HR Analytics: The onto-epistemology and politics of metricised HRM

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Abstract

The development of HR analytics, the growing dominance of positivistic approaches in academic HRM, and the increasing influence of evidence-based approaches on HR represent a convergence of contextual factors that have the potential to influence HR practice significantly. In this context, we examine how the HR analytics 'project' may unfold based on a reflective analysis of a number of data-rich wellbeing projects and empirical evaluations. We focus on the ways in which participants may become enrolled and mobilised in such projects, and the implications this has for perceived value and effects of 'data' generated by HR analytics. In particular, we draw attention to the social, political and onto-epistemological processes of the analytics project, and draw conclusions about the way in which the analytics project may influence professional practice.

Keywords: HR analytics, HR professional, wellbeing, onto-epistemology, organisational politics

Introduction

Although by no means new, HR analytics, which we loosely define as including metrics and analytics (Lawler, Levenson & Boudreau, 2004), is seen as an increasingly significant issue for organisations (CIPD/Workday, 2018). It has been promoted as a way of analysing human capital and improving business performance, and enhancing the position of the HR function in organisations (Boudreau and Ramstad, 2007; Fitz-Enz, 2010; Huselid, 2018). However, the application of analytics appears to remain rather limited and its impact variable (Boudreau & Cascio, 2017; Minbaeva, 2017), and this seems to echo the effects of prior innovations in HRM that have promised to develop the function and raise its status (Legge, 1978; Guest & King, 2004; Caldwell 2003). What distinguishes HR analytics from these earlier developments is its focus on data and analysis, and the provision of 'scientific' knowledge for the management of the workforce (Ulrich & Dulebohn, 2015). In this paper, we explore the ways in which different forms of knowledge and data shape, and are shaped by, the relationships between HR managers, senior managers and a wider academic and professional context. Within the context of the increasing dominance of positivist epistemology in the HRM academic field (Harley, 2015) and the institutionalization of Evidence-Based Management (EBM) and Evidence-based HRM (EBHRM), we argue that the nascent development of HR analytics and its impact on HRM practice cannot be understood without examining the onto-epistemological and political issues that surround the production, dissemination and use of HR data (Knights, 2008; Sandberg & Tsoukas, 2011). We conclude that these factors will give impetus to the development of HR analytics because it produces data valued by senior managers, which potentially will enhance the professional recognition of HR in organisations. However, we argue that this places HR managers in an ambiguous position, as they are compelled to provide largely quantitative evidence to senior managers, which they believe fails to reflect the complexity of HR issues and potentially undermines their efforts to improve the workplace.

We begin the paper by briefly reprising the debate on the appropriate role and practice of HRM, and argue that HR analytics has emerged as the latest 'opportunity' for the profession. We then link this to the increasing prevalence of positivism in HR research, and to the institutionalisation of EBM and EBHRM. We outline the conceptual basis of our paper, rooted in Actor Network Theory (ANT) and Callon's (1984) sociology of translation, which allows us to explore how networks of actors and interests work together, and how they shape and are shaped by different forms of knowledge and data. We go on to describe and justify the methods that underpin this paper, which is based on a retrospective analysis of a large research programme, involving a series of empirical case studies of wellbeing projects that generated both quantitative and qualitative data, thus allowing us to explore the impact of differing forms of data and knowledge. Our analysis demonstrates how organisational actors were enlisted into the wellbeing projects, and how data was generated and interpreted within the case organisations. We then discuss the implications of our findings for HR analytics and draw conclusions about how such projects may unfold and with what consequences for the development of HRM.

HRM and analytics

The role of the HRM function has been a subject of debate for many years, generating a range of new models and many opinions about the proper place of the function and its relationship with senior board-level managers, line managers and employees (see Marchington, Wilkinson, Donnelly & Kynighou, (2016) for a useful summary of the various dimensions to this debate). For example, the role of HR has been seen as: being about service provision, taking a strategic business partner role, being a change agent or facilitator, and so on, roles which have implications for the work, influence and status of the profession. However, the advocacy of various new roles and positions has failed to resolve the ambiguities and uncertainties around HRM (Caldwell, 2003). Advocates of HR analytics, argue that it represents an opportunity for HRM to play a more strategic and performance-oriented role (Levenson, 2005; Mondore, Douthitt & Carson, 2011), based on quantitatively-driven cost benefit analysis, behavioural modelling and cause and effect analysis (Fitz-Enz, 2010)[1]. Some influential commentators suggest that this will allow HR to catch up with its more analytically-oriented functional rivals (CIPD, 2017) and strengthen the position of the HR function in organisations (Lawler et al. 2004). This brings to mind earlier claims made about innovations in HRM and begs the question as to whether analytics can deliver what these previous innovations have not.

