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EMERGENCE, COMPLEXITY AND SUSTAINABILITY: A STUDY OF THE ‘SUB-POLITICAL ARENA’

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Abstract

This paper aims to explore the phenomenon of emergence within complex multiple stakeholder networks that have developed around the aim of sustainable Landcare. Our empirical work indicates that these networks facilitate the emergence of organisational forms that are shaped by the tensions between two broad discourse coalitions. Each emergent form represents a coalition of interests and has a distinct discourse in relation to their interpretations of sustainable natural resource management. The finding informs our understanding of the phenomenon of emergence and has implications for the relationship between organisations in the multiple stakeholder arrangements often termed as crucial to sustainability and sustainable natural resource management.

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INTRODUCTION

This paper aims to explore the phenomenon of emergence within multiple stakeholder networks using the case of Landcare networks that have developed around the aim of sustainable natural resource management. Earlier exploratory work by one of the researchers (2005) identified the Landcare organisation in Australia as consisting of two discourse coalitions and proposed the distinction between the two sets of discourses as summarised in Table 1. Drawing from Hajer’s (1995) seminal work on discourse coalitions, this work argued that each emergent form represents a coalition of interests and has a distinct discourse in relation to their interpretations of sustainability in the context of natural resource management (XXX 2005) ¹.

Table 1: Story lines of Landcare

<i>Local</i>	<i>Regional</i>
<i>Landcare Coordinator</i>	<i>Community Support Officer</i>
<i>local</i>	<i>regional</i>
<i>landcare</i>	<i>Landcare</i>
<i>holistic</i>	<i>strategic</i>
<i>farm</i>	<i>catchment</i>
<i>local awareness raising</i>	<i>priority projects</i>

In this project reported on in this paper, we aimed to further explore this proposition in the context of emergence. That is, what are the more specific characteristics of the discourses that are associated with this emergence of two sets of discourses?

¹ Note authors name withheld for anonymity in light of review requirements

In following sections, connections and tensions between these emergent Landcare forms are situated within the multifaceted ‘sub-political arena’ of Ulrich Beck’s ‘risk society’ and explored through the lens of the complexity metaphor. We then turn to some empirical findings to illustrate the theoretical framework, concluding with a broad discussion, which will both signal future research directions and question the need for a cohesive organisational identity. Findings presented in this paper build on our earlier work of XXX (2005), present new qualitative data from a recent study of emerging relationships and provide theoretical inquiries for future analysis.

THEORETICAL BACKGROUND

The ‘sub-political arena’

The theoretical framework to the project is provided by linked theories of reflexive modernisation and ‘risk society’ (Beck 1995; Beck 1999; Beck 2002; Beck et al 2003; Beck, Giddens and Lash 1994; Giddens 1991). Beck et al (2003) categorise reflexive modernization as a distinct second and transformational phase of modernity: *the modernization of modern society*. As these scholars put it (Beck et al 2003: 1):

“When modernization reaches a certain stage it radicalizes itself. It begins to transform, for a second time, not only the key institutions but also the very principles of society. But this time the principles and institutions being transformed are those of modern society”.

The main focus of this theory is the increasingly self-critical nature of society as it learns to cope with its own side-effects such as the increasing threats and uncertainties of environmental risks and degradation. As society is disordered as a result of this critique, organisations too are required to open their boundaries. New forms of decision-making are ‘shaping society from below’ and their dynamics, and those of attendant disputes, are examples of the complex and often unordered ‘sub-political’ arrangements of the ‘risk society’

(Beck 1999, pp. 37-38).² In the 'sub-political' arena, the assumptions and prejudices of the different stakeholders are exposed to wider scrutiny and thus its formation is associated with the development of a reflexive consciousness.

These emergent organizational forms can be local and decentralized but can also occur at other levels. Their critical distinctions are their temporary nature and the fact that they involve multiple stakeholders in complex decision-making forums operating outside the representative arena. Importantly they have the potential to exert symbolic power with significant influence on both individual organisations and both scientific and industry macrocultures (Tsoukas, 1999).

