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Toward a collaborative model of industry/ community relationships in environmental management



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1. Executive Summary

Our research aims to investigate the application of a Swiss participatory model, or more precisely, an appropriately revised version of it, to the industrial developments in the Gladstone area, Central Queensland. It is essential to understand that the Swiss participatory approach moves significantly beyond accustomed participatory models in Switzerland. It furthermore exceeds the most stringent Swiss government requirements and overwrites general Swiss cultural and political norms. This extraordinary idea, applied to a large quarry development, is driven by direct democracy, community empowerment and political equality, which we argue, can be generalised beyond the project we studied and the general Swiss socio-cultural and political landscape.

The Swiss experience and its unique and agreed outcomes for the environment, the local community as well as for the industrial developer are briefly discussed in this review. To share the benefits of the Swiss approach, we are studying the feasibility of a revised participatory and collaborative approach in relation to, at this stage, selected industrial developments in the Gladstone area. Similar to the Swiss model, the community engagement methods we are developing will move beyond local and state legislation and exceed local participation models, as for example, Citizen Juries, Consensus Conferences or Community Advisory Boards. Consequently, Gladstone stakeholders engaged in current industrial developments cannot justify participatory tokenism by exclusively pointing to the socio-environmental¹, cultural or political differences between Switzerland and Queensland. Primarily because, like their Swiss counterparts, nothing prevents them from moving beyond local government requirements or socio-cultural and political norms as long as they operate within the confines of the law.

In the pages that follow, we present an applied literature review, exploring the theoretical underpinnings of organisational and institutional change, which are intrinsically linked to genuine community engagement in the planning of large industrial developments. In our experience democratic popular empowerment in natural resource governance is largely symbolic in Queensland. In their April 2004 working paper, Fung and Wright (2004) point to one of the primary reasons for the persistence of symbolic community participation. These are primarily linked to the complexities, which genuine community empowerment and direct democracy entails. Our study of the literature highlights these unavoidable complexities, which are even heightened by considering that participatory governance requires significant organisational as well as institutional change. It is not surprising, therefore, that some stakeholders view the business of participatory governance as far too complex. Consequently, these stakeholders argue that inequalities in our economic and socio-political structures are too deeply embedded to allow for political equality. Thin democracy is therefore seen as being still better than no democracy at all (Fung and Wright, 2004).

¹ We define the term socio-environmental, which is used in our study extensively, as including social, cultural, economic and political environments. Socio-environmental, as we see it, is not limited to the natural environment.

To move beyond participatory symbolism requires a rethink of the basic structures of our political institutions and demands significant changes in the community engagement policies of industrial organisations. The reorientation of institutional and organisational structures with regard to genuine community engagement is inherently complex and requires a firm understanding of the organisational and institutional change literature, which in our view must also include the deep structure, punctuated equilibrium and social trust paradigms. Our review deals with these complexities and is designed to address in the first instance senior decision-makers of appropriate government agencies, industry practitioners and our professional peers. The reason for this selection lies with the existing inequalities in power relations, meaning that community engagement, as we understand it, requires a limited power shift towards community stakeholders.

It is in this context that the professional stakeholders engaged in the Gladstone developments are expected to understand or at least develop an understanding of the complexities that arise from our review to assure informed decision-making. Furthermore, to address a community audience prior to establishing the feasibility of our revised participatory approach or before the willingness of industry and government decision-makers to participate is established would be futile if these decision-makers refuse participation.

The problems arising from limitations in citizen capacity in relation to community engagement are dealt with in a more tangible way. Our research team has approached community representatives and the community engagement methods we envisage have been explained to them. Most importantly, we linked our participatory ideas to local case specific issues², which directly impact on the Gladstone community and are therefore best understood by citizens whose way of life is challenged by industrial development. It is self-explanatory that theoretical complexities that emerge from early deep structure choices and strategies or complex issues that arise from a limited power transfer are not discussed with those outside the power and decision-making structures. Nor are these community members required to develop an understanding of these issues for reasons outlined earlier. Conversely, industry and government professionals engaged in the Gladstone developments, entrusted with wide ranging decision-making powers are required to familiarise themselves with the complexities that arise from the literature analysed by this review.

The avoidance of complexity is generally driven by deeply embedded inertia, which is suspicious of change, subscribes to symbolic participation and prefers the status quo. Consequently, the study of accustomed but less advanced participatory models³ cannot provide sufficient insights into the capacity or the political will of Gladstone stakeholders to support pioneering community engagement methods. Therefore, we decided to employ a participatory model that derived from our work in Switzerland, using it as the “ideal

² As part of preliminary interviews we referred to the former Southern Pacific Petroleum development Ltd., Comalco and Cement Australia.

³ As for example, consensus conferences, citizen juries, community advisory boards or similar participatory approaches which continue to exclude the community from decision-making structures, leaving the final decision to adopt or reject genuine community concerns with the developer.

type” against which the local participatory behaviour of Gladstone stakeholders is measured. This means that the theoretical underpinnings supporting the Swiss model also guide our preferences in literature, directs our research methods and forms the basis of a revised participation approach that fits the Gladstone context.

It is in this framework of the “ideal type” that a detailed insight into the deep structure strategies and choices of Gladstone stakeholders is investigated. This investigation includes the analysis of the actual socio-environmental deep structure behaviour of those involved in selected local industrial developments. Gersick (1991), one of the prominent authors in the deep structure literature, defines the concept as a set of fundamental choices made by an organisational system into which its subsystems and deep structures are organised. Deep structure choices and strategies consist of interdependent and interrelated organisational parts. However, these interrelated relationships apply not only to internal organisational deep structures, but also to external relationships across the internal/external deep structure divide.

Long-term or deep structure participatory strategies are continuously challenged by newly found insights into community engagement approaches. This means that deep structure commitments and behaviours of Gladstone stakeholders are forced into a cycle of continuous and equally important fundamental change. Consequently, our research focuses on the capacity and the political will of industry and state government agencies to absorb fundamental change if challenged by costly socio-environmental community demands. The punctuated equilibrium literature is particularly suitable to theoretically underpin change processes in organisational and institutional deep structure commitments. For example, punctuated equilibrium theory describes organisations and their activities as evolving through relatively long periods of stability or equilibrium which are punctuated by relatively short bursts of fundamental changes (Romanelli and Tushman, 1994; Tushman et al., 1986). Proponents of the punctuated equilibrium concept view these abrupt discontinuations in equilibrium not only as fundamental change, but also as the beginning of new periods of stability (Gersick, 1991; Tushman and Romanelli, 1985). In the context of the Gladstone developments, the question emerges whether new periods of stability can be assured by minimum compliance and a commitment to less advanced community engagement models?

Finally, deep structure strategies and commitments, which favour symbolic community engagement models, cannot be expected to generate genuine and sustained social trust relationships between the participants in industrial developments. The social trust literature (see Earle and Cvetkovich, 1999,1995,1994; Gambetta, 1988; Kasperson et al., 1992) verifies that social trust has been the most uncertain element in industry/community relationships. Frequent inconsistencies between the words and actions of influential industrial developers and powerful public institutions left communities disillusioned. It is against this background that we recognise three primary dimensions of social trust, which in our view must be understood by industrial and government stakeholders prior to social trust development:

1. The role of trust in reducing socio-environmental complexity;

2. The role of trust in fostering collaboration and
3. The role of trust in relation to the communication of risk.

These trust dimensions imply the early involvement of the local community into the planning and decision-making process. It is essential that the early engagement of the community include the collaborative development of socio-environmental risk assessments, which in our experience leads to strong and sustained social trust relationships, which in turn reduces complexity and negotiation costs. It is therefore important that industry and government stakeholders realise that social trust is an effective tool for preventing rancorous conflict. Consequently, our research focuses on the question whether industry professionals and senior public servants engaged in Gladstone developments are willing to recognise and use social trust as an effective tool in reducing socio-environmental complexities.

References and Bibliography

There is an extensive professional and applied literature on; (1) corporate environmental change, (2) the relationships between companies and communities in environmental management and (3) community change and public participation. All these literatures dovetail in our research. We provide an extensive bibliography, which can be used by professionals, basic and applied, company and community leaders concerned about these issues. The papers and books cited in our review are listed in this section (References and Bibliography), but we include as well papers, books and articles that were used or could be used by others, but were not explicitly cited by us in the literature review.

2. BACKGROUND TO THE RESEARCH PROBLEM

There are several strategic reasons for focusing on relationships between industries and local communities in our concern for environmental management. One is that large-scale industries through their extraction and production processes are at the same time principal sources of environmental degradation and the platform upon which real environmental change can be achieved. When we add the concept of environmental sustainability, the nature and extent of change needed by industry is clearer. Environmental sustainability is fundamentally a social and ecological concept as it refers to the fundamental changes required by industries, communities, government agencies, domestic households and individuals consuming products and services. It requires fundamental changes in the way we think and behave as members of organisations, communities, societies and cultures, and families. It certainly calls for changes in the way that we conduct business and commerce and will require fundamental change by industry and business. We will review the nature of these changes and why we might expect resistance by industry to changes which require deeply embedded ways of thinking and behaving by managers. A recent publication by *The International Human Dimensions Programme on Global Environmental Change* illustrates the dilemma we face regarding the dual face of industry in responding to issues of environmental, social and economic justice.

“A major part of the world’s population is struggling with fulfilling even basic needs, while the more wealthy part is hesitant, not to say reluctant, to reconsider the systems of production and consumption that brought them prosperity”
Vellinga and Wieczorek 2003:2).

For industry, the dilemmas are clear. Doing business is increasingly complex as concepts of development and the ways of bringing about development are rapidly changing. Increasingly, industry is required by law, policy and pressure, much of it coming from local communities, to equate making money with social and environmental justice. However, companies vary in their ability to institutionally and structurally cope with these new demands, which began with the environmental movement but have intensified and expanded their scope through the actions not only of government policy, but more importantly of mobilised pressures from non-government organisations at the national and international level. As the result of rapid electronic communication through the Internet, there are possibilities for linkages between local community, national and international groups and organisations that are affecting how companies pursue economic goals. It is here that we would agree with Douglas North, a Nobel Prize winning economist, that economic behaviours are deeply embedded in and encompassed by social relations. It is not enough to make money and protect the environment, but justice goals (social and economic justice) are forced upon companies and finance capital by active and influential non-government organisations working nationally and internationally to achieve integration of these goals, what has become known as the “triple bottom line”. Hoppe, Rickson and Burch (2004), in their analysis of company responses to the environmental imperative and resulting relationships with local communities, conclude that bringing together social, economic and environmental objectives by companies in their economic activities is dependent upon two related and equally important processes: (1) trust and (2) power sharing. The importance of trust and power sharing among parties promoting and affected by development are exemplified by the fact that the networks of national and international development are rapidly changing as industry/community relationships have emerged as strategic linkages in national and international models of development.

8. Strategic Actors in Modern Development

Who is involved, where the power is, what needs to change and how do we see development?

Who is involved?: If we are going to understand or at least correctly observe how change and resistance to change occurs, we must first of all have a good idea as to who is involved. This is not an easy question to answer. When we consider corporations as powerful actors, for example, what we see on the surface or presence in any given location can tell us little about where decisions are coming from. First of all, organisations/corporations are organised on a multilateral rather than an unilateral or hierarchical basis. This means that companies have by and large accepted the now popular managerial philosophy of issuing policy from the centre, the core of an

international group of companies, but leaving implementation to local managers. This increases the power of local managers in areas of environmental compliance, for example, but financial control, for most corporations, is tightly controlled from the centre. Secondly, if we conceive of corporations as “production capital”, a common concept in the research literature, financial backers, including divisions of the same company or group of companies are powerful influences on company decisions and policy, which affect the type of relationships that local managers have with community groups. Production capital includes a number of different company dimensions and define what we usually think of as the organisation, the company we see read about, work for or have an opinion about. Finance capital is the strategic background of decision making and its scope is international. It is mobile, organised and controlled by financial institutions such as commercial banks often in partnership with large corporations or even divisions of large corporations, and is primarily concerned with adding value to shareholders. These forces limit the power of local managers if investment in environmental structures are seen as affecting short-term economic pay-offs. There are then different levels of globalization represented by finance and production capital. Implementing the so-called “triple bottom line” of economic, environmental and social objectives occurs more in the front line activities of corporations rather than “background” companies and financial institutions organising finance and moving money.

One of the first things that researchers now do when studying modern organisations is to find their place in complex networks of economic action. Only then can we begin to understand how companies are responding to problems and opportunities at the local community levels (Castells 2000, Mittelman 2000, Dicken 2003). Concepts of corporate responsibility, environmental sustainability and “the triple bottom line” concepts that refer to more than a single organisation, but to a network of finance, production, processing and retailing. Companies vary widely in how these economic forces of production and finance capital play off against each other, but understanding these relationships helps to conceptualised how different economic forces influence industry/community relationships at the investment site. Although “global finance drives the world's economy” (Bello et al. 2000) and more so now than ever before, how financial flows are situated in local sites and how direct power and trust relationships emerge necessarily turns our attention to direct relationships between companies and communities. The trajectory of our research has been to isolate relationships at the local community site of investment and move backwards to conceptually map direct and indirect influences at higher levels of national and international influence. Researchers can of course work from the macro to the micro level. Whichever way we go, local action or localisation is as important to understanding modern development as globalisation.

Environmental and social impacts of development are concentrated locally. Although the benefits of international investment flow easily from the investment site to networks of production and finance capital, the social and environmental costs defined in terms effects upon local community cultures and traditions, employment and environmental quality are concentrated and intensified at the local level. In the past, these impacts were often excluded from political and social action. However, the environmental movement

is worldwide and local concerns and local action are increasingly communicated to an international audience and attract the attention of international NGOs having the environment as a specific focus. Local action or localisation is therefore as important to understanding modern development as globalization. The proliferation of internet facilities through the developed and developing worlds combined with emerging environmental consciousness throughout the world have internationalized environmental action where local issues can quickly become global issues. The Yearbook of International Organisations lists more than 26,000 NGOs. There were 6,000 reported in 1990. Because the costs of international communication and transportation through the Internet have sharply declined, the influence and effectiveness of non-government organisations have dramatically increased. Even though globalization and liberalised trade has handed some international corporations unprecedented power, it has also focused more attention on local community issues. Sustaining local diversity, environmental health and environmental justice at the local level have emerged as significant social and political issues. Alignments between local community people and global NGOs are now at the forefront of forcing change by otherwise powerful organisations.⁴

The focus of our research programs have been on relationships between industries and local communities. These relationships are strategically important affecting how corporate policies are locally implemented, but, as we have noted, one of a number of strategically critical linkages in the national and international networks governing modern production and processing. We can chart and describe who belongs to the networks and their activities, which range from organising production and finance capital to organising resistance to company investment plans or mobilising to try and promote local investment by international companies, but wanting to participate and influence company investment plans and policies as they are locally expressed. We need to do more than describe who belongs to these networks and what their relationships might be. It is more important to know how power is distributed. Is power centralized or dispersed through the network of relationships? If it is centralized, for example, who dominates and why? This information is as important for understanding the trajectory of development as who is involved. Secondly, what type of changes are necessary if we are going to achieve goals associated with, say, “the triple bottom line” where advocates argue that economic objectives must be balanced with social and environmental justice if we are to have the type of communities we would like to live in. This means we need “institutional and structural” change, one basically implying the other”.

