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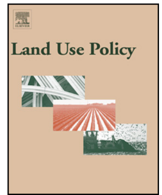

Performing inter-professional expertise in rural advisory networks

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ABSTRACT

In this paper we draw on in-depth research to explore inter-professional working in rural land and livestock management and introduce the novel concept of *inter-professional expertise*. An increasingly intricate regulatory framework, the diversification of the economic base of rural areas away from primary commodity production and a growing emphasis on environmental protection and ecosystem services mean that the management of land and livestock are becoming more complex in their objectives, more demanding of specialised technical knowledge and skills and more rule-bound in their procedures and processes. To assist them in meeting these challenges, farmers and other land managers turn to a growing array of rural professional advisers. Increasingly the achievement of private and public objectives for rural businesses depends upon the integration of a variety of specialised expert inputs. So, alongside pressures to differentiate the specialised knowledge they have to offer, rural professionals face demands to work together to help clients solve complex problems and deliver multiple objectives. It follows that rural land and livestock management present a rich context in which to explore the dynamic relationship between different types of professional experts. As a departure from the strong tradition of farmer-centred research examining extended knowledge networks in rural settings, we therefore explore the working relations between advisers themselves. Using concepts of relational agency and socio-material approaches we identify the skills and strategies involved in this inter-professional communication and working, with relevance to expert-expert interactions and the negotiation of contemporary professional expertise in fields far beyond the provision of rural services. We find that it is in the ways that experts perform, act and interact in the field that professional expertise and, by extension, inter-professional expertise – is realised and practised. Thus as working practices are increasingly shared, credentialism is pursued less by achieving the monopolies of old and more by striving for new monopolies of inter-professional practice.

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1. Transitions in the land system and the changing advisory context

In agriculture, reliance on a range of expert advisers is not new. Farmers are used to calling on the services of a soil scientist, a crop consultant or an animal nutritionist to advise on different aspects of farm production management; on a land agent or an accountant, to advise on farm business planning; on a vet or agronomist, to advise on animal or plant health. Since the early 20th Century a combination of private and state sponsored agricultural extension services has operated in the UK (Jones and Garforth, 1997). In the post-war period these services provided essential underpinning to the intensification of farming through the uptake of innovations and efficiencies. However, since the late 1980s, the privatization of state extension services and a policy-cum-market driven broadening of the post or neo-productivist roles of farming and land management have introduced additional players and imperatives to the cast of advisers and service providers (Garforth, 2004). New enterprises have their own specialists advising on a switch to, for example, organic production, novel crops, tourism provision or wind farming. Investment in new buildings and machinery may involve discussions with agricultural engineers, building design consultants or planners. Concerns over the environmental impacts and benefits of farming may require advice from pesticide consultants, ecologists and hydrologists. Long-term planning of the farm business may involve discussions with bankers, solicitors, tax consultants or small business advisers.

As the range and variety of professional advisers and service providers grows, this has encouraged cooperation but also competition. More specifically, in recent decades a movement towards

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inter-professional working has been catalysed by two key transitions which have resulted in increased complexity and diversity in the management of rural land and its products and services (Hodge 2007). The first is the transition from agricultural systems based on production to ones oriented towards consumption (Marsden et al., 1993). This includes a shift in focus from the quantity, to the quality of production (Ilbery and Kneafsey, 1998; Harvey et al., 2004); from what is produced to how it is produced; and from uniform commodities to demands for distinctive traceable products (Banks and Bristow, 1999). This transition has been mediated by a range of governance mechanisms, including: the development of quality assurance schemes (Morris and Young, 2000); the rise of the healthy and ethical eating agendas (Gilg and Battershill, 1998); the demands of product differentiation and marketing (Renting et al., 2003); the refinement of production supports and controls; and the elaboration of regulatory regimes for managing food risks (Barling, 2004). The second key transition is the shift in objectives for agriculture away from production towards sustainable development. This includes moves away from monoculture to ideas around multifunctionality. The farmer is expected not only to be a producer but also an environmental manager. Farms are less likely to be single enterprises than diversified and multiple ones (Juntti and Potter, 2002; Lobley and Winter, 2009). Programmes of funding for rural and regional development; place marketing and promotional activity; and the new priorities for environmental management and regulation of rural land have all played their part (OECD, 2006; HM Government, 2011).

Both transitions have led to a land economy which is more complex, diverse and rule-bound. Farmers and land managers thus have to solve increasingly complex problems and deliver multiple objectives. The existing literature recognizes the consequent need for learning and innovation in agricultural systems (EU SCAR, 2012; Oreszczyn et al., 2010). However, while it acknowledges the role of extensive and heterogeneous networks of knowledge in contemporary agriculture (Tovey, 2008), that literature remains focussed on the challenges faced by farmers (Ingram and Morris, 2007) and neglects the growing contribution of, and interactions between, external professional experts in delivering a greater range of technical skills and knowledge. Farmers and other land managers look to such experts for different types and combinations of technical advice and specialised services to achieve the new functions and efficiencies envisaged for rural areas and to address the uniqueness of their individual farms and businesses. The specificity of products, services and environments that are expected of farmers and other land managers calls for specialist advice that is tailored to their particular physical and business circumstances (Faure et al., 2012). Different inputs of specialist expertise therefore need to be locally targeted and coordinated with other inputs and to be integrated with the farmer's own understanding, expectations and skills. Increasingly, this calls for inter-professional working in the provision of advice and services to farms and other rural businesses.

Inter-professionalism is both increasingly prevalent and necessary (Edwards, 2005; Adler et al., 2008). Better coordination and targeting of expertise for farmers has also become a key objective for public policy not only in the UK (Defra, 2013) but across the world (Faure et al., 2012). There is, however, little agreement about how this might be achieved. Fundamentally, it remains unclear of what and how inter-professional expertise is constituted. Changes in the governance of expertise are seen to play a crucial if contradictory role.

