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The ambience of a project alliance in Australia

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The challenge of delivering construction projects that serve their intended purpose while meeting value-for-money criteria has confronted the construction industry in many countries. The call for a change in culture in project delivery organizations and their clients has also been well documented. The response to these challenges has been a shift from traditional project delivery towards a relational approach that has been gaining momentum for highly complex and/or highly time-constrained infrastructure construction projects. An especially instructive development in this trend has been the growth in project alliancing in Australasia. Literature on project alliancing and related comparable forms of project delivery indicates that this way of performing project business requires an entirely new set of project management (PM) behaviours and a new working atmosphere, environment and ambience within which to work. Traditional PM is carried out in a highly competitive environment, with little or no risk sharing between the various professions and trades involved in project delivery. Alliance projects, in the form used in Australasia, depend upon close relationships between all relevant stakeholders and participants from project concept to delivery and this supports a positive workplace ambience. The depth of this relationship and gain/pain sharing is demonstrated through the alliancing principles and alliance code of practice developed at the project team-formation stage. Research results presented in this paper describe the ambience of alliance projects. They extend our knowledge of project alliancing, the behaviours expected of project team members and the motivations that drive alliance managers (AMs). Reported findings also capture rich insights into the lived experience of project AMs and reveal the nature of the workplace ambience.

Keywords: Ambience, project alliances, project management, uncertainty.

Introduction

A meta-study of UK government-commissioned reports ranging across the second half of the twentieth century (Murray and Langford, 2003) highlighted poor construction industry performance in delivering value for money and revealed unsatisfactory business relationships throughout the supply chain between contractors, suppliers, design consultants and clients. Two of the reports cited (Latham, 1994; Egan, 1998) were particularly influential not only in the UK but elsewhere in pinpointing the litigious and strife-torn relationships across the construction industry supply chain that all too often result in inefficiencies, ineffectiveness and wasted opportunities for innovation. In Australia, a similar disturbing culture was described and the need for this to change was established by the National Building and Construction Council (NBCC, 1989). The NBCC represented the members of the construction supply chain and so it presented a united position that the culture of the construction industry and relationships across the entire supply chain needed to change. The reports (NBCC, 1989; Latham, 1994; Egan, 1998) demonstrate a united call for cultural change, and openness to innovation and collaboration that could trigger improved value for money in delivering construction projects. One significant outcome of that determination for change was the trend towards adopting a project alliance (PA) approach for complex and/or highly time-constrained projects.

Project alliancing has developed as an important procurement option for Australasian infrastructure and

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construction projects with many $AUD billions of infrastructure projects being delivered over recent years as evidenced by several recent studies (Blismas and Harley, 2008; Wood and Duffield, 2009; Mills and Harley, 2010; Walker and Harley, 2013). Working within these types of procurement arrangements is quite different from other forms of project delivery demanding a new set of skills as well as unlearning (or putting to one side) highly tuned and aggressive commercial behaviours and skills (Ross, 2003). The PA establishes a new overall workplace culture and, beyond that, each individual PA has its own particular ambience.

The purpose of this paper is to reflect upon how the infrastructure project sector in Australasia has developed its own culture through engagement with project alliancing as a procurement form that has triggered a cultural transformation manifested by a specific ambience that can be sensed by those engaged in a PA for construction infrastructure projects. We then concentrate on how this new culture has led to a different way of working that creates a distinct ambience to that of other more aggressive commercially driven forms of project delivery. We explain how the establishment of a PA ambience develops within each alliance entity that is strongly influenced by the alliance entity's purpose and charter.

A result of industry-wide dissatisfaction with the status quo had led to the emergence of sector-wide cultural supportive for and adoption of project alliancing. PAs are based on the principles of shared objectives, trust and transparency developed through the alliance entity charter, resulting in the creation of a specific alliance entity ambience. While there are similarities in the ambience that exists within each alliance entity there are also subtle differences. While this ambience concept is evolving, our research suggests that its basic tenets are reasonably stable. This perceived ambience is shaped by the willingness of many projects owners *and* their supply chain to embrace change. Acknowledgement of the need for change triggers a willingness to adopt new ways to address and minimize identified problems (Kotter, 1996). Project alliancing has mainly been applied to projects where there is intense complexity, uncertainty and risk around project design and delivery methods and/or where extraordinary time constraints are placed upon project delivery that make other approaches highly unattractive. This new project delivery form appears to eliminate or at least reduce many of the problems identified as besetting the construction industry.