The case of Landcare

Our case example of Landcare was chosen for study because it represents a complex organisation operating at the 'sub-political' level to which one of our researchers has access as a participant observer. Landcare is a networked, community-based organisation, committed to sustainable development and community awareness raising about the need for sustainable natural resource management. It has emerged in response to Australia's growing ecological crisis due to salination, loss of species and water wastage. In global terms Landcare is a unique organisation comprising some 4500 autonomous groups with highly variable backgrounds and rationales that are organised in networks across Australia. Local groups are loosely arranged in local networks and local networks in regional networks.

Landcare provides many examples of complex interorganisational arrangements. Governmental bodies are linked into the networks at both local and regional levels in order to provide funding and professional advice. The organisation is also linked with approximately 40 major corporations through sponsoring arrangements. Many of these collaborative arrangements are organised at the national level by the corporate organisation,

² Ulrich Beck uses the concept of 'sub-politics' to describe the decision-making, disputation and negotiation which increasingly takes place outside the traditional representative realm of politics. It involves new relationships and alliances in the management of society. It is the 'shaping of society' from below (Beck 1992).

Landcare Australia Limited. Other corporate links are to regional networks. Recent changes have witnessed a shift toward the regional level network where there are strong connections with business, political institutions and traditional community based organisations such as scouts, the Catholic Church and primary schools. These links are made because of the highly visible Landcare brand – the symbol of two linked green hands has been a major marketing success in Australia. In short - we argue that the Landcare arena can be classified as 'sub-political' . The relationships between the stakeholders may give us an indication of emergence as it occurs in such a fluid arenas.

Organisational Complexity, Landcare and Emergence.



Complexity theory is of increasing interest to researchers in the field of organization studies in a number of different ways. This paper utilises a social complexity perspective, which considers the unique characteristics of human systems as opposed to other mechanical and natural systems. It is thus appropriate to utilize in conjunction with reflexive modernization theory, which as we have said, does recognise boundaries between society and nature, unlike postmodern theory. According to Snowden and Sandbridge (2004) as a paradigm for investigation social complexity assumes an ontology of unordered and a heuristic epistemology. These relate closely to an assumption that human behaviour is highly changeable and often unpredictable. Unorder implies:

“A new understanding of systems in which causality is anything but stable and while relationships may be coherent in retrospect, they do not form a basis for action or prediction”
(Snowden and Sandbridge, 2004).

Due to the complexity of social relationships it is difficult to predict the ways in which these relationships will emerge in an organisational form a priori. Simultaneously, a heuristic approach entails a certain degree of interpretation of relationships. Given these assumptions we can see Landcare as a whole system of affiliated networks, yet there is not necessarily a systematic order or

structure to these networks, and there may be variation between networks, which can change independently and unexpectedly over time.

Emergence is one of the key properties of a complex system, yet its nature and causes have been widely debated (Seel, 2006). Emergence is a complex phenomenon, which describes a process that is constantly coming into being. Many have struggled with a definition of emergence in fact Seels (2006) writes that even in a seminal text entitled “Emergence” the author John Holland declines the challenge to define the concept instead stating:

“It is unlikely that a topic as complicated as emergence will submit meekly to a concise definition, and I have no such definition to offer” (Holland, 1998:3).

Yet others have argued on behalf of definitive characteristics of emergence. Stacey (1996:287), for instance, sets out a definition:

“Emergence is the production of global patterns of behaviour by agents in a complex system interacting according to their own local rules of behaviour, without intending the global patterns of behaviour that come about. In emergence, global patterns cannot be predicted from the local rules of behaviour that produce them. To put it another way, global patterns cannot be reduced to individual behaviour”.

Applied to the Landcare example we understand that local groups and networks emerge spontaneously within the overall structure of the Landcare movement. Often these occur independently and are unique compared with other networks within the movement. New groups are constantly forming around special issues – ranging from Tidy Towns to bush regeneration and sustainable farming. Just as frequently, groups are dissolving or burning out. As well, the numbers of different organisations populating this ‘sub-political’ realm appears to be on the increase, as bureaucracies and business move

in to colonise the Landcare arena and capitalise on the Landcare brand. Accordingly, we would expect to find numerous forms of networks within the Landcare organisation that occur independently yet within the same 'banner' of the Landcare movement. As a point of departure this paper uses such a model to examine the ways in which recent regional organisational changes have impacted upon the Landcare networks in the Hunter Valley region.

