the history
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social
innovation
conference

FORESIGHT, SOCIAL INNOVATION AND ENTREPRENEURSHIP: SOME ISSUES FOR EDUCATION

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Foresight, Social Innovation, and Entrepreneurship: Some Issues for Education

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ABSTRACT

Our exploration of the intersections between foresight, innovation and entrepreneurship has consistently raised issues with respect to education. This paper outlines one such exploration that poses specific challenges for those wanting to educate in the intertwined fields of foresight, social innovation and entrepreneurship.

The formation of a social venture relies, in part, upon the participants reaching a shared understanding of purpose and process. Yet, at the intersections of innovation and foresight, there exists circumstances of great complexity and uncertainty and therefore it raises the question; how can shared insight and understanding be created? If the response to complexity and uncertainty is to seek simplicity and order by finding commonality and consensus, then what is lost and what is risked? Can shared understandings of purpose and process be arrived at by embracing complexity and uncertainty in its entirety rather than striving for a distilled and incomplete common ground and if so how? These questions led us to explore the process of dialogue and communication of a team in its formative stages. Our interests were not centred upon the behavioural characteristics of the individuals in the 'forming' stage of group dynamics but rather the process of cognitive and linguistic turns, the wax and wan of ideas and, the formation of insight and shared meaning.

INTRODUCTION

This paper reports on the continuation of our previous research in the field of foresight, innovation and entrepreneurship (FI&E). In approaching this subject, originally we considered that globalisation and rapid modernisation were increasingly creating the need for social reflexivity. We considered that new approaches to thinking about how and what we innovate, the choices we face for new enterprise creation and the influence of infrastructure for generating entrepreneurship would need to emerge. Our research has consistently exposed implications for education.

We have examined the issues for education when considering empowerment as an objective of an FI&E program. This research provided deeper insight into the way FI&E education can be used to create empowerment through the derivation of a framework that addresses entry, process and agency factors. This exposes the limitations of narrowly defined education interventions (O'Connor & Ramos 2006).

We have also considered social entrepreneurs and the way in which they use foresight to create innovation based upon triple bottom line measures of sustainability. Our findings in this study exposed the variability with the extent to, and the way in which foresight is used. Deeper exposure to foresightful thinking seemed to bring about broader engagement with communities across expanding boundaries. If transformational thinking is a goal the development of foresight practices within education would seem vital (Ramos & O'Connor 2004).

This in turn led us to a new question that sought to understand the intersections between innovation and foresight. This exploration focused on the process of formation of insight and shared meaning as it emerged during new venture formation. This study suggested that perhaps education needs to operate from a theory

of emergence and 'not-knowing' that structures the process of developing and engaging in deep and constructive dialogue.

The opportunities for education that extend from this body of work seem to point to the need for deeper appreciation of multiple paradigmatic views, a need to transcend disciplinary boundaries, and a need for education practices that encourage the acceptance of emergence. Education in this field is less concerned with providing answers and solutions but instead with providing enabling processes and world views that respond to the challenges arising from the increasing complexity imposed by our changing world.

The context for foresight and social innovation

Human sustainability, be this at personal, interpersonal or (global) impersonal levels, involves our capacity to grapple with changing conditions of existence, and evolve new ways of being, acting and thinking. Increasingly, these changing conditions of existence are typified by 'complexity', conditions in which there are no simple solutions. This complexity may manifest in the way in which we relate with each other or in the ways we organise work and life. It also may manifest in our responses to economic, ecological, political and social challenges that our societies face. Furthermore, finding ways to solve these 'complexities' is becoming increasingly problematic. Awareness of the inter-relatedness of issues is increasing and, people perceive issues differently. Perhaps a more accurate description of these challenges is that they are 'wicked problems' Conklin (2005).

> One cannot understand the problem without knowing about its context; one cannot meaningfully search for information without the orientation of a solution concept; one cannot first understand, then solve. Moreover, what "the Problem" is depends on who you ask – different stakeholders have different views about what the problem is and what constitutes an acceptable solution (p.8).

It seems that we are grappling with our own capacities to deal with unknown dimensions in emergent issues. Innovating solutions to the wicked problems we now face requires a different approach to human and social innovation. If we are going to be successful at creating human and social innovations which adequately address the wicked problems of the 21st century, from the personal to the political, we will need to find new approaches to do this. In approaching these issues, we asked; how can we best prepare individuals to locate shared insight and understanding to offer an opportunity for innovation in the context of 'wicked problems' through active entrepreneurship?

At the global level the world is facing a number of wicked problems, from issues like population growth, rapid urbanisation, climate change, disease, water sustainability, resource wars, and rising levels of poverty. A number of approaches and processes have emerged in response to wicked problems at the global level.

