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Developing collaborative professionalism: an investigation of status differentiation in academic organizations in knowledge transfer partnerships

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ABSTRACT

In recent years, there has been a significant growth in knowledge transfer partnerships to improve the quality and timeliness of health care. These activities require an increasing level of interdependence between academic and health care professionals, with important implications for human resource management. To understand these knowledge transfer partnerships, we conducted an in-depth longitudinal study based on 99 interviews and 5 focus group workshops across academic and health care professionals in nine university-based knowledge transfer partnerships in England. We explore how academic professionals of lower and higher status organizations develop a new form of professional work, based on the principles of collaborative professionalism, during their involvement in partnerships with health care professionals. We illuminate how the interdependent work between academic professionals and health care professionals in the development of a new academic specialization is shaped by the status of their organizations.

KEYWORDS

Collaborative professionalism; inter-professional work; status; knowledge transfer; academic work; health care

1. Introduction

In recent years, professionals have been increasingly engaged in inter-professional work to comply with policy developments and enable innovation (Adler, Kwon, & Heckscher, 2008; Noordegraaf, 2011). Decentralization of work in horizontally integrated inter-professional work teams and partnerships enables human resource management to encourage innovation by facilitating non-hierarchical and flexible interaction among professionals (Batt, 2007; Boxall, 2003; Guest, 1997). While studies have highlighted that collaboration between distinct professional groups is important to facilitate knowledge transfer and exchange (Bartunek, Trullen, Bonet, & Sauquet, 2003; Hansen & Haas, 2002), we know less about the HR challenges of

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work coordination arising from these changes in professional work in a post-industrial, knowledge-based economy (Adler & Heckscher, 2006).

Despite the increasing significance of inter-professional work, research on professions has conventionally emphasized the importance of the autonomy of professions for the maintenance of their occupational authority (Freidson, 2001) and has linked the interdependent work of distinct professional groups with the de-professionalization of their work (e.g. Abbott, 1988; Ferlie, Fitzgerald, Wood, & Hawkins, 2005). More recently, there has been increased concern regarding the development of the nonconventional form of inter-professional collaborative work (Muzio, Brock, & Suddaby, 2013; Noordegraaf, 2011).

Adler et al. (2008) conceptualized the development of a new form of professional work that derives its authority from the non-hierarchical collaboration of distinct professional groups. They classify this as collaborative professionalism and highlight that it has two distinct structural characteristics. The first characteristic concerns the nature of interdependencies and emphasizes how the interdependent work of distinct professional groups in collaborative knowledge generation is facilitated through shared information exchange mechanisms and networks. The second characteristic concerns the division of labour and emphasizes the development of specialized expertise in collaborative knowledge generation. This can be facilitated by the development of inter-professional training programmes and knowledge broker roles.

Our study advances Adler et al.'s (2008) theoretical insights by addressing the following research question: 'How does the development of the structural characteristics of collaborative professionalism differ among academic professionals from lower and higher status organizations as they engage in innovative university-based knowledge transfer partnerships with healthcare professionals in England?' While the development of nonconventional professional work is theoretically recognized to be shaped by the status position of professionals (e.g. Battilana, 2011), little is known about how the development of collaborative professionalism is influenced by the status differentiation of professional organizations.

In examining the impact of status differentiation of organizations on the development of collaborative professionalism, we also advance research on the impact of organizational status on the development of nonconventional professional work (e.g. Greenwood & Suddaby, 2006; Phillips & Zuckerman, 2001). Specifically, we demonstrate how academic professionals of lower and higher status organizations develop a specialized expertise in collaborative knowledge generation to enhance or maintain their status in the academic profession. We also demonstrate how academics of lower status organizations enhance their status by developing an academic specialization in applied research that is more divergent with the established standards of academic professionalism; and how academics of higher status organizations maintain their privileged status by aligning the development of the new academic specialization with the established professional standards of academic work.

In the following section, we review the literature concerned with the development of a new form of professional work and consider the role of status in its emergence. We then outline our research context and methodology and discuss the findings of our work.

2. Development of collaborative professionalism

Professions have been traditionally defined as occupational groups that possess autonomous control over a restricted domain of specialized knowledge (Macdonald, 1995). The academic and health care professions derive occupational authority to practice specialized knowledge by maintaining autonomous control over its reproduction (Abbott, 1988) and by enacting a 'regulative bargain' in which specialized knowledge is translated into legitimate recognition from states in the form of a monopoly over an occupational domain (Larson, 1977). In contrast to the bureaucratic and market-oriented forms of work that pursue organizational and economic interests, professional work has traditionally been viewed as reproducing the values and interests of expert occupations (Freidson, 2001).

Recently, however, scholarship of professions has become increasingly concerned with the development of a more inclusive conceptualization of professional work – one that integrates the principles and characteristics of the conventionally professional, bureaucratic and market-oriented forms of work (Muzio et al., 2013; Noordegraaf, 2011). In this vein, Adler et al. (2008) conceptualize the development of a new form of professional work called *collaborative professionalism*, which emphasizes a non-hierarchical collaboration of distinct professional groups. This work form has two distinct structural characteristics that we examine in our study.