METHODOLOGY.

The data reflected in this paper is the result of a longitudinal study of the Landcare movement in the Hunter valley region. One of the authors is engaged in Landcare activities at a grass roots level and has been undertaking participant observation research on the networks for five years. In the earlier project concerning Landcare (XXXX 2005), interviews were conducted with a number of corporations, Landcare community group members and local Landcare coordinators in two states of Australia and secondary data sources were consulted³. The results in this paper use these earlier findings as a point of departure for analysis of more recent data. We focus on the analysis of 20 interviews conducted within one region in NSW. Interviews were transcribed and imported into NVivo for analysis. Transcripts were coded according to a schema of nodes stemming from three central themes of 'Sub-political Arena', 'Processes' and 'Resources'. Field notes from attendance at local and regional meetings of Landcare as well as secondary documents such as reports were also included as sources of text.

Transcripts were then sorted according to those that identified regional or catchment issues in their responses. We then scanned those who had identified 'catchment/region' to ensure validity and to categorise how they referred to the region or catchment. Cross-checking procedures were effective in

³ Information on Landcare was also obtained from Landcare websites: Hunter Region Landcare Network <http://www.Landcarens.org/Hunter.htm>; <http://www.Landcareaustralia.com.au/>; <http://www.Landcarens.org/> and from interviews and personal communication with Landcare personnel.

that we identified one respondent who was speaking about the regional/catchment in a negative sense. This is significant as we aimed to test the earlier assumption from XXXX (2005) that there are two emergent discourse coalitions in which one is supportive of the moves towards the regional levels and the other is interested in re-emergence of local level networks. Responses were coded with an additional attribute according to this criteria and we found there to be eight interviews under the ‘Non-identity’ attribute and 14 under the ‘Identifies’ attribute. We refer to these groups as those who identified positively with the region/catchment as the Regional Landcare and the others as Local Landcare.

We then performed Boolean searches within the documents to find where respondents identified the following key nodes: “Business”, “Trust/Distrust”, “Expert”, “Lay” and “Social Capital”. These nodes were selected for analysis as they best test the conclusions drawn in the study by XXXX (2005). In this pilot study two sources of power were identified as representing distinct emerging ‘subpolitical’ arenas for decision-making as summarised in the table below.

Table 2: Power sources in Landcare

Bureaucratic Landcare	Local Landcare
bridging social capital facilitates expert and technocratic power acting through professional/corporate networking	symbolic capital derived from the reputation of Landcare as an unique organisation
bridging social capital facilitates potential to generate economic capital through sponsorship	local knowledge empowered through social capital and community renewal
bridging social capital linking government networks to foster support for top-down planning	bonding social capital can enable effective and cohesive local action

Data extracted under each node was then further analysed and summarised according to their major themes. The following discussion examines each of these nodes in turn and then draws some comparative analyses.

Attitudes towards business relationships.

Generally we find that the data reflects the findings of the pilot study. Those respondents in the “Local Landcare” group signified the ways in which Landcare at the local level supported local businesses and were sceptical about big business relationships, whilst those in the “Regional Landcare” group described the symbolic significance of regional representation which enables working relationships with big business such as from the mining industry.

Local Landcarers: attitudes to business.

Local Landcare representatives identified the interconnection between local Landcare activities and rural renewal through local business support and injection of financial capital through funding:

“And local businesses, the advantages of money coming into the town can be to them... We’ve got three rural suppliers in town.... in the last 10 years, those three have expanded their businesses rebuilt the facilities and things like that. I don’t think it’s just a coincidence that when Landcare arrived the town they got prosperous as well”.

This demonstrates the ways in which the brand of the local Landcare network enables inputs of financial capital to renew local economies. Whilst there was recognition of the benefits businesses gain from Landcare there was a sentiment of scepticism regarding business relationships. Respondents felt that sponsorship deals were about brand-awareness for big business with little benefit for the Landcare group. Big business was seen to be trading on the symbolic capital of Landcare:

“Yes. I do have a problem with actually getting into bed with the miners, those sort of people do stuff round the countryside and we sort of help them with their PR programs, saying we’re responsible citizens we planted 10,000 trees, nobody says that in 5 years time they all died anyhow. (laughter) And the fences we put round the trees have all rusted away because of the extra acid in the air”.

