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Field Expertise in Rural Land Management

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Abstract

This paper explores the expertise of field-level advisors in rural land management. The context is the English uplands and negotiation over a Higher Level Stewardship agreement. An observed encounter between a hill farmer, his retained land agent and an ecologist working for Natural England illustrates the multiple roles that field-level advisors have in regulating, directing and influencing contemporary land management. The paper draws on field notes, taken during work shadowing and in-depth interviews, to reflect upon the relationships that constitute field expertise not only between farmer and advisor but amongst the advisors too (and those who advise them). We argue that expert-expert interaction and the emergence of networks of practice are crucial to the development of field expertise and are key factors in the increasing complexity of the decision making underpinning contemporary land management.

Keywords: field expertise, [farm extension](#), rural land management, expert-expert interaction, networks of practice

1 Introduction

Given its paradigmatic position in knowledge and technology transfer, farm extension has attracted a huge amount of research (for comprehensive reviews see Dancey, 1993; Swanson et al, 1997; Leeuwis and Van Den Ban, 2004; Rivera and Sulaiman, 2009), but changes in recent decades have introduced a marked complexity to the contemporary ‘land system’ (Foresight Land Use Futures Project, 2010; Foresight. The Future of Food and Farming, 2011), influencing both the way in which

environmental knowledge is produced and the politics of field expertise. Until the early 1990s, responsibility for knowledge transfer in farming was largely assumed by government in the form of state-funded agricultural extension (Dancey, 1993; Jones and Garforth, 1997). The subsequent shift away from direct state provision of free technical and scientific advice to farmers and the resultant privatisation of agricultural extension services in a number of European countries, including the UK, can be viewed as a consequence of broader political changes, principally the ascent of neo-liberalism as the dominant model of governance. Klerkx et al (2006, p.190) note that there was a “general dissatisfaction with the efficiency and effectiveness of public extension services” and a feeling that public agricultural extension “did not serve the needs of rural people and embodied paternalistic and unilateralist attitudes”. The restructuring of extension involved a major shift in the mode of delivery. The old system had been informed by a theory of extension based around a ‘linear model’ of science application and technological diffusion (Rogers, 1962; Clark and Lowe, 1992). Neo-liberalism introduced a less ordered and less systematised approach to extension as a mode of delivery of expertise. Jones and Garforth (1997) note a shift in emphasis away from the movement of messages through a hierarchical system, towards more client-oriented extension, with a focus on the quality of interaction between advisor and farmer.

Neo-liberalism has also been associated with a shift in the objectives for agriculture, resulting in a significant reorientation in the logics of rural land management (Munton et al, 1990): from primary production to sustainable development; from a production-driven logic to one more oriented to the consumer; and from a sectoral to a territorial outlook in the management of rural areas and their resources. The management of land and rural resources has thus had to adapt to altered priorities for rural development and environmental conservation, as well as new institutional and regulatory frameworks. A range of specialised functions are thereby served – some of which are public, some of which are marketable – leading to a mixed economy of provision, subject to different forms of regulation and market demand. Agri-environment schemes are one particular feature of this emerging multifunctionality. They are implemented through voluntary agreements, where farmers are awarded payments for adopting environmentally friendly farming practices or for providing environmental services. They highlight the emergence of a formalised role for farmers

as custodians of the countryside (Lowe et al, 1986; Wilson and Hart, 2001; Fish et al, 2003; Burton et al, 2008).

Much of the existing literature on farm extension has focused on the role of agronomists; however, the shift towards pluralistic extension systems involving a range of specialised advisors has meant that other types of expertise relevant to the contemporary requirements of land management are starting to attract attention from social researchers (see Tsouvalis et al, 2000; Morris, 2004; Carr and Wilkinson, 2005; Ingram and Morris 2007; Bergea et al, 2008; Riley, 2008). A particular focus of this recent research has been on the knowledge of farmers and land managers themselves which, while becoming more visible in a pluralistic advisory system, is frequently ignored and undervalued (Ingram, 2008; Morris 2006). In attempts to redress this balance, there is recognition of some symmetry between the knowledge practices of farmers and scientists, especially in the interpretation of complex data (Tsouvalis et al 2000). However, there is little work specifically on the knowledge practices of those experts who mediate between the extremes of institutional science and land managers.

We call this category of experts – those who go onto farms to conduct investigations and provide advice – ‘field-level advisors’. We studied the work of three groups of field-level advisors (applied ecologists, land agents/surveyors and farm vets) using in-depth interviews and ethnography, including periods of work shadowing and observation. Their expertise emerged as a form of mediation between the institutionalised practices of science and regulation and the more fluid space of the field. We conceptualise this ‘field expertise’ further in the next section. The remainder of the paper is built around an encounter between a farmer and two advisors negotiating a Higher Level Stewardship (HLS) agreement. In presenting this case study, our interest is not in the specific process of implementing environmental stewardship schemes but rather in what this tells us about the roles and interactions of field-level advisors and their clients as they go about practising expertise. We look at the cross-professional working that occurs when multiple advisors are involved and consider how expertise is negotiated and mobilised in individual encounters but also across wider networks of practice.

