

Working Paper Proceedings

Engineering Project Organization Conference

Cle Elum, Washington, USA June 28-30, 2016

Assessing Impacts of Research Using Goffman's Dramaturgical Analysis: Moving beyond a singular, structural narrative

Paul W Chan, The University of Manchester, UK William Robinson, The University of Manchester, UK

Proceedings Editors

Jessica Kaminsky, University of Washington and Vedran Zerjav, University College London



© Copyright belongs to the authors. All rights reserved. Please contact authors for citation details.

ASSESSING IMPACTS OF RESEARCH USING GOFFMAN'S DRAMATURGICAL ANALYSIS: MOVING BEYOND A SINGULAR STRUCTURAL NARRATIVE

Paul W Chan¹ and William Robinson²

ABSTRACT

There is increasingly policy imperative for promoting university-industry research collaborations. There is a tendency to assume that such collaborations will generate more impactful outcomes. Yet, recent scholarship paints a more nuanced and chequered outlook. In this paper, we join this critical line of scholarship to question impacts of research as a product and basis of producing social interactions between the researcher and the industrial collaborator. By drawing on the perspective of symbolic interactionism, and the dramaturgical concepts of Erving Goffman, we reflect on a recent university-industry collaboration to highlight the multiple ways in which research impacts are negotiated over the course of the project. The contribution of this paper is to open up the hitherto singular narrative of equating more collaboration with higher impacts to consider multiple possibilities of conceptualizing and chasing after impacts of university-industry collaborative research.

KEYWORDS: co-production research, dramaturgical analysis, Goffman, research impacts, university-industry collaboration

¹ Lecturer, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, Pariser Building E17, Sackville Street, Manchester M13 9PL, United Kingdom, paul.chan@manchester.ac.uk.

² PhD Researcher, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, Pariser Building F Floor (C11), Sackville Street, Manchester M13 9PL, United Kingdom, <u>william.robinson-5@postgrad.manchester.ac.uk</u>.

SETTING THE SCENE

The need to demonstrate the impacts of research has grown in prominence over the past few years. In a recent reflection of the UK's Research Excellence Framework (REF), Pidd and Broadbent (2015) indicated that the research impacts agenda is likely to become more pervasive in future evaluations of research quality. In the field of project management research, Morris (2014: 151) called for scholars to place "a greater focus on application and impact" as he argued for radical change in "the culture of academic engagement". Elsewhere, Söderlund and Maylor (2012: 693) also asserted that scholars "lose relevance if the knowledge produced in research does not lead to improved decision-making and practice", adding that the field of project management has a competitive advantage over other areas of business management in that "managers and companies want to create partnerships with us".

In the quest to produce 'useful' knowledge from research, (project) management scholars have seen over the past two decades a greater emphasis on collaborative research with practitioners to solve problems in real-world contexts. Gibbons et al. (1994), for example, coined the term Mode 2 knowledge to differentiate such applied, collaborative research from traditional investigator-led scientific endeavours (or so-called blue-sky research). Jasanoff (2004) called to our attention the importance of co-production research as she argued that "scientific knowledge [...] is not a transcendent mirror of reality" (p. 3); rather, "the ways in which we know and represent the world (both nature and society) are inseparable from the ways in which we choose to live in it" (p. 2). Thus, as Van de Ven (2007) argued in his call for more engaged scholarship, and as Antonacopoulou (2010) urged scholars and practitioners to become co-researchers in improving managerial actions, getting closer to practice is what matters. It would seem that collaborative research between academic researchers and industry practitioners is the universal way forward. In a recent survey of nearly 700 Australian academic researchers, for instance, benefits of collaborative research such as 'real-world' impacts, access to research data and industry networks, and improvements in the chances of securing research funding and career progression have been reported (Cherney et al., 2012).

Nevertheless, the beneficial outcomes of collaboration between academic researchers and industry practitioners are not uncontested. For example, Perkmann *et al.* (2011) examined datasets covering university-industry relationships across all UK universities and found a negative association between faculty quality and involvement in contract research for firms. On the impacts of co-production research, Mesny and Mailhot (2012) argued that the benefits of collaborative research can sometimes be opaque due to a lack of visibility of research products and traceability of knowledge transfer. Nerlich (2013) questioned whether modern academic life has a problem with hype in over-claiming the positive impacts of research. Similarly, Pardoe (2014) called for critical restraint as he suggested that the functionalist approach to communicating research impact as though impact is always achievable within existing funding may be counter-productive in terms of how that research contributes (or not) to society. Indeed, collaborative research between academic scholars and industry practitioners is not straightforward and oftentimes fraught with tensions of differing logics, tempos, motives and interests (see e.g. Bartunek and Rynes, 2014).

It is to this growing critical voice on collaborative research between academic scholars and industry practitioners that we seek to contribute to in this paper. According to Bartunek and Rynes (2014), although there is no shortage of critical reflections on university-industry collaborations, there is a relative lack of empirical illustrations that problematize such

collaborations. We therefore reflect on an ongoing collaborative project with ConstructCo, a major building contractor in the UK, as they attempt to change their business model from a goods-dominant logic to a service-dominant logic (see e.g. Lusch and Vargo, 2014). Frequently known as 'servitisation' (see Vandermerwe and Rada, 1988), a service-dominant logic means that the underlying model of economic exchange lies not in the product (e.g. a boiler), but in the through-life service the product provides (i.e. predictable levels of heating). The collaboration with ConstructCo started in November 2012, with fieldwork taking place over two years from December 2013 to December 2015. In this paper, we draw on a dramaturgical approach inspired by Erving Goffman to reflect on and highlight multiple perspectives and problems associated with this collaborative venture.

THEORETICAL ORIENTATION: MOVING FROM SINGULAR, STRUCTURAL ACCOUNTS OF RESEARCH IMPACTS TO ANALYSING IMPACTS AS PART OF SYMBOLIC INTERACTION

As university-industry collaborations in research become more mainstream, there has been growing interest in examining the conditions and consequences of such collaborations. Increasingly, a more nuanced picture is being presented. For instance, Perkmann *et al.* (2011) cautioned against the singular narrative that collaboration with industry and commercializing the outputs of research is always and necessarily a good thing. They argued that patenting and academic entrepreneurship are poor proxies for capturing the impacts of research. Soh and Subramanian (2014) analysed patent, publication and alliance data from 222 biotechnology firms to examine the success of university-industry collaborations. They found that collaborations are more successful in cases involving technological recombination, whereas those with a more basic scientific research focus tend not to yield as much benefit.

The impacts of university-industry research collaborations are also not uniform in all cases. Banal-Estañol *et al.* (2015) found that academic researchers with a greater proportion of collaborative research with industry do not always produce more outputs using the proxy of publications. They found a curvilinear relationship between level of research outputs and level of collaboration. The more an academic researcher collaborates with industry, the more outputs are generated, but only up to a point. If an academic researcher solely works on collaborative projects with industry, then it is likely that research outputs will decline. Similarly, Wang *et al.* (2016) also found a similar relationship between the impacts of university-industry collaboration on teaching. They found that teaching quality, measured by student satisfaction, is enhanced by more university-industry engagement but suffered when the university-industry collaboration relates to commercialisation. Thus, simple exhortations equating more university-industry collaboration to greater and better impacts are rendered problematic in these recent accounts.

