that female researchers may hold about how their work is perceived and whether they believe that they have to do more to get published in a field that is only slowly becoming receptive to female scholarship. This strikes us as the kind of question that could be taken up fruitfully through qualitative research. Another question is whether these findings are unique to, or more pronounced within, qualitative research because it lacks the kind of conventions that are associated with rigour in quantitative research. Of course, this also raises the question of whether it also applies to quantitative research.

In terms of holding a mirror up against existing research, we believe one of our contributions is the provision of a list of indicators that might provide the basis for a much needed discussion about the quality and future conduct of case study research. While we would not insist that it be used as a rigid checklist, we would nonetheless argue that qualitative case study research has to engage with issues of research design and validity while also being transparent on the amount of evidence and on how it is analysed. Empirically, we find that there are more regularities in reporting practices, especially with regard to validity, than previously appreciated. The significance of this finding should not be underestimated in the context of the criticism that this tradition of research is little more than a form of storytelling. Nonetheless, we cannot avoid the fact that the vast majority of case study papers under-report some of the more fundamental elements of their research. Perhaps the most striking of these is the general failure to explain why case studies and qualitative methods are deemed to be appropriate in the first place. This is closely followed by the extraordinary inability to address the basic conceptual question of what the case studies were actually cases *of*, especially when case studies are always instances of some wider phenomenon. (Gerring 2007:18-20) We wonder if these and other omissions reflect a deeper problem which is that the qualitative

tradition is frequently unable to demonstrate the value of case study research, possibly because of a certain 'taken for granted-ness' among practitioners. The danger here is that it may come to hold the position of an unquestioned faith that appeals only to 'true believers'. This paper is intended to go some way towards challenging such a possibility.

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References

Ackers, Peter. 2011. "The Changing Systems of British Industrial Relations, 1954–1979: Hugh Clegg and the Warwick Sociological Turn." *British Journal of Industrial Relations* 49(2):306-30. doi: 10.1111/j.1467-8543.2010.00844.x.

Barratt, M., T. Y. Choi and M. Li. 2011. "Qualitative Case Studies in Operations Management: Trends, Research Outcomes, and Future Research Implications." *Journal of Operations Management* 29(4):329-42.

Beverland, Michael and Adam Lindgreen. 2010. "What Makes a Good Case Study? A Positivist Review of Qualitative Case Research Published in Industrial Marketing Management, 1971–2006." *Industrial Marketing Management* 39(1):56-63. doi: http://dx.doi.org/10.1016/j.indmarman.2008.09.005.

Brown, William and Martyn Wright. 1994. "The Empirical Tradition in Workplace Bargaining Research." *British Journal of Industrial Relations* 32(2):153-64.

Bryman, Alan. 1988. "Introduction: 'Inside' Accounts and Social Research in Organizations." Pp. 1-20 in *Doing Research in Organizations*, edited by A. Bryman. London: Routledge.

Burawoy, Michael. 2003. "Revisits: An Outline of a Theory of Reflexive Ethnography." *American Sociological Review* 68(October):645-79.

Cavendish, Ruth. 1982. *Women on the Line*. London: Routledge and Kegan Paul.

Clemens, Elisabeth S., Walter W. Powell, Kris McIlwaine and Dina Okamoto. 1995. "Careers in Print: Books, Journals, and Scholarly Reputations." *American Journal of Sociology* 101(2):433-94. doi: 10.2307/2782434.

Cockburn, Cynthia. 1983. *Brothers: Male Dominance and Technological Change*. London: Pluto.

Collinson, J. and J. Hockey. 1997. "The Social Science Training-Model Doctorate: Student Choice?". *Journal of Further and Higher Education* 21(3):373-81.

Commons, John R. 1921. *Industrial Government*. New York,: The Macmillan company.

Dubé, Line and Guy Paré. 2003. "Rigor in Information Systems Positivist Case Research: Current Practices, Trends, and Recommendations." *MIS Quarterly* 27(4):597-636. doi: 10.2307/30036550.

Frank Fox, Mary. 2006. "Gender, Hierarchy and Science." Pp. 441-57 in *Handbook of the Sociology of Gender*, edited by J. Saltzman Chafetz. New York: Springer.

Frege, Carola. 2007. *Employment Research and State Traditions*. Oxford: Oxford University Press.

Gerring, John. 2004. "What Is a Case Study and What Is It Good For?". *American Political Science Review* 98(2):341-54.

Gerring, John. 2007. *Case Study Research: Principles and Practices*. New York: Cambridge University Press.