There has been little empirical or critical academic research on HR analytics through which we can judge the above claims or assess progress (Marler & Boudreau 2017; Van den Heuval and Bondarouk, 2017). Some recent evaluations suggest that there are significant obstacles to the utilisation of HR analytics and that the transformational potential of the approach may be limited. At a very basic level, some commentators suggest that the appropriate analytical skills are missing from the HR function (Kryscynski, Reeves, Stice-Lusvardi, Ulrich & Russell, 2018), though even if this skills gap was to be filled, other critics argue that the peripheral position of HR impedes the development of analytics projects at a more fundamental level (Smeyers, 2015, cited in Angrave, Charlwood, Kirkpatrick, Lawrence, & Stuart, 2016). Further, and of central interest to this paper, Angrave et al. (2016) and Guest and King (2004) assert that there is scepticism and ambivalence amongst HR professionals about metrics and quantified data, which they see as reductive and of questionable value in the context of 'people management'. These points draw attention to important questions of onto-epistemology and organisational politics. Firstly, what is considered to be the 'appropriate' form of knowledge and evidence in HRM, and secondly, what is the impact of such knowledge on the various relationships between HR practitioners, senior managers and academic ideas?

The adoption (or not) of HR analytics can be contextualised within two current and related developments about HRM and knowledge/data: the narrowing of management and HR research around a positivist paradigm and the growth and institutionalisation of EBM. Critics have asserted that research in the management field is increasingly positivistic and formulaic (Alvesson & Gabriel, 2013), generating ‘boxes and arrows’, or ‘correlational’, theory (Delbridge and Fiss, 2013). Harley (2015) argues that a similar trajectory is evident in the HRM field, with the growing dominance of positivist, psychology-informed, statistics-based work. He describes the rise of ‘scientific’ HRM research as involving a move towards studies that seek to demonstrate links between HR practices and performance, based on objective data, and proven through multivariate, multi-level models. The increasing influence of positivism in academic HRM is taking place in tandem with the development and institutionalisation of EBM and EBHRM. Advocates of EBM see it as a means of countering ‘discredited nostrums, partial remedies, or untested management miracle cures’ (Pfeffer & Sutton, 2006: 63), arguing that management decision-making should be underpinned by “the conscientious, explicit and judicious use of the best available evidence from multiple sources” (Barends, Rousseau & Briner, 2014: 2). These proponents claim that the use of scientific evidence can remove the subjectivities in management decision-making, leading to better management decisions (Pfeffer & Sutton, 2006; Rousseau, 2005), and to the establishment of cause and effect relationships (Rousseau, 2005). The EBM doctrine has also been extended specifically into the HRM field (Briner & Barends, 2016; Rynes & Bartunek, 2017), and is growing in influence. For example, the recent CIPD Profession Map (CIPD, 2018a) includes direct reference to evidence-based practice and echoes precisely the evidence sources outlined by advocates of EBM, namely: scientific research findings; organisational data (which corresponds to the type of data that HR analytics would produce); professional experience and judgement; and stakeholder values and concerns (CIPD, 2018b; Barends et al., 2014).

The positivism and scientism of management research and EBM has recently been critiqued by a number of commentators. Kaufman (2015: 405) is especially critical of the HRM field being increasingly characterised by "a creeping scientism with emphasis on ivory tower theorizing and number crunching, which produces journal articles having little contact with or value for real-life organizations and managers”. Guest (2011) and Harley (2015) have warned against the overwhelming move toward ‘statistical sophistication’ that could exclude qualitative research, and others have argued that a variety of evidence types is essential to understand experiential aspects of HR, which are difficult to define and measure (Purcell, 2014: 241). Though EBM recognises a range of evidence types, as outlined above, and claims theoretical plurality, the approach is criticised for having a narrow view of what is useful and valid evidence. For example, Tourish (2012) argues that EBM operates within an overtly positivist paradigm, and Learmouth and Harding (2006) argue that it adheres to assumptions of a unified scientific paradigm against which evidence is judged. The value and interest laden nature of evidence, and its construction through political processes, is consistently ignored (Cassell, 2011: 23). Despite claims to the contrary, and the acknowledgement of the role of professional judgement in decision-making, Morrell and Learmouth (2015: 522) argue that “what ultimately seems to count to EBMgt is quantification and commensuration”. They argue further that narrative forms of knowledge are typically devalued in the EBM literature, yet narrative surely forms a crucial element of professional judgement and the ‘craft’ of management (Hewison, 2004).