The first structural characteristic of collaborative professionalism emphasizes the distinct *nature of interdependencies* (Adler et al., 2008, pp. 365–369). In contrast to the traditional concern of professionalism with the protection of occupational autonomy, collaborative professionalism emphasizes the non-hierarchical interdependence of distinct professions. Similar to bureaucratic work, collaborative professionalism controls knowledge creation and diffusion through the functional interdependence of collaborating parties. However, while in bureaucratic work administrative authority is used to enforce organizational rules and norms, in collaborative professionalism, rules and norms are defined in an interdependent collaboration of distinct professional groups. Moreover, while in market-oriented work experts are guided by instrumental, means-ends calculation in response to external necessities, in collaborative professionalism, experts purposefully and voluntarily coordinate their interdependent work in accordance with shared goals. The highest priority of collaborative professionalism is therefore 'interdependent contribution to these shared goals' (p. 366).

Interdependent work of distinct professional groups can be manifested in the joint development of knowledge, networks and information exchange systems

(Adler et al., 2008). Academic professionals develop joint research together with members of others professions (Guile, 2012; Tousijn, 2012; Tasselli, 2015) to share their tacit and explicit occupational knowledge (Bartunek et al., 2003). In health care research, medical problems are increasingly solved in inter-professional teams that consider both their endogenous (e.g. biological or psychological) and exogenous (e.g. sociological, political or economic) causes (Currie & White, 2012).

The second structural characteristic of collaborative professionalism highlighted by Adler et al. (2008) is a distinct structure of the *division of labour*. Professions have traditionally reproduced their authority by insulating their expertise from external demands (cf. Abbott, 1988; Freidson, 2001). For example, academic professionals have traditionally specialized in the development of 'pure' research that is not tainted by the demands of knowledge users. Collaborative professionalism encourages further specialization of professional work in order to develop specialized expertise in inter-professional knowledge generation. Professionals increasingly specialize in the development of applied knowledge that is responsive to the requirements of its users, develop specialized expertise in inter-professional knowledge generation in knowledge transfer learning programmes and create professional-manager roles aimed at facilitating knowledge transfer.

To develop specialized expertise in collaborative knowledge generation, collaborative professionalism integrates the principles of the bureaucratic and market-oriented forms of work (Adler et al., 2008). Similar to bureaucratic work, collaborative professionalism develops specialized knowledge to enhance the predictability and control of work. In contrast to the bureaucratic emphasis on conformity and standardization, collaborative professionalism encourages innovation and creativity by facilitating the development of specialized expertise in knowledge transfer and brokerage. Similar to the market-oriented work, it develops strategic knowledge to facilitate competition and flexibility. In contrast to the market-oriented work, it develops specialized expertise in knowledge transfer to facilitate symmetrical distribution of knowledge among collaborating parties. Prior studies demonstrate how academic professionals develop a new specialization of research and teaching on knowledge transfer (Harney, Monks, Alexopoulos, Buckley, & Hogan, 2014; Landry, Amara, & Rherrad, 2006; Mansfield & Lee, 1996) and how health care professionals specialize in the development of new expertise in collaborative knowledge generation in multi-disciplinary teams (Adler & Kwon, 2013).

In this study, we advance Adler et al.'s (2008) conceptualization of collaborative professionalism. We examine how its two structural characteristics, concerning the nature of interdependencies and division of labour, are developed by academics of lower and higher status organizations during their interaction with health care professionals. In so doing, our research examines how the development of the structural characteristics of collaborative professionalism can be shaped by organizational status differentiation.

3. The role of status in the development of collaborative professionalism

Status differentiation represents hierarchical positioning of actors based on accumulated acts of deference (Sauder, Lynn, & Podolny, 2012). While deference can be secured by forming networks with actors of superior reputation (Podolny, 2005), in a professional domain, it is typically attained by creating knowledge that is not affected by non-professional concerns (Abbott, 1988). For example, academic professionals typically achieve privileged status by publishing research in top-ranked peer-reviewed journals (Ballantine, 1997). Likewise, the status of academic organizations can be derived from their positioning in university research rankings or league tables (Sauder, 2008). In these and other intra-professional status hierarchies, lower status actors seek to enhance their occupational authority by gaining resources that are controlled by their higher status counterparts (Podolny, 2005). At the same time, higher status actors seek to retain their privileged authority by monopolizing control over the definition of the standards of occupational mobility.

Phillips and Zuckerman (2001) proposed that conformity to established work arrangements is likely to be higher among actors who value participation in these arrangements, yet feel insecure of it. They suggested that both lower and higher status actors can be equally likely to pursue nonconventional work that diverges from the institutionalized status quo because the former are excluded from the reproduction of established arrangements and are less likely to value participation in them, and the latter are more secure in these arrangements and are less restrained to exhibit a non-conforming behaviour. These insights have been widely exemplified in empirical research.

Professionals of lower status organizations may pursue nonconventional work because they are less constrained by intra-professional norms, less dependent on intra-professional networks and more exposed to inter-professional contradictions (Battilana, 2011). They are often disadvantaged by existing institutional arrangements and may have little to lose by engaging in work that diverges from the institutional status quo (Kraatz & Zajac, 1996). Because they have limited access to resources that are reproduced in an intra-professional status hierarchy (Maguire, Hardy, & Lawrence, 2004), they may engage in nonconventional work to secure alternative channels of resource mobilization (Dorado, 2005).

Academic professionals of lower status organizations may seek public funding in nonconventional forms of knowledge generation, such as the engagement of non-academic professionals in joint research and knowledge transfer, because they often lack capacity and have limited access to funding in conventional academic research (D'Este & Patel, 2007). In turn, non-academic professionals may engage academic professionals of lower status organizations in collaborative knowledge generation because it provides them with a comparative advantage, in terms of the opportunity cost of partner selection, at a stage when they require a close

interaction with academics who are willing to invest time and effort into the development and implementation of joint interventions (Mansfield & Lee, 1996).