While this more textured view has opened up the hitherto singular narrative of the benefits of university-industry collaboration, what many studies examining the impacts of research have in common is the emphasis on explaining the structural conditions of such collaboration. Thus, Perkmann *et al.* (2011) was concerned about how different forms of collaboration (i.e. contract research versus academic consulting) would influence different levels of faculty quality. Soh and Subramanian (2014), along with Banal-Estañol *et al.* (2015), focused on the number of academic publications as an output measure. Wang *et al.* (2016) used a number of standard proxy measures – for example, patent applications versus patent sales, income from licensing and technical services – to distinguish between engagement and

commercialization impacts. Therefore, there is an implicit assumption that what matters most is an understanding of the structural conditions that govern university-industry collaboration, and which conditions would yield the 'best' consequence often quantified in terms of number of publications or patents, or monetized in terms of income generation from research.

Such monolithic view of university-industry collaborations fails to capture the realities of research as an activity that produces, and in turn becomes a product of, social interaction. By emphasizing the structural conditions and tying these to an evaluation of consequences in a rational and causal manner, scholars have invariably ignored the multiplicity of everyday research practices and assumed that researchers are hapless, passive recipients in search of the guide to 'successful' collaborative research (see de Certeau, 1984). Therefore, to offer a counter-position to this dominant, rational view of assessing research and associated impacts, our point of departure here is to treat our research practices as a social and symbolic interaction. In so doing, we acknowledge that our actions are not simply a product of the various structural conditions that play on us, but as an ongoing construction through a process of interpretation. As Blumer (1969) stressed, "[s]tructural features [...] set conditions for their action but do not determine their action. People – that is, acting units – do not act toward culture, social structure or the like; they act toward situations" (p. 87-88).

It is to these situations – encounters between us as academic researchers and them as our industrial collaborators – that we reflect on in this paper. To facilitate this reflection, we draw upon a selection of concepts from Erving Goffman's dramaturgical analysis. In *The Presentation of Self in Everyday Life*, Goffman (1959) invoked the metaphor of theatre¹ to elaborate on analytical resources that can be used to study the staging of human behavior. A fundamental part of this elaboration is the focus on performances not as mere 'putting on an act', but a deeper understanding of how individuals act out in interaction with others (see Burns, 1992: 112), in what Goffman (1959) termed as impression management. Accordingly, every act is such that the individual "intentionally or unintentionally *expresses* himself, and the others will in turn have to be *impressed* in some way by him" (Goffman, 1959: 14; original *emphases*).

At the heart of Goffman's dramaturgical analysis lies the relationship between the team of performers and the audience. To maintain a coherent performance, and to sustain an audience who remains impressed throughout the performance (including before, during and after the performance), there are a number of key concepts introduced by Goffman that are worth a brief mention here. First, performers must believe in the parts they are playing. This requires actors to convince him or herself of their ability to assume particular characters in what Goffman (1959) called the "cycle of disbelief-to-belief" (p. 31). Indeed, the performance is then an idealization, as Goffman (1959) explained,

"when the individual presents himself before others, his performance will tend to incorporate and exemplify the officially accredited values of the society, more so, in fact, than does his behavior as a whole." (p. 45)

A second concept relates to the importance of the team. A coherent performance requires "a team of performers who cooperate to present to an audience a given definition of the situation" (Goffman, 1959: 231). This performance takes place in what Goffman (1959) called the front stage, which contrasts against the more truthful, often contradictory and conflictual

¹ It is worth noting that Goffman did not regard all life to be a stage nor did he consider all life to be always dramatic (see e.g. Goffman, 1967 and 1974).

occurrences found in the back stage. A simple example to illustrate these two regions of performance can be found in the everyday practices of such service workers as flight attendants who would always have to put up a polite front when serving paying passengers in the cabin, only to release their true emotions behind the curtained galleys. According to Goffman, a coherent performance requires the team of performers to work together to save the show should slip-ups and *faux pas* happen, and to segregate the audience from what goes on in the back stage of the performance. As Goffman (1959) noted,

"When a member of the team makes a mistake in the presence of the audience, the other team-members often must suppress their immediate desire to punish and instruct the offender until, that is, the audience is no longer present." (p. 94)

By keeping the audience at bay and not divulging the situation in the back stage to the audience, this would help the team of performers achieve what Goffman called dramaturgical loyalty. By minimizing disruptions and *faux pas* from occurring during the performance in the front stage, the team of performers would be exercising Goffman's dramaturgical discipline. A practice for maintaining a coherent performance is what Goffman called dramaturgical circumspection. A circumspect performer is someone who exercises prudence and, where possible, seeks to attract members who are sympathetic and supportive to join the team (or indeed, audience).

Goffman's impression management, and his ideas on how to deliver and maintain a coherent performance that captivates the audience through dramaturgical loyalty, discipline and circumspection, have inspired a number of studies in the field of organizational research. For example, Clark and Mangham (2004) analysed a merger between two banks as a piece of corporate theatre, and noted the contradiction between how senior managers framed this as moving 'Towards One Bank', while disallowing junior-level employees from having a voice to ask difficult questions such as possible redundancies. In this way, Clark and Mangham (2004) showed how a coherent performance was maintained. Sharma and Grant (2011) mobilized Goffman's dramaturgical concepts to analyse how Steve Jobs discursively defined himself and the world of Apple to his followers. Through careful management of the back stage and front stage by exercising dramaturgical loyalty, discipline and circumspection, Sharma and Grant (2011) demonstrated how Steve Jobs generated such charisma that captivated his audience even when delivering bad news. In a more recent study, Rosengren (forthcoming) drew on Goffman to study the implications of emerging digital technologies at the workplace on the performance of work. Rosengren (forthcoming) drew attention to how the performance of work was carried out according to the 'social scripts' of commitment, dedication, professionalism, and masculinity, which serve to construct the idea (and ideal) of what constituted a morally good working day.

In these Goffman-inspired exemplary studies, "social reality is a matter of scripts and performances created and sustained by human interaction" (Clark and Mangham, 2004: 41). As Manning (2008) stressed, for Goffman, "the work of society is interaction; without it, no business can be done" (p. 681; original emphasis). Manning (2008) also added a word of caution against treating such organizational artefacts as goals and objectives as the basis for guiding action, stressing that these "function as tools to reduce choice [...] are background knowledge, only on occasion front stage or immediate" (ibid.). Thus, adopting a symbolic interactionist account to study the university-industry research collaborations will not take the impacts and outputs as an end, but as scripts with symbolic meanings that are created and sustained through

the interactive performances between the researchers as performers, and the industrial collaborators and sponsors. In the next section, we apply this line of thinking to reflect on our collaborative venture in tracing how ConstructCo was making the transition towards a new business model.

A BRIEF NOTE ABOUT CONSTRUCTCO'S ORGANISATIONAL CHANGE AND OUR ENTRY INTO THE FIELD

ConstructCo is one of the largest contractors in the UK, with roots tracing back to 1848. The company grew from humble beginnings as a specialist subcontractor to become a systems integrator delivering infrastructural projects stretching from Europe to the Middle East and Australasia. In August 2012, a meeting was organized between a group of academic researchers from the North of England University (hereinafter known as NEU) and a director and one of his assistant engineers at ConstructCo. This meeting was mediated institutionally by NEU's central research office, and the aim was to identify opportunities for collaborative research. The meeting concluded with three possible areas of interest, including risk and complexity management, through-life information management, and new business model innovation. These areas were subsequently consolidated in a proposal to examine opportunities for adopting through-life service-oriented business models from the aerospace and manufacturing sectors in the construction context. A three-and-a-half year collaborative project was sanctioned, and a PhD student was recruited to start on this project in November 2012. This was also a time when the construction market in the UK suffered a sharp decline as a result of the fallout from the global financial crisis². Thus, ConstructCo was keen to explore new market opportunities, which goes some way to explain their interest in business model innovation.

