Towards a holding environment: building shared understanding and commitment in projects

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Abstract

Purpose: The early stages of projects are often characterised by ambiguity arising from differences in stakeholder views regarding project rationale and objectives. This paper presents a *viewpoint* on how to build a shared understanding of project goals and thus reach a shared commitment to achieving them. One of the ways to achieve shared understanding is through open dialogue, free from political and other constraints. We call an environment that fosters such dialogue a *holding environment*. Our main aim is to illustrate, via a case study:

1. How an alliance-based approach to projects can foster a holding environment.

2. How argument visualisation tools such as IBIS (Issue-Based Information System) (Kunz and Rittel 1970) can be used to clarify different points of view and options within such an environment.

Design/methodology/approach: Following a discussion of theoretical background and literature review, an alliancing case study is used to illustrate the development of a holding environment and demonstrate the utility of IBIS in the creation of such an environment.

Findings: It is seen that an alliance-based approach to projects can provide the foundation for a holding environment. IBIS is seen to facilitate the building of shared understanding by making arguments explicit and capturing decision rationale.

Practical Implications: The paper outlines a practical framework for improving the quality of dialogue and achieving stakeholder commitment on projects.

Originality / Value: Achieving shared understanding and commitment to action is difficult, particularly in the early stages of projects. The paper outlines the conditions and techniques needed to facilitate this via a non-trivial case-study.

Introduction

Mainstream definitions of project management focus on the specialised skills and knowledge required of project managers. For example, the PMBOK defines project management as *the application of knowledge, skills, tools and techniques to project activities to meet the project requirements* (Project Management Institute 2009). This definition all but ignores the human aspect of projects - that projects are conceived, planned, carried out and monitored by people. In this paper we present a viewpoint that puts people at the centre of projects.

Organisations and projects are made up of people, and it is the commitments that people make (to carry out certain actions) that make organisations or projects tick (Winograd and Flores 1987). This metaphor – *that projects are networks of commitments* - lies at the heart of the perspective we propose. Accepting this view implies, among other things, that the focus of project management ought to be on how commitments are made and maintained through the life of a project.

It is well known that the most important project decisions and consequent commitments are made at the "front-end" or early stages of projects (Samset and Williams 2010). It is here that scope is defined and plans formulated. Unfortunately, it is here that uncertainty is greatest. Commitments made at this stage are critical to the success of projects, but have to be made based on incomplete or ambiguous information, which in turn leads to and differing views on what ought to be done. Following Rittel and Webber (1973), one could say that this aspect of project planning is a wicked problem.

In view of the above, it is important that commitments to action be made on the basis of a shared understanding of the issues involved. The obvious way to achieve this is through

communication. In other words, gaining commitment involves – or should involve - *dialogue* between project stakeholders. Moreover, if the intent is to gain genuine commitment then the environment must be free of politics, power games and all other factors that hinder open dialogue. Creating such an environment is far from straightforward. There are at least a couple of issues involved:

1. What are the conditions required for genuine dialogue to occur?
2. How can these conditions be created in real-life projects?

Borrowing from the literature in psychology and leadership we call an environment that fosters *open* dialogue a *holding environment* (Winnicott 1960, Heifetz 1994). The qualifier "open" suggests dialogue that is free from political and other constraints, a notion that is made more precise later. Our main aim in this paper is to flesh out the notion of a holding environment in the context of projects. In doing so, we draw upon Habermas' philosophy of communicative rationality which we discuss later in this paper (see Finlayson (2005) and Fultner (2011) for more).

Although the foregoing sounds somewhat idealistic, our focus is entirely practical. Our intent is to show that dialogue needed to elicit genuine commitment is achievable. Indeed, many of the theoretical concepts we discuss are realised in project alliancing (Ross 2003, Walker et. al. 2002). To this end, we describe an alliancing case study which illustrates how open dialogue can be fostered in situations where project stakeholders have diverse, conflicting views on how critical aspects of the project should be tackled. We also demonstrate how the IBIS (Issue Based Information System) notation helps in fostering such an environment by making arguments explicit and capturing decisions (Kunz and Rittel 1970, Conklin 2005, Awati 2011).

Towards a holding environment

There are existing approaches to project management that are similar in philosophy to the one we outline in this paper (Hodgson and Cicmil 2006, Thomas 2005, Alderman et. al. 2005, Sense 2007). Accordingly we begin by reviewing some of the literature pertaining to these approaches. We note that although these techniques recognise problems associated with distorted communication and lack of shared understanding in projects, they do not propose practical ways to address these issues. One of our aims in this paper is to build upon these perspectives by outlining such a method.

Following the literature review, we provide a brief history of the concept of a holding environment and how it relates to the present work. Thereafter, we look into an under-appreciated aspect of communication on projects: its role in collective decisions and stakeholder commitment. We discuss how Habermas' notion of communicative rationality is precisely what is needed to achieve commitment to action. This leads on to a discussion of project alliancing as a practical holding environment, which we illustrate using a detailed case study. Finally, we close with some reflections based on the case study, making connections to relevant work in related disciplines. It is worth emphasising that in contrast to most research reports, this paper presents a *viewpoint* that was developed by reflecting on experience rather than a pre-crafted study.

Situating the problem via a brief literature review

In recent years there has been a growing recognition that a large proportion of projects fail (see Standish 2009, for example). Although specific findings of the Standish Report have been questioned (Glass 2006, Eveleens and Verhoef 2010), the fact that a significant number of projects fail has led to an increased interest in alternate views of project management. In the context of this paper, there are two alternate streams of project management research that are particularly relevant: critical studies and sense-making. Below we present some of the central ideas from these areas and discuss how this paper builds on them.

Critical studies

Critical studies in project management are intended to surface and diagnose problems associated with distorted communication and pathologies relating to observation, measurement and performance control as prescribed by the traditional approach to project management (Hodgson and Cicmil 2006).The literature relating to critical studies in project management essentially challenges the mainstream view of project management which "remains heavily reliant on the functionalist, instrumental view of projects and organisations, where the function of project management is taken to be the accomplishment of some finite piece of work in a specified period of time, within a certain budget and to an agreed specification" (Hodgson and Cicmil 2006). We present below a couple of perspectives from critical studies that highlight the shortcomings of this traditional view.

