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Understanding knowledge brokerage and its transformative potential: a Bourdieusian perspective

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Background: Knowledge brokering is promoted as a means of enabling exchange between fields and closer collaboration across institutional boundaries. Yet examples of its success in fostering collaboration and reconfiguring boundaries remain few.

Aims and objectives: We consider the introduction of a dedicated knowledge-brokering role in a partnership across healthcare research and practice, with a view to examining the interaction between knowledge brokers' location and attributes and the characteristics of the fields across which they work.

Methods: We use qualitative data from a four-year ethnographic study, including observations, interviews, focus groups, reflective diaries and other documentary sources. Our analysis draws on Pierre Bourdieu's conceptual framework.

Findings: In efforts to transform the boundaries between related but disjointed fields, a feature posited as advantageous – knowledge brokers' liminality – may in practice work to their disadvantage. An unequal partnership between two fields, where the capitals (the resources, relationships, markers of prestige and forms of knowledge) valued in one are privileged over the other, left knowledge brokers without a prior affiliation to either field adrift between the two.

Discussion and conclusions: Lacking legitimacy to act across fields and bridge the gap between them, knowledge brokers are likely to seek to develop their skills on one side of the boundary, focusing on more limited and conservative activities, rather than advance the value of a distinctive array of capitals in mediating between fields. We identify implications for the construction and deployment of knowledge-brokering interventions towards collaborative objectives.

Key words knowledge broker • knowledge translation • boundary spanner • healthcare

Key messages

- Knowledge brokers are vaunted as a means of translating knowledge and removing barriers between fields;
- Their position 'in between' fields is important, but their influence in those fields may be limited;
- Lacking the resources and relationships to work across fields, they may align with only one;
- Both the structure of fields and the prior knowledge and habitus of brokers will influence knowledge brokerage's success.

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Background

Much has been made of changes in contemporary society that, since the late twentieth century, have challenged traditional forms of organisation and occupation. In public services, the challenges posed by ‘wicked issues’ mean that single-sector approaches to addressing societal needs are viewed as inadequate, and ‘joined-up’ approaches to social intervention seen as essential. The response has included new professional and proto-professional roles that work across established fields of social activity, and concomitant new trajectories for individuals embracing the opportunities and challenges of these roles.

The fields of research and practice – knowledge production and utilisation – exemplify these changes. Long subject to calls for greater interaction between research and innovation on the one hand, and practice and implementation on the other, efforts to bring the fields closer together have seen significant investment (Amara et al, 2019). Concerns about the delay between discovery and evaluation of new interventions and their routine incorporation into practice have been particularly pronounced in healthcare, resulting in international efforts to understand and close this ‘translational gap’ (Curran et al, 2008; Swan et al, 2010).

One notable recent innovation that seeks to break down boundaries and promote dialogue between fields is the ‘knowledge broker’. Knowledge brokers are individuals or groups who seek to manage and share knowledge, generate new connections, and build capacity across two or more separate but related fields (Knight and Lyall, 2013; Ward et al, 2009a; Bornbaum et al, 2015). They have been deployed in settings as diverse as healthcare, international development and environmental conservation (Meyer, 2010a). Operating as individuals, teams or even intermediary organisations (Wye et al, 2019), knowledge brokers have gained both traction and a developing evidence base for their utility (Bornbaum et al, 2015; Elueze, 2015). As understanding of the roles’ potential as a means of spanning or even breaking down boundaries between sectors has evolved, so too has a clearer specification of the qualities they need to embody, such as technical skills (Wye et al, 2019) and personal traits (Phipps and Morton, 2013). Some authors have even put forward putative performance management frameworks for knowledge-brokering professionals (for example, Maag et al, 2018).

However, examples of their success – particularly in reconfiguring the relationship between fields – remain sporadic. We argue that this patchy evidence base is due in part to a persistent *over*-emphasis on the characteristics that can make knowledge brokers successful, and concomitant *under*-conceptualisation of the influences that can constrain their boundary-spanning efforts. With some exceptions (for example, Currie et al, 2015; Kislov et al, 2016; 2017), few researchers have deployed social theory to shed light on the conditions that can help or inhibit knowledge-brokering efforts. Using Bourdieusian theory, we respond to calls for attention to the consequences of knowledge brokers’ positioning outside established institutional fields on their viability and potential (Contandriopoulos et al, 2010; Haas, 2015).

Knowledge brokerage

The ‘theory of change’ for knowledge brokering – that is, the means by which it is expected to give rise to greater interaction and coordination between fields – has developed steadily over the last 15 years. Ward et al (2009b) describe three principal foci for knowledge brokers’ work (see also Bornbaum et al, 2015): knowledge management; linkage and exchange; and capacity building. These activities share epistemic foundations with theories that emphasise the limitations of conceptualising knowledge as an object, and posit joint meaning-making through social interaction as a better way of transferring, understanding and applying knowledge (Brown and Duguid, 2000; Tsoukas and Vladimirou, 2001). Knowledge brokers thus constitute a social intervention that aims to facilitate the dialogue or even shift the boundary between two fields, overcoming the limitations of more technical knowledge-management solutions that handle only codified information (Tsoukas and Vladimirou, 2001; Haas, 2015).

Brokering knowledge has been an implicit function of many occupational groups for a long time (for example, Burgess and Currie, 2013). Increasingly, however, knowledge brokerage has come to be recognised as a distinctive and specialised role in its own right. Wye et al (2019), for example, highlight the need for dedicated time commitment for knowledge brokering, to allow immersion in different epistemic communities. Studies also point towards peripheral or liminal positioning *itself* as an important feature of knowledge-brokering roles (Swan et al, 2016), helping brokers to ‘resist the “dogmas” of the domains they are eventually meant to bring together’ (Meyer, 2010a: 122). Haas (2015: 1040), for example, conceptualises knowledge brokers ‘as “liaisons” linking two different groups without belonging to either’. Cheetham et al (2018) describe how the *lack* of expertise enables knowledge brokers to help experts on either side of a boundary make sense of problems and apply knowledge creatively in response. In public policy, writers such as Medvetz (2012), Williams (2020) and Landry (2020) describe how think tanks and their members mediate between established fields, combining attributes valued in those fields to produce distinctive forms of knowledge. Such studies suggest that a defining feature of the knowledge broker’s skillset may be its independence and distance from the communities on both sides of the boundary being mediated (for example, Cheetham et al, 2018), and/or ability to combine skills and activities from either side of the boundary in novel ways (for example, Medvetz, 2012). As Meyer (2010b: 169) argues, what is needed from knowledge brokers is an ability to sustain an ambivalent relationship with both fields, maintaining a role that ‘influences without imposing, helps without directing, accompanies without pestering, points towards a path without forcing someone to follow it and, above all, at the end of the process, moves away’.

