

The Farmer's View: How Seeing the Local Landscape Defines On-Farm Conservation

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ABSTRACT

Farmers grapple with production mandates that restrict their ability to integrate conservation zones within their land management practices. This study was conducted to develop a participatory method for farmers to analyse their landscapes in relation to production and conservation values. A photo elicitation method was used, whereby local Landcare farmers on steeply erosive hillsides, took photographs of their 'most significant landscapes'. They then ordered the photos thematically and using Personal Construct Theory and narrative, analysed their responses to each scene. Voluntary compliance programs such as the government sponsored Landcare, introduce conservation values to the landscape, but are only partially effective because both Landcare and the farm focus remains on production. The long term landscape changes are difficult for farmers to relate to when immediate financial issues are pressing. New landscapes of agro forestry are advocated, but the long term realities of harvesting these steep areas remains unclear. Photo elicitation is a powerful tool for farmers and researchers to understand the respective views and it offers a reflective opportunity for farmers to consider how to change their landscape practices. Farmers are caught between the contrasting imperatives of conservation and production. A more explicit policy commitment is required to support changes to land management practices.

INTRODUCTION

This paper is principally about a photo-elicitation method that evolved because of a land conservation study undertaken in southwest Gippsland, Victoria, Australia. The study mainly involved dairy farms, and particularly Landcare farmers. The larger question underlying the study was how farmers interpret and manage their landscapes for conservation. In working with Landcare members, the study assumed that farmers participating, as members in the nationally funded Landcare program were aware of conservation values associated with their landscapes and farm management. Governments were necessarily anxious to know whether programs, like Landcare, lead to changes in farm management. Researchers often struggle to find appropriate and reasonable ways of measuring the effect of government policies at a local level. The method described here offers just such an insight into the decision-making

process at the individual farm landscape level. In analyzing their images of Landcare, participating farmers discussed the decision making process and their management strategies.

The first part of this paper provides a brief background to Landcare and to the study site. The second part explains the evolution of the method that developed among the farmers and its significance as a qualitative information source. The final section considers the implications for conservation and production values on farm landscapes, and offers the metaphor of landscape itself as a vehicle for changing practice.

BACKGROUND

The landscape of southwest Gippsland, Victoria, Australia is dominated by the rise of the Strzelecki Ranges. The Ranges originate in unwarped, faulted and extremely eroded Mesozoic sandstones and mudstones. Older basalt and minor amounts of Lower Tertiary formations cap some of these areas. The valleys are deeply dissected and of comparatively recent formation. They are steeply sloped and culminate in sharp pinnacles. Most of the soil is yellowish, friable, and porous. These soils are highly structured, strongly acid loams. There are some Krasnozems (Ferrosols) soils, which are also deep, friable, and permeable. The highest peak in the Ranges is 730 m. This geological structure underlies what appears to contemporary farmers to be an erosion prone landscape. There are clearly factors other than parent material influencing the tunnel; gully and landslip erosion profiles that are common in this area, but farmers associate such activities with living on 'duplex soil'. The 'duplex' association is described as comprising a first layer of usually shallow hard-setting soil over subsoil that may be stable most of the time but disperses easily when wet. This sits on top of the impermeable layer of original formation. Water tends to build up between the two layers, eventually contributing to landslips, and tunnel and gully erosion.

While contemporary images of the Strzelecki Ranges show rolling green hillsides with minute patches of forest vegetation, the European explorers of the 1840s encountered the Great South Gippsland Forest. It was a dense temperate rainforest, dominated by *Eucalyptus regnans* (Mountain Ash) and including tree-fern gullies of *Dicksonia antarctica*. The undergrowth in this forest was so dense that the explorer Count Strzelecki was forced to abandon his horses and scientific specimens. He struggled for 22 days through the forest and exited with his clothes in tatters and in a state of exhaustion (Noble, 1976). The impenetrable character of the

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Great South Forest kept European settlers at bay until the 1870s. The original selections were 130 ha, but most cleared only 40 ha, dependent as they were on manual tools and the use of fire to clear the forest (Noble, 1976).