For example, commentators diagnose the ascendancy of neoliberalism, with its agenda of subjecting professional services to market disciplines, as instrumental in the rising demand for inter-professional working (Derkzen and Bock, 2007; Sutherland et al., 2013). On the one hand, the privatization and break up of centralised public agricultural extension services is seen to have led to a 'pluralistic' (Labarthe and Laurent, 2013), 'multi-institutional network' of advisory services (Faure et al., 2012) that is characterised as fragmented and poorly coordinated (Klerkx and Proctor, 2013). Where, under state sponsorship, there had been a clarity and differentiation of professional objectives through entrenched professions having internalised state objectives in areas such as productivity and animal health, there is now a multiplicity of competing professions under pressure to be more client-oriented and market responsive. There is evidence, though, that advisory service providers have shown versatility and adaptability to the new contexts, engaging for example in extensive informal networking across organizational and professional boundaries and cooperating together in discrete projects (Proctor et al., 2012). The aim of this paper is to reveal how the nature of expertise is fundamentally interactive and to explore the skills and strategies that constitute inter-professional expertise.

Inter-professional working is showing increasing prevalence in fields far beyond the provision of rural services. There is a growing body of research on inter-professional working in public-sector institutions and collaborative working within multi-disciplinary teams, mainly relating to the provision of health-care and education (Mäkitalo, 2012; Edwards and Daniels, 2012). The increasing need for collaboration between professional communities is leading organizations and firms to adopt a pattern of working that involves setting up transient inter-professional teams equipped with the necessary skills and capabilities to address particular problems (Midler, 1995). Through this engagement in common projects there occurs a shift in the deployment of expertise away from profession-specific objectives towards temporarily shared goals focused on the task in hand (Guile, 2011, 2012). This rubbing together of different specialists in project teams has made knowledge increasingly 'insecure' and expertise increasingly contested (Fenwick et al., 2012). Moreover, it has laid challenge to the traditional bounded domains of professional practice (Edwards 2005), raising questions about the nature and integrity of contemporary professional expertise and the means by which it is negotiated and mediated in these new spaces of interaction. This echoes wider debates on the definition of professionalism and how, as both a 'normative value system and ideology of control . . . [it] continue[s] to be contested and challenged in new and old occupational contexts' (Evetts, 2013: 791).

Little work has been conducted exploring how experts communicate across professional boundaries. From a rural perspective there is an imperative for research on inter-professional working given its contemporary significance in addressing challenges in rural land management. This is supported by an extensive international review of the literature on farm extension and advice (Faure et al., 2012), which revealed a trend towards a more complex advisory system but was unable to 'clearly identify literature on the interactions amongst different types of adviser working in the same area to better understand the synergies or competition between them' (2012: 473). What is particularly lacking in the work on inter-professional working is an exploration of how professional expertise is realised and emerges through interaction. Since it is practices that remain the locus for both the execution of knowledge and the reproduction of professional roles and identities (Styhre, 2011) these new spheres of inter-professional working place strain on existing processes of credentialism that proceed on the basis of attaining 'monopolies of practice' (Freidson, 1986).

The shift from a mono-professional to a multi-professional focus in the constitution of expertise reflects an enlargement of the audience for that performance from professional peers and the state to include also non-peer professionals as well as clients. This 'horizontal flow of professional competencies' demands the development of new entrepreneurial and strategic behaviours (Tordoir, 1995: 3). But how do professionals learn to deal with other experts? What

particular skills, acumen and abilities are required? How do they negotiate delicate issues of competition and cooperation over the exclusivity of their expertise? This paper addresses these questions by identifying the skills involved in this inter-professional communication and working (Section 3) and how they are deployed in inter-professional strategies (Section 4). We consider how experts act and interact in the field and the implications for how professional expertise is formed and practised. The paper builds on previous work which explored the networks of farm advisers (Klerkx and Proctor, 2013) and their underpinning decision-making processes (Proctor et al., 2012).

2. Professional expertise and interaction: conceptual and methodological approach

Our particular focus is on the interaction between expert advisers, to develop our understanding of how and where expert relationships are mediated and what expertise may be required to manage these relationships effectively. To do this, we draw on two schools of thought which present different ways of analysing expertise and interaction:

2.1. Relational agency

This concept has been developed principally by Anne Edwards (2010) in educational research and refers to the expertise individuals have *at* interacting which is presented as a distinct capacity in itself that is a pre-requisite for any inter-professional collaboration. It is the capacity "to recognise others as resources, to elicit their interpretations and negotiate aligned action" (Edwards, 2005 p.175). It is thus about the social skills of working with others, particularly to undertake negotiations, including the skills, the compassion and the empathy to be able to relate to others and see others' points of view. Linked to relational agency is the notion of *interactional expertise* (Collins and Evans, 2002; Collins et al., 2006) which refers to the expertise *to* interact, particularly the linguistic competence to engage with a particular domain of expertise even if not possessing the practical ability or skill to contribute substantively to that domain. This conceptualization follows from the idea of bounded domains of expertise where the ability 'to speak the language' of separate domains is essential to the task of combining their different substantive expertise.