We draw upon empirical results of recent studies of alliancing in Australasia. Two studies took place during late 2010; one into the current state of alliancing in Australasia (predominantly on Australian examples) (Mills and Harley, 2010) and another study of the same sample pool which investigated the attraction, recruitment, development and retention of alliance managers (AMs) in Australia (Walker and Lloyd-Walker, 2011a, 2011b, 2011c). We focus upon the *ambience* of the PA in this paper. We use the term ambience because it represents the mood, feeling and sense of atmosphere generated by this form of project delivery within a specific alliance entity. If we used terms such as 'culture' it would imply hidden values (Schein, 2004) and we wanted to illustrate a more tangible and accessible sense of what we observed and our research project respondents described through their interviews. We take our point of departure from the established literature to explore this identified project ambience phenomenon by addressing the reality of PAs as a project procurement option. Our study of the ambience experience is based upon empirical work from our observations and the experiences revealed by our study respondents through interview transcript data.

The subject of alliancing has been well researched and written about; differences between PAs and other relationship-based procurement options for project delivery have been dealt with elsewhere (Walker and Lloyd-Walker, 2011a, 2011b, 2011c). According to Wood and Duffield

> Public and private sector expenditure on infrastructure projects in the Australian road, rail and water sectors has grown significantly from 2003 to 2009, increasing from $12 billion per annum in the 2003–2004 financial year to $32 billion per annum in the 2008–2009 financial year. (2009, p. 7)

This represents a significant use of PAs given that the population base of Australia is a little over 22 million. This scale of alliancing is corroborated by three recent reports (Blismas and Harley, 2008; Mills and Harley, 2010; Walker and Harley, 2013). However, while all these studies provide statistics of scope and scale of alliances and explain their nature and characteristics few attempt to explain the PA ambience in terms of the 'feel' or character experienced by those participating in and managing these types of alliances. This study builds upon a focus on PA cultural aspects, for example in Rowlinson *et al.* (2008), to extend the concept by including a broader appreciation that includes the 'feel' of the atmosphere created by human interactions within a PA.

The ambience of a PA is the individual atmosphere created in an alliance entity guided by agreed alliancing principles. Each alliance creates a unique character quite separate from that of the base organizations that collaborate to form the alliance. To a large extent, this palpable ambience is derived from the espoused alliance

principles and the interaction of people and their resulting perceptions within the PA. These PA principles are agreed up front and as all project team members agree to them it is these principles that shape the character of the distinct entity created to deliver the project. A critical principle is that alliance participants share the pain or gain from the project *as an entire PA team* based upon a *holistic view* of project success; one that incorporates more than financial bottom-line measures and short-term impact results to also embrace social and environmental measures of benefit.

Our focus is restricted to Australasian infrastructure and construction projects so findings cannot be automatically extrapolated to other industry sectors or countries, but we do suggest that other industry sectors deploying alliancing may benefit from the insights presented here.

The research question identified and answered in this paper is:

> Q1: What characterises the project ambience experienced by participants engaged in Australasian infrastructure project alliances?

The remainder of this paper is structured as follows. We outline some of the salient literature on alliancing to frame the concept of ambience within a PA context and then we provide a section that explains the research approach adopted in the study partially reported upon in this paper. We then present findings followed by discussion of the findings and their implications for the project management (PM) discipline. We conclude with a summary of the paper.

Supporting concepts

We introduce and explain two supporting concepts that are critical to understanding PA ambience that may be new to many readers. The first relates to the PA project deliver approach, and the second relates to the way that a PA delivery mechanism delivers a specific *ambience*, the way it 'feels' to be part of such a project team.

