An exploration of language for biodiversity and regeneration in Australian agriculture

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Contents

Abstract. The language of words is the most commonly used tool in person to person communication and this in turn, profoundly reflects and creates an individual's belief systems and behaviours. In the arena of sustainable production systems for food and fibre and the 'management' of natural resources, there is a plethora of information provided by organisations dedicated to researching and communicating new land use methods for farmers to implement. However to date, the uptake of new methods has been frustratingly low resulting in the on-going degradation of Australia's fragile landscapes while exploitative farming practices continue. A key issue is whether the language of current policies is appropriate to influence the belief systems of decision makers in exploitative agriculture in order to achieve a shift towards more sustainable and regenerative outcomes. Research is currently in the early stages to distinguish the different 'languages' present in Australian culture, especially in ***agri-culture***. Initial evaluation reveals that the hegemonic language is economic rationalism (hereon known as 'eco-rat') emanating from neo-liberal economic policies. 'Eco-rat' is characterised by espoused masculinity, *viz.* competitiveness, control, reductionism, power and domination and is counter-productive to sustainable production practices. Conversely, the language of sustainability and regeneration is feminine - nurturing, holistic, supportive and nature-cyclical. An integral component of this research is to identify specific paradigms in Australia that characterise exploitative (industrialised) farmers and paradigms that characterise regenerative / conservation landholders. A key characteristic of such paradigms is the level and extent of each person's vocabulary, building on Wittgenstein's notion that "*the limits of my language are the limits of my mind*". Are there differences between the vocabularies of landholders engaged in regenerative farming compared to those who use more industrialised methods of production? For example when contemporary advertisements for high input agriculture are analysed, farming is commonly portrayed as a competitive 'battle'. In polemic essay style, this paper explores and characterises the underlying belief systems and vocabularies that perpetuate the paradigms of 'stubble-burners' in broadacre cropping enterprises, and compares these to those of regenerative farmers – with the implication that these distinct paradigms can influence the development of very different land use practices.

Keywords: agricultural belief systems, emotional learning, gender attributes, agricultural expectations, holistic, eco-literacy, economic rationalism, agro-ecological paradigms.

Introduction

In polemic style, this paper creates a background to research currently being undertaken into the power of language in shaping and expressing exploitative versus regenerative paradigms within Australian agriculture.

Language is our primary communication tool and we use it without conscious effort. Speaking is a survival skill which we continue to practice frequently so we tend to take the process of thinking and articulating for granted. Language is a part of our organism and no less complicated than it (Wittgenstein 1958). The actual words we use are paramount in establishing *and endorsing* our belief systems which in turn underpin our actions and behaviours.

When you take a slow-motion view of walking there are four distinct processes, or stages, in the action of one footfall. The first stages sees the heel touching the ground, then the lateral or outside edge, followed by a slight inward rocking so the ball of the foot makes contact and finally, the toes touch down and launch the foot forward into the next step. Until you see all this in slow motion, it is difficult to appreciate the number of minute movements and stages that constitute the final outcome – locomotion.

Speaking, verbalising, 'gas-bagging', bragging, gossiping, explaining, describing, talking, arguing and discussing, all occur very easily for us and almost effortlessly as we are so practiced in applying them.

To understand how this happens however, requires the intrusion of a slow-motion camera into our brains.

To express a thought, an idea, a concept, an opinion, a fact, our brain rapidly goes through a series of processes and, depending on the familiarity of the subject matter, this happens with seemingly little effort. Actually describing this sequence nevertheless is quite challenging, since the use, say, of formal medical jargon detracts from the insights that might be revealed. So, imagine a scenario instead, someone organising three children for breakfast on a school morning:

"Do you know where my homework diary is?"

"On the dining-room table."

"OK."

"Has anyone seen my lunchbox?"

"It's in the kitchen with your lunch in it."

"Thanks Dad.'

"How can I use the word '*extirpated*' in a sentence?"

Silence.

Whereas all the other words used in this scenario were familiar and often used, what does that word, *extirpated* mean? If I haven not heard of it before, how can I possibly use it or wrap thoughts and ideas around it?