2.2. Socio-material approach

This approach challenges the idea of expertise as something that is fixed and established (Fenwick et al., 2012). In contrast to Relational Agency and Interactional Expertise it does not uphold the idea of pre-existing domains of expertise with sharply delineated boundaries that require distinct bridging skills to transcend them. Instead, it maintains that expertise is inherently fluid and socially emergent through practice. Expertise is thus constructed *through* interaction and is influenced by the combined social and material forces that come to bear on a particular encounter. This approach, therefore, is particularly useful for examining the negotiation over professional expertise in practice. The Socio-material Approach assumes that boundaries to expertise are constantly being enacted in the performance of expertise. Expertise is therefore the outcome of the interaction between the performer(s) and the audience. At its simplest, the audience for a performance of professional expertise may comprise the client and/or fellow professionals. In inter-professional working, the audience includes additionally, non-peer professionals. We are particularly interested in the dialectic whereby non-peer judgements are formed and sanction and shape the performance of professional expertise.

Table 1
Interviews.

	Veterinarians	Land agents	Ecologists	Other
Interviews with professional representatives	6	6	7	4
Interviews with advisers	8	8	15	0
Work shadowing of advisers	2	1	2	0
Interviews with farmers	–	–	–	6

We have so far delineated the scope of and context for rural inter-professional working and explored the nature of expertise as interactive. Now we go on to consider how expertise is created, expressed and mediated in inter-professional working amongst rural professionals. Our research focused on three groups of rural professional advisers working in the north of England:

- Farm animal veterinarians who provide advice and services in the care and treatment of animals, the promotion of animal welfare and optimization of animal production. They are typically employed within private practices comprising several vets. These private veterinary practices may specialise exclusively in farm animals, but more often serve a mixture of farm and companion animals, but with individual vets usually specialising within the practice. Vets are also employed by official agencies and government to regulate animal health and welfare in farming and the food supply chain.
- Land agents (also known as rural surveyors or valuers) who perform multiple roles but are often principally known for advising farms and estates on the value of rural property and assets and the legal, tax, financial and management aspects of the use, development, sale or acquisition of rural property. Land agents occasionally operate as sole independent consultants but are more often members of multi-person private land agency practices where they may perform distinct roles (e.g. tenancy specialist, environmental stewardship specialist etc). Land agents are also sometimes employed directly to manage private farms and estates as well as by public and third sector organizations that hold rural land.
- Applied ecologists who conduct wildlife surveys and advise on the conservation of habitats and species. In the private sector, applied ecologists are typically independent consultants although occasionally they will be employed as part of multi-professional practices. They are also employed by public and third sector organizations that hold rural land to carry out conservation management, and by official agencies and government to regulate wildlife protection and control. In public employment they generally specialise by broad species or habitat types.

In this paper we draw upon research (Table 1) which included 60 in-depth interviews with advisers, farmers and representatives of professional associations and work shadowing of advisers conducted between 2010 and 2012. The interviewees were identified, with the help of a project advisory team made up of representatives from each of the case study professions, to provide a spread of advisers according to profession, levels of specialism, experience and sector (public, private, third sector). Interviews with farmers (mainly livestock and mixed farms) were selected through contacts made during 5 days of work shadowing with advisers. All 60 interviews were recorded and transcribed. Field notes were made during the shadowing and written up immediately after. All data was organised and coded with the help of NVivo software, and analysed manually through successive rounds of thematic analysis and coding by the research and advisory team (with data both analysed for each profession and thematically across the professions), following a grounded theory approach (Strauss and Corbin,

1990). In the remainder of this paper, we will examine the skills and strategies of inter-professional working in order to explore how the expert-expert interface is constructed and managed between advisers as part of advisory encounters.

3. Inter-professional skills

Rural professionals need to be not only experts in their own field, but also experts at navigating the challenges and maximising the opportunities that may arise from inter-professional working. To do so involves nurturing and managing relationships amongst other professions. From our interviews we found that key skills include: networking and reciprocity; 'the art of deference' towards other professionals; and connoisseurship in choosing experts to work with.

3.1. Networking and reciprocity

For inter-professional working to happen, rural professionals need to establish networks with other professionals outside their field to exchange knowledge and information with a view to potential cooperation and sharing of business opportunities:

> So good networking is crucial to broaden your experience. . .you recognise a face and you think, 'Well, okay,' and have such and such a word with such and such. 'I know him, I met him there'. Ring him up and be capable and confident to ask a question. (Land Agent 1)

Openness and a willingness to work with other specialists are necessary requirements, and have to be taken on trust. As one vet replied when asked how important was working with other professionals:

> I think it's vital really. Again all these things end up very personality driven and everyone likes working in different ways. . .. I quite enjoy it most of the time, provided that the other advisers have the same mindset, and want to, because they can also be defensive if you're within a team if you feel things aren't going well . . .. So it is really important and I do quite a lot. . .. But it doesn't always work (Vet 1)

Networking links are sustained through reciprocity. This may involve the sharing of knowledge of a technical nature (such as scientific expertise) or information that would be of business interest (for instance details of a new policy which might provide additional work opportunities):

> You have ones that you tend to use more or they'll help you out, so it's just networking again, and ones where you can just pick up the phone and run questions by them, so that again helps to expand your knowledge and transfer ideas back and forth, making sure that you're singing off the same hymn sheet (Land Agent 1)

References to having "the same mindset" and "singing off the same hymn sheet" suggest that swapping knowledge through networking involves more than the exchange of information and includes also the development of interactional expertise.