Project alliances

We first clarify what we mean by a PA so that readers can better understand any nuances in behaviours required of PA participants that differ from other forms of project delivery. In this section, we argue that collaboration behaviours and expectations hold the key to understanding how a project ambience might develop. An alliance agreement is usually made between two or more entities who, in good faith, commit to working cooperatively, sharing the risk and rewards of the project in order to achieve the stated outcomes (Jefferies *et al.*, 2006). Trust and transparency are essential components of a PA; therefore, ensuring that the most compatible possible partners are chosen is important for success (Jefferies *et al.*, 2006). Important behavioural requirements that are required of PA participants are described as follows:

> … All parties are required to work together in good faith, acting with integrity and making best-for-project decisions. Working as an integrated, collaborative team, they make unanimous decisions on all key project delivery issues.
> Alliance agreements are premised on joint management of risk for project delivery. All parties jointly manage that risk within the terms of an 'alliance agreement', and share the outcomes of the project. (Department of Finance and Treasury Victoria, 2010, p. 9)

In 2001, when describing the National Museum of Australia (NMA) PA, Walker *et al.* (2001, p. 212) used the phrase 'sink or swim' together. In a PA, participants are jointly and severally bound together through performance of the project delivery outcome (rather than individual team performance). Overall project performance outcomes determine a PA painsharing or gainsharing performance allocation. Thus all PA participants are bound together and treated as a single entity. This has significant impact on the way they are likely to collaborate. Key terms in the above quote suggest the expected behaviours of PA participants being characterized as collaboration, best-for-project values, integrity and shared joint management of risk. The above definition is focused upon a public sector project owner (PO) or its representative (POR) but it can be more broadly applied to private sector PO/PORs.

Projects suitable for this procurement choice are therefore likely to be intellectually and professionally challenging and stimulating. We now discuss literature relating to the key terms alluded to above, and focus these on PAs rather than the varied range of general project procurement forms.

Substantial scholarly work has been undertaken on delivering projects in Australia through PAs. Davis (2006) for example undertook a PhD thesis on relationship-based procurement that involved interviewing 49 alliancing participants with Australia. Wood and Duffield (2009) surveyed 82 alliance participants from 46 alliances in Australia and also undertook case studies on 14 alliances. Walker and Hampson (2003a) undertook a longitudinal study of the NMA. MacDonald (2011) gathered detailed data from 39 subject matter experts and reflected upon his own extensive experience

on alliance projects. The defining nature of collaboration in alliances in each of these and other studies can be summarized as joint responsibility for decision-making so that both the PO or POR and non-owner participants (NOPs) work together by sharing relevant information and knowledge. An Alliance Leadership Team (ALT) constitutes the project executive level supervising the project and an Alliance Management Team (AMT) constitutes the project operational level of management. Both teams form a consensus on decisions to be made on a best-for-project basis rather than being based on any individual participant's values and interests. The Australian project alliancing experience appears similar to other PAs reported upon in the UK (Smyth *et al.*, 2009), the Netherlands (Laan *et al.*, 2011), Finland (Lahdenperä, 2009; Heikkinen and Airola, 2013) and China (Xu *et al.*, 2005).

PAs involve a very different decision-making process from that of other forms of collaboration in which parties *contribute* relevant information and knowledge to formation of a position by the various POR and NOP team leaders about their own input into the project delivery process. The subtle difference is one of alliances requiring *commitment* to form a consensus position rather than *contribution* to decision-making. In this respect the difference can be explained as the difference between a hen and a pig in providing a bacon and eggs breakfast. The hen makes a contribution while the pig makes a commitment.

Mills and Harley (2010, p. 14) undertook a survey of 18 PA organizations in 2010 and Walker and Harley (2013) conducted a survey in 2012 of 13 PAs gathering data about the extent to which the PA met the PA agreement performance statement. In the 2010 survey no PA performance was rated poorly, two met expectations, seven were rated as exceeding expectations and two were rated outstanding; the remaining five recorded 'no comment'. In the 2012 survey, Walker and Harley (2013, p. 1) report that

> Key Result Areas (KRAs) consistently met the minimum conditions of satisfaction (MCOS) or above range, with some projects consistently achieving 'outstanding' or 'game-breaking' scores. The range of primary KRAs indicates a standard set of areas on which projects are planned and assessed.