2 Field-Level Advisors and Field Expertise

We can situate field-level advisors in relation to two key aspects of what they do. First, they are experts. The very notion of formal advice sets up the advisor as an expert, or at least as a conduit of expertise. Recent work in the social sciences has focused on the authority of experts as being constructed and contested within particular socio-political contexts, including around the so-called ‘lay-expert divide’ (Irwin, 1995; Nowotny *et al.*, 2001; Collins and Evans, 2002; Jasanoff, 2003; Rip, 2003; Wynne, 2003; Eden *et al.*, 2006). A recurring theme is that of dissent towards expert knowledge by those assumed to be on the lay side of the divide, and the dismissal in turn by certain types of experts of ‘local’ or ‘lay’ knowledges (which, as noted above, is often the case with farmers’ knowledge). From this perspective, it might be assumed that the difficulty of farm extension work lies in convincing land managers of the value of external ‘expert’ knowledge. However, in our research on what was being done, routinely, by advisors, we encountered little outright controversy but plenty of to-ing and fro-ing and negotiation. The work of extension encompasses more than the moment of giving successful advice, and it is in these extended practices that the particular expertise of field-level advisors comes to light.

The second important aspect of field-level advisors is that their expertise is tied to the space of ‘the field’ – in other words a space of practice beyond the lab (of course in this article the field will include quite literally farmers’ fields). In their exploration of the ‘knowledge cultures’ of precision farming, Tsouvalis *et al.* (2000) aim to go beyond conceptions of ‘expert’, ‘lay’ and ‘local knowledge’, and we agree with the need to adopt a relational approach to knowledge and expertise. We have adopted the term ‘field expertise’ not to claim an essential divide between ‘advisor’ and ‘farmer’, or ‘scientist’ and ‘field advisor’, but to highlight that this is a specific and under-researched component of the land system and that there is something particular to the spaces in which this form of expertise is produced and mobilised. The knowledge practices of the field are less researched than those of the laboratory (Eden, 2008). Much of the existing work focuses on the production of scientific knowledge in the field and how this differs from the tightly controlled space of the lab. The field emerges as a space of imprecision with multiple variables that are difficult to control; it is where science ‘stammers’ (Latour, 1999, p.30). In some instances, land managers

themselves can be the uncontrollable variables that cause such stammering. Farmers have been shown to contest the knowledge claims embedded in novel technologies (Tsouvalis et al, 2000) and scientists' field experiments (Wynne, 1996). As a result, the successful extension of science into the field in land management has required the field to be 'prepared' in advance, with efforts made to "modify the local environment in line with scientific prescriptions" (Clark and Murdoch, 1997, p.57).

Given the variability in local field conditions, it is perhaps unsurprising that a defining feature of a field expert can be knowledge of a particular 'patch', yet this local knowledge is also judged in terms of how the results it brings about conform to more universal and institutionalised standards (Ellis and Waterton 2005). Eden's (2008) account of the Forest Stewardship Council's environmental certification demonstrates that local knowledge is required to adapt environmental standards into land management practice. However, rather than being a problem for the implementation of new land management practices, the imprecision and fluidity of the field can be a benefit: "fieldwork, unlike labwork, can more readily draw on uncertainty and adaptability for strength, turning a lack of control into a closer relationship between environment, species, knowledge and management practices" (Eden, 2008, p.1032).

With this in mind, and contrary to recent attempts to provide normative categories for expertise (Collins and Evans, 2002), we maintain that field expertise is best seen as mobilized in practice. We understand practices as sets of heterogeneous relations between materials, concepts, subjects and objects (Law, 2011). Within these relations, no actor stands alone but acts:

"in collaboration with others to such an extent that it is not always clear who is doing what...What each actor does also depends on its co-actors, on whether they allow it to act and on what they allow it to do, on rules and regulations."
(Law and Mol, 2008, p.72)

Expertise is an outcome of such interactions. It is more than skill, knowledge or experience: the work of field-level advisors is "socially sanctioned and legitimate" (Jones and Garforth, 1997, p.1) and this *recognition* is also part of what it means to be an expert. An advisor is an expert if supported in that role through the relationships in which they are enmeshed. The remainder of this paper examines a particular type of

advisory encounter and the relations out of which it arises – relations that constitute and mobilize field expertise.

3 The advisory encounter

Here, we present an in-depth case study of an encounter between two advisors and a farmer observed during work shadowing, along with in-depth interviews with all those involved. Field notes were made during the observation and written up immediately after. Semi-structured interviews were conducted with the advisors and farmer at their offices/home (with the ecologist prior to the encounter and with the farmer and land agent after). These were carried out with their consent and were recorded and transcribed. All the data has been analysed and coded following a grounded theory approach (Strauss and Corbin, 1990). In order to contextualise the case study material, later sections also reference evidence from over 40 interviews with vets, ecologists, land agents and farmers.

