

*Community perspectives of natural resource extraction: coal-seam gas mining
and social identity in Eastern Australia*

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Abstract: Using a recent case study of community reaction to proposed coal-seam gas mining in eastern Australia, we illustrate the role of community views in issues of natural resource use. Drawing on interviews, observations and workshops, the paper explores the anti-coal-seam gas social movement from its stages of infancy through to being a national debate linking community groups across and beyond Australia. Primary community concerns of inadequate community consultation translate into fears regarding potential impacts on farmland and cumulative impacts on aquifers and future water supply, and questions regarding economic, social and environmental benefits. Many of the community activists had not previously been involved in such social action. A recurring message from affected communities is concern around perceived insufficient research and legislation for such rapid industrial expansion. A common citizen demand is the cessation of the industry until there is better understanding of underground water system interconnectivity and the methane extraction and processing life cycle. Improved scientific knowledge of the industry and its potential impacts will, in the popular view, enable better comparison of power generation efficiency with coal and renewable energy sources and better comprehension of the industry as a transition energy industry. It will also enable elected representatives and policy makers to make more informed decisions while developing appropriate legislation to ensure a sustainable future.

Keywords: community engagement, natural resource extraction, coal-seam gas, sustainable energy source

Introduction

Society faces many grand challenges for sustainability within a world in transition. There is an urgent call for research and development towards mechanisms that allow science and society to address decision making and the needs of citizens at global, regional, national, and

local scales (Reid *et al.* 2010). This paper explores community perspectives of the coal-seam gas industry in affected communities of northeast New South Wales and southeast Queensland, Australia, as a case study of society-wide decision-making in the context of natural resource extraction. This case study focuses on a situation where public engagement is high, and is heightened through the contentious nature of the proposed resource extraction. As easily accessible sources of hydrocarbons have been exploited, the exploration industry has been forced to target unconventional reserves of oil and gas. In Australia the gas mining industry is mostly dependent upon the extraction of coal seam gas. Gas reserves are being developed in every State, with government estimates of a projected 40,000 gas wells in Queensland alone by 2030, and gas facilities approved for construction at regional ports. The industry is drawing billions of dollars into regional areas, creating new jobs and swelling State and national coffers as export contracts are signed and sealed.

The industry has faced criticism from various stakeholder groups. Concerns have arisen due to fears of the potential environmental impacts of mining processes, and of impacts on the Great Barrier Reef from export facilities being developed on Curtis Island. UNESCO is currently re-evaluating the Great Barrier reef's world heritage status as a result. Environmental concerns relate to high water consumption, groundwater contamination, salt production and air pollution, with a particular concern relating to the long-term nature of potential impacts. In addition, there is concern as to whether there may also be knock-on social and economic impacts associated with the industry. Environmental advocacy groups have also stated that they do not see gas production as a solution to decreasing carbon emissions.

This is often claimed to be the critical decade. It is understood that human society needs to be able to adapt quickly to rapidly changing global social and environmental conditions, and that a community that lacks adaptability to its changing environment can compromise its own viable existence (Lebel *et al.*, 2010). However, there is growing concern that the current capitalist system does not address long-term environmental or social issues easily or well (Guptara, 2010; Reid *et al.*, 2010; Dunstan, 2011; Irvine, 2011). There is pressure for governments to come up with new energy solutions. Mineral-rich Australia, therefore, is facing mining development on an unprecedented scale (Irvine, 2011). While the national focus on resource extraction has tended to be economic, coal-seam gas mining has brought together economic, social and environmental issues – mineral resources, water resource management, agriculture and environment – into the Australian public debate (Brown, 2011; Duddy, 2011; RBS-Morgans, 2011): “The explosion in coal-seam gas extraction has concerned farmers and green activist groups locked in fierce debate with cashed-up extraction companies and governments with dollar signs in their eyes” (Klan, 2011: 13).

Communication failures and social impacts

Inadequate community engagement is viewed by many researchers as the primary governance problem contributing to social conflict around land and resource management issues (Pullin and Knight, 2003; Hindmarsh, 2010). During coal-seam gas exploration in Australia, it has become clear that there have been key communication failures between

industry and community. In Western New South Wales, for example, one company was reported to employ the strategy, considered to be intimidating, of taking community members out of a meeting to question them individually (pers. comm., Ian Gaillard 23/07/11). Company representatives have been accused of continually failing to adequately answer community concerns, and of systematically withholding relevant information when answering questions (pers. comm., Garry Gilliland 13/09/11). It has been reported that large sectors of the community consider they have been insufficiently notified of planned exploration, or consider they have been provided with biased information, rendering them unable to take what they consider to be an informed view of mining developments (Leser, 2011). Reed (2008) argues that stakeholder participation needs to be underpinned by a philosophy that enables empowerment, equity, trust and learning to take place. In order to empower individuals and groups in the community to make informed choices, to steer governmental decision making processes, the community has to be brought to science, and vice versa (Greenwood and Levin, 1998; Reed, 2008).