These studies begin to delineate the characteristics and positioning of knowledge brokers that give them the greatest chance of success. They give a sense of how what we might call the *professional knowledge broker* – as opposed to the *professional who brokers knowledge* – should pursue their role. The literature also provides extensive guidance on the behaviours that successful knowledge brokers should exhibit and activities they should undertake. Key attributes include credibility, empathy, flexibility and self-confidence (Phipps and Morton, 2013), while key activities include facilitation, relational work, analysis and evaluation (Glegg and Hoens, 2016; Wye et al, 2017). Most ambitiously, it is claimed that this kind of work can give rise to a reconfiguration

of the relationship between fields by ‘addressing system-level barriers’ (Glegg and Hoens, 2016: 114), and thus reducing or removing boundaries altogether. Successful knowledge-brokering organisations may carve a distinctive niche for themselves, transforming the boundary between fields (Medvetz, 2012; Williams, 2019; 2020).

To date, optimistic accounts of how a skilful approach might combine with a liminal position to produce change have tended to predominate. In the literature on think tanks, for example, researchers have described the self-positioning work undertaken by actors to legitimise a role between the ‘scholarly but detached’ sphere of academic research and the ‘engaged but mercenary’ world of politics, policy and lobbying (Medvetz, 2010; Williams, 2020). Through such work they are able to maintain legitimacy in both fields, facilitating the translation of knowledge from one field into another, and even coming to dominate the space between fields and reconfigure the boundaries between them and the forms of knowledge that they value. Some commentators, though, ask important questions about the possible downsides that might accompany such roles. Even as he expounds the benefits of peripherality in spanning boundaries, Meyer (2010a: 122) raises questions: ‘what is the cost of being marginal to multiple worlds, especially since these marginalities might be viewed with suspicion?’ Haas (2015: 1040) calls for studies that analyse the ‘power relations influencing the behaviors and performance of gatekeepers, boundary spanners and knowledge brokers in longitudinal studies’.

To the extent that such calls have been answered, the focus has been on the consequences for knowledge brokers themselves, as pioneering members of a new occupational group facing unique stresses and an uncertain career pathway (Chew et al, 2013; Knight and Lightowler, 2010; Kislov et al, 2017). Less attention has been devoted to the consequences for knowledge-brokering *work* of contextual conditions that often remain oriented towards the maintenance of existing institutional boundaries. This is especially the case for the kinds of dedicated, professionalised knowledge-brokering roles increasingly vaunted in the literature. Studies by Kislov et al (2016) and Currie et al (2015) describe the constraints that face knowledge brokers with existing affiliations on one side of the boundary (that is, ‘professionals who broker knowledge’), highlighting the challenges they face in gaining legitimacy with others, and their tendency to focus on some (more conservative) aspects of the role over (more ambitious) others. For those affiliated with neither camp (that is, ‘professional knowledge brokers’), regardless of the advantages that this liminal position might bring, the challenges might be even greater.

Conceptual framework

Our analysis is informed by the work of Pierre Bourdieu, who conceptualises how individuals, their dispositions and their (intellectual, interpersonal and economic) resources influence their practice and status in fields of social activity, and how this structures how they act and what they can achieve. This perspective privileges the relationship between individuals and the social structures in which they act over inherent individual traits, seeing practices as the outcomes of relationships between *field*, *habitus* and *capital* (Bourdieu, 1977).

In Bourdieu’s framework, a *field* is any institutional setting in which social activity takes place. Each field has its own norms of behaviour, and its own hierarchy, logics of practice, and boundaries. By participating in a field, individuals submit to the ‘rules

of the game' that govern it (Bourdieu and Wacquant, 1992: 99). Their participation in the game makes it real, reproduces its rules and hierarchies, and occasionally transforms them.

Individual actors' understanding of and disposition towards the social world is deeply influenced by their experiences of those fields. Bourdieu's notion of *habitus* seeks to encapsulate individuals' embodied sense of the social world and how it works, and the set of dispositions that informs their actions. Habitus is 'the social made body' (Bourdieu and Wacquant, 1992: 127): an individual's implicit understandings of the world and how it works, as moulded by their experiences of that world – particularly though not exclusively through conditioning during their formative years (Bourdieu, 1990a). Habitus equips actors with an intuitive sense of how to behave, how to respond to social cues, and what to expect of others. If each field is a game played by those who engage in it, habitus is the players' 'feel for the game' (Bourdieu and Wacquant, 1992: 128), their sense for its norms and rules, and for the strategies likely to achieve advancement. For those immersed in a field, this embodied appreciation of its rules and strategies becomes second nature: 'when habitus encounters a social world of which it is the product, it is like a "fish in water": it does not feel the weight of the water, and it takes the world about itself for granted' (Bourdieu and Wacquant, 1992: 127). Those whose habitus was formed elsewhere lack this advantage.

While habitus endows individuals with the implicit resources that inform the way they act and interact in a field, their position relative to others in that field is determined by their stock of *capitals* (Bourdieu, 1984). Bourdieu (1990b) identifies three principal forms of capital: *economic* (material assets that can be directly converted into money); *cultural* (knowledge, expertise, craft skills, and associated qualifications and credentials); and *social* (networks of contacts, associates and friends, and the insights and relationships of trust derived from these networks) (see also Lockett et al, 2014; Kislov et al, 2017 for lengthier expositions). Cutting across all three is *symbolic* capital: the legitimacy that derives from the meaning ascribed to economic, cultural and social capital in a given field. Symbolic capital is thus the means by which endowments of economic, cultural and social capital are given value or currency (Bourdieu and Wacquant, 1992; Wacquant, 1993). Succeeding in a field depends on an individual's ability to mobilise 'differing proportions of the various kinds of capital' valued in that field (Reay, 1998: 26). This in turn is influenced by the individual's habitus: their implicit understanding of how the field works and how to behave in it; their sense of the 'game' they are engaged in and how to play it. The field tends to reproduce itself, since those with greater capital endowments are able to determine symbolic capital: the relative value of different subcategories of capital.