Collaboration in alliances is geared towards best-for-project outcomes where there is an expectation of integrity being demonstrated by all parties towards each other and this is reinforced by the *joint* risk sharing arrangements agreed upon in the project alliance agreement (PAA) (Department of Finance and Treasury Victoria (2010, p. 9). Joint risk taking and decision-making based on the PAA means that all alliance parties sink or swim together providing a built-in governance measure that encourages and guides this behaviour, contributing to the creation of an ambience where each party takes responsibility for and is committed to a best-for-project outcome. Their commitment is to the entity and the outcome it has been formed to deliver.

Another salient issue that affects a PA ambience is the nature of risk and uncertainty faced by parties to an alliance. This is different from other relationship-based procurement forms providing a major contributing factor to the creation of a PA ambience. Wood and Duffield (2009, p. XVIII) state that alliances are best used where there is significant project complexity and uncertainty. Walker and Hampson (2003a, p. 84) in their study of the NMA also found this to be so. The main motivation for adopting a PA form for the NMA project was to complete the project by a fixed date and that the PO and POR believed that there was no other form of procurement that could achieve that goal. The uncertainty present in this project related to fast-tracking of design detailing to encourage and deliver innovation in order to accommodate uncertainty about the final configuration of exhibits and other operational issues. The aim was that the opening of the Museum to the public would directly follow the Prime Minister's entourage immediately after the opening ceremony. A critical objective was that people could immediately enjoy the museum and all restaurant and café facilities and that all other operational aspects would be fully functioning from that opening day. In other projects where alliancing is adopted other levels of uncertainty in both definition and refinement of the brief may be undertaken as design and delivery continues. An alliance arrangement ensures that all parties can accommodate uncertainty and temporary (or even more permanent) switches in direction and focus. The alliance arrangement is also better at coping with other ambiguities in the project context without the need to expend vast amounts of management energy in re-negotiating contract terms or conditions or in negotiating compensation for disruption to plans. This agreement to be flexible and adopt a best-for-project mentality dominates the PA ambience and becomes engrained in its working culture.

Our data strongly indicate PAs are a vehicle suited to delivering projects through their superior potential for managing uncertainty. In a previous paper, we identified differences between PAs and other forms of relationship-based procurement (Lloyd-Walker and Walker, 2011). We suggested that central to an effective PA ambience is its support of effective uncertainty management. This implies that AMs emphasize planning and control within an agile, resilient and flexible paradigm as and when the context demands. This has been described as a muddling through (Lindblom,

1959, 1979; Hällgren and Wilson, 2007) decision-making mode; one of being open to emergent strategy as suggested by Andersen (2008). This is one of the reasons why a PA ambience is different from the prevailing culture when using traditional project procurement approaches.

Ambience

What exactly do we mean by ambience and how might its meaning differ from culture or atmosphere? Why should we use the term ambience in relation to PAs?

According to the New Oxford English Dictionary (2001, p. 52) ambience means 'the character and atmosphere of a place'. It is derived from the French word *ambiant* 'surrounding'. Schein (1985, 1990) describes organizational culture in terms of superficial artefacts as physical and other manifestations of the organizational identity's rules, regulations expectations; values or norms and standards that are applied as the way work is done; and assumptions or an underlying paradigm and belief system in why the norms are valid and workable. Culture suggests being a part of the whole and to recognize it one needs to be acquainted with that culture and capable of interpreting it as a culture. Atmosphere suggests the quality of the surroundings, sounds, light, smells, but it relates to the actual external situation that everyone would experience. Ambience, we argue, combines the *internal* feeling of being within a culture with the *external* sense of atmosphere. One can enter a café or bar and sense the ambience through the lighting, sound and setting but one needs to understand the clientele and their culture to really understand the nature and nuances of this ambience. We argue that one can feel the ambience of an organization through the senses as well as through the raw physical manifestations of the workplace conditions. Contextual knowledge is also needed to understand its culture. Thus abstract constructs such as a culture of 'fairness' or 'caring' or 'functioning collaboration' can be attributed as defining features of ambience. As a respondent in a current study of ours who has been intimately involved and led several PAs stated to us

> To me it's a vibe or a synergy or something that you get together once your team get focused and once they can see where they're going and once they've got a best-for-project, and that focus, it can produce some really really outstanding results. If the team is buzzing and it is all heading in one direction you can still get a really good outcome from a business as usual but you don't seem to have that same buzz or vibe, that feeling that everybody's pulling in the one direction.