Professionals from higher status organizations are also likely to engage in nonconventional work because they exhibit high credibility and deference (Greenwood & Suddaby, 2006) and can revise their work with little loss of legitimacy (Sherer & Lee, 2002). They can be more open to practices that break with established work arrangements and are likely to serve as early adopters of innovations (Rogers, 2003). For these professionals, engagement in nonconventional work can even generate heightened peer esteem (Berkowitz & Macaulay, 1961). Academic professionals in higher status organizations tend to be the first to engage non-academic professionals in joint research (Owen-Smith & Powell, 2001) and to develop learning programmes that are oriented towards knowledge users (Kraatz & Moore, 2002). They can also develop nonconventional work because they tend to have privileged access to research funding (Sauder, 2008), inter-professional networks (Greenwood & Suddaby, 2006) and knowledge brokers (Currie & White, 2012). They can take advantage of their privileged access to resources to withstand setbacks and to engage members of other professions in collaborative knowledge generation (Casper & Murray, 2005).

However, professionals from higher status organizations may also benefit from the reproduction of existing work arrangements and, hence, may be disinclined to change them (Kraatz & Moore, 2002). They tend to protect their privileged authority by monopolizing control over occupational expertise (Abbott, 1988) and by inhibiting the formation of networks with other occupational groups (Ferlie et al., 2005). Because academic professionals of higher status organizations tend to be more embedded in the established intra-professional networks, they can be disinclined to invest time and resources in the development of inter-professional networks outside their occupational domain. They may perceive collaborative work with knowledge users as an opportunity cost to the publication of research that is esteemed by their higher status peers (Landry et al., 2006).

Our study advances research on the impact of organizational status on the development of nonconventional professional work by demonstrating how the development of a new form of professional work based on the principles of collaborative professionalism can be shaped by the status differentiation of academic organizations. Specifically, we demonstrate how academic professionals of lower and higher status organizations engage health care professionals in collaborative knowledge generation; and how they create a new academic specialization in knowledge generation that is responsive to the needs of users.

4. Method

4.1. Case context: academic work in new knowledge transfer partnerships

Neoliberal government reforms in the United Kingdom have led to extensive changes in the professional work of academics (Deem, Hillyard, & Reed, 2007).

Reforms have placed an increased emphasis on the cost-effectiveness and accountability of academic work, and its demonstrable impact on service users. This policy change has been reinforced by a shift in the allocation of public research funding, with the funding becoming increasingly used as a steering mechanism to align academic research with governmental priorities.

The UK Department of Health developed a new research funding stream that required health care academics to conduct research and build partnerships with service provider organizations in order to generate more relevant research and to facilitate the transfer of research knowledge into clinical services. In the bidding process, universities were required to outline research and implementation programmes concerned with knowledge transfer. Nine university-based partnerships (UBPs) with diverse service delivery organizations were successful in obtaining this research funding; in 2008, each of these UBPs received approximately £10 M in new funding from the National Institute for Health Research (NIHR). In 2013, each of the UBPs was refunded for another five years by the NIHR, which, from the central funder's perspective, indicated that all of the partnerships were deemed successful.

The new partnerships between university medical departments and health care provider organizations – called 'Collaborations for Leadership in Applied Health Research and Care' or 'CLAHRC' – received government funding as part of an innovative pilot programme concerned with transferring knowledge between academic research and clinical services. Each new partnership was given flexibility in how to organize, with very little interference or recommendations from the UK Department of Health. CLARHCs organized themselves into research and implementation programmes with designated academic, clinical or management professionals overseeing the projects from these programmes.

While the respective university medical department was the primary designated university department involved in the partnership, some CLARHCs also involved academics from other academic departments, including business schools, sociology and engineering departments. Partnering organizations included one or more acute hospitals, community-based health providers, voluntary sector organizations, health administrative organizations, municipal authorities and in one case a private sector company. Accountability structures within the CLAHRCs varied considerably, though each reported to an overseeing advisory board in addition to the funding body.

4.2. Fieldwork procedure, sample and data analysis

Our findings are based on the qualitative analysis of 99 semi-structured in-depth interviews with academic and health care professionals of all nine CLAHRCs and the qualitative analysis of the results of three-hour intensive focus group-type workshops with the key members of five CLAHRCs. Interviewees were selected using the purposive sampling strategy (Silverman, 2013) and included 9 directors

of CLAHRCs, 3 deputy directors, 25 programme leads or co-theme leads, 17 senior academics, 11 junior academics, 4 senior managerial clinicians (e.g. directors of NHS trusts) represented on CLAHRC Boards, 13 CLAHRC middle-level managerial clinicians and 17 clinicians seconded to work on CLAHRC projects. In all of the CLAHRCs, we interviewed the key, senior academics.

To answer our research question, we relied on an inductive approach to data analysis to derive the differences in participant interpretations from the data, instead of fitting the data into a pre-existing theoretical classification (Silverman, 2013). However, the process of data analysis was iterative; that is, we iteratively moved between the data and emergent themes and between higher and lower order themes to identify the conceptual patterns in several phases (Eisenhardt, 1989).

Qualitative analysis of the data was conducted by three researchers using the Atlas.ti 5 software. We first coded the interview and workshop data transcripts using very detailed categories that identified the differences in the perceptions of work transformation across CLAHRCs. These codes, for example, focused on comments regarding the development of training programmes for knowledge brokers, comments emphasizing the importance of disseminating research findings in academic journals that have high value in the (upcoming) Research Excellence Framework (REF) or comments about challenges encountered. During this step, we continuously compared the coded data and discussed alternative conceptual patterns (e.g. the literature on knowledge transfer and implementation). In this stage, the coding of interview and workshop data generated 347 discrete data segments.

