I hope you are feeling uncomfortable now: role conflict and the natural resources extension officer

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Summary
There is an implicit social contract between farmers and their advisers. A key clause of this contract is that advisers will provide information and advice that is of benefit to farmers. Historically, when the role of government-employed extension in Australia was primarily to promote the adoption of practices that were intended to increase the profitability of farms, it was relatively easy for advisers to comply with this contract. However, the shift in emphasis of government-funded extension away from productivity and towards conservation outcomes has made it more difficult. Advisers now can find themselves in a position where their employer or funder demands that they promote activities that they and farmers know are not compatible with the farmer’s goals. The result can be a loss of credibility and trust, with important implications for the way that extension agents are viewed by farmers. They are unlikely to be allowed to participate in farmers’ decision making in a supporting role, or even to help farmers evaluate information. Rather, they are limited to providing information that other more trusted individuals assist the farmer in evaluating this information and deciding how to respond to it. Thus, government extension has evolved into a less influential activity than it once was. To counter this, funders need to develop more sophisticated strategies that acknowledge and integrate conflicting farmer and government objectives. The alternative is for their extension service to lose relevance to the farming community.

Introduction
One of the strangest meetings I have ever attended was with a group of pasture and grazing industry extension staff seeking to understand why they were expected to advise farmers to do something that made no sense. Most farmers would agree that advice to sow perennial pasture during a prolonged drought is generally bad advice. These extension staff felt they were being asked to give such advice to justify their employment.

No-one set out to create this situation. One could say it was an emergent outcome of this particular funding program and its associated organisational structure (Bella 1997). To understand it required following the money trail. Although the extension staff were paid by their employer, a State Department of Agriculture, the money came from a catchment body together
with a contract to promote the sowing of perennial pasture. The catchment body was interested in the salinity and erosion control benefits of increased perennial pasture coverage in the catchment. This increased coverage was to be achieved using a combination of persuasion, demonstration and incentive payments. The catchment authority was but one intermediary in the money trail. The money came to the authority from the Federal Government under a national conservation program. Like any national program, the ultimate funding source had accountability requirements that were passed down the chain. The national funding body was under pressure from an audit office report questioning the effectiveness of the program. By the time this pressure reached the extension officers, it was expressed as an expectation to achieve a fixed area of newly sown perennial pasture for each year of the project. Accountability reporting was an annual occurrence.

Unfortunately, severe drought arrived in the midst of this project’s delivery timetable. The target audience understood that any money invested in sowing would be wasted and would increase the financial pressure on the farm business during a difficult season. Extension staff who advocated the sowing of pasture to managers of drought-stricken farms would damage their local credibility. The pressures of annual reporting placed the extension officers in an impossible position of having to defend their failure to achieve annual sowing targets to the catchment body. The unfortunate message they inferred was that they should be concerned only with the objectives of the funding agent, rather than take account of the situation of the farm community in drought. But one could not conclude that government was not interested in the welfare of farmers, farm families and farm businesses during the drought. Other federal funding programs were providing financial support to the same farm community during the drought.

One can allocate responsibility for this situation at a number of steps along the funding chain. Perhaps pasture adoption was not the most effective investment available to the catchment body to help it achieve its objectives. Perhaps extension investment was not the most effective strategy for achieving the pasture adoption objective. Perhaps the objective of extension investment needed to be justified on the basis of building the capacity to sow pasture when suitable seasonal conditions returned. These questions are discussed in the recent Australian literature on targeting natural resource investment (Pannell 2008). This chapter leaves these questions for others, and instead examines the transformation of the role of the extension officer as government priorities have shifted from agricultural production to conservation.

This chapter starts with a short exploration of the nature of the perennial pasture innovation. It then recounts some important research into the advisory relationship. Some of this research is now more than 20 years old. Despite the age of this research, it offers some useful insights into the nature of the social contract between farmer and adviser. This social contract sets the bounds of reasonable performance expectations of any investment in advisory services.