Linehan and Kavanagh (2006) point out that traditional project management methodologies view projects as having an objective existence, independent of the people who constitute them. Among other things, this paradigm sees humans merely as means to the end of delivering a project. According to Linehan and Kavanagh, this view needs to be balanced by a perspective which acknowledges that projects are "emergent outcomes of disparate, ambiguous political practices." Further, they suggest that the "spiritual crisis" in project management must be addressed by finding a place for virtue, ethics and morality.

In a paper that appears in the same volume, Thomas (2006) highlights the gap between espoused and actual project management practices. She does so by tracing the historical roots of the discipline, an analysis that leads her to the conclusion that mainstream project management focuses on techniques, with only a cursory nod to the underlying theory and the wisdom needed to adapt these techniques to real-life projects. This leads to inevitable contradictions in practice. For example, project management is intended to manage one-off

"non-normal" initiatives, yet it tends to be a bureaucratic affair based on quantitative measurements that may (or more often, may not) have any bearing on reality (see also, Hodgson 2004).

Critical studies correctly diagnose the shortcomings of mainstream project management approaches in addressing social factors such as politics and diversity of stakeholder interests. However, apart from noting that such issues must be addressed somehow, they do not offer concrete solutions. One of our aims in this paper is to outline a practical way to reconcile diverse stakeholder viewpoints that that are inevitable in complex projects.

Sense-making

Sense-making refers to situations in which organizational units – such as project teams - find solutions to their problems through a process of collective exploration and discovery. Among other things, sense-making in a group situation is a highly collaborative process. Solutions are not prescribed beforehand by management (or standards authorities). Instead solutions that are relevant to the problem at hand are discovered or crafted by people who are at the coalface of the problem.

Particularly relevant in the context of project management is the need to resolve different world-views of stakeholder groups, as these can lead to a divergence in the understanding of what a project is all about. Alderman et. al. (2005) point out that in many situations a project manager is required to reconcile conflicting narratives of different stakeholder groups. This is essentially a sense-making role. More relevant for the discussion that follows, however, is the point that such reconciliation is a precursor to gaining commitment of stakeholders to a mutually agreed course of action.

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Closely related to the role of sense-making in projects is the notion of projects as vehicles for organizational learning (Sense 2005).   The traditional view of projects, which frames them as solely as means to particular ends, ignores their potential for enhancing organizational learning. Sense points out that projects are characterized both by action and learning. In the traditional view, the intensity of the latter is seen as being inversely proportional to that of the former. He suggests, however, that from a situated learning perspective, it is possible to have both high learning and high action simultaneously. Indeed, the sense-making activities discussed later in this paper are examples of such situations.

Studies on sense-making highlight the need to reconcile stakeholder differences and harness collective knowledge in order to reach a shared understanding of project objectives and the actions that are needed to achieve them. Also, in contrast to mainstream thought, these studies recognize that sense-making on projects can facilitate organizational learning while a project is in progress. Nevertheless, most of the research in this area tends to have a theoretical focus. In contrast, our focus is primarily on describing, via a case-study, a practical sense-making approach that can be used on real-life projects.

The concept of a holding environment

The term holding environment was first used by the psychoanalyst Donald Winnicott (1960) to describe the earliest stages of the relationship between mother and infant. He did not offer a definition of the term, but instead described the main function of such an environment as being "*the reduction to a minimum of impingements to which the infant must react...*" The essential point being that infants do not have the ability to deal with external stimuli in a sensible way; all they can do is react to them. The function of the holding environment (provided by the mother) is to give an infant the space it needs to develop the ability to cope with events that it cannot control.

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As such, the term applies to any psychologically supportive environment that provides individuals the support they need to tackle challenging issues that confront them. For example, the concept of "Ba" - a shared physical and mental space for knowledge creation within organisations (Nonaka and Konno 1998) – can be considered a holding environment. The concept of Ba, however, has been criticised by some authors on the basis of its vagueness (see Gueldenberg and Helting 2007, for example). For this reason, we prefer to use Ronald Heifetz's (1994) concept of *adaptive work* as our starting point. According to Heifetz, adaptive work is needed whenever we are faced with, "a problem or a challenge for which there is no technical remedy, a problem for which it won't help to look to an authority for answers."

Many of the issues that project stakeholders are faced with (e.g. resource limitations, unclear scope, lack of time) involve adaptive work on the part of the project team and other stakeholders. The key to resolving these lies in achieving a common understanding of the issue and a joint commitment to actions that will address it. So, for our purposes, a holding environment is one that can foster shared understanding and shared commitment to action. As we will see later, such an environment has much in common with Nonaka's concept of Ba..

The role of communication

Project communication is generally seen as a means to disseminate information to stakeholders – a means to keep them "in the loop," so to speak. A sentence from the section on Project Communication Management chapter of the PMBOK Guide summarises this view as follows: "*Effective communication creates a bridge between diverse stakeholders involved in a project, connecting various organizational and cultural backgrounds, different levels of expertise, and various perspective and interests in the project execution or outcome*" (Project Management Institute, 2009).

This is fine as it goes, but bridges do not make commitments – and commitments are critical in project work. Individuals (or groups) can commit to something only after they understand it and feel that their contributions have been taken seriously. Communication therefore plays a deeper, less appreciated role in projects: the building shared understanding and commitment to action via collective deliberation (Gastil 2006).

Rational dialogue

Introduction

The philosophy underlying a process of collective deliberation is described in the theory of communicative rationality proposed by the German philosopher Juergen Habermas (See Ulrich 2001, Finlayson 2005 or Fultner 2011 for succinct and accessible overviews). The basic premise of communicative rationality is that rationality (or reason) is tied to social interactions and dialogue. In other words, the exercise of reason can occur only through dialogue.