One way to examine the impacts of community engagement and communication success and/or failure is through the lens of social identity theory (Spears, 2011). Social identity theory argues that individuals define themselves largely according to their group involvement and memberships. In social identity theory, sociologists explain the levels of social analysis along an interpersonal to intergroup continuum, creating an important bridge between the concept of self, group membership and intergroup behaviour (Spears, 2011). Achieving a positive distinction between one's own and another group leads to inter-group behaviours, where any perception, cognition or behaviour is influenced by the individual's recognition that they and others are members of a distinct social group (Turner, 1975). As individuals seek to maintain their group identity, this can lead to the development of stereotypical and conformist behaviours within a group and stereotypical perceptions of other groups. This relative homogeneity effect leads to the increased likelihood of stereotyping of other groups and their members. Discrimination and categorisation of other groups and their members may become a feedback loop that can lead to a distancing from other social groups, accentuation of intergroup differences and even polarization of a community. In-group identification with a particular social group may also not be at the will of the group member, and can lead members from other groups to categorise or label them as a part of a group that they may not necessarily value or wish to be associated with, for example a 'hippy', 'greenie' or 'red neck'. In turn, this particular group may be stigmatised or regarded as a group of lower status in society and, therefore, undesirable to be associated with (Turner and Giles, 1984). Social schemata are the assumptions that we make of a person or a group of people based on their dress and appearance (Kleine et al., 1993; De Weaver and Lloyd, 2005). Social stratification is associated with gradients of perceived status differences that can create social-psychological pressures for social change.

Methods

Here we present of a case study to examine community reactions to a politically-charged and emerging environmental issue – coal-seam gas mining – and gain insight to the processes of community engagement with a natural resource management matter that has landscape-wide

implications. Case study methodology is an integrated approach of enquiry that uses unique examples of social situations as the basis of deep description and analysis to gain insight into questions of how and why a social process or phenomenon works. It is, according to Yin (2009:2), the “preferred method where (a) “how” and “why” questions are being posed, (b) the investigator has little control over events, and (c) the focus is on contemporary phenomenon within real-life context”. It is typically used where there are more variables – often many more – than data points, and insight into complex social processes is sought, rather than simply describing pattern or seeking a simple cause-and-effect relationship. It is perfectly suited to the examination of issues of social concern. Case study methodology relies on multiple evidence sources, and thus legitimately works with diverse, and often very different, data gathering techniques. Case study analysis provides results that are validated through triangulation, the convergence of insights from independent or unrelated evidence and/or cases. It is the independent origins of such insights, especially where they converge to a common answer, that provides the validity of the emerging understanding of the how and why of the social process.

In developing this case study, we focussed on describing the various social constructions of the issue of coal-seam gas mining, based on people’s expression of these constructed ideas, through interviews, and their behaviour reflecting the ideas through observations at key events (Jackson and Penrose, 1993). This allowed us to examine interactions not readily distinguishable from their context. The case study builds on interviews with key informants from key social action groups engaged in this issue, and observations at key events:

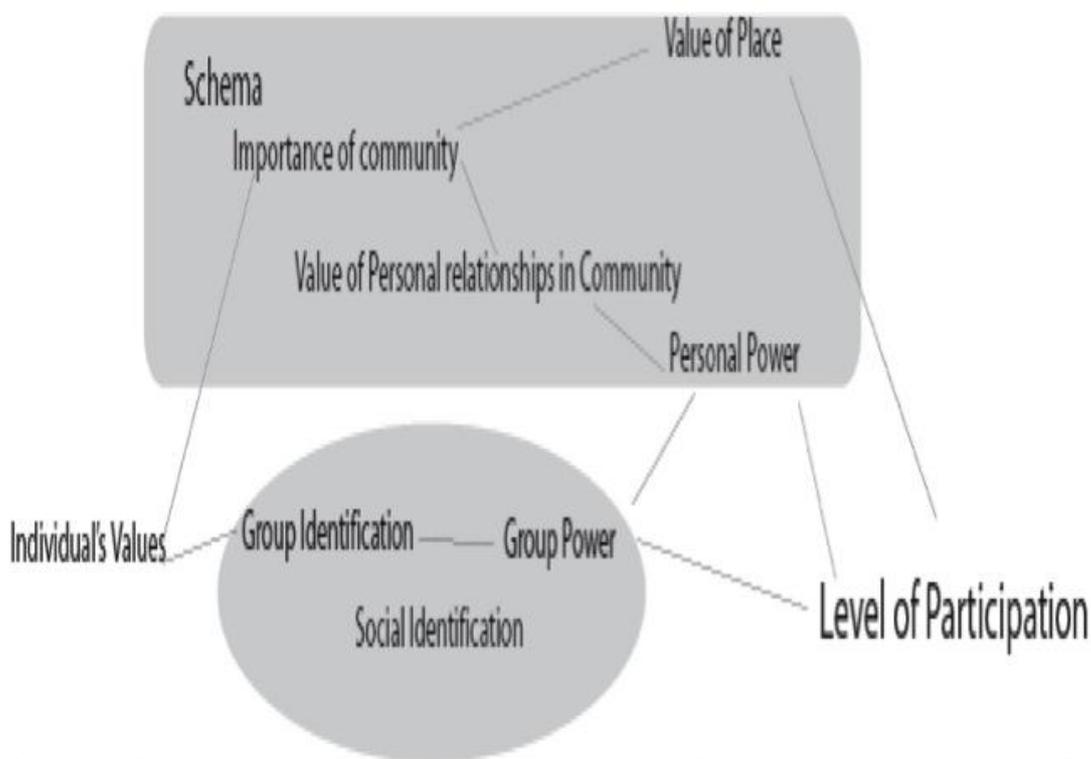
- The Western Downs Alliance
- Lock the Gate
- The Basin Sustainability Alliance
- Kyogle Group Against Gas
- Keerong Gas Squad
- The Ngaraakwal Indigenous Association
- The Tara blockade and the May Day Chinchilla parade (May)
- The Murwillumbah protest rally (May)
- 9th Annual Australian Coal-Seam Gas Conference, Brisbane (June)
- Lock the Gate Annual General Meeting (June)
- Casino Environmental Defenders Office public meeting (August)
- Arrow Energy Public consultation, Lismore (September)