**Conservation and complexity**

Early in my career I found myself working in a program promoting dryland lucerne for watertable control on the riverine plains of northern Victoria. The simple message of the program seemed to be ‘plant lucerne; it will solve your watertable problems!’ Fortunately, there were other advantages to growing lucerne. It was potentially more profitable than the usual pastures of the area. However, at that time only a few farmers grew significant areas of dryland lucerne (Ransom and Barr 1993). It took an explanation by the local lucerne system specialist for the problem of complexity to become apparent. What looked like a simple act of sowing an alternative pasture was potentially the first step in a transformation of the farming system.
Farmers sowing lucerne did not have a guarantee they would produce a successful crop. The chance of failure was greater than for most other pasture species. One way to minimise the financial risk of establishing lucerne, and to make up for time a paddock may be out of production was to sow lucerne with a faster growing crop such as safflower. Farmers following this strategy had to learn to grow new crops which were more compatible with lucerne (Barker 1992).

Lucerne requires rotational grazing management. The majority of farms were managed with a regime of set stocking. Wool-producing farms typically ran three flocks: ewes, weaners and wethers. Some ran an additional flock of maiden ewes. Under the four-paddock rotation system recommended for dryland lucerne, a farm keeping the same flock structure would need 12 or 16 paddocks. For farms previously ‘set-stocked’ this implied additional expensive fencing and more dams and water reticulation to provide watering points in each paddock. Fencing at this intensity was likely to impede the easy management of cropping activity on the farm. Only larger farms built up over a number of farm amalgamations had an existing paddock structure suitable for rotational grazing. Farmers sowing dryland lucerne needed large farms, or needed to rethink their flock structure.

Lucerne pasture is more productive than normal pasture, but wool producers did not make money merely by growing more pasture. More sheep would be required to utilise the extra pasture (Ransom 1992). The increased flock size required extra working capital, more work in sheep handling and an increased workload of rotational grazing. Higher sheep densities in paddocks may mean a greater need for control of intestinal parasites and increased use of veterinary chemicals or greater attention to rotational grazing systems to minimise parasite infestation (Coffey 1992).

One means of maximising the benefits of lucerne is to abandon lambing in autumn in favour of spring lambing and convert to prime lamb production. This meant a need to further rearrange the farm timetable. Shearing would probably be moved to after the harvest season and before sowing. The risk of grass seed contamination would increase. Grazing rotation strategies to minimise this risk were needed. To maximise the benefits of prime lamb production, the farmer would need to develop new marketing skills and develop relationships with export abattoirs.

Most farms in the region were mixed farms. These changes to the grazing side of the enterprise needed to be integrated into the cropping enterprise. Growing lucerne can mean major changes in crop management. How does the farmer combine the new grazing rotation with the crop rotation side of the business? Whereas an annual pasture may have been grazed for a couple of years before cropping, there are good reasons to maintain a lucerne paddock for its full eight-year life after successful establishment. Consequently, the farmer may have to crop paddocks elsewhere on the farm for a longer period before putting them back into pasture. Forestalling the depletion of soil nitrogen inevitably meant introducing grain legumes and oil seeds into a rotation system that was predominantly based on wheat and pasture. This required improved cropping skills, marketing skills and probably investment in cropping machinery and on-farm storage for each crop.

Clearly, the ‘simple’ decision to sow dryland lucerne was not all that simple. It implied complex changes to the farm management system and necessarily entailed greater risk in the conversion period. There were many issues to think through, and only some of the changes were capable of being tested using discrete farmer experiments. In short, this was an adoption decision that required deep thought and assessment of conflicting information. There may be significant and undesirable consequences for the farm business if it did not work out.

Adoption of farm innovations with these characteristics is never fast. It may take a generation between first experiments and widespread adoption across a farming region, as has been the experience with conservation cropping. During this period there will be phases of
disadoption as new problems with the system are discovered, and re-adoption of these practices as those problems are solved (Pannell et al. 2006). The role of the extension agent in promoting such technologies is complicated and subtle.