Habermas refers to actions based on rational dialogue (in the sense described above) as *communicative action*. Such actions are a result of commitments that are based on shared understanding arising from deliberations. In the context of projects, such commitments could be formal or informal agreements to perform actions ranging from recurring, operational tasks resolving one-off issues – essentially the things that make a project tick. This clarifies the phrase we used at the start of the paper, that projects (or indeed, organisations) are *networks of commitments* between individuals who comprise them (Winograd and Flores 1987).

It is important to point out that communicative rationality is a practical philosophy. Indeed, there has been much work done on the application of Habermasian thought to information systems design (Hirschheim, Klein and Lyytinen 1996, Klein and Hirschheim 2001). Further,

there have been several specific practical applications of it to areas ranging from Internet-based forums (Heng and de Moor 2003) to transportation planning (Willson 2001). Many authors also emphasise the barriers to achieving rational dialogue in organisational settings – inequity (in power, education etc.), differing motivations and even personality differences can come in the way of rational discourse (Flyvbjerg 1998, Introna 1996, Klein and Hirschheim 2001). One of our aims is to outline a practical means to overcome these barriers.

Validity Claims

In deliberations, statements (or utterances) made by participants convey their perceptions of the problem space. Each statement contains implicit or explicit *validity claims* that express a speaker's belief that something is true or valid, at least in the context of the dialogue. Participants who disagree with a speaker are essentially contesting his or her claims. According to the theory of communicative action, every utterance makes the following validity claims (Finlayson 2007):

1. It makes a claim about objective (or external) reality. Habermas refers to this as the truth claim.
2. It says something about social reality – that is, it expresses something about the relationship between the speaker and listener(s). The relationship is typically defined by social or workplace norms. Habermas refers to this as the rightness (or normative) claim.
3. It expresses something about subjective reality – that is, the speaker's personal viewpoint. Habermas refers to this as the truthfulness (or sincerity) claim.

As an example, when we say that a task is going to take a week to complete, we imply that we can justify the statement (if required) in three ways: it will take us a week (objective), that it

ought to take us a week (normative – based on rightness) and that we truly believe it will take us a week (subjective).

In most dialogues validity claims are implied, but rarely tested: we usually take what people say at face value, and don't ask them to justify their claims. Nevertheless, we assume that they can offer justifications should we ask them to. Naturally, we will do so only when we have reason to doubt the validity of what they say. It is at such points, when there are "breakdowns" in conversations, that debate begins (Ulrich 2001). Progress in project discussions actually depends on such breakdown in "ordinary communication" – good project decisions emerge from open deliberation about the pros and cons of competing approaches. Only once this is done can one decide on a sensible course of action.

Conditions for ideal discourse

All this sounds somewhat idealistic, and it is. Flyvbjerg (1998) notes the following five prerequisites for ideal discourse:

1. **Inclusion**: all affected parties should be included in the dialogue.
2. **Autonomy**: all participants should be able to present and criticise validity claims independently.
3. **Empathy**: participants must be willing to listen to and understand claims made by others.
4. **Power neutrality**: power differences (levels of authority) between participants should not affect the discussion.
5. **Transparency**: participants must not indulge in strategic actions (i.e. lying!).

From this list it is clear that open discourse (or communicative rationality) is an ideal that is difficult to achieve in practice. Nevertheless, because it is always possible to improve the

quality of dialogue on projects, it gives us an ideal to strive towards. In the next section we look at a collaborative project delivery framework that can be used as the basis for a holding environment in which open dialogue can occur.

Towards a Holding Environment: From Partnering to Alliancing

Partnering, in the context of projects, is a commitment between two or more organisations to work together in a way that uses each participating organisation's resources in the most effective way to achieve the desired project outcomes. The spirit of partnering requires mutual understanding, cooperation and trust, but it is important to emphasise that the commitment is an informal one – "a handshake" arrangement that states certain norms and behaviours as opposed to a contractual one. For example, "the CIIA (Construction Industry Institute Australia) stress that there is no partnering contract as such, rather an agreed partnering charter forms the basis of a working agreement that is intended to shape a non-adversarial culture to promote win-win working relationships between partners" (Walker et. al 2002). This notion of values and principles underpinning mutually accepted behaviours is common across various industries. The Agile manifesto (Beck et. al 2001) that underpins certain practices in software development is a similar set of guiding values and principles aimed at achieving best for project outcomes.

Partnering charters and agile manifestos are non-binding, so they are easily derailed by commercial interests. As stated by Jim Ross (2003): "Partnering tries to impose a culture of "win-win" over the top of a commercial and contractual framework which remains inherently "win-lose". The verbal commitments during the partnering process, even if genuine at the time they are made, are not enough to withstand the stress imposed by gross misalignment of commercial interests."

Given the above, a charter or manifesto is not enough to create a holding environment that can override the inherent self-interest enshrined in contractual arrangements. The underlying issue of risk transfer (the question of who is responsible for managing a risk) still remains *Culmsee, P. and Awati, K. (2012), Towards a holding environment – building shared understanding and commitment in projects, International Journal of Managing Projects in Business, Vol. 5, Iss: 3.*

unresolved. If one party becomes aware of information that is material to its risk, it may choose not disclose that information to other parties. An adversarial relationship is the most common symptom of this difference in perception of risk responsibility.

The construction industry in particular, recognised this problem and moved away from partnering the late 1990's, when a new form of project delivery took shape *relationship contracting,* or in its strongest form, *project alliancing.* The basis of this model was that the aforementioned ideals of trust and cooperation were enshrined into the contract and were, therefore, legally enforceable.

As Walker et. al. (2002) state: "A core issue that differentiates between the two approaches is that in partnering, partners may reap rewards at the expense of other partners. In alliancing each alliance member places their profit margin and reward structure *at risk.* Thus in alliancing the entire alliance entity either benefits together or not all. This fundamentally changes the motivation and dynamics of the relationship between alliance members."