One such approach is the World Social Forum (WSF) which emerged as a platform from which to propose alternatives to *status quo* neo-liberal globalisation. Since being initiated in Porto Alegre, Brazil in 2001, social forums have been conducted over 160 times, in more than 120 cities around the world, and have brought together millions of participants to dialogue and collaborate on wide ranging issues. Another approach is the Millennium Development Goals (MDGs) which were created by the United Nations (UN) to formalise ambitious development aims to drastically cut poverty, disease, illiteracy and many other social problems. The UN also created the Global Compact in 1999 as a forum between governments, business, labour and civil society, aimed at finding ways to encourage businesses to become more socially responsible and environmentally sustainable. Thousands of companies have signed on to the compact. Yet another is the Make Poverty History (MPH) which is a campaign comprising over 500 trade unions, charities and faith based organizations, that has raised awareness about poverty and development related issues. While each of these projects (WSF, MDGs, MPH, etc.) exist to tackle wicked problems, where human suffering is complexly situated, in many ways they present a wicked problem in themselves.

The social forums operate by facilitating the formation of meta-networks to deal with meta-problems (in the spirit of Trist 1983) and by providing spaces for dialogue and collaboration between diverse groups in addressing the wicked problems. And yet the social forums create a paradox. The purposefulness of each group becomes an obstacle to their capacity for dialogue (their agenda is set – it cannot emerge dialogically). So, at what point does one group's vision of the future become incommensurable with the rest? The social forum process expresses this tension between a 'horizontalism' in which a myriad of

identities are drawn together through Open Space Technology (Owen 1992) in dialogical co-existence, and a 'verticalism', by which groups try to use the forums (instrumentally) toward certain fixed ends (Tormey 2005).

The personal level reveals the paradox of individual transformation. The resolution of the wicked problems faced at global and interpersonal levels require individuals to be different in order to create something innovative and original. While the design of structures, organisations and processes play a key role in social innovation it is still the capacity of individuals that gives hope that wicked problems can be transcended. It is our belief that the carriage of transformation and transcendence rests with individuals who engage in new enterprises and therefore social entrepreneurship provides at least one avenue for developing solutions to wicked problems.

The role of Social Entrepreneurship

Taylor and Plummer (2003) address the intersection of education and enterprise as a human capital issue in community growth and development. They suggest that education in this field "is about equipping people to work within a global sphere of economic activity" and "providing individuals with an understanding of facets of the economy and society they live in, and the processes of change that run through them" (p. 559). Therefore, in this research we adopt a position that education in the field of enterprise should be directed toward developing capacities to bring forth new solutions and innovations at the economic, ecological, political and social levels. In essence we are referring to education for social entrepreneurship.

In defining social entrepreneurship authors have tended to defer the definition to that of the social entrepreneur, (Dees 1998; Schuyler 1998). Tregilgas (2003) extends this approach by also describing social enterprise. While it is reasonable to expect that social entrepreneurship will be conducted under the direction of a social entrepreneur and may well involve social enterprise, defining social entrepreneurship by these attributes can not be considered a satisfactory approach, due to the circularity of the terminology.

To address this issue perhaps it is better to reflect on the nature of the problem of the definition itself. In attempting to define social entrepreneurship many authors in the field have first referred to the root literature on entrepreneurship (Johnson 2000; Davis 2002). This approach is unlikely to yield common agreement given that, in the first instance, there is no universal agreement on the definition of entrepreneurship, (Gartner 2001; Hansemark 1998; Low & MacMillan 1988; Lindsay & Hindle 2002). Ultimately it leads to multiple definitions and a form of taxonomy of various types of activities that may be considered to fall under the scope of entrepreneurship.

However, one popular definition of entrepreneurship (Markman & Baron 2002) has been put forward by Shane and Venkataraman (2000) that states entrepreneurship to be a "scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated and exploited" (Erikson & Nerdrum 2001; Gartner 2001; Ucbasaran, Westhead, & Wright 2001). This would appear to be equally applicable to the field of social entrepreneurship although perhaps with a more specific focus. Social entrepreneurship is said to be emerging as "an innovative approach for dealing with complex social needs" (Johnson 2000). Further, it has been stated that "social entrepreneurship extends the definition of entrepreneurship by its emphasis on ethical integrity and maximizing social value rather than private value or profit" (Davis 2002). Social entrepreneurship research can then be said to involve the examination of how, by whom and with what effects opportunities to create future social value are discovered, evaluated and exploited.

Social entrepreneurship therefore would seem to have an important role to play in resolving wicked problems and would seem to offer significant potential to creating new solutions. From this perspective our concern was with how we could best prepare individuals as social entrepreneurs to engage in new ventures predicated upon shared meaning, directed toward new solutions for wicked problems, that are untested, untried and lacking in a foundation of empirical evidence.

METHODOLOGY

This paper explores the notion of engaging with complexity through a process of dialogue and reflexivity in order to discover shared insights and understandings as the first step in venture creation. The research

engaged in a specific process, a trilogue[1], whereby understanding through complexity and uncertainty was assembled by twining dialogue and reflexivity together between three independent parties. In essence we created a case study through which we attempted to find shared meaning in a complex domain.