Actors may participate in multiple, quasi-autonomous but related fields with differing reward systems. Actors compete within a field by mobilising capitals, but capital valued in one field may not be equally valued in another. Thus if an individual – for example a knowledge broker – is to gain legitimacy and act successfully in the periphery of two institutional fields, then successful action will require possession of capital relevant to *both* fields, and may be aided or impeded by their habitus. At the intersection of some fields, peripheral individuals have been able to mobilise these resources with great success. Medvetz (2012: 128), for example, documents how actors in think tanks in the US, positioning themselves at the boundary between research and policy, are able to exert control over the value of different forms of social and cultural capital, and thus determine the 'conversion rates' between fields. Williams

(2020: 1073) describes how applied policy researchers ‘position themselves, and their intellectual products, in a space without established routines’ to gain control over the space between fields.

These examples perhaps offer a template for how *professional knowledge brokers* might seek not only to transform the boundaries between existing fields, but also to gain status for themselves at these intersections. Applying a similar framework to a coordinated effort to mediate the boundary between healthcare research and practice, we focus on the degree to which habitus and capital endowment enabled professional knowledge brokers to achieve the lofty ambitions that have been set for such roles. These include the use of diverse sources of knowledge towards better decision making (Bornbaum et al, 2015; Elueze, 2015) and the reconfiguration or even elimination of boundaries (Glegg and Hoens, 2016), creating what might in Bourdieusian terms be understood as an emergent joint field with new rules, capitals and relationships between actors.

Setting and methods

Our study was set in a newly-formed, multi-organisational Collaboration that sought to link the worlds of clinical research and routine healthcare practice. It was one of several such collaborations established (with funding from the National Institute for Health Research (NIHR), local healthcare organisations and a local university) in the wake of reports highlighting the slow pace of translation of biomedical innovations into practice in the English National Health Service (NHS) (Department of Health, 2006; Tooke, 2007). Overall, the Collaboration received £20 million over five years, with the objective of forging ‘partnerships between academia and surrounding NHS organisations, which focus on improving patient outcomes through the conduct and application of applied health research’ (NIHR, 2012). Like other similar collaborations across England, the Collaboration instituted knowledge-brokering roles to enhance dialogue and foster understanding between academic and healthcare partners, and facilitate new ways of working. It sought to bring together the fields of healthcare research and healthcare practice, and the markedly different values they accorded to different forms of cultural and social capital. Cultural capital in the field of research, for example, might take the form of skills in research methodology, outputs such as research papers, and research qualifications and formal recognition in academic hierarchies. In the field of practice, it might take the form of more applied skills in investigation, treatment and care-giving; in practice-oriented training and certification; in positions in professional and managerial hierarchies; and in recognition by professional associations. Social capital in the field of research might be formed of connections with peer academics, societies and funding bodies, whereas in the field of practice it might arise from networks with members of one’s own and adjacent clinical profession, with budget managers and with others with influence in the world of healthcare (cf. Kislov et al, 2017: 1424).

Our study derives from an evaluation of the Collaboration undertaken over four years (see also Chew et al, 2013; Martin et al, 2013). We used ethnographic methods to examine the work of seven dedicated knowledge brokers, each working between the research institution (‘Shire University’, a pseudonym) and one of seven practice organisations (NHS healthcare providers). We used multiple data-collection techniques. SC spent around 250 hours observing and shadowing the knowledge brokers as

they worked, and observing key operational and strategic meetings where the Collaboration's partners came together. Knowledge brokers themselves kept reflective diaries, which they shared with us as data sources; additionally we conducted two focus groups with them. We conducted 31 semi-structured interviews with knowledge brokers and other key stakeholders in the Collaboration, which were audio-recorded and fully transcribed, and collected and analysed relevant documents and artefacts. As part of the ethnographic work, SC also conducted other opportunistic, follow-up interviews which were informal and conversational.

Supported by NVivo, we used an approach derived from the constant-comparative method for analysis (Charmaz, 2006). Interview transcripts and fieldnotes were coded by SC using high-level themes. Themes were identified inductively from a close reading of the data informed by Bourdieusian theory. Coding was accompanied by ongoing discussions among the authors. Modified and amalgamated codes were developed via an iterative cycle of coding, re-evaluating, and seeking alternative explanations. Finally, an initial, integrated draft of our findings, centred on our research question, was drafted by SC and was further developed and agreed by all authors.

Findings

We present our findings over three sections. First, we describe the knowledge-brokering role and its place in the Collaboration. We then show how imbalances in power between the two fields gave rise to progressive reorientation of the role, reconstructing the problem as residing in the practice field, rather than a joint issue of research translation, and delegitimising the contribution of knowledge brokers to the research field. Finally, we demonstrate how the habitus of knowledge brokers and the capital resources available to them left them powerless to resist this reorientation, but able instead to offer a contribution that appeared more transactional than transformational. Accordingly, a position of *liminality* that, in theory, proffered advantages upon the knowledge brokers, became in practice a disadvantaged position of *marginality*.

The Collaboration: the inception of a joint field?