Action research was used as a basis for engaging with this study, taking a systemic thinking perspective to describe and understand the social interactions within the communities in each case study (Flood, 2010). Action research allows the researcher to gain a rich, contextual understanding of social processes, and to see beyond group discourse, to identify greater concerns and themes reflecting peoples’ values, sense of community and local environment (Greenwood, 1999; Dick, 2000). The processes of action research and action learning can be used effectively to empower individuals, groups and organisations, and to help them change and develop relevant skills (Swepson *et al.*, 2003). This paper describes the early stages of this action research project, focussing on the richness of evidence and contextual understanding obtained from several data sources, primarily interviews and observations

(Gladstein, 1984; Reason and Bradbury, 2001; Yin, 2003). As an early stage in a proposed action research program, informants from six coal-seam gas community groups were interviewed in order to identify their understandings, positions, key concerns and desired outcomes. This provided insight into the various forms of social engagement being expressed through these groups.

Interviews were recorded digitally or by note taking, and transcriptions and notes were examined using an on-line data analysis tool, Wordle (Feinberg, 2011), to identify recurring or dominant themes. Interpretation focussed on elements of social identity theory and group dynamics (Figure 1).

Figure 1: The role of schema and social identification in the participation process.



Groups form when groups of individuals have shared concerns and goals that cannot be accomplished individually. As social bonds form with members of their 'in group', in-group favouritism can occur (Tajfel and Turner 1979). Achieving a positive distinction between your own and another group leads to inter-group behaviours where any perception, cognition or behaviour is influenced by people's recognition that they and others are members of a distinct social group (Turner 1975). In-group identification with a particular group may also not be at the will of the group member, and can lead members from other groups to categorise or label them as a part of a group that they may not necessarily value or wish to be associated with (for example a 'hippy' or 'greenie'). In turn, this particular group may be stigmatised in society and, therefore, seen as undesirable to be associated with (Turner and

Giles 1984). Social schemata are the assumptions that we make of a person or a group of people based on their dress and appearance (Kleine III, Kleine et al. 1993; De Weaver and Lloyd 2005).

The framework of social identity theory was, therefore, used in this study to provide a perspective of the social interactions taking place in relation to an issue. Cultural rules provide a structure for people's behaviour, effectively channeling behaviour in some ways but not others. Schemata define similarities shared by individuals that enable them to identify as members of a culture, community or group. Cultural identity results from and is influenced by shared schemata and is reinforced by peer group socialisation (De Weaver & Lloyd, 2005). Social identity theory was first defined by Henri Tajfel as "an individual's knowledge of his or her membership in various social groups together with the emotional significance of that knowledge" (Tajfel, 1974). Social identity theory argues that individuals define themselves largely according to their group involvement and memberships. In social identification theory, sociologists explain the levels of social analysis along an interpersonal to intergroup continuum, creating an important bridge between the concept of self, group membership and inter-group behaviour (Spears, 2011).

There may be a price to pay for group cohesiveness, as individuals minimise their differences. As individuals seek to maintain their group identity, this can lead to the development of stereotypical and conformist behaviours within a group, and to stereotypical perceptions of other groups. Individual identity is now defined more by the shared values and purpose of the group with which they are associated, hence these become determining characteristics of group behaviour (Turner & Giles, 1984). This 'relative homogeneity effect' leads to the increased likelihood of stereotyping of other groups and their members. Discrimination and categorisation of other groups and their members may become a feedback loop that can lead to a distancing from other social groups, accentuation of intergroup differences and even polarization. This occurs especially where there may be inter-group competition, or when a group feels threatened by another group, yet ironically often leads to greater cohesiveness of those members within the in-group.

The theory of realistic group conflict was based on a social experiment carried out by Sherif (1966) that determined the key factors in inter and intra-group relations as the cooperative relationship between group members and the alignment of group goals. In-group's goals and objectives will lead directly to intergroup attitudes and behaviour. Mutually exclusive goals within a group are likely to create divides that can lead to the failing and or division of the group if they fail to be resolved. If this is at an intergroup level, conflict is likely to occur between groups.