The project undertakes theory building as an inductive process (Mintzberg 1979; Eisenhardt 1989) moving from the specific case outward toward generalised theory. Strauss and Corbin (1998) highlight that, while initially building a 'grounded' theory incorporates an inductive step, it is then complemented by interpretation informed by a researchers life experiences and accumulated knowledge base. This complementary step they argue is a deductive process and therefore the process of building theory interplays between induction and deduction; a thesis of cycles in theory building (Bourgeois 1979). Our research endeavor, therefore, is located in the interpretive tradition and is not an attempt at empirical generalisation.

Our study created a purposive simulation of the enterprise creation process; in our case, a research enterprise. However, we argue that it could equally have been a commercial or social enterprise being conceived in an uncertain and complex field. The research was conducted in two phases. The first phase was generative, producing a data set through a trilogue. The second stage was normative to understand how the data was produced. In essence it was not the trilogue data on the subject matter that was critically analysed but rather the process of data production captured in the reflective practices of the individuals that was to draw our attention.

The trilogue phase (phase one) engaged in sequential dialogue limited by time and space. This technique was used to simulate a clumsy or undisciplined dialogue that occurs in blocks, is contrapuntal, sometimes unfinished or unqualified and sometimes silent on key or unrecognized issues. We considered that it was in this somewhat ad hoc manner that shared insights and understanding were often attempted to be created; a situation, we argue, confronted by many of the social forums.

Email was the primary tool of the trilogue data creation and capture. Each of the three correspondents was set a limit of 300 words and given 48 hours to create the next link in the trilogue process. The trilogue was rotated in sequence between two active participants and one passive. The passive participant played an observer role noting the threads of the dialogue, the filtering of the respondent and their own reactions to the correspondence before becoming the active participant and passing the observer baton to the next trilogue participant. The sequence was rotated through three full cycles with the trilogue aiming to build toward agreement (without judgment on whether broader acceptance may be achieved) between the three co-researchers.

Phase two was designed to bring all three participants together along with their observer field notes on the threads and choices made in the trilogue. This stage of analysis applied a first person action research (Torbert, 2001; Reason and Bradbury, 2001) technique to analyse and distill reasoning and rational choice and to better understand the process and experience of the participants engaged in the active/passive trilogue method. Senge and Scharmer (2001) state that reflecting on past experiences is one mode of learning and, that "all learning cycles are variations of this type of [reflective] learning." It is also important to note that first person reflection and learning very often requires types of second person (group) processes of reflection and learning, that challenge each person's particular assumptions (CIIS 2005). First, second and third person learning categories are archetypes, not essential categories that stand alone, and as Reason and Bradbury (2001) note, rigorous research requires all three. The reflexive process was important to help us conclude the human experience we had encountered. In a sense the research was an action phenomenology in that we sought to explore in real time the process of creating structures that supported insight and shared meaning in the human experience. We became aware that certain behaviours and stances were more conducive to generating this spark of shared insight. We began to make distinctions regarding what was constructive which led us toward shared insight and creativity. We also noted the opposite and identified patterns that inhibited arrival at a shared position of new thinking.

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[1] A trilogue had been trialed before, however with a different group, in different circumstances and with different aims. (Burns, A., Floyd, J. and Ramos, J. "Embodies Foresight", Unpublished, 2006.)

THE CASE STUDY

Our research required the generation of data in order for a theory of how shared insights and understanding for innovation could be proposed. As stated previously, the data generation phase, the trilogue, was deliberately designed to simulate disjointed dialogue, as in public discourse. While the theory that arose from generating the phase one data is the purpose of the research, it would be remiss if some time was not taken to briefly describe what the experience was like.

We agreed, as a starting point, that the process would be about the linkages, commonality or crossover in the areas of foresight, innovation and entrepreneurship and in particular how this might apply to the area of public policy. The process went on for several weeks. From the onset there was a disjuncture in the frames of reference. Where one participant began with assumed group intentions and preferred outcomes (that were not at all shared), another tried to define structural elements in the commonalities and differences of Foresight, Innovation and Entrepreneurship, while the other asked the existential question, 'why does any of this matter in the first place?' The lack of immediacy in space / time, arising from the email correspondence method, further challenged us. We were confronted with slippages in language, where the meaning of words seemed to split between interpreters, and the fact that one could not respond immediately to an interpretation meant that meaning could not be easily controlled. This added to frustration on the part of some, annoyance by others. The more one tried to impose an order – of definition, intention, meaning, interpretation – the more one felt that the process was not working. At times we would reach a new plateau, an insight or synergy in the process which would take the whole process to a new level. At times the process didn't seem to make sense at all, and we would admit our sense of confusion, or dismay, or lack of faith, in what we were endeavouring to do. In the end we produced a number of iterations, which became the raw data for phase two.