Reciprocity could also involve sharing business opportunities. For instance, one professional may direct a client to another professional if he or she is unable to help the client. In return, they would expect the recipient to repay the favour. This builds up a sense of mutual obligation:

> There's quite a synergy between land agents, lawyers and accountants as to asking a question. And I have relationships with various lawyers that I can ring up and say, 'Look, I've got this problem, what the hell do I do here?' And they'll say, 'Well, we've come across this before and you need to do this.' I'll say, 'Fine, if it comes to anything I'll give you a nudge and you can do the job.' And that's the way it works. (Land Agent 2)

Reciprocity may also involve making personal introductions or recommendations to clients of other professionals they might use, as well as sharing advice:

> I have quite a lot of dealings with land agents and solicitors, but mostly through land agents on legal matters to do with sites, sometimes asking their advice and hoping they won't charge me for it, and sometimes just working with agents of other partners, whether they be tenants or landlords. (Ecologist 1)

Trust is essential in successfully maintaining reciprocal relationships and requires the nurturing and maintenance of strong personal relationships:

> If you have established and managed a good relationship with your fellow professionals, whether it's a lawyer or an accountant or whoever, then they will respect that in a way that we would go to someone where we had a problem that we couldn't tackle ourselves. They would come to us. . .. If you've got that good relation with these other professionals, you're less likely to find them encroaching on your patch. (Land Agent 3)

Maintaining such relationships therefore depends on unwritten rules of engagement or a 'moral economy' of inter-professional working. It requires discretion and judgement on the part of the professionals involved. Respecting the territorial and expertise patch of another professional reduces the likelihood of problems over competition arising. Where professionals, or particular professions, do not possess this type of expertise they can attract criticism: not only for not sharing their own knowledge or contacts, but also for not engaging in reciprocal relationships which would be to their own benefit as well as to others.

3.2. The art of deference

Expertise is often negotiated at the interface of inter-professional working. Being aware of different expertises is important for the successful functioning of inter-professional working but acknowledging them is also an important strategy. This often takes place through the art of deference, whereby the superior expertise of another profession in a particular area is acknowledged and endorsed.

> We can't provide all the advice we need, so we'll point them [clients] to other specialist advisers. If there are specialist planning issues then we'll point them towards specialist planners and specialist agricultural legal advice and this sort of thing, because you've got to realise what your limitations are to your abilities. Whilst you're good at some things there are other things where it's better to hand over to a specialist in that area. (Land Agent 4)

Advisers thus often recognize where their knowledge is insufficient to carry out specific tasks, and know how and when to defer to the expertise of others. This may lead to them contracting in or referring on their clients to those more expert in particular specialist or technical areas of work. This acknowledges the sheer complexity of the contemporary land economy – too complex, in many instances, to be handled by the solo professional. As one land agent explained:

> For Higher Level Stewardship, you need a Farm Environmental Plan, and ecologists do that, or what they term as FEP-ers. You've got to have a good eye, I haven't got the expertise to go out and identify plant species and such like, so I contract an ecologist in

> to do that work, and we work closely. I basically get the farm and she does the ecology work, and then we sort the bill out thereafter, and it works very well. (Land Agent 1)

Deference in this way might be considered an 'art' and as 'strategic' because it not only serves to reveal the very genuine differences in skills between professionals, but also because it implicitly includes a range of social endorsements that benefit working relationships and the reputational standing of those involved, and which also ultimately defend their areas of expertise against incursion by others. For example, it provides reputational endorsement to another profession, thereby strengthening relationships and making future reciprocations more likely. It displays the personal integrity of the professional adviser in passing over work or being willing to pool expertise, and in doing so reaffirms his or her status as an expert in their *own* field (i.e. by saying 'this is not my expertise' implicitly suggests that the speaker possesses some other type of expertise, without appearing immodest).

Deference may also have the effect of endorsing a speaker's brokering role, where they wish to present themselves as the appropriate first point of call and source of knowledge on where to locate the expertise required (whilst implicitly also serving to steer, and maintain their control over, access to farmers). As a senior vet remarked to a junior colleague, urging her to attend a joint visit with an animal nutritionist to a farm where the cows were suffering a recurring problem with cysts:

> The farmer can see that we're keen to work as a team with his other advisers, we'll learn something from it, the nutritionist will probably learn something from us, and everybody is better off. (Vet 2)

Demonstrating their mutual expertise in front of their client therefore simultaneously endorses both parties' expertise as well as their working relationship. Deferring to expertise in this way underlines the importance of professionals working together and maintaining strong working relationships. It demonstrates inter-professional acumen and an ability to see the wider benefits of engaging with others. It also reveals the socio-material basis of the advisers' expertise which is formed through their mutual interaction in particular contexts.

3.3. *Demonstrating connoisseurship in choosing experts to work with*

The complex networks which might arise as part of inter-professional working allow us to start thinking about how advisers manage the expert-expert interface. To become an effective expert, advisers need to learn how to deal with other experts. A key necessity in doing so is for advisers to demonstrate and exercise inter-professional acumen in how they select particular experts to work with.

Field expertise is generated and maintained through a mix of flexible relationships between advisers and their clients, including long standing informal working relationships and one-off contractual arrangements. In coordinating the contributions of different professions as part of inter-professional working, advisers may discriminate between experts to contact for advice, work alongside or enter into sub-contracting arrangements with, based on judgements about their level of expertise and abilities. Through this process, advisers implicitly sanction or marginalise the expertise of others. One vet explained relationships he had with various farriers, embryo transfer (ET) specialists and artificial insemination (AI) specialists:

> I've had some revolting hoof lesions involved that, rather than me muck around with, we've had a farrier come in, and some of the lads are absolutely brilliant, they're perfectly happy to do that sort of thing. . ., completely out with my capability . . ..Some of the pedigree livestock do quite a lot of ET and we transfer work and will synchronise with them. . ..We have the likes of geniuses with AI technicians and things, we've always had a relationship with them. (Vet 3)

This connoisseurship in choosing other experts is part of the skill set of an effective adviser and is often based on long-standing relationships, developed over time and through personal contact with the advisers in question:

> Those contacts have been built over time, as you'd appreciate, so we tend to know that if we've got a problem with whatever it is, we've got two or three people who we know, because we've dealt with them in the past, we'll give them a ring. (Land Agent 3)

An excerpt from our work shadowing notes provides a further example of connoisseurship at work. In this example, a public sector ecologist [Ecologist 2] working for the statutory organization Natural England describes the land agent we are about to encounter as we drive out to a farm:

> She mentioned that the land agent was 'experienced'. She seemed to respect him and said she had worked with him on various agreements in the past for other farmers. She said he was very good and jokingly told me not to tell him she had said that. She said some agents weren't so good – hinting that perhaps she had had some bad experiences with them. She mentioned that this particular agent had worked on a number of difficult cases on common land involving many tenants. She noted in particular that he was quite supportive of Natural England and in some cases had even urged them to go further with their regulatory powers.