Gibbert, Michael, Winfried Ruigrok and Barbara Wicki. 2008. "What Passes as a Rigorous Case Study?". *Strategic Management Journal* 29(13):1465-74. doi: 10.1002/smj.722.
Goldthorpe, John H. 2000. *On Sociology: Numbers, Narratives, and the Integration of Research and Theory*. Oxford: Oxford University Press.
Gorman, Elizabeth H. and Julie A. Kmec. 2007. "We (Have to) Try Harder: Gender and Required Work Effort in Britain and the United States." *Gender and Society* 21(6):828-56. doi: 10.1177/0891243207309900.
Harvey, Charles, Aidan Kelly, Huw Morris and Michael Rowlinson. 2010. "Association of Business Schools Academic Journal Quality Guide Version 4." Vol. London: The Association of Business Schools.
Hochschild, Arlie Russell. 1983. *The Managed Heart: Commercialization of Human Feeling*. Berkeley: University of California Press.
Holgate, Jane, Gail Hebson and Anne McBride. 2006. "Why Gender and 'Difference' Matters: A Critical Appraisal of Industrial Relations Research." *Industrial Relations Journal* 37(4):310-28. doi: 10.1111/j.1468-2338.2006.00406.x.
Kaufman, Bruce E. 2004. *The Global Evolution of Industrial Relations: Events, Ideas and the Iira*. Geneva: International Labour Office.
King, Gary, Robert O. Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.
Kitay, Jim and Ron Callus. 1998. "The Role and Challenge of Case Study Design in Industrial Relations Research." Pp. 101-12 in *Researching the World of Work: Strategies and Methods in Studying Industrial Relations*, edited by K. Whitfield and G. Strauss. Ithaca: Cornell University Press.
Leahey, Erin. 2008. "Methodological Memes and Mores: Toward a Sociology of Social Research." *Annual Review of Sociology* 34(1):33-53. doi: doi:10.1146/annurev.soc.34.040507.134731.
Mangabeira, Wilma C., Raymond M. Lee and Nigel G. Fielding. 2004. "Computers and Qualitative Research: Adoption, Use, and Representation." *Social Science Computer Review* 22(2):167-78. doi: 10.1177/0894439303262622.
Mayo, Elton. 1933. *The Human Problems of an Industrial Civilization*. New York,: The Macmillan company.
McCarthy, W.E. J. 1994. "Of Hats and Cattle: Or the Limits of Macro-Survey Research in Industrial Relations ". *Industrial Relations Journal* 25(4):315-22.
Merton, Robert K. 1973. *The Sociology of Science*. Chicago: University of Chicago Press.
Nerad, Maresi and Mimi Heggelund. 2011. *Toward a Global Phd?: Forces and Forms in Doctoral Education Worldwide*. Washington: University of Washington Press.
Padfield, M. and I. Procter. 1996. "The Effect of Interviewer's Gender on the Interviewing Process: A Comparative Enquiry." *Sociology* 30(2):355-66.
Piekkari, Rebecca, Catherine Welch and Eriikka Paavilainen. 2009. "The Case Study as Disciplinary Convention: Evidence from International Business Journals." *Organizational Research Methods* 12(3):567-89. doi: 10.1177/1094428108319905.
Platt, Jennifer. 1996. *A History of Sociological Research Methods in America, 1920 - 1960*. Cambridge: Cambridge University Press.
Platt, Jennifer. 2007. "Case Study " Pp. 102-21 in *The Sage Handbook of Social Science Methodology*, edited by W. Outhwaite and S. P. Turner. London: SAGE.
Seale, Clive. 1999. *The Quality of Qualitative Research*. London: Sage.
Silverman, David. 2011. *Interpreting Qualitative Data: A Guide to the Principles of Qualitative Research*. London: Sage.
Song, M. and D. Parker. 1995. "Commonality, Difference and the Dynamics of Disclosure in in-Depth Interviewing." *Sociology* 29(2):241-56.
Sonnert, Gerhard and Gerald Holton. 1995. *Who Succeeds in Science? The Gender Dimension*. New Brunswick: Rutgers University Press.

Sonnert, Gerhard and Gerald Holton. 1996. "Career Patterns of Women and Men in the Sciences." *American Scientist* 84(1):63-71.
Thompson, Paul and Bill Harley. 2008. "Hrm and the Worker: Labor Process Perspectives." Pp. 147-65 in *The Oxford Handbook of Human Resource Management*, edited by P. Boxall, J. Purcell and P. M. Wright. Oxford: Oxford University Press.
Wajcman, J. 2000. "Feminism Facing Industrial Relations in Britain." *British Journal of Industrial Relations* 38(2):183-201.
Yin, Robert K. 2009. *Case Study Research: Design and Methods*. Thousands Oaks: Sage.