In the next phase, we compared data codes across interviews and workshops in order to consider the ways in which these distinct data segments could be aggregated. During this phase, comments emphasizing, for example, the importance of the development of training programmes for knowledge brokers and research training for health care professionals were collapsed into the category 'development of specialised training programs to facilitate knowledge transfer'.

In the final phase, we explored the underlying conceptual patterns among the first-order categories to identify the ways in which these categories could be aggregated into the higher level, second-order themes. Moving from higher to lower order categories, we reclassified the first-order categories in accordance with differences in the nature of the interdependencies and the division of labour of academic work. Professional status emerged from the data as a distinguishing characteristic in shaping the development of nonconventional work emerged from the data, and was not an a priori assumption. The final data structure is illustrated in Figure 1.

Status differences in UBPs were derived from the ranking of participating university medical departments in the two most recent national research rankings of universities, i.e. Research Assessment Exercise (RAE) 2008 and 2001. RAE ranks academic departments in British universities based on the quality of research

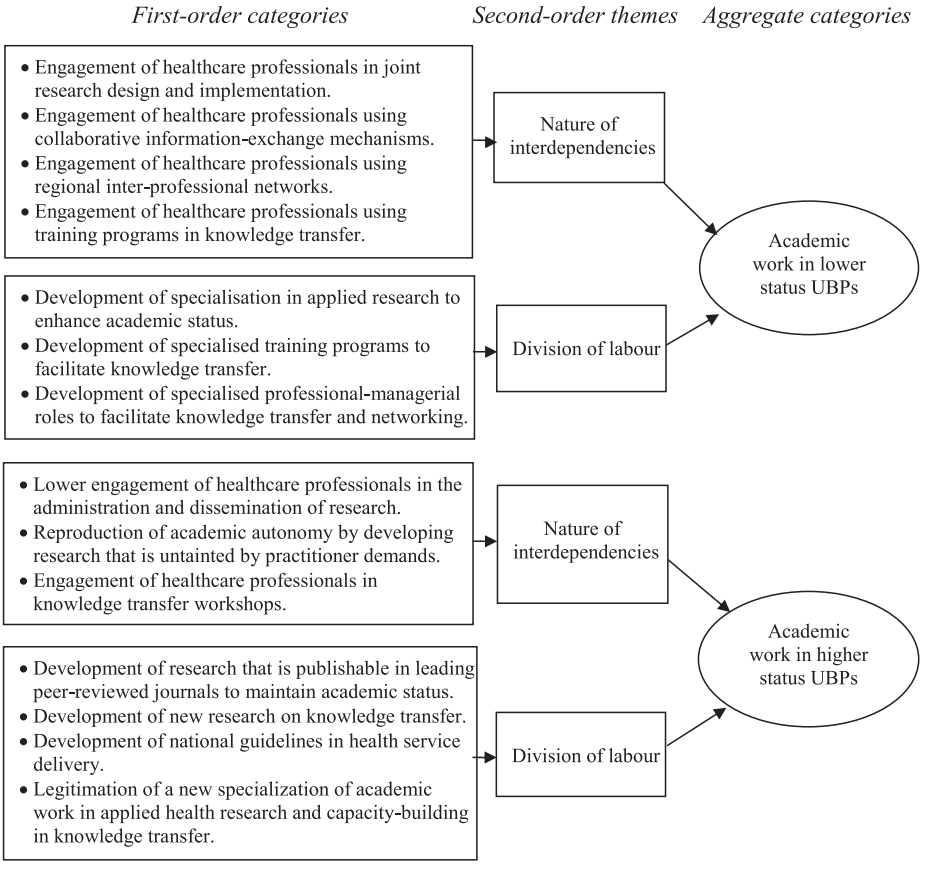

Figure 1. Examples of data themes and structure.

output, which is the dominant standard of status differentiation in the academic profession. A similar status metric has been used by other researchers (Sauder, 2008). Based on RAE ranking of medical departments, the top four UBPs were classified as 'higher status' in the academic field, while the bottom five were classified as 'lower status' UBPs. In the RAE, the medical departments of three out of the four UBPs classified 'higher status' were ranked among the highest 25% of university medical departments, while the fourth was ranked among the top 30%. Conversely, the medical departments of the five 'lower status' UBPs were ranked among the lowest 30% of university medical departments. Overall, the rankings of the medical departments in the RAE were consistent between 2008 and 2001, indicating stable and accepted status differentiation.

5. Development of collaborative professionalism in UBPs

In this section, we present the different strategies that academic professionals of lower and higher status UBPs used to develop the two structural characteristics of collaborative professionalism. First, in considering the development of the new

structure of interdependencies of academic work, we outline the strategies that academic professionals used to engage health care professionals in collaborative knowledge generation. Second, in considering the creation of the new structure of the division of labour, we present the strategies that academic professionals used to develop a new specialization in collaborative knowledge generation.

5.1. The nature of interdependencies of academic work in lower and higher status UBPs

5.1.1. Lower status UBPs

While academic professionals in all UBPs recognized the need for the engagement of health care professionals in collaborative work, there were systematic variations in the priorities of academic work in lower and higher status UBPs. Academic professionals from lower status UBPs placed a stronger emphasis on the development of interventions that were contextually embedded and had practical utility for health care professionals. They were more concerned with integrating health care providers in joint research and exhibited more flexibility towards other stakeholder groups.