### Making decisions as a social engagement

In the 1980s a graduate student of agricultural extension at Melbourne University undertook a longitudinal anthropological study of the process of farmer decision-making. Tom Phillips conducted multiple interviews during a year in the life of a number of dairy farmers who were thinking about big changes to their farming business (Phillips 1985). This may have been the first rural ‘sense-making’ research in Australia.

Tom represented the decision-making environment with three concentric circles (see Figure 9.1). At the centre of the circle was the decision-making farmer. In the inner circle around the farmer was family and those who would share the consequences of any decision. In the middle circle were trusted associates. In the outer circle were socially distant subject experts. The search for information to support a decision is shown by the arrows. In this hypothetical example, the decision maker starts with a trip to an information expert in the outer circle, then confers with family intimates, makes another trip to an information expert, seeks help to evaluate the information in the middle circle, then returns to the inner intimates circle to consider the decision.

In a series of interviews with each farmer, Tom recorded the process of decision making. As well as documenting the decision journey, he asked farmers to identify and classify their face-to-face information sources, and then he mapped the information-seeking behaviour of the

![Figure 9.1. Tom Phillips’ conceptual model of decision making.](From Phillips 1985.)
decision maker between sources and confidents located in each of these circles. The average farmer undertook 30 learning projects in the year. Time available for learning was constrained. This meant time was allocated according to the significance of the learning project to the core values and aspirations of the farmer. For small and inconsequential decisions, the decision maker often undertook a quick assessment of the available information and made a decision. An example of making a decision about fencing and paddock subdivision is represented by Figure 9.2. In this situation, information providers are approached (LA, LB, DG, EODB), and one person (FM) is used to evaluate the information. The final decision making is done with three family members (F1, Fb, Fw).

For decisions that carried significant risks for the farmer, the process of decision making was generally long and extensive. Farmers invariably described these decisions as stressful. Research in cognitive psychology reveals that such decision making is uncomfortable, often less than rational, and embedded within the social support network of the decision maker. Most people dislike uncertainty, and when faced with a decision with high uncertainty and complexity, are likely to apply simple decision rules (heuristics) rather than find an optimal solution (Tversky and Kahneman 1974). Commonly used heuristics include the recognition heuristic (choosing the familiar) and the imitation heuristic (copy others). Humans also fear losses far more than they value potential gains (Kahneman and Tversky 1984). Faced with a complex decision with potential for significant loss, we humans have an in-built tendency to stick with social norms and the status quo (Samuelson and Zeckhauser 1988).

These human traits mean that the process of consequential decision making is more than just an information-seeking task. It is a sense-making task and a search for emotional support (Janis and Mann 1977). A decision about buying a block of land and building a new dairy shed

**Figure 9.2.** Petal diagram representing a decision about fencing and subdivision. (From Phillips 1985.)
is shown below (Figure 9.3). There were many excursions to the outer circle for information, but also significant trips to people in the inner and middle circles. I will refrain from describing the process for obvious reasons.

Decision makers undertake different tasks in each of the circles. In the outer circle, he or she is seeking information from many sources. There is more and more information available to farmers. How does one make sense of this information? The evaluation of the information is performed in the middle circle. Here it is evaluated, integrated and sense is made of the information. This task is shared with a small number of contacts. Finally, decisions are made in consultation with the inner circle. These are the people who will share in the outcomes of the decision. Here the decision maker is looking for emotional as well as intellectual support to evaluate the options against personal and family goals. The issues will not only be ‘will this work?’, but also ‘how will these people react to my decision, and will they support me if I make this decision?’

The more difficult the decision, the more the stages of information seeking and evaluation will be intertwined. The decision maker will engage in a series of sorties, engaging and re-engaging the personal support network and less intimate sources of information. The major decision will be preceded by a series of decision points along the way. At each of these points
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the decision maker will validate the decision with close or intimate contacts, with more time spent with closest contacts when the main options are evaluated (Phillips 1985).