There is another point worth making here: that of power relationships. One of the weaknesses of communicative rationality is that it glosses over the role that power plays in shaping discourse pertaining to (project) planning (see Flyvbjerg 1998, for example). Flyvbjerg and Richardson (2002) suggest that an approach based on the power analytics of Michel Foucault might work better than the communicative approach of Habermas. It is our contention that alliancing serves to address the imbalance in power between key stakeholders by *requiring* (by contract) that parties work together in creating an environment that promotes trust and openness. Indeed, this forms the basis of what we call a holding environment. In the next section we present a case study that illustrates how alliancing provides a practical holding environment for gaining stakeholder commitment by facilitating open dialogue in the front-end of projects.

Case Study – Precinct 5

Background

Population and economic growth projections for the state of Western Australia and its capital city, Perth, spurred the state government to develop a planning framework called "Directions 2031" (see Bunker 2009 for an overview of Australian metropolitan planning strategies). One of the major components of Directions 2031 was the notion of a network of "strategic activity centres" – in effect, satellite cites surrounding Perth, to offset the growth of the Central Business District and provide overflow and better use of the infrastructure and resources.

The area of Stirling, just north of Perth, was an obvious choice as one of the strategic activity centres because of its proximity to Perth and an availability of underdeveloped land around a well-connected transport hub (freeway and train station). In this aspect Stirling is unique in Perth. No other proposed strategic activity centre has the combination of land availability, proximity and excellent transport connectivity.

While the Stirling City Centre was a prime candidate for a strategic activity centre with an increased population density, it is also beset with some wicked problems (Rittel and Webber 1973). Previous planning has not been well thought-through and as a consequence, the entire area lacks cohesion. Traffic-wise, there is a significant flow of non-local traffic flowing through the area, compounded by a major retail precinct. This results in Stirling City Centre being one of the most congested areas in Perth.

Pollution is another major issue in the area, ranging from contaminated stream (now a drain) and an old rubbish tip site, leaching contaminants into the nearby soil and groundwater. Aside from such issues, the local community were particularly leery and suspicious of their local government, thanks to a previous town planning scheme that delivered some very poor outcomes for them.

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The Stirling Alliance

The City of Stirling and the Western Australian Planning Commission recognised that a strong collaboration between all stakeholders offered the best approach to resolving the complex issues facing the Stirling City Centre and delivering on the Directions 2031 vision of Stirling becoming a strategic activity centre. The Stirling Alliance was formed in July 2008 as a collaborative partnership between the community, several government agencies and the private sector. It was dedicated to achieving "best for community" outcomes by working together towards a shared vision for a completely new and revitalised Stirling City Centre, incorporating a significantly increased local population and while also remediating pollution. The vision was:

 "Create Stirling as a sustainable 21st century city – a place for everyone. It will be a hub for a diverse and prosperous community offering wellbeing for all"

The challenge to translate this vision into reality is significant. Balancing the competing interests of stakeholders, against the sometimes conflicting demands of economic vs. environmental and social constraints is a tricky balancing act.

Within the Stirling area are a variety of 'neighbourhoods' or precincts, each having qualities or emphases that differentiate them from one another. Precinct 5 is an area adjacent to the city centre, a suburban, residential area with very little commercial activity.

However, surrounding precinct 5, things have changed significantly. The shopping centre was one of the first suburban centres in Perth, expanding over the years with other retail development springing up around it. Any residential suburb bordering this scale of commercial activity is bound to be affected negatively. Rat running (shoppers taking short cuts through the precinct to avoid traffic snarls) had become a major problem for local

residents making the area both noisy and dangerous for children. Furthermore, the surrounding traffic generated by the commercial/retail activity made it difficult for locals to get into and out of their own precinct. The amenity of the area has been affected by the surrounding commercial activities.

This is the present state of affairs, but even bigger changes are underway. Massive development will occur in the surrounding precincts to create the heart of the new Stirling City Centre, with a huge increase of residential development in those areas to meet Directions 2031 density targets. A new city centre will be within close proximity which will bring new commercial activity, jobs and increased pressure on transport and associated infrastructure.

A road plan was needed for precinct 5 to be able to accommodate the changes taking place. The principles under alliancing call for, among other things, trust, transparency, fairness, mutual support and best for project outcomes. As a result the traditional consultative approach of developing, then formally advertising a plan for the area did not adhere to alliancing principles of "best for community" outcomes. Under the alliancing framework, this traditional engagement model was turned on its head. Rather than devise a plan, advertise it to the community and solicit feedback, the aim was for a local group to develop the solution themselves.

The end goal was to create a final "precinct plan" that worked within the constraints of the surrounding area while incorporating local knowledge. In this way, the option development from start to finish would involve all stakeholders. It was also understood that advertising of the plan to the broader community would only happen after a final option had been developed and ratified by this group and distributed to the broader community via collaborative means.

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For the residents of precinct 5, as well as various other stakeholders, the challenge would be to buy into the vision and plan for their area. We were asking a diverse community group with no formal planning, traffic or land use expertise to think about what their area would look like in 15-30 years time – incorporating the tangled issues outlined earlier.

A Hybrid Approach

The basic approach to this challenge was to hold a series of weekly workshops that in structure, were a hybrid between an enquiry by design – also known as Charrettes - (Lennertz et. al. 2008) and a value management workshop (New South Wales Treasury 2004), using the Issue-Based Information System (IBIS) notation (Kunz and Rittel 1970, Conklin and Begeman 1988, Conklin 2005, Awati 2011) as a means to capture rationale and ensure transparency of the process. We'll say a bit more about each of these techniques below.

Enquiry-by-Design workshops are common in urban planning and are used to bring together major stakeholders at one time and place to discuss, develop and draw possible urban designs and planning solutions to specific, place-based problems. Value management workshops on the other hand, are used to discuss identified options from an enquiry by design effort and gain a shared understanding of what options provide the best balance across social, environmental, economic and engineering issues. Criteria to assess each option are identified and agreed, and each option is then rated collaboratively, in accordance with each criterion to discount options and narrow focus onto preferred options.