There was little in the way of relationship development between local Landcare groups and local small business.

Regional Landcare: attitudes to business

Whilst these statements reflect a lack of community engagement with business, those we classified as ‘Regional Landcarers’ emphasised the strategic significance of the regional network and the increased capacity for Landcare involvement in partnership arrangements:

“I suppose the most important thing is.....an increase in the profile of HRLN and Landcare in general and this is itself created a lot of opportunities”.

Whilst power imbalances exist between businesses and volunteer based community groups, Landcare can greatly benefit from relationships with businesses where they maintain ownership of the project and clearly state the role of business involvement:

“And there’s people saying, as soon as the coal company’s name is on the sign or is part of the agreement you’re going to lose your credibility. You’re going to be seen by the community as..... Sold out. I personally don’t have a problem with a company as long as the project is achieving the goals the Landcare group wants to achieve. They will seek to keep in one way or another, ownership of that project. They have to be seen to be the drivers”.

Additionally, they saw a crucial role for Landcare coordinators as salaried personnel in providing facilitation of long-term relationships essential for enabling one-off events and large-scale regional projects. However Regional Landcarers also noted the lack of business involvement at the local level, specifically in a volunteer capacity with completion of on-ground works. Particularly, geographic isolation inhibited business involvement in this capacity, which was highlighted as crucial for groups that needed hands on assistance rather than financial sponsorship:

“as far as our group’s concerned we haven’t had a lot of business participation”

And:

“...we’re viewed very much as being out-of-towners, as hillbillies and so on so there isn’t a great deal of interest in businesses in our nearest large town contributing to anything that we’re doing in the lower half of the shire”.

Expert/Lay knowledge perceptions: Indications of Trust/Distrust.

Those in the 'Regional Landcare' group of respondents were more aware of the strategic ways expert knowledge within the groups can provide linkages with funding and other information:

"It also means that those very people that have come into the group have a great network....

They can get to the source both for funding and of support but otherwise other groups would have a great deal of difficulty. A lot of the owners understand how bureaucratic processes operate and how to cut through the bureaucratic crap if I could be so crude".

This 'Regional Landcare' group also acknowledged that expert knowledge works best when bureaucrats are actively engaged with on-ground works. It was signified that this expert knowledge worked effectively when the 'experts' relinquished ownership of the projects and involved the local community rather than strictly facilitating with the regional network.

The discourse of 'Regional Landcare' does not reflect the shared trust of institutional support and expert systems suggested in the pilot study. While some respondents point to communication as essential for developing trust and building relationships with business, others communicated similar sentiments to those of the 'Local Landcare' groups in terms of lack of trust of Landcare Australia Ltd operations, scepticism of bureaucratic interest in on-ground works and distrust of the expert knowledge of agronomists working for government bodies.

Yet, another respondent was quick to point out that regional level communication between Landcare and institutions and businesses, even if based on scepticism, at least provides the building blocks for the development of relationships:

"When there's information exchange even if it's a distrusting, sceptical relationship that seems to make the relationship more ongoing".

Regional Landcarers understood that the slow building of relationships with businesses is essential for maintaining long-term working relationships.

The discourses of the 'Local Landcare' group clearly relate to the feeling of scepticism towards expert systems, technical reporting procedures and business relationships, supporting the findings of the earlier exploratory research (XXX 2005). These respondents do not see that expert knowledge has a practical application in local contexts. Even where it is seen as relevant it is perceived as expensive and inaccessible:

"Anywhere the research has been done one suspects that there's a lot of good research being done by organisations like the CSIRO and clocked up in filing cabinets in the CSIRO. And if you want to access it you've got to pay megabucks to get it these days".

And;

"It's very enthusiastically delivered by incredibly well qualified young people but it just doesn't work".

Additionally they felt that technical catchment plans were beyond the capacity of local volunteer based groups that were struggling with issues on their own properties:

"How do we do all this marvellous stuff in this plan. We're just volunteers who'd like somebody to say to us we're going to have working bee on Saturday afternoon, turn up. But now it's starting to get rather technical and organised....".