This illustrates more than culture or atmosphere and suggests an almost tangible ambience.

Fichtner and Freiling (2008, p. 7) use the Italian form of ambience when writing about organizational knowledge and competencies from a resource-based view maintaining that *ambiente* means

> Mental and structural couplings of different assets and resources that are consciously developed or have emerged over time. These couplings undergo permanent processes of utilization and modification that enable the firm to keep pace with external developments affecting firm's competitiveness.

This applies to both tangible and tacit knowledge and experience gained by members of an organization (Freiling *et al.*, 2007) that help them build the couplings that appear as atmosphere and culture. Therefore, we also see ambience as a structural characteristic.

The term ambience thus embraces culture and atmosphere together with mental and sensory perceptions to extend the concept. This infers that the workplace situation prepares and sustains its openness to learning from explicit and tacit sources, tested by experiential authentication so that it forms a learning gestalt. Using ambience in this sense suggests that organizations that demonstrate or possess this ambience are open minded and consciously integrate (through collaboration and exchange of perspectives) with a holistic view of what they are meant to achieve through the project. The sum is greater than its constituent parts.

Table 1 Profile of interviewees

Alliance project managers, ALT members interviewed and other PA members	11 AMs, 6 unit mangers/ALT members and 5 PA team members
Experience in alliancing	1.5–5 years
Unit managers interviewed	3
Number of organizations employing PA	6
Organizations' level of involvement in alliancing	Varied, up to 75% of income generated through alliances. Alliancing had become the dominant procurement method for all participant organizations
Nature of alliances	One building construction PA, nine infrastructure development and maintenance services PAs

The research study approach

This paper focuses upon the alliance ambience but the study it is based upon had a more expansive aim. In this study, 10 AMs and 2 managers to whom AMs directly reported were interviewed. One of the AMs was also a unit manager (a person reports to) and thus able to comment from two perspectives. Each interview was recorded and transcribed. Interviews took on average just over one hour. In addition a further intensive half-day workshop with two unit managers who had been ALT members was undertaken in Melbourne in January 2011 and a further half-day workshop was undertaken in Auckland, New Zealand, with seven PA team members including two AMs and two ALT members. Over 17 hours of recording were gathered and over 250 pages of transcript analysed. Table 1 illustrates the profile of interviewees. We use illustrative quotes in our discussion where nn = interview number; SCn = sub-category derived from content analysis.

We used a grounded theory approach to analyse the data gathered following a process where we 'coded' data, to make sense of the responses to questions asked, using the transcripts and sound files as our reference along with our knowledge of the literature from the literature review. Both researchers coded the data separately, then discussed and agreed upon the codes arrived at using the approach prescribed by Glaser and Strauss (1967). We used NVivo, a sophisticated tool for managing qualitative research data. We were able to access the sound files, transcriptions, other relevant data such as project reports, web-based information and sundry, less-formal correspondence such as emails. NVivo can be used as a form of document copier and tagging facility. The researcher reads transcripts and listens to the interview records and codes for meaning of emerging category themes and sub-category, subthemes. These are then built into more encompassing category entities in a continuous sense-making exercise.

The process is akin to factor analysis used for quantitative data analysis. The number of interviews chosen is based on achieving data saturation when each new interview reveals fewer 'new' categories/themes and with further interviewing achieving significantly diminishing returns for effort involved. Two researchers undertook separate thematic analysis and compared notes to agree and explore disagreed interpretations. This is a well-established approach (Glaser and Strauss, 1967) and requires an open-minded researcher. Sense is made of data through triangulation of other data such as documents, web sites and by presenting findings to respondents and other subject matter experts at workshops inviting critical review. Sound files reveal tone and expression and the researcher-as-interviewer can also read body language and take contextual notes that would be otherwise absent from mere transcripts. This approach can be opinion-based so there is always a danger of bias through 'group think' or taking short cuts in analysing large amounts of data. Opening up results of analysis to external review is a time-consuming and absorbing approach but it has the advantage of deeply immersing researchers into the subject matter content, guarding against groupthink and reducing bias.