This opportunity allowed us to follow the actors and their actions in ConstructCo as they explored the possibilities of adopting a more service-oriented way of working. For the researchers, this opportunity also presented a conundrum: where is the heart of the action, and who/what do we follow as researchers? This is particularly problematic given the size and scale of ConstructCo's operations. ConstructCo has around 15,000 employees, and they undertake a range of activities from site-based construction, to digital design and engineering, to manufacturing. At the commencement of this collaborative venture, ConstructCo also acquired a business in building services (e.g. mechanical and electrical systems for heating, ventilation and air-conditioning or HVAC). To exacerbate matters, ConstructCo was at that time (and still is) figuring out what moving towards a more service-oriented business model meant in practice. Thus, it was difficult, virtually impossible, to pin down where the action was.

To this end, and for the purpose of this article, Goffman's (1967) essay on 'where the action is' proved instructive. According to Goffman (1967),

"action is to be found wherever the individual knowingly takes consequential chances perceived as avoidable. Ordinarily, action will not be found during the week-day work routine at home or on the job. For here chance-takings tend to be organized out" (Goffman, 1967: 194-195)

² Although the start of the global financial crisis is commonly marked by the collapse of Lehman Brothers in 2008, there is usually a time lag before the effects of any financial crisis are felt by contracting organisations. In the UK, investments in infrastructure projects continued until the first half of 2012. Therefore, the realities of the downturn started to kick in for companies like ConstructCo around this time. See, for instance, Berkin (2013) and the Department for Business, Innovation and Skills (2013).

Goffman offered a few possibilities, including what he called "fancy milling" (1967: 197), exemplified in the case of a casino. This is where, as Goffman (1967) explained, "the individual brings into himself the role of performer and the role of spectator; he is the one who engages in the action, yet he is the one who is unlikely to be permanently affected by it" (p. 198). He added that the action takes place where there is "the uncertainty of not quite knowing what might happen next, the possibility of flirtations, which can themselves lead to relationship formation, and the lively experience of being an elbow away from someone who does manage to find real action in the crowd" (p. 197-198). Indeed, ConstructCo was taking a gamble with the idea of moving towards more service-oriented ways of working, with no clear sight lines as to what benefits this would bring and for whom these benefits would accrue. Thus, we focused not on those individuals and contexts that were operating as business-as-usual, and attended particularly to the accounts of those who were trying to work out what this business model change could mean. In the end, we followed 51 interviewees over a 33-month period, and amassed a great deal of non-participant observational notes developed by the research team, visual representations of the materials and technologies used on the project (e.g. schemes and drawings), and other forms of textual data (e.g. project documents, technical specifications, email correspondence etc.).

As the focus of this paper is on problematizing research impacts as a product and basis of producing social interaction, we place our analytical attention on one particular form of encounter with ConstructCo, i.e. the key interactions with our sponsors. Our dramaturgical analysis draws on a reflection of the experiences and documented memos from 8 progress meetings that took place with the sponsors since the initial meeting in August 2012 until September 2015, as well as our participation in two research conferences organized internally by ConstructCo in January 2013 and March 2014. The analysis also draws on over 2,500 email exchanges between the researchers and our sponsors in ConstructCo. Table 1 summarises the key encounters between the researchers in NEU and the research sponsors in ConstructCo. In the next section, we examine these key interactions and the unfolding drama of negotiating and changing the idea of research impacts by using Goffman's ideas of impression management and coherence of performance through dramaturgical loyalty, discipline and circumspection. We do so from our perspective as researchers, reflecting on our interactions with the sponsors.

EXAMINING OUR KEY INTERACTIONS WITH CONSTRUCTCO SPONSORS USING GOFFMAN'S CONCEPT

Impression management and the cycle of disbelief-to-belief

Our involvement with ConstructCo started with in August 2012 when the Central Research Office of NEU coordinated a meeting with the Director and an engineer from the Innovation Department of ConstructCo³ to explore opportunities for collaborative research. A funding scheme by the Engineering and Physical Sciences Research Council (EPSRC), which provided vouchers⁴ to companies to support PhD research, prompted ConstructCo to express an interest to collaborate. ConstructCo had already invested in a number of research groups and centres in such prestigious institutions as the University of Cambridge and Oxford, as well as

⁴ These vouchers meant that the industrial organization had to invest at least 25% of the total cost of the PhD student, with 75% of the funds paid for by the public purse through the research council.

³ We use 'Innovation Department' as a pseudonym to anonymise our sponsors in ConstructCo.

Imperial College in London. By approaching NEU, ConstructCo intended to widen its portfolio to include research-intensive institutions outside of Oxbridge and London. The deadline for submitting the application form, which included a brief proposal of around two pages containing the rationale, aims and objectives and methods for the research, was in the latter half of September 2012. Therefore, the initial meeting was intended to be a scoping meeting for ConstructCo to see if a proposal could be put together in a short period of time.

As ConstructCo was a civil engineering company, the Central Research Office of NEU sent the invitation to the Director of Research in the Civil Engineering department of NEU. This invitation was then circulated to 9 academic researchers in the department who were thought to have an interest in collaborating with ConstructCo. As one would expect in academic departments, there was a divergent range of areas of research interest generated by the 9 researchers, from climate change and energy consumption, to risk management, to recyclable materials. In the end, only three academic researchers were available to attend the initial meeting in August, including the Director of Research (with interest in recyclable materials), a lecturer with interest in risk and complexity management, and the first author of this paper who had experience in managing such a PhD project and a track record of collaborating with ConstructCo. It was decided prior to the initial meeting that the first author would prepare the presentation that showcased the strengths of the department and the relevant research expertise to ConstructCo, incorporating the ideas generated by the 9 researchers.

The meeting was organized in the main meeting room at the Civil Engineering department at NEU. It is typical in these initial meetings for parties on both sides to make a formal presentation introducing their respective organisations to one another. The Director of ConstructCo led the first presentation, sketching out the history and aspirations of ConstructCo, and provided an outline of his career. It is worth noting that the Director had only recently joined ConstructCo, having worked in the aerospace industry for most of his career up to the point of joining ConstructCo earlier in 2012. Thus, when the first author presented the strengths of NEU, he was particularly keen to emphasise the longstanding relationship that NEU had with Rolls-Royce through ongoing teaching and research collaborations. He also highlighted the fact that he had previously managed a similar PhD research programme, and had collaborated with ConstructCo before. This was a conscious attempt to leave a good 'first impression' on the Director of ConstructCo, and to reassure him that he was among researchers who not only knew about ConstructCo, but also shared some knowledge and experience of the aerospace industry he was more familiar with. This was also what oriented the PhD research project. Rolls-Royce has long been regarded as an industry leader when it comes to moving towards a service-oriented way of working; their TotalCare® model of leasing engines, colloquially known as 'power by the hour', and often been hailed as an exemplary form of servitised business model innovation. Consequently, ConstructCo was keen to explore ways in which such a business model innovation could be adopted in the construction industry:

"[ConstructCo] would benefit most from a project bringing the expertise [...] in the areas where the firm does not have appropriate capability internally. We would be keen to support Proposal 2 if its focus moved from information management to identifying TotalCare® models for [ConstructCo] to adopt in connection to high-value manufacturing [Mechanical and Electrical] MEP products and services that the firm is developing." (Extract of email from the Engineer in ConstructCo, 21 August 2012)

Table 1: Sequence of encounters between the research team at NEU and the research sponsors in ConstructCo.