Additionally, there was a general scepticism regarding the usefulness of complex bureaucratic reporting procedures which Local Landcarers see as time consuming and restricting them from applying for government funding:

"..if you want to apply for some funding you sort of got pages and pages of stuff to read..... And some enthusiastic bureaucrat has sat down for a month and designed these forms...Then you come across cases where people say they couldn't be bothered applying for the funding and it could have been for a quite worthwhile project."

We noted in the previous section lack of trust in business intentions. As well, respondents felt money from corporate donations did not always reach local projects. This was associated with a distrust of the

local council, perceived as misappropriating funds in some instances. Local Landcarers suspected that funds were absorbed through the overly bureaucratic processes of the National Landcare operations.

With regard to lay knowledge, both Regional and Local Landcarer groups understand the significance of local knowledge, in particular the way that diverse knowledge and experimentation shared through Landcare groups creates innovative land practices that may result in more sustainable means of natural resource management. However, those in the 'Regional Landcare' group also highlighted the ways in which the network can legitimise and facilitate the diffusion of local knowledge. Examples were the way in which the network spread knowledge of a local innovation regarding tube stock and another instance where local debate regarding weed spraying overrode the expert recommendation of seasonal spraying times to protect the pollen collection patterns of the bees.

Regional Landcarers also perceived that local and expert knowledge were working through the Landcare networks to complement one another. They saw this as happening through expert speakers facilitated through the network sharing information to local groups:

"...at the local level Landcare seems to work to develop and foster local knowledge. More of a knowledge sharing sort of perspective. Sharing from experts who come to give talks and also from working on the ground projects."

And;

"A lot of Landcare groups really just couldn't get going without initially having people come in to speak to them about issues that are associated with capacity, building....You need that educational basis to get Landcare groups going (and).. very frequently people will go off and be inspired to learn themselves independently and then bring that knowledge back to the group".

Finally they identified the way in which lay historical knowledge of local vegetation and successful species “*particularly from old people, is enormously valuable (because) it becomes elusive*”.

Social capital

While this research confirms the earlier findings of the existence of two discourse coalitions formed around issues of expert power, it does not support the other earlier finding of a clear split between bonding social capital at the local level and bridging and linking at the regional (XXX, 2005). We find that in both coalitions, respondents identify the significance of all types of social capital in their discussions on connectivity to things such as knowledge, funding, social support and access to resources. Bonding social capital is not restricted to the local networks as those in the ‘Regional Landcare’ category also share close ties between members. The results do show an emphasis in the ‘Regional Landcare’ of the bridging mechanism between local groups provided by the network and the enhanced symbolic capital of the regional network bridging new relationships with businesses. This represents a distinct change from the findings of the earlier study, as the symbolic capital of Landcare had in the exploratory study been located at the level of the local Landcare groups. Too, Regional and Local Landcarer groups emphasised the importance of relationships with the externally funded Landcare coordinators and recognised that the Regional level enables links between local groups and bureaucratic processes.

DISCUSSION.

Landcare is an amorphous organisation in a state of constant emergence due to the process of grassroots formation. Yet within this space of constant flux this study confirmed earlier findings that there are two emergent and distinct Landcare forms that are shaped through the two dominant

discourse coalitions – the Local and the Regional. The boundary between these coalitions is a perceived difference in the meaning and outcomes for the Landcare movement in Australia, creating barriers in flows of information and shared meaning which impede the formation of a collective Landcare movement. We observe that while Regional Landcare discourse, as a result of its focus on catchment management and corporate partnerships, associated with an overriding neo-liberal political agenda at the federal level of government (Curtis 2003) is increasingly dominant, we note a hardened resistance to bureaucratisation at the local level resulting in a re-emergence of Local Landcare. The emergence is facilitated by the networked structure of Landcare which allows for the connections and attendant tensions between the different levels of Landcare.

We argue, therefore, that the nascent boundaries of these forms are more firmly delineated as a result of these tensions. Relationships with highly organised national bodies and industry would not be possible without the long-term commitment of permanent staff, consistent resources and ongoing planning and monitoring of projects at the regional level. Political support from state and federal government has shifted from the individual farm focus to the catchment focus, correlating with the shift to the regional Landcare developments.