These academic debates have implications for the types of knowledge made available to, and valued by, managers, and this has generated a significant literature on the relevance of management research to practitioners (Knights, 2008; Sandberg & Tsoukas, 2011). Sandberg and Tsoukas (2011: 340) argue that very different logics underpin academic and managerial work. They see academics as working within an onto-epistemological framework of scientific rationality and “detached observation and analysis”, and managers as entwined with their worlds, and favouring a logic of practical rationality, more rooted in the complexity of their experiences. They suggest this difference of logic renders ideas based on scientific rationality of questionable value to practitioners. Whilst we recognise this important distinction, it seems to assume that managers across functions and at different levels in an organisation will share common preferences for this experiential knowledge. However, evidence suggests that some managers might find truncated, numeric data and the promise of scientific, 'proven' causal relations attractive (Rose, 1991; Harley, 2015), and this is reflected in the adoption of HR analytics and "the narrative and metrics associated with short-term and easy to measure performance criteria", which Marchington (2015: 178) argues, is an attempt to meet the demands of senior management.

With HR analytics being seen as a project through which the role and position of HRM in organisations can be enhanced, by its provision of certain types of knowledge, and within a broader context of assumptions and trends in what constitutes warranted knowledge in the field, it seems important to explore the inter-relationships between these issues. To facilitate this, we turn to Actor Network Theory (ANT) as our analytic framework, for as Knights (2008: 547) argues "knowledge is best seen as a hybrid of objects, social artefacts, and discourses that are organized […] through networks of actors, mediators, and intermediaries mobilized for purposes of securing it".

The doing of science

The application of ANT ideas to HRM is not unprecedented. Legge (1995: 317) has used Latour's (1987) ideas to explore the 'hyping of HRM', seeing HRM as a discourse that supports the interests of a loose network of stakeholders in a process that resembles scientific work. Latour (1987) argues for the analysis of science-in-the-making, examining the process of collective scientific work, which involves enrolling others into projects and building 'networks of association'. From this perspective, science is a process of 'organised persuasion', as scientists try to enrol others to, quite literally, 'get with the project'. Legge (1995) argues that, in similar fashion, academics, HR managers and so on deploy the rhetoric of HRM to further their interests, creating a significant network of influence and power.

At a more fine-grained level, Callon (1984) introduces the idea of translation, arguing that during the process of scientific investigation or the accomplishment of a project, participants must have a means of communicating with each other, and that they must be unified or brought into a relationship with one another through processes of negotiation and adjustment. He identifies four moments in the process that structure the power relations around a project: problematisation, interessement, enrolment and mobilisation. Problematisation involves the ways in which researchers (though plausibly other agents in different circumstances) define the identities of actors and "establish themselves as an obligatory passage point in the network of relations" they build (Callon, 1984: 204), in other words, how they make themselves indispensable to the other actors enlisted in the network. Interessement involves various strategies to lock the actors into place in the network. At this stage, the researchers (or other agents) define and understand the identities, goals and inclination of the actors, and bring them together in ways that they control through devices, which may weaken some relationships whilst strengthening others. Interessement does not automatically lead to alliances between actors; a further stage, enrolment, is required to define and attribute roles to actors, primarily those with some degree of power. This involves "negotiations, trials of strength and tricks" (Callon, 1984: 211), which enable interessement to succeed. Finally, mobilisation is concerned with representation and, specifically, with who gets to speak within a project. Not everyone has a voice; some actors may be represented by a select group drawn from their ranks, others only by the research results of which they are the subjects. Callon (1984) argues that this involves the displacement of some actors and the establishment of equivalences such that a concentration of actors can come to speak for all.

The relevance of these moments to HR analytics may not seem obvious, however, remembering Legge (1995) and thinking of an ‘HR analytics project’, the application of the ideas seems appropriate, for we are concerned with the influence of knowledge on, and the social processes involved in, establishing comparable networks of relationships. How do those leading projects organise persuasion, how are the moments of translation enacted, what effects does this have on what is perceived to be appropriate evidence and data within organisations, and how does this shape network relationships?