The core goal set by its funders, and the mission the Collaboration set for itself, was a transformation of the fields of healthcare research and practice to bring the two together, and align them in mutually agreed and beneficial programmes of knowledge generation and translation. The Collaboration expressed its ambitions in terms of 'integrated knowledge translation', with researchers and healthcare professionals working together at every stage of the process:

Researchers and research users work together to shape the research process by collaborating to determine the research questions, deciding on the methodology, being involved in data collection and tools development, interpreting the findings, and helping disseminate the research results. This approach, also known by such terms as collaborative research, action-oriented research, and co-production of knowledge, should produce research findings that are more likely to be relevant to and used by the end users. (Excerpt from Collaboration public document)

The ambition, in Bourdieusian terms, was the creation of a joint field, in which agreed objectives might translate into the valuing of distinctive, shared forms of cultural and social capital. These included intellectual assets and forms of knowledge that would command interest among both researchers and practitioners, for example cultural capital in the form of evidence-informed outputs that might be valued by both the field of knowledge production (through publication in academic journals) and the field of practice (because of their direct clinical relevance and applicability). Similarly, in terms of social capital, the new field would foster cross-cutting social connections that would be valued by all, rather than separate networks delimited by the boundaries of the two fields. The joint field would enable new forms of social activity, oriented towards the production and acquisition of these shared forms of capital. Central to this transformative ambition were the Collaboration's knowledge brokers. They were positioned as 'the crucial link between NHS trusts and academia to ensure [the Collaboration] is working collaboratively to deliver its aims' (Collaboration website). Each of the Collaboration's eight constitutive NHS organisations was expected to fund one knowledge broker, and all but one successfully appointed a knowledge broker for at least some of the Collaboration's five-year existence. The roles were based within their employing NHS organisations, but jointly managed by the Collaboration's core staff.

As the excerpts above suggest, much was invested in the potential of the roles to bridge the boundaries between research and practice locally. The roles' remit aligned with those put forward for knowledge brokers in the wider literature (Bornbaum et al, 2015; Ward et al, 2009a), focusing in particular on linkage and exchange and building capacity for integrated knowledge translation on both sides of the research-practice divide. Accordingly, the knowledge brokers expressed excitement at their potentially pivotal roles in reconfiguring institutional boundaries: "We actually have a chance to inform this, something new that could potentially change the way NHS and academics work together" (Joss, knowledge broker).

The sheer scope and scale of the roles, however, was daunting. The job descriptions were all-encompassing: "huge, ten-page documents that list pretty much everything they can, but actually say nothing" (George, knowledge broker). This left knowledge brokers themselves with little sense of their priorities, what they were expected to achieve, and how: "It was an extensive job description and I tried to look at that before I started, to try and think what it actually might involve day-to-day. And I couldn't really grasp, because of the breadth of the job spec, exactly what it would involve" (Mo, knowledge broker).

The breadth of tasks left to the Collaboration's knowledge brokers reflected, moreover, a lack of detailed thinking about how exactly they would contribute towards its intended transformative outcomes. Senior leads within the Collaboration acknowledged that, despite allusions to frameworks such as integrated knowledge translation, its approach was not founded in a specific model of what was needed to connect, align and remould the two fields: "We're not theoretically based at all, very much sort of practical, pragmatic sort of team and just bringing things together" (Alex, senior lead).

Thus while the ambition for a joint field may have been clear, the means of achieving it were ill-defined. And as we discuss next, this challenge was compounded by the way the Collaboration in practice tended to value the capitals of one field over the other.

Field-level capital configurations

The rhetoric that accompanied the Collaboration's formation was avowedly transformative, identifying deficits in the fields of research and practice alike that had given rise to their disjuncture – for example, the lack of end-user engagement in defining the priorities and leading the conduct of research. The management and day-to-day work of the Collaboration, however, were dominated by individuals from the field of research. Its director and the leads of its workstreams were all research-active clinical academics, predominantly employed by Shire University. Their habitus was formed in the field of research, and the forms of capital they valued were the ones valued in that field. Correspondingly, the bulk of the Collaboration's economic capital was invested in programmes of healthcare research, with the expectation that it would accrue cultural capital (including knowledge, journal papers and recognition) that was primarily valued in the research field. By contrast, there was a relatively limited focus on knowledge exchange and translation of evidence into healthcare practice, and the forms of cultural capital (knowledge, recognition) and social capital (networks, trust and relationships across fields) this would produce. The sense among many stakeholders was that the Collaboration largely represented 'business as usual' for the research field, with little attention paid to the field of practice, or to transformative efforts to bring the two together.

'Why is the bulk of the money being spent on doing applied research? Well I do understand it because it's in the interests of those people who are in control [of the Collaboration] to do that. That's what they wanted to do, therefore that's what it does.' (Max, middle manager)

Moreover, the metrics used to monitor the Collaboration and similar partnerships elsewhere by their principal funder, the NIHR, first and foremost a research-funding body, prioritised indicators of research quality and output: publications; PhDs completed; further research funding obtained – the cultural capital of the field of research. Accordingly, a focus on the tasks prioritised by the research field drove much of the Collaboration's activity, at the expense of its more transformative and field-crossing intentions: "Aside from the other ambitions around cultural change, and capacity development, there were projects that had to be delivered on and people are getting their heads down and trying to get those done" (Ash, middle manager). A mid-term independent review, commissioned by the Collaboration's leadership, confirmed that more had been achieved in knowledge production than in translation, implementation or capacity building.

The response was to devote more attention, and some more resources, towards knowledge translation. The form this took, however, again reflected the dominance within the Collaboration's decision-making structures of powerful actors in the research field. It belied the rhetoric in the Collaboration's documents that suggested that thoroughgoing change to the entire process of knowledge production and translation was needed. Rather, it followed the habitus of those in decision-making roles, formed in the field of research, and their somewhat jaundiced perception of the field of practice.

'That's the way the NHS has always been. It has always been fairly shambolic... dysfunctional organisations, or big organisations that have just

got so many other priorities, that it's just very difficult to change the culture in them, as an outsider prodding this gigantic elephant with a stick is actually rather ineffective.' (Ash, middle manager)

Rather than seeking to transform and bring together both fields, this approach suggested that the problem of knowledge translation resided in the field of practice. Accordingly, while the applied health research funded by the Collaboration continued as usual, its efforts at change targeted organisations in the field of practice only, with a focus on building capacity to absorb and make use of research knowledge.

Transforming the fields or consolidating their boundaries?

This focus thus reflected one of the key roles set out for knowledge brokers in the literature: capacity building (Ward et al, 2009b), but with an exclusive focus on one side of the boundary. On the face of it, this construction of the problem could proffer a crucial role for the knowledge brokers. As the Collaboration's key agents with a foot in both camps, they were perhaps the only group with 'insider' status on both sides.