The background of researchers is also a factor in the research process. In this case one researcher is an experienced professional with direct PM experience in similar projects and had studied both alliance and more traditional construction projects over a period of several decades. The second researcher is considered a highly expert professional in human resource management (HRM) having a sound knowledge of organizational behaviour and general management and has been involved with this professional area for several decades. In this way we were able to better understand the nuances and jargon that respondents provided and we were able to seek clarification of ambiguous or unexpected comments and to closely engage with respondents at their comfort level. We guarded against the possibility of assumptions and bias dominating threads of discussion by encouraging free range discussion within a broad interview semi-structured protocol. This allowed us to prompt participants where necessary. We asked questions about what it *felt* like to be in the alliance so that we could gain insights from bursts of enthusiastic voice levels, evasion or reticence, or other expressions of emotion.

The data from the study provided us with valuable insights into differences and commonalities expressed by participant PMs of their experience of PAs. We also gained intriguing insights into what facilitates and supports development and retention of participants working within alliances. This enabled us to develop an understanding of the ambience of the alliance through participants' honest and detailed descriptions of their experience and perception of alliances, especially in relation to their comparisons with experiences of other project procurement forms. Access to numerous articles and documents about alliances provided further in-depth information and supported comparisons made.

Discussion of data and results

After carefully coding the data, two main categories emerged to help explain the often difficult-to-describe attributes of a PA that led to the development of its ambience. Each category was then further analysed

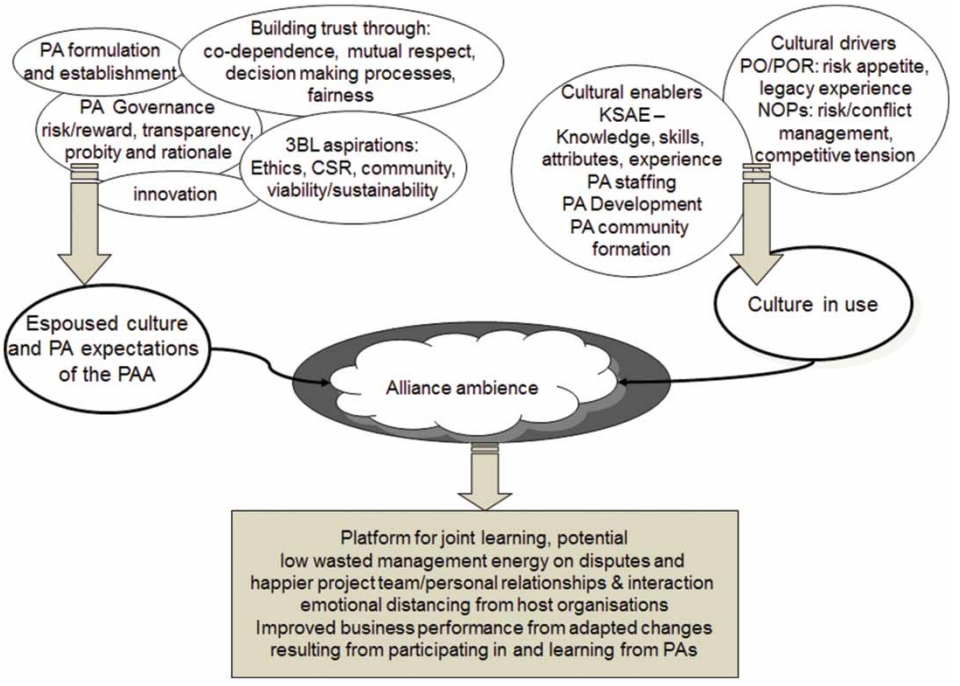

Figure 1 The key to understanding PA ambience

into distinct sub-categories. Figure 1 illustrates a model or representation of the ambience of a PA.

Our coding led us to a visualization, presented in Figure 1, of the mechanisms that provide a key to understanding the alliance ambience. Two important codes relating to culture are illustrated—*Espoused* culture and *Culture in use*. The way that the culture in use responded to the espoused cultural expectations shaped the project ambience and the *feel* of the ambience on any particular PA varied in intensity from participants working on the PA. Each PA exhibited a unique combination of dynamic contributing influences because the ambience and 'feel, smell and taste' of the PA varied with different situational and interpersonal influences.