Methods

To answer these questions we explore the ways in which a series of HR intervention projects were developed and appraised within a programme of research on wellbeing. This involved significant empirical work, generating both quantitative and qualitative data. Whilst not an HR analytics project, the quantitative data produced would be very similar to that produced by an HR analytics system. The analysis of the programme of research allows us to explore a data-rich HR project, through all its stages from conception to completion, and to consider specifically the ways in which differing types of data ‘worked’ within four case organisations. This paper is unusual in that it is based on a retrospective analysis and, thus, we are not reporting the original results of the research, but analysing the research process itself, and the nature of the data it produced. Firstly, we outline the way the original research programme was conducted and give an account of the methods used for data collection and analysis. Secondly, we describe our approach to the current analysis of the programme process.

The Original Research Programme

The original programme of research involved a wide-ranging study involving nine participant organisations, of which we focus on four (Recovery Service, Car Manufacturer, Police Force and Local Authority), for which Author 1 was the lead researcher, with responsibility for the management and execution of the evaluation. A four-stage process was carried out in each organisation, as outlined in Table One.

Project Stages	**Evaluation methods**
Project recruitment	Structured interviews
Pre-intervention evaluation (baseline assessment)	Qualitative interviews Field notes Questionnaire survey
Intervention implementation	Five days consultancy/training with organisations being assisted in developing and implementing tailored wellbeing interventions
Post-implementation evaluation (approx.12 months later)	Qualitative interviews Field notes Questionnaire survey Feedback to key contacts and project steering groups

Table One: Project process in each organisation

Fifty-three organisations expressed a wish to participate in the research, and the recruitment process involved structured telephone interviews with HR managers to gain an insight into their organisational context and to establish motives for participation. Fifteen organisations were then invited for full participation, and meetings were held between the researchers and the organisations, before the research team made a final selection of nine cases. Finally, in order to be included in the programme, formal board-level authorisation was required.

Tailored wellbeing interventions were agreed between each organisation and the consultant, a firm specialising in employee health and wellbeing, whose work was funded by the research grant. A clear division was maintained between the interventions and the evaluation process.

The evaluation approach used was similar in format to other works designed to assess intervention outcomes (Cox, Karanika, Griffiths, & Houdmont, 2007; Nielsen & Daniels, 2012), in that attempts were made to evaluate the effects by using pre and post intervention assessments.

The research involved mixed methods of data collection and analysis. As might be expected in a study designed to evaluate 'outcomes', a quantitative element (in the form of a survey followed by a rigorous statistical analysis) was central to the methodology. Researchers also conducted 60 qualitative interviews with employees, HR and line managers to understand how organisational actors perceived their health and wellbeing before and after the intervention, and to gather reflections on the interventions themselves. This was an attempt to respond to some of the criticisms levelled at narrow, quantitative HRM studies generally, and wellbeing studies specifically (Nielsen, 2013). Interviews were transcribed and imported into NVivo software through which the coding process was undertaken. The identification of the main themes and codes involved close collaboration of the research team to ensure agreement in the labelling and meaning of codes, and a shared understanding of where and how these codes could be applied. In total, 125 codes were identified that were used for a thematic analysis, from which we have extracted 14 relevant codes for the analysis that underpins this paper, which we outline later.

In addition to the research data, Author 1 made detailed field notes throughout the research process, covering a broad range of elements such as observations of the working environment and post-interview reflections. Notes on the research process were also kept, recording details about: all interactions with research participants and organisational members; discussions with steering groups before, during and after the interventions; and interactions via telephone and email. Although the field notes were not written for the purpose of an ethnographic study, they do represent a rich, varied and comprehensive data source, detailing the context in which the projects unfolded. The material used for this paper is outlined in Table 2.

Research process documentation	
Field notes	Research plans, consultant feedback reports, email and other communications with consultants, participants organisations etc. Author 1 notes on interactions with participant organisations, including reflection on meetings, conversations and incidents. Also, included reflections on feelings and impressions of the research process.
Original research recruitment and evaluation data	
Structured interview transcripts (4)	Initial interviews with HR managers, exploring their interest in and suitability for participation in the research programme.
Semi-structured interview transcripts (60)	Interviews with HR managers, line managers and employees involved in the interventions, pre and post intervention.