The observed encounter occurred during a day of work shadowing a Natural England land management and conservation advisor working in an upland area. This advisor was a trained ecologist. The meeting between the farmer (Frank), his retained land agent (Arthur) and the Natural England advisor (Catherine)¹ was the culmination of a series of pre-meetings and phone calls between all the parties, to finalise the farmer's application to enter the Higher Level Stewardship (HLS) agri-environment scheme. The HLS is an agri-environment scheme funded under the European Union's Common Agricultural Policy and administered by the agency Natural England. It incentivises farmers and land managers to deliver significant environmental benefits on their land including: wildlife, landscape quality and character, protection of natural resources and the historic environment, and public access. Payments are for 10 years, with the amount dependent on the management options selected. The HLS application process is complex and requires the applicant to submit supporting evidence including commissioning a Farm Environment Plan (FEP) for the sites selected and a historic environment record check. A FEP is a structured survey of all environmental features

¹ Pseudonyms have been used throughout.

on a farm. It is typically completed by an ecologist or surveyor with specialist knowledge and is commissioned by the applicant but paid for by Natural England. The farmer had employed the land agent to complete the HLS application form on his behalf, specifying the management options being applied for and a notional costing. The agent had employed a specialist contractor to complete the FEP. The application was then sent to Natural England, where a case officer (Catherine) was responsible for reviewing it, carrying out site inspections, scoring the application and formulating an offer to the farmer based on what Natural England were prepared to fund. Catherine had sent a copy of this offer to the farmer and his agent to check prior to their meeting, where it would be negotiated and signed.

The following account draws upon the field notes made during the work shadowing and follows the process of negotiation leading up to the agreement being signed by the farmer. In specifically focusing on the end stage of the application process, this case study is an exploration of how a standardised process is brought to bear through the encounter. It demonstrates the different relationships that exist between the farmer and the advisors. It also incorporates key features of the contemporary advisory landscape including expert-expert interaction and the wider networks of practice which now underpin land management decisions. In what follows, the “I” is the first author of this paper.

Around the kitchen table

I had interviewed Catherine at her office a few weeks prior to the work shadowing where she had outlined her role as a Natural England advisor, including site monitoring and making farm visits. I was invited to accompany her on a farm visit to finalise an HLS agreement with a farmer and his land agent. In the car on the way to the farm, Catherine explained that she hoped the meeting wouldn't take too long. However, she had called Frank, the farmer, the day before to check that the meeting was still going ahead and he'd not yet read the revised agreement. She had advised him to do so in case he had any questions. She said to me that she would offer it as it was and would “stand firm”, anticipating no problems from the meeting.

On arrival, we were welcomed by Anne, the farmer's wife, who led us through to the kitchen where Frank and Arthur, his land agent, were already sat. The meeting took place around a large kitchen table. Catherine led the discussion and worked through the agreement document, of which all three had a copy, focusing on points of clarification or contention. There was an initial discussion about dry stone wall restoration. Arthur asked why a stone pen had not been included in the agreement. Catherine explained that there wasn't enough resource. She described the process of how she had reached this decision, which had involved consulting on priorities with a colleague who advised on the historic environment. She said that the stone wall features in the agreement were already significant and that her budget controller would probably "take a sharp intake of breath" on reading the document. Arthur quipped that it was worth trying and you didn't know unless you asked. Catherine steered away from this slightly awkward moment by asking Arthur whether he knew of anyone who might be suitable for a historic environment advisor post being advertised.

The discussion moved onto the subject of lapwing scrapes². Frank mentioned the presence of gas pipelines where these were proposed; Catherine said that it was important for him to inform the Royal Society for the Protection of Birds (RSPB) advisor when she visited the site. Catherine said that she understood that Frank was "sceptical" about the lapwing part of the scheme but she urged him to persist as it was "experimental" and he would see over time whether the scheme made any difference to bird numbers. Frank retorted that it would be hailstorms that would make a difference rather than the scrapes, as the ground was always wet. Arthur asked Catherine whether amendments could be made to the agreement at a later date. Catherine did not say that it was not possible, but commented that it would make Genesis (the computer programme used by Natural England to document all agreements) "wobble" and the agency's supervisors would "wobble" too. That seemed to close the issue.

² Scrapes are shallow depressions which are artificially created to collect water in winter and dry out slowly in the spring and summer. These provide food and nesting areas for breeding waders such as lapwings.

There was a discussion then about some of the farms in the surrounding fells which turned into a gossip about neighbours and people Frank and Arthur knew. Arthur talked about a farm which had experienced problems with heather beetle and how this had been tackled through burning. Catherine pointed out that this wasn't an ideal solution as it destroyed natural enemies. Frank asked Catherine what these were and she explained they were parasitic wasps. Arthur then mentioned some bad farming practices that he had noticed nearby. Catherine pulled her OS map out and he showed her where this was. She commented that it was not on "her patch" but she would let colleagues know. Arthur was quick to disclaim he was "whistle blowing". He went on to inform Catherine of a plant which he had noticed in woodland at the far end of the site (not part of the farmer's land) which he thought might be juniper and recommended she take a look.