The German philosopher, Wittgenstein (1958), asserted that '*the limits of my language are the limits to my mind*'. The example above illustrates this quite clearly. Yet vocabulary is but one element of a broader collection of factors that influence the way a person thinks and acts, particularly in a setting where a community of practitioners operates. In the 1960's, Thomas Kuhn developed the notion of a "paradigm" to characterise his relativist view of how communities of scientists operate (Kuhn 1962). A paradigm represented the way any particular community of scientists functioned to "see" their practice of science and it embraced:

- a shared vocabulary;
- specific gender experiences;
- shared examples of good and bad practice in defining and solving problems;
- shared devices for teaching the paradigm; and
- shared values which define the bounds of legitimate activity.

Kuhn's notion of a paradigm has since been widely extended to depict non scientific communities of practitioners who hold a particular mindset and values that guide and characterise their shared activity. It is proposed that the paradigm framework can be adapted within this research to distinguish the approaches of exploitative versus regenerative farmers and that characterising the distinct belief systems of these communities can lead to new communication approaches for achieving a shift towards more sustainable and regenerative outcomes.

Scientists are often guided by *tacit knowledge*—knowledge acquired through practice which cannot be articulated explicitly (Polanyi 1958). Research by the author/s has commenced with the aim of exploring a similar scenario with regenerative and industrialised farmers in the Australian context. There appears to be a distinct shift from one paradigm to another since many of the regenerative farmers once fell into the category of being heavily reliant on synthetic inputs. It is these shifts which are also being explored together with the details of how, when, why and what occurred that predicated those shifts. The use of narrative and conversation methodologies to collect 'stories in their own words' from both groups of participants will provide an unstructured situation for the collection of vocabularies. The content of these will then be analysed to compare lexicons of 'eco-rat' and ecological-literacy and ascertain the influence of language on subsequent attitudes and actions.

The acquisition of a 'new' literacy, especially an eco-literacy (Pretty 2003; Capra 1999) was fundamental in people being able to imagine another 'way of doing things', of seeing the world through different sets of eyes; to appreciating there was more than one 'right' way of achieving outcomes.

'Unfamiliarity is much more of an experience than familiarity' Wittgenstein (1958)

Attributed male-gender characteristics

To discuss the *status quo* of a situation, it is necessary to know the stages of its development, implementation and maintenance and in this regard, exploitative, industrialised farming has a distinct background. Cartesian mechanistic theories, reductionist science, the laws of thermodynamics and then economic ideologies based on these theories, have produced a shrewd structure of technology-driven farm production that promotes reliance on continual applications of purchased inputs (Jackson 1991; Diamond 2005) These inputs, coupled with the strategy of producing 'more of the same' known as commodification is resulting in*:*

- increased demands on dwindling soil capital;
- the loss of farming family enterprises;
- desertification;
- soil acidity;
- salinity;

- overgrazing;
- man-made droughts
- loss of habitats and biodiversity; and
- lower equity and incomes for those remaining and attempting to do more of the same and expecting a different result.

(Diamond 2005; Scott 2005)

What do the above have to do with language and our actions? The short answer is – 'everything'.

To use an example and strategy from advertising, a repeated message is far more likely to be remembered than one heard or seen only once (Kotler, 2006). Repetition works – (just think of the constant request from children for something they may have seen on television or that one of their classmates now has). This is known as 'pester power' in marketing practice (B & T 2002, 2005) and now commands its own range of tactics in advertisements and promotions to eventually reduce parents to the point where they succumb to the child's never-ending demands for something the child simply 'can't live without'. The repeated request is finally responded to by the parents and a purchase result is forthcoming.

When analysing the application of eco-rat language of agri-culture today, the prolonged use of 'pester power' is occurring with repeated messages from agri-chemical companies, commodity agencies, farmer associations, some Research and Development corporations, and some politicians and economists about the need for 'higher productivity and efficiencies' as the solution to competition and declining terms of trade (Single Vision 2004; Main 2005)). Driving this continuous demand is the hegemonic ideology of neoliberal economics through which the free-market economy is the 'shining jewel' (Davies 2004) and globalisation the de-humanising outcome.