Figure 1 Indicators for Research Design, Validity, and Transparency

Indicator	Definition
Research design	
Case study rationale [c, d, f]	Does the paper explain why case studies are appropriate for the study given its aims?
Rationale for qualitative research	Does the paper explain why qualitative research is appropriate for the study given its aims?
Case sampling strategy [b, c, e]	Does the paper explain why these particular cases were selected?
Unit of analysis [a, c, f]	Is the unit of analysis clearly stated?
Selection of interviewees/subjects	Does the paper explain how the informants/interviewees were selected?
Limitations of study	Is there a discussion of the limitations of the study?
Validity	
Clear research question [a, f]	Does the paper provide a clear statement of the research question(s)?
Different methods [a, b, c, d, e, f]	Is there more than one source of evidence (i.e. more than one method of data collection used)?
Amount of evidence	Does the state the amount of evidence that was collected (e.g. number of interviews)?
Case study context [a, b, e]	Does the paper discuss the case study context (e.g. changes within the industry, local labour market, geographical region, etc.)?
Pattern matching [a, b, e]	Does the author(s) compare the findings with those reported in other empirical studies?
Direct quotes [a, c, d]	Does the study present evidence in the form of direct quotes?
Evidence/analysis transparency	
Access [b, e]	Does the paper discuss the level and conditions of access enjoyed by the researcher(s)?
Organization's own name [b, e]	Are the case study organizations referred to by their own name?
Evidence specified by case	Is the amount of evidence specified by case (e.g. number of interviews)?
Interview attribution	Does the paper attribute verbatim quotes so that different speakers may be identified?
Data coding procedure [a, d, e]	Does the paper indicate how the interviews/transcripts/field notes were coded?
Method of analysis [a, d, e]	Is the method of data analysis described?

a = Dubé and Paré (2003); b = Gibbert *et al.* 2008; c = Piekkari *et al.* (2009); d = Beverland and Lindgreen (2010); e = Gibbert and Ruigrok (2010); f = Barratt *et al*. (2011).

Figure 2 Methods reporting index by gender, 2000-2014, all other values held constant.