⁴ An excellent example of this is reported in the spring 2000 issue of Foreign Policy. An interview with Lori Wallach, the organizer of the anti-World Trade Organisation (WTO) protests in Seattle in November 1999, illustrates the role of the Internet in these issues. She details how scanning a “secret” OECD document on Multilateral Agreement on Investment on the World Wide Web helped to organize international protests. The document was in the hands of interested individuals and NGOs around the world three days after it was received by her colleagues and her. See “Lori’s War” in Foreign Policy, 2000, Spring Edition, pages 28-58.

Where the power is: When we look where the power is in the modern economy, we invariably find a great deal vested in organisations that are more and more likely to be transnational in their scope and capable of moving production and finance capital relatively easily across national, community and ecosystem boundaries. Bertrand Russell, in *Authority and the Individual* (1948), was among the first to recognize that “important achievement is and will be almost impossible to an individual if he cannot dominate some vast organisation”. This is even truer now. The mobility of large-scale, international organisations and their assets define our time and the power of the economic and political networks they belong to is unprecedented and difficult to underestimate. International finance and planning networks are considerably more powerful than the old style “multinational” of a few decades ago. Global finance and production networks can “selectively switch on and off individuals, groups, regions, and even countries, according to their relevance in fulfilling the goals processed in the network, in a relentless flow of strategic decisions” (Castells 2000:3). The decisions and activities taken separately and jointly by network members affect everyone, everywhere on a worldwide scale (Strong 2001:33). Many corporations we generally think of as global are more accurately multinational or international rather than operating everywhere on the globe. Even if many international organisations are not really functioning on a global scale, the modern communications systems they use to manage the many different parts of their companies are global in their economic, social and environmental impacts. See Rickson (2004) for elaboration of the above discussion.

Concepts of corporate responsibility, good corporate citizenship and “the triple bottom line” are now canons of up to date corporate governance and management education in the world's top universities, scholarly journals focusing on commerce and industry and presumably critical issues in the Board Rooms of large-scale international industries. A cursory reading of influential publications such as *The Economist*, *Business Week* and *Fortune* as well as *The Wall Street Journal*, *The Financial Times* and the *Australian Financial Review* suggests that all companies, certainly all of the major companies, investing in Australia's commodity production and processing accept the principle that minimising the environmental impacts of their economic activities is a basic corporate responsibility that should be applied to all organisations across all industry sectors. Certainly, spoken commitments and policies found in public advertisements and CEO addresses to Chambers of Commerce, universities and other public venues suggest that modern industry is promoting concepts of corporate responsibility and environmental sustainability. There has been deep-seated or institutional change in (1) the attitudes of senior managers and (2) the funding and staffing of corporate centres, divisions and groups responsible for making sure that economic activities and environmental responsibilities are integrated in company strategic planning. Although perhaps not intended, this signals radically different models of economic activities, which many, perhaps most, industrial, business and commercial organisations are finding difficult to implement in their normal routines of doing business.

What needs to change? How does change come about?: Economists, sociologists and other social scientists are increasingly emphasizing the importance of institutional change. The concept “institutions” as used in the research literature refers to long-

established ways of thinking and behaving, that which is accepted as the proper way of doing things or at least “the way things have always been done”. Institutions are therefore a source of stability, but also inertia, which promotes the type of “path dependence” on the part of organisations, communities and individuals that limits their ability to respond to change in new ways. Institutional change is therefore uneven as it inevitably occurs in the midst of revolutionary thinking or when facing specific contingencies where the old ways, based on established culture and power, are not working any longer or failing to thrive. Stephen Jay Gould's concepts of punctuated equilibrium and change based on contingencies are found in current concepts of the responses of ecosystems to human use and the reverse, how humans respond to environmental contingencies. Two points are made by Folke and his colleagues (2002) when elaborating this conception. We will deal with this in more detail below, but two points are worth mentioning now. One is that change in ecosystems are neither linear nor easily predictable. Secondly, human and natural systems are integrated and cannot be treated separately if we are to understand the contingencies affecting when and how they change. Rorty (2000) argues that focusing on contingencies brings social and ecological change together in a much more logical manner than assuming linear evolution of either. Models of “co-evolution” (of social and natural or ecological systems) also are generally based on responses to contingencies. As we explain below, institutions, whether in organisational or community contexts, must over time respond to contingencies. How they respond is the critical research question influenced by several different factors or conditions. Organisational theory incorporating these notions looks at the interplay between institutionally based inertia, “deep structures”, path dependence and similar concepts specifying resistance to change. Punctuated equilibrium refers to contingencies essentially forcing change on social and ecological systems exhibiting inertia and path dependence. We see this in corporations trying to come to terms with the environmental and other social movements challenging their traditional ways of making money.

There is a great deal of interest in the management and organisational theory literature on “cultures” of organisations and how the environmental movement among other society and worldwide movements have challenged and promoted change in these cultures. One consequence has been most industrial organisations accepting environmental sustainability as a dimension of corporate policy. However, there is a powerful dynamic of inertia in all organisations that is recognised in organisational theory and central to our understanding of institutional change and resistance to change by organisations. Basically, organisations prefer incremental changes that occur gradually over time. Institutional and structural inertia, common to all forms of human organisation, creates a strong bias “toward marginal improvements on old ways of doing things”. This “causes an organisation's interests to be most closely aligned with existing institutions, which results in support for the status quo” (Ingram 1998: 261). North (1998) and others call this “path dependence” where an organisation is institutionally or culturally tied to its past or, as noted above, “the old ways of doing things”.

Drucker (1999), one of the leading management scholars of our age, writes that present day theories and models of business are no more than hypotheses requiring continual testing and examination. He writes in the tradition of John Dewey's philosophy of

pragmatism where “structures”, including the administrative structures of corporations, universities and government agencies, should be continually evaluated on the basis of their consequences. If the consequences are undesirable for either the organisation or the local, national or international communities they serve, then change is necessary. The environmental and responses to it have unquestionably put enormous pressure on industry to change the way they think and act. A different culture and language is needed by corporations that integrates economic, environmental and social objectives rather than seeing them as separate. Or, that the social and environmental impacts of production processes are constraints of their behaviour rather than having the status of fundamental goals like profits and shareholder value are. Dewey’s pragmatism and its consequences have been cited by some as “more radical than Marx” as it takes nothing for granted and, if implemented, means that our stated and unstated assumptions and policies about who should participate in making decisions about development, who should take responsibility for its environmental and social costs and how the benefits of investment will be shared are open for debate and analysis. These debates will take place across organisational networks, increasingly organised on an international and multilateral basis, across industry and commerce sectors, and of course between transnational corporations and local community groups. But, the networks emerging are complicated by numerous partnerships between groups providing financial capital for development, managers of transnational corporations charged with decision making and monitoring development activities, national government agencies, and the focus of our research program, relationships between corporations and local community groups. Doing business in this structure, as noted by Drucker (1999) above, is considerably more challenging than the old “models” of development what we refer to above as sequential frameworks founded on the assumption that getting the economy going will eventually resolve any social or environmental costs of investment.

Finally, referring to “who has the power?”, we need to consider distributive justice when evaluating economic investments. This is one of the goals of environmental and social impact assessment, which have emerged, if unevenly, as important policy tools since the 1970s. A distribution of power is also needed so that organisations and communities are not locked into technologies paying off in the short term, but, but “sowing the seeds for chronic stress and non-linear change”, which can abruptly affect the health and living standards of communities dependent upon investment or wanting such investment by companies See Adger (2003). Industrial transformation is a basic element of this (Vellinga and Wiczorek 2003).

How do we see or define development? This is a complex issue, but put into context by Hirschman (1990) when he distinguished comprehensive from sequential models of development. The latter sequential concept of development is the preferred approach to development planning by neo-liberal or “rationalist” economic thinkers and is one that promotes “getting the economy going and then dealing with whatever social and environmental problems emerge” (Hirschman 1990). Such a perspective assumes a linear model of development having neither social, economic or ecological thresholds and optimistically posits that no matter what happens, we can fix it up. Rickson (2003) cites an influential paper by Folke and his colleagues (2002) on “resilience and sustainable

development” criticising conventional theorists who knowingly or unknowingly believe that “we can do one thing at a time” and not really worry about the multiple, often unanticipated consequences of our economic, social and environmental planning. They are equally critical, as they should be, of environmental planners who cannot see or accept that environmental planning has or can have significant social and economic impacts. In these perspectives, they argue, professionals see the responses of ecosystems to human use as linear, predictable and manageable. So too, thinking and planning in these areas seem to assume that human and natural systems are separate and can be treated independently. They present an increasingly accepted view in both the social and ecological sciences that “natural and social systems behave in non-linear ways, exhibit marked thresholds in their dynamics, and that social-ecological systems act as strongly coupled, integrated systems” (Folke et al. 2002). See also Adger (2003). See Rickson (2004) for the development of this argument.

We have already mentioned when discussing change that Rorty, one of the best known living philosophers in the Pragmatic tradition clarifies this point when he argues that when we focus on “contingencies” bringing about change in social and ecological systems, we then look at the behaviour of those involved, how others affected by their actions or behaviour, what it means to them, how they are responding the way they are and what changes emerge. What finally happens may be development, as one or the other group defines the concept, but again Rorty helps us deal with the definitional problem of development. He says that, logically or philosophically speaking, “there are no privileged descriptions and that therefore there is not much point in asking, “Is our way talking about things objective or subjective”. Development, as it occurs in a specific context and how it is defined, is a product of what he refers to as “conversations” between participating parties or strategic partnerships as we prefer to call them. Whether or not there is a strategic partnership or any kind of partnership as we understand the term depends upon how long and with what intensity these conversations last.

If we are beginning to define development as more than economic growth and shareholder value and seeing it as Hirschman (1990) suggested, then new ways of thinking and acting are needed. Interestingly, one of the best definitions of development from the views of those interested in “development” as a process rather than a “thing”, like economic growth, is suggested by the engineer, Dunn (1971:9): “*Development* implies that an activity system is transformed in the mode of its operation.” Development, then, is a behavioural concept whereas growth is a scalar concept referring to “more” of something. Dunn (1971:9) goes on to say that “Growth implies and increase in scale, development an increase in the complexity of behaviour. Implicit in these concepts are their opposites. The concept of growth implies the concept of decline. The concept of development implies the concept of behavioural regression.”

Many of today’s scholars would refer to this concept as “reflexive” and we take it as meaning that concepts of development arise out of institutionalised ways of thinking and acting, which, if there is enough equality in social systems, they are capable of changing over time in small (tactical) or large (strategic) ways. New ways of thinking and acting are what the literature commonly refers to as “institutional change”. We would add “new

ways of structuring and administering organisations and community decision making, which would lead to strategic partnerships between industries and local communities based on concepts of sharing power and trusting each other. A recent report from the United States' *National Academy of Sciences* provides some direction. Regulatory policy for industry has typically depended upon a philosophy and model of "command and control". Although that approach has been successful in reducing industrial pollution overall, it has reached a point of diminishing returns. New approaches are needed. Market-based policies such as "water markets" are emerging and used in many countries, including Australia, and are best summarized by the literature on "tradeable environmental allowances", but these along with government regulation are "old tools" exemplified by regulatory agencies specifying controls on industry, community and household behaviour and sanctioning non-compliance. Compliance is not enough as regulations, emerging in highly politicised situations are usually compromises falling far short of the ideal. This is recognised by many industries. Furthermore, how policies are implemented and interpreted vary across localities. Dietz and Stern (2002:) refer to the "new tools", which can lead to organisations and communities going beyond compliance and are based upon education, provision of information, and voluntary measures.

One consequence of relying exclusively on regulation is industry "capture" of agency policies where industry power affects how agencies draw up and implement policies. Regulatory policies, in these circumstances, are symbolic at best. New tools are designed to directly promote institutional change so that parties accept necessary change as voluntary rather than dictated by government. This is attractive to a neo-liberal or generally conservative political view (Lawrence and Herbert-Cheshire 2003), but has been central to policies of governments, such as The Netherlands, noted for their liberal (left of centre) policies on social welfare and the environment (Bressers and Klok 1996, Hofman and Schrama 1996). Here, responsibility for environmental controls and balancing economic activities with social and environmental justice is delegated to industry groups and community participation by locals in community decision-making is directly and specifically encouraged by company policies. Regulation therefore promotes corporate responsibility by monitoring and backing up regulatory measures. According to Dietz and Stern (2002:5):

Voluntary measures include agreements between regulatory agencies and private firms, agreements among firms in an industry, and voluntary actions across industries, such as when firms set environmental requirements for their suppliers

They go on to note that so called "old" and "new" are hybrids. An effective mixture combines "command and control", "markets", "education", "information", and "voluntary measures" (Dietz and Stern 2002). The hybrid policy mix is designed to promote and reward change by industries, communities and individuals. Company responses to the "new tools" include that by the Holcim Group of Companies, at least by part of its worldwide network of companies (Hoppe et al. 2004) and the Indian firm, TATA Sons Ltd. See TATA Index for Sustainable Human Development (2003).

4. Strategic Partnerships between Companies and Communities

Strategic alliances between transnational companies and local community groups are increasingly important for understanding modern development. National regulation is still an important activity by nation-states, but increasingly international bodies (non-government organisations) and community groups relate directly to industry about local issues such as the social and environmental impacts of new technologies. International corporations are ultimately caught up in a system where the complex processes of corporate uniformity and local diversity push against each other creating tensions, conflict and change by industries and communities. The diversity of local cultures and ecosystems represented by groups in local communities are emerging as one of the most important sources of conflict about environmental management. Because of recent forms of communication such as the Internet, local groups can contact international NGOs and rather easily turn a local into a global issue. Therefore, globalization of production, processing and investment are matched by local responses to investment by transnational corporations. This attracts an international audience already monitoring industry behaviour, especially in Third World countries. Many companies respond to this challenge by establishing local relationships where groups work with managers to review and evaluate strategic decisions proposed or made by companies. Company development strategies, in these instances, go beyond passive compliance to existing laws and policies, which is now discussed in the popular and scholarly management literature as “going beyond compliance”. They serve goals of social and environmental justice as well as establish a means where companies and local community members can, through their representatives, negotiate differences, settle differences, avoid rancorous conflict and the inevitable ever tightening downward spiral of discontent and distrust that inevitably follows. When positive relationships between companies and local people are established, communication and negotiation between companies and locals is normalized and routinized. In the most positive model, these relationships are accepted by companies as part of doing business and by locals as a way they can influence company actions and policies of concern to them.

Integrating local and global perspectives in company management is a critical and continuing problem. Globalizing operations require coordinating strategic leadership and operational execution across many different cultural and ecological settings. A continuing and intensifying dilemma for transnational corporations even in the age of the Internet is how to ensure that policies on environmental, economic and social dimensions of company policies are applied at local company sites. Goal setting and strategic leadership are principal responsibilities of corporate headquarters in global or international companies, but local autonomy and room for local identities are equally important. When this occurs, social and cultural diversity contributes to problem solving and the stability of global networks. Rather than feeling as if they were a “subsidiary of a multinational” managers are more inclined to think of themselves as a local company working in a global network (FitzGerald 2000). Industry/community relationships based on trust and communication are essential elements of company operations and related to economic success. This fits Unilever's strategic perspective that “while there are global companies, there is no uniform global consumer” (FitzGerald 2000:28-29). An emerging

principle in management textbooks is that success in integrating local economic activities in a globalizing corporate network is based upon their ability to manage social and cultural diversity through the local manager's knowledge of local conditions and trust engendered by their identification with local communities. "Managing local diversity" and implementing central policies on waste treatment, pollution abatement and local relations are particularly difficult since, in many areas, there are long standing trade-offs, bargains and conflicts that have to be accommodated or changed. For this reason, local community diversity (social, cultural and environmental) has emerged as one of the principal sources of structural heterogeneity in international companies (Warner and Joynt 2002).

Companies that are members of the same international, multilateral network respond differently even though they operate, at least nominally, under the same set of policies coming from the corporate centre. However, it is impossible to manage everything from the centre and allocating responsibilities to local managers familiar with local conditions is generally accepted as "best management practice". They have most autonomy in the areas of environmental and social responsibilities, but considerable constraints on financial matters, which corporate centres try to keep under reasonably tight control. Studies of companies and industry/community relationships in newly organised global networks find considerable variation in the type and quality of local community and industry relationships. They agree that the industry/community relationship is key to long-term strategic planning especially, as in much of the resource sector, long-term access to site specific mineral resources are needed. This point is probably best summarized by the experience of one of the most successful transnational companies. There is always the tension between "localization" and "standardization" of policies and programs in company management. The issue is "how much to standardise from country to country versus how much to localise to respond to local differences" (Ghemawat 2004:44). "No one drinks globally. Local people get thirsty and buy a locally made coke" (Ghemawat 44). As a result, the balance between standardization and localization is rapidly tipping toward strategies of differences and localization. A "tipping" toward localization in strategic decision making is occurring, but organisations (corporations) vary in their capacity to effectively engage local communities in strategic planning. Although company capacities for doing so are increasingly recognised as preconditions for successful and sustained economic investment, companies vary enormously in their abilities or capacities to engage effectively with local communities. Too often, research suggests that companies rely upon failed models such as "minimal compliance with local regulations (and nothing more), strategic alliances only with local economic elites promoting "growth at any cost" or "beating down" local opposition through "understandings" and partnerships with state or national government agencies.

Therefore, conflicts between industrial developers and local communities have emerged as one of the most significant dimensions of environmental management and resource development. Social and environmental impacts of development are central to these conflicts. Our research suggests that companies can avoid these conflicts or respond effectively to social and environmental contingencies as they emerge by having effective, on-going relationships with local groups and agencies. Conflicts between industries and

communities that arise in the early stages of development, if unresolved, inevitably re-emerge at any time throughout the project. Differences arising after formal investment decisions have been made and after approval by state and federal regulatory authorities being granted, with capital works well under way, are particularly costly and disruptive to the operational process. This significantly reduces the value of industrial investment and the social and economic benefits to regions and local communities. Our research shows that those strategic alliances between transnational companies and local community groups can be established and maintained through participatory structures, which allows industry/community collaboration at all stages of development. A major finding of our previous research has been that establishing relations of trust at the local community level between international companies and local communities are essential to successful investment and integrating economic, community and environmental objectives. Relations of trust were essential to successful development and environmental management. Establishment of these types of relationships between companies, government, including local government, and local community people is strongly related to setting-up committees or commissions where industries and communities participate as partners in strategic development.

The following case presents a sample of our findings to this date Hoppe (forthcoming); Hoppe et al. 2004; Hoppe, Rickson and Burch (forthcoming). Our analysis and the research of others in this field suggests that models that are effective are those that emerge from commitments by parties to share power in decision-making and thereby instilling trust in relationships. Rather than a commonplace word, “trust”, similar to “power”, has become an important analytical concept and central to our current research.

5. THE CASE: In our previous research we studied one of the worlds largest cement manufacturers, The International Holcim Group of Companies. The company has a capacity to produce 4.3 per cent of global cement requirements and operates production facilities in more than sixty countries. The global cement industry is commonly faced with the problem of ensuring access to its most important resource used in the manufacture of cement, high-grade limestone. This often requires these mostly global organisations to negotiate agreements with local communities, to balance their economic investments with broader socio-environmental community objectives. Within these global organisational structures policies that control wider financial matters and capital flows are tightly controlled, whereas socio-environmental responsibilities are largely left to local sub-structure managers. It is in this area of local socio-environmental community demands that local sub-structure managers are given considerable leeway in decision-making. Although global socio- environmental policies exist, it is particularly difficult for central policy makers to explicitly manage how their local sub-structure representatives respond to local environmental and social imperatives. To guarantee the achievement of financial and economic goals global and local managers increasingly realise that hostilities over social and environmental impacts that emerge from their local developments can block potentially profitable investments. As a result, international companies and most particularly the Holcim Group of Companies are recognising that the

success of their economic investments depends upon “going beyond compliance” by employing a holistic and synergistic strategy. It is in this context that the subject of our previous research, the Bündner Cement Untervaz (BCU), realised that there is an interconnection of different social, cultural, environmental and techno-economic elements associated with their development. Consequently, the BCU management integrated social and techno-economic elements into its decision-making structure, which, as we observed, produced a positive social climate, paved the way for genuine community engagement and assured the continuous development of social trust and social capital as a matter of routine.

Untervaz, Switzerland

In the mid 1980s the BCU realised that the future availability of its most important resource, limestone, was no longer assured. Engineers estimated that existing limestone reserves would reach their extractable limit in 20 to 25 years. Consequently, the search for new limestone deposits commenced in 1984. At first glance, two decades would seem to provide a comfortable buffer for BCU engineers in which to locate and secure sufficient quantities of high-grade limestone, assuring BCU's economic future. Locating and establishing a large quarry development in the socio-culturally and environmentally sensitive area of Untervaz, however, proved to be particularly difficult. Planners and development engineers estimated that the exploration, planning, and government approval process could require ten to fifteen years. The primary reason for such a long planning and development phase was that numerous objections and demands by community and interest group were expected.

To avoid a prolonged conflict and costly legal battles a participatory body, the *Calanda Commission*, was established, which included representatives from the local council, the community and the BCU. The commission was entrusted to collaboratively search for potential limestone deposits and decide on the most socio-environmentally friendly production process. Consequently community relationships could develop on a basis of trust and are therefore not crisis driven. With this participatory framework the BCU established the *Coordination Team*. The primary task of the *Coordination Team* was to collaboratively plan and develop the Quarry development proposal, which was to be submitted to the appropriate government agencies for approval. The *Coordination Team* included local councillors who were elected as part of local council elections. These candidates contested the elections on the platform to represent their fellow citizens as local councillors and in particular as members of BCU's *Coordination Team*. This means that publicly elected councillors were given a mandate to represent the local community in the participatory structures associated with the BCU Quarry development. This is an additional responsibility, exceeding the usual duties of a local councillor. Assigned to this case specific task, the elected councillors represented the community at the *Coordination Team* negotiating contentious issues with the developer whereby proposed alternatives had to be ratified by the community at public council meetings.

Also on the *Coordination Team* were representatives from the Kantonal Department of Regional Development and the Department of Environment. These representatives were appointed by their respective departments, but rotated on a regular basis. It is important to note that these government representatives served in an advisory capacity only. The *Coordination Team* invited other authorities such as experts from federal agencies, consultants or interest groups on request.

Particularly useful for the *Coordination Team* was the assistance of government experts largely because any emerging deviation from regulatory requirements could be corrected long before it could develop into a serious problem. This means the Kantonal experts at the developer's *Coordination Team* co-authored the project proposal, which finally had to be approved by their respective departments. And because any possible deviation from regulatory requirements was detected early and corrected immediately no time consuming re-submissions of a revised project proposal or even parts thereof was necessary.

Throughout the planning and developing process the free flow of information was assured. The *Coordination Team* constantly informed the local community in public meetings about the latest developments in the project planning process. In these public information meetings local community concerns were taken note of and referred back to the *Coordination Team* for consideration. If consensus could not be reached alternatives had to be found and agreed upon by all involved. In order to find these alternatives the local community, through its representatives, was empowered to actually influence the planning and decision-making process. When the local community began to realise that their ideas were incorporated into the planning process and actually changed the development design, locals increasingly identified with the project and supported it. And, because the project proposal was co-authored as well as collaboratively planned and developed by the community, state and local government representatives, local interest groups and the developer it passed the government prescribed approval process without objection.

With the approval of the project proposal the *Coordination Team* served its purpose and was dissolved. However, to monitor the implementation of prior agreements between the *Calanda Commission*, the *Project Team* and the developer throughout the life of the quarry operation, the *Project Commission* was established.

The *Project Commission* was designed and instituted under the auspice of the local council. Its core membership includes representatives from the local community, appointees from state government agencies, delegates from the regional and local forestry authorities, the developer and an ecologist appointed by the commission. The commission engages other specialists and experts as required.

Similar to the *Coordination Team*, councillors serving at the *Project Commission* were elected on the platform to represent the community as councillors and in particular at the *Project Commission*. The elected representatives on the commission were given a mandate for three years, after which new council elections decide on their re-election or replacement. The *Project Commission* meets at least once a year, which includes the physical inspection of the quarry sites as well as a compliance assessment of the

operational phase in progress. The commission's findings are recorded in an official protocol, which is submitted to the local council executive for assessment and approval to be ratified on the next public council meeting. Disagreements among stakeholders are in the first instance solved by the commission by negotiation. If, however, agreement cannot be reached, a quorum decision via majority vote decides the contentious issues. However, ballots and their results are not removing the right of the parties to seek redress by legal means. Appeals against the decisions made by the *Project Commission* are to be directed to the appropriate authorities.

Outcomes

The following examples are a limited selection of the most significant outcomes that resulted from the collaborative interaction between the *Calanda Commission*, the *Coordination Team*, the monitoring body of the *Project Commission* and the local community.

Among others these include, the reduction of the planning and development phase of the quarry project from 10 to 4 years, primarily the result of direct participation and the co-authorship of the development proposal by the developer and the local community. As a consequence the earlier than expected return on investments resulted in significant savings estimated to exceed 40 million Dollars. Moreover, the construction of a 4.2 km transportation tunnel in favour of a 25-metre wide concrete road, designed to transport limestone from the quarry to the production facility via a dump truck fleet, was collaboratively planned and agreed upon by the developer and the community. This significant change to the existing development design resulted firstly, in a more efficient and cost effective mode of operational procedures, providing significant saving over the estimated 45-year period of operation. Secondly, it prevented the destruction of a pristine forest area assuring access for local wildlife to the nearby river Rhine. Thirdly, because locals and holidaymakers alike frequent the forest, a sharp downturn in tourist numbers vital for the regions prosperity, could be avoided. Fourthly, the survival of an important cultural monument, the Herrenburg castle was assured.

Another contentious issue was the proposed open cut mining method proposed by the developer. Within the framework of the *Coordination Team* the developer and the community agreed to use a concealed mining process. Consistent with the collaboratively reached agreement the quarry pit is driven into the mountain leaving the forested front slope of the mountain in tact. While the quarry is driven deeper into the mountain the front slope follows the operation but remains 30 meters above the pit level at all times. Simultaneously the rehabilitation of the mine is carried out from work terraces following the operation and after mining has ceased the newly created valley floor will either be reforested or turned into new farmland. Again this approach has distinct benefits for the local tourism industry since operational processes cannot be seen from the valley floor, leaving the scenic beauty of this socio-environmentally sensitive area in tact.

The above summary of findings at our research site in Untervaz, Switzerland is excerpted from Hoppe (forthcoming) and Rickson, Hoppe and Burch (2002).

6. Social Trust

The researchers focus on power (or more accurately power sharing between corporations and local community groups) and social trust developed out of our first research site in Switzerland. As researchers, we were familiar with power and trust as basic concepts in social and economic change and the importance of these concepts for looking at relationships between industries and local communities. However, much of past research literature is normative concerned with “what should be done” to promote, say, effectiveness and efficiency rather than ontological where the latter specifies what factors are involved in issues and settings, how they are related and how, as in our study, how *power-sharing* and *trust* emerge in industry/community relationships. Or, alternatively and equally important, what are the sources of resistance (for instance, institutionalized inertia, deep structures) on the part of either industry, local community groups or both in the development of such relationships. As to ontology, its classical definition refers to “the theory of objects and their ties”. As Corazzon (2004) notes, objects may be concrete or abstract, existent or non-existent, real or ideal. “Ties” can refer to dependencies or interdependencies, relationships whether argumentative, cooperative or conflictual at different times, in sequence, or all at the same time. See Corazzon (2004). Rather than assuming a given set of relationships as might be involved in previously constructed “model” such as “science juries”, we would examine any model to determine if the two basic elements of effective industry/community relationships are present: power-sharing and trust. The presence of these elements would promote resilient relationships. A resilient relationship of industry/community relationships would be one that is capable of dealing with all of these types of relationships over time, one where minor issues are managed before they become major sources of difference among member parties.

Regulatory policy for industry has typically depended upon a philosophy and model of “command and control”. Although that approach has been successful in reducing industrial pollution overall, it has reached a point of diminishing returns. New approaches are developing emphasising voluntary compliance and include education, information and voluntary measures (Dietz and Stern 2002). We have discussed the model emerging out of our research in Queensland and Switzerland and as indicated above, we are assessing the feasibility of its adoption, in some form, in industry/community relationships by Queensland industries and communities. This “model” has emerged out of our research and data analysis. It should be emphasized that it was not a model available in the literature that could be applied on some formulaic basis. It was not a “12 steps to collaboration and peace between transnational industries and local communities”, but rather refers to fundamental processes associated with effective and long-term or resilient collaboration between industries and communities. We have summarised our results from the European site in several professional presentations and papers. See Hoppe et al. (2004).

7. Application of the Model to Gladstone, Queensland.

The participatory approach taken by the BCU and the Untervaz community was established and is maintained on a purely voluntary basis, meaning that the model is based on agreements between the industrial developer and the community that exist outside and beyond regulatory requirements. This means that neither local, state nor federal socio-environmental requirements, although involved, played a decisive role in these voluntary agreements or the overall model. Therefore, one cannot disqualify such an approach by simply pointing to the apparent socio-environmental, cultural, economic or political differences between Australia/Queensland and Switzerland. Particularly our studies in central Queensland revealed that such simple comparative assumptions, which largely disregard complexity, are deeply embedded in the psyche of a significant number of local stakeholders, viewing new participatory approaches with heightened suspicion or outright hostility.

As a result of our work in south-east Switzerland and Port Curtis in central Queensland we found fundamental differences in socio-environmental behaviours and participatory commitment levels between Australian and Swiss public institutions and industrial organisations. Equally diverse, we discovered, are the views on voluntary community empowerment, which if pursued genuinely, require significant changes to local institutional and organisational structures as well as their respective deep structures. The high level of voluntary community empowerment we found in the Swiss model was based on trust-based strategies, which enabled stakeholders to negotiate value differences and to address factual uncertainties thereby transforming conflict into consensus. It is in this context of fundamental change that we propose to critically analyse the organisational change as well as social trust literature, recognizing four primary reasons for this decision.

- Firstly, prior to introducing local stakeholders to a participatory model that significantly exceeds accustomed local models, one needs to examine the long-term participatory strategies and the actual socio-environmental contingency responses of institutional and organisational structures. In our experience this is best achieved by analyzing how local organisational structures actually respond to discontinued local socio-environmental equilibria and to the associated processes of change.
- Secondly, one needs to acquire a detailed understanding of current participatory and collaborative commitment levels. This includes the examination of the actual socio-environmental behaviour of local institutional and organisational structures as well as that of their respective deep structures and their responses to socio-environmental community demands.
- Thirdly, the most appropriate next step is to investigate the capacity and/or willingness of local institutional and organisational structures and their respective deep structures to absorb fundamental change if challenged by exceptionally costly socio-environmental community demands.
- Fourthly, in much of the literature trust is closely linked to participation and collaboration. Since the model we are proposing be firmly grounded on social trust relationships it is vital to determine whether government and industrial managers are

willing to recognize trust as an effective tool in reducing socio-environmental complexities. In our experience if trust is to simplify cooperation and reducing negotiation costs than the concept of social trust as well as the associated value and belief systems of community stakeholders need to be acknowledged and legitimized by those engaged in large and complex industrial developments.

We believe that a detailed assessment of these participatory issues is an unavoidable prerequisite for collaboratively developing a participatory model with interested Port Curtis stakeholders using the Swiss participatory approach as the “Ideal Type”. Approaches to industry/community relationships vary across cultures and localities belonging to the same culture. The feasibility and capability of stakeholders, including industry and local community groups and relevant government agencies undertaking the types of relationships we saw in Switzerland is a primary focus of the project. It is in this context that we intend to develop a revised participatory model that may be adopted and tested by Gladstone industry and/or community stakeholders. Understanding commitments to power-sharing and trust requires an analytical understanding to the research literature on organisational change. This is a highly technical literature and is summarized below. Central concepts as noted above include *punctuated equilibrium*, *deep structures*, *inertia* and related concepts helping us to explain organisational change resistance by organisations to what we have called *institutional change*.

8. Applying the Punctuated Equilibrium Paradigm to Gladstone’s Organisational and Corporate Stakeholders

Concepts of punctuated equilibrium have emerged as the most prominent theoretical framework for investigating organisational transformation and fundamental organisational change. Punctuated equilibrium theory, as described by its proponents, depicts organisations and their activities as evolving through relatively long convergent periods of stability or equilibrium which are punctuated by relatively short bursts of fundamental change (Romanelli and Tushman, 1994; Tushman et al., 1986). The punctuated equilibrium literature views the abrupt discontinuation in equilibrium not only as fundamental change but also as the beginning of new periods of stability (Gersick, 1991; Tushman and Romanelli, 1985). In the context of the ongoing developments in Port Curtis, however, these new periods of stability are not necessarily assured by regulatory compliance. The fundamental difference between a progressive organisational commitment to fundamental change and compliance to government regulation is that mere compliance significantly limits industry responses to socio-environmental community demands. For example, government legislation is a reactive response to (a) new scientific insights and (b) to changing community perceptions and values. Industry compliance to legislation, therefore, is usually lagging behind improved scientific knowledge and secondly, behind the consequent new socio-environmental community values and norms. Punctuated equilibrium models have their origin in biological evolutionary theory, which argues that a biological lineage changes little during most of their history. Evolutionary theory further holds that events of environmental and genetic

selection not only disrupt periods of equilibrium, but also result in rapid and fundamental change (Gould, 1980; Eldredge and Gould, 1972). Norgaard's (1994) concept of co-evolution can be applied here as he adopts an approach to change based on connected parties changing and adapting as contingencies in their relationships emerge and require change. Change can be "progressive" or "regressive" depending upon the nature of the relationships and the institutional histories of "deep structures" of involved groups.

Although this theory has its origins in the discipline of biology, Gersick (1991) reminds the interested scholar of the largely independent emergence of the punctuated equilibrium paradigm across a number of disciplines. Kuhn (1970) for example, concerned with the study of the history of science, suggests that traditional scientific activity is interrupted by tradition-shattering scientific revolutions that lead to new scientific paradigms. Others, such as Abernathy and Utterback (1982) or more recently Erickson and Kuruvilla (1998) studied industrial transformation, arguing that industrial relation systems cannot be changed unless the underlying value and belief systems that drive organisational structures are changed first. These changes, they assume, could occur gradually or abruptly (Erickson and Kuruvilla, 1998). Investigating organisational transformation, Romanelli and Tushman, (1994), Tushman and Romanelli (1985), and Miller and Friesen (1984, 1980), describe organisations as evolving through relatively long periods of stability punctuated by rapid revolutionary change. Levinson (1986), engaged in the psychological sciences, views life structures as evolving through orderly periods of structure building, interrupted by periods of structural changes and transition. Finally Gersick (1989, 1988), conceptualizing change in a group and team building context, suggests that stable infrastructures permit only incremental adaptation, and brief periods of revolutionary upheaval.

Even though these models display striking similarities from which the same paradigm emerged, they nevertheless show some differences. The commonalties converging into the overall punctuated equilibrium paradigm have been summarized by Gersick (1991). She concludes that systems evolve through the alternation of periods of equilibrium, in which "...persistent underlying structures permit only incremental change, and periods of revolution, in which these structures are fundamentally altered" (Gersick, 1991:13). This implies that the punctuated equilibrium paradigm consists of three main components: a) persistent underlying structures or deep structures; b) equilibrium periods; and c) revolutionary periods of fundamental change. These components, we believe, provide an effective guide to evaluate the capacity and/or willingness of organisational stakeholders in Gladstone to fundamental change. Using the introduction of a new, progressive participatory model, that significantly exceeds the accustomed local models of public participation, as the punctuating event. Consequently, the following needs to be analysed:

- (a) The deep structures of organisational stakeholders in Gladstone and in particular the underlying value and belief systems that either prevent or support a genuine commitment to adaptation and change.
- (b) The strategies for possible socio-environmental contingencies in response to participatory community demands, which may emerge as the primary reason for discontinued equilibria.

- (c) The strategies for the inclusion of community stakeholders into the planning and decision-making process, particularly in the case of fundamental shifts in community values, socio-environmental norms and participatory demands.

Our analysis of these strategic choices will be placed in a comparative analytical framework in which corporate organisational structures, sub-structures and deep structures are assessed across systemic boundaries. This means that industrial corporations and their deep structures are not studied as organisational singularities, but instead as multileveled industry systems.

9. Deep Structures

The concept of deep structure has its origin in Chomsky's (1966) analysis of Cartesian linguistics. Gersick (1991) has chosen it for its general appropriateness as a set of fundamental interdependent choices made by an organisational system into which its subsystems and deep structures are organised. These choices or strategic orientations of organisational deep structures consist of interdependent and interrelated organisational parts. These may include core values and beliefs, organisational culture, norms and ideology, organisational structure, technology and different types of power and control systems (Romanelli and Tushman, 1994; Gersick, 1991). Punctuated equilibrium theorists, therefore, describe organisational deep structure as a system of interrelated organisational parts or choices which are maintained by mutual dependencies that exist among these parts or choices (Romanelli and Tushman, 1994; Gersick, 1991; Tushman and Romanelli, 1985). However, these interrelated relationships apply not only to internal organisational deep structures, but also to external relationships across the internal / external deep structure divide. As indicated earlier, it is for this reason that our research approach considers corporate organisational structures, sub-structures and deep structures across systemic boundaries.

Wollin (1999), using Simon's (1996) concept of hierarchic systems, extends Gersick's (1991) earlier notion of deep structure by pointing to the importance of the multi level ordering of a system's multi-dimensional deep structure (Wollin, 1999). The concept of multi level ordering indicates that any system is comprised of interrelated subsystems, which in turn are hierarchical in structure, until the lowest level of elementary subsystem is reached (Simon, 1996). Therefore, this systemic order, Wollin (1999) suggests, applies equally to organisational deep structures where the multi level order of subsystems determines the extent and depth of organisational change, depending on the level where punctuated change actually occurs. This means that change at the fundamental level is most likely to affect subsystems at the marginal levels of the deep structure. Change at the marginal levels, however, does not necessarily result in changes at the fundamental level (Wollin, 1999).

If placed in the context of the Gladstone developments this means that the local corporate stakeholders we are studying may be part of an independent or semi-independent sub-structure of a larger global structure. Our previous work supports Wollin's (1999) theoretical proposition, showing that local punctuating events, such as the introduction of

new participatory concepts, including the genuine empowerment of local communities are indeed largely limited to subsystems and their local deep structures (Hoppe, 2004). It is for this and time constraint reasons that our research efforts will be concentrated on local subsystem and deep structure inertia and/or progressiveness without necessarily linking these to possible transnational structures. This linkage, however, depends on the level of independence or semi-independence of the organisational structure.

Deep structure, as a theoretical concept as previously mentioned, reflects the choices and strategic orientations of interdependent subsystems. These choices and strategies not only maintain an organisation's multi-dimensional deep structure, but also determine how the organisation will behave in its contingency responses. In other words, these choices, if institutionalized, result in inertial multi level deep structures that are highly stable. Consequently, earlier choices made by these interdependent deep structures will most likely restrict contingency responses, primarily because most of the later decisions and strategic options in response to socio-environmental discontinuities can be expected to be ruled out by deep structure inertia (Gersick 1991). This implies a historic development of deep structure strategies and choices consequently, Clark (1985), Dosi (1982) and Wollin (1999:361) emphasize the analytical importance of system history. Primarily because different system histories may have significant impacts not only on deep structure strategies, but also on organisational change per se. Wollin, therefore, suggest that fundamental change to deep structures requires the "...remaking of earlier fundamental choices and the abandonment of more marginal choices that are predicated on them". This process of selection and retention akin to evolutionary theory is central to the punctuated equilibrium paradigm. Therefore, if environmental discontinuities disrupt one or more levels of an organisation's deep structure, its systemic order may retain its inertial structure at some levels and resist change. However, other levels of its systemic order may select to adopt change.

This scenario of heterogeneous change between different levels of organisational deep structures is reflected in our earlier work in Switzerland and central Queensland. We found that organisational and/or subsystem histories significantly influenced different deep structure levels as well as later attitudes towards organisational change. These attitudes, whether conservative or progressive, develop over time into highly inertial deep structure strategic choices. That is, institutional histories (ways of thinking, believing and acting) heavily influence how current situations are defined, reflected upon and talked about (see Rorty's notions of "conversations above). A primary research task, in these field sites, is therefore to study the organisational and deep structure histories of local stakeholders. This means that particular emphasis will be placed to gain insights into the historical development of socio-environmental strategies and policy responses to participatory community demands. Within this historical context we need to focus particularly on the question of symbolism. In other words, we intend to investigate whether public collaboration and participation policies, introduced by local organisational structures, were actually applied or remain purely symbolic. We regard any participatory policy as symbolic that:

- Engages the public in a non-binding advisory capacity, thereby effectively excluding the local community from the planning and decision-making process.

- Assures that the decision-making power remains in the hands of the institutional and/or industrial developer
- Prevents any possibility of a limited power shift thereby preventing the genuine empowerment of locals.

Symbolic participatory structures usually result in extended periods of limited change with very little or no effect at the fundamental level. Furthermore, new constellations within a system's deep structure are most likely to emerge. Thus, to successfully introduce progressive participatory models depends on the successful transformation of earlier deep structure strategic orientations and choices.

Because managers are frequently reluctant to see anything change when things are going well or cling to old ways of thinking and acting exhibiting path dependence (See North, above), changes can be more 'symbolic than real' to state a useful cliché. Policies can be formulated stressing company acceptance of responsibility and, indeed, policy changes are necessary first steps. However, policy that fails to lead to action or worse, policy designed to express commitments without really doing so, are tactics by organisations that are reported in the literature (Beder 1997). It should be recognised, however, that "hypocrisy can be the first step toward real change". When we equate changes promoted by what has come to be called 'the triple bottom' line, the issue is complicated because corporate responsibility then is associated with 'justice' goals, which includes balancing and integrating economic goals with social and environmental justice in the normal conduct of business. An outcome of corporate activity would require much more than attending to economic investment and minimal compliance with government regulatory policies. It would signal an entirely different way of doing business. One would expect that in these circumstances, we would find a great degree of resistance by companies as well as institutional and structural inertia. Rickson and Ramsey (1985:89), in one of the comparatively few studies of industry pollution abatement, suggested that

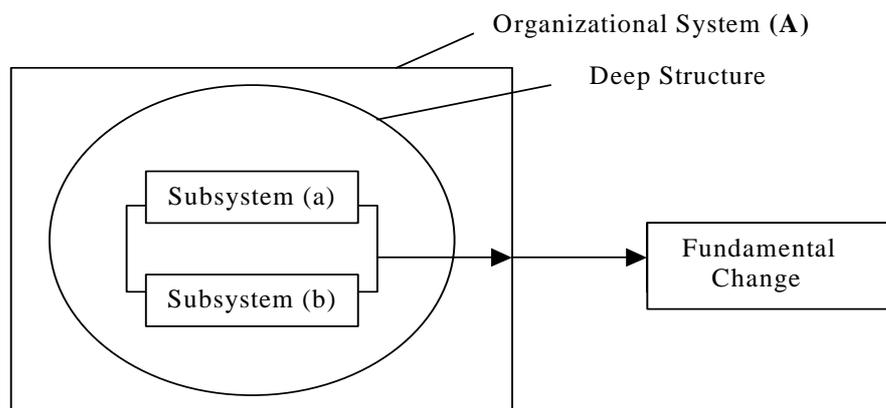
Industrial firms, committed to conventional economic goals, can be expected to resist goals which have their origin in political, social and cultural values "outside" the economic institution. Standard operating procedures that have been established over time and within operational models stressing economic criteria for measuring success and failure do not easily incorporate noneconomic objectives such as pollution control.

They go on to say that "They challenge long established attitudes by owners and managers about their rights and responsibilities in a capitalist economy. Traditional attitudes and structural inertia are sources of company resistance to these goals, but there is a logical range of responsiveness by companies to the problem."

10. The Triadic Principle of Deep Structure Contingency Responses

The following model⁵ captures the most common responses of organisational subsystems to socio-environmental contingencies. See Hoppe (2004 forthcoming). It is set against the background of earlier strategic orientations and choices as well as deep structure inertia. These systemic contingency responses may take three different paths in responding to socio-environmental and socio-cultural discontinuities.

Figure 1: Deep Structure Contingency Response, Path 1



The first of this three-path process shows organisational system (A) illustrated in Figure 1. Fundamental organisational change occurs here because all subsystems, (a) and (b), within the organisational deep structure reorganize uniformly in response to socio-environmental contingencies. However, such a uniform response, although not entirely impossible in smaller organisations, is highly unlikely in larger and/or global corporate structures.

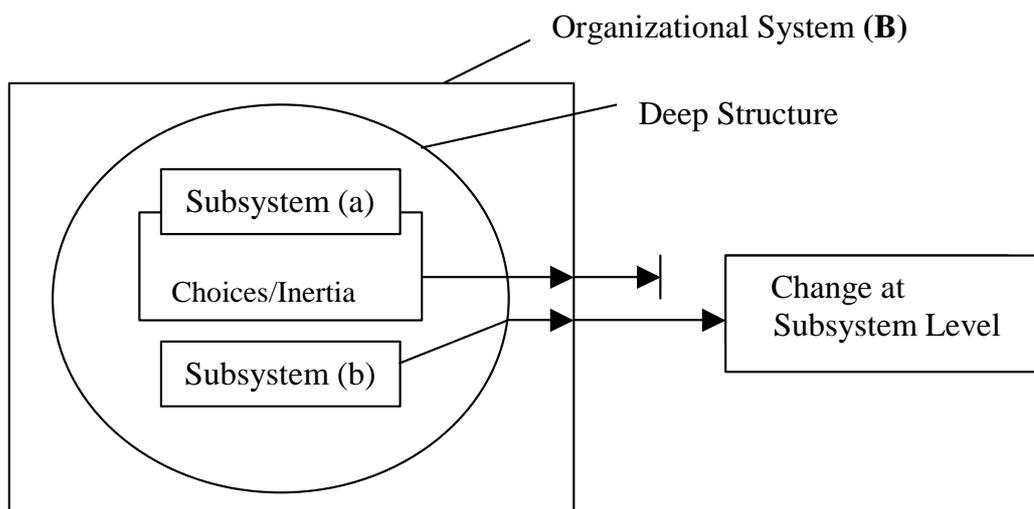
The primary reason preventing uniform responses in these structures is the size and complex nature of large / transnational systemic structures. Other factors are the interdependence as well as independence or semi-independence of its local subsystems, operating not only within the complexities of a vast organisational structure, but also across global and local boundaries. Therefore, global organisational structures, we believe, cannot be expected to change or respond to contingency impositions simultaneous or to the same extent.

Figure 2 displays organisational system (B) where earlier strategic orientations and choices result in deep structure inertia. This causes subsystem (a) within the organisational deep structure to behave differently from subsystem (b) as well as from the organisation as a whole. Consequently, organisational contingency responses are heterogeneous, primarily because change is limited to subsystem (b), which in contrast to (a) is not constrained by earlier choices and organisational or subsystem inertia.

⁵The deep structure contingency response model, path 1-3, has been taken from PhD thesis *Industry/Community Relationships in Critical Industrial Developments*, Peter Hoppe (forthcoming)

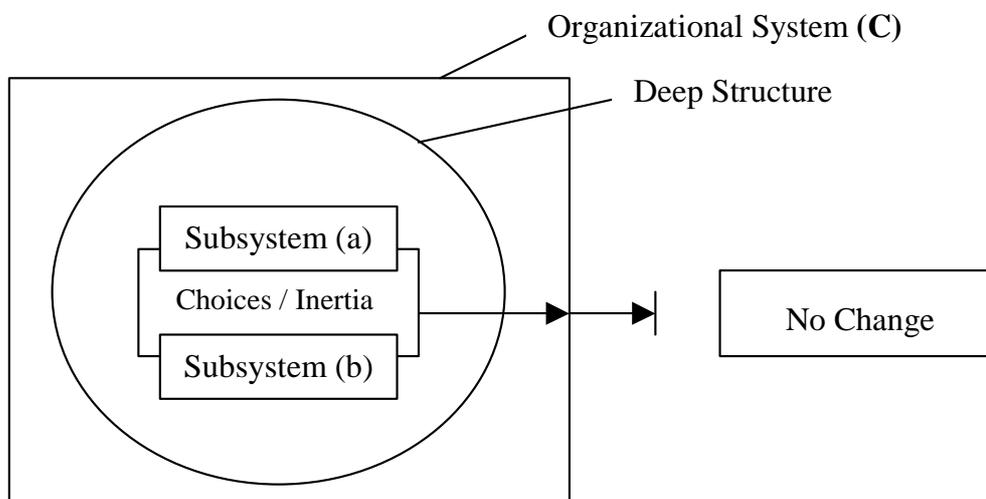
Subsystem behaviour as presented in organisational system (B), is expected to be particularly apparent if contingency responses are analysed in a physical and theoretical spatiality context namely, across global / local borders.

Figure 2: Deep structure contingency response, Path 2



The final organisational system (C), Figure 3, shows that subsystem (a) and (b) are constrained by institutionalized earlier strategic orientations and choices. Thus, organisational contingency responses are uniformly set against change caused by organisational and subsystem deep structure inertia. These uniform responses of subsystem (a) and (b) show some similarities with the subsystem responses of organisational system (A). However, as indicated earlier, uniform contingency responses may occur in organisations of more limited size, but the simultaneous rejection of environmental contingencies within global / local organisational structures is highly unlikely. Change therefore can be expected to be heterogeneous and uneven.

Figure 3: Deep Structure Contingency Response, Path 3



The conclusion that can be drawn from these three path models, is that systemic multi-level deep structures may adopt change at the fundamental organisational level or at the local subsystem level or prevent change entirely, depending on earlier strategic orientations and choices. Contingency responses by organisations and their subsystems are, therefore, inherently heterogeneous. The primary reason for this heterogeneity is the exposure of organisational subsystems and their deep structures to different internal and external socio-environmental discontinuities, as well as to varying degrees of different local contingency pressures. If organisational size is associated with those contingency requirements and/or pressures, an additional complex scenario emerges. The link between organisational size and resistance to change is well documented in the literature (Rickson and Parlange, 1994). The larger the organisation, it is argued, the more interdependent subsystems rely on subsystem technocrats to interpret local environmental contingencies (Tushman and Romanelli (1985).

The level of empowerment of local subsystem administrators, interpreting and responding to local socio-environmental contingencies, is of particular interest to our analysis. Whether these powers are applied in a semi-independent global/local subsystem setting or within a distinctly local organisational framework not only raises important questions about global/local and distinctly local deep structure historical backgrounds, it also adds another dimension to our study. This means that a comparative analysis may establish whether either global/local subsystems or entirely local organisational structures respond more favourably to the introduction of participatory models. Consequently, since organisational subsystems encourage, retard or prevent organisation-wide change we intend to focus our attention on local subsystems and their actual responses to local socio-cultural and socio-environmental contingencies. To this end our analysis will be partially based on the contingency theory. Restricting our analysis to the traditional structural contingency paradigm, however, which largely views organisational structures as unified systems of organisation would significantly limit our study and thereby it's empirical results. Therefore, prior to merging the most appropriate concepts of the traditional contingency theory with those of the punctuated equilibrium paradigm, some analytical consideration is given to the contingency literature under the following sub-heading.

11. The Structural Contingency Paradigm

The structural contingency paradigm, pioneered in the late 1950s and early 1960s by Woodward (1965, 1970) and Burns and Stalker (1961), holds that individual organisations adapt to their internal and external environments in order to survive. Consequently, management adopts survival strategies that are not only reflective of changed environments, but also of organisational goals and objectives (Christensen et al., 1987). Proponents of the structural contingency theory seem to agree, that to maintain functional and optimal structures, requires organisations to utilize existing resources to pursue strategies, that assure particular levels of size, technology and diversification. Each of these is considered in the organisational literature to be a contingency variable (Christensen et al., 1987; Blau, 1970; Hage and Aiken, 1970; Chandler, 1962; Burns and Stalker 1961). If organisations are confronted with a discontinued equilibrium between

these contingency variables and local environments, they will move back into congruity by either adaptation or change. Structural contingency theorists see this as an adaptive process designed to regain effectiveness and performance (Christensen et al., 1987; Blau, 1970; and Woodward, 1970).

Discontinuities in local socio-environmental equilibria, however, particularly if caused by introducing technologies to local environments, require a fundamental rethink in relation to participatory structures. In context of the Gladstone developments the question arises whether local subsystem managers realize the importance of community collaboration and participation for long-term corporate effectiveness and performance as well as for the assurance of size, technology and diversification? It is important, therefore, to study the awareness levels of local subsystem managers of the inherent linkages between collaborative and participatory structures and corporate effectiveness.

In more recent organisational literature, Burke and Litwin (1992) point to the pressures of environmental discontinuities and the resulting consequences for organisational cultures, belief systems and internal organisational behaviour. Consequently, to assure the successful adaptation to external contingencies, internal behavioural changes are proposed. These include a revised approach to managerial leadership, the transformation of organisational cultures and fundamental changes in mission and strategy (Burke and Litwin, 1992). Similarly, Vollman (1996) focuses on organisational change imperatives and lists a number of potential transformation factors that underlie successful organisational adaptation and change. Five of these appear to be most appropriate for our study. Successful responses to socio-cultural contingencies and to participatory community demands requires organisations to develop the following:

- a) strategic responses such as planning of appropriate programs and actions;
- b) assign organisational competencies to the relevant environmental contingencies;
- c) display a learning capacity that identifies and integrates newly acquired knowledge into the organisational structure;
- d) develop contingencies for possible challenges and anticipated problems;
- e) apply strategies effectively to the relevant issues (Vollman, 1996).

These transformation factors, which we intend to view from a punctuation and deep structure perspective, are of particular interest if linked to local rancorous conflicts between industrial developers and the local community. In the context of the Gladstone developments this means that our inquiry particularly focuses on whether local companies who are rancorously engaged in community/industry disagreements actually changed strategies as well as the unsuccessful strategists in order to end a persistent problem.

Vollman's (1996) as well as Burke and Litwin's (1992) accounts also focus on structural and strategic transformation factors that include organisational culture and behavioural dimensions. If confronted with a discontinued equilibrium caused by stakeholder value discrepancies, these authors argue, organisations will move back into congruity by either adaptation or change. We expect, however, that entrenched subsystem inertia is more

likely to further deepen inconsistencies between organisational and community value positions. Vollman's as well as Burke and Litwin's assumptions can be applied to any local situations where there are competing or cooperative groups confronting a common problem, but where the distribution of the costs and benefits of actions are of primary concern to all parties. Understanding of the deeply entrenched industry / community value discrepancies as well as some insights into possible industry / substructure inertia are necessary. Without such knowledge, the introduction of participatory models, which are significantly more progressive than accustomed approaches, is most likely to fail.

Using punctuation models we expect to identify different value choices within industry/community deep structures. This allows us to assess whether value discrepancies may be settled in sequences, thereby resulting in particular solutions for individual subsystems suitable for different phases of industrial developments. One can, however, not exclude the possibility that local organisational sub-units and/or individuals within them resist change, because in their view, no adaptive advantage appears to accrue (Gould, 1989). This implies that equilibrium is unlikely to be regained by limited or symbolic change, usually preferred by those who misinterpret or misunderstand adaptive advantages, but instead by fundamental organisational transformation. Other authors characterize adaptation in terms of rapid continuous change. They describe how organisations succeed in relentlessly changing competitive environments by linking organisational structures to high velocity market environments (Eisenhardt and Tabrizi, 1995; D'Aveni, 1995). Emphasizing the need for rapid adaptation, D'Aveni, particularly points to the rigors of competition, whereas Stalk and Hout (1990) view organisational strategic competencies as the most important prerequisite for fast adaptation. Other theorists consider a fast pace in product innovation and the development of new technologies to be the central path by which organisations transform and adapt themselves to new environments (Eisenhardt and Tabrizi, 1995; Dougherty, 1992; Vesey (1991); and Womack et al., 1990). There seems to be agreement among these authors that fast adaptation to rapidly changing environments is of central importance for organisational strategy, innovation and ultimately, vital for organisational survival. Since fast adaptation seems to be paramount for organisational effectiveness and survival or research intends to analyse the capacity of local corporations to adapt to participatory and socio-environmental community demands.

However, these accounts concerned with rapid change and adaptation fail to pay enough attention to the complexities of organisational subsystem independence or semi-independence. In other words, local independent subsystems may respond to external contingencies heterogeneously. This means that as an integral and interdependent part of the same global organisational structure, for example, independent local subsystems have the optional freedom to adopt and maintain positions contrary to the contingency response behaviour of their global organisation. Such freedom may not be formally allocated, but central administrations often decide that they cannot override local contingencies or culture. Consequently, if independent or semi-independent local subsystems decide to introduce varying levels of change or adopt different adaptation sequences, they actively prevent or retard rapid change.

Attempts have been made to portray organisations as more dynamic than they are commonly assumed to be. For example, Brown and Eisenhardt (1997) suggest that extant organisational dynamism together with continuous rapid change more realistically reflect how organisations survive in competitive environments. Instead of inaction, it is argued, organisations firstly attempt to overcome sectional inertia and subsystem resistance. Secondly, they try to control the pace, level and speed of change or adaptation. In our experience, however, this depends largely on the level of subsystem independence and the congruency or heterogeneity in organisational sub-structure contingency responses. Previous strategic choices, which are maintained by inertial subsystem deep structures and complex internal and external interdependencies, cannot be expected to be suddenly abandoned in favour of a unified response to environmental discontinuities. Heterogeneous contingency responses by independent subsystems are, therefore, expected to retard or prevent rapid organisational change. Managing subsystem independence in local socio-cultural and industrial development contexts is a continual problem. Success in integrating economic activities and local socio-environmental diversity may be achieved through local manager's knowledge of local conditions and their identification with local communities (FitzGerald, 2000). Local socio-cultural and socio-environmental diversity as well as subsystem independence and semi-independence, however, appear to be the principle sources of structural heterogeneity particularly in global organisational structures.

It is in this context that we have engaged a global industrial developer in Gladstone, comparatively studying global/local planning and decision-making structures with particular reference to local participatory and collaborative strategies. There is no doubt that the structural contingency literature offers numerous different approaches and possible solutions in terms of rapid continuous change. Studies, however, focus on interdependence rather than on the independent organisational subsystem behaviour and how subsystem and deep structure independence retards or prevents rapid change. The gap in literature and in empirical data is particularly evident when the heterogeneity in subsystem contingency responses is analysed in the context of socio-cultural or socio-environmental contingencies. Therefore we merged some aspects of fast adaptation with the punctuation concept and with the deep structure paradigm, applying the emerging paradigm to our research in Gladstone. This will aid our understanding of whether heterogeneous subsystem contingency responses promote or retard change. This means that a detailed understanding of the interdependence/independent decision-making dynamics allows us to develop the most appropriate and beneficial participatory approach for the Gladstone stakeholders.

However, in spite of the apparent differences in the contingency debate, there seems to be agreement in the literature that gradual or incremental adaptation, rather than short burst of revolutionary change, transforms, over time, the organisation in its entirety. This assumption may fit analyses that approach organisational structures as unified systems of organisation. If, however, global organisational structures are viewed as a conglomerate of loosely coupled systems, a different analytical picture emerges. The underlying reality of this approach suggests that complex global structures are not unified systems of coordination (Selznick, 1996, Gross and Etzioni, 1985; Weick, 1976). They are instead, a

framework of loosely coupled interrelated and independent organisational subsystems that function across global and local socio-cultural and socio-environmental boundaries. The advantage for global corporations to maintain loosely coupled systemic structures is evident. If, for example, structural elements of transnational organisations are loosely coupled to one another, any one element can adjust and modify local contingencies without affecting the whole organisational system (Weick, 2001, 1976). However, specific core elements of global organisations such as finance, investment, tax minimization and the transfer of profits across global boundaries are traditionally tightly controlled structures of organisation. Organisational elements such as global and local environmental management, on the other hand, may well be organised as loosely coupled systems of organisation. In the event of local environmental discontinuities, for example, the loosely coupled local sub-unit can easily be sealed off, thereby preventing it from affecting other elements in the global structure (Weick, 1976, 1969).

We suggest that loose coupling is not imperative but a strategic choice made by transnational organisations. This implies that in a loosely coupled global/local subsystem setting different perceptions and interpretations of local socio-environmental value and belief systems are likely, leading to heterogeneous local contingency responses. Two fundamental questions emerge from such a scenario. Firstly, what is the extent to which local socio-environmental community values are legitimized by global/local systems and secondly, to what extent are these included into local organisational subsystem decision-making, as well as into local deep structure strategies?

12. Consistency Theory and the Legitimization of Community Values

Our recent work in Switzerland as well as in central Queensland strongly suggest, that although central in environmental controversies, the importance of including different environmental values in the decision-making process varies across organisations in the same group of companies and across groups. Organisational systems and their deep structures continue to reflect a view, largely ignorant of the role individual and community values play in environmental disputes. The underlying reason for tensions in environmental decision-making is the widely held belief by industry technocrats, particularly at the subsystem and sub-unit level, that environmental conflicts are driven by disputes over economic, technical, financial or ecological facts, rather than competing value positions (White, 1970). The natural environment, however, is more than simply an objective fact, the environment is instead “experienced”, and thereby given a social and cultural meaning (Cotgrove, 1982). Thus, social experience and socialization organize community perceptions about the environment and its natural resources. Therefore, there can be no thoroughly objective perception of the environment, only different interpretations, varying with experience and personality (Festinger, 1964, 1957).

There is a considerable body of literature concerned with the relationships between beliefs, values, and behaviour. This provides a key to understand why people differ in their perception of environmental issues. For example, as early as the 1950s Rosenberg (1956) suggests that a person’s evaluation of an object is strongly related to individual expectations or beliefs that the object is consistent with the values and goals to which an

individual may subscribe. In the Gladstone context this means that community perceptions and evaluations of an object e.g. new industrial developments, individuals and the local community expect these to be consistent with their value and belief systems. This concurs with Fishbein (1963), suggesting that a person's assessment of an object is strongly related to the total set or pattern of his/her beliefs about an object. Rosenberg's and Fishbein's analyses imply that individual values, attitudes and beliefs informed by socialization as well as socio-cultural constructs such as politics, economics, science and religion are numerous and diverse. Therefore, social action, whether the action involves political, socio-economic or cultural activities, is directed by these individual attitudes and belief systems (Krech et al, 1992).

Development engineers and industry technocrats tend to regard these socio-environmental and socio-cultural complexities as beyond their responsibility or competence, particularly if these experts maintain a strong professional identification. This, has significant consequences for environmental decision-making for two reasons. Firstly, because professional perceptions, preferences and value positions become the implicit determinants of plans that are presented for public choice (White, 1970). Secondly, this would force individuals into attitude / behaviour inconsistencies if their value positions differ from those supporting industrial development. Significant and sustained resistance, rather than lateral or strategic movement is therefore to be expected. The theoretical underpinning for this argument can be found in various theories known collectively as "consistency theories" (Freedman et al, 1970; Festinger, 1957; Heider, 1944). Based on Fritz Heider's (1944) earlier work, Leon Festinger's (1957) theory of cognitive dissonance suggests that there should be consistency between cognitive elements, whether they refer to values, attitudes or behaviour, because inconsistencies between them will give rise to cognitive dissonance (see also Ajzen and Fishbein, 1980; Heider, 1958). If the inconsistency between cognitive elements persists because of competing eco-industrial motives and conflicting corporate and individual value positions, individuals may be forced to behave contrary to their value and belief systems.

Considering organisations, it is often the case that their administrative structures are "inconsistent" with their purported efforts regarding the environment or social welfare objectives (social justice), which they may claim through policy or CEO declarations that they are committed to. For example, what are the structural capacities of the organisation for effectively and competently investigating the environmental and social impacts of their economic activities or specific production and processing activities at any given site? It is common for companies to espouse environmental commitments, for example, before they have the structural and administrative capacity to undertake these types of tasks. Furthermore, the deep structure commitments to economic objectives, an understandable part of their institutional histories, often means that policies and public commitments outstrip the structural and administrative capacities for doing what they either would like to do or saying they are doing. Inglehart (1997), among others, refers to this as "cognitive mobilization", which occurs in organisations as it does in the general community. How does an organisation or a community mobilize knowledge on a specific topic or problem and turn that knowledge into action?

Organisations often exhibit “structural inconsistencies” especially in the early stages of strategic change when it is, to some degree, forced upon them from the outside (Rickson and Ramsey 1985). Corporate responses to taking environmental responsibility has led many to establish divisions or departments that measure the environmental impacts of industry processes and work with government regulatory agencies to ensure company compliance. They become “point men and women” in bargaining with agencies over the application of environmental regulations to their perhaps unique circumstances. Outsourcing is also a significant tool for industry as contracting with private consulting firms saves them investing directly in the knowledge and structural capacities needed for environmental management and relationships with community partners. Institutional or strategic change occurs when structures responsible for pollution control or general environmental management have the same status and power in companies that are enjoyed by those in conventional accounting, marketing and production departments. When this is not the case, then high rates of turnover and low morale will characterize employees working in departments not seen as core dimensions of company activities (Rickson and Ramsey 1985).

There is consensus in the literature that if confronted with these situations, individuals will try to eliminate dissonance by re-establishing a mental and emotional equilibrium between discrepant cognitive elements (Fishbein and Ajzen, 1975; Kiesler et al, 1969; Abelson et al, 1968). Consequently, to regain equilibrium and to eliminate the dissonant state, the individual will change either attitude or behaviour (Ajzen and Fishbein, 1980; Fishbein, 1963). In more recent literature, scholars extend these earlier accounts of consistency theory by pointing to the importance of congruence between individual and organisational value systems (Schein, 1996; Hoffman, 1993; Posner and Schimdt, 1992; Denison, 1990; Wiener, 1988). Most of these authors agree that the alignment of individual and organisational value and belief systems is intrinsically linked to corporate success. Therefore, in the context of global / local industrial developments, global organisational structures and their local subsystems are forced to appropriately respond to local societal value and belief systems. These organisations and their local subsystems would seriously jeopardize effectiveness and long term success, if these local values and beliefs are ignored. Additionally they can hardly expect loyalty from their own members, because of continuous cognitive dissonance. They may also fail to find support from government agencies or the wider community for the same reason. As a consequence, these organisations forego their chance of achieving excellence in organisational performance (Wiener, 1982). Thus, if incongruity between organisational and community value and belief systems persists, local communities and other local interests are more likely to enforce legal and socio-political sanctions. Local people usually pursue such a legal approach in an attempt to eliminate the inconsistencies between their value choices and the conflicting “object” (e.g. particular industrial developments in Gladstone, which directly impacts on their lives). If the industrial developer ignores incongruity between community and organisational value and belief systems, legal and political sanctions are available and will be used by the local community. This is despite the efforts of subsystem managers seeking to maintain a complex network of commitment and relationships with local communities (Romanelli and Tushman, 1994).

13. Legitimizing Community Value and Belief Systems

The fundamental interaction between industry professionals and the lay-public is predominantly socio-cultural, although this is not a view shared by the majority of industry technocrats. For example, disputes which arise from incongruent industry / community value and belief systems and the inevitable heterogeneous contingency responses, are often sought to be eliminated by the exclusive or extended application of technical knowledge or by industry prescribed techno-economic solutions. However, to maintain effective community relations operational management and development engineers particularly if acting on behalf of local organisational subsystems, must add socio-cultural issues and complexities to their repertoire of strategic choices. There is a widely held belief among industry practitioners that finding solutions to socio-cultural problems generates at best a “feel good” experience. This was illustrated at the "Leadership 99 Conference" held and organised in Queensland, Australia, by a major transnational corporation. The vast majority of senior and operational managers at the conference regarded social and cultural issues as of little or no importance. Only one of eight focus groups ranked social issues and corporate social responsibility as of medium or high importance. Although most of the participating industry professionals recognised the importance of industry / community relations in an industrial development context, the role and significance which socio-cultural issues play in these relationships seemed to be either misunderstood or misinterpreted.

We found that such misinterpretation originates from their technical and managerial training, which fails to fully recognize that socio-cultural complexes are a major determinant for the long-term success of industrial developments. Thus, if global organisational structures as well as their independent or semi-independent local subsystems do not legitimize socio-cultural contingencies, such as community value and belief systems, ineffective contingency responses are almost certain to follow. Main questions for research, in this area, would include the following:

1. Have Gladstone's industry practitioners recognised the need to acquire a solid understanding of the value and belief systems to which the local community subscribes?
2. To what extent are Gladstone's industrial developers acquainted with these different community value frameworks?
3. Have community values been included from the earliest stages of planning and decision-making? If not, have costly disruptions and delays to the development process changed attitudes towards the inclusion of community value and belief systems?

The exclusion of individual and community value positions by organisational subsystems and deep structures, and consequently from their planning and decision-making, has fostered an atmosphere of distrust and suspicion by the public. Industry equally distrusts individuals and communities critical of industrial developments, by largely disregarding their positions and value systems as irrelevant or less legitimate. Nevertheless, there are primary values that are "...shared by all reasonable people because their common

humanity renders some things harmful and others beneficial”, but there are equally important secondary values that vary with individuals, societies and historical periods (Kekes, 1993:9). This suggests that community and corporate environmental value systems are not static. Instead, the dynamic nature of these value positions is amplified by the continuous metamorphosis of societal attitudes towards the natural environment. These changes, primarily generated by new scientific insights, socio-political debate and regulatory restraint, produce increasingly complex and highly organised environmental value positions.

This raises the question of negotiated interests and legitimization. Community and corporate value positions, for example, are intrinsically linked to the complexities of environmental problems and to the socio-political system in which they occur. The selection and legitimization process of these values is driven by the dominant ideology and its socio-cultural, economic and political interpretations and explanations. This type of legitimization, Habermas (1976:112) argues, is a “...ideological form of justification, which either asserts or counterfactually supposes the generalizability of interests that is dominant”. Therefore, the legitimization of value positions in the context of environmental complexes consists of interpretations that are designed to assure the validity claims of the dominant ideological norm. The consequences of validating dominant norms are continuous. It follows that strategic choices that are based on previous dominant ideological norms will guide future communications, which originate from previous socio-political systems and by simultaneously extending the use of technically exploitable knowledge, organisational and institutional experts systematically limit communications with local communities in disputes. Organisational substructures and institutional agencies are thereby forcing themselves, as well as local communities, to live with the legacy of earlier ideological norms and strategic choices.

These communication deficiencies are grounded in an “expert” ideology that translates individual and community value questions into techno-economic language. Individuals and particularly local communities affected by industrial development are increasingly inclined, however, to question technical expertise and its adequacy as a basis for environmental decision-making (Nelkin, 1977). This rift in communication is the consequence of two opposing language systems:

- 1) an assumed “objective” language that is used by organisational and institutional experts to emphasize information with technical underpinnings and utilitarian aims; and
- 2) a “subjective” language commonly used by individuals and local communities ostensibly revealing their value and belief systems (Naess, 1986).

It is in this context that Habermas (1979) argues that science and technology are the main sources of "distorted communication" that prevent political consensus. Similarly, Brown (1987) suggests that “fact-value” questions are intrinsically embedded in environmental questions. They are systematically distorted and hidden by the language system of technical experts which consequently prevents environmental consensus. At the center of translating environmental complexities into the language of technical experts is the

assumption that environmental problems can almost exclusively be solved by technical means. By denying the importance or even the existence of socio-cultural and socio-political solutions technical experts attempt to separate “facts” from “value” positions, thereby preventing stakeholders from dealing with the value dimensions of industrial developments (Braun, 1987; Pepper, 1984).

In the context of the Gladstone study this means that the possible separation of "facts" and "values" by local industrial stakeholders, which may either be based on language distortions and/or industry/community communication disparities, caused by the failure to legitimize local community value positions, is of particular interest. This interest stems primarily from our earlier work on value legitimization (see Hoppe, forthcoming; Rickson, Hoppe and Burch, 2002), showing particularly strong linkages between the inclusion of different community value positions and the development of strong social trust relationships.

14. The Social Function of Trust in Relation to Public Participation

In our experience the establishment and maintenance of trust has been traditionally the most uncertain element in industry/community relationships particularly in relation to large and complex industrial developments. Our research results, particularly those from central Queensland, strongly indicate frequent inconsistencies between the words and actions of influential industrial developers and powerful public institutions. This left local communities disillusioned, perceiving industrial development as a threat to their accustomed way of life and local environment. It is not surprising, therefore, that communities engaged as stakeholders in industrial developments maintain a deep-seated distrust towards state agencies and industrial corporations. Consequently, community stakeholders judge any new or alternative proposal advanced by other stakeholders with heightened suspicion. This increasingly frustrates the industrial developer and government agencies, because it reduces the effectiveness of their contingency responses, which in turn increases public distrust. Ruckelshaus (1996:2) called this cycle of mutual distrust a “vicious and descending dreaded spiral”, which prevents the development of social trust relationships and lasting mutually beneficial agreements.

These are novel observations about social trust or distrust. Instead, a sizable literature analyses these issues and offers a variety of theoretical perspectives and interpretations. It also points to a growing interest among social researchers in the various dimensions that underpin the successful development of social capital, with trust featuring most prominently in the social capital debate as one of its key dimensions. Unlike other forms of capital, social capital comprises relationships of trust, reciprocity, rules, norms and sanctions, as well as connectedness and social networks that facilitate cooperation for mutual benefit (Putnam, 1995, 1993; Coleman, 1990, 1988; Bourdieu, 1986). It is in this context that we recognize social trust relationships as the most appropriate and useful dimension in the development of social capital, particularly if linked to our Gladstone studies. Consequently, our analysis focuses on present levels of local social trust between Gladstone’s industrial developers and the local community. This, we believe, is best achieved by highlighting several features of the social trust concept and by linking these

to the various levels of public participation and collaboration in relation to the Gladstone developments. These key features are:

1. the role of trust in reducing complexity,
2. the role of trust in fostering collaboration and
3. the role of trust in relation to the communication of risk.

15. Fundamental Dimensions of Social Trust Relationships

In much of the literature, trust is closely linked with participation and cooperation. For example, Zucker (1986) views trust as a social resource, which facilitates social interaction. Others point to trust as a useful agent in reducing the need to monitor the actions and behaviour of others, which increases informal cooperation and reduces negotiation costs (Williams, 2001; Powell, 1990; Gambetta, 1988). Similarly, Bradbury et al. (1999) and Focht (1996, 1995) suggest the use of “transformative” strategies to create trust among and between stakeholders and external agencies. These trust-based strategies are expected to enable stakeholders to negotiate value differences and address factual uncertainties thereby transforming conflict into consensus (Bradbury et al. 1999). Trust, therefore, appears to be invaluable for the corporate developer particularly if controversial development issues such as techno-economic as well as socio-environmental contingency responses need to be communicated to local communities.

Most industrial organisations, however, subscribe to a greater or lesser extent to the neo-Hobbesian view, which rejects trust as a highly inappropriate and misleading concept in relation to economic activity (Williamson, 1985). Trust, it is claimed, is redundant because cost-effective safeguards have been devised, assuring more efficient exchange and cooperation in economic activities. Subscribing to this view, Williamson (1993, 1985) points to the market as the most efficient remedy to correct possible lapses in cooperation while refusing to acknowledge trust as a key element for cooperation and participation in economic activities. This neo-classical approach, Korczynski (2000) argues, can only be maintained because of its limiting assumptions regarding human motivations. Subsequent research strongly supports Korczynski’s observation, indicating that the failure to acknowledge trust as a key basis for cooperation inevitably leads to increased distrust and consequently to higher negotiation costs. These incur as a result of delays, which are primarily caused by lengthy disputes and prolonged techno-economic disputations among experts. Most industrial organisations, however, fail to acknowledge that the absence of trust is one of the major causes of these problems, which can be expected to emerge at any time and all stages of their techno-economic activities.

There can be little doubt that particularly in relation to more controversial developments in the Gladstone area, industry/community distrust led to very high negotiation costs. This is reflected in costly delays in government approving processes, which are primarily the result of a rancorous conflict driven by a vicious cycle of technical claim and counter claim as well as by a total lack of trust between the local community and the industrial developer. It appears that government and industrial managers seem to be unable or unwilling to recognize trust as an effective tool for reducing socio-environmental

complexities. It is for this reason that we aim to investigate the origins and/or the continuous absence of an effective social trust relationship between the industrial developer, government agencies and the local community.

When there is a “continuous, downward spiral of distrust”, stakeholders, including the community and the industrial developer are forced into investing heavily into monitoring the promises, actions and behaviour of other participants in the dispute, which mutually perceive each other as being untrustworthy. We expect that this mutual distrust significantly increases the complexities of the social relationship between industry, government agencies and the local community, further complicating the techno-economic and socio-environmental debate between experts and community groups. Social trust, in contrast, simplifies cooperation, reduces negotiation costs and creates mutual social obligations, which participants in a trust relationship agree to honour. In this context trust may be seen as a medium for communication such as money or power, which are used as media for reducing complexity in modern society (Luhmann, 1988; Bradbury et al, 1999). Expanding on this point, Early and Cvetkovich (1999) view trust as a simplifying strategy, which enables individuals to adapt to complex social environments, thereby benefiting from increased social opportunities. Therefore, to assure continuity in development processes and to benefit from a wider range of social opportunities, the concept of social trust needs to be acknowledged and legitimized particularly by those engaged in large and complex industrial developments.

To draw from increased social opportunities, it is argued, requires industrial organisations and government agencies to recognize that trust operates on an interpersonal level as well as at a system level (Luhmann, 1980, 1988; Misztal, 1996; Earle and Cvetkovich, 1995). These authors agree that interpersonal and system level trusts are mutually inclusive, meaning that trust at the system level should provide the basis for a positive social climate in which social relationships at the interpersonal level can develop. The interpersonal level in turn generates trust and confidence in the larger system level, arising out of experiences made at the interpersonal level (Bradbury et al, 1999; Putnam, 1993). Positive social experiences, however, can only fully develop if participants in social relationships are willing to add trust and confidence to their expectation that others will act in a similar manner. Introducing social trust and confidence to social relationships, however, holds an element of risk, uncertainty and possible disappointment for its participants. Social trust and confidence are particularly endangered if industrial organisations and government agencies uphold a narrow view on risk communication. The traditional view on risk communication narrowly relates to techno-economic risk, often neglecting issues such as compromising local community values, loss of quality of life, erosion of the sense of community, disrupted social relations, and stigma (Kasperson et al, 1992).

Social trust is widely identified with social interaction and derives its social importance from trust attributes such as the free flow of information, honest and open risk communication and cooperative behaviour. Based on these fundamental and overarching trust attributes social trust has been defined in several different ways:

- "The willingness of individuals to rely on the actions and behaviour of others in situations that involve the risk of opportunism" (Mayer et al. 1995:387);
- "A generalized expectancy held by an individual that the word, promise, oral or written statement of another individual or group can be relied on" (Rotter, 1980:1);
- "The generalized expectancy that a message received is true and reliable and the communicator demonstrates competence and honesty by conveying accurate, objective and complete information" (Renn and Levine, 1991:181); and
- "A set of expectations shared by all those involved in an exchange" (Zucker, 1986:54).

These definitions share some common general themes, suggesting an expectation among those engaged in a trust relationship that others will act in a similar manner. Such expectations, however, require individuals to accumulate evidence about the trustworthiness of the trusted, which, if acceptable and continuous, reinforces positive sentiments necessary for the establishment of social trust relationships. Trust, according to Lewis and Weigert (1985), should therefore be seen as a social, psychological and relational construct, which involves three fundamental dimensions of social relationships:

- Cognition;
- Affect; and
- Behaviour

The *cognitive* dimension of trust development is described in the literature as an experimental process in which individuals learn about the trustworthiness of others by social interaction (Williams, 2001; Bradbury et al 1999; Jones and George, 1998; Mayer et al, 1995). Most of these researchers emphasize the importance of "continuous" social interaction, which they believe enables people to familiarise themselves with the object of trust and to update their information about the trustworthiness of others. However, since cognitive trust seems to require a certain degree of familiarity with situations which may lie between total understanding and total ignorance, some cognitive leap of faith may be required (Kasperson et al 1992; Luhmann, 1980). For example, some participants in social trust relationships might provide only limited or inaccurate information or may decide to withhold available knowledge about important facts altogether, making it difficult to discriminate among those perceived to be trustworthy or distrusted.

The literature offers various other cognitive dimensions of trust on which judgements about the trustworthiness of participants in a social trust relationship may be based. Some earlier interpretations empirically identify competence and responsibility with trustworthiness and legitimacy (Hollander, 1958; French and Raven, 1959). According to this tradition, social trust assumes a rational role, which is traditionally empirical, requiring evidence of competence and responsibility as prerequisite dimensions of trustworthiness. In their critique of this traditional view Earle and Cvetkovich (1999; 1995) agree with Luhmann (1980), suggesting that by overemphasising competence and responsibility as the primary legitimate attributes of trustworthiness, a cultural singularity is assumed (Earle and Cvetkovich, 1999). Rejecting this approach they claim that individuals base their social trust judgements on varying sets of cultural values rather

than on a normative and rational cultural value singularity. This interpretation suggests that social trust is socially constructed as well as grounded in cultural pluralism. To support their claim, Earle and Cvetkovich (1999) devised a survey experiment, which demonstrates that participants based their social trust judgements on value similarities, which originated from a variety of different cultural values. This means that individuals in the experiment assessed and interpreted social trust from a multifaceted cultural value perspective. They did not base their social trust judgements about trustworthiness on a dualistic approach, thereby failing to identify competence and responsibility as the dominant trust dimensions.

However, additional trust dimensions have been identified by the literature on which assessments about trust and trustworthiness can be based. For example, Peters et al (1997) and Covello (1992) suggest the inclusion of knowledge and expertise into the list of trust dimensions whereas Renn and Levine (1991) and Kasperson (1986) identify objectivity, impartiality and neutrality as important attributes of trustworthiness. Furthermore, Bradbury et al. (1994), analysing trust relationships in relation to the US Chemical Weapons Disposal Program, found that local residents affected by the program associated trust and distrust with openness and accountability. These trust dimensions are of particular importance to stakeholders that are engaged in establishing the trustworthiness of others in industry/community disputes. Other trust dimensions, which are equally appropriate for judging trustworthiness in development controversies, are the willingness to honestly and forthrightly disclose appropriate information, thereby assuring procedural fairness throughout the dispute (Brockner, 2002; Bradbury et al, 1999; Webler, 1995; Covello, 1992; Lind and Tyler, 1988).

The *affective* dimension of social trust refers to the emotional bond among and between participants in a social relationship, whereas affective responses such as disappointment or anger influence how people assess and evaluate their emotional bond with others (Williams, 2001; Bradbury et al, 1999). Any serious violation of these emotional investments significantly damages the emotional bonds between the participants in social trust relationships and prevents the development of deeper levels of trust. This means that more shallow types of trust will develop, similar to those, which can be expected to emerge from the limited rational approach. According to this approach, trust is gained only when organisations or institutions are judged to be reasonably competent in their actions, and only then is their trustworthiness legitimized by the participants in the trust relationship (Kasperson et al 1992).

Throughout their influential work Cvetkovich and Earle (1992)⁶ argue that social trust cannot be limited to an empirically based rational process. Primarily because it reduces social trust to rational calculations about the competence and responsibility of organisations or institutions in meeting prescribed obligations, while excluding social concerns such as caring or shared values. Social trust, therefore, must accommodate the

⁶ To gain a deeper insight into Early and Cvetkovich's work, refer to their 1999, 1995 and 1994 publications, which are detailed in the bibliography of this review.

cultural values to which participants in social trust relationships may subscribe. Without their inclusion trust and trust relationships are undermined by rational and cognitive considerations, which generates the functional equivalent of trust, social distrust (Earle and Cvetkovich, 1999). The inclusion of cultural values, therefore, which vary across people, contexts and time, is expected to encourage the establishment of emotional bonds between participants in trust relationship.

This process of emotional bonding is most likely to result in a deeper level of trust, which is based on the perception that there are important base values, which are shared among and between participants engaged in trust relationships (Williams, 2001; Bradbury et al, 1999). Studying the relationship between social trust and trust values, Earle and Cvetkovich found that respondents in their experiment, which was mentioned earlier, did tend to give higher levels of trust to organisations and institutions that shared their values (Earle and Cvetkovich, 1999:15). This result, they argue further, "...indicates that individuals have some means of comparing their shared values and may use the emerging information in making judgements about social trust".

Finally, the *behavioural* dimension of trust has been described by Kasperson et al (1992:168) as a "...behavioural enactment in social relationships, which can influence cognitive and emotional [affective] trust". This explanation implies a complex interactive process, which includes the cognitive, affective and behavioural dimensions of trust. It furthermore highlights the importance of the fiduciary responsibilities and moral obligations that individuals, organisations and institutions are expected to contribute to social trust relationships. Our recent work demonstrates that the range and depth of trust depends largely on the performance and behaviour of institutions and organisations. It also shows that equally important for the development of trust relationships is the social climate, structures and conditions under which institutions and organisations operate. For example, in a positive social climate Kasperson et al (1992) expect people to invest more trust in institutions if conditions allow for the early development of trust. Early trust development, they argue further, usually indicates a high level of commitment by institutions and organisations to their fiduciary responsibilities, which may lead people to be more forgiving should trust be misused. In a negative social climate, however, low commitment levels by institutions toward their fiduciary obligations prevents people from trusting any institution or organisation and any violation of trust is not tolerated (Renn and Levine, 1991).

The challenge for industrial organisations and government institutions, particularly if engaged in industrial developments such as those occurring in Port Curtis/Gladstone, is to establish a context in which participants in a social trust relationship are encouraged to develop and maintain an effective dialogue (Bradbury et al. 1999). Essential for a favourable social climate among stakeholders are social trust and predictable trust related behaviour.

16. Conceptualizing Social Trust Dimensions

In a positive social climate it is expected that individuals or groups can rely on the actions and behaviour of others and that promises and statements either oral or written that are made in a trust relationship are being fulfilled by those who made them. (Mayer et al 1995; Rotter, 1980). In a negative social climate, industrial organisations, government institutions and individuals are most likely to act inimically, thereby not only leaving expectations unfulfilled, but also creating social distrust. Negative social climates are usually driven by a lack of commitment, technical and socio-cultural incompetence, an uncaring attitude towards dependent communities, and finally, by inconsistent and unpredictable behaviour in relation to community expectations. Kasperson et al (1992) identified four key social trust dimensions, which they see as essential to capture the range and level of trust related behaviour, these are:

- Commitment;
- Competence;
- Caring; and
- Predictability

Commitment. This trust dimension relies on community perceptions that organisations and government institutions fulfil their fiduciary obligations and other socio-cultural norms in response to local socio-environmental demands. These perceptions of commitment are primarily based on the belief that organisations and institutions engaged in contested industrial developments act objectively, fairly and openly with a commitment to assure the free flow of accurate information.

Competence. As participants in social relationships, local communities judge government institutions and industrial organisations in relation to their actions as well as technical and socio-cultural competency. If government agencies, industrial organisations or individuals within them are occasionally wrong, community expectations remain in tact and local communities are most likely to forgive such limited failings. If, however, consistent failures and inadequacies, particularly in social behaviour and socio-cultural competencies, dominate the social trust relationship the loss of trust can be expected. Risk managers as well as government institutions must show that they are technically but equally important socially and culturally competent.

Caring/Empathy. Particularly important for the development of social trust relationships are perceptions of a caring attitude towards dependent individuals and communities. Organisations and institutions engaged in industrial developments must be seen by trusting individuals and local communities as showing concern for their expectations. A caring attitude and behaviour by industrial organisations and government agencies are important, primarily because their organisational structures exert control and authority over dependent individuals and communities, their well being and their way of life.

Predictability. The successful development of social trust relationships depends largely on the fulfillment of expectations. If industrial organisations and/or government

institutions consistently violate expectations, distrust is most likely to follow. Predictability and consistency in organisational behaviour in fulfilling community expectations, however, must remain fluid. This state of flux is necessary to allow the inclusion of new insights and changed value orientations into decision-making processes. Any response by industrial organisations and government agencies to newly gained techno-economic or socio-cultural information, however, should be consistent with general societal value and belief systems.

This conceptualization of social trust suggests that trust relationships depend heavily on the reliability of the participants. It also implies a complex interaction of cognitive, affective and behavioural properties, which play an important role in the development of different types or levels of trust. Kasperson et al (1992) believe that trust operates simultaneously at the cognitive, affective, and behavioural levels. The fulfillment and maintenance of trust, they argue further, requires these dimensions be validated at all levels, because building trust on only one dimension will most likely lead to a corresponding loss of trust on another.

For example, attempting to prevent the further erosion of trust in a development dispute, the industrial developer may be committed to enter into a social relationship with the local community by establishing a community liaison group. With its inception public perceptions in relation to the trust dimension of commitment are most likely to improve. However, after entering the liaison group the developer might decide to withhold relevant facts and vital data from the local community. This restricts public insights into contested issues effectively changing the power structures of the social trust relationship. Consequently, negotiation processes and the control over ultimate decisions are significantly restructured, favouring the developer and government agencies sympathetic to the development. It is in this context that the establishment of the liaison group appears to initially validate the trust dimension of commitment. Withholding information, however, correspondingly decreases the level of community trust in relation to reliability and possibly competence.

The social trust dynamics just described inevitably lead to community frustration and social distrust over the apparent discrepancies between commitment and actual behaviour. The refusal to disclose relevant information, however, cannot be sustained indefinitely, because even the best guarded information usually finds its way to the other participants in the trust relationship (Sandman, 1985). Although the early release of relevant and important data may lead to difficulties and the erosion of trust, on balance however, ... "damage associated with openness is easier to address than damage associated with concealment" (Kasperson et al, 1992:180).⁷ The free flow of information, therefore, particularly if introduced early, removes some pressure on social trust development. It furthermore provides participants in a trust relationship with the knowledge needed to constructively contribute to the decision-making process. The unhindered exchange of information also allows local communities to verify the claims of

⁷ The four trust/behaviour dimensions of Kasperson et al (1992) have been modified to suite the industrial development and participation analysis of this study.

the developer and government agencies, which provides them with a sense of control and participation, thereby enhancing trust. This equally provides significant benefits for the developer and government agencies, because trust fosters collaboration, reduces complexity and minimizes negotiation costs (Bradbury et al 1999; Earle and Cvetkovich, 1999, 1995). To benefit from these social and economic opportunities a positive social climate has to be maintained. Positive social trust experiences, however, are frequently jeopardized by the narrow interpretation of technical risk assessments that often neglect the full range of socio-cultural concerns mostly at the industrial developer's peril (Kasperson et al, 1992; Misztal, 1996). The remainder of this paper, therefore, analyses the key elements of successful risk communication, highlighting the importance of including community stakeholders in the process of risk identification and treatment.

17. The Role of Social Trust in Facilitating Cooperation and Participation in Relation to Risk Communication

In situations of high social distrust, particularly in complex industrial developments, all or some dimensions of trust such as commitment, competence, caring and/or predictability are usually compromised. One of the primary reasons for this scenario is the narrow interpretation of risk which largely excludes the social and cultural concerns of local communities. Risk communication cannot be effective if restricted to techno-economic, environmental and/or health information. It is equally ineffective if reduced to a thinly veiled attempt to change people's risk perceptions in favour of expert risk interpretation. The most likely outcome of these limited views on risk communication is increased community distrust. Scholars agree that risk communicators should instead seek broad public participation in defining "acceptable" risk (Bradbury et al 1999; Misztal, 1996; Earle and Cvetkovich, 1999, 1995; Kasperson et al, 1992). To arrive at a mutually agreed definition, however, is particularly difficult because people hold different views on what constitutes acceptable risk. These discrepancies in risk perceptions derive primarily from differing social and cultural values and underlying world-views to which local communities may subscribe (Harding, 1998).

Thus, risk communicators should acquire an understanding of the socio-cultural structures of local communities, particularly if these are confronted with industrial development and its inherent socio-environmental risks. They furthermore should recognize that risk communication occurs in a context of multi-levelled social communication in which stakeholders make their own judgements about risk (Kasperson et al, 1986, 1992; Krinsky and Plough, 1988). This requires a two-way communication process between risk communicators and local communities. Although widely espoused but rarely achieved, an open and honest two-way exchange of information in purposeful risk communication is essential for the identification of consensus or key points of contention (Kasperson et al, 1992).

It is in this context that we recognize four primary advantages of transparent and inclusive risk communication:

- It encourages the development of social trust;
- It generates social cooperation;

- It reduces complexity; and
- It reduces negotiation costs.

Conversely, the difficulties associated with collaborative risk communication are extraordinarily prominent if linked to industrial developments that are of particular public interest. We expect that in this case risk communication is likely to exclude, and thereby disadvantage, small local communities and their socio-cultural and natural environments. Such exclusion is caused by the absence of an effective dialogue of risk, which primarily derives from the lack of mutually shared socio-cultural and socio-environmental values. This compounds the difficulties for industry and government decision-makers, developing and implementing risk strategies that are by nature highly controversial. For example, industry and government experts may perceive a development project as being technically and socially feasible. In the absence of community involvement and commonly held value positions, however, expert evidence and proposed risk strategies provided by industry and/or government agencies are frequently disputed by local communities. The literature deals with these problems by emphasising the inclusion of local communities in the risk communication process. Bradbury et al (1999), for example, particularly emphasises cooperation and stakeholder collaboration on matters of risk in relation to large and complex industrial developments.

This means that risk issues, which are of intrinsic concern to local communities, should be dealt with collaboratively. In our experience the exclusion of local communities from cooperatively stipulating what constitutes risk, even though it has a direct impact on their lives, can be expected to result in the rejection of expert interpretations of risk. Moreover, effective risk communication not only requires stakeholder collaboration, but also adequate levels of trust as well as the lowering of distrust among stakeholders subscribing to different perspectives. Similarly Misztal (1996) assigns two key roles to effective risk communication firstly, sustaining high levels of trust and secondly, reducing distrust among stakeholders. Earle and Cvetkovich (1999, 1995) add another dimension to effective risk communication. They call for a greater mutual appreciation of the multiple values that are held by the various participants in a social relationship. Moreover, they particularly recognize the need for transformational exchange, the collaborative interpretation of the emergent values and the consequent alignment of different socio-cultural perspectives.

The authors cited above seem to agree that a collaborative approach to risk issues and the inclusion of community values into risk assessment processes can be expected to lead to more effective risk communication. This approach moves beyond the traditional view which suggests techno-economic solutions to socio-environmental and socio-cultural risk issues. To successfully overcome the over reliance on exclusive techno-economic fixes, a participatory approach is needed with the aim to collaboratively establish the wider risk context as well as engage locals in the risk identification and risk treatment processes. Our research, therefore, specifically investigates this approach, which we expect to provide us with some detailed insights into the successes and/or failures of Gladstone's organisational and institutional risk communicators. It furthermore elucidates different modes of risk communication employed by industrial developers and highlights the

community responses thereto. It also shows how selected industrial developers in Gladstone communicate risk of future development and production phases. It finally provides us with a better understanding of different level of collaborative risk identification and the reasons for the possible absence of a risk communication dialogue.

Viewing risk communication as discourse or dialogue has significant implications for the development of social trust, the reduction of community distrust and the establishment of participatory structures. Particularly in situations of high social distrust, the absence of community collaboration and the employment of a narrow conception of risk is destined to result in ineffective risk communication.

As indicated earlier, risk communicators should seek broad public participation and include issues of public concern into their risk management strategies. This means that community concerns should be included that not necessarily relate narrowly to the traditional perceptions of risk. For example, issues such as losses in property value and quality of life, erosion of the sense of community, disrupted social relations and stigma are to be included into the risk equation (Kasperson et al 1992). Kasperson and his colleagues further suggest that social conflict over facilities and risk is often not a conflict over risk per se, but rather a political conflict over access to power and resources. Therefore, to reduce social distrust requires the sharing of power by including the community from the beginning and throughout the risk assessment process, presenting all plans and positions as provisional. Thus, community participation and power sharing throughout the risk identification, risk analysis and assessment as well as risk treatment processes can be expected to positively affect social trust along all its key dimensions. The importance of this goal becomes more apparent by considering its alternative. The exclusion of the community from all negotiations or at best the symbolic inclusion of community stakeholders will generate conflict, anger, and additional distrust. Moreover, the presentation of positions as final or not negotiable removes from all stakeholders the freedom to manoeuvre and withdraws from the public the power over process and ultimate decision-making (Kasperson et al 1992). If, however, the local community remains informed at all times, a sense of control can be established by the public, greatly enhancing a condition conducive to the development of social trust. Failure to disclose relevant data almost certainly results in prolonged periods of distrust.

Public participation can thus be viewed as a means of developing consensus among stakeholders particularly if engaged in complex industrial developments such as in Gladstone. The challenge for the industrial developer as well as government agencies, however, is to develop a context in which community stakeholders can establish and maintain effective dialogues (Bradbury et al 1999). Adding to this idea, Earle and Cvetkovich (1999) note that increased public participation per se does not necessarily assure success. It needs instead the necessary forums for communication and participation in which issues of public concerns about risk as well as issues of dependency and empowerment can be addressed. It is in this context that our research investigates whether a favourable social climate was provided by the developer in which the establishment and maintenance of participatory structures was assured. Also in which

stakeholders of different socio-cultural persuasion were able to engage in a free and open dialogue, with the final goal to reach consensus.

Furthermore, our research sets out to analyse whether public participation was actually viewed by the developer and the appropriate government agencies as discourse or dialogue. This provides some insights into the participatory opportunities provided for the Gladstone/ Port Curtis community stakeholders by local developers namely:

- The provision of a forum in which socio-environmental and socio-cultural community concerns could be expressed;
- The assurance of the inclusion of community concerns into organisational and institutional risk contingency strategies;
- The provision of a means to realize critical awareness by the developer; and government agencies.

18. Conclusion

The primary reasons for selecting the organisational change and related literature for analysis rather than studying different participation paradigms is directly linked to our decision to use an “ideal type” approach, which proposes a participatory model that significantly exceeds local accustomed participatory approaches. Any consideration to introduce such revolutionary model or a revised version thereof requires fundamental changes in participatory strategies by Gladstone’s industry and government stakeholders. This means that particularly industrial developers need to genuinely include local communities into their planning and decision-making processes, thereby agreeing to a genuine power shift, actually sharing socio-environmental decision-making power with the local community. Therefore, by emphasizing less advanced participatory models eg consensus conferences, community advisory approaches or citizen juries, no sufficient insights can be gained in relation to the capacity and/or political will of industry and government agencies to fundamental change in relation to public participation and collaboration. Consequently, prior to the collaborative development of particularly progressive models of public participation, which would require genuine power shifts in planning and decision-making as well as revolutionary change one needs to acquire detailed insights into:

1. The long-term participatory strategies of Gladstone’s industrial developers;
2. The actual socio-environmental behaviour of industry and government agencies in response to participatory community demands;
3. The current participatory and collaborative commitment levels of industry and government stakeholders;
4. The capacity and/or political will of industry and government agencies to absorb fundamental change if challenged by costly participatory community demands;
5. The level of social trust between industry and community stakeholders;
6. The capacity of local managers to recognize trust as an effective tool in reducing socio-environmental complexities; and
7. The level of community value and belief systems legitimization by industry and government agencies.

A detailed understanding of these local participatory issues, we believe, should precede any attempt to collaboratively develop a progressive, but revised and locally adapted "Ideal Type" model such as we are proposing. Preliminary information gathered from Gladstone's industry as well as government stakeholder suggests a need for fundamental change in relation to public participation and collaboration. In the context of the ongoing developments in Gladstone this means that stability and local peace are not necessarily assured by regulatory compliance. It is our experience that in the absence of genuine commitment to progressive change, particularly in relation to participatory community demands, costly disruptions throughout all phases of operation are to be expected.

These interruptions may be the result of new scientific insights and the consequent changes in participatory community perceptions and norms, which would constitute a significant punctuating event, requiring a fundamental rethink of participatory strategies. The complexity of such a reorientation is particularly evident if organisational structures are analysed as loosely coupled systems, each with their individual deep structure which may be progressive or inertial. In the context of such complexity the punctuated equilibrium paradigm appears to be particularly helpful in guiding analyses of persistent underlying deep structures. Particularly if these deep structures operate within a framework of global/local independence and/or semi-independence, either permitting or preventing fundamental change.

As previously mentioned, deep structure reflects the choices and strategic orientations of interdependent, but also independent or semi-independent subsystems. These choices and strategies maintain an organisation's multidimensional deep structure as well as determine how the organisation responds to participatory community demands. This means that earlier choices made by deep structures are most likely to restrict contingency responses, because most of the later decisions and strategic options in response to socio-environmental discontinuities can be expected to be ruled out by deep structure inertia (Gersick, 1991). This clearly implies a historic development of deep structure choices, which emerge from different subsystem histories, impacting not only on deep structure strategies, but also on organisational change per se. Wollin (1999:361), therefore, suggests that fundamental change of deep structures requires the remaking of earlier fundamental choices and the abandonment of more marginal choices, thereby emphasising the importance of analysing organisational system and deep structure histories.

Consequently, one of the primary tasks for our research is the analysis of these histories, meaning that an emphasis is placed on the historical development of socio-environmental strategies and policy responses in relation to participatory community demands. This includes a particular focus on the historical development of symbolic participatory structures. Our earlier work in Switzerland and central Queensland strongly suggest that the engagement of the public in a non-binding advisory capacity and the insistence on existing power structures both prevent any possibility of a limited power shift. These symbolic participatory structures usually result in extended periods of limited change with very little or no effect at the fundamental level. Moreover, new inertial constellations within a system's deep structure are most likely to emerge. Thus, the

successful introduction of progressive participatory models depends on the transformation of earlier deep structure strategic orientations and choices particularly at the local subsystem and deep structure level.

It is important to note, however, that local subsystem and deep structure histories, particularly in a global/local context, are to be studied as loosely coupled organisational structures. The underlying reality of complex global/local structures is that loosely coupled interrelated and/or independent organisational subsystems can adjust and modify local contingencies without affecting the whole organisational system (Selznick, 1996). Loosely coupled local subsystems, therefore, can be sealed off by the global structure preventing it from affecting other elements of the global structure. Consequently, we believe that loose coupling is not an imperative but a strategic choice made by translational organisations. This implies that in a global/local setting, local socio-environmental community value and belief systems are likely to be interpreted locally possibly significantly diverting from global organisational policy. The question arising from such scenario is twofold. Firstly, to what extent are local community values accepted and legitimized by global/local structures and secondly, to what extent are community values included into local decision-making? Our earlier work on community value legitimisation shows particularly strong linkages between the inclusion of different community value positions and the development of strong social trust relationships.

The research literature verifies that trust has been traditionally the most uncertain element in industry/ community relationships, particularly in large and complex industrial developments such as Gladstone. The primary reason for this uncertainty lies with the frequent inconsistencies between the words and action of influential industrial developers and powerful public institutions. This left local communities disillusioned, perceiving industrial developments as a threat to their accustomed way of life. In the Gladstone context this means that the most basic prerequisite for social trust development is a detailed understanding of at least the three primary dimensions of the concept of social trust namely:

1. The role of trust in reducing socio-environmental complexity;
2. The role of trust in fostering collaboration; and
3. The role of trust in relation to the communication of risk.

The latter trust dimension in particular suggests an involvement of the local community into early planning and decision-making. In our experience, the early involvement of the local community into the project planning process, which includes the collaborative development of local socio-environmental risk assessments, leads to very strong social trust relationships. These trust relationships not only reduce complexity, but also negotiation costs. It is important for the industrial developer and appropriate government agencies, however, to recognize social trust as an effective tool for preventing rancorous conflicts, which are usually driven by a persistent cycle of technical claim and counter claim. It is for this reason that we suggest to investigate the historical development of local social trust in the Gladstone developments. Conversely, we intend to analyse the

reasons for the continuous absence of trust relationships between Gladstone's industrial developers, government agencies and the local community.

As argued earlier, social trust simplifies cooperation, reduces negotiation costs and creates mutual social obligations, which participants in trust relationships agree to honour. Mutual distrust, on the other hand, significantly increases the complexity of social trust relationships between industry, government, experts and the community, further complicating the techno-economic and socio-environmental argumentation between experts and community groups. The primary feature of mutual distrust requires the community and the industrial developer to invest heavily in monitoring the promises, actions and behaviour of other participants in the dispute, which mutually perceive each other as being untrustworthy.

In a positive social climate individuals or groups can rely on the action and behaviour of others that the promises and statements made in a trust relationship are being fulfilled by those who made them. In contrast, negative social climates are usually driven by a lack of commitment, technical or socio-cultural incompetence, and an uncaring attitude towards dependent communities and by inconsistent and unpredictable behaviour in relation to community expectations. This is particularly evident if experts exclusively identify socio-environmental risk. Findings of our earlier work suggest that this exclusiveness is directly linked to poor and ineffective risk communication. Consequently, to assure effective risk communication, risk communicators should not only include local risk issues that are of concern to local communities, but also deal with them collaboratively. The exclusion of local communities from cooperatively identifying local socio-environmental risk, therefore, is most likely to result in the rejection of expert interpretations of risk.

Finally, collaborative risk identification which includes the local community and their values into the risk assessment process not only leads to effective risk communication, but also encourages risk experts and the community to perceive risk communication as discourse or dialogue. This shift in risk perception and communication has significant implications for the reduction of community distrust and the establishment of participatory and collaborative structures. Conversely, in the absence of community participation in identifying local socio-environmental risk issues and the insistence on a narrow and/or traditional conception of risk is most likely to result in ineffective risk communication and mutual distrust.

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