For an adviser engaging in inter-professional working, understanding their own expertise and limitations, as well as the expertise and limitations of other professions is a key part of maximising client benefits. In identifying other complementary specialisms that may be needed, advisers both delineate and affirm their own particular expertise and demonstrate their grasp of the bigger picture. This shows not only knowledge about the potential contribution of different specialisms, but also judgement about the particular personal qualities and interactional expertise of other specialists to be involved:

> Actually, the ecologist I use farms within her own right as well, so she's absolutely great to go and meet with the farmers, because she very much can talk about what's going on, understands their systems. She might not be the absolute best ecologist for identifying plants and such like. . . She actually calls in other people for expertise to assist her. . . But she's very much capable of going and talking to a farmer. (Land Agent 1)

Choosing another expert who farms, who therefore "very much can talk about what's going on", indicates that interactional expertise may be a key factor in selecting other experts to work with, ones able to talk the language of farming.

4. Inter-professional strategies in competition

We thus found that advisers involved in inter-professional working possess skills of relational agency and interactional expertise. Whilst on the surface they may appear cooperative in nature, they are also seen to play an important role in negotiating and defending the credentials of their respective professions. Becoming an accomplished expert in a crowded field of different professions requires knowledge of how to position oneself within the wider

networks of professionals competing for business. It is through this positioning that we are able to discern enactment of the fluid boundaries of expertise and the nature of inter-professional strategies.

Internal to individual professions there are established rules to manage and limit such competition between fellow professionals – i.e. intra-professional competition – including restrictions on entrants to a profession and on who can perform certain practices, which specify the training, skills and experience required to perform professional tasks. These rules prescribe the nature of recognised professional expertise and reinforce the knowledge status claims of the specific profession. These professional rules tend to focus intra-professional competition onto a struggle over geographical territory, and this competition is further attenuated by formal and informal norms against poaching of clients from fellow professionals.

With inter-professional working comes competition additionally over knowledge territory as experts from rival professions challenge the legitimacy of each other's expertise, but without any of the mechanisms available internally within a profession to restrict competition. The exclusivity of the knowledge status claims of individual professions is thus opened to challenge through inter-professional working as the integrity of professional domains and boundaries are contested. As one land agent remarked:

> Another debate going on is where does one profession end and another begin, where's the crossover and why should one be poaching off of that? It's a difficult one, because I think different individuals will have a different leaning . . .. to what they think is their own preserve. (Land Agent 5)

But through this competition, what different roles do advisers take on within extended networks? For those assuming a central position, on what basis do they assert their centrality and what approaches do they adopt? We now consider these questions through exploring the contrasting strategies for inter-professional working of rural land agents and farm veterinarians successively.

4.1. Land agents in inter-professional working

Land agents often felt challenged by competition from other professions but are long experienced at handling it, including competition that strikes at the heart of their traditional functions.

A core – some would suggest a defining – skill of the land agent is the ability to value property. Indeed, those interviewed often referred to themselves as valuers. However, other professions do not always recognize the exclusivity of this expertise, and land agents regard this as a fundamental challenge to their authority:

> Valuers are valuers, that's what we do, that is our profession.. . . Sometimes a lawyer will do a valuation because they think they can.. . . Sometimes an accountant will because they think they can. But they don't do valuations; they just put a figure in. (Land Agent 6)

The land agents therefore placed great emphasis on establishing and maintaining a strong and direct relationship with their clients. As one land agent explained, "once you've got a client, you probably won't lose the client" (Land Agent 7). This was seen as important in guarding against the encroachment of both traditional rivals such as accountants and lawyers as well as professional newcomers:

> It certainly has changed and it's continuing to change. It's specialism really.. . . For example when I first started there was really no such thing as an environmental specialist.. . . But now there is such a thing and other professions are getting involved in doing a lot of work which land agents would have done previously.. . . They're not only competing with each other but they're competing with other people. (Land Agent 7)

One area where professional terrains were being particularly contested at the time of our survey work was indeed that of environmental assessment. Public funding for farmers to enter into Stewardship Schemes to manage their land for environmental purposes had greatly increased and farmers were seeking professional advice on applying for this funding. Most turned in the first instance to their regular source of advice on accessing agricultural supports – their land agents. In turn, most agents felt the need to supplement their own expertise especially where the requirements for environmental management were more exacting. As one land agent commented:

> We use specialists to advise things that we can't do, like part of the environmental scheme we can't deliver because we're not expert enough at identifying habitats or not. We can do it but we can't tell them whether it's a species-rich grassland or just an ordinary field. . . So we use ecologists or botanists or whatever to do that. (Land Agent 6)

However, not all land agents felt the need to supplement their own expertise. As one ecologist complained:

> On technical areas relating to the environment and ecology, land agents can be reluctant to hand over work to other groups who are more appropriately professionally qualified. One of the issues is that Government does not help with this attitude as it does not like to say that some work is defined to any group or profession. Farm Environment Plans are a good example of this issue. (Ecologist 3)

Even where land agents and ecologists were working together closely on behalf of farmers wishing to enter Stewardship Schemes such work involved a division of tasks and responsibilities that had to be negotiated. One land agent described the different ways they might incorporate the specialist contributions into the advice which they would give to their farmer-clients:

> Sometimes they will work as sub-contractors to us, in which case, from a client's point of view they wouldn't necessarily be made aware of the fact that they're involved. Other times, because of the level of their involvement often we would make it quite clear to the client that we are bringing alongside whoever it may be to assist us with this. And in situations like that often we will end up effectively managing the job rather than necessarily providing the advice. So we act as the sort of interface between the client and job, and specialist adviser, and we sort of make sure it all happens. (Land Agent 8)

For land agents acting in this way as coordinators of inter-professional working, managerial skills, good client relationships and strategies for managing the relationships underpinning inter-professional working were stressed as essential attributes. In assuming this gatekeeper role and emphasising these network management characteristics, land agents asserted their centrality within inter-professional networks. The other professionals whose work they orchestrated were thereby cast in a supporting but essentially secondary role, whilst at the same time serving to demonstrate to the client the land agent's central position. Land agents justified this by suggesting that the expertise of these other professionals was esoteric and distant from the practical demands of farm management. As one land agent put it, "ecologists are not the chosen adviser, because they're very specialist" (Land Agent 6). Similarly another argued that "ecologists are so narrow minded and focused in their own, they don't see the bigger picture" (Land Agent 5).

Some ecologists complained of being marginalised within the advisory process in cases where they sat on the periphery of inter-professional exchanges between a key adviser and a farmer:

> I tend to be employed to do the survey and it tends to be a sort of paper exercise . . . I mean if a farmer came up to me and said, "I want some advice on managing my meadows," I'd be absolutely delighted but that doesn't happen very often. (Ecologist 4)

With their contribution to environmental assessments often mediated by land agents and not performed directly in front of the client, ecologists could be left backstage, not visible to the farmer, and at risk of being perceived to be disengaged from the realities of contemporary farming. As one farmer remarked:

> I think they just simply Google Earth, or whatever it is. Literally, if they had been, I would have seen them.. . . They would have to say if they were coming. They don't. (Farmer 1)

In portraying ecologists as detached technical specialists, the land agents emphasised their own social skills of interactional expertise that make them central to the farmer/expert adviser interface:

> Ecologists, I guess they only have to know about a limited field of expertise, so they can very much be experts in their own ecology work. . .. You have to have a good client relationship, you have to have good people skills, and you have to have a good element of trust built up, because it's what you're telling the farmer and they won't always understand what you're telling them about, so you have to build that understanding up, and they'll have to be able to trust that what they're being told is correct. (Land Agent 1)

4.2. Veterinarians in inter-professional working

The vets included in our study seemed much less challenged by inter-professional competition and more sure of the integrity of their professional authority. This is despite the fact that there is now a host of specialists, including farriers, foot trimmers, AI specialists, food nutritionists and ultrasound scanners, offering advice and services to livestock farmers in areas some of which were once their preserve (Lowe, 2009; Enticott et al., 2011). This crowded field of technical specialists has arisen at the same time as the notion of animal health has become more complex. As the historian of animal health Abigail Woods (personal communication 4 December 2014) has commented, since the mid-20th century there has been a reconceptualization of livestock health from:

> a reductionist and ontological category, i.e the absence of pathology, to a situation where health equates to productivity, is positioned on a spectrum, and conceived as the result of the interactions between housing, feeding, milking, breeding, microbes etc. Under the former construction, disruptions to health were defined as disease and therefore fell within the veterinarians' remit. Under the latter . . . health disruption manifests as a decline in production, and can be attributed to many different elements of the production system which interact in their effects on animal bodies. So the solution to the problem requires experts themselves to interact. . . .. Someone has to bring the threads together, hence the vet as ringmaster.

Two vets explained the complexity of contemporary problems of animal health they encountered, one with reference to mastitis in cattle:

> There are plenty of people who are not vets who are interested in mastitis for example, which we would see as a veterinary thing, but it's not. There's no reason why somebody else can't come in and give advice. You have to work with mastitis and you've got to work with people who are specialists in parlours because I'm not a specialist in parlour equipment, but some of those people are interested in what we're doing as well. (Vet 4)

The other vet referred to the example of lameness in cattle:

> Lameness in dairy cattle is a major problem. . . We have a classic example where. . . we've tried all the things we can think of. We need to be thinking about input from a nutritionist, a buildings consultant, design consultant, and a foot trimmer, and ideally we want them all there at the same time. (Vet 2)

The options to tackle such problems may therefore involve technical inputs from different professional sources. The vets we interviewed asserted their key role in orchestrating responses where such multifaceted solutions were required. In doing so they demonstrated a strong self-belief in the primacy of their own expertise, a synoptic perspective on animal health, and essential leadership qualities.

Vets' confidence in their own professional authority reflects in part the special standing they (and doctors) enjoy, embodied in law, of being healers vested by society with exclusive authority to determine the health status of their patients (what is referred to as Aesculapian authority – Rollin, 2002; Martin, 2011). Amongst the professionals we investigated they also had the clearest sense of the scientific basis of their expertise, an assessment echoed by the other professionals and the farmers we interviewed.

The pre-eminence of veterinary expertise is underpinned by the way veterinary services are procured. Veterinary practices are usually paid a monthly or yearly retainer by the farmer which allows him or her to call out a vet at any time to deal with a stricken animal. It also provides for the farmer to be given preventative health advice. This helps secure the unchallenged status of the vet as the authority on farm animal health. The vets retain this status by assuming the leading role in solving farmers' animal health problems:

> I actually think that a vet's job is to make a diagnosis, then once you've made the diagnosis, it might be you that gives the follow-on advice, or it might be the nutritionist, or it might be lots of people. A vet's job is simply to make a diagnosis, and once a diagnosis is made then after that the farmer. . .. can then have a far better idea of what the right course of action is for them. (Vet 2)

Vets see this synoptic outlook as part of their empirical approach to problem-solving based on their scientific training. As one of them remarked, "the bottom line is vets are, at heart, scientists" (Vet 2).