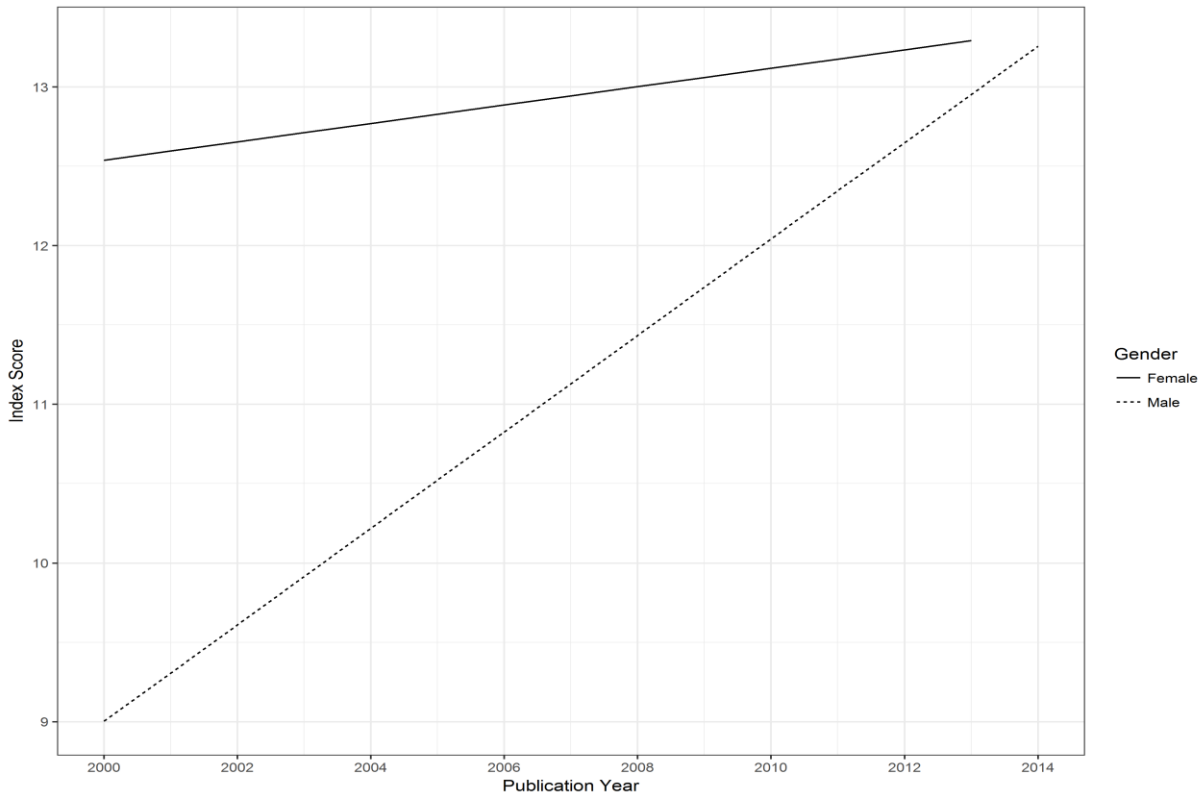
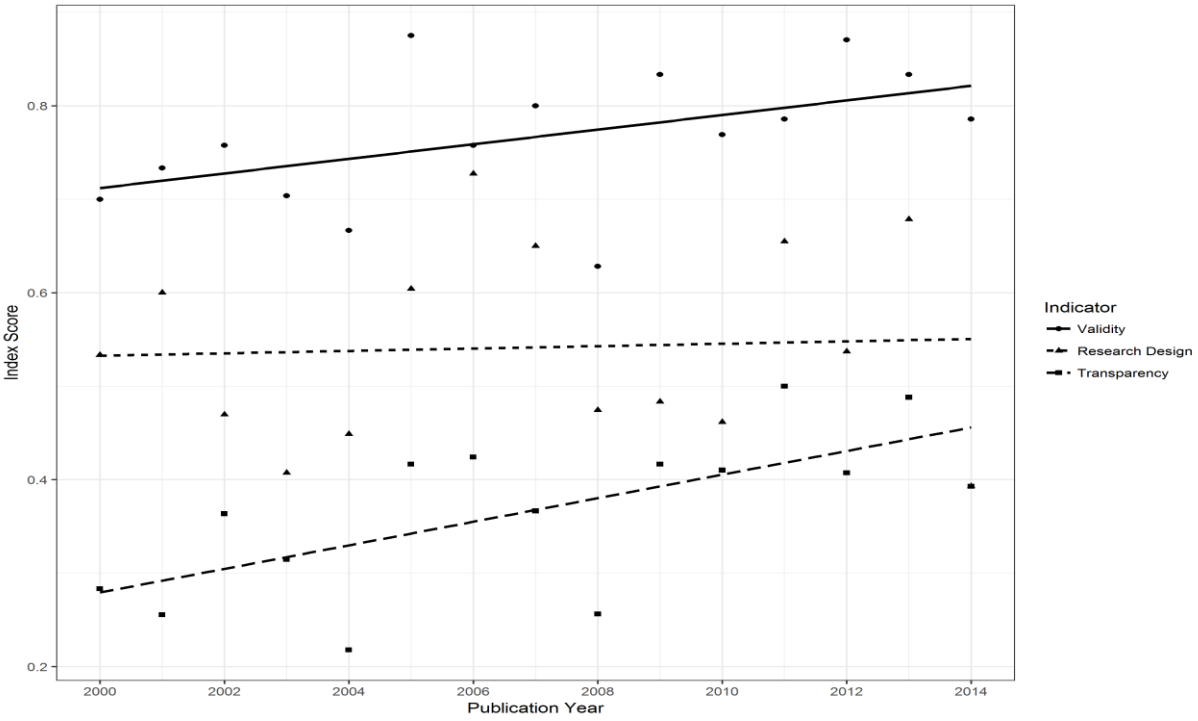


Figure 3 Research design, validity and transparency indices, 2000-2014 (averages)



Note: only the coefficient of the transparency indicator is significant at the 99% level of significance (separate analysis not shown).