Espoused culture leading to a PA ambience

The espoused and portrayed PA culture is demonstrated by the way that the PA itself is formulated and established. The way it is constructed, its aims and objectives, the selection process and the way it views innovation and changed practices all speak volumes about a PA's ambience. The PA establishment and formulation process sets the tone of how the PO/POR and NOPs can expect values and assumptions about business practice to be viewed. For example an alliance team selection based upon the best team demonstrated by evidence of achieving excellence in a broad range of key result areas (KRAs) will create a different ambience from that of a team selected on a highly cost-/time-competitive priority process adopting narrowly defined KRAs. The PA values, assumptions and the PAA conditions all create a certain definable atmosphere.

PA governance is represented by rules, organizational structures and expectations that are enshrined within the PAA and these also provide many of the observable cultural artefacts described by Schein (1985, 1990) that shape a culture and provide a tangible dimension to the PA ambience. PAAs are composed of three commercial contractual 'limbs' (Ross, 2003). Limb 1 stipulates how costs will be reimbursed and what direct and management costs are considered valid. Limb 2 stipulates the basis of the fee for service. Limb 3 defines the incentivization philosophy and the arrangements for sharing pain/gain between PA participants based on defined and measurement performance criteria in terms of specific KRAs and key performance indicators (KPIs) and how they will be used for assessing pain/gain in the incentivization part of the PA agreement. A PA also includes a behavioural contract guiding how participants will collaborate and interact. The agreement follows variations to suit the specific alliance. Readers may refer to the draft outlined by Ross (2010) or Commonwealth of Australia Department of Infrastructure and Transport (2011a) for more detail on the form of contract and governance arrangements. These aspects define how probity is conducted and what transparency and accountability measures are prescribed by the PAA. We also observe other governance artefacts of the PA

such as logos, vision statements and even in many cases uniforms in terms of safety equipment such as hard hats, safety vests and other clothing and equipment branded with the PA logo which often uses a symbol to represent the feel of the project's desired outcome such as clean water, an uncluttered transport link or community facility.

Intangible elements of the espoused culture are made evident through a sense of collegiality that is made explicit through the PA's behavioural rules that contractually require adherence of the POR and NOPs. These form a tangible rather than intangible element of creating a PA ambience. They can be felt and guide the way that PA teams work together with a sense of collegiality that is reinforced by the behavioural and performance clauses. These contractual devices stipulate a 'we' rather than 'they' flavour to the conduct of relationships. The hierarchy is reduced through the way that the ALT and the AMT is structured, how it is composed and its terms of reference. Behavioural clauses require the POR, the design team NOPs, project delivery contractor and sub-contractor NOPs to share responsibility and accountability for the project. Their collegial tenor and requirements for unanimous ALT and AMT decision-making in addition to a no-litigation clause (unless total incompetence or criminality can be clearly demonstrated) guide PA parties to an attitude of 'we all sink or swim together'. This combination of governance and contractual obligation triggers a palpable ambience. It has the capacity to fuel high-trust relationships between parties through the contractual requirement for open-book transparency associated with Limb1 arrangements of the PA for cost reimbursement in terms of benevolence and integrity and the intensive PA selection procedure that requires demonstration of professional and technical excellence (Walker and Hampson, 2003b; Department of Treasury and Finance Victoria, 2010; Department of Infrastructure and Transport, 2011b). This enhances the chance of NOPs' demonstrated project delivery ability to enhance ability elements of trust (Meyer and Allen, 1991) including social trust in which a desire to help another party through a sense of professionalism or sense of acting ethically is practiced (Smyth and Edkins, 2007, p. 234).

A key feature of PAs is the expectation of innovation and moving beyond business-as-usual (BAU); this is hard-wired into the PAA. It is made explicit through specifying innovation stretch targets and demonstrated improvement in process and task performance. Any pain/gain is pooled and based on *project* KRAs and KPIs being measured rather than *individual* NOPs' KRA/KPIs being assessed. This forces a situation where it is in every participant's interest to collaborate, shun playing the 'blame game' and share rather than hoard information and knowledge. This broadly shared accountability of PA participants and explicitly specified KRAs and KPIs that have been collaboratively negotiated and refined to contributes to an ambience of collegiality.