Table 2: The data for reflective analysis

The Current Analysis

The analysis for this paper involved a review of empirical data and field notes, involving a process of reinterpretation and reflection. Author 1 systematically reviewed the interview data and field notes in order to identify material relevant to the current paper and, specifically, relating to the processes of translation. In order to ensure that the ‘insider’ experience of Author 1 did not unduly influence the analysis, Author 2 also systematically, and independently, reviewed the material. We then compared interpretations and mapped out the ways in which the research projects had evolved. The original codes from the programme, were independently reviewed until we were able to identify accurate codes relevant to how networks of actors and interests worked together, and how the actors shaped and were shaped by data during the programme.

The next stage of the analysis involved mapping the interview data codes and extracts from field notes onto the four moments of translation. Callon (1984) acknowledges that the moments overlap and are not clearly distinct, and our account, whilst structured for analytical convenience, also appreciates the fluidity of the moments in actual practice. Our mapping and data examples are illustrated in Table 3. We were then able to outline a chronology of the programme and consider how the moments of translation played out, identifying the key ways in which participants were enrolled in the projects, and the influence of differing forms of data or knowledge in the process.

Interview Data Codes from NVivo	**Moments of translation**	**Translation themes from research programme**
Organisational reasons for participation Intervention *Aims of intervention* *Awareness of intervention* *Barriers to intervention* *Evaluation* *Expectations* *Facilitators* *Impact of interventions* **Organisational culture** Organisational pressure **Performance** Measures of performance Organisational performance	**Problematisation** Defining actors and obligatory passage points (OPP)	Researchers' recruitment process and alignment of interests Wellbeing framed as a problem - *contextual topicality* - *manifest in absence figures* Free consultancy Perceived self-interest of managers
	Interessement Locking allies in place	Managers as clients Employees as research subjects Consultants and researchers as 'independent experts' Senior managers as 'investors'/proxy clients
	Enrolment Defining and coordinating roles	Researchers as enrolling HR managers HR managers as enrolling senior managers, line managers and employees
	Mobilisation Who speaks for whom?	Pivotal role of HR managers What data means: *Quantitative data 'meaningless' but accurate/objective*

		Qualitative data rich and explanatory but subjective Doing versus reporting

Table 3: Moments, codes and data

Findings

Problematisation involves defining the actors in the proposed network and then establishing obligatory passage points in the network of relationships built by the researchers. In this case, the process began by the researchers selecting participating organisations, a rigorous process that aimed to generate a range of committed and varied case study organisations. At this stage the key actors were: the researchers, the HR managers and the senior managers. Line managers, consultants and employees would emerge later in the process. The initial task of the researchers was to bring together the interests of the network of actors around the ‘problem’ of wellbeing, particularly focussing on the interests of the HR and senior managers, who could be construed as the clients. This process began with an understanding that ‘wellbeing’ was an organisational and managerial issue, an understanding that existed prior to the researchers making contact with the organisations, through the contemporary context of HRM. It would be difficult for any HRM manager not to be aware of wellbeing as a professional concern, given the amount of publicity given to this theme and, obviously, this was reinforced by the research team approaching the organisation with a specific wellbeing project, and with the status afforded to them by their apparent expertise.

Wellbeing also had to be on the organisational agenda. A comment from an employee in Car Manufacturer highlighted the ‘problem’ of wellbeing:

> I think they realised the discontentment (sic) down here, you know. Why people don't like coming here and why absence is so high. It's self-explanatory why it's high, you know. It's a stressful job. It's back breaking. It's physical and it's a mundane thing.

To the respondent the problem was obvious from experience. In another organisation (Recovery Service), one HR manager made reference to a 'gut feel' about the stressful nature of call centre work but, generally, the view was that managers had an expectation that 'obvious' problems had to be explicitly evidenced and quantified. Indeed, in 'organising the persuasion' of the senior management to authorise participation, HR managers stressed that it would be essential for the researchers to provide quantitative data to 'measure' progress, a position reinforced by one line manager:

> Senior managers, as in very senior managers, all we have from them really is we need to cut absence figures and they're very clear about the percentage we need to decrease absences by (Line manager, Local Authority)

Absence was a common measure of problematic wellbeing in each organisation, though the figures were abstract, reducing a complex phenomenon to simple measures that needed to be reported and then improved upon**.** However, though HR managers saw the need for this quantifiable data, they were more concerned with qualitative judgements and narratives because they sought explanations for the figures:

> It's all very well knowing that […] our employees have 8.51 days [off sick] on average, but that's a meaningless figure really. Where are they, what are the issues? And you can only do that if you dig deep (HR manager, Local Authority)

> So the last couple of years there's been a particular drive on that which looks at, not just about are you red or green on your metrics, but how have you delivered that and what behaviours have you used to deliver that (HR manager, Car Manufacturer)

So as well as framing wellbeing as a problem, the researchers and consultants also had to present themselves as having expertise and something to offer. One aspect of this was the provision of a free consultancy intervention package, which helped to interest and enlist those who perceived wellbeing as a problem, or at least an area for improvement, in their organisation. However, different, perhaps more cynical, reasons were offered by some for the involvement of the organisations in the projects. For example, in Police Service, one employee implied that the self-interest of key managers was significant:

> I couldn't really say why they have [participated]. Like I say, it might be somebody that's going through promotion that needs to implement something and achieve something, tick it off for the promotion board.

Such motives cannot be dismissed from our analysis for reasons we will return to in our concluding discussion.

At this stage, it is worth considering interessement, the actions through which actors' identities are stabilised by the researchers. As mentioned earlier, we can regard the identity of the HR managers as being that of 'project clients' and senior management as 'clients by proxy', as they were at one remove from the researchers. In being clients, these actors had particular expectations; the improvement in metrics was a key objective but, for the HR managers in particular, this had to be accompanied by a coherent explanation of how the gains were made, perhaps so that changes could be rolled out in other areas of the organisation as 'best practice'. For example, in the initial steering group (researchers and HR managers) meeting at Local

Authority there was consensus that the project should subsequently be grown into a ‘corporate project’ (Field notes).

The identity of the researchers and consultants is also of particular interest in this paper. Their identity in the network was based on perceptions of their expertise and independence. The provision of the free, tailored wellbeing intervention for each organisation was clearly a draw for participating organisations, but so too was the chance to have this evaluated by professional researchers. An HR manager in Recovery Service said:

> We’ve never done anything proactive before and I think by taking part in the study and having the interventions, it was welcome, the fact that we would get some kind of steer on how we could go about it, what was the right thing to do.

As well as expertise, the researchers also offered independence, which was a crucial element of their identity. As one line manager (Car Manufacturer) recounted:

> It would be nice for somebody to go and have a look at it, go and do surveys with the guys and get what they feel, and actually say okay, well we thought we were doing right by doing that but the actual shop floor hates that part of what we do, so let's address that.

‘Independent’ experts could provide the justification and validation for HR practitioners and line-managers to spend time on wellbeing, which senior managers would perceive as somehow more ‘credible’. The researchers perceived that senior managers would not necessarily trust the HR practitioners or line managers to initiate and objectively evaluate their own interventions, reinforcing the need for the independent evaluation by the researchers. For example, within the initial structured interview with an HR manager, ‘external validation’ and building ‘credibility for schemes’ were seen as crucial benefits of participation (Car Manufacturer, field notes).

Given the definition of the actors in our network and the establishment of identities and interests for these actors, we should now consider the ways in which they were enrolled into the projects. The initial enrolment was that of the HR managers into the projects by the researchers, through a process of persuasion based on their expertise and independence. However, from that point the HR managers' role in enrolling other actors came to prominence. Firstly, they needed to enrol the senior managers by persuading them of the performance gains to be made that would then need to be demonstrated quantitatively. For example, at a steering group meeting it was discussed that there were demands from senior management to prove financially the Return on Investment (Recovery Service, field notes). In the same meeting, the HR manager indicated that the wellbeing steering group, perceived by senior management to be 'pink and fluffy', would have to produce tangible results.

Secondly, the HR managers played a key role in enrolling the line managers and employees into the projects, by persuading them of the possible benefits of the wellbeing initiatives:

> My first involvement was when [HR managers] came and said, do you want to get involved and I said yeah, I'm more than willing … because I wanted to understand what was going on … I was trying to do something with the guys and girls (Line manager , Recovery Service)

One HR manager (Recovery Service) subsequently reported that she felt line managers were better able to manage situations:

> [It] was a really positive step forward in terms of helping our team managers recognise when our people are under pressure.

For some employees the promise of improvements in working conditions encouraged enrolment, for example, through getting managers to work with employees to resolve problems or through the offer of more facilities on site, such as physiotherapy or counsellors. However, it is notable that most employees remained sceptical about the prospects for improvement.