Chris: 'Because you are based in the [NHS] you can see what's missing more than [the Collaboration] can, based within the university.'

Joss: 'That's a major difference between our position and other people in [the Collaboration], because we are there, listening to frontline people... The [Collaboration's] core staff are so far away from what's actually going on in the NHS, they're guessing.' (Knowledge brokers focus group)

Yet this construction also served to constrain the legitimate role of the knowledge brokers. Locating the problems outside the field of research also served to immunise that field from any exogenous transformative impetus. The Collaboration's leads, all originating from the field of research, increasingly framed its transformative objectives as pertaining primarily or solely to the field of practice, with the knowledge brokers' focus following.

'A [knowledge broker] doesn't know anything particularly about research, is not involved in research and is almost like a PR person who is not going to be listened to. It's not because of them as individuals, it's because their role just doesn't allow them to do that. I think they're a mistake and they certainly haven't added anything to the researchers.' (Cam, research lead)

For those in the research field, the knowledge-broker role, and the forms of capital it supplied, could be readily discounted. It was seen as legitimate not to engage in dialogue with knowledge brokers because their work was akin to 'PR' (public relations): making ephemeral contributions, in contrast to the 'real' work of scientific discovery. Some capitals were more valuable than others, and for those most prominent in the Collaboration, their roots largely in the field of research, the social and cultural capital of knowledge brokering (forming field-spanning relationships and developing knowledge products that would be valued in both fields) were inferior to the forms of cultural capital valued in their 'home' field.

'I think they probably should get stuck in a bit to research, actual applied research that's going on in their respective organizations. I think it would give them a bit of something to do.... I mean who do they talk to? I don't really know. And they're running around trying to drum up additional capacity, and it's a bit vague.' (Dale, middle manager)

Accordingly, the knowledge brokers' work was constructed as something with little relevance to the research field. At best it could be discounted and ignored; at worst it could be dispensed with altogether, to free resource for further investment in knowledge production.

The reconstruction of the Collaboration's task as one of building capacity in the practice field, and the repositioning of knowledge brokers as relevant only on that side of the boundary, facilitated the reinforcement of the hierarchical structure of the *research* field on the nascent *joint* field that the Collaboration sought to instigate. The valuation of capitals in the joint field thus followed the rules of the research field. Symbolic capital, and the power to determine the rules of the game, and the relative value of capitals, rested with powerful actors in the field of research, and both the value of the knowledge brokers' work and the scope of their contribution were determined accordingly: "People from within academia would be like, 'You don't know what you're talking about; you're not a PhD'" (Fran, knowledge broker).

Individual-level capital configurations

Without the trappings of academic qualifications and skills, or the clout that came with control over the Collaboration's financial resources, knowledge brokers lacked the cultural and economic capital to resist or contest the progressive restriction of their roles in the research field. Their endowments of the capital valued in the field of practice, however, were also limited. The posts were graded at NHS Band 6, equivalent to an entry-level non-medical professional, for example a newly-qualified midwife or pharmacist. Most of the successful applicants were recent graduates at early career stages, with limited experience of healthcare (or academic) settings. They were typically recruited from outside the organisations; thus their habitus had been formed elsewhere, and they lacked the social capital that might arise from prior exchanges and trusting relationships with colleagues in either field.

In the practice field too, therefore, the knowledge brokers were rather undercapitalised and, at least at first, did not have the advantage of a 'feel for the game' that might help them to accrue capital. Even as the knowledge brokers' function shifted from the transformative inception of a new joint field towards developing the capacity of an existing one, the challenge seemed daunting given their disposition, stocks of capital and position in the field's structure: "They're not very senior and yet the expectation seems to be that they're trying to change the research culture; they're supposed to talk to all the chief execs and all the rest" (Dee, middle manager).

The knowledge brokers often found (via circulated minutes or their managers) that they were excluded from meetings that pertained to their work, perpetuating their marginality: "sometimes there is stuff mentioned that was going to affect our workload or they even mentioned our names, but we weren't aware of it" (Fran, knowledge broker). This lack of social capital was compounded by the absence of any endowment of economic capital: "[They should have] just a little budget, because then it would

also give them influence. You know, it disempowers them and undermines their role in the organisation by revealing them to be powerless” (Cal, middle manager). Thus the knowledge brokers were bereft of the kinds of capital valued, even in the practice field that might be translated into the symbolic capital necessary to achieve change.

The low value ascribed to their roles manifested in various ways. Knowledge broker Chris’s office was located in a soon-to-be-closed former asylum, already vacated by most personnel. Chris explained that it was unclear to the organisation’s human resources department where the role fitted, and relocation depended on resolving this issue. Many knowledge brokers were hosted by their healthcare organisations’ research governance offices, located with staff whose principal role was securing permissions and providing oversight for the *conduct* of clinical research, not *translating* the fruits of knowledge production into healthcare practice. Opportunities for informal ‘watercooler’ encounters that might develop their social capital, and offer the kind of immersion in the field that might remould their habitus, were few.

Consequently, knowledge brokers found themselves marginal to both fields. Some had a sense of being cast adrift in a rudderless boat:

‘I need to know that I’m doing what I’m supposed to be doing for [the Collaboration]. But I think probably they don’t know either. It changes every day what they want the [knowledge broker] to do, and sometimes it feels like it’s just whatever doesn’t fit into [research], the [knowledge brokers] can do that.’ (Joss, knowledge broker)

Through time, nevertheless, some of the brokers did begin to build some forms of capital of the kind valued within the field of practice. As they became familiar with their organisations, knowledge brokers started to form the understandings and dispositions that equipped them to interact in the field. They also found that they could take advantage of the cache of social capital they gradually accumulated in the course of their employment in the field of practice, and cultural capital they accumulated through their interactions with the field of research, such as research skills acquired through attendance at training sessions and seminars. This emergent habitus and unusual combination of networks and skills were appealing to some of their colleagues, enabling them to foster small-scale collaborations between research and practice: “Met with a doctor to help with some analysis using SPSS.... I was able to perform some survival analysis which he appreciated” (Frankie, knowledge broker, reflective diary).