For the extension (or practice-change) agent seeking to promote the adoption of complex system innovations such as lucerne, there is clearly greatest opportunity if one is included in the farmer’s middle circle of contacts where information is assessed and integrated. But an invitation into the inner circle must be earned by the adviser.

Another researcher provided some insights into who is included in this middle circle and why they are included. Anderson (1979, 1981) studied the characteristics of extension workers which made them more or less acceptable and credible to farmers. It was important for the advisor to be technically capable of taking a farm system view of any technology and to deduce practical options and assessments. The credibility of extension agents depended upon more than just technical systems competence. Just as crucial was that the farmer believed that the agent accepted the primacy of the farmers’ goals. Those who were seen as aiming to help the farmer work towards his or her objectives were trusted. Those with different agendas were not. It is easy to see that any extension agent seen as working towards goals irrelevant to or even in conflict with the farmer’s goals will at best be relegated to the outer circle of information sources, to be just one of many potentially competing information sources (Vanclay 2004).

Common goals

Many farm operators have common objectives – of being full-time farmers, of providing a reasonable standard of living for their families and passing on a viable farm business to the next generation. A farm that meets these objectives needs large enough scale to generate a cash surplus to provide an acceptable standard of living for the family (potentially supplemented with off-farm income from a partner), allow the building of financial reserves to smooth income fluctuations caused by commodity prices and climate fluctuations, and generate the capacity to invest in expansion and productivity improvement to keep pace with the declining terms of trade.

In my current work, I ask gatherings of farmers across Victoria about the scale of farm needed to meet these objectives. The belief is that one needs a farm capable of generating an annual gross income of approximately $400 000 during average seasonal conditions. The number varies according to the industry and the group. While these assessments are subjective, data from the ABARE farm survey supports this simple rule of thumb.¹

Figure 9.4 shows a time series of mean farm cash surplus and non-farm income for Victorian broadacre farms with a gross farm income of between $100 000 and $200 000. The mean farm cash surplus only rises above $50 000 in a couple of years. When non-farm income is included and if we assume the farm contributes to only one household budget, the average total annual income into the farm household over the past five years has been $61 000. This is a little below the median Australian household annual gross income of $68 800 in 2008 (ABS 2009). It is difficult to see how farms of this scale can enable a farmer to achieve the multiple objectives of providing an acceptable standard of living and allow for investment to mitigate income fluctuation and investment for future productivity increases. The long-term future for farms of this scale will include serial dependence upon government assistance during periods of low rainfall or low commodity prices. The long-term prognosis is that these farms will fall further behind as the terms of trade decline.

Figure 9.5 shows the same time series for farms with a farm gross income of between $200 000 and $400 000. The anecdotal benchmark for financially sustainable production lies at the upper end of the farm scale within this group. Mean farm cash surplus varied between
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$50 000 and $120 000, and was supplemented by a modest non-farm income. Over the most recent five years of the series, the average total annual income from cash surplus and non-farm income was $86 000. If we make the same assumptions about single household farms, we can equate this income to the 70th percentile of Australian household incomes. This naïve analysis suggests there is capacity to sacrifice some household income, maintain an average standard of living and make some investment in the farm and to smooth income volatility. The anecdotal benchmark of farmer groups suggests this is only really feasible for the very largest farms in this group.

Farm scale in Australia is strongly skewed. There are many small farms and far fewer larger farms. Figure 9.6 shows the distribution of farm financial scale in Victoria in 2006. Between 20 and 25% of farm establishments are on a scale that surpasses the anecdotal benchmark for long-term financial sustainability. In other words, three-quarters of the farms in Victoria fall below this benchmark. For many of these farms, we can generally assume that any decision to invest in farm technology raises trade-offs between the needs of the farm and need for household expenditure. Many of the smallest of these farms are managed by farmers in a form of retirement or by operators dependent upon off-farm employment. The owners of these farm businesses have little capacity to take on any business risk. Most of these farms are located in areas where land values are high, making farm expansion through land purchase an unlikely strategy (Barr and Karunaratne 2002). Because of age or off-farm work commitments, few are able to consider changes to their farm system that significantly increase labour requirements from either the owner operator or from hired labour. The only pasture innovations likely to be compatible with these farmers objectives are those with low cost, low risk and low complexity (Barr 1996; Barr and Wilkinson 2006). Promoting any other pasture system will probably conflict with many of these farmers’ objectives.