Self-belief in their professional authority means that veterinarians are prepared to rehearse the different professional perspectives on a problem in front of the client. They therefore often take the initiative in arranging joint farm visits:

> It's really important. . ..that you're all sat down in the same room at the same time with the farmer. (Vet 4)

This is also because it is the farmer who must ultimately decide what course of action to take:

> You've always got the focus on 'Right, what's the best advice here for the animal? What's the best advice for the client?' It doesn't always follow that the client is going to take that advice. Now you could argue that if we had more authority, the client might be more likely to take that advice, but at the end of the day, it's his business, it's his money, and you've sometimes got to accept that he probably does believe the advice, but he's got other priorities. (Vet 2)

One vet summarised their synoptic role of assimilating different expertises, whilst not losing sight of the overall objectives for which the work is being undertaken, as follows:

> The vets key strength is our ability to assimilate all of these things and relate it back to the overall health and well being, and therefore, productivity of the individual animal of the herd. So the lameness, the foot trimming, the feed adviser, the business consultant and ourselves. So I think not to do that the vet will be missing out on the key strength that means that we'll always hopefully have a job, and being that translator and facilitator in support of the farmer, you know starting from the cow as we do, making more so perhaps, as advisers, of our overall perspective. (Vet 1)

The vets' efforts to orchestrate livestock farmers' technical support teams are well illustrated by the example of animal nutrition. Most English livestock farmers get advice from both a vet and a nutritionist. We found a great deal of inter-professional interaction between vets and nutritionists. The vets interviewed showed themselves keen to liaise with their farmers' nutritionists, for example arranging regularly to meet up at their clients' farms, but also to work together if a problem arose:

> Most nutritionists are probably very receptive to doing joint visits or getting involved when we flag something up, partly because obviously they want to look after the client, and partly because it makes a difference, and it's more enjoyable to work with some of the other people. (Vet 5)

Vets in our study displayed a strong sense of what they can contribute and when to intervene in inter-professional working. For example, one vet described how he had prepared a junior colleague for a meeting with a farmer and his nutritionist:

> It happened to be a farm that myself and Clare, one of the vets, were in charge of, and we talked about the problem with cysts and how we were going to resolve it, and the farmer said how he was getting his nutritionist to come in. Now on the particular day that the nutritionist was coming, I couldn't attend, so I said to Clare, 'He's got the nutritionist coming. We should be there because it's a team effort to try and get this problem resolved'. Clare was quite alarmed, because we did nutrition in first and second year. She's been eight years qualified, so it's ten years ago, eleven years ago, and she didn't feel confident to be involved in that discussion with the nutritionist. I said, 'Well, you don't need to know about nutrition. You just need to know about the physiology of the cyst. If you don't know about it, we've still got tonight to read up about it, so you can turn up tomorrow morning and you're going to know all about cysts. You'll have something to contribute'. (Vet 2)

The example reveals the strategic preparations for inter-professional working that can take place behind the scenes in advance of face-to-face encounters with clients and other experts. There is also a dimension of interactional expertise within such encounters, whereby advisers (namely vets) have learnt the language to be able to converse with other advisers (the nutritionists):

> There's always a big overlap between vets trying to be nutritionists. . . and nutritionists trying to be vets and vice versa. So, yeah, there's obviously areas that we sort of understand but don't know the absolute nitty-gritty of or whatever, and they're being paid to do it. (Vet 5)

Often vets take the lead in inter-professional encounters. Here, a farmer explains:

> Last year we did have a specific problem with the ewes. I think maybe we got the ration wrong and we got the mineral levels wrong and, yeah, we had a meeting in the kitchen with the nutritionist, the vet, and me, and the shepherd, and dad, to make sure that the following year we didn't have the same problem. [Interviewer: Who took charge in that meeting?] It would be the vet, I would think. I think it was the vet, yeah. (Farmer 2)

In some instances vets had been prepared to challenge the nutritionists over the advice they were giving their clients:

> I've got a situation where there's a nutritional adviser, there's myself, and a farmer, and something's going very wrong. I'm giving him one advice, the nutrition adviser is giving him the other . . . I didn't know what to do so I rang a veterinary nutritionist at the University . . . And he goes, 'Right, you must do this, this, and this'. Which is completely different to what the nutrition adviser the farmer employs said, and so I said, 'well, I don't know much about nutrition itself. That's your job but I've spoken to a guy at the University' and he said 'this is probably what's going on' (Vet 6)

One of the reasons why vets felt that farmers were not always getting the best advice on nutrition was because many of the nutritionists were tied to a particular feed company. In these and other circumstances where the vets felt their clients were receiving consistently poor advice, they were quite prepared to recommend another nutritionist:

> In the worst case scenario, if you thought there was a problem, and you kept ringing up the nutritionist and didn't feel they were doing anything, then I might suggest to the client do they want to get someone else to review it, get another nutritionist. (Vet 5)

4.3. *Comparing strategies for inter-professional working*

Through their interactions and the competition between them, advisers from across the professions are found to take on different roles within extended networks. For some it was about being at the centre of these networks, occupying a broker or coordinator role as a way of asserting their centrality. Others were cast into or assumed a secondary role. The outcome is the emergence through inter-professional working of new hierarchies of expertise. These hierarchies, nevertheless, remain subject to constant negotiation and are underpinned and reproduced by distinctive strategies for inter-professional working, as the contrasting examples of rural land agents and farm veterinarians both reveal.