> You are trying to move from the NHS [National Health Service] being a passive recipient or purchaser of research to being a partner in generating knowledge. (UBP 7, senior academic)

> We would say there are three large groups we try to get problems from – NHS organizations, clinicians and patients – and we think of each of them as a legitimate perspective on understanding where there are problems in the system. (UBP 9, senior academic)

Academic professionals in lower status UBPs involved health care professionals in the development of information exchange mechanisms to facilitate the transfer of academic knowledge into health care delivery. For example, academics in one UBP set up a database to make academic and health care professionals aware of skills and expertise that they could tap into for their projects. This 'skills database' facilitated the sharing of expertise among academics and clinicians by providing a systematic overview of the competencies of the UBP staff on which others could draw. Academics engaged clinicians in the interdependent work by diffusing the ownership of research process, emphasizing mutual cooperation and the value of research for stakeholders.

> One of the things I'm interested in is how you can engage general practitioners in some kind of project … by demonstrating to them that there is some benefit to them. (UBP 9, senior academic)

Most of UBPs relied on regional research networks between academic and health care professionals, as well as elite NHS connections, to facilitate the writing of the original bid proposal. However, academic professionals in the lower status UBPs were noticeably more embedded in regional networks with health care professionals, due in part to their interest in developing new expertise in knowledge brokering and associated programmes. The strong network ties to the

regional health care provider community were frequently emphasized as strength of their partnership:

> [Our] medical school was set up in a way that involved a close collaboration between academia and the health service right from the beginning, so … putting [UBP] on top of that was a fairly natural thing to do and I think that's probably made it easier to do it than in places where there was less obvious working relationships between academia and the health service. (UBP 9, senior academic)

Running training programmes in knowledge transfer for health care provider organizations that were involved in a partnership enabled academics to become further embedded in collaborative work with clinicians. These programmes enabled academics to gain a more nuanced understanding of the local contextual challenges of health care delivery and to shape research priorities that might address specific concerns of health care providers. Thus, while a common theme among academics in the higher status UBP was a lack of real understanding about 'implementation' or how to account for contextual factors in their research with one high status director commenting – 'I realized about 1 year into this that we had no idea how to do "implementation" or even what that meant' – academics in lower status UBPs had more direct engagement with implementation concerns:

> I think that the knowledge implementation cycle fundamentally is about joint priority setting, finding out what the priority is and then actually looking at context and working in the context. (UBP 8, implementation program lead)

5.1.2. Higher status UBPs

With one notable exception, where the academic leads were actually employed by a hospital and spent little time in the affiliated university, the academic professionals in higher status UBPs sought to engage health care professionals in collaborative knowledge generation in such a way as to reproduce their occupational autonomy. They prioritized the evaluation of their performance in the UBP in terms of the generation of high-quality research that was not tainted by the capacity-building demands of health care professionals. Rigorous peer-reviewed, evidence-based knowledge that was publishable in high-impact journals was considered imperative, and thus required the objectivity of conventional academic work and carefully conducted studies.

> As a research team, our goals are very much incentivized by the researchers, universities and the REF. Working here you cannot escape your targets. If you don't publish then forget it. So 90% of our effort has been making sure that our findings are published. And we have actually done very well. (UBP 2, senior academic)

Considering themselves elite players in the global network of top universities, academic professionals in higher status UBPs sought to maintain their occupational status by aligning their research in a partnership with the research debates in the leading academic outlets and universities. Professorial academics in these UBPs were somewhat more concerned with the maintenance of control over the research process to safeguard publishing potential; while clinicians frequently

participated, for example, in contributing to project goals, they were less likely to steer the process through a form of collaborative co-production. Not only might co-production compromise rigorous research methodologies, but also unconventional research approaches – such as action research – could generate less publishable results.

> Our currency is research publications, grant income, all of the kind of traditional fodder that keeps an academic in a job and develops kudos, and marrying those two up in a proper way in the NHS context is really challenging. (UBP 3, senior academic)

Yet, academics from higher status UBPs allowed clinicians to define the core research objectives. The concerns of partnership stakeholders were acknowledged and acted upon, though a loose coupling of academic and clinician was generally maintained. From the perspective of senior academics, this new way of working interdependently with clinicians was a radical departure from previous academic research and 'completely different way of working'. Academics provided advice, feedback and research training to health care professionals. The emphasis on the uptake of academic knowledge into health care delivery led to the development of knowledge transfer workshops on evidence-based techniques for clinicians enabling local contacts and engagement to develop.

> So we had a lot of stakeholder events, we mapped processes of care around [a disease]. What has come out of that is a great deal of support for the work that [UBP] is doing in the [clinical service provider organization], a great deal of credibility, they want us to get involved in everything now. (UBP 2, senior academic)

5.2. The division of labour of academic work in lower and higher status UBPs

5.2.1. Lower status UBPs

Academic professionals from lower status UBPs reorganized their work by specializing in the development of training programmes in knowledge transfer for health care professionals. They developed training programmes that provided clinicians with specialized capacity-building expertise in collaborative knowledge generation. Several UBPs introduced vocational training programmes in which clinicians were taught to develop leadership in boundary-spanning skills, knowledge transfer techniques and networking strategies. These programmes focused on understanding research design, research culture and effective change management in health care delivery organizations. In one case, knowledge transfer training was incorporated into the delivery of medical curriculum in a university.