Such capacity to develop connections at the regional level is legitimised through the long-term generation of social and symbolic capital from the grassroots. While some groups support recent changes there is a simultaneous pull away from the institutionalisation at the regional level. Some Landcare groups are drawing back from regional associations, as their members are opposed to the increasing bureaucratisation of the network. These Landcarers believe the efficiency and true meaning of a Landcare network can only be found at the grassroots level, however there is much variation between the local groups.

While these groups have diverse origins and in some cases are diametrically opposed they continue to operate within the 'Landcare Organisation'. Some scholars argue (eg Seel 2006, Byrne, 1998) that social systems reach a state of 'criticality' at which emergence is more likely to occur. Several conditions the social systems will occur just prior to this state of emergence: among others these include connectivity between and within social networks, diversity, high information flows, intentionality (shared stories), shared sense of identity, flexible boundaries (set out what is prohibited but not what must be adhered to) and a positive emotional space which reduces anxiety and encourages 'watchful anticipation' so that the collective is ready to act when the opportunity for organisation or change emerges (Seel, 2006). In this sense emergence is theorized as about having the right conditions for enabling a sense of a shared possibility for change. The Landcare movement does not share these characteristics in its entirety due to the range of participants and their geographical dispersion. For example in the case of Landcare networks outlined here we find there is high connectivity between members and high information flows facilitated across the network. Yet we also see incommensurate views of the Landcare identity, unclear boundaries and a regulatory environment which increases the anxiety of the grassroots networks. In this sense Landcare represents a complex organisation where at least two dominant discourse coalitions provide multiple opportunities for emergent forms to operate within the Landcare system without one overriding organisational form.

The finding informs our understanding of the phenomenon of emergence and has implications for the relationship between organisations in the multiple stakeholder arrangements often termed as crucial to sustainability. In particular, it challenges the 'think global, act local' edict underpinning much sustainability discourse, which assumes a 'universal discourse' for addressing complex sustainability issues. The Landcare case demonstrates the significance of both local and expert knowledge and multiple discourses for addressing issues related to natural resource management which create tensions and innovations within the dispersed regional networks.

References

- Beck, Ulrich (1995) *Ecological Politics in an Age of Risk*. Cambridge: Polity Press.
- Beck, Ulrich (1999) *World Risk Society*. Cambridge: Polity Press.
- Beck, U. and Beck-Gernsheim, E. (2002) *Individualization*, Sage Publications: London.
- Beck, U., Bonss, W. and Lau, C. (2003) *Theory, Culture & Society* 2003 (SAGE, London, Thousand Oaks and New Delhi), Vol. 20(2): 1–33
- Beck, Ulrich, Anthony Giddens and Scott Lash (1994) *Reflexive Modernization – Politics, Tradition and Aesthetics in the Modern Social Order*. Cambridge: Polity Press
- Boyne, R. (2003). *Risk*. Open University Press: Buckingham, UK.
- Byrne, D.S. (1998) *Complexity Theory and the Social Sciences: An Introduction*. Routledge:USA
- Curtis, A. (2003) ‘The Landcare Experience’, in S. Dovers and S. Wild River (eds), *Managing Australia’s Environment*, Federation Press: Annandale.
- Giddens, A. (1991) *Modernity and Self-Identity: Self and Society in the Late Modern Age*, Cambridge: Polity.
- Hajer, Maarten (1998) *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Clarendon Press.
- Seel, R. (1996) Emergence in Organisations <http://www.new-paradigm.co.uk/emergence-human.htm>
- Snowden, D & Stanbridge, P. (2004) The landscape of management: Creating the context for understanding social complexity. *ECO*, 6(1-2) pp. 140-148.
- Stacey, R. (1995) The Science of Complexity: An Alternative Perspective for Strategic Change Processes. *Strategic Management Journal*, 6(6), 477-495. John Wiley and Sons.
- Tsoukas, H.: 1999. David and Goliath in the risk society: Making sense of the conflict between Shell and Greenpeace in the North Sea. *Organization*, 6, pp. 499-528.
- XXXX (2005).