Encounter	Description	Related Goffman's concept(s)
August 2012 Location: NEU Meeting Room	 An initial meeting was organized by NEU's Central Research Office, attended by 3 NEU academics (comprising Director of Research and 2 lecturers), a representative from NEU's central research office, and 2 members from ConstructCo (comprising the Director of the Innovation Department and another engineer, hereinafter known as the Engineer). The meeting started with a presentation from ConstructCo, followed by a presentation from NEU (delivered by the first author). The meeting concluded with the scoping of three possible research areas including: risk and complexity management, through-life information management and business model innovation. A number of email exchanges followed this meeting throughout August 2012. Brief one-page proposals were sent to the Engineer in ConstructCo to be considered by a steering group in the Innovation Department. A project proposal was refined and the necessary paperwork was signed off and returned to the Research Council (funding agency) before the deadline of 21 September 2012. 	Impression management and the cycle of disbelief-to-belief
October 2012 Location: NEU Meeting Room followed by lunch	 This was the kick-off meeting with the project, attended by two lecturers from NEU (including the first author) and the PhD researcher, as well as the two members from ConstructCo who attended the August 2012 meeting. The original project objectives that were included in the proposal submitted to the Research Council were reviewed, with a discussion of the plan of action for the next six months. Two key actions resulted from this meeting: first, the PhD researcher (coauthor of this paper) was invited to present at a ConstructCo PhD Conference in January 2013; second, the PhD researcher was asked to send a proposal for the PhD study to the Engineer in ConstructCo. The PhD researcher sent the proposal after the meeting, which led to an email from both the Director and Engineer of ConstructCo to seek clarification of the research scope. 	Coherence of the performance, scripts and dramaturgical loyalty
January 2013 Location: HQ of ConstructCo	 ConstructCo had, in the early 2010s, started to invest in research and development, as shown in the formation of the Innovation Department in 2011 and investments in academic research projects in such leading UK universities as Cambridge, Oxford and Imperial College in London. The conference was the first to showcase results of the PhD investment. The NEU PhD researcher presented his research scope and was congratulated for progress made despite starting only in October 2012. 	Impression management and dramaturgical circumspection

 Table 1: (Continued)

Encounter	Description	Related Goffman's concept(s)
June 2013 Location: NEU Meeting Room	 This was the first progress meeting with the ConstructCo sponsors. The meeting was attended by the PhD supervisor and researcher (both authors of this paper), and the Engineer and new industrial supervisor (a Principal Engineer) from ConstructCo. The research scope expanded from examining "what fails in mechanical and electrical process (MEP) systems and how often; how much repair and maintenance costs the building operators currently; how much the new service [] would cost ConstructCo and therefore how much ConstructCo should charge building operators for subscribing to this kind of whole-life service; what ConstructCo MEP business should change in the way they procure and keep technical records and in terms of their contracts with suppliers to be able to deliver this kind of whole-life service" (email from the Engineer on 22 October 2012), to include consideration of Construction Operations Building Information Exchange (COBie) in the context of the changes to the Private-Finance Initiative known as PF2 (cf. email from the Principal Engineer on 24 July 2013). 	Impression management and the cycle of disbelief-to-belief
November 2013 Location: Meeting room in HQ of ConstructCo	 This was the second progress meeting with the Principal Engineer along with the Lead on Systems Integration in ConstructCo. The PhD researcher presented work-in-progress, and noted the difficulty of gaining access to people for interviews. Various members from the Innovation Department in ConstructCo were introduced to the PhD researcher and supervisor, with follow-up contacts made. Interviews were arranged for December 2013, although the Principal Engineer from ConstructCo remained uncertain about the purpose of these research interviews. 	Impression management and dramaturgical circumspection
March 2014 Location: HQ of ConstructCo	 This was the second and last research conference organized by ConstructCo. Presenters were drawn from both MSc and PhD cohorts. The Chairman of ConstructCo was in attendance. The PhD researcher presented his work-in-progress. The audience reception was lukewarm. On the whole, the conference was not well-received as there was limited specific (quantitative) details on the benefits and impacts to ConstructCo. The conference was never run again. 	Coherence of performance and dramaturgical discipline
July 2014 Location: HQ of ConstructCo	 This was formally set up as a Gateway Review to discuss progress made by the PhD researcher, and was attended by the Director, the Principal Engineer and the Lead for Systems Integration in ConstructCo. Objectives of the research were reviewed and access to a case study was given. Interviews were set up with key people across the value chain. 	Coherence of performance, dramaturgical loyalty and circumspection

 Table 1: (Continued)

Encounter	Description	Related Goffman's concept(s)
January 2015 Location: Meeting room in HQ of ConstructCo	 This was the fourth progress meeting, which was attended by the Principal Engineer and Lead for Systems Integration in ConstructCo. The PhD researcher reported on progress, which was considered to be satisfactory. Attention turned to getting publications from the project. 	Dramaturgical loyalty
April 2015 Location: Meeting room in HQ of ConstructCo	 This was the fifth progress meeting, which was attended by the Principal Engineer and Lead for Systems Integration in ConstructCo. Progress was reported, including publications to date. The Principal Engineer and Lead for Systems Integration in ConstructCo were happy that results were being disseminated to the servitisation community of academic researchers and industrial practitioners. 	Impression management and dramaturgical circumspection
January 2015 Location: Meeting room in HQ of ConstructCo	 This was the sixth progress meeting, which was attended by the Principal Engineer and Lead for Systems Integration in ConstructCo. The PhD researcher reported on results from the research, demonstrating the lack of a business case for moving towards servitisation for ConstructCo. Following the presentation by the PhD researcher, the discussion revolved around dissemination of findings in peer-reviewed publications, professional press and industry forums. 	Dramaturgical loyalty and circumspection

Although the first author had no prior experience in researching servitisation, his involvement with teaching on the Rolls-Royce programme and previous track record of managing a similar PhD research project and collaborating with ConstructCo added to his legitimacy and gave the impression that he was a competent academic researcher. Moreover, the Director of ConstructCo was also a Visiting Professor in another engineering department in NEU. Therefore, it would seem that the collaborative relationship between NEU and ConstructCo was secured at this initial meeting. In hindsight, the Director of ConstructCo also probably saw this opportunity for ConstructCo to learn from business models of the aerospace industry as a means to bolster his legitimacy and influence in an industry where he was a relative newcomer. In this initial meeting, it can be seen that both parties – the researchers from NEU (and especially the first author of this paper) and the practitioners from ConstructCo – had to 'put on an act' so that they leave a positive and believable impression that the project and funding could be secured.

While first impressions are important and can be lasting, impression management never really ceased in our interactions with the ConstructCo's sponsors (and indeed with the interviewees we eventually engaged with throughout the research). So, in January 2013, just two months after the PhD researcher started working on the project, we were invited to present our work-in-progress to at the first ever PhD Research Conference organized by the Innovation Department in ConstructCo's Headquarters. This was an opportunity for the Innovation Department to showcase ongoing research activity and to report results that demonstrate 'value' to ConstructCo. As the PhD researcher was at a very embryonic stage of his literature review at the time, he was only able to sketch out in his presentation the key areas and questions that he was seeking to investigate. Nevertheless, he was commended by the audience and the sponsors for delivering a progress presentation so quickly after he started.