The trilogue produced deep insights into the process that we had experienced, and a general appreciation for dialogue as a specific process based on the tradition which stems from David Bohm (1996) and others who have developed dialogue in his footsteps or in parallel. As we examined our email conversations and our personal journals we thought that we were attempting to practice a structured dialogue but what took place was anything but that. We mainly practised what was 'not-dialogue', and following Bohm, we called this practice 'discussion'. The occasional instances where something that was different to discussion took place, we eventually called 'dialogue'. Dialogue aims for real communication, while discussion is competitive (and ego bound), as, for example, an argument, where every person struggles to win.

> In a dialogue … nobody is trying to win. Everybody wins if anybody wins … In a dialogue there is no attempt to gain points, or to make your particular view prevail. Rather, whenever any mistake is discovered on the part of anybody, everybody gains. It's a situation called win-win, whereas the other game is win-lose (Bohm 1996: p. 7).

As Bohm argued, dialogue should bring up certain difficulties, as people carry ulterior motives or stubborn purposefulness and are confronted by difficult ideas and propositions, sometimes frustrated with a process not leading to desirable outcomes, feeling pressured to get somewhere, and trying to force conclusions without giving space for a fluid movement of ideas (Bohm 1996: pp. 34-35). It is *supposed* to be confronting and difficult. Through dialogue however, we learn to become aware of our own 'blocks' (to listening) and the nature of the blocking itself (Bohm 1996: p. 5). One of the core abilities one learns in the practice of dialogue is to suspend assumptions: 'so that you neither carry them out nor suppress them. You don't believe them, nor do you disbelieve them; you don't judge them as good or bad.' (Bohm 1996: p. 23). One learns to hold one's assumptions:

> … as suspended in front of you so that you can look at it – sort of reflected back as if you were in front of a mirror. In this way I can see things that I wouldn't have seen if I had simply carried out that anger, or if I had suppressed it and said, "I'm not angry" or "I shouldn't be angry" (Bohm 1996: 23). The point of suspension is to help make proprioception possible, to create a mirror so that you can see the results of your thought. (Bohm 1996: 29)

Our analysis of the self-generated case revealed a number of obstacles and enablers to dialogue which are each outlined in the following sections.

Obstacles to dialogue

The list of obstacles to dialogue that we distinguished was unexpected. Our analysis of the experience of attempting dialogue to explore complex domains suggested to us that any of the following could limit the effectiveness of such attempts:

- Discussing or debating ideas
- Searching for shared purpose
- Introducing theory
- Performing our social role

An explanation of each of those obstacles follows.

Obstacle 1 - Discussing or debating ideas
Discussing or debating ideas formed a major obstacle to dialogue. We demonstrated a capacity to dialogue only when we said what we felt/thought, when we employed open questions and when we declared our non-knowing. This form of dialogue was primarily in the first person, 'I', and in some respects was as if we were speaking to ourselves or speaking to a space but were not speaking to another person. The dialogue was broken when we responded to another with constructed rhetorical structures by asking questions that we had already decided we wanted to answer or with preformed ideas, beliefs and positions. This form was primarily reported in 2nd or 3rd person voices, where what disappeared was our felt/thought perspective and any sense of not-knowing. Declaring 'not-knowing' created tension and confusion for the individuals which encouraged the injection of feelings and thoughts, thereby creating the space again for dialogue.

Obstacle 2 - Searching for shared purpose
Actively searching for shared purposes appeared to close down dialogue and reduce possibilities because it emphasised what was commonly understood and devalued what was different and disputatious. Not agreeing or refusing to choose, however, kept the structure of the dialogue open and de-railed the tendency to return to competitive discussion. 'If we do not know what we agree about then there is nothing else to do but keep the dialogue going' (assuming that we do not wish to simply walk away). Paradoxically, we were brought together by a sense of purpose, which was based on a shared commitment to find connections between FI&E, but from which we diverged depending on our assumptions about the process. To the extent that individuals fought for a particular vision or future for FI&E, dialogue was closed down.

Obstacle 3 - Introducing theory
Dialogue was also broken when individuals introduced another person's theory as this burdened the dialogue, as though someone had suddenly joined the dialogue (the theoretician), but who could not dialogue with us. Theory was invariably introduced as a passive, third person perspective. The theory seemed a 'dead' voice that was incapable of anything innovative. Theory is an answer to a known need and so the introduction of theory refutes the proposition that need, presented by a wicked problem, is truly unknown. Theory also privileges those individuals who know the theory. There is also the possibility that individuals might 'hide' behind the theories of others in order to not have to expose their own unknowing. We accept that theory is an important aspect of human knowledge, and therefore do not feel theory is a permanent obstacle, but rather a specific obstacle to dialogue.