For farms a little larger in scale (between $150 000 and $300 000 EVAO), there is less dependence upon off-farm income and, in average seasons, should provide an acceptable
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However, these medium-sized farms have limited capacity to invest in farm development and expansion for a sustainable future. For many operators the objective is to

Figure 9.5. Farm cash income and total non-farm income for Victorian broadacre farms with gross income between $200,000 and $400,000 for the period 1990–2008.

Figure 9.6. Farm scale distribution and cumulative distribution for Victoria in 2006.
(Data source: ABS, derived from customised data tables from the 2006 Australian Agricultural Census.)
maintain viability for as long as possible, at least until retirement. All technology will be viewed through this lens. Technology with financial risk will be unattractive for many who judge they have minimal capacity to absorb losses from failed changes to their farm systems.

Serving two masters?

Extension providers fall along a spectrum between the counselling form of extension and ‘practice-change’ extension. In the counselling school of farm advice, acceptance of the goal framework of the farmer is seen as instrumental as a means of achieving an extension objective of improved decision making, and as a desirable ethical objective. During the 1970s and 1980s, this approach gained considerable influence in the extension profession with extension being portrayed as a ‘helping profession’ by its practitioners. The goal of the extension agent was to assist the client to achieve their goals through improved decision making. From this perspective, it was argued that measures of adoption were not useful indicators of extension success. The area of pasture sown was less important than whether farmers made sensible decisions as to whether to sow pasture or not. This philosophy of extension continues today amongst the Rural Financial Counselling service and private consultants.

This counselling form of advisory support delivered by government advisors was gradually withdrawn through the 1980s and 1990s as government objectives shifted from rural development towards the containment of agricultural externalities. Extension officers could no longer justify their activity through ‘improved decision making’ but through promises of tangible adoption outcomes that delivered wider public benefits. For a short period, the increasing divide between farmer objectives and government conservation advisors was addressed by projects that attempted to ‘change farmer attitudes’ (Barr 1994). Thankfully this approach is now discredited, though the cause of discredit has been its lack of effectiveness in changing adoption rates rather than any ethical objection (Cary 1994).

The phrase ‘extension’ is now being gradually replaced by phrases such as ‘practice-change’. This is at least overt in making it clear that the government extension officer’s objectives may be different to those of the farmer. The implicit admission of the potential for diverging agendas between government and advisory services inevitably makes the social contract position of the advisory officer much more complex. Funding accountability requires the government advisory officer (or the government contracted consultant) to be accountable to the funder for contracted outcomes, such as the adoption of perennial pasture systems. But to be effective in achieving this outcome, the officer needs to maintain a credible standing with the farmers working through this adoption process. And the key to that is to respect the objectives of the farmer. Role conflict is now likely to be an inevitable experience for the government extension agent.

Endnote

1 The anecdotal benchmark can be confirmed using ABARE Farm Survey data. One assumes that a farm operator has three basic objectives: to be a full-time farmer, to earn enough to provide a living standard commensurate with that of the rest of the community and to pass on a viable business to the next generation. Based upon the past decade, the farm income will need to keep pace with a 1% annual decline in the terms of trade and a 2% per annum real increase in disposable income in the wider community. Based upon linear regression relationships between cash surplus, capital and farm gross receipts, one can calculate the average scale of farm that is capable of meeting all these criteria. In 2008 this was somewhere approaching $500 000 gross receipts. A spouse working off-farm can lower this threshold to approximately $400 000.
References


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