The discussion moved on to the specific duties Frank had to fulfil under the agreement. Catherine explained what was expected as part of the bird recording. She said that a "standard recording sheet" was included in the agreement forms but said he might find it easier to jot any observations down in a notebook. Frank said he always carried one with him anyway. Catherine seemed keen to underline that this should be "fun" and not an "onerous" task and that by taking down notes he would be contributing to monitoring the indicators of success for the site. Arthur then asked Catherine why Natural England only formally monitored sites every 6 years and how they carried out these bird assessments. Catherine explained the process (that she walks through the site, uses binoculars and counts within a transect) adding that, although she was not an ornithologist, it was not "rocket science". Arthur questioned how the bird data should be supplied. Catherine replied that it needed to be submitted every September. Arthur asked if there was a way that the system could generate Frank with a reminder to do this. Catherine said there wasn't but that she would make a note to send out a reminder. Arthur apologised for creating more work for her but followed this with a query about what the consequences would be should this data not be supplied.

Catherine began to explain to Frank the formal procedures for inspections to the agreement once it was up and running. She warned that the Rural Payments Agency, the Defra agency formally responsible for farm payments, would not notify him prior

to an inspection and that, although Natural England would be aware of any visit because they were asked to prepare documents ahead of an inspection, they were not able to warn farmers. She added that during the inspection period, all payments would temporarily be suspended. Arthur interjected here saying that there were “ways around this”, reassuring Frank that he could apply for money via a hardship mechanism should this be necessary.

After running through her list of action points and summarising the key amendments and corrections to the document, Catherine finally asked Frank to sign. There was a brief discussion about whether Arthur should sign, acting on the farmer’s behalf (he had joked earlier that he was a millionaire on paper as his signature was on so many agreements) but then it was agreed that both Frank and his wife, as equal partners in the business, should sign and Frank went to find his wife. After signing, Catherine reassured Frank that it was a good thing that he was doing but added that she felt like a “double-glazing salesman” at this point in the process. Once the agreement had been signed, Catherine and Arthur chatted informally over a cup of tea, while Frank, Anne and I listened in.

Catherine eventually said that we should go to allow Frank and Arthur to have a post-meeting chat “in private”. We left them sat at the kitchen table. On leaving the farm, we drove to the wooded area where Arthur thought he had spotted some juniper. Catherine did not get out the car and only looked at the woodland through the window. When nothing of interest was found she said that Arthur was prone to making “throw-away comments”. On the drive home, Catherine reflected that the meeting had taken a lot longer (3 hours) than she had anticipated especially given that farmer and agent had not had any particular concerns or queries. I noted that Arthur had tended to seek clarification on a number of points and suggested that he perhaps had to be seen to be earning his fee to which she agreed. Catherine reflected that the final agreement was in fact a very good offer and this explained why the farmer and the agent had had very few queries about it.

4 Practising field expertise

Meetings enact realities (Law 2011; Law and Urry, 2004); they are sites in which relationships are (re)made in practice, bringing together a mix of material and symbolic resources. The meeting round the kitchen table had a formal framing device: the HLS agreement document that had been circulated beforehand and which served as the focal point for discussions. Through the encounter various sets of relationships that make up farm advisory work can be seen.

Advisor/farmer

Although Frank was present throughout the discussion, he said very little. The encounter shows him as acted upon by the formal process of signing the HLS agreement. Each of the advisors had put forward a set of proposals (Arthur in the application form and Catherine in the formal offer) about Frank and his farm that determined his future ability to act in certain ways. Frank and Arthur have a good working relationship which is also a long-standing one, based on regular contact. Arthur is viewed by Frank as a reliable and trusted advisor, able to see things “from a farmer’s point of view”. The advice Arthur provides to Frank on the scheme is not only based on his procedural knowledge and procedural-based authority concerning eligibility criteria and how values are calculated; it also brings together his knowledge of agronomy/farm management and property rights issues, his local knowledge of other agreements and his legal liability.

Arthur explained that he saw his role as one of translator between Natural England and farmers:

“I have to try and put that into an agricultural context and explain why it’s important” (Interview, Land Agent)

Frank’s passivity in the encounter was recognised and explained by him and Arthur:

“I’m paying him to do that. It’s so complex, and he has been involved in quite a few more agreements, so he is really well into this, and if there’s anything technical, he can get on with it. We’ll always have a talk afterwards to see what’s been... he’ll ask me if he’d missed putting the point

over... But it is so complex, the rules and all that, so I simply don't want to be an expert on that. My job is farming. It's them two's job to sort it out to my best advantage" [Interview, Farmer]

"Some of them [farmers] don't want to know. Some of them just want to be told what they've got to do and they give you complete autonomy, they'll say, 'Oh, just get on with it, tell me when the money is due.'" [Interview, Land Agent]

The farmer here demarcates their respective roles: what is expected of each advisor and what the expected outcome should be for him. They are helping him to do his job. Frank's characterisation of what Arthur does is key: he uses Arthur to fill in his forms. Should anything go wrong in filling out the application, Arthur has professional liability insurance. Given the scale of the sums involved – a major HLS scheme may bring individual payments of thousands of pounds per annum – this is one of the chief reasons why farmers use the services of a land agent. The interview data reveals more about how the agents occupy the role of 'form fillers', facilitating the agreement and payment procedure for various schemes.