Obstacle 4 - Performing our social role

Survival literally requires us to assume roles and to perform them. The professor, in his/her role, performs the task of educating and creating knowledge, the fireman/woman, in his/her role, performs the task of fighting and preventing fires. We are held responsible for our roles, as people depend on their survival on our capacity to perform. Role taking in society is compulsory and there are few spaces which invite us to let go of our roles, identities and positions. Yet performing our social role also makes dialogue more difficult, as we assume positions where solutions, answers, formulas and the like have been normalised. There are few places where we are encouraged by others to abandon the expertise which has been invested in our roles and to adopt an approach that Wheatly (2002) calls meeting 'as peers, not as roles'.

These obstacles were all important, perhaps even central, aspects of each of us; they were all key components of what we felt we represented as 'intellectuals'. These obstacles had served us well in the past and with the hindsight of what had worked before we assiduously carried them with us into this task. For each of us it was painful to see these 'helpers' become 'hinderers' when the domain moved from needs known to needs unknown.

Enablers of dialogue

When we then turned our analysis to moments of dialogue, we became aware of new factors that were operating, and these we called 'enablers'. These included:

- The attraction of not knowing
- The suspension of purpose and outcome
- The primacy of the present experience
- Re-owning of the Other

Enabler 1 - The attraction of not knowing

Dialogue is a space where one brings uncertainty and openness. For there to be the possibility of dialogue participants have to be attracted to the idea of not knowing. Without attraction then there would be no energy and willingness to sustain the dialogue. Wheatly (2002, p. 30) refers to this as developing genuine curiosity for others in conversation. Participants being strongly attracted to exploring what they do not know, was one of the enablers.

Enabler 2 - The suspension of purpose and outcome

The suspension of purpose and outcome is in someway the suspension of ego. It is the ego that would worry about 'how I can fulfill this intention', 'what other people might think' or 'how long have I been at this with nothing to show for it'. It is the ego who feels the performance anxiety of discussion and the ego that repels us away from dialogue because it does not sustain our sense of a controlling and powerful self. Maintaining a focus on dialogue as the purpose and outcome is itself an enabler to dialogue while any focus on some purpose or outcome other than dialogue was disabling. This is particularly difficult for us if we have set visions of the future, or set visions about *how* to think about the future.

Enabler 3 - The primacy of the present experience

While the ego cannot be removed from the process, its effect on the process can be managed if participants focus upon the primacy of the present experience. By reporting on thinking/feeling in the present moment, and by not returning to the past to find histories or theories that explain/inform/challenge, then the ego is managed. By speaking to the dialogue and not necessarily responding to any dialogue participant then ego is also managed.

Enabler 4 - The re-owning of the Other

Knowing that one perspective was not sufficient to address this complex issue, we were tacitly open, if not attracted, to the perspective of 'the Other' as fundamental difference. The contextual factors involved in addressing complex problems require the involvement of many perspectives. As Trist argued (1983, cited in Chisholm 2001) in order to address meta-problems, we require meta-processes. As Inayatullah writes: 'The future is deepened by understanding the Other' by re-owning the contradictions and resistances we are faced with (Inayatullah 2006: p.665). This might be re-stated as re-owning, through dialogue, what has

been previously dis-owned, psychologically or practically, so that a fuller appreciation of an issue is reached. What we dis-own is often what we are attracted to (Stone and Winkelman 1989), and what can potentially make us more whole. Dialogue helps us to identify with what we have disowned.