The vast majority of the participants were from the local community. Also present and facilitating the process was an urban planner from the alliance, one of the authors of this paper as a co-facilitator and a community development specialist employed by the alliance.

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An open-door policy was instituted, so any local resident could participate. Accordingly, the vast majority of participants were not planning or urban design professionals. This meant that most participants had limited expert knowledge. On the other hand, they had something that the professionals lacked – tacit local knowledge of the area. After all, they lived there. This model reflects what Horst Rittel (1972) referred to as the "symmetry of ignorance" in complex design problems.

Rittel also spoke of the need to make the basis of each participant's judgements explicit via objectification. Rittel described objectification as "successfully exchanging information about the foundations of our judgement." This task fell to the co-facilitator, who used the IBIS notation to capture the essential arguments made by the group. The technique of mapping discussions using IBIS in real-time (as the discussion unfolds) is called *dialogue mapping* (Conklin 2005, Awati 2011). Dialogue mapping makes the basis of each participant's judgements transparent, explicit and easier to communicate to others.

A teacher more than a doctor

The first step of process, scene setting, was the most difficult. Residents carried long memories of frustration from previous planning decisions that had impacted their lifestyles negatively. Further, because of their lack of specialist knowledge about urban design, they did not always appreciate the reasons why certain things were the way they were. The planner initially countered this by attempting to explain planning decisions in technical, planning terms. When a participant asked why certain decisions were made, or suggested options that were clearly not feasible, he would try and close off the option with a "that would never work" or "we looked at that but it was not feasible" type of answer.

<<Take in Figure 1>>

1. Section of IBIS map from the first workshop.

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Around halfway through the first workshop, the planner realised that his attempts at giving technical answers fell on ears deafened by frustration. The key to changing this pattern of behaviour and the first step in the establishment of a lasting holding environment lay with the planner. In his own words, when faced with a naïve statement or an idea that had serious problems with it, he had to stop thinking like a planner and "let it go". In doing so, he was entrusting the validity of ideas to the dialogue map being built and ultimately, the wisdom of the crowd. This is a huge change in perspective – from a technical view to a sociotechnical or even purely social one. In Rittel's (1972) terms, the planner switched from being a doctor to a mid-wife. An excerpt from a dialogue map from the first workshop is shown in Figure 1.

The establishment of trust (Why can't it stay the way it is?)

The next challenge for the planner was the establishment of trust – one of the key elements to a holding environment. Participants initially vented their frustrations and the planner was the lightning rod. In fact participants knew full well that the planner had nothing to do with their present frustrations, but was the representative and venting was part of the process of establishing trust. His willingness to endure criticism that was not really aimed at him, allowed pent up frustration to find an outlet.

One particular challenge that the planner had to overcome was the effect of the "naïve simplicity" stage of coping with wicked problems, characterised by the "why can't it be the way it is?" type question or "well I won't be here to worry about it anyway" comment. The planner countered this by shifting the frame of conversation from telling participants what would work and what would not, to letting it emerge from the conversation itself, via challenging the group to the dilemmas faced by planners by asking them to take on the same questions he faced. All discussions were captured in IBIS via dialogue mapping, and in time the maps started to reflect the diversity of concerns and potential ways to address them.

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The act of identifying, examining and rating various options often raised more contextual questions. As a result, the main discussion - option development - had to be parked while these questions were answered. Discussions thus traversed unexpected terrain and more shared learning took place. In this process previously answered questions were often raised again by participants. Here the dialogue maps were very valuable – the co-facilitator could point to the previous discussion of the issue, thus saving a lot of needless repetition of previously discussed issues.

<<Take in Figure 2>>

2**. An option with topographic map and pros and cons captured in IBIS**

Once the first option was discussed, a cadence emerged and the group examined options in a consistent fashion. The option would be displayed via projector, onto a whiteboard. , Participants would discuss and clarify the physical characteristics of the option. After this context had been set, debate on pros and cons took place. The co-facilitator captured all of this in detail into dialogue maps, incorporating by a spatial image of the area in question (see Figure 2 for an example map). Via mouse-over, he was able to zoom the image to allow participants to understand the topographic changes that each option would require, while the whiteboard provided the planner the ability to draw over the projected images as new ideas came to light.

The use of dialogue mapping ensured that all contributions were heard and acknowledged. The group did not have to spend excessive time on repetition. Participants who began with an arms folded "why can't we leave it the way it is," attitude ended up developing a deep understanding of the interlocking issues that they had to confront. While not all the discussions left all of them happy, at the very least the participants had a shared understanding of what the plan entailed.

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The holding environment takes root

As trust in the planner and the process developed, so too did the technical knowledge transfer to participants and their enthusiasm for delivering a solution that balanced their needs and went beyond. Between meetings, participants would "hit the streets" with tape measures and envision options to take back to the group. Often these solutions were hand drawn over a basic map of the area, scanned into a dialogue map, and examined using the emergent process of fleshing out characteristics and the subsequent identification of pros and cons.

A breakthrough moment came, when one resident, "Gary", who had been thinking about the shortcomings of many of the options arrived at the workshop with a design that no-one else (not even the planners or road engineers) had considered. Based on what he had learned via the planner, Gary had ensured that his design met all guidelines, and alleviated several longstanding road issues. Best of all it was very cheap to test out: all the road reconfigurations he suggested could be achieved with temporary water filled plastic road barriers.

Another interesting outcome came from an option that was identified as ideal in the longer term, but considered infeasible because it required a new road to be constructed over some private commercial property in one of the other precincts. The property in question was leased by a nationwide chain of hardware stores and it was assumed that this meant that the option was not feasible.

The owners of that property, who had not been a part of the first few workshops, were invited to participate. Upon examining the rationale for the option in question, the owners indicated their support for the idea. After all they reasoned, "It's just a big shed." Once the current lease expired for the premises, the retailer would likely redevelop the site in any event. Therefore, incorporating the long term road usage needs into a redevelopment plan was supported by the owner of the site and this option was a great medium to longer term strategy.