But what is this 'language' and what are its characteristics? The following words and terms are used constantly in agribusiness, a slave of the free-market economy:

- waste
- bottom line
- financial performance
- risk management
- corporatisation
- power
- cost cutting
- yield
- management
- labour
- competitiveness
- efficiencies
- ownership
- commodities
- raw materials
- agribusiness
- eradicate
- terminate
- dominate
- units of utility
- aggressive marketing
- inventory reduction
- economies of scale
- control
- ''Bullet proof' (advertisement for ATV)
- 'Muscle in now' (Mazda *Bravo* advertisement)
- 'Middle Weight Champ' (tractor advertisement)
- 'Built Tough' (Pacific Seeds canola advertisement)

As Starhawk (2004) comments, '*when we use language that fits into the established framework of the culture, when we try to make our ideas respectable, we limit what we can say and think*' and perpetual use of this lexicon reinforces the established mindsets. Similarly, *'certain fixed standards of our expression prevent us from seeing facts with unbiased eyes which force us to think that the facts must conform to certain pictures embedded in our language*'. (Wittgenstein, 1958)

These listed words are also typical of masculine gender-characteristics with a win-lose focus. There are clear losers in this 'battle' of farmers making an income 'against' the odds and elements; the losers are:

- the once-endemic and flourishing species of flora and fauna;
- the rural communities with dwindling populations;
- the children of farming families who feel unable to pursue that option;
- rural and regionally based enterprises and their synergistic relationships with landholders.

The winners on the other hand are the multi-national agribusiness corporations who tirelessly pursue their profits via the eco-rat 'mantra' outlined above.

With the continuing destruction of eco-systems from industrialised farming practices, even the medium-term future appears bleak. The goal of the Millennium Ecosystem Assessment (MEA 2005) was to establish the scientific basis for actions needed to enhance the conservation and sustainable use of ecosystems and their contributions to meeting human needs. Because the basis of all ecosystems is a dynamic complex of plants, animals, and microorganisms, biological diversity (or biodiversity, for short) has been a key component of the MEA. The MEA recognizes that interactions exist between people, biodiversity, and ecosystems. That is, changing human conditions and actions drive, both directly and indirectly, changes in biodiversity, changes in ecosystems, and ultimately changes in the services ecosystems provide. Thus biodiversity and human well-being are inextricably linked.

'Our ordinary language, which of all possible notations is the one which pervades all our life, and holds our minds rigidly in one position…..'
Wittgenstein, 1958

Attributed feminine-gender characteristics

To initiate a change from technology-based industrialised production to regenerative-focussed systems, a logical component to alter first is the language used in agri-culture. Such an alteration provides a means for reshaping the exploitative paradigm framework (Diamond 2005) and offering practitioners an alternative standpoint. A worthwhile place to begin is to adopt and implement the following culturally accepted views of feminine gender-characteristics (Tarnas 1995; Starhawk 2004), namely –

- Nurturing
- Caring
- Patient
- Passive
- Mediator
- Gentle
- Consistent
- Observers
- Supportive
- Nature-cyclical
- Menders
- Co-operative
- Curious
- Team players
- Compassionate
- Synergy
- Emotional
- Symbiotic
- Sympathetic
- Empathy
- Respect
- Trust
- Facilitation
- Instinct
- Fertility
- Mystery
- Ambiguity
- Pluralism
- Freedom
- Abundance
- Justice
- Diversity
- Resilience
- Complexity

Having an attitude of 'making a living *with* the land' as opposed to 'making a living *from* the land' (Roe & Hoogland, 1999) implies quite different practices simply from the alteration of one word. The nature of the relationship between the human and the land takes on a significantly different approach here and extends to one of co-operation and co-existence (feminine) rather than one of coercion and intimidation (masculine).

The account of Colin Seis (Scott 2005) and the transformation from high-input production to creating an innovative pasture cropping system on his property *"Winona'*, indicates the differences in his language from the late 1970s to the present:

- The measurement of tonnes of fertiliser per hectare has been replaced by measuring tonnes of organic matter;
- The stocking rate now includes sheep, microbes and earthworms;
- Fungi are no longer pests to be sprayed into extinction; mycorrhizal fungi are excitedly welcomed as an indicator of soil health and function;

- The scope of the soil food-web is enhanced with the re-establishment of birds, reptiles and plants that once thrived in this area but had been forced into dormancy and re-location by previous inhospitable treatments of the soils and vegetation;
- The accumulation of soil carbon (new term) is increasing exponentially now that perennial grasses can truly express themselves – and be perennial!
- The wealth of life in the soil is treated with awe and respect as previously unknown systems are steadily increasing the available nitrogen;
- Plant health rather than plant yield is the primary focus since one follows the other…….. when given the chance.