However, the capital that knowledge brokers accumulated in the process was valued only in the field of practice. With the hierarchies of the two fields unchallenged, and without economic capital, the knowledge brokers’ efforts relied on the limited deposits of social and cultural capital they could accumulate for themselves. Their focus became transactional rather than transformational: small victories where they could develop their colleagues’ access to or capacity for research were valued, but the work did little to develop the capacity of the field of practice as a whole, let alone reconfigure the relationship between the two fields.

Discussion

Our analysis of the realisation of knowledge-brokering roles, in a recent effort to reconfigure the relationship between two fields, shifts attention away from a principal emphasis on cataloguing the traits, skills and competencies of knowledge brokers themselves, and towards the consequences of the contexts in which they operated; including both the vaunted joint field, and the influence of history on the key actors' habitus, capitals and power. In particular, our use of Bourdieu's theoretical framework sensitises us to the way the structure of the two fields limited knowledge brokers' capacity to invoke the kinds of changes that optimistic advocates of knowledge-brokering roles anticipate. Our Bourdieusian lens helps us to elucidate how the differential valuation and distribution of capital in related but autonomous fields, along with the habitus and prior investments of the actors within those fields, can pose problems for those who seek to operate across or between them.

In our case study, the transformational impact anticipated for the knowledge brokers proved beyond their reach. In part, this reflected their inexperience and their habitus. But our analysis extends attention beyond their personal merits and limitations towards structural characteristics of the fields that would likely have constrained all but the most powerful of actors. Despite the Collaboration's ambitions, and its introduction into a context that sought to foster a closer relationship between fields, the two fields remained largely separate, each still subject to its own logic and power structures. Valued though their cultural and social capital might have been in a new field, the knowledge brokers were undercapitalised to achieve much influence in either of the preexisting fields.

These findings contrast with more optimistic assessments of the ability of some kinds of knowledge broker, working across some fields, to reconstitute the boundaries between those fields, facilitating or even controlling the translation of knowledge and other forms of capital between them, and sometimes precipitating the development of new fields with their own norms and rules. Discussing think tanks and policy researchers in the US and UK respectively, for example, Medvetz (2010; 2012) and Williams (2019; 2020) describe the skilful positioning work of key actors, who by 'mobilising and reinvesting [their] capital' (Medvetz, 2012: 128) can influence the relative value of capitals and the terms of their exchange between fields. In those cases, a liminal location could be worked to an individual's advantage. The key difference here appears to be the resources and positioning of both the knowledge brokers themselves and other actors within the existing fields. Whereas Medvetz's and Williams' actors already had habitus and stocks of capitals that equipped them to act entrepreneurially between the fields of research and policy, the knowledge brokers here lacked such resources, and found themselves in a field that remained largely dominated by powerful actors in the field of research. Insofar as a joint field was established, it was the values of the research field that dominated, and here the knowledge brokers were particularly lacking, without the material resources (economic capital), skills and credentials (cultural capital), or networks and relationships (social capital) that might provide them with power and influence. Thus the Collaboration represented, as Eyal (2013: 179) puts it, not an incipient new field, but 'a site of opportunity, one in which resources could be accumulated and then possibly converted into an improved position' in dominant actors' home fields; for example, through the concentration of economic capital on activities likely to result in cultural capital valued in the research field.

Our findings suggest, then, rather a pessimistic outlook for knowledge brokers (at least those without significant prior stocks of relevant capital of the kinds available to Medvetz's think tank analysts) in efforts to break down barriers between fields and engender new structures, relationships and ways of working: a new field, and a new game with new rules, in Bourdieu's terms. If, as Bourdieu and Wacquant (1992) contend, field, habitus and capital are co-constitutive, then it is likely that any individual expected to invoke change in a novel or emergent field straddling two established ones will need to have capital endowments that are valued in both, at least until the rules of the game of the new field are established. Placing such a burden on knowledge brokers who lack resources convertible into symbolic power, and thus influence on the structure of the field, is likely to result in failure. From this it follows that whatever the posited advantages of liminality for a knowledge broker *between* two fields might be (Meyer, 2010a; 2010b; Haas, 2015; Swan et al, 2016), in practice these are likely to be outweighed by the disadvantages of lacking capital resources that enable them to operate effectively in *either* field. At least until the emergent field has matured to a point where the structure of its own capital distributions starts to become apparent, the risk for the knowledge broker who is truly between fields is that liminality equates to marginality to both. If dominant actors see this space less as an emergent field and more as a site of opportunity for accumulating capital that is 'reconverted into currency' valued in their own fields (Eyal, 2013: 178), then the marginality may be indefinite.

At the individual level, this has particular consequences for the potential of professional knowledge brokers, as distinct from professionals who broker knowledge. Again, the literature suggests that, given the time commitment and esoteric skill set required of such individuals, there is a need to understand knowledge brokering as a professional role in its own right, rather than a task accomplished by individuals in existing professional roles (Phipps and Morton, 2013; Glegg and Hoens, 2016; Wye et al, 2017). This may also help knowledge brokers in maintaining impartiality between the two sides (Elueze, 2015), and reduce the likelihood that they retrench into the comfort zone of their prior professional role (Kislov et al, 2017). But our analysis suggests the inception of professional knowledge brokers does not necessarily overcome the challenges faced by professionals who broker knowledge. Professional knowledge brokers are nomads in the liminal space between fields, native to neither one nor the other; when this space is annexed, they risk becoming refugees without a natural homeland. Yet as we saw in this case, finding a home in one field – and in the process, accumulating capitals valued there, and developing habitus to act more fluently – is likely to be more feasible than pursuing accumulation of capital valued in both, and acquaintance with the rules of two games. Once a home is found in one field, the challenge for professional knowledge brokers in managing knowledge, facilitating linkage and exchange, and developing capacity, might be even greater than that of professionals who broker knowledge, since they do not have prior capital resources to fall back on. The temptation to move towards the more transactional aspects of knowledge brokering, rather than focus on its transformational objectives (Kislov et al, 2016), becomes even greater.