The agent is the point at which the regulatory state meets rural landed property; agents mediate the interaction between formal bureaucratic and regulatory systems and private land ownership structures. This draws upon their formal and regulatory knowledge and their experiential knowledge of their client and 'patch'. Land agents are used because of the considerable transaction costs involved in dovetailing private and public objectives and structures in rural land management. They broker transactions and take responsibility for any oversights that might result in a financial penalty and this makes them worth the fee they charge. An agent is, literally, one who acts for another – a meaning perhaps forgotten in the sociological use of the term – and in this situation we see that played out. The agent appears as the locus of agency (in a sociological sense), but this in turn is underpinned by a hinterland of other relationships, most notably, an insurance company that manages and distributes financial risk and the trust of the farmer.

Catherine brings regulatory authority to the table: literally, in the form of the HLS agreement document; figuratively, in that she is backed by the legal-rational practices that make up Natural England and that are present through her. Catherine enacts Frank as an environmental custodian of his land by setting up the HLS agreement. This entailed both preparing the paperwork and inputting it into Natural England's IT system, but also providing informal guidance on how the agreement would work in practice, what would be expected of the farmer and how he might achieve the obligations set out in the agreement. She is tasked with putting a financial value on certain conservation and environmental actions that Frank is expected to implement. It is her responsibility to oversee the protection of natural values. She does this largely through incentivising and guiding farmers' actions. Thus, although regulation is her function she employs the flexibility of 'fieldwork' in obtaining the results demanded by formal standards (Eden, 2008), using advice and inducement as her main modes of operating.

The relationship between Catherine and Frank was respectful but more formally professional than that between Arthur and Frank. This partly reflected Catherine's dual role as advisor and regulator, but also what she was seen to represent. As Frank put it:

*"You've always got that in the back of your mind that you'll have to think what you say and don't drop yourself in it. The things they do, the conditions they put on you ... if you do something wrong and it's a cross compliance issue, you can lose your plan or all of your Single Farm Payments. So they have as their ultimate weapon the ability to literally bankrupt you, so you've got to tread around them – well, I wouldn't say 'carefully' – but be aware of what you're busy with. That's why it's handy to have people like Arthur who can argue the ins and outs of these various things"*³ [Interview, Farmer]

Frank looks to Catherine for clarity, authority and certainty:

"If Catherine tells you something, what she says is what she's going to do and it's right" [Interview, Farmer]

³ The Single Farm Payment scheme is the main agricultural subsidy scheme in the EU. Farmers are required to meet minimum environmental and welfare standards known as cross compliance requirements. Where these requirements are found to have been breached, payments may be withheld.

Her regulatory authority is underpinned by her perceived scientific standing. Frank noted in interview that he considered Catherine to be the most ‘scientific’ of all his advisors (including his vet), adding that she uses “Latin words”. Her advice and her formal interventions carry a ‘signature of expertise’ (Ellis and Waterton, 2005) that Frank recognises in her words and actions together.

Catherine’s role exemplifies the rising status of ecologists and other environmental advisors in rural land management. As Natural England advisors, they have become powerful orchestrators of rural land, with significant statutory powers to regulate farmers’ actions, direct control of sizable funds for environmental stewardship and some leverage even over farmers’ receipt of Single Farm Payments (through the requirement for cross-compliance between CAP payments and EU environmental legislation). When asked whether her advisory role might compromise the performance of her regulatory functions, Catherine maintained that she was able to balance her role as advisor-cum-regulator because she would not be the prosecutor should anything go wrong (depending on the issue, it would then be taken up either by the enforcement division of Natural England or by another government body, the Rural Payments Agency). However, she would likely be the whistleblower in referring a case for punitive action, which illustrates the dilemma advisors face in seeking to align the goals of farmers with those of the government (Lowe et al, 1997). Sometimes advisors resolve this dilemma on an individual basis, with either the advisory or regulatory aspect dominating an encounter or relationship, as Catherine remarked:

“Sometimes it depends on the personality of the farmer. Some can be quite hostile to advisors, anyone, and just see you as public servants who are standing in the way between them and the money. ... There are others who you relate very well to and you’re able to really help them and explain things, and give them a lot of technical background, and set up a good agreement, and feel that they’ve benefitted from it or they’ve actually said to your face, ‘That’s really useful and we’ve learned a lot from that, and we’ll be able to get on and do this.’” [Interview, Natural England Advisor]

Both advisors are helping Frank to do his job; they, and the bundle of relations they are enmeshed in, act in Frank's place, taking away his administrative burden, helping him to acquire funding and enabling him to deliver environmental benefit through his farming. But is this impression of a passive farmer, positioned by others to manage the land, the whole picture? Certainly, at the meeting to finalise the HLS agreement, Frank was mainly an observer. But his silence was telling: it put his seal of approval to the discussion between the land agent and the ecologist. By ceding them authority, Frank effectively allowed the advisors to perform their enabling roles.