Turner & Giles (1984) see cohesiveness as depending directly upon motivational interdependence and mutual need-satisfaction, therefore those groups which are reaching set goals are going to be more cohesive than those who do not. From this, it can be concluded where there is a clear understanding of the alignment of group goals, inter- and intra-group conflict is less likely to occur and a collaborative relationship is able to form. It is also important to note that a pre-existing social identification with members of other groups is also an important factor in the development of inter-group relations (Spears, 2011).

Results: (i) Key informant views

Western Downs Alliance & Lock the Gate

The Western Downs Alliance began as a collection of half a dozen landholders on what is known as the Tara Estate. The key informant for this case study is a local landholder. His involvement began in 2009, when he received a letter offering him a sum of money for a number of coal-seam gas wells to be drilled on his land. He reported immediately carrying out internet research, and found information and sites describing what had already happened in the United States from coal-seam gas mining. Twenty minutes later, he reports, he was on the phone to his neighbours. He worked with them to involve the media, and within six weeks they had gained the interest of Channel Nine's *60 Minutes* television program, who broadcast the issue. This was shortly followed by an ABC *Four Corners* television program, exposing the issue to the wider Australian public. With the help of the international environmental campaign lobby group, Friends of the Earth, the group researched the extent of coal-seam gas developments, and started screenings around the country, with the key informant travelling across Australia to present screenings of the American film *Gasland* (Fox, 2010), to tell the story of what was happening in his area, and to expose plans for coal-seam gas mining developments across the country.

Key concerns raised by the key informant in the interviews were: environmental damage; the impact on water and air quality; and lack of landholder rights. He described what he saw to be the inadequate regulation of the industry and the coal-seam gas mining company's general lack of engagement with the public, including what he described as an often confrontational approach. He was concerned about what he considered to be the enormous impact on his life from the industry: the drilling rigs; holding ponds filled with produced water; truck convoys; and the compressor station that continually disturbed his sleep. He reported physical symptoms arising from the stress created, a serious headache that only stopped when he was away from his home for a period of weeks – "I've had a constant headache for months now". His land, he claimed, had lost all value, and he was now behind on his mortgage repayments due to devoting all of his time campaigning on this issue. In his words:

When I'm at home it's never silent, just this constant vibration all night long from the compressor station, and with heavy vehicles going past all day. I can't sleep. I go away and spend all this time campaigning, and I come home and get this sinking feeling as my reality sets in. And now my land is worth nothing. One morning I was so exhausted and frustrated that I just went out on the road and stopped the traffic for an hour. Just sat in the road and stopped the trucks, cost them some money.

Working with the Western Downs Alliance, the key informant and other members were shocked to discover "...our total lack of rights and power to stop the drilling on our land": "we barely own our own topsoil!". Also, while researching the industry, they discovered plans for coal-seam gas mining in every State and Territory of Australia, with 40,000 gas wells to be drilled in Queensland alone. They were concerned about the leaking methane

from the well heads, and had been examining the wells for leaks in light of company claims that the wells were not leaking. “We’ve tested about thirty-eight wells ourselves and have found a huge percentage to be leaking, in fact thirty-two out of the thirty-eight we tested were leaking methane.”

To form alliances with community groups concerned with gas and coal developments, a *Lock the Gate* website was developed – the Lock the Gate group is a national alliance, formed due to concerns of coal-seam gas and coal mining, with a very active website providing information and a point of contact for over a hundred community groups campaigning on these issues across Australia. The Alliance saw what they saw as wedge politics being run locally, dividing residents over the coal-seam gas industry. Some members of the community benefitted financially through the provision of accommodation and services for the rapidly developing industry, whilst others claimed to be suffering from the effects of the industry. Whilst other concerned farmers in the region formed a group called the Basin Sustainability Alliance, they were not willing to associate themselves with the Western Downs Alliance or with Lock the Gate at this point, apparently for fear of compromising their perceived social status as farmers by their association with so-called radical groups (Turner & Giles, 1984).

There has been long held mistrust between rural and green groups, largely stemming from the time of the Bjelke-Petersen premiership (Bjelke-Peterson was the powerful conservative premier of Queensland from 1968 to 1987, who sought political stability through suppression of political dissent), when the premier himself saw street marchers as a “menace who clogged up traffic”, and treated them as such (Alvey & Ryan 2006). The key informant’s perspective was that the farmers were worried about their respectability in associating themselves with environmental activists (‘greenies’). This is a clear example of social identity theory and stereotypical intergroup perceptions, as described by Tajfel (1974). The informant, however, did not see himself as a ‘greenie’, but as a landholder who wished to enjoy the peace for which he purchased his block of land. He dressed accordingly with what was to become his trademark red flannelette shirt, pair of smart jeans and truckies cap. Stigmatization as a greenie is common in contentious environmental issues, and can often be seen as a significant barrier to acceptance of such matters by the wider public and hence to community cohesion (Turner & Giles, 1984).