Our study has several implications. In particular, it suggests that anyone seeking to deploy knowledge-brokering roles should consider carefully the configuration of the fields they wish to mediate. Notwithstanding the disadvantages of relying on professionals who broker knowledge to lead such activities, their positional advantages

should be considered too. The array of tasks asked of knowledge brokers should also be subject to careful consideration. In our study, the knowledge brokers were left bewildered by the range of activities on which they were expected to focus: in the literature, some 39 distinct tasks have been ascribed to the role (Bornbaum et al, 2015). In this breadth is the immanent potential for those in the roles to gravitate towards the more conservative or transactional tasks, whether because they reflect the home turf of professionals who broker knowledge, or because of the constraints that face professional knowledge brokers when they try to undertake more transformational work. We suggest that a tightly-focused set of activities, premised on a clear theory of change that accounts for the structure and rules of the game in the fields concerned, will be essential if knowledge brokerage's transformational potential is to have a chance of success.

Conclusion

Dedicated, professional knowledge brokers have been promoted as a promising means of enabling exchange across fields and breaking down institutional boundaries to foster collaboration. However, our Bourdieusian analysis of professional knowledge-broker roles suggests that without capital endowments that are valued in both fields, their efforts to engender change in either can be futile. For professional knowledge brokers to be able to succeed, the capital-exchange systems of the fields they will act in should be taken into account, and individuals with capitals that give them legitimacy and the power to act in those fields should be sought.

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Contributions

The authors designed the study together. Data collection and analysis was led by SC, with support from the other two authors. SC and GPM led drafting of the paper, with critical input from NA. All authors approved the final version of the manuscript.

Research ethics

This study received ethical approval from the Leicestershire, Northamptonshire and Rutland 2 NHS Research Ethics Committee, 17 September 2010.

Conflict of interest

The authors declare that there is no conflict of interest.

References

- Amara, N., Olmos-Peñuela, J. and Fernández-de-Lucio, I. (2019) Overcoming the 'lost before translation' problem: an exploratory study, *Research Policy*, 48(1): 22–36. doi: [10.1016/j.respol.2018.07.016](https://doi.org/10.1016/j.respol.2018.07.016)
- Bornbaum, C.C., Kornas, K., Peirson, L. and Rosella, L.C. (2015) Exploring the function and effectiveness of knowledge brokers as facilitators of knowledge translation in health-related settings: a systematic review and thematic analysis, *Implementation Science*, 10: 162. doi: [10.1186/s13012-015-0351-9](https://doi.org/10.1186/s13012-015-0351-9)
- Bourdieu, P. (1977) *Outline of a Theory of Practice*, Cambridge: Cambridge University Press.
- Bourdieu, P. (1984) *Distinction*, Cambridge, MA: Harvard University Press.
- Bourdieu, P. (1990a) *The Logic of Practice*, Cambridge: Polity Press.
- Bourdieu, P. (1990b) Programme for a sociology of sport, in M. Adamson (trans) *In Other Words*, Stanford, CA: Stanford University Press.
- Bourdieu, P. and Wacquant, L.J.D. (1992) *An Invitation to Reflexive Sociology*, Cambridge: Polity Press.
- Brown, J.S. and Duguid, P. (2000) *The Social Life of Information*, Boston, MA: Harvard Business Press.
- Burgess, N. and Currie, G. (2013) The knowledge-brokering role of the hybrid middle level manager: the case of healthcare, *British Journal of Management*, 24(S1): S132–142. doi: [10.1111/1467-8551.12028](https://doi.org/10.1111/1467-8551.12028)
- Charmaz, K. (2006) *Constructing Grounded Theory*, London: Sage.
- Cheatham, M., Wiseman, A., Khazaeli, B., Gibson, E., Gray, P., Van der Graaf, P. and Rushmer, R. (2018) Embedded research: a promising way to create evidence-informed impact in public health?, *Journal of Public Health*, 40(S1): i64–i70. doi: [10.1093/pubmed/idx125](https://doi.org/10.1093/pubmed/idx125)
- Chew, S., Armstrong, N. and Martin, G. (2013) Institutionalising knowledge brokering as a sustainable knowledge translation solution in healthcare: how can it work in practice?, *Evidence & Policy*, 9(3): 335–51.
- Contandriopoulos, D., Lemire, M., Denis, J.L. and Tremblay, É. (2010) Knowledge exchange processes in organisations and policy arenas: a narrative systematic review of the literature, *Milbank Quarterly*, 88(4): 444–83. doi: [10.1111/j.1468-0009.2010.00608.x](https://doi.org/10.1111/j.1468-0009.2010.00608.x)
- Curran, G.M., Mukherjee, S., Allee, E. and Owen, R.R. (2008) A process for developing an implementation intervention: QUERI Series, *Implementation Science*, 3: 17. doi: [10.1186/1748-5908-3-17](https://doi.org/10.1186/1748-5908-3-17)
- Currie, G., Burgess, N. and Hayton, J.C. (2015) HR practices and knowledge brokering by hybrid middle managers in hospital settings: the influence of professional hierarchy, *Human Resource Management*, 54(5): 793–812. doi: [10.1002/hrm.21709](https://doi.org/10.1002/hrm.21709)
- Department of Health (2006) *Best Research for Best Health*, London: Department of Health.
- Elueze, I.N. (2015) Evaluating the effectiveness of knowledge brokering in health research: a systematised review with some bibliometric information, *Health Information & Libraries Journal*, 32(3): 168–81. doi: [10.1111/hir.12097](https://doi.org/10.1111/hir.12097)