The mobilisation of actors, that is, the ways in which the collective actor groups were represented by spokespeople is the final element of the translation process. In this respect, there are two pertinent issues. Firstly, who speaks for whom and, secondly, how do they speak for others? In terms of the first issue, we find the researchers orchestrating the speech of actors throughout the research process. The survey methods and interview programmes were designed to elicit the views of HR managers, line managers and employees on wellbeing and the impact of the interventions provided by the consultants and, at these points, the voices of employees and line managers were heard for the first time. The researchers were aware of the limitations of survey data and used interviews with respondents to add depth and richness to their understanding of the wellbeing issues in each organisation. The resulting data was then fed back to the organisations, and principally to the HR managers, who then took a pivotal role in relaying that data through the organisation.

How actors speak for, about and to others is also crucial, and the role of different types of data is evident here. Given our earlier analysis of problematisation, and interessement, one would expect the need for tangible results based on existing metrics to be a key element of how the projects evolved, and to be crucial in the mobilisation of network members. However, the limitations of the quantitative measures became increasingly evident to some actors in the organisations, and the expected persuasiveness of the hard, ‘scientific facts’ was not always evident. Firstly, there was scepticism amongst some actors about the quantitative measurements that the researchers were generating from the projects. For example, respondents cast doubt on the measurements and the possibility of correlating changes to the interventions:

> The signs of stress might bring the absence down from four weeks to two weeks or from six weeks to four weeks, but I don't know how you could predict the saving because you can't say it's going to give us 1% less absence. If we could say that, we could put a figure on it straightaway because we like putting figures on things, but I don't know how you would measure that one. It would be really hard to measure it (Line manager, Car Manufacturer)

> We didn't get tangible, significant results that we could directly relate to the wellbeing initiative. So sickness absence might have gone down, and it did, I couldn't correlate that with wellbeing initiatives. It could be correlated with all sorts of other things that had been going at the same time, and that's quite difficult to pick apart. (HR manager, Recovery Service)

In short, HR and line managers tended to be unconvinced that the numbers meant very much or 'proved' links between changes.

Secondly, and in stark contrast to the previous point, senior managers continued to privilege quantitative data as evidence of change. The juxtaposition of 'objective proof' to 'subjective experience' seemed to be a subject of contention for those wishing to promote health and wellbeing in the workplace. On the one hand, hard facts and figures were necessary to persuade senior management to invest in future initiatives, while on the other the subjective judgements of those on the ground were seen to be richer and offered more scope for the explanation of the phenomena. The nature of the interventions and the focus on wellbeing made this particularly problematic:

> I think organisations still struggle to buy into wellbeing and still struggle to understand the positive benefits of engaging in it, because business has not got tangible results. And it's really difficult with wellbeing (HR manager, Recovery Service).

HR managers' objectives continued to be more oriented towards 'making a difference' in terms of wellbeing and seeing results on the ground, than simply reporting figures to senior management. The HR managers tended to recognise the importance of 'doing' as well as reporting:

> Erm, I think, you know, we recognise there's more that we could do to create that great working environment, because I do believe that if you create a great working environment, people will feel happier and ultimately, yeah, okay, they will be more productive but they're going to stay with you longer hopefully, they're going to recommend you to friends. (HR Manager, Recovery Service)

The notion of translation and the concepts Callon (1984) outlines are helpful in understanding the processes that took place in the organisations involved in the programme. The framework draws attention to the social relations and interests of the actors and the ways in which the researchers, and also the HR managers, attempted to enlist the differing actors into the projects. In particular, it allows us to consider the role of knowledge and data in the process.

Discussion and conclusion

Our analysis of the wellbeing projects has focussed on the different forms of knowledge and data in and around HR practice. This knowledge, some of which is comparable to analytics type data, was rather more varied than that produced by HR analytics systems, and this has allowed us make comparisons of the impact of different types of knowledge that would not have been possible from a study of an analytics project alone. This comparative approach allows us to make inferences about the way in which analytics projects may unfold, and for their impact on the role and status of HRM in organisations. The promise of HR analytics to transform HR is very much connected to knowledge and data, and their onto-epistemological and political consequences. As the wellbeing programme demonstrated, the role of, and relationships between, organisational participants are intricately tied to: the establishment of relationships between the organisation and the wider context of HR; the enrolment of actors into projects; and the types of knowledge they encounter.