The Basin Sustainability Alliance

The key concerns of the Basin Sustainability Alliance were: impacts over-extraction and groundwater contamination; lack of sufficient research; Australian assets being sold off too cheaply; and the behaviour of the gas mining companies being too confrontational. The key informant argued that there are better methods for coal-seam gas mining, and was convinced that if gas wells could be properly lined then separate aquifers would not be linked or contaminated. The Alliance’s approach was to secure meetings with government officials to ensure that the coal-seam gas industry became sustainable, requiring an industry moratorium until further studies had taken place. The key informant’s views differ markedly from that of Western Downs Alliance, in that he believed that the companies should offer more money as compensation; the Western Downs Alliance does not believe that financial compensation at any scale is adequate. Despite this, his central concerns are aligned very closely with those of key informants from other groups. He brought up the point that the group could achieve more

without being aligned with other groups. This latter point aligns with concepts of social identity theory: the existence of bias, perceived differences and stereotypical assumptions of the different groups can raise concerns over associations in regards to perceived status differences, and therefore influence people's choice of group allegiance.

Kyogle Group Against Gas

The Kyogle Group Against Gas group is situated west of Lismore, and has approximately fifteen regular members. The key informant for this group held a remarkably different perspective of the issues and what he wished to see happen. He had heard of the locally-based organisation, Group Against Gas through word of mouth, joining it in early 2011 due to his mounting concerns of coal-seam gas mining. He is now working with, and supporting, the Group Against Gas to prepare submissions and organise events, and to work with politicians by providing his property for meetings. The Group Against Gas is also seeking improved regulations, specifically a moratorium on coal-seam gas mining prior to thorough research into potential impacts and the entire cessation of the industry in their area. His approach seems more moderate than that of some other members of the group, in that he supports the use of on- and off-shore gas reserves in Australia. However, he also holds grave concerns regarding the coal-seam gas industry:

You can't eat gas, it's that simple. They want to put the pipeline right through our most productive country ... This is all about water: our head waters are just up the road here at Lynches Creek, and we depend upon these aquifers for the farms and for the towns.

He stated that there had been claims by the companies that there would be no pumping stations precisely where his neighbours had already been approached: "The boring rigs follow the pipelines: that is what has happened in Queensland. It is inevitable ... the mining companies are lying."

A second key informant for Group Against Gas had kept horses and lived on his property for thirty-one years before a gas well was placed on the other side of the creek from his property. His experience, and, he claims, that of his neighbours, was that there was no requirement for the companies to notify occupants of neighbouring properties.

For thirty-one years, if I wish to build anything on my own land I have to put in a DA [development application] which includes a notification to my neighbours. No-body was notified at all until the well was put there. I can see it from my deck in plain view: it's about 500 metres from my house.

He explained how he had visited thirty properties along the road towards a neighbouring town, and twenty-nine residents had taken yellow 'Lock the Gate' triangles to put on their front gates (Figure 2). One property owner had made his money from mining, so was supportive of the industry. He had tried to explain the impact of having thirty wells on your property was not the same as conventional mining techniques. The informant, however, explained that although the wells do not directly use bore water, they use the spring-fed water from a nearby dam. They depend on this water for themselves and their horses.

This issue is going to divide communities a lot more yet, as one neighbour can let them on and then you have a gas well on your boundary. In the early stages there was no education, people did not know what they were letting themselves in for. When you go out and educate yourself it is quite terrifying.

The informant warned of individuals who may not seek peaceful means to stop the gas drilling:

After our protests, to Council, the well was blocked off, but we received notification [at a public meeting] that they would be returning in 2013 for the next phase of production. They said to us, “we’re not breaking the law, this is the law.” ... One chap up the road says he will shoot them if they try to come on his property, and the scary thing is that he might!

Figure 2: The Lock the Gate triangle, symbol of community protest against coal seam gas exploration and mining, along with related messages made available to the public for posting on property entrances. (Source: <http://www.keepthescenicrimscenic.com/signs-and-stickers.php>)



The Keerong Gas Squad

The Keerong Gas Squad was formed in 2010, following the commencement of coal-seam gas drilling in Keerong Valley, and has approximately twenty members. The key informant for the Keerong Gas Squad is a member not only of the this group and a regular attendee of the

meetings at Byron, but also of the Ngaraakwal Indigenous Association. He expressed his concerns in terms of his daily life.

The women in Keerong were sitting in their garden having afternoon tea and the drilling rig turned up to drill an exploration well. They thought, we'd better do something about this and called in some experienced campaigners.

The scary thing is that we've had millions of years of the earth forming and now we're pulling it all up to the surface, what is going to be the impact of that? I'm worried that if we keep digging up, drilling and injecting the earth, everything is going to die. I've got kids, I basically work for the future, that's what I do. I'm working for the animals too, and the trees.