Identity

In Australia, there are quite distinct groups of primary producers even within the same industries. When meeting people for the first time who generate their incomes from / with the land, their definition of themselves is frequently based on their occupation.

"I'm a wool grower"

"I'm a wheat grower"

"I raise beef cattle".

"I have a cropping enterprise."

"I'm a farmer's wife."

When one's identity is based on a familiar 'group', there are subtle and subliminal pressures to dress in a certain way, and to behave, speak and think in a particular manner in order to be recognisable *and accepted* within that grouping.

To alter one's identity, especially within a peer group, can be very difficult. To become a 'harvester of sunlight and water in order to grow grass' (Savory, 1999) instead of being a wool grower, suggests an almost 180 degree shift of focus. The language has altered with the identity transfer, with the new focus of energies *and with the altered management practices.* However, the primary goal is still to raise sheep to grow wool but with a subtle change; the focus is now on creating and facilitating the most optimum conditions for that to happen by ensuring the stocking rate does not exceed the carrying capacity and being willing to sell off stock if the property is unable to produce enough fodder to keep the stock in a Score 3 condition.

For broadacre croppers, size of machinery matters (economies of scale) and there are self-confessed 'recreational tillers' who simply love machinery and the ability to transform, in a very serious manner, the landscapes. How can one be a cropper without machinery? That doesn't fit the prescribed identity and unless there is an on-going 'battle' with broad-acre weeds, or mites, or 'take-all', or wheat mosaic virus…….. there is nothing to actually do! To fulfil one's own (and ascribed) identity, there are various *accoutrements* one needs to fulfil that image and expectation. Breaking out of this mould to become a 'soil carbon sequester' by growing perennial pastures and direct drilling cereals into them, requires a totally different identity together with a vocabulary to achieve that shift.

Conclusions

'When we live in our memories, we recreate history. When we live in our imaginations, we create the future'. Scott, 2000

Fear is probably the most profound barrier to change – a common sentiment is *'I don't mind change; I just don't like being changed'.* Fear will keep us rooted to one spot, afraid to try something different, remaining risk averse and erecting barriers to anything with which we are unfamiliar. If change is externally imposed, we are certainly more resistant. However, if we initiate the change, we are in control of the process.

If we spoke a different language, we would perceive a somewhat different world (Wittgenstein 1958). As mentioned earlier, incorporating new and other elements and words into our lexicon is an important starting point. Below are some examples:

We need ways to encourage regenerative practices, to smile with passion and emotion on our exquisite landscapes, speaking words of gratitude for the abundance we are blessed with; replacing fear with awe and respect; seeing and feeling the world from the perspectives of wasps, bees and trees; imagining what it is like surveying the realm from an eagle's and cockatoo's eyes; creating and nurturing habitats for many species and treasuring biodiversity;

Celebrating the rain with a feast from wholesome and nutritious food grown in your own ecological garden…. intuitively knowing about health – your own, your family's, your animals, your soils and your ecosystems at all levels;

Developing symbiotic and respectful relationships with all living and non-living entities; experiencing the manifestations of spiritual awakenings that exhilarate and excite; feeling sincere fulfilment and profound satisfaction in co-existing with and regenerating biodiversity, social capabilities, and communities, and trusting and respecting your own wonderful and valuable self.

Altering and adding language changes attitudes and belief systems and eventually, actions and behaviours. Respecting and trusting Nature's wisdom and systems requires letting go of old beliefs that have enforced offensive action, movement, control and power. Studying the language of Nature can be a dangerous undertaking. To become literate in Nature's idiom, we must challenge our ordinary perceptions and change our consciousness. We must, to some extent, withdraw from many of the underlying assumptions and preoccupations of our culture. (Starhawk 2004) We must seek a notation which stresses a difference more strongly and is made more obvious than ordinary language to loosen our mental cramp. (Wittgenstein, 1958)

The research that has commenced will move forward with these ideas and seek to characterise the distinct paradigms that appear to exist as frames for exploitative versus regenerative farming in Australia.

We are often reminded "Don't just stand there, do something!' Are we brave enough to do the opposite and stop thwarting Nature's efforts? Can we ***not*** do something and just stand there instead?.

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