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Another particularly powerful experience was dubbed, "the magical mystery tour." Before a workshop commenced, a bus was hired and the participants were taken to an area where a similar urban transformation had been made ten years before. The group walked around the area for an hour, soaking in the ambience, learning about the history of the area - how the area was redeveloped and how certain planning challenges were overcome.

The tour enabled participants to get a real sense of the issues they needed to confront, and they felt it with all their senses, sight, sound and tactile, rather than in a theoretical way in a group discussion. Later, when the group returned to the meeting room, quality of the rationale captured in the dialogue mapping was much richer because of the sensory immersion that took place before the discussion began.

Making arguments explicit

Mapping rationale via IBIS for each option was a key to the success of the process. This rationale demonstrated the openness and transparency required. Further, because participants had the means to make their thought process visible, they were able to demonstrate their logic to the rest of the neighbourhood. In fact, on occasions when dialogue wasn't being mapped, participants indicated a reluctance to discuss issues: they wanted their rationale captured so that what they said could be clarified for others and used a reference in the future.

Finally, this process was also resulted in significant cost savings. Under normal circumstances, any plan put to the local residents would be professionally designed and developed by a consulting firm at considerable expense, before the community had seen it. The process followed here did not require it. Even better, an examination of the rationale captured revealed recurring patterns: outlines of a final plan began to emerge from the

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workshops. These emerging themes were also captured in the Dialogue Maps as they were identified by the group.

Developing the criteria

Eventually the identification and examination of road and land use options were exhausted, and focus switched to developing criteria for scoring each option. Dialogue mapping was used to determine the criteria that would be used to rate these options. Previous work performed at the alliance had identified several criteria across a triple bottom line basis of social, environmental and economic criteria (Elkington 1998). The group took these criteria as a base-set, and then determined which ones were relevant to precinct 5.As a result of this exploration, some criteria were added and others were removed.

The next step was to rank the identified criteria from most important to least important. The group had to choose between splitting the weights of criteria evenly or ranking each individual criterion. The group chose the latter as, in their eyes, the criteria did not always rate an equal weighting.

The process was interesting because it surfaced some additional assumptions. For example, one criterion "Preserve or enhance the economic value of the existing community" essentially means that no resident should be any worse off financially from any new plans. This was ranked 3rd most important by participants, based on the assumption that compensation paid to residents who would lose their homes would be adequate in the eyes of the affected resident, as opposed to the state. Clearly these sorts of assumptions are critical to the validity of the scoring. Dialogue maps were an excellent vehicle to capture this key information.

Synergise

Most options were discarded due to low scoring. A final larger workshop was held to synthesise a final solution from the few road options that remained. This workshop was a

classic Enquiry by Design/ Charrette process with large maps, plenty of marker pens and the addition of discipline experts in traffic, urban design and place building. By this stage however, the residents had a much deeper understanding of the problem and were much better informed in various areas of planning and urban design. The planner in particular found that this stage of the process was considerably smoother compared to his previous experiences. By the end of this workshop, three hybrid solutions were considered and a final solution was agreed upon.

How well did it work?

Soon after the final option had been synthesised, a community BBQ was held in order to consult and communicate with the wider community, regarding the planning that had been undertaken by the Precinct 5 working group.

Approximately 250 people from the community attended the BBQ and of these, 57 completed a feedback sheet. The responses showed the majority of respondent's felt comfortable with their knowledge about the general concepts of the plan, and were supportive of the traffic and movement measures proposed (Gary's solution).One cannot read too much into this as it is quite possible that those who weren't supportive of the plan did not bother to fill in feedback sheets. However, one would expect that those who were strongly opposed to the plan would have wanted to have their say.

 It is important that we clarify a point here: the BBQ was not intended as a celebration or a means to gauge support for the plan. On the contrary it was meant to serve as a forum for the wider community to air their concerns about the plan. Indeed, in the words of one of the main organisers:

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"The people that come to these events are those that are concerned and lack trust. They come to criticize. It was interesting that many would come in with the attitude – "I don't trust the City of Stirling and what are they up to now." These people would be surprised to see their fellow community members sitting at the desk and welcoming people in. Many would say, "What are you doing here?"

...Of course there were concerns about some aspects [of the plan], and these were followed up with specific meetings with all the people in that street or place to come to some agreement or change the plan if required."

Although the above does not constitute proof that the process worked, it does indicate that a fair degree of buy-in and commitment to the plan was achieved. It is plausible that this commitment was largely due to the fact that the plan was created collectively. We discuss this point in more detail next.

Discussion

Towards a holding environment – shared understanding and commitment

The case study covers the early stages of a large and ambitious project over a long timeframe, one that is aimed at changing the face of an entire suburb. As such it is a perfect example of a project involving diverse stakeholders with (sometimes) conflicting views. Indeed, Rittel's original formulation of the term "wicked problem" was made in the context of urban planning - exactly this kind of problem (Rittel and Webber 1973). In such cases it is often difficult to arrive at a consensus on what constitutes *public interest,* and such a consensus is required for a group to make a collective commitment to action. The problem is, standard evaluation techniques do not *by themselves* help in articulating public interest (Alexander 2002). As stated by Alexander:

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"Utilitarian evaluation methods have demonstrably failed in articulating a substantive public interest. Arriving at a consensual decision, through interactive deliberation in the political, administrative, or judicial arenas, is the conventional way unitary and deontic concepts of the public interest are effectuated; this also conforms to dialogic views of the public interest. The problem with this approach – involving comparative weighting of relevant decision considerations – is that its judgmental conclusions are contestable, making a substantive public interest doubtful. A universal deontic norm (e.g. Rawls' formula or Habermas' procedural criteria) as a surrogate public interest criterion is one response to the limits of aggregative methods and deliberative approaches. *But applying such norms in practice has so far proved infeasible*" (italics ours).