Impression management continued at the first official progress meeting in June 2013, when a new industrial supervisor was assigned to the ConstructCo's sponsor team. This new industrial supervisor is a Principal Engineer who did not have a PhD degree, whereas the Engineer who was associated with the project up to this point was at the end of her PhD research that she was undertaking part-time in Imperial College London. It was noticeable that the Principal Engineer constantly proclaimed the fact that he did not have a PhD and thus did not understand what it entailed. He would often be seen commenting in jest about the Engineer and what she was doing (or rather not doing) with her PhD. We also observed that the Principal Engineer tended to find it easier to interact with the PhD researcher rather than the supervisor. At one point, when the PhD researcher (second author) explained that the supervisor (first author) was going to undertake the research interviews together with him, the Principal Engineer remarked in an email, "what is the purpose of [the supervisor] joining? Normally once we ve [Sic.] set up the agenda items and a scope we let the student get on with the study" (email sent 28 November 2013). Thus, the PhD researcher and supervisor often had to justify the methods.

One area that created an impasse in the first year of the project was access to interviewees across ConstructCo's value chain. The sponsors insisted that there was little need or value for us to ask our interviewees what they did in their everyday organizational lives. Although we were interested in how ConstructCo was working towards their vision of servitisation, understanding the present context of what went on in ConstructCo was an invaluable first step for the PhD researcher. So, this meant that the PhD researcher and the supervisor constantly had to impress upon the sponsors the need to gain access to interviewees for the purpose of understanding the context in which ConstructCo operate, so that the conditions and constraints for business model

innovation can be fully articulated. Despite the PhD researcher's efforts in contacting key individuals across ConstructCo in January 2013, it was not until December 2013 until a breakthrough was made in securing access to interviewees. Even so, impression management continued with each interview as the PhD researcher had to constantly 'sell' the project to members across ConstructCo's value chain even though the project was sponsored by ConstructCo. As the Principal Engineer aptly explained in an email to us on 2 December 2013:

"Bear in mind most of the people you meet will be new to your study so be clear on your objectives with them and what you need to get out, as you will only have a little time. You now have more focus on the elements you require information on."

Coherence of performance through loyalty, discipline and circumspection

Dramaturgical loyalty: batting for the same team?

In the previous section, we identified in some detail the various moments in which impressions must be managed on both sides of the NEU-ConstructCo relationship. In this section, we examine how the researchers' performance can be made coherent and sustained as a unified front when interacting with the sponsors of ConstructCo. As Goffman (1959) noted, coherence of any performance is achieved through three dramaturgical levers: loyalty, discipline and circumspection. In this sub-section, we reflect on a number of key moments when dramaturgical loyalty was put to the test. The first moment related to the kick-off meeting in October 2012, soon after the PhD researcher started working on the project. Within a week of starting his PhD, the researcher prepared a proposal that outlined a salient review of the research evidence on servitisation and identified a number of possible questions to address in the PhD. Following the kick-off meeting, the researcher communicated this proposal with the Engineer and the Director of ConstructCo. This sparked the first dispute with our sponsors claiming that the proposal prepared by the PhD researcher was entirely different to the one agreed with the research funders.

To save the performance, it was crucial that the researcher and supervisor responded from At the heart of the dispute between NEU and ConstructCo lies a misunderstanding on the part of the sponsors, and miscommunication on the part of the research team (notably, the supervisor), on the process of research. Early on in the review of the research literature, the PhD researcher found an initial promising gap in the theoretical understanding of servitisation and business model innovation; that is, while there is a wealth of scholarship articulating the promises and problems of servitisation, most scholarship treated servitisation as an end-point with relative neglect on the transition journeys that organisations take to get to that point. Thus, one of the initial questions we were interested in asking was how ConstructCo envisioned the end-point 'to be' and how they saw where they were at the point we entered the field (i.e. 'as is'), in order to identify what the gap between aspiration and reality was. For the sponsors in ConstructCo, they were mainly concerned about the end-point, and did not appreciate that this was where the researchers would be heading towards by the end of the project (i.e. 3 years) rather than within a week from starting the research. To resolve the dispute, the supervisor had to clarify and reassure the sponsors of ConstructCo that the original proposal was still intact, and explained how the interviews to gather the 'as is' contextual information was a crucial first step to achieving the intended outcomes of the proposal. The Engineer was clearly satisfied with the research team's loyalty to the script, as evident in her email dated 22 October

2012, stating, "Very many thanks for this clarification, it all makes sense now! We will arrange for you [...] to meet key people".

Yet, access to these 'key people' was less than forthcoming despite the efforts of the research team. The lack of understanding as to why we needed to probe into the present context of ConstructCo's operations continued more than a year into the project, as captured in an email by the Principal Engineer to the researcher and supervisor on 28 November 2013:

"I understand the purpose of the interview but I don't want this to be the main focus as the study is much wider. You will get the similar answers from the staff we have set meetings up with, and their time is better spent identifying areas of originality and probing opportunities."

Interestingly, when we eventually undertook the exploratory interviews across ConstructCo's value chain (i.e. from design, to construction, to facilities management) in December 2013 the findings demonstrated that, far from yielding "similar answers from the staff we have set meetings up with", the exploratory interviews had opened up many contradictory claims about ConstructCo's desire to embrace business model innovation and provide more service-oriented offerings (which we presented in Chan *et al.*, 2015). This brought the realization that the script that we had been given by the sponsors, through the initial representation of the Director and Engineer of the Innovation Department and latterly by the Principal Engineer and Lead for Systems Integration, needed to be revised. While some interviewees were aware of ConstructCo's aspirations to develop more service-oriented capabilities, others were either not aware or not interested. Staying loyal to our script as researchers to probe into the status quo paid off; it allowed us to pay closer attention to the unfolding contradictions found across ConstructCo as both an obstacle and opportunity for pursuing more service offerings (which we articulated in Robinson *et al.*, 2016).

Another notable example where loyalty between the researcher and the supervisor was tested came in July 2014 when ConstructCo set up what they termed as a 'Gateway Review' meeting. We will reflect on this 'Gateway Review' when discussing dramaturgical discipline in the next sub-section. Nevertheless, a 'Gateway Review' is typically used as a formal instrument by contractors to review the progress and manage the risk associated with a project. Therefore, by formally calling for a 'Gateway Review', the research project was deemed to be a risk to ConstructCo. During this review meeting in July 2014, over 20 months since the start of the research project, the sponsors in ConstructCo still could not see the point of undertaking research interviews across ConstructCo's value chain. From our vantage point, it would appear that our sponsors considered the need for the research team to understand what went on in ConstructCo to be irrelevant to the development of the business case. Interestingly, what the sponsors were keen for us to do was to tap into our knowledge of what companies in other sectors was doing in terms of servitising their businesses, with a view to emulate so-called 'best practices'. One such company that ConstructCo was particularly interested in learning from was Rolls-Royce, and our sponsors were quite forthright in pushing for us to undertake research interviews with key people in Rolls-Royce.