OBSTACLE-
Seek shared purpose

ENABLER-
Suspend purpose and outcome

The design of the process

OBSTACLE-
Perform social role

ENABLER-
Be present

The behaviours during the process

The stance taken by each participant in the process

OBSTACLE-
Debate

ENABLER-
Embrace not knowing

OBSTACLE-
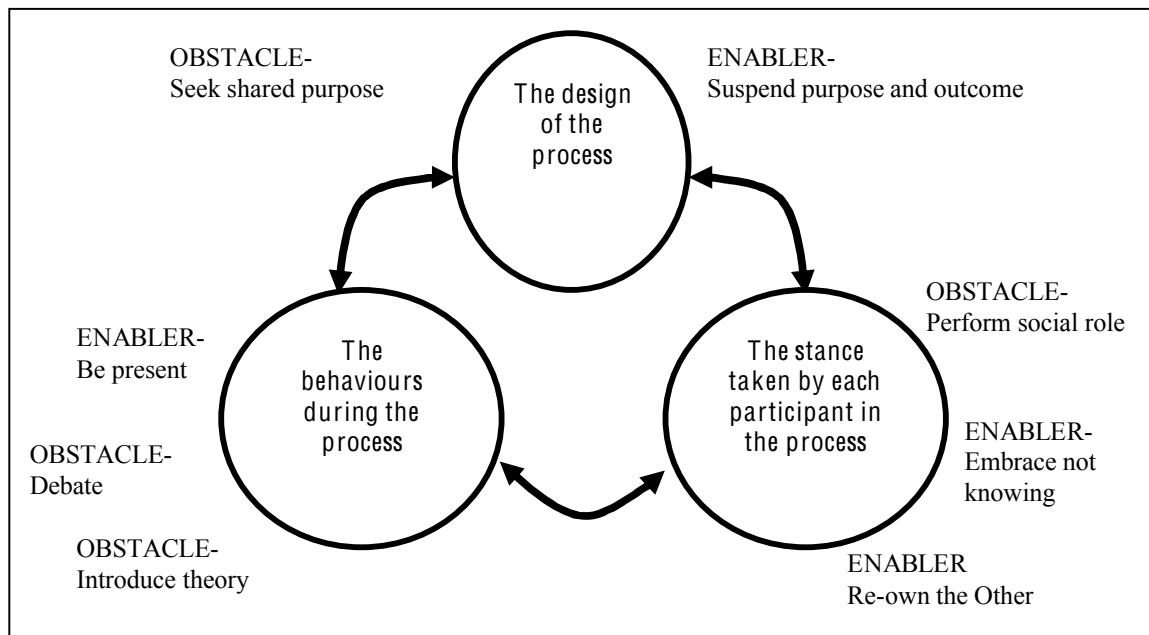Introduce theory

ENABLER
Re-own the Other

Figure 1 – Representation of the Phase 2 of the dialogue analysis

Figure 1 represents the dynamic through which the obstacles to dialogue arise and where the enablers of dialogue can eventuate. The design of any process will impact upon the stance taken by participants and the behaviours taken during the process. Our trilogue process was a similarly deliberately chosen process design that would generate data about dialogue. The analysis of the data was that obstacles to dialogue emerge, almost automatically, through stance and behaviour, in spite of the design, and create a discussion that moves towards the known. That discussion may have a strong sense of purpose and shared understanding, it may have rigorous debate and contain stimulating theory and it will *still* not be dialogue (such that it will not lead to innovation). For dialogue to occur then along with process design the stances and behaviours of participants need to explore the not known have to be expounded. Through certain enablers a dialogue can emerge and be sustained. But while such a dialogue cannot be expected to produce anything innovative, something innovative could emerge.

REFLECTIONS ON THE PROCESS

Our dialogue did embrace complexity and we did create shared insight and understanding. We identified that our movement towards this dialogue moved through three phases before dialogue was reached. That does suggest that other phases may exist on the far side of dialogue. We, however, had no experience of these but we do share the 'sense' that the pathway out of dialogue may have just as much learning as does the pathway in. What follows is our understanding of the path into a dialogue that created insight and understanding, as well as the psychological shift toward openness and vulnerability, and then the path out of dialogue toward an embodied understanding and practice for integrative action. This section is offered as a 'map' of the 'research journey'.

Coming Together

At the start there was attraction, a sense of friendship and of curiosity that brought us together and provided the energy to begin the journey. This was fundamental, without it the journey could not have been sustained. Yet the wicked problem also brought us together. Our historical moment is rife with wicked problems, and thus we feel or intuit that any one discipline may not be enough to genuinely appreciate or influence the nature of the issues we face. For David Bohm (1996) the modern world is typified by

fragmentation, as we know the world through categories of expertise, and we control and solve problems through pervasive analysis incapable of seeing its own operational limitations and not adequate for the task of grappling with modern day problems. Bohm suggested that dialogue is a key process in finding and developing shared meaning, a way of creating coherence and wholeness. Intuitively, we were facing the fragmentation – what brings us together is the whole variety of dilemmas that our world is facing, and our need to meet and re-integrate our dis-owned selves to face these challenges.

Un-encumbering

By consciously putting down the obstacles to dialogue then something became possible that was impossible before. Against our instincts we stopped discussing and debating ideas, searching for shared purpose, introducing theory and performing our social roles. As Bohm (1996) argued, trying to solve complex social problems (with unknown dimensions) by using methods developed for straight forward and simple problems (of known needs) only creates bigger problems. It is the lens of reality, the way of seeing that itself is implicated in the production of the greater problems emerging from the simple problems we try to fix. Un-encumbering thus requires developing sensitivity to how we are already encumbered, what Bohm termed 'proprioception':

> "self perception of thought," "self awareness of thought," or "thought is aware of itself in action". Whatever terms we use I am saying: thought should be able to perceive its own movement, be aware of its own movement. In the process of thought there should be the awareness of that *movement*, of the *intention* to think, and of the *result* which that thinking produces (Bohm 1996: p. 91, emphasis in original).

Within this context there is a sense of movement much as described by Clegg, Kornberger and Rhodes (2005: p.160) that 'becoming' was evolution 'when heterogenous elements collide and together build a new system. There is no preformed logical order to becoming and, even worse, during its genesis it might disturb and hinder the entire organism in its existence'. It was during the phase of 'unencumbering', where our assumptions about purpose and meaning collided, and we began to open to a new system and a new order that enabled the next phase, unlearning.