Based on the case study discussed earlier, we suggest that alliancing makes the application of such norms feasible. Indeed, the case study illustrates how alliancing helps establish the conditions for rational discourse in the sense of Habermas. Let us briefly consider the conditions listed earlier in this paper and see how they were achieved (albeit, approximately) in the workshops:

1. **Inclusion**: This was formalised in the alliancing agreement and was implemented "on the ground" through facilitation techniques that encouraged participation.
2. **Autonomy**: Once they saw that their views mattered, participants – particularly those from the community – felt free to articulate their opinions in the workshops.
3. **Empathy**: The planner listened to the concerns of participants from the community, thereby gaining their trust.
4. **Power Neutrality**: The planner's attitude ensured that as far as the workshops were concerned, all opinions had equal value, and that his formal position (as town planner) did not give his views more weight.

5. **Transparency**: Once trust was established, difficult questions were dealt with openly (consider the discussion about the option that involved building a road through private property). Participants actually indicated a reluctance to participate in deliberations that were not captured into IBIS maps

Of course, it would be a stretch to suggest that the conditions persisted through the entire course of the workshops. However, the fact that they were clearly on display at times when it mattered indicates that alliancing can help in fostering dialogue aimed at achieving shared understanding and commitment to action based on it.

It is interesting to note that our observations regarding alliancing are also entirely consistent with Ostrom's (1998) work on behavioural aspects of collective choice and action. According to Ostrom, cooperation and collective action can be improved through *communication* and *innovative governance*. She also identifies three core relationships that promote cooperation: *reciprocity*, *reputation* and *trust*. Reciprocity refers to the family of strategies in which people respond to each other in kind – i.e. they do unto others as others do unto them; reputation is the general view of a group towards a person within the group; and trust refers to the expectations of others' behaviours when one has to act before them. Although these core relationships are not engendered by alliancing per se, the framework puts in place incentives to encourage behaviours that foster and enhance them. An important implication of Ostrom's work is that cooperative endeavours tend to work well when all stakeholders stand to gain from its success and, equally, to lose from its failure. Indeed, an alliancing framework involving mutually shared risk achieves exactly that.

Knowledge creation and capture

In an earlier section we mentioned that Nonaka's concept of "Ba" – an environment within which knowledge creation can occur (Nonaka and Konno 1998) – is akin to our notion of a

holding environment. We believe that our formulation of the latter term, as described in this paper, offers a concrete (and more precisely defined) version of Ba. Indeed, the development of the option chosen by the group is a good illustration of how our notion of a holding environment maps to Ba. The option did not exist in the early stages of the discussion - it emerged as the group's understanding of the problem evolved. As with many innovative breakthroughs, it emerged extemporaneously, independent of any project plan (Ciborra 1999).

The dynamics of such a process of knowledge creation is not easy to pin down, but it is likely catalysed by dialogue, openness and knowledge sharing – the essential elements of a successful holding environment. Indeed, recent work on the dynamics of participatory design rationale has begun to address the question of how simple visual notations such as IBIS can have a significant positive impact on design workshops and discussions (Selvin et. al. 2010).

The utility of IBIS as a project or organisational memory has been discussed by Conklin (1997). Further, it has been noted that visual notations such as IBIS are superior to prose when it comes to capturing the gist of arguments (Van Gelder 2003). This was validated several times over during the workshops when participants were able to remind themselves about the details of a previous discussion by a quick look at the relevant IBIS map.

Does methodology matter?

It is worth noting that alliancing does not prescribe any particular methodology to manage the projects. Instead, it focuses on getting the relationships between stakeholders right. Particularly important in this regard are risk sharing, joint target setting and inter-organisational communication. These form the basis for a holding environment in which individuals can reach a shared understanding based on which they can make commitments that are achievable and that they intend to fulfil. We conjecture that once this is done, it matters little which methodology is used to manage the project.

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The endless debates about efficacies of particular methodologies serve only to distract project professionals and academics from the real work of project management - which is finding effective ways to achieve and manage individual commitments. We note that this claim is echoes the principle of *methodological individualism* (Elster 2007, Heath 2011): that a causal explanation of a phenomenon should describe how it arises as a consequence individual actions which, in turn, should be traceable to individual desires and intentions. We elaborate on this point briefly below.

A statement regarding efficacy of a particular project management methodology is essentially a claim regarding cause and effect. For example, a statement such as," our project success rate has increased by 50% since we implemented Methodology X" implies that use of the methodology was in some way responsible for the improvement (use of the methodology being the cause, and project success being the effect). Such a statement can be called into question because it does not tell us how the alleged success of Methodology X is a consequence of individual intentions and actions.   In contrast, the approach we have described above - one which focuses on achieving shared understanding project objectives – directly facilitates individual commitment to achieving those goals. We suggest this commitment, when expressed in a tangible form, could be the causal link between intentions, actions and outcomes.

Conclusion

We suspect that the central theme of this paper – that commitments matter - will not be news to most project managers. However, we believe our proposed approach provides a novel means of getting buy-in from a diverse group of stakeholders. Further, although alliancing and IBIS have been around for a while, to the best of our knowledge they have not been combined in the way we have discussed in this paper.

Towards a holding environment

In this paper we have illustrated how an alliance-based approach to projects coupled with the use of sense-making tools such as IBIS can create a practical holding environment within which stakeholders can achieve a shared understanding of issues and a shared commitment to action. There are a couple of aspects to this. First, an alliance provides the foundation for an environment in which rational dialogue can take place, free of most of the political and other constraints that plague many projects. Second, tools like IBIS can help clarify the various options available and the arguments for and against them in real-time. We speculate that both these factors are essential prerequisites to achieving a shared understanding and commitment to action. Moreover, as illustrated in the case study, they can augment and enhance the effectiveness of established techniques such as Value Management and Enquiry by Design.