The contextual influences on the wellbeing programme were clear, with the academic and professional discourses placing wellbeing on the HR agenda in the organisations. The current discourse around analytics represents a similar influence. Despite low adoption rates, the HR analytics theme is currently very much on the academic and professional agendas, and this seems likely to make it easier to enlist organisations and managers into projects. Whilst adopters may be sceptical or wary of the promises of HR systems vendors, the broad trumpeting of analytics from academics and professional bodies, who are seen as more independent, is likely to promote the development of the approach. Further, the positivist turn in academic HR and the growing discourse of a scientistic EBM would seem to add impetus to the analytics project, which seems to favour quantitative data and knowledge and could intensify a move towards management based on numbers.

However, our findings also show that the onto-epistemological gap between academics and practitioners is rather more complicated than Sandberg and Tsoukas (2011) suggest. Firstly, they underestimate the pragmatism of researchers working in organisations to 'flex' their research approach. The wellbeing research team, whilst still adhering to clear methodological principles were well aware of the limitations of narrow, and particularly quantitative, research approaches and measurements. Secondly, they largely take for granted the homogeneity of managers' positions on knowledge. We found an onto-epistemological gap lay between senior managers and HR managers, the former being perceived as having little interest in anything other than quantitative data, and the latter being more sceptical about the capacity of numbers to measure the subjective experience of wellbeing, which is consistent with some prior studies (Guest & King, 2004; Angrave et al., 2016). HR managers feared that the tacit knowledge of organisation, the non-numerated experiences of people, the ‘felt’ history of events and the human subjectivity of individuals were lost in mere numbers, and this was especially the case in the context of wellbeing. Further, the HR managers in these cases were much more committed to a narrative form of knowledge that helped to explain, rather than simply measure, changes and outcomes.

The implications of this for the development of HR analytics are significant, particularly in light of the likely centrality of HR managers in such developments. Our analysis demonstrates the pivotal role of the HR managers, what Callon (1984) would dub the *primum movens*; they played the greatest role in enlisting actors into the project and bringing them into relation with each other. Given the contextual influences, HR professionals are likely to be more engaged with the analytics process than they have in the past, particularly as they seek to enlist investment from senior managers and meet the data needs of that group. Our analysis showed that HR managers felt compelled, to deliver senior managers the ‘numbers’, even though they felt they gave a limited representation of what was going on and lacked explanatory value. This might signal a move towards more analytics driven HR practice that will give the function a less peripheral position, delivering ‘professional respectability and decision-making rigor’ (Ulrich & Dulebohn, 2015: 202), and improving HR managers’ strategic position within increasingly financialised organisations (Marchington, 2015; Dundon & Rafferty, 2018). However, our analysis suggests that their position is likely to remain one of profound ambiguity because of the onto-epistemological gap between them and senior managers, thus continuing the trend identified by Caldwell (2003). Whilst Marchington (2015) suggests that the HR profession has been ‘too busy looking up’ in its efforts to address senior management objectives, our analysis suggests that they look two ways. The HR managers in our case sought to meet senior management objectives and enrol them into projects, but at the same time, they were committed to making positive changes for the workforce regardless of what the metricised performance measures were capable of reflecting. HR managers may strive to meet the data needs of senior managers through analytics, but their own apparent preferences for more qualitative, narrative knowledge may create a tension in their work, intensifying their ambiguous and uncomfortable 'middle-man' position.

Using Callon's (1984) ideas on translation and projects, our paper has attempted to anticipate how the HR analytics project will unfold, and we have found a situation of some ambiguity. On the one hand, the profession may move towards the analytical project with enthusiasm, seeing it as a resource to establish the professional and organisational credentials of the HR function. On the other, HR professionals may treat the 'numbers' with scepticism, feeling that 'human agency counterbalances the seeming objectivity of numbers or rather comes into play where numbers leave off or fail' (Locke & Spender, 2011: xv). Following this, we would call for further empirical analysis of analytics projects that focusses on the process of development rather than its outcomes, and for HR researchers to be more reflexive in understanding their indirect contextual role in this process. At the very least, our hope is it that academics and professionals can engage with the developments with a greater appreciation of their onto-epistemological and political implications.

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[1] The CIPD HR analytics factsheet, whilst giving passing mention to qualitative data and a health warning on causation, certainly suggests a largely quantitatively-driven approach in its definition of analytics as "the application of mathematical, statistical and data-mining techniques to HR and business data to explore concepts and ideas and solve HR-related business problems" (CIPD, 2015:1).