Thus in the field of environmental assessment, where professional boundaries are felt to be more and more contested, the land agents studied sought to be the conduit and trusted intermediary between the farmer and inter-professional networks. This position establishes an inter-professional order and division of labor in which the land agents manage the interface between farmers and other advisers. The order elevates as key the process and social skills of the land agents, and their personal service and close relationships to clients, while rendering secondary the substantive specialist expertise of other professionals. Agents see their own role as translating specialist technical information on environmental assessment into practical guidance for the farmer. In this process other professionals are assigned backroom roles and land agents are able to distance advisers they perceive as potential competitors. The land agents were seen to act as gatekeepers, guarding access to the farmers – farmers are their clients. This inter-professional strategy is symptomatic of the primary role and positioning of land agents in mediating and negotiating the interface between the regulatory state and wider demands placed on land management and the business practices and structures of farming. Thus land agents are often recognised by farmers as understanding farm business

management and planning which, allied to their detailed knowledge of the financial incentives and penalties and regulatory and other legal constraints farmers potentially face, means that farmers can take some reassurance on the financial and legal soundness of the advice they receive.

In contrast, the vets interviewed were not inclined to act like the land agents do in commissioning and managing inter-professional teams on farmers' behalf. They leave this to the farmer to do. Nevertheless they are active in steering the farmer in veterinary health planning and their advice to the farmer may well allocate specific tasks to the other technical specialists working with the farmer and even extends to proposals to bring in additional or alternative specialists where necessary. The vets thus act as ringmasters of the technical teams that farmers rely on in managing their animals. Based on their own sense of professional authority they appeared more comfortable and confident with openly interacting with other professional and technical specialists when consulting their clients.

This suggests that land agents and vets face different degrees of precariousness on account of the increasingly plural and distributed nature of farm advice services, which necessitate quite different sets of inter-professional strategies and working practices. On the one hand, vets' core expertise (diagnosis) has remained their exclusive preserve and this has meant they have been able to take a more relaxed approach to inter-professional competition. On the other hand, land agents have for long faced competitive challenges to the exercise of a key defining skill (valuation) from other established professions. This has driven them to seek to extend their services into new domains (e.g. agri-environment) as they arise. Although they do not have the necessary scientific expertise to advise clients on ecological and environmental matters they emphasise their client-facing and project management skills to justify their continued service to the client. To maintain their privileged position this has required the careful handling of inter-professional engagements in the eyes (or beyond the sight) of the client. Vets, in contrast, provide added-value to their core service by explicitly recommending and drawing in the relevant specialists to address the animal health issue at hand. If a farmer is faced with a sick animal, they might have an inkling of what the problem is, but they still need a vet to make a diagnosis and recommend the relevant expertise necessary to solve the problem.

5. Conclusions

A considerable body of literature has examined knowledge and learning within the complex entanglements of post/neo-productivist agriculture in the context of increasingly neoliberal working environments. Much of this work has centred on innovation by farmers within knowledge networks and their encounters with advisors. Our focus on engagements between advisors has considered the practice of inter-professional working and its underpinning expertise. We have demonstrated how expertise is ever emergent in interactions and shared working encounters between professionals, requiring new skills and strategies of engagement. The paper has highlighted the existence in such settings of an ever-present but fluid tension between cooperative and competitive strategies that emphasises the inter-section of power, knowledge and identity in practice. Thus, as working practices are increasingly shared, credentialism is being pursued less by achieving the 'monopolies of practice' (Freidson, 1986) of old, and more by striving for newer monopolies of *inter-professional* practice.

Rural inter-professional working may thus be seen as increasing the potential for the exclusivity of expertise to be challenged. Such challenges from across professional boundaries lead to negotiations over roles and responsibilities. While some advisers seek to consolidate and reinforce their specific claim to be able to offer a particular service to a client, it is also found that by working together across professions advisers increase their business competitiveness by making themselves more attractive to clients. There is clearly a balance to be struck, therefore, between the potential risks and benefits. Striking such a balance requires an ability on the part of rural professionals to carefully manage and negotiate their relationships during interactions with other professions. This, we have shown, involves a set of skills and strategies that make-up their *inter-professional expertise*.

We found that advisers involved in inter-professional working recognize the limitations of their own expertise and the value of others; that they demonstrate connoisseurship in selecting the experts they choose to work with and those to avoid; and that they are skilled at establishing and nurturing relationships and interactional expertise (Collins and Evans, 2002) with other professions. These skills, it would seem, are applicable and deployed across the range of professions considered in the research and should therefore represent an important focus for future training and continuing professional development. Furthermore, it is likely that they will be characteristic of the relational agency required of inter-professional encounters more widely involving different professions and contexts, though further research is needed to confirm this or expose contrasting patterns.

These distinctive capacities of relational agency (Edwards, 2010) are also seen to be intimately embedded within the socio-material basis of expertise and its performance through inter-professional interaction (Fenwick et al., 2012) – the two approaches are not mutually exclusive. Thus it is in the ways that experts perform, act and interact in the field that professional expertise and, by extension, *inter-professional expertise* – is realised and practised and a division of labor established of who knows what and who can do what. Becoming an accomplished field expert in a crowded field of different professions – whether in the provision of farm advisory services and potentially in other contemporary fields of professional practice that involve expert-expert encounters – requires knowledge of how to position oneself within the wider networks of practice involved in inter-professional working. Inter-professional encounters often involve a negotiation of knowledge and authority between different advisers and, through the distinctive inter-professional strategies that individual professions adopt, lead to the constant emergence of new hierarchies of expertise. These encounters were sometimes revealed as fraught or tense affairs but through such power play expertise is formed, tested and challenged at the expert–expert interface.

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