Finally, it is our view that many projects fail because they proceed without a collective commitment to action and the understanding that precedes it. To reprise a line we have used a few times in this paper: projects, like organisations, are networks of commitments. Consequently, managing projects ought to be all about managing commitments. The concepts and case study discussed in this paper are offered as a small step towards such an approach.

Note

The case study and the ideas presented in this paper are elaborated in a recently published book by the authors (Culmsee and Awati 2011).

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Figure 1: Section of IBIS map from the first workshop.
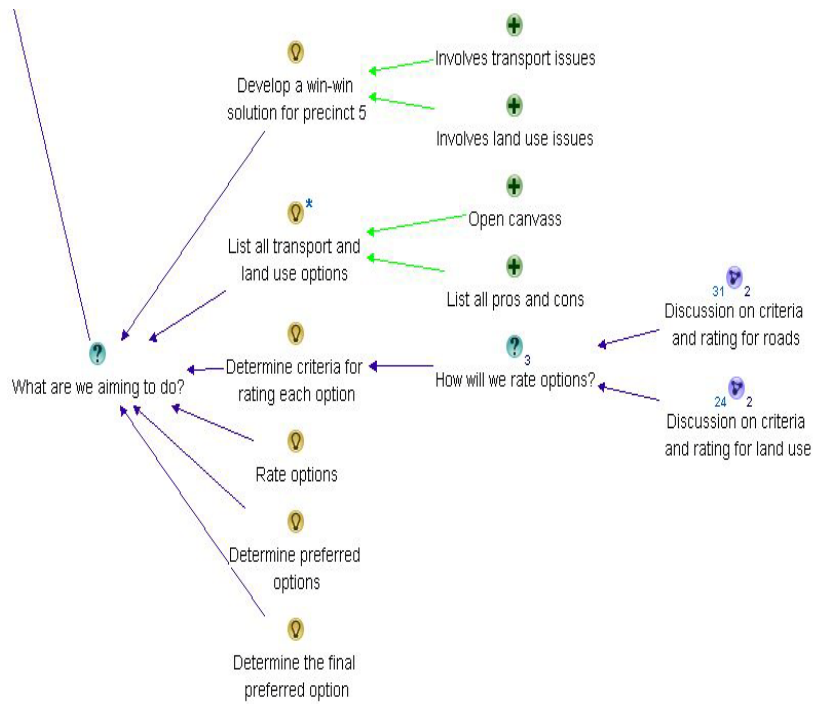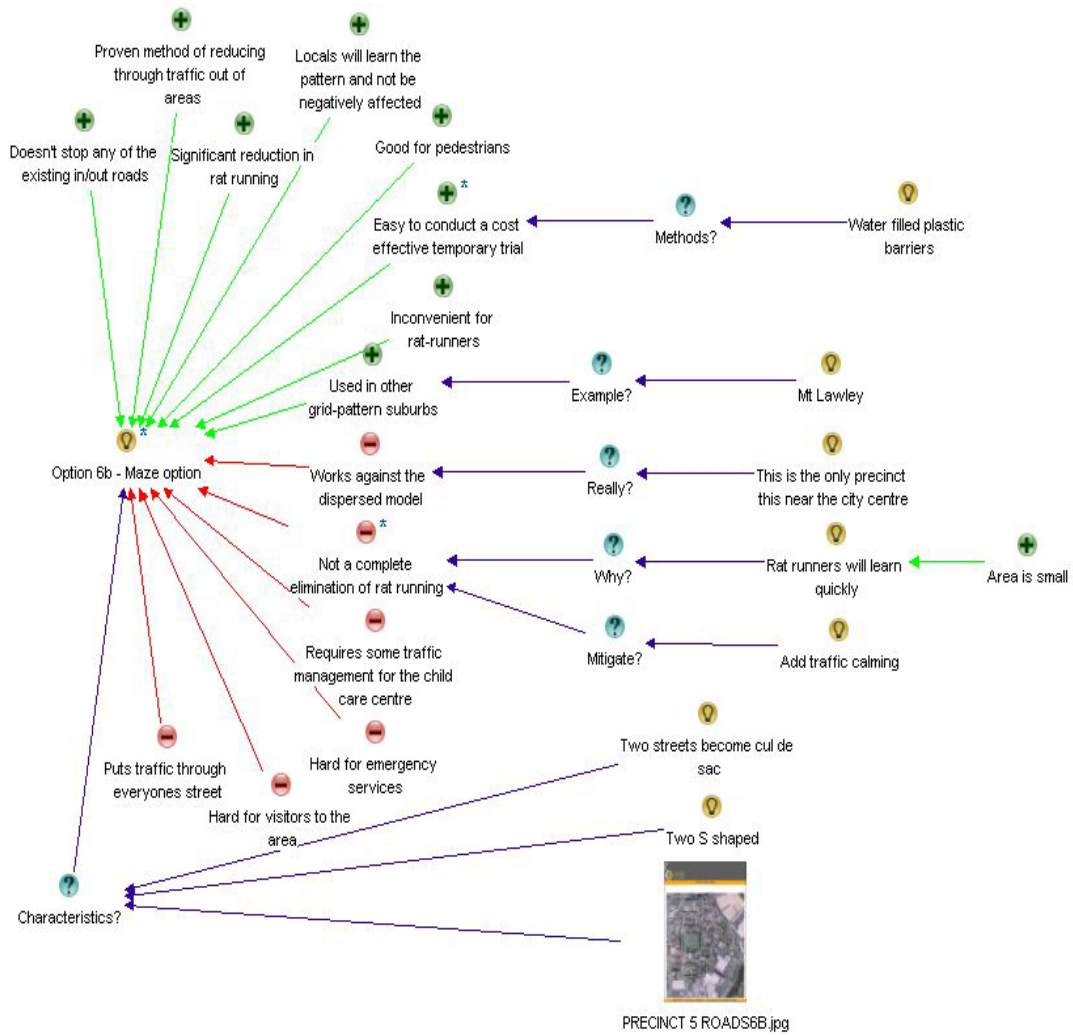
Figure 2: An option with topographic map and pros and cons captured in IBIS