At this point, it is worth noting that the Director of the Innovation Department, along with the Lead for Systems Integration in ConstructCo, were formerly employees of Rolls-Royce who, in previous progress meetings, had often indicated how Rolls-Royce represented 'best practice' in servitisation. Through our review of the research evidence, and through our contacts in Rolls-Royce, we acknowledged that Rolls-Royce was exemplary as a market leader in

servitising aircraft engines. However, we were less certain that the practices in Rolls-Royce were necessarily 'best practices' that could be applied to the context of ConstructCo based on our assessment from our exploratory interviews. This was a point raised and discussed during the 'Gateway Review' meeting in July 2014, and an agreement was reached between the sponsors and the research team that we will explore the possibility of gaining insight of practices and challenges of servitisation from Rolls-Royce's perspective through further research interviews. One possibility was to interview the Director and Lead for Systems Integration as a starting point. Yet, access to these two key people in ConstructCo proved challenging. Two months after the 'Gateway Review', the PhD researcher was still unable to organize interviews with the Director and Lead for Systems Integration in ConstructCo. It was not until the end of September 2014 when the Lead for Systems Integration in ConstructCo wrote this email to the Principal Engineer and copied this to the research team:

"I am somewhat surprised to find that [the PhD researcher] has not yet been able to sit down with Rolls-Royce (RR), as my understanding of this PhD was that the RR power by the hour model was a large basis for this work. Im [Sic.] surprised in hind-sight that he has been able to pass the MPhil without it. Considering [the] academic supervisor [...] runs several modules on the RR MSc [Programme] it is both practical and imperative that [the PhD researcher] uses this route to approach RR rather than a route through [the Director] or myself." (Email from Lead for Systems Integration, 26 September 2014)

This was a crisis moment of mistrust between the research team and the sponsors in ConstructCo. Rather than to respond to the PhD researcher's invitations for a research interview, the Lead for Systems Integration not only delayed his response, but also raised doubt on the legitimacy of the researchers. In hindsight, such a curt reply is probably a front for maintaining a coherent performance on the part of the sponsor team in ConstructCo. It is perhaps inconvenient for both the Director and Lead for Systems Integration to divulge information about their time when working in Rolls-Royce since it is plausible to think that both individuals would have signed non-disclosure agreements at the time of leaving their previous employer. In any case, we needed to save the performance of the research team as well. Despite the failure to organize interviews with the Director and Lead for Systems Integration in ConstructCo, we were able to piece together insights into the practices of servitisation in Rolls-Royce and other manufacturing companies through our review of the academic and professional literature on the subject. This demonstrated that while some companies in the aerospace and manufacturing industries were leading the pack in servitisation, these companies went through a long gestation period (at times, over decades) before they were in a position to incorporate through-life service offerings within their operational systems. Thus, it allowed the research team to articulate the triumphs and tribulations of the transition journeys that other companies in other industry sectors had to endure. This was fed back to the sponsors in the progress meeting in January 2015, which was met with a satisfactory response by the Principal Engineer and Lead for Systems Integration.

Dramaturgical discipline: making sense of a crisis moment

Although the first research conference organized in January 2013 was a rather ceremonious affair designed to showcase ConstructCo's research and innovation power, the second research conference in March 2014 had a very different feel. This conference was again held on the premises of ConstructCo's Headquarters, and was attended by the chairman of the company. It is worth a brief mention here that the Chairman of ConstructCo started out as a site

labourer before gaining a degree in civil engineering. He founded a subcontracting company, which eventually grew to provide more specialist services in construction, which led to the acquisition of an established contracting firm to form ConstructCo in 2001⁵. In an interview published in the *Building* magazine in 2004, the Chairman of ConstructCo remarked,

"I don't believe in email [...] I don't believe in lengthy reports or proposals [...] Most contractors are probably not run by the right people. They are not engaged in the process and what's going on [...] I would not find it difficult to run a project. That would be an exciting thing to do. Just because you have the title of chief executive doesn't mean you shouldn't go near the front." (See Footnote 5 below.)

The Chairman of ConstructCo is therefore a very practical man. He added, "The premier business schools will say that you can teach management techniques. But if you look at people like Lord Weinstock at GEC, he came through the ranks and created a huge business."

Having undertaken three months of exploratory interviews, the PhD researcher presented an update of progress made, which highlighted some of the inherent contradictions that would challenge ConstructCo's aspirations to pursue a servitised business model. Given the Chairman's view of management theories from business schools, the presentation on business model innovation was not well-received. There was a sense that the audience, and especially the Chairman of ConstructCo, were keen to know how they could (or should) act upon the findings. The questions from the audience indicated a strong desire for knowing how servitisation would help ConstructCo generate specific quantitative (and often, monetary) impacts. In short, ConstructCo simply wanted the business case for servitisation.

What was also striking was that this second conference also included a number of presentations from ConstructCo's employees who were sponsored on various taught postgraduate (Masters) degree programmes. These presentations were based on their research dissertations, and contained tangible evidence of how these employees were putting theory into practice. The reception on these presentations was much more positive. Unlike the celebratory feel of the first research conference, the second conference in 2014 was a disaster. The chairman of ConstructCo struggled to see the specific value not only of this project, but of many of the PhD projects presented at the conference. This was the last time a research conference of this kind was organized by the Innovation Department in ConstructCo. Following the disastrous reception at the research conference in March 2014, the sponsors called for the 'Gateway Review' meeting. It later transpired that the PhD project was not the only one subjected to the Gateway Review meeting; the other sponsored PhD projects also went through the same process. Thus, it can be seen that ConstructCo was treating their investment in the various PhD research projects as a contractor would in any project context.

It would, nevertheless, be unfair if this reflection did not also consider the shortcomings of the research team. For instance, could the PhD researcher and supervisor have done more to present a more practitioner-oriented presentation in the March 2014 conference? In hindsight, the answer is yes. The PhD supervisor could have insisted that the researcher rehearsed the presentation prior to the conference so that the message could be tailored towards a practitioner audience. The supervisor could have intervened when the researcher emailed the supervisor on 1 March 2014 to say "I should be at a stage now where I do it all myself anyway" before closing

⁵ The brief profile of the Chairman of ConstructCo was taken from an interview published in the *Building* magazine in 2004 (Issue 30). The reference is not provided to maintain the anonymity of those working in ConstructCo.

with a remark "The tediousness (for me) of developing a poster". Perhaps taking a more directive approach could have resulted in a better reception of the presentation at the conference. Following the presentation, the PhD supervisor sensed that more could have been done. Recalling the supervisor's viewpoint at the time, there was a strong temptation to address the crisis and discuss the presentation performance with the researcher. This was nevertheless averted as the researcher had to drive home and the supervisor had to catch a train after the conference. The research team was able to put up a front, at least in front of the sponsors in ConstructCo, and discipline was postponed to the next PhD supervision meeting. Indeed, there were many occasions when the PhD researcher and supervisor had to work together as a team to suppress their thoughts about the discussions and comments by the sponsors of ConstructCo so as to present a coherent performance, only to address these issues away from the sponsors behind the closed doors of the supervisor's office, over telephone conversations and during the train/car journeys from NEU to the Headquarters of ConstructCo.