The Ngaraakwal Association

The Ngaraakwal Indigenous Association is based in Nimbin, and has a key focus towards achieving sovereignty for Australian Indigenous people. The key informants clearly have strongly-held views that relate closely to land rights issues brought to the fore by the coal-seam gas mining companies. In particular they express dissatisfaction with government handling of Indigenous affairs. The concerns about land rights are linked to the informants' cultural understanding of the land and landscape (Figure 3). An exchange between two key informants during the interview illustrates this point:

“With the concept of land-rights in tatters, we can unite together and treaty. We are the original owners of this land, we are the custodians of the land, this is the most legal standpoint by international law. This is a time when the elders can stand up and say, yes we do have a legal right but it's a matter of moving quickly on this before the irreversible damage is done. This is a multicultural concern, as far as we are concerned they are not allowed to get through the top 8 inches of soil.”

“That's right. The basic thing is that if you look after country, country will look after you.”

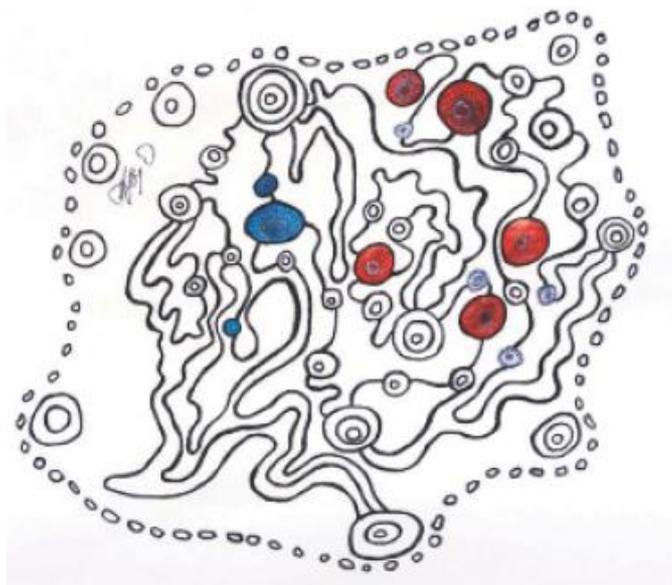
“Nine tenths of the law is possession, and we have the greater heritage here. This is still sovereign land, the people can look after this better, we don't need this government. The land council are the frauds, like the pimps of our people ... They don't speak for us. No-one has the right to diminish our responsibility towards the land.”

There was an overall feeling by the interviewees that there was a significant 'selling out' by many Indigenous peoples in this region, and in many others. As a result, they felt disempowered to manage the land within which their cultural heritage exists (Kerr, 2011).

Its communication (about the land) that gets everything confused. It all comes back to communication between people, and from the government. The

government does not care at all, they just care about money. We need to hold the government accountable and ensure that there is increased transparency.

Figure 3: Uncle Harry's ancient knowledge of aquifer interconnectivity: Ngaraakwal Bulbe Ancient Knowledge Australia's Aquifer System Sacred Water. (Image by Uncle Harry Roberts, and reproduced with his permission.)



Results: (ii) Observations of key events

The Tara blockade and the May Day Chinchilla parade (May)

Chinchilla and Tara are small towns situated four hours drive from the coast in southeast Queensland, in an area subject to rapid coal-seam gas mining development. The annual May Day parade is organised by the local Rotary Club. The Western Downs Alliance had gained last minute permission to follow the parade in May 2011 with a protest march. The protest march provided an opportunity to observe interactions between protesters and members of the Chinchilla community. The local police were present, and appeared relaxed and friendly, interacting easily with the protesters. There was a stark difference in appearance between the protesters and the Chinchilla public, with the bright colours and 'hippy' dress and hair styles of the protesters contrasting with the quiet, conservative public that looked on. Many local men watched from the pub as the protesters followed the annual parade.

As part of the research observations, community members were asked what their thoughts were on coal-seam gas mining. Comments were recorded, reflecting a diversity views, with evidence for growing sense of a community divided on this issue.

One father watching with his young family said, “I have no faith in the mining companies, or in their providing locals with jobs, or any long-term economic benefits for our town”. He used to work for a mining company, but now felt cynical about whether their actions were for the good of the community. A young man of about 20 said that they were using a hydraulic fracturing process [known popularly as ‘fracking’] to extract gas from the coal seam beneath his land, and that, “Nothing’s happened yet, so why should we think anything’s gonna happen to our water?”. A representative from Chinchilla Rotary Club stated that his view that coal-seam gas mining is in “a constant state of re-evaluation”. Several residents clearly in supported the protesters; a local resident cried out, “Keep it up, please!”, whilst covering up her work badge. She described that her family land had been “devastated by coal and gas mining”, some 70 km westwards, describing virgin timber including 2 m-wide iron-bark trees that had been bulldozed against her family’s wishes, while they had been powerless to stop any of the developments. “I want people to open their eyes,” she said.

When the parade reached the Town Fete, the gates were closed to the protesters, with two mounted police behind the gate. In front of them were Rotary Club members, some holding the gate closed (Figure 4). At this time there was significant verbal conflict between the protesters and the fete volunteers. The protesters wanted to go in, and the volunteers said that they could not unless they left their banners outside. There was about a half-hour stand-off between the protesters, the police and the fete volunteers, until finally the protesters dispersed. Some remained engaged in heated discussions with the police and the Rotary Club Chairman. There was a significant amount of discussion on whether the Rotary Club received any funds from the gas companies, as a prominent marquee boldly advertised, “Origin, Coal-seam Gas”.