Many public sector and infrastructure PAs have a well-defined triple bottom line (3BL) focus. 3BL means that value in terms of cost efficiency, effectiveness and profitability benefit is balanced with a desire for social and environmental benefits (Elkington, 1997). The 3BL focus is now incorporated within social responsibility and sustainability initiatives within organizations; those considerations that are not measurable in bottom-line terms but which will provide benefits to a range of stakeholders over time, including society in general or the environment. Some have advocated a sustainable balanced scorecard approach be taken (Hubbard, 2009) and corporate social responsibility (CSR) is now used to indicate the need for organizations, including PAs, to consider the total impact of their actions on society, going beyond the interests of the firm alone (Dahlsrud, 2008). The AM also is concerned with maintaining the POR and NOP teams with a best-for-project focus. It is the role of the ALT, AMT and AM to facilitate this maintenance of a best-for-project focus ensuring values alignment while resolving any potential stakeholder engagement paradoxes. PAs usually have a best-for-project need that accommodates 3BL, sustainability and CSR demands. An overarching requirement of a PA is the way that each team, POR and NOPs, interpret and re-interpret their common and shared expectations as active stakeholders in the project. The literature suggests that viewing a PA in this light helps us better understand the realities and ambience of a PA.

We now present a series of illustrative quotes from our study to reveal the PA ambience experienced by interviewees and relating these to espoused values.

Quote 1—IV02—SC 1.1, 1.2, 2.1, 2.2—The basic assumption for alliancing is that you're all on the same team and if you can keep everybody on an even keel, then you'll end up with an excellent project …. the agreements [PAs] are reached before you even start doing any work …. that's the important part …. We had an alliance PAA. We were all signatories to it. A lot of the development of that alliance agreement came out of workshops with the contractor and the client [which they] were prepared to develop and agree to. So a lot of the problems that are normally associated with uncertainties within the contract have been thrashed out.

Quote 2—IV-07 SC 1.3—*…* we were up to about 250 innovations so far I think on this project and we've been really pleased the way we've been able to

innovate during the bid stage and we've continued that innovation through the TOC process [Target Outturn Cost, which is the 'budget' equivalent term]. That innovation has continued on after the TOC process. Obviously the more you innovate, the less opportunity later on to innovate because you're sort of getting into the building phase. So some of the size of those innovations may have changed but the whole process continues on and the net effect of them is very promising.

Quote 3—IV-05—SC 1.2, 1.5—We, our XXX collaborative agreement that was set, one of the five key result areas is sustainability so we have a number of KPIs [key performance indicators] under that and that's around everything from water to power to education of people; those sorts of things … we've taken on two youths in the last two years from detention centres and given them employment and one took on an apprenticeship with us so we continue to do that and we've partnered with XXX Water to do that so that's been very good for us; we're doing the same thing around indigenous employment.

Culture in use leading to a PA ambience

The driving logic to embrace collaboration that influences the need for a PAs is often based on the exigency and required response to high complexity or urgency in delivering a project. PAs are generally formed because collaboration and risk sharing is the most sustainable to deal with risk and uncertainty associated with these projects. This urgency or sense of threat can trigger an ambience characterized by high levels of sensitivity to risk accompanied by a fight-or-flight reaction. A good example of this would be a highly constrained time to deliver the entire operating project within an immovable timeframe. Projects with flexible delivery deadlines may be undertaken in a more traditional manner with the project concept being developed, followed by a design phase then subsequently moving to a delivery phase in a linear and perhaps segmented way but allowing thorough market testing through an open tender. However, the NMA study reported upon by Walker and Hampson (2003a, p. 84) found that a PA was the only feasible choice based on a specific and highly constrained delivery time.

The risk appetite for a PO/POR influences the PA decision as well as the form that it may take and the attitudes, assumptions fears and hopes that it imbues in a PO/POR. This may influence the ambience in a negative way with a sense of fear about being vulnerable and exploited or it may trigger a positive ambience in which hope and faith is expressed through the PAA while maintaining a reasonable and understandable level of security through the PA transparency and probity conditions. NOPs