Dramaturgical circumspection: "We are under pressure to prove our investment in the PhD Programme is worthwhile"

A third lever for sustaining the coherence of a performance relates to dramaturgical circumspection. This is where caution is exercised by the performers and, where possible, members who are sympathetic or supportive to the performers are enlisted. We have hitherto painted in this reflection a growing schism between the researchers and sponsors of ConstructCo. In moments of crisis, as depicted in the email from the Lead for Systems Integration or the performance in the 2014 conference above, the division between the research team in NEU and the sponsors in ConstructCo was certainly felt. But, it must be noted that there were sympathetic and supportive members from across ConstructCo that contributed immensely to the research process. After all, 51 interviews were undertaken alongside access to a live project to develop case study analysis. Documentary evidence was freely provided whenever the research team was clear what supporting evidence was needed. The Principal Engineer, who was initially cautious about his legitimate role as an industrial supervisor having not completed a PhD himself, was also extremely supportive. Take, for instance, the following extract of an email sent by the Principal Engineer to the PhD supervisor on 25 September 2014:

"I trust as his academic supervisor you are making him aware he needs to deliver results by the time he comes round to our major review [...] in the coming months. We are under pressure to prove our investment in the PhD programme is worthwhile, and we all want him to do well. Please make him aware he needs to impress."

Note how the Principal Engineer emphasizes 'we' in this extract to reaffirm that he and the sponsors of ConstructCo are part of the whole research team. The need to demonstrate practical impacts to the Chairman was not simply the responsibility of the researchers, but a collective duty for NEU and the Innovation Department to prove the value from the PhD investment.

By the time the research team met with the sponsors in January 2015, more interviews and a case study of a hospital project had been undertaken. In addition, a framework for assessing the likely quantitative impacts of any potential business model innovation was under way. While progress was under way to analyse the evidence to demonstrate whether there was a business case for ConstructCo to servitise or not, the sponsors appeared to have a new agenda. Questions were raised as to whether the research team had generated sufficient peer-reviewed

publications and citations. This was a surprising development for the researchers since the pursuit of peer-reviewed publications was thought to be typically a matter of concern only for researchers. To receive constant requests for information about peer-reviewed publications from an industrial sponsor made a refreshing, if welcome, change. It transpired to us that the Innovation Department was under immense pressure to demonstrate tangible benefits from ConstructCo's investment in research, and a regular update on publications (especially those co-authored with our sponsors from the Innovation Department) and citations became a measurable key performance indicator. Monthly emails were sent by the Principal Engineer to request for updates on our publications, including three emails sent from 22 April 2015 to 18 May 2015.

In the final progress meeting in September 2015, a presentation was made to update the sponsors. Results from qualitative evidence of the problems and prospects of ConstructCo's transition towards more service-oriented offerings, case study research and quantitative forecast of impacts of servitisation pointed towards a limited business case for making such business model innovation. This was thus a negative finding; the realization that such innovation was not going to pay off in monetary terms, at least in the short to medium term, meant that interest in such a model had waned. At the same time, the UK construction market was also buoyant at the end of 2015⁶, and there was a sense that attention returned back to focusing what ConstructCo did best, i.e. construction rather than services.

DISCUSSION AND CONCLUDING REMARKS

As university-industry collaborations become more mainstream, there is a need to critically assess the impacts of such research activity. By tracing the key interactions with our sponsors in ConstructCo, it is argued that research impacts is not a singular performance measure that is captured at a particular moment in time, but one that is negotiated over the course of the project. So, although the objective at the outset of the PhD research was to find a business case for ConstructCo to servitise, the PhD researcher found that the case was, at best, limited in the short to medium term. Were the impacts of research to be defined as meeting the objective, then one could argue that this project delivered little impact for ConstructCo; we did not see the fruition of a servitised way of working in ConstructCo in the end.

Nevertheless, our brief overview of the key interactions emphasizes the point that the definition and measurement of impacts is a very contingent process, socially constructed in interaction between the researchers in NEU and the sponsors in ConstructCo. Thus, by exercising loyalty and discipline, and maintaining our academic integrity to delve deeper into the fundamentals of business model innovation, we were able to focus our attention on examining the transitional journeys that ConstructCo's value chain embarked on as they moved from present-day reality to their aspirations of servitisation. Although this was not appreciated by the sponsors in ConstructCo over the first year and a half of the research project, unraveling multiple, often conflictual and contradictory perspectives allowed for a more realistic assessment of what servitisation could or could not do for ConstructCo. This, we would argue, is more impactful to ConstructCo as it awakened the awareness of multiple realities across ConstructCo, which are not always accessed by or made accessible to our sponsors.

When the sponsors of ConstructCo met with NEU's researchers for the first time, the intended 'impacts' of research lay not in the goals and objectives spelt out in the research

⁶ See http://tinyurl.com/UKConstruction-Dec2015 accessed on 5 January 2016.

proposal. These goals and objectives, as Manning (2008) argued, served not as a guide for our research practices, but as a tool for constraining choices. In practice, the goals and objectives seemed to become moving targets as the research team in interaction with the sponsors made sense of what mattered at different points in time. So, while the research began with the objective of measuring failure points and failure rates of mechanical and electrical processes (MEP), the introduction of the Principal Engineer pushed the attention towards Construction Operations Building Information Exchange (COBie) in the context of changes to the Private-Finance Initiative (or PF2). The negative reception of the presentations delivered at the March 2014 conference meant that focus had to be placed on actionable knowledge. The need to formulate tangible, quantifiable measures of performance led to the attention placed on co-authoring peer-reviewed publications.

Antonacopoulou (2010) reframed research impact as improving action. By a similar token, Söderlund and Maylor (2012) insisted that project management researchers are only relevant if the knowledge from their research resulted in improved decision-making. To a certain degree, we have provided the research evidence for ConstructCo to make an informed decision about the future of servitisation. But, much more impact, both to the theory and practice of servitisation, was achieved through the study. We were able to critically evaluate the research evidence on servitisation, only to find that while there is much scholarship promising the wonders of servitisation, far less reliable evidence exists to demonstrate the realities of such benefits. We were able to offer a comparative analysis of what we knew about servitisation elsewhere against our deeper understanding of the context within which ConstructCo was operating. This provided a more fundamental understanding of what could or could not be accomplished. We also produced a number of publications that stood up to the scrutiny of our expert peer-reviewers. At the time of writing this paper, the PhD researcher is also finalizing his thesis; the profound impact this study has brought to the researcher cannot simply be described by an objective measure. As Van de Ven (2007) stressed, the focus on actionable knowledge is simply "far too narrow, instrumental, and may lead to focusing on shallow and short-sighted questions of performance improvement instead of addressing larger questions and fundamental issues" (p. 236). We hope our narrative of the encounters with our sponsors opens up how we conceive and perceive impacts of research to embrace a more pluralistic, often conflictual view of impact (see e.g. Simsek et al., 2013; Bartunek and Rynes, 2014, and; Pardoe, 2014).

By invoking Goffman's (1959) dramaturgical metaphors of the performance, and by examining how the coherence of a performance can be sustained through loyalty, discipline and circumspection, we also highlight the problems of practising university-industry collaborations. It is rare, certainly in the field of project management research, for such candid reflections of industrial collaborations to be considered. In so doing, we bring to the fore questions of power in negotiating university-industry collaborations in research. For example, it is notable that that while the earlier progress meetings with our sponsors took place either on the premises of NEU or the Headquarters of ConstructCo, there was a clear shift after June 2013 when all progress meetings took place in ConstructCo. Thus, it is important to consider where encounters between the researchers and industrial collaborators take place, and how the place of these encounters can have significant implications for the dynamics of collaboration. Alongside this, it is also crucial to reflect on the back-stages of the research performances (e.g. in university offices, trains and cars) and become aware of how these places away from our industrial collaborators can allow us to exercise loyalty, discipline and circumspection.