Figure 4: Locked gates at Chinchilla fete (Photograph, Hanabeth Luke)



What had been a cheerful protest grew sombre and confrontational as protesters were denied entrance to the fete. The presence of the mounted police and the closed body language of the fete volunteers members led to a mirroring of this behaviour by the protesters, and a feedback loop of conflict, as group goals became mutually exclusive: the protesters felt they had a right to peacefully enter, and the fete volunteers members felt they had a right to a non-confrontational fete (Sheriff, 1966).

Inside the fete, Rotary Club members were happy to talk, including the manager of the local coal power-station. He was supportive of the coal-seam gas industry, and described plans for renewable infrastructure that was also to be developed in the region. A local businessman, who makes what he described as a comfortable living providing accommodation and building infrastructure for the mines, said, "We just go with the flow". The Rotary Club members and their associates mostly believed gas mining to be a sustainable industry, with many ways to manage the produced water; to "turn Chinchilla green, to become a salad bowl for farming ... they just need to get the processes right", as one member stated. They were, however, concerned about the lack of clarity of how the salt brought to the surface with the produced water would be dealt with.

Public coal-seam gas meetings

- **The Murwillumbah protest rally (May)** Murwillumbah is a town in northeastern New South Wales, close to the Queensland border. The Murwillumbah rally took place in mid-May 2011, and was a gathering of approximately 2,500 people from communities around the Northern Rivers region of New South Wales. This contrasted the smaller crowd (400 people) marching in a similar protest rally earlier in the year (February) in Lismore.
- **9th Annual Australian Coal-Seam Gas Conference, Brisbane (June)** An anti-coal-seam gas demonstration, drawing around 200 protesters, at the hotel location of the annual Coal-Seam Gas Conference received significant and national press coverage. There was also a protest in the evening outside a conference dinner at Customs House. Figure 5 shows some of the images and messages that were projected onto the wall of the building from one of the two projectors. Very few Brisbane residents were present.
- **Lock the Gate Annual General Meeting** Lock the Gate President, in his address, clearly understood the social and cultural divides that they faced within society (Figure 6). He spoke of the interactions that were needed with communities across Australia: "People like being a part of our law abiding communities and we are asking them to make a huge choice, we need to treat them with respect and humility."
- **Casino Environmental Defenders Office public meeting (August)** The meeting at Casino, northeastern New South Wales, was organised by the Environmental Defenders Office, with speakers from the National Toxics Network, the Environmental Defenders Office and the gas company Metgasco (Figure 7). This event was a chilling testimony to the divisions being experienced within society, most notably in this case between the company CEO, and the overwhelming majority of the

approximately 150 community members and group representatives. There was heckling from the moment the Metgasco CEO spoke, which resulted in full-scale shouting, most notably by some of the Kyogle Group Against Gas.

- **Arrow Energy Public consultation, Lismore (September)** This consultation meeting only allowed a selection of approximately seven community members, mostly from the Kyogle Group Against Gas, to attend. Invitations to attend an open public meeting had been rejected by Arrow in favour of this style of selective consultation. There was a noisy demonstration outside for the entirety of the meeting. One of the Arrow representatives stated, “We hear the sentiments of the public outside, it has not escaped our attention”. There were more Arrow representatives present than community representatives. The meeting was tense, although maintained a respectful tone for most of the meeting. The community representatives were smartly dressed for the occasion, yet still contrasting with the eight Arrow employees. Early on, when asked to keep questions until the end, a Keerong Gas Squad member stated, “We will ask questions when we want, this consultation is for our benefit. We are here to educate you as much as you are here to educate us.” Towards the end, the community became more emotional, unconvinced by assurances by Arrow regarding the safety of the industry. There was strong evidence of development into an even more polarised relationship. This consultation did not achieve placation of community concerns, nor provide the communication hoped for by the community members. One member of the Kyogle Group Against Gas later commented, “I couldn’t believe that scientist, she just sat there sneering at us like we were stupid. I feel like calling up Arrow and complaining. It’s just downright disrespectful, this is our lives we’re talking about here!”