Table 1 Frequencies for research design, validity and transparency indicators

	BJIR	EID	EJIR	ILRR	IR	IRJ	JIR	NTWE	RI	W&O	WES	JIR	Total (%)
No. of case study papers	12	25	12	6	2	16	15	36	15	7	28	15	174 (100)
Research Design													
Unit of analysis	9	23	9	4	2	15	12	30	14	7	25	12	150 (86.2)
Case selection strategy	6	18	8	4	1	13	3	14	6	2	20	3	92 (54.6)
Research limitations	6	16	6	3	2	4	6	12	5	1	11	6	80 (46.0)
Case study rationale	3	10	4	1	1	1	2	11	0	0	8	2	44 (25.3)
Informant selection	3	12	0	1	0	0	1	5	6	4	12	1	44 (25.3)
Qualitative rationale	1	6	2	0	1	1	5	6	5	1	9	5	38 (21.8)
Validity													
Clear research question	11	18	10	6	2	15	13	23	12	7	23	13	140 (80.5)
Amount of evidence	10	21	11	5	2	11	8	29	14	7	21	8	139 (79.9)
Different methods	9	20	6	6	2	13	14	29	12	5	19	14	135 (77.6)
Case study context	10	21	12	6	2	13	10	25	9	5	20	10	133 (76.4)
Direct quotes	8	22	8	1	1	9	12	31	10	7	23	12	132 (75.9)
Pattern matching	10	21	6	4	1	12	6	26	8	2	21	6	118 (67.8)
Transparency													
Access	5	5	3	1	1	6	3	7	2	3	10	3	46 (26.4)
Organization's own name	8	7	4	3	2	7	3	12	5	1	4	3	56 (32.2)
Evidence by case	9	14	2	2	2	9	5	18	8	6	16	5	91 (52.3)
Coding	0	7	0	1	0	1	5	8	2	1	8	5	33 (19.0)
Method of analysis	2	9	2	1	0	1	5	10	7	3	10	5	51 (29.3)
Interview attribution	5	14	4	2	1	6	5	16	3	5	12	5	73 (41.9)

Table 2. OLS linear regression for combined index (regression coefficients and standard errors)

Gender	Model 1	Model 2	Model 3
Male	(Ref.)	(Ref.)	(Ref.)
Female	1.83*** (0.48)	1.76*** (0.48)	3.78*** (0.92)
Academic rank			
Low	(Ref.)	(Ref.)	(Ref.)
Medium	1.06* (0.56)	0.79 (0.56)	0.81 (0.55)
High	1.62** (0.63)	1.21* (0.65)	1.20* (0.64)
Year of PhD award	0.07** (0.03)	-0.06 (0.06)	-0.07 (0.06)
PhD subject			
Industrial relations	(Ref.)	(Ref.)	(Ref.)
Sociology	-0.05 (0.53)	-0.04 (0.54)	0.13 (0.53)
Other	0.44 (0.49)	0.52 (0.48)	0.60 (0.48)
PhD country groups			
United Kingdom	(Ref.)	(Ref.)	(Ref.)
North America	-0.02 (0.58)	0.23 (0.58)	0.18 (0.57)
Rest of the World	-0.94 (0.51)*	-0.61 (0.52)	-0.55 (0.51)
Experience (post PhD)	0.05 (0.04)	-0.07 (0.06)	-0.09 (0.06)
Year of publication		0.20** (.08)	0.30*** (.09)
Journal rank			
Low		(Ref.)	
Medium		0.88* (0.51)	0.84* (0.50)
High		1.67*** (0.59)	1.63*** (0.58)
External funding			
No		(Ref.)	
Yes		-0.10 (0.42)	-0.17 (0.42)
No. of cases		-0.04 (0.05)	-0.03 (0.05)
Gender x Publ. year			-0.24** (0.10)
R^2	0.13	0.20	0.23

Significance level: *** $p< 0.01$; ** $p<0.05$; *$p<0.10$
Ref.: reference category.

Appendix 1. *Definitions of variables used in Table 2.*

Independent variable	
Academic rank	Position held by the author or the most senior author.[4] High = Full Professor. Medium = Reader, Senior Lecturer, Associate Professor, Principal Lecturer, and Principal Research Fellow; and Senior Research Fellow. Low = Lecturer, Assistant Professor, Post-doctoral Fellow, Research Fellow and PhD student.
Gender	Male or male only; female or female only.[5]
Experience	Number of years since senior author completed PhD.
PhD year of award	1969 – 2014
PhD subject groups	Information on the PhD of the most senior author was obtained from a variety of sources including the British Library e-theses online service (EThOS), faculty web pages and library searches at the awarding university. An initial list of 17 subject areas was recoded into 4 subject areas: 1 = Industrial relations; 2 = Sociology; 3 = HRM/Management and 4 = Other.
PhD Country groups	The eighteen countries were recoded into three country groups: UK, North America (USA and Canada), and the Rest of the World (Europe and Australia).
Year of publication	2000-2014
Number of cases	1 to 20.
External funding	1 = Yes; 0 = No.
Journal ranking	High = Association of Business School (ABS) 4: BJIR, IR and WES; Medium = ABS 3: EID, EJIR, NTWE, ILRR, W&O. Low = ABS 2: IRJ, JIR and RI.

[4] We initially constructed a variable that contained five levels but moved to a more parsimonious three levels version because the model estimates were very similar.
[5] As the results for papers that had both male and female authors lay between those for either sex we excluded them.