> They are doing learning events. They are working with groups of commissioners on four different chronic diseases, going through some education programs around budgeting and around the use of literature, and their project this summer is to start designing specifications that they will share across the patch. (UBP 5, academic)

To develop applied health research that is responsive to stakeholder organizations, academics in lower status UBPs created new specialized professional-manager

or knowledge broker roles, variously called 'knowledge brokers', 'coordinators', 'diffusion fellows', 'inequalities facilitators' or 'locality leads', who were staffed with clinicians from health care provider organizations. Of the five UBPs that set up knowledge broker roles in the first two years of the programme, four were embedded in the lower status academic organizations. Knowledge brokers were typically clinicians (e.g. hospital clinician, physiotherapist and doctor) who were employed by the NHS and provided it with ownership over the generation of applied health research. Academics developed a new specialization in applied research and user-oriented teaching by liaising with brokers to inquire about the capacity-building requirements of health care partner organizations and to prepare knowledge transfer educational programmes for clinics.

> They helped write the implementation component for each of our proposals, and we also have used an implementation contact to work alongside [knowledge brokers] quite a bit, so [academics] do a bit of education and teaching and support with the [knowledge brokers]. (UBP 6, senior academic)

Academics in the lower status UBPs perceived involvement in the new knowledge transfer partnerships as an opportunity to advance their status by developing a new specialization in applied health research, including experimenting with new or unconventional research methods. The development of applied research was perceived as an opportunity to enhance their status by generating specialized expertise in health care capacity-building and by acquiring new research funding and staff. Lower status academic organizations were referred to as uncompetitive in terms of 'pure' biomedical research grants. Applied health research, with its more contextualized approach to knowledge generation, is a relatively new area of research having concomitantly less recognition in the academic profession, yet provides a new area of academic specialization and funding.

> We are kidding ourselves a bit about some of the world class research we are doing because there is a lot of variation, so we need to collaborate on [developing applied research]. A [UBP] cluster is about status, it is about sustainability, it is about putting things together … [Academic department] basically didn't do wonderfully well in the RAE [former university rankings]. [UBP] enables the [academic department] to position itself in terms of applied research or translation research … We cannot compete in academic research, but can establish a niche in applied research, as there is a gap in the market. It is nowhere near Oxbridge or London … we are never going to compete on genetic or biochemical research … [UBP] attracts better doctors being here (…) and it is good for the reputation. (UBP 6, senior academic)

5.2.2. Higher status UBPs

Academic professionals in higher status UBPs were, in general, reluctant to specialize in applied research that was unlikely to be publishable in top-ranked peer-reviewed journals. A common concern voiced by these academics was the difficulty in publishing highly contextualized knowledge, influenced by service delivery constraints, which leading journals considered as less rigorous and scientific. They frequently referred to 'service improvement' research as bordering on

consulting work and commented that this genre of highly contextualized research would ruin the career of untenured academics, because 'this stuff is hard to publish'.

> You can't blame universities, because it is how universities are evaluated – they are evaluated on the quality of their teaching of course, but a lot of it is on the quality of their research … Well, as long as these are the measures of success, you know, universities aren't concerned with whether their research is implemented; they are just concerned that it is published. (UBP 3, senior academic)

These academics were concerned with producing research that would enable them to maintain high status among peers through the peer review process. While academics in most UBPs expressed discontent with the constraints of clinical research governance procedures, academics in higher status UBPs distinctly emphasized the importance of autonomous research. Though these academics engaged NHS clinicians in the development of research priorities, they sought to protect the established structure of the division of labour in the academic profession by maintaining control over existing research specializations.

> My reservation of putting something in through the UBPs was the more direct involvement of the NHS … Before, it has been of our choosing – you know, you work with people who want to do that kind of thing, and then you work with the [providers] who say 'oh, go ahead'. (UBP 2, senior academic)

However, academic professionals in the medical schools of higher status UBPs also developed a new academic specialization on knowledge transfer and implementation in collaboration with colleagues from other university departments. Three of the four UBPs that involved business schools in the development of expertise on the transfer of scientific knowledge in health care delivery were higher status UBPs. In two of the higher status UBPs, research on the process or science of implementation became an important aspect of academic work. One UBP also included academics from an engineering department that drew systematically on soft system design principles to identify the most effective systems for the implementation of scientific knowledge.

> We saw an opportunity in the CLAHRC to expand that model somewhat, apply it directly and test out ideas … not in an unsystematic, just pure NHS development way, but trying to make science at the heart of the testing so that we would really have … research about the science [of] implementation. (UBP 4, senior academic)

Academics in higher status UBPs also specialized in the development of national guidelines in health care delivery. For example, two lead academics from one UBP sat on working groups producing the national guidelines defining 'best practice' in their area of expertise and reflected the cumulative findings from the UBP research as part of their input. Another lead academic was asked to develop national commissioning guidelines for her area of expertise by a leading figure affiliated with the NHS. Higher status UBP academic leads sought to use their research-generated knowledge to influence high-level national agencies, such as NICE (National Institute for Health and Care Excellence) and health policy committees.

> Our goal should be to develop national guidelines from our research. This will have more impact than writing papers alone, though of course we need the papers. Just influencing our local set up, or even our region, is not [ideal]. We should have our eyes on the way it is managed nationally. (UBP 1, senior academic)

These academics developed national health care guidelines and research on the knowledge transfer process, along with the more conventional research that is publishable in leading peer-reviewed journals to reproduce their dominant status in the academic profession. However, by becoming involved in new knowledge transfer partnerships, which were funded by government to develop a new academic specialization in knowledge transfer, they partly undermined the institutional foundations of their superior status. Since academics from higher status universities exhibited high legitimacy in the academic profession, their involvement in the government-sponsored partnerships was perceived to legitimize the new specialization of academic work that was distinctively prioritized by their occupational peers in lower status UBPs. They legitimized not only the characteristics of the new work specialization, that were more compatible with the established structure of the division of labour in the academic profession, such as research on knowledge transfer, but also characteristics that were more discrepant with the established specializations of academic work, such as the development of capacity-building expertise in knowledge brokering and that was more extensively adopted by academic professionals from lower status UBPs.