Moreover, outside this rather ritualistic occasion, Frank revealed in interview how he had acted to set the terms of the HLS negotiations. Firstly he could select which advisors to use. Frank recounted his relationship with different advisors now and in the past, and how he had changed land agents and vets in order to get a better quality service: "that is always the ultimate weapon that you've got – you can go elsewhere". Arthur, his current land agent, had a strong reputation locally for advising on complex agri-environment schemes. He had acted as Frank's agent on previous agri-environment agreements as well as over Single Farm Payments. He could therefore draw upon extensive knowledge of Frank's outlook, circumstances and means when representing him.

Frank revealed a second source of sanctioning authority in his dealings with English Nature (Natural England's predecessor) when he and other local farmers had resisted the unilateral imposition of conservation restrictions on their land:

"They just come along and say, 'Well, your ground is in a site of specialist scientific interest. You can't do this, you can't do that.' So there were five or six years of guerrilla warfare and then I think it finally dawned on them that if they wanted people to accept them and their various ideas, they were going to have to come up with some schemes. ... Word would soon get around, so they would find it very difficult to work in an area if they were going around being deliberately bloody-minded" [Interview, Farmer]

The advisor/farmer relationship is thus one of interacting strategies and logics, articulated through overlapping sets of relations. For Frank, Arthur and Catherine gathered around the table, the logics in play were in alignment. As Frank's previous

experience showed this was by no means a given – it is testament to the structuring device of the HLS agreement which in turn is the outcome of past interactions.

Expert/expert

The relationship between Frank and his advisors was not the only one on display in the encounter. Expert/expert interaction in farm advisory work has received considerably less attention than that of farmer/advisor, yet it is a key site in effecting regulatory strategies and field expertise. In the case we have presented, the encounter served not only as a platform for one-way flows (e.g. when the agent is explaining how the process works to the farmer) but also for the circulation of knowledge between the advisors. Catherine and Arthur knew one another from working on agreements together for other clients and had an amicable working relationship. Prior to the meeting, Catherine mentioned that Arthur was “experienced”; she said he was very good at his job. In working through the agreement there was an open exchange of knowledge and gossip between the two advisors. There were occasions where Arthur sought to clarify specific details of the agreement, but many of his questions were much more general – concerning the formal procedures of Natural England – and he was clearly picking Catherine’s brain on revisions to Stewardship rates and requirements.

Such exchanges occur both in formal advisory settings (as we have shown) and when farmers are not present. Our wider research findings reveal that while advisors from within the same profession (e.g. colleagues within a business or advisors linked through other networks, discussion forums or blogs) often share experiences and pass on ‘best practice’, advisors from different professions are also increasingly collaborating on behalf of clients, exchanging different types of knowledge and generating new expertise (Proctor et al, 2011). This inter-professional working includes, for example, land agents working with ecologists (on agri-environment applications), with solicitors and accountants (for transfers of land, tenancy agreements, business plans and taxation issues) and with planning specialists (for complex planning applications, building conversions etc). Similarly, vets talked about their experiences of working with nutritionists, artificial insemination technicians, foot trimmers and animal housing /design consultants. This trading of information by

advisors and stretching of expertise from one encounter to another extends the network of practice spatially and temporally. One of the fears associated with the privatisation of extension services was that agricultural knowledge provision would be compartmentalised into a series of closed systems, with a “decrease in information which is openly exchanged on a free-of-charge basis among various actors” (Klerkx et al, 2006, p.191). Our findings here provide evidence that advisors are able to negotiate their way across expert divides in order to exchange and access knowledge.

Such expert-expert interaction does not preclude professional competition. Advisors test each other’s legitimacy while working out an agreement or piece of advice. Thus the observed encounter served as a platform for the two advisors to prove their worth to one another and to the farmer. During one exchange on dry stone wall restoration, for example, Arthur tried to reopen negotiations for his client. However, this attempt to bargain was skilfully managed by Catherine and ultimately deflected. In another exchange, Arthur attempted to demonstrate his ecological knowledge, pointing out to Catherine the possible presence of juniper nearby and highlighting where he had seen illegal burning take place; but both points were ultimately dismissed by Catherine. Finally, in a discussion about payment procedures, Arthur undermined Catherine by suggesting to Frank that there were “ways around” the system. The posturing here might seem crucial; both advisors demonstrating their expertise in order to gain the confidence of the farmer and ultimately ensure that he signed the agreement. However, the agreement was largely a done deal by the time of the meeting, and the farmer recognised the ritual in the process:

“All the banter and horse trading and micky taking ...that’s how it should be. With Arthur, well, it’s just a case of he’s left to negotiate his way with the likes of Catherine and just literally get the best deal for us that he can. He seems to. Catherine will sometimes say, ‘Oh, he did go on a bit,’ or, ‘He gave me a hard time,’ or something like that, so you think, ‘Oh well, that’s okay’”
[Interview, Farmer]

This ‘horse trading’ was a performance that all parties understood and expected (and which was mentioned in many of the interviews conducted in the research). Both advisors were clearly wise to the negotiating tactics involved in reaching an agreement:

“Quite often, of course, you’re negotiating two people – the farmer and their land agent at their side. I would prefer it if it was just one, quite frankly. If it’s not one of them that undermines you, it’s the other one. You feel you could get somewhere maybe with the farmer, but the land agent is a stumbling block because, of course, they’re having to pay for their keep, aren’t they? They are not averse to using bullying tactics, I would say... I’m not saying they’re all like that, but I think as a group, as a stereotype, there is a lot of that. There’s quite a bit of arrogance there” [Interview, Natural England advisor]

“...we were there to do a specific task that morning which I don’t think was particularly contentious, but I was really only there to make sure that Frank understood what was being put over to him. I may have asked Catherine some questions that were a bit challenging, or a bit confrontational, because that’s in my nature. Catherine is quite easy to wind up (laughter) - which is a bit naughty” [Interview, Land Agent]

The observed encounter demonstrates how advisors are required routinely to defend their professional domains and the legitimacy of their expertise as part of the exchange, alongside defending the interests of their clients, to whom they are ultimately accountable. While the circumstances surrounding this encounter are particular to the agreement being negotiated, the meeting between advisors and a client and the inter-professional working it represents have become a crucial part of the advisory process. This may not necessarily involve face-to-face interaction, and may extend far beyond two advisors working together, into much wider networks.

Extended networks of practice

The encounter is only one way of telling the story of farm advice, one which brings certain professions and forms of relationship (specifically one-to-one exchanges) to the fore. But what happened at the farm kitchen table was also the result of relationships that appeared present only in passing, but which ultimately helped to mobilise Catherine and Arthur as expert advisors.

Advisors often explain the ways in which they assemble multiple relationships to do their work. Both Catherine and Arthur described extended networks surrounding the observed encounter. Compiling evidence and surveying the proposed site involved an ecological consultant specifically contracted by Arthur to carry out a Farm Environment Plan (FEP). In preparing the final agreement offer, Catherine drew upon the FEP that had been prepared by this unseen contractor. She also consulted with a water vole specialist, a historic environment advisor, an advisor on rights of way and an RSPB officer. The encounter demonstrates the complex nature of the advisory system and in particular highlights the delegation of responsibilities and the specialization of particular functions between professionals from across the public, private and third sectors.

A more collaborative approach to advice provision revealed through the encounter was found to be increasingly common across all the professions we examined. We discovered evidence of complex networks of advisors assisting farmers on specific parts of their business. In some cases, these networks were co-ordinated by farmers themselves and in others by individual advisors. A number of advisors interviewed described the benefits, indeed the necessity, of such activity while not disregarding the difficulties of co-ordination.

Advisory encounters therefore mobilised, but also ordered, a wider periphery of experts. In some cases these players themselves complained of being marginalised within the process, as an ecological consultant sub-contracted by a land agent to prepare a FEP explained:

“I tend to be employed to do the survey and it tends to be a sort of paper exercise and it's then Natural England who interact more with the farmer face to face in terms of interpreting the results and advising the farmer what he would be required to do to get into an agri-environment scheme. I tend to just do the survey element. 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.” (Interview, Ecologist 1)

Those directly involved in advisory encounters are thus embedded within a wider network of advisors. Their authority (their capacity to influence) is stabilised through

the extended networks of expertise which they simultaneously deploy and help to maintain. These networks also extend to expert systems and management technologies which are in place to help bring order to this complexity and embed the advisors within a wider system. Natural England's Genesis computer programme and the Farm Environment Plans are cases in point. Both played a pervasive role in framing and fixing the observed encounter. Each, in its design and content, envelops multiple and distant forms of expertise.

The FEP, for example, is a device that embodies a range of expert relations. Completion of a FEP requires reference to various sources of expertise, including existing environmental data sets available for the farm, in order to identify and assess the condition of features of historical, wildlife, environmental, access or landscape interest. Recommended reference materials for the prospective FEP surveyor cover such aspects as hedgerow woody species, native breeds at risk, condition assessments for hedgerows and stone walls, plant and animal species present, and identification of ancient trees. The FEP marshals, assesses and presents this information for the farm in question, in a systematic manner; it 'prepares' the field (Clark and Murdoch, 1997) for the HLS agreement, translating it into a form compatible with the scientific and regulatory machinery of Natural England (see also Ellis and Waterton, 2005)

The Genesis computer programme extends the network of practice into the formulation, funding and implementation of conservation management of the farm. The programme is integral to the application system for Environmental Stewardship, the arrangement of payments to farmers, the management of sites and the recording of conservation outcomes. It involves complex mapping of farms and enables calculations of the size and value of farmland features. It is built not only on inputs of ecological and farm management expertise, but relies on significant computing knowledge. In the observed encounter Catherine warns how Genesis would "wobble" if amendments had to be made to the agreement in the future. That clearly positions her as part of a much wider infrastructure – one which involves no small amount of Natural England's organisational capacity in a behind-the-scenes orchestration of human and technological components that both operationalises environmental stewardship schemes and manages risks that might destabilise Genesis or cause Genesis to destabilise the wider organization (Natural England, 2007). Genesis is a

good example of how meetings bring up ‘manifest absences’ (Law, 2004) resulting from practices which cannot be changed in the encounter but help frame it as solid. Such extended networks of practice expand the capabilities of individual advisors to offer advice, but also establish order and fixity within the advisory process. Notably, though, it was Catherine who deemed what might make Genesis wobble, relying on Genesis both as a material and semiotic resource.