Today's dairy farms on the slopes of the Strzelecki Ranges and the undulating plains emerging from these hills, are among the most intensively managed landscapes in southwest Gippsland. These family farms average 100 ha and herd size is generally 125 head. These family farms usually involve the labor of two adults, with support from other family members for various jobs. Australia wide, off-farm income is important to the ability of the family to sustain its rural existence (Lawrence, 1996). In the area of this study, the common pattern is for the woman to work off-farm, part-time.

While Landcare is a federally funded program under the National Landcare Program/National Heritage Trust, each state developed its program. The Landcare Program in Victoria is "the major focus for achieving sustainable land management; a partnership based primarily on community action and support from government" (DCE, 1992). The overall membership statistics for Landcare indicate that 25% of Australian farmers are participants. The commodity breakdown indicates that 19% of dairy farmers are Landcare members (Mues et al., 1994). In the area of this study, Landcare was initiated under a state government program called Farmcare, because local farmers considered Landcare to be too 'green', and not as production oriented as they required. Nonetheless, Landcare in the region involved a voluntary compliance, grassroots, community-based, production and conservation movement. The key objectives of local groups included the fencing out of creeks and gullies, the management of landslips, and tunnel and gully erosion, the planting of trees for revegetation corridors and the promotion of indigenous plant species for on-farm conservation areas. Landcare groups were encouraged to do whole farm planning emphasizing soil capability classes and connecting farms with central corridors. Many Landcare farmers were also involved in commodity based extension programs like "Target 10" for the dairy industry. This program emphasizes productivity goals such as growing 10% more grass per year. Therefore, while Landcare encourages conservation awareness and activities designed to change the management of productive landscapes (such as taking land out of production for alternative uses), farmers are constantly balancing this approach with demands for increased pasture productivity on the same farm.

METHODS

This research involved a longitudinal study over five years. This included attending all Landcare activities for the five Landcare groups in the study area. Field days and farm walks exposed a gap between Landcare ideas discussed at meetings and Landcare as it might be practiced on members' farms. In listening to the farmers talking during farm walks, it became obvious that each of them looked at the landscape from a different perspective and it appeared that these 'views' were critical to their management process. Landscape studies have long used photography as a tool for explaining research, analysing management strategies, and

using public participation to validate particular landscapes for preservation or creation (Emmelin, 1996; O'Riordan, et al., 1993; Whitmore, et al., 1995). Brandenburg and Carroll (1995) use landscape photographs to review citizen responses to resource management issues. Moore (1997) uses photographs taken by farmers in the wheat belt of Western Australia to 'provide immediate and efficient access to place as perceived by farmers and their families in relation to their lands'.

The idea of 'landscape' as a tool for conservation is a simple one. The cultural context of 'landscape' derives largely from a Western alienation from agricultural lands as citizens migrate to urban environments. This exodus reinforces the objective characterization of landscape as something to be viewed, and the viewer is external to the scene. However, for farmers, the landscape is something that they construct through their farm management regimes. It is in fact, as Samuels (1979) suggests, their biography. Connecting life stories to landscapes empowers those that live in them to see how their personal decision-making processes affect land management (Beilin, 1998).

Visual sociology, based on an ethnographic foundation, encourages the integration of photograph and commentary. This process of qualitative interview and narrative explanation is called 'photo elicitation' (Collier, 1967; Harper, 1987). The photograph and not a researcher's question, becomes the focus of the discussion (Harper, 1986). The responses of the informants extends the possibility that the researcher can build on proffered answers to approach a more meaningful understanding of the areas under discussion. The act of collaborative research is strengthened through the listener's participation (Forester, 1989). The narrator of the photographic 'story' is encouraged by the images to explore previously 'taken for granted' understandings, which can be quite confronting for the subject as well as the researcher (Harper, 1994).