Figure 5: The Customs House protest, Brisbane. (Photography, Hanabeth Luke)

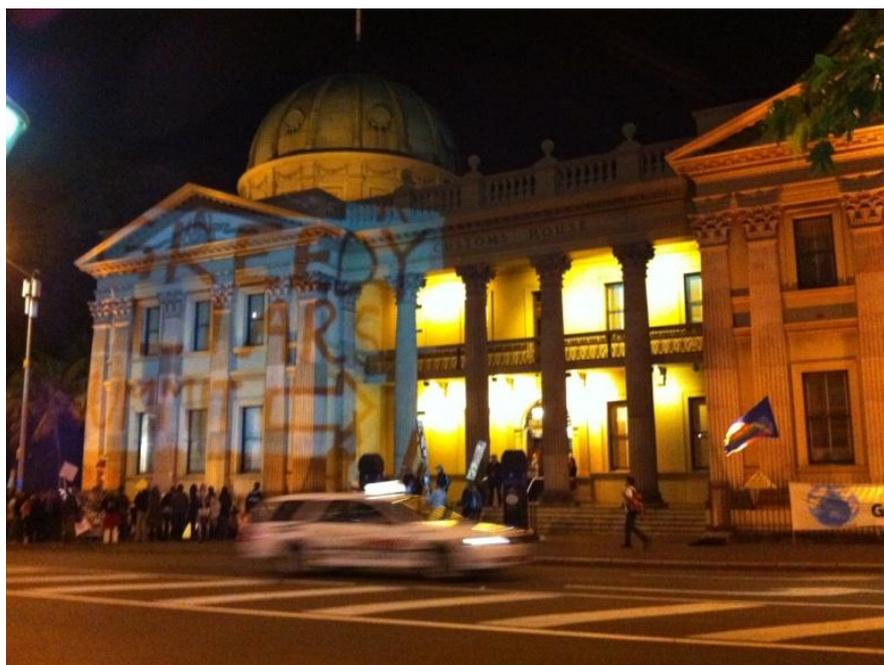


Figure 6: Lock the Gate President, Drew Hutton, speaking at the Lock the Gate Annual General Meeting. (Photograph, Hanabeth Luke)



Figure 7: Fifth generation farmer, Lesley McQueen addressing Henderson in Casino. (Photograph, Hanabeth Luke)



Discussion

Despite the wide diversity of views recorded by groups and individuals regarding the issue of coal-seam gas (Figure 8), over the course of the research it became apparent that different sectors of the community were increasingly aligning over a unifying issue of water. It seems there has been some significant developments in Chinchilla since May Day. In August, there was a court case for the Lock the Gate President, following his arrest at the Tara Blockade.

There are already clear divisions in affected communities, as those who either support the industry or who are financially benefitting become polarised from those who do not wish to see the industry develop. Key concerns expressed relate to power gradients between industry, government and community. Common themes in the interviews were mistrust of mining companies and governmental bodies. People are scared of not having access to clean water now and in the future, as they understand corporations and governments to be making decisions that can affect Australia's water supply indefinitely. For this reason, a wide range of disgruntled individuals are uniting on this issue. Large sections of communities are coming together to protect what they consider to be their basic human right to safe food and water. In doing so, this protest movement appears also to be reacting against what it sees as the status quo – the socio-political view that privileges the supply of jobs and financial benefits over care of the environment that supports human populations. In questioning a view that is often termed 'realist', those who are standing up as protesters, to protect their community, groundwater and environment, become regarded as 'idealists' under the current dominant paradigm. This appears to provide an empowerment for community members. Yet, here a city-bush divide developed. For isolated rural communities (and city dwellers that identified with them), coal seam gas appeared to provide a rallying standard in the minds of rural constituents, to protect the rural idyll and their way of life. 'Tree changers' and families with multi-generational connections to the land were concerned with maintenance of the status quo. Conversely, for city-based decision-makers, investment and resource access became a major driver. While this debate raged, many rural communities (based in small towns) were concerned with issues of employment, housing, health and equity, and began feeling increasingly marginalised from having missed the benefits of the mining boom. The result was growing inter-group identity confusion in rural communities.

A real issue for researchers and policy makers is to define the concept of how to identify rural Australia. Is it defined by an economic dependence on agricultural production? Is it a physical manifestation driven by proximity to centres of certain population sizes or a division into four broad categories: urban, regional, rural and remote (Cameron-Jackson 1995)? Or is there a strong parallel with the more esoteric concept of how, and with whom, groups define their identities. The paradox is that the same debates occur with regard to the concept of how individuals and groups define their aboriginality (Lloyd, 2005; Libesman, 1995), and the answer is probably the same: it is multi-dimensional and depends on context. Farmers in the New South Wales Hunter region, for example, quickly aligned with the conservation movement to battle the coal seam gas exploration and coal industry expansion. On the other hand, farmers in Queensland, who identified as traditional farmers aligned with traditional animosities in discourse between the old National Party of Bjelke-Petersen and the political left, rejected collaboration in favour of direct lobbying of parliamentarians.

The individuals and groups involved in this study appear to be reflecting growing concerns of, on the one hand, an Australian public rapidly losing its faith in its governing structure (Irvine, 2011), and, on the other hand, a fragile dependence of our capitalist system, a system dependent on already strained natural resource base (Dunstan, 2011; Roubini, 2011). The concerns broached in this study highlight questions of the principles, foundations and perceptions of science and research as it applies to industrial extraction of natural resources. Our record also illustrates the potential independent community groups to question the role of scientific enquiry in a society where governmental decision-making tends to lean towards

economic outcomes (Klan, 2011). The coal-seam gas industry is a most obvious symptom a malaise many people see in Australian society today, and the public concerns – expressed in all their diversity – reflect a healthy social response to environmentally damaging industrial activity.

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