- Eyal, G. (2013) Spaces between fields, in P.S. Gorski (ed) *Bourdieu and Historical Analysis*, Durham, NC: Duke University Press, pp 158–82.
- Glegg, S.M. and Hoens, A. (2016) Role domains of knowledge brokering: a model for the healthcare setting, *Journal of Neurologic Physical Therapy*, 40(2): 115–23. doi: [10.1097/NPT.0000000000000122](https://doi.org/10.1097/NPT.0000000000000122)
- Haas, A. (2015) Crowding at the frontier: boundary spanners, gatekeepers and knowledge brokers, *Journal of Knowledge Management*, 19(5): 1029–47. doi: [10.1108/JKM-01-2015-0036](https://doi.org/10.1108/JKM-01-2015-0036)
- Kislov, R., Hodgson, D. and Boaden, R. (2016) Professionals as knowledge brokers: the limits of authority in healthcare collaboration, *Public Administration*, 94: 472–89. doi: [10.1111/padm.12227](https://doi.org/10.1111/padm.12227)
- Kislov, R., Hyde, P. and McDonald, R. (2017) New game, old rules? Mechanisms and consequences of legitimation in boundary-spanning activities, *Organization Studies*, 38(10): 1421–44. doi: [10.1177/0170840616679455](https://doi.org/10.1177/0170840616679455)
- Knight, C. and Lightowler, C. (2010) Reflections of ‘knowledge exchange professionals’ in the social sciences: emerging opportunities and challenges for university-based knowledge brokers, *Evidence & Policy*, 6(4): 543–56.
- Knight, C. and Lyall, C. (2013) Knowledge brokers: the role of intermediaries in producing research impact, *Evidence & Policy*, 9(3): 309–16.
- Landry, J. (2020) Grounding the political spectrum: how three Canadian think tanks integrate social space, *Critical Policy Studies*, 14(4): 365–87. doi: [10.1080/19460171.2019.1599975](https://doi.org/10.1080/19460171.2019.1599975)
- Lockett, A., Currie, G., Finn, R., Martin, G. and Waring, J. (2014) The influence of social position on sensemaking about organisational change, *Academy of Management Journal*, 57(4): 1102–129. doi: [10.5465/amj.2011.0055](https://doi.org/10.5465/amj.2011.0055)
- Maag, S., Alexander, T.J., Kase, R. and Hoffmann, S. (2018) Indicators for measuring the contributions of individual knowledge brokers, *Environmental Science & Policy*, 89: 1–9.
- Martin, G.P., McNicol, S. and Chew, S. (2013) Towards a new paradigm in health research and practice? Collaborations for leadership in applied health research and Care, *Journal of Health Organization and Management*, 27(2): 193–208. doi: [10.1108/14777261311321770](https://doi.org/10.1108/14777261311321770)
- Medvetz, T. (2010) ‘Public policy is like having a vaudeville act’: languages of duty and difference among think tank-affiliated policy experts, *Qualitative Sociology*, 33(4): 549–62. doi: [10.1007/s11133-010-9166-9](https://doi.org/10.1007/s11133-010-9166-9)
- Medvetz, T. (2012) Murky power: ‘think tanks’ as boundary organisations, in: D. Courpasson, D. Golsorkhi and J. Sallaz (eds) *Rethinking Power in Organizations, Institutions, and Markets*, Bingley: Emerald, pp 113–33.
- Meyer, M. (2010a) The rise of the knowledge broker, *Science Communication*, 32(1): 118–27. doi: [10.1177/1075547009359797](https://doi.org/10.1177/1075547009359797)
- Meyer, M. (2010b) Les courtiers du savoir, nouveaux intermédiaires de la science, *Hermès*, 57(2): 165–71.
- NIHR (National Institute for Health Research) (2012) *Collaborations for Leadership in Applied Health Research and Care*, London: NIHR.
- Phipps, D. and Morton, S. (2013) Qualities of knowledge brokers: reflections from practice, *Evidence & Policy*, 9(2): 255–65.
- Reay, D. (1998) *Class Work*, London: UCL Press.

- Swan, J., Scarbrough, H. and Ziebro, M. (2016) Liminal roles as a source of creative agency in management: the case of knowledge-sharing communities, *Human Relations*, 69(3): 781–811. doi: [10.1177/0018726715599585](https://doi.org/10.1177/0018726715599585)
- Swan, J., Bresnen, M., Robertson, M., Newell, S. and Dopson, S. (2010) When policy meets practice: colliding logics and the challenges of ‘Mode 2’ initiatives in the translation of academic knowledge, *Organization Studies*, 31(9–10): 1311–40. doi: [10.1177/0170840610374402](https://doi.org/10.1177/0170840610374402)
- Tooke, J. (2007) *Report of the High Level Group on Clinical Effectiveness*, London: Department of Health.
- Tsoukas, H. and Vladimirov, E. (2001) What is organisational knowledge?, *Journal of Management Studies*, 38: 973–93. doi: [10.1111/1467-6486.00268](https://doi.org/10.1111/1467-6486.00268)
- Wacquant, L.J.D. (1993) On the tracks of symbolic power: prefatory notes to Bourdieu’s ‘state nobility’, *Theory, Culture & Society*, 10(3): 1–17. doi: [10.1177/026327693010003001](https://doi.org/10.1177/026327693010003001)
- Ward, V., House, A. and Hamer, S. (2009a) Knowledge brokering: the missing link in the evidence to action chain?, *Evidence & Policy*, 5(3): 267–79.
- Ward, V., House, A. and Hamer, S. (2009b) Developing a framework for transferring knowledge into action: a thematic analysis of the literature, *Journal of Health Services Research & Policy*, 14(3): 156–64.
- Williams, K. (2019) Credibility in policy expertise: the function of boundaries between research and policy, *Policy Studies Journal*, 49(1): 37–66. doi: [10.1111/psj.12342](https://doi.org/10.1111/psj.12342)
- Williams, K. (2020) Strategic positioning: how policy research actors situate their intellectual labour to gain symbolic resources from multiple fields, *Sociological Review*, 68: 1070–91. doi: [10.1177/0038026119900116](https://doi.org/10.1177/0038026119900116)
- Wye, L., Carey, J., Anthwal, R., Rooney, J., Robinson, R., Beckett, K., Farr, K., le May, A. and Baxter, H. (2017) Knowledge brokers or relationship brokers? The role of an embedded knowledge mobilisation team, *Evidence & Policy*, 15(2): 277–92.
- Wye, L., Cramer, H., Beckett, K., Farr, M., le May, A., Carey, J., Robinson, R., Anthwal, R., Rooney, J. and Baxter, H. (2019) Collective knowledge brokering: the model and impact of an embedded team, *Evidence & Policy*, 16(3): 429–52, doi: <https://doi.org/10.1332/174426419X15468577044957>.