> We here are still more interested in the development of high quality research that has high value in the [national university research rankings], rather than purely applied, vocational research. In so far as the [UBP] fits these goals, it remains useful. However, by becoming involved in a [UBP], we partly contribute to the legitimacy of applied, user-oriented research orientation that undermines the authority of high academic standards. (…) Some other [UBPs], that are not so keen to publish research in the top journals, are more concerned with the engagement of stakeholders locally. I know from collaborative learning events that they talk about brokers, team-work, networks; you know all that stuff about collaborative work. I do not know where this process is going, but even [this top-ranked university] is now part of it. If you really think about it, we are legitimizing it. (UBP 1, researcher)

6. Discussion

Our study makes two theoretical contributions. First, we advance theoretical insights on the development of the structural characteristics of collaborative professionalism by demonstrating how this development can be influenced by the status differentiation of professional organizations. Second, we contribute to the understanding of the impact of organizational status on the development of nonconventional professional work. We highlight how academics of lower and higher status organizations develop a new academic specialization in collaborative knowledge generation to enhance or maintain their status; and how the development of this new specialization can be simultaneously legitimized by academics

of both lower and higher status organizations. Below, we consider the theoretical and practical implications of our findings.

6.1. Theoretical implications

Compared to traditional professionalism, collaborative professionalism emphasizes (1) the engagement of distinct professional groups in interdependent work and (2) the development of a new occupational specialization in knowledge transfer (Adler et al., 2008). Prior research has demonstrated how professionals develop these characteristics in academia (Hartley, 2010) and health care (Tasselli, 2015; Tousijn, 2012). Our study advances this research by demonstrating how the development of these characteristics can be prioritized by academic professionals of lower and higher status organizations.

Our findings suggest that the engagement of academic professionals in interdependent work with health care professionals is likely to differ depending on the status of academic organizations. Academics in lower status organizations are more likely to engage health care professionals in the development of joint information exchange and networking mechanisms to investigate the capacity-building requirements of health care partner organizations and to develop tailored interventions (Tousijn, 2012). Being more engaged in the interdependent work with health care professionals, academics in lower status organizations are more likely to undergo a shift in the locus of their professional control from what Adler et al. (2008) conceptualizes as 'independent self-construals' of conventional professionalism to 'interdependent self-construals' of collaborative professionalism. Thus, stakeholder engagement is likely to be more symmetrical for academics of lower status organizations, which are likely to be more flexible in deviating from established standards of academic work.

In comparison, academic professionals of higher status organizations are more likely to engage health care professionals in interdependent work in such a way as to reproduce their occupational autonomy. They can be reluctant to participate in symmetrical knowledge exchange at the local level, unless it is incentivized by the academic standards of career mobility. In our case, the concern of these academics with the generation of high-quality research, in part disincentivized their engagement in symmetrical co-production of knowledge with health care professionals at the local level, as they were concerned that the research outputs from this work might be less publishable. While these academics are likely to engage health care professionals in the development of training programmes in knowledge transfer, they are more likely to maintain distance from the influences of local health care practice on the knowledge generation process (Ferlie et al., 2005).

Academic professionals of lower and higher status organizations are also likely to differ in terms of the development of training programmes around a new academic specialization in knowledge transfer. Academics of lower status organizations are more likely to specialize in the development of applied research that

is responsive to the capacity-building requirements of clinical stakeholders and more likely to develop the knowledge brokering capacity to coordinate information exchange with stakeholders (Adler & Kwon, 2013). These mechanisms can facilitate the compartmentalization of information into units that the stakeholder groups could access and find relevant, so as to encourage communication and exchange (Richardson & McKenna, 2014). We suggest that the efficacy of the development of 'new professional-managerial roles' (Adler et al., 2008, p. 367) in the form of knowledge brokers (Currie & White, 2012) can be enhanced by the creation of information exchange mechanisms (e.g. 'HR skills database') that facilitate knowledge brokering in inter-professional contexts.

Academics from higher status organizations are more likely to reproduce the established structure of the division of labour in the academic profession by prioritizing the generation of fundamental research that is publishable in top-ranked peer-reviewed journals. The greater mobility of neutral, decontextualized knowledge, set apart from localism and particularism, has a more universal application in an academic profession and is more esteemed by occupational peers in higher status organizations (Abbott, 1988). However, our findings suggest that these academics are likely to develop a new specialization of research on the implementation of scientific knowledge in health care delivery, as well as that they are likely to specialize in the development of health care policy guidelines.

Our findings also contribute to the understanding of the impact of organizational status on the development of nonconventional professional work. Phillips and Zuckerman (2001) proposed that professionals of both lower and higher status organizations are equally likely to engage in nonconventional work because the former are excluded from the reproduction of these standards and the latter are endowed with the authority to revise them. Consistent with these insights, we demonstrate that academic professionals of lower status organizations are likely to engage in nonconventional work by specializing in the development of proprietary knowledge that is more contextualized and directed towards protocols, routines and processes of knowledge users and is thus less constrained by the publication requirements of top-ranked peer-reviewed journals. However, in contrast to Phillips and Zuckerman (2001), we suggest that academics of higher status organizations are more likely to protect the established standards of academic professionalism. They are likely to perceive engagement in collaborative knowledge generation with health care professionals as an opportunity cost to the development of more fundamental research that is publishable in journals that are esteemed by their higher status peers (Landry et al., 2006).