Unlearning

After the obstacles were removed then we could 'unlearn' the situation and become at one with it through being attracted to not knowing, accepting there was no purpose or outcome in what we were doing and focussing our attention into the present moment. Unlearning entails a heightened reflexivity towards one's own ways of thinking / knowing. It is not a rejection of what we know, but rather a capacity for what Jain calls 'mindflex':

> It is not about forgetting, emptying, destroying. Nor is it simply about critical thinking, positive thinking or problem-solving. At its most basic level, unlearning starts with looking at the realities and possibilities of life from other points of view. It involves becoming more conscious of the different mental models, assumptions, generalizations, sacred constructs, cognitive blindness, expectations, anxieties, etc. that influence how we understand reality, how we create knowledge, how we make choices and how we grow and evolve *(Jain 2005 p115)*.

Unlearning is a considerable challenge. Assumptions are assumptions by virtue of the fact that we don't know they are assumptions. Generalisations are the very things that our 'everyday' thinking process(es) depend on. 'Sacred constructs' are things to fight to the death for, not challenge. Unlearning might seem like a good idea, but the devil is in the practice.

Dialogue

We created, or were found by, insight and shared understanding. In dialogue we were able to see and actively relax our assumptions, let go of fixed purposes, and reach shared insights and new understanding by appreciating the perspective and being of the Other. Though it seemed that this was not an inherently stable state. Issacs (1993: p.28) documented occasions when severe dysfunctions at organisational and social levels that had defeated traditional analysis and problem solving approaches were seemingly transcended by processes of dialogue. One key finding was that if instability in the dialogue, where 'too

many perspectives, too many purposes and too many interpretations despite the best intentions' was sustained, then creativity in the dialogue emerged. So while removing obstacles and introducing enablers acts to make dialogue possible, this cannot be permanently maintained. The creativity and innovation which emerges by design also creates instability.

BECOMING VULNERABLE

We inhabit a world in which highly specialised professionals are trained to deal with very specific domains – we are seemingly segregated. The 'traumas' of poverty, economic depressions, disease, the future, are bounded within well define limits of expertise. Each trauma is seemingly dispatched, solved, repressed or hidden from view. But are they really? The essence of a 'wicked problem' is that the trauma is never solved and even seems to become more entrenched after each failed intervention. Confidence declines, exhaustion or ennui sets in and the certainty of the professional or profession is lost. Paradoxically this type of ending might also be a psychological preparation for individuals to be able to dwell, together, in this unknown, to arrive at wiser approaches to the complex problems we face. Opening to a broader complexity entails enabling an appreciation for collective experience, where vulnerability is shared, and a collective responsibility can emerge.

By and large our sense of vulnerability is kept from public view, except when we are personally faced with the intractability of an issue that overwhelms our capacity to effectively cope. It is at this point when abandoning the illusion of the private nature of the issue becomes central. The knee jerk reaction to vulnerability is to seek a solution to the perceived sources of the issue, through a type of control, by means of the existing repertoire of thinking, practices and solutions one already knows. However, in situations of systemic and epistemological complexity, this is likely to fail, or even exacerbate the problem. At this point we need to externalise our vulnerability, making public the limitations of our thinking in the search for new understanding. The externalisation of the individual sense of vulnerability onto a shared space of vulnerability creates the   psychological pre-conditions for dealing effectively with wicked problems. When vulnerability shifts from an individual phenomenon of disconnected experience, to a shared phenomenon of connected experience, we can cast new light on the wicked problems we inhabit, and find empowerment and action through their dialogical re-construction.

When vulnerability is externalised the distinction between relevance and irrelevance can be re-constructed. What is important and what is peripheral must undergo a shift when vulnerability becomes shared. Global warming has shifted from being a potential threat to Pacific Islanders, to being a direct threat to the global economy - reconstructed as relevant for whole new groups, disciplines, and institutions. They may have wanted to believe this issue was beyond their field of action-consequences, but the expansion of vulnerability contexts, the sharing of vulnerability, pushes us toward the intermeshing of inquiry and action processes of greater complexity, where we no longer know and have control of our individual fates by working in isolation. This has special resonance with what are considered disciplinary boundaries of inquiry, academic fields. What if a disciplinary approach reaches the limits of its powers in dealing with the wicked problems it wants to address? Is it time for practitioners of that field to share vulnerability with other practitioners in other fields (or non-academic domains) in grappling with renewed spirit with the dilemmas we face?

FROM DIALOGUE TO INTEGRATIVE ACTION

While our data generation and analysis did not include the steps beyond dialogue we did gain a sense of what the 'next steps' could be. What follows is offered as a hypothesis for later research to examine.