In this study, landscape photographs and the photo-elicitation process were linked. In keeping with the Landcare rhetoric, the photographs were to represent the farmer-centric view. Therefore, 'the photographer's gaze' had to be that of the farmers themselves. In this way, the photographer both objectifies the landscape scene through the process of the farmer taking the picture; and in recognizing and analyzing the subsequent photograph with the researcher, the farmer interprets the scene as both personal and subjective. To assist in ascertaining levels of significance in the series of twelve photographs taken by each farmer, a modified form of personal construct theory was used (Kelly, 1955; Dalton and Dunnett, 1990). This involved grouping the photographs into farmer designated thematic headings, and then ordering each group into levels of significance. All the photographs were thus prioritized and ranked.

Marvin and Stan, father-son farming partnerships comment on one of the farm creeks.

Marvin: "The creek changes over the years we have been here. That part of the creek at one time was level. We had one big flood five years ago and it seemed to fill in what was steep and cut out new bed for itself as it went down. Now the ground along the new part is unstable.

"There is very little you can do in land management



Photograph 1. Stream erosion.

terms that is good farming practice there. You could let the blackberries grow all along it and they would hold the land together, but that is not good farming practice. They say plant trees along it, but I've seen where the trees are planted and the water undermines it and they fall in. Big trees. It isn't taking up so much of productive land...but it is a nuisance. Our animals cross the creek on bridges."

Stan: "It is going to be a big problem one day because the Grand Canyon started from something!"

An intergenerational farm (Photograph 1), inherited by Marvin from his father seven years ago, when Marvin was 50. Stan is Marvin's 27-year old son. Father and son are the only workers on this 180 ha farm with 240 dairy cows. The discussion on stream erosion reflects Marvin's perception of the inevitability of erosion in these hills. He attends Landcare meetings regularly, but his practice indicates he is not convinced about fencing out creeks nor about planting trees, two cornerstones of Landcare. Stan recognizes the threat from erosion, but is not in a position to influence his father's management of it.

Marvin and Stan consider a recent landslide on their farm.

Marvin: "This shows how the land can move. There is very little you can do with them...It moves slowly each year and the cows get stuck in it...It just has to take its course unfortunately. Unless someone can find a way to let the water out from under it.



Photograph 2. Landslip on cleared land.



Photograph 3. Tree planting in the gullies.

Stan: "There is one big old tree holding its spot. When it was all bush and forest it stood a fair chance, but as grazing land, one tree will hold its little patch if it gets established, but the roots going out won't hold any more. Which means, I suppose that it could be a forest...but it isn't very sustainable either—not as far as people, eating."

Stan muses on changing management regimes (Photograph 2). He remembers that the site was a forest, and that agroforestry offers a possible alternative to continued landslips. His concern is that an agroforestry income won't be sufficient to let him stay on the land.

Gary, a beef producer anticipates a new look to this landscape.

"These landslips well you won't be able to see them any more. It is an important sort of thing to do. You know, the visual effect. It is too soon to know if the trees in the gully will stop the slips or stabilize them."

Gary and Denise are also intergenerational farmers (Photograph 3), with three young children. Gary has been president of the local Landcare group for seven years. Gary remembers his father plowing this hillside ready for pasture when a big storm occurred and washed all the topsoil away. The result is a paddock subject to severe landslips. Now planted to agroforestry, Gary is unsure whether this will stop the slips. It is also unclear whether the timber will be harvested because of the steepness of the site. The other drawback is that the area is treacherous to manage and the value of the timber depends on early and continuous maintenance of the site.

William believes that agroforestry is a solution on his rented farm landscape.



Photograph 4. Landslip catalyses farmer action.



Photograph 5. Rethinking tree placement on steep cleared land.

"This 10 year old landslip is significant because it was the inspiration behind the beginning of an agroforestry site."

William is a share farmer (Photograph 4) who convinced the landowner that agroforestry was a potential income earner on these degraded hillsides. The farmer runs sheep, and the sheep graze under the established trees. Sheep are excluded from the younger sites until the branches are out of range. Nonetheless, animals can do significant damage to plantations and the quality of timber is often affected. William's hope is that the trees will remain because he sees their value as re-established forest cover.

Jessie noted how photographing the landscape of her farm for the study made her analyze past, present and future responses to such scenes.