In line with the theoretical arguments of Podolny (2005), we suggest that academic professionals of both lower and higher status organizations are likely to develop work characteristics that enable them to enhance or maintain their academic status. However, in contrast to Podolny (2005), we suggest that the enhancement or maintenance of status is likely to be less contingent on the reputational advantages of networking with non-academic stakeholders and more contingent

on the development of a new structure of the division of labour. Because academics primarily derive their status from their ability to generate specialized esoteric knowledge (Ballantine, 1997), a change in status is likely to be triggered by the development of a new specialization of academic work. In our case, academics of lower status organizations perceive themselves to be less competitive in terms of the generation of pure biomedical research and seek to enhance their status by legitimizing a new specialization in applied research and by attracting the necessary resources to develop it. Academics of higher status organizations maintain their privileged status by protecting the established research specializations in the academic profession that are geared towards the publication of research output in leading peer-reviewed journals.

Previous research on the impact of organizational status on the development of nonconventional professional work demonstrates how it be launched by professionals of either lower (Battilana, 2011) *or* higher status organizations (Greenwood & Suddaby, 2006). Lower status professionals may be disinclined to develop nonconventional work unless they are supported by their higher status counterparts (Adler & Kwon, 2013). However, networks with lower status actors may diminish the legitimacy of their higher status counterparts (Podolny, 2005). We advance this research by demonstrating how nonconventional professional work can be developed simultaneously by academic professionals of both higher *and* lower status organizations that work independently of each other. We suggest that although academics from higher status organizations can be predisposed to maintain their privileged status by protecting established standards of academic work, they are also likely to legitimize the new work specialization by developing national service delivery guidelines and generating research on knowledge transfer. More importantly, given the legitimacy of high status universities, their involvement in new knowledge transfer partnerships is likely to contribute to the legitimation of the new characteristics of academic work that are prioritized by their lower status counterparts, such as the development of knowledge transfer training programmes for clinicians and knowledge broker roles.

6.2. Practical implications

With the fragmentation of professional work into autonomous specializations, the engagement of distinct professional groups in collaborative knowledge generation has become critical for the solution of social problems (Adler & Heckscher, 2006; Noordegraaf, 2011). While the engagement of academic professionals in knowledge transfer partnerships with knowledge users facilitates collaborative knowledge generation (Landry et al., 2006; Rynes, Bartunek, & Daft, 2001), it is often challenging and can be influenced by status differentials of participants (Oborn & Dawson, 2010). Given the increased use of ranking metrics, for example in universities, hospitals and secondary education institutions, the awareness of their relative status is made more accessible and overt competition for status

increasingly important in understanding work reorganization. The findings of our study suggest a number of strategies that human resource managers in knowledge transfer partnerships could use to engage academic professionals in collaborative knowledge generation with health care professionals.

HR managers could engage academic professionals in collaborative knowledge generation with health care professionals by incentivizing the development of shared information exchange mechanisms and inter-professional networks. For example, HR managers could introduce a 'skills database' and online communities to facilitate inter-professional knowledge generation (Faraj, Jarvenpaa, & Majchrzak, 2011), thereby informing academics about the capacity-building requirements of clinical partners and informing clinicians about the academic expertise that could be used to develop clinical interventions. Pre-existing inter-professional networks between universities and local health care delivery organizations could be mobilized to engage academic and health care professionals in joint research and learning, and to secure public funding for the development of knowledge transfer mechanisms.

Engagement of academics from lower status organizations in knowledge exchange with clinicians could be incentivized by the development of knowledge broker roles. Brokers are likely to encourage knowledge exchange by facilitating the interpretation and translation of knowledge across distinct professional groups. Brokers could also help academics identify the capacity-building requirements of clinical partner organizations in the form of the development of collaborative research, and help clinicians identify academic expertise that can be mobilized to develop clinical interventions.

Academics from higher status organizations could be encouraged to reorganize their work using interventions that are less likely to compromise the conventional standards of academic professionalism. In higher status organizations, academics are likely to be responsive to engagement in research on the conceptual development of knowledge transfer and implementation science. They are also likely to participate in research networks across multiple academic departments, such as medical school, business school and engineering departments, assuming that these networks could generate high-quality research. Conversely, they are less likely to invest time and effort in research that is not publishable in top-ranked peer-reviewed journals.

7. Conclusion

Our study suggests that the involvement of academic professionals in collaborative knowledge generation with health care professionals is likely to emerge differently depending on the status of academic organizations. We demonstrate how academics of lower status organizations specialize in applied health research and knowledge brokering, while academics of higher status organizations develop national health care delivery guidelines and implementation research. We suggest

that academics are likely to enhance or maintain their academic status, while meeting the demands of health care professionals who are involved in collaborative knowledge generation. We suggest various information exchange strategies (e.g. skills database and knowledge brokers) that human resource managers can use to facilitate knowledge transfer between academic and health care professionals in academic organizations of differential status. In illuminating the development of a new form of professionalism that is responsive to the collaboration of distinct professional groups, our study has sought to facilitate an understanding of the changing character of professional work that transcends the conventional concern of professionalism with the protection of occupational autonomy and enables innovative resolution of the emerging problems of a post-industrial society.

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