The extent and stability of these networks thus depend upon where one stands within them. While numerous professionals provided information on the environmental stewardship application, many had no direct contact with the farmer concerned, which made the farmer sceptical of their role in the process:

“I think they just simply Google Earth, or whatever it is. Literally, if they had been [here], I would have seen them. But it is etiquette; they would have to say if they were coming. They don’t. This is one of the complaints that we’ve always had, that there’s too much of the budget gets frittered away on civil servants lurking in offices...” [Interview, Farmer]

Farmers value experts they have a close association with and are more sceptical about those who seem distant or detached (see also Leeuwis and Van den Ban, 2004; Oreszczyn et al, 2010). Thus, while advisors saw themselves participating in extended collaborative networks, farmers gave little acknowledgement to such networks. These semi-visible networks thus largely operate behind-the-scenes enabling upfront advisors to complete a job. One land agent described how he used other professional inputs:

“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. ...So we act as the sort of interface between the client and job, and specialist advisor, and we sort of make sure it all happens, and then we can feed through to the client, and obviously be there to talk it through with the client, but without necessarily having provided the specialist advice.” (Interview, Land agent 2)

In summary, field expertise is generated and maintained through a mix of flexible relationships between advisors and their clients, including long standing informal working relationships and one-off contractual arrangements, and more rigid regulatory systems, procedures and expert technologies. Becoming a field expert requires not only the specialist knowledge of your own field but also knowing how to position yourself in these wider networks of practice.

5 Conclusions

Viewed in the context of broader changes that have occurred in regulatory regimes and the shifting orientation away from production to environmental and conservation priorities in farming, this paper has explored how these emerging goals are negotiated between farmers and advisors and between different professionals in decisions over land management. Cut off from the centralised certainty of state managed extension, field advisors are now more reliant on each other. Their work is dependent on knowledge and skills beyond their own. We have conceptualised what happens in contemporary farm extension work as being less a transfer of knowledge or a straightforward exercise of authority and more as the co-production of relationships that position the various parties as expert actors in their own right. Experts are nodes in wider networks of practice. Advisor-advisor interaction and expert-expert inter-professional working determine the capabilities of both farmers and advisors alike and are key elements of how decisions over land management are now made.

Furthermore, in highlighting the wider networks of practice underlying the advisory encounter, we have revealed the complexity of the systems now in place to provide farm advice. This authority of the field advisor emerges from these networks of practice which comprise an array of other professionals, some visible, others invisible to the farmer. In this way, expertise is mobilised across these networks and stabilised in part through expert systems and management technologies.

The result of the meeting described is a product of the relation of the various parties (as a client, a professional, a friend etc), the permanence of the relationship (transitional or more longstanding, direct or peripheral) and what each party brings to the encounter (e.g. goals, incentives, regulatory authority, legal documents, quality of

service, specialist assessment skills, trust, financial insurance). Each advisor is a product of their relations with their discipline, with systematised forms of knowledge and field practices, with their clients and their rituals and customs, with expert technologies and so on. The meeting round the table simplified this, making it manageable by building the outcome of their work into the agreement document.

Our findings suggest that future research, as well as advisor training and professional development systems, should give much greater attention to understanding and enabling expert/expert interaction in farm advisory work and the means by which advisors navigate their extended networks of practice, alongside long standing attention to the advisor-farmer relationships. They allow us to start thinking about farm advice not as an end product, but as an ongoing process. Somewhat counter to the client-centric model that a pluralistic, neo-liberal approach to farm extension promotes, the farmer is not the decision making centre of this process, handling and organizing the inputs from the various advisors. Sometimes one person – maybe the farmer; maybe a professional advisor – is framed as the focal point of this work, to simplify matters and help frame a situation. In other words, advisors and farmers are engaged in heterogeneous engineering (the assembling of many different material, textual and conceptual elements into a network; Law, 1987) but there is no single grand designer overseeing the process. The advice, the agreement, the decision, the management plan, is an assembled thing in which multiple people are entangled and all come away changed in their relationships.

Field expertise manifests in the ability to achieve such complex outcomes. It is tied to relational practices that mix the mutable and informal of the local (the expert's patch) with the formal, the immutable, and the fixed points of external order (digital data, legal agreements). These practices involve both devices that standardize the heterogeneity of the field (such as the FEP and Genesis) and forms of field working that exploit the flexibility of the field to implement standards. Thus, the work of those we began by labelling as field level advisors involves far more than the straightforward provision of advice. Viewing the work of advisors through the lens of field expertise highlights their collective position as a significant organizing force in the contemporary land system.

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