"I was preoccupied by this (a landslip) at the time I was taking the photos. At the time (they occur), it is almost like they are flesh wounds or something...running sores. There are so many little sloppy areas like that, I would probably more strategically put trees across the top of the hill somewhere to reduce the water in the recharge area. So I probably wouldn't go chasing those landslips. We have in the past, but we wouldn't so much now."

Jessie emphasizes the value in planting in the recharge area on the top of the hillsides (Photograph 5). The reality is that this is very productive land, and local farmers are reluctant to take this grazing area out of production. Jessie indicates, as do several other farmers, the personal involvement farmers feel with the look of their land. The slip is like a 'running sore' to her, endlessly challenging the production-management strategies for the farm.

Deborah and Roger manage their dairy farm together and with the aid of a volunteer youth group have attempted to revegetate an enormous and badly eroded gully on their farm.

"It is a big landslip and gully and horrible area—and we have fenced it off and we've planted 1000 trees in there."

Deborah and Roger indicate the amount of energy required to combat erosion in these hills (Photograph 6). A thousand trees requires that there be pre-planting herbicide treatment, newspaper mulching, hand planting of a 1000 tube stock plants, follow-up weed management; and all of this as a part of the everyday work routine on their farm. In



Photograph 6. 1000 trees.

conservation zone of some significance, but the immediate reality is that it is a management nightmare in a region heavily infested with noxious weeds. These sites are vulnerable to weed seed build-up and there are no on-going management funds allocated through Landcare to care for such sites.

DISCUSSION

"Landscape is a frame for discourse that encourages the development of metaphors, and which enables the exploration of old topics in new ways, and which may provide the framework for construction of new theories," (Morphy, 1993).

The photographs provide a landscape sociology of farming in a difficult and highly degraded terrain. While governments are concerned to develop conservation programs that will counter continuing land degradation, farmers are anxious to remain productive and thereby stay on their landscapes. Both government and farmers share a desire to understand conservation as a solution to the degradation they can see on their farm landscapes.

The photo-elicitation process allows farmers and government an insight to the decision-making processes. It was not intended to evaluate Landcare *per se*, but in reality, it offers an understanding of how farmers perceive Landcare at a grass-roots level. As farmers analyze their photographs, they define 'conservation' on their farms. The photographs clearly identify the overwhelming production mandate of these hill farms. They emphasize the 'look of the land' and management responses. The sub-text addresses the voluntary character of Landcare, where farmers can opt not to participate or rather to participate in meetings but not change their practices. The study demonstrates that changing landscape management practices is complex, but a lack of financial incentive to change leaves conservation secondary to production within the Landcare program.

CONCLUSIONS

Fifty years ago Aldo Leopold (1949) wrote, "we asked the farmer to do what he conveniently could to save his soil, and he has done just that, and only that"; and, "in our attempt to make conservation easy, we have made it trivial". Leopold highlights the concern that government sponsored

voluntary compliance programs are not effective, because their voluntary character suggests that conservation is optional. Farmers in this study face extremely difficult and degraded landscapes. Their analyses of the photographs indicate they know the options are limited. But without significant support from government, support that balances the productive capability of their landscapes so farmers can afford to invest in alternative landscape regimes, and to fence out degraded areas, they are unable to act.

The photo-elicitation method offers a powerful insight to an aspect of Landcare that is not often discussed. It exposes not just the landscape, but also the restrictions to change. The result is to pose the question as to why Landcare has not challenged the current production mandate and supported conservation values with a more deliberate approach to changing the landscape.

The photo-elicitation method demonstrates the close link between the everyday work of farming and the production mandate. The landscape is not an object 'out there' for us to gaze at and accept as an apparently static fact. By contrast, the landscape is a construction that in the context of this study represents internationally accepted production systems and imposes them on local landscapes. In Australia, we have seen that these systems need to change if we are to have a local future on the land. If, as Eaton (1990) says "the landscape is a signpost of what a culture values", then we must quickly turn our attention to creating landscapes in which conservation values, alternative land use regimes and more diverse landscape patterns dominate. In assessing the on-ground reality of policies whose rhetoric appears to offer change, the qualitative insights evolved in this study, offer a confronting reality. The challenge these farmers face is also a test of our integrity as a society in making the rhetoric meaningful.

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