Finally, it would be tempting to talk of university-industry collaborations in terms of 'them' and 'us'. Indeed, we have written this reflective piece from our point of view as performers, taking the role of our sponsors as the audience. But, as Goffman (1967) stressed, the audience is not always gullible. We have seen, for instance, how our audience (sponsors) can exert immense influence on our performances of research. Such interaction is, of course, two-way and we have seen how it is also important for us to influence our sponsors to get access to data and people. Thus, taking a social interactionist view of university-industry collaborations would prompt us to widen our perspective of research impacts, so that we can ask for whom knowledge from research is meant to be 'useful'. It would also enable us to be contingent about our intended (and unintended) audiences, both within the organisational context of research and the academy, and how these audiences influence the framing of research and its products. Last, but not the least, a dramaturgical approach would also allow us to be more reflective on how we know where the organisational action takes place (see e.g. Czarniawska, 2004, and; Marshall and Bresnen, 2013).

REFERENCES

- Antonacopoulou, E. P. (2010) Beyond co-production: practice-relevant scholarship as a foundation for delivering impact through powerful ideas. *Public Money and Management*, **30**(4), 219-226.
- Banal-Estañol, A., Jofre-Bonet, M. and Lawson, C. (2015) The double-edged sword of industry collaboration: Evidence from engineering academics in the UK. *Research Policy*, **44**(6), 1160-1175.
- Bartunek, J. M. and Rynes, S. L. (2014) Academics and practitioners are alike and unlike: the paradoxes of academic-practitioner relationships. *Journal of Management*, **40**(5), 1181-1201
- Berkin, C. 2013. January construction output 8 pc down on 2012. *Construction News*, March 8. http://tinyurl.com/Berkin2013 accessed on 7 June 2016.
- Blumer, H. (1969) [1986] *Symbolic Interactionism: Perspective and method*. Berkeley: University of California Press.
- Burns, T. (1992) Erving Goffman. Abingdon: Routledge.
- Cairns, G. and Beech, N. (2003) Un-entwining monological narratives of change through dramaturgical and narrative analyses. *Culture and Organizations*, **9**(3), 177-193.
- Chan, P. W., Robinson, W. and Lau, T. (2015) Material contradictions: Exploring paradoxes in servitising construction. *In*: Dossick and Gretchen (Eds.) *Proceedings of the 2015 Engineering Project Organization Conference*, University of Edinburgh, June 24-26, accessed through www.tinyurl.com/EPOC2015Programme on 9 June 2016.
- Cherney, A., Head, B., Boreham, P., Povey, J. and Ferguson, M. (2012) Perspectives of academic social scientists on knowledge transfer and research collaborations: a cross-sectional survey of Australian academics. *Evidence and Policy*, **8**(4), 433-453.
- Clark, T. and Mangham, I. (2004) From dramaturgy to theatre as technology: the case of corporate theatre. *Journal of Management Studies*, **41**(1), 37-58.
- Czarniawska, B. (2004) On time, space, and action nets. *Organization*, **11**(6), 773-791.
- de Certeau, M. (1984) *The Practice of Everyday Life*. Translated by S. F. Rendall. Berkeley, California: University of California Press.

- Department of Business, Innovation and Skills (2013) *UK Construction: An economic analysis of the sector*. July, accessed through http://tinyurl.com/ukconstruction-July2013 on 7 June 2016.
- Engwall, M. and Westling, G. (2004) Peripety in an R&D drama: capturing a turnaround in project dynamics. *Organization Studies*, **25**(9), 1557-1578.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. and Trow, M. (1994) *The New Production of Knowledge: The dynamics of science and research in contemporary societies.* London: Sage.
- Goffman, E. (1959) [1990] *The Presentation of Self in Everyday Life*. New York: Anchor Doubleday.
- Goffman, E. (1967) [2008] *Interaction Ritual: Essays in face-to-face behaviour*. New Brunswick: Transaction Publishers.
- Goffman, E. (1974) *Frame Analysis: An essay on the organization of experience*. Cambridge, MA: Harvard University Press.
- Jasanoff, S. (2004) (Ed.) *States of Knowledge: The co-production of science and social order*. London: Routledge.
- Lusch, R. F. and Vargo, S. L. (2014) *Service-Dominant Logic: Premises, perspectives, possibilities*. Cambridge: Cambridge University Press.
- Marshall, N. and Bresnen, M. (2013) Where's the action? Challenges of ethnographic research in construction. *In*: S. Pink, D. Tutt and A. Dainty (Eds.) *Ethnographic Research in the Construction Industry. Abingdon: Routledge. pp.* 108-124.
- Mesny, A. and Mailhot, C. (2012) Control and traceability of research impact on practice: reframing the 'relevance gap' debate in management. M@n@gement, 15(2), 181-207.
- Moilanen, H., Halla, M. and Alin, P. (2015) Openness in university-industry collaboration: probing managerial perceptions. *European Journal of Innovation Management*, **18**(4), 493-507.
- Morris, P. W. G. (2014) Project management: a profession with a hole in its head or, why a change in the culture of academic support is needed for the profession. *Engineering Project Organization Journal*, **4**(2-3), 147-151.
- Nerlich, B. (2013) Moderation impossible? On hype, honesty and trust in the context of modern academic life. *The Sociological Review*, **61**(S2), 43-57.
- Pardoe, S. (2014) Research impact unpacked? A social science agenda for critically analysing the discourse of impact and informing practice. *Sage Open*, **April-June**, accessed through http://sgo.sagepub.com/content/4/2/2158244014529774 on 25 December 2015.
- Pidd, M. and Broadbent, J. (2015) Business and management studies in the 2014 Research Excellence Framework. *British Journal of Management*, **26**(4), 569-581.
- Robinson, W., Chan, P. and Lau, T. (2016) Finding new ways of creating value: A case study of servitization in construction. *Research-Technology Management*, **59**(3), 37-49.
- Rosengren, C. (forthcoming) Performing work: The drama of everyday working life. *Time and Society*, in press.
- Sharma, A. and Grant, D. (2011) Narrative, drama and charismatic leadership: the case of Apple's Steve Jobs. *Leadership*, **7**(1), 3-26.
- Simsek, Z., Heavey, C. and Jansen, J. J. P. (2013) Journal impact as a diffusion process: a conceptualization and the case of the *Journal of Management Studies*. *Journal of Management Studies*, **50**(8), 1374-1407

- Söderlund, J. and Maylor, H. (2012) Project management scholarship: relevance, impact and five integrative challenges for business and management schools. *International Journal of Project Management*, **30**(6), 686-696.
- Soh, P. and Subramanian, A. M. (2014) When do firms benefit from university-industry R&D collaborations? The implications of firm R&D focus on scientific research and technological recombination. *Journal of Business Venturing*, **29**(6), 807-821.
- Sturdy, A. (2004) The adoption of management ideas and practices: theoretical perspectives and possibilities. *Management Learning*, **35**(2), 155-179.
- Van de Ven, A. H. (2007) *Engaged Scholarship: A guide for organizational and social research*. Oxford: Oxford University Press.
- Wang, Y., Hu, R., Li, W. and Pan, X. (2016) Does teaching benefit from university-industry collaboration? Investigating the role of academic commercialization and engagement. *Scientometrics*, **106**(3), 1037-1055.