Relearning

In relearning the possibilities that emerged during dialogue can be cognitively assimilated. This concerns what is now known that before was unknown, as well as what purposes or outcomes are possible that before were impossible. Following Uphoff (2000), the cognitive dimension comprises intangible and non-directly observable elements such as culture, norms, values and beliefs which form 'social capital'. Clegg, Kornberger and Rhodes (2005: p.161) claimed that learning is 'constituted in the interplay between order and chaos' and moreover they suggested that learning, is associated with the concept of 'becoming' in an

organisational context. We were concerned with the human experience of gaining new understanding from residual complexities and, discerning new mental visions and the inner character of complex phenomenon; in effect bringing a new order to that which seemed chaotic. In our case we distinguish an opening pathway toward shared meaning and insight through relearning.

Re-encumbering

We envisage that re-encumbering is a more substantive movement than relearning. Here we would be concerned with what is now accepted as personal responsibility, that previously was not, what is to be consciously adopted, and what has to be done so that a more integrative future is eventuated. Re-encumbering would go beyond simple mental play, and requires a commitment to taking on an aspect of what was previously disowned. It is in this space that social entrepreneurship takes form and structure. On one hand re-encumbering is potentially weighty and 'embodied', but on the other hand it is liberating, as we can activate parts of ourselves that were dormant, repressed or non-existent. It may mean taking on a role that is slightly altered, or deciding to play a new role in addition to an old one. Senge and Scharmer (2004: p.86) suggest that not all learning has to arise from reflections on past actions that lead to new actions. They argue that it is possible to learn from a future that has not yet happened by discovering our new role in how that future is brought to pass. Our experience is that such an emergent future process requires both courage and a willingness to make ourselves vulnerable as we put down our social roles, come out from behind our theories in order to become fully present, and discover newer roles.

Leaving

We consider our convergence as a special moment in time which gave us a chance to learn from each other. We can now take our learning forward into our life, as a new cognitive understanding or embodied practice. We hope that there is action arising from new insights and understandings that weighs upon how we create the future anew. As futures educator David Hicks reflects, effective teaching and learning about global futures requires: 'three awakenings' – of the mind, the heart and the soul. Only then can a grounded personal path of action be found' (Hicks 2002: p102).

ISSUES FOR EDUCATION

We feel this paper addresses some of the complexities inherent in trans-disciplinary education, and potentially provides an understanding of the challenges, tensions, and possibilities in the interplay between FI&E. In concluding we wish to offer some thoughts about the relevance of the case study to education in the intertwining disciplines of Foresight, Innovation and Entrepreneurship.

Futures Studies, while a field of study in its own right, is also situated within a trans-disciplinary context – at the interface between various domains of inquiry-action. It may be that one of the key strengths of futures studies, the power to capture the essence or 'gestalt' of complex issues and wicked problems, comes from its trans-disciplinary nature, softer disciplinary boundaries, and openness to broad ranging discourses. If this is so then futures studies has much to gain through practices that can create greater dialogical awareness, and methods to facilitate dialogue between the multitudes of disciplines that weigh upon the future. In cases where we may be prone to project our disciplinary background on trans-disciplinary projects, dialogue can allow other voices to emerge and 'bite us back'. We feel it is not adequate to project upon the complex world disciplinary models and frameworks without entering into a dialogue with alternative voices that impinge upon an issue. The entanglement that ensues is a necessary precursor to a fuller appreciation of the trans-disciplinary context we wish to deal with. Futures Studies implicitly deals with ontologically embedded ways of knowing, acting and being, as well as the purposefulness that stems from this weight of history. New dialogical practices and awareness can help those engaged in Futures Studies to navigate this domain of purpose and intention with more sensitivity.

Another key lesson from our research suggests that there is no one theory that can be applied to the development and formation of innovation for wicked problems. Rather than being presumptuous about the theories we have come to know being equally meaningful and transferable to new contexts in response to wicked problems, we need to consider instead that an understanding of theory emergence may be more appropriate that aligns with the process of developing and engaging in deep and constructive dialogue. If we are to encounter entrepreneurship in a new vision of integrative futures through bold enterprises, then it

would also seem to hold that historical knowledge will be subjected to unprecedented challenge. If enterprise is the carrying out of new combinations—as Schumpeter (1961: p. 74) suggests—then so too should we expect that the new environment created through innovation and entrepreneurship will challenge our preconceived notions and ideas.

Examining the relationship between foresight, innovation and entrepreneurship in this context raises some issues and challenges for education. We expect that education and educators have a new role to play in shaping the future. Equipping students with the tools of the past will, to some extent, limit the new and innovative thinking that might be required to deal with wicked problems. In this new space educators become exposed and vulnerable as they exemplify not knowing as a way of being. In this context the need for transformative thinking becomes blatantly apparent and education will need to gear up to equip students with new skills that deliberately challenge the very processes and systems that have created the apparently intractable wicked problems. In doing so, the tools for dialogue will become an imperative. Our experience suggests that learning as communities will be problematic without a significant effort by participants in putting down their individual purposes, passions and theories in order to be fully present with 'the other' to co-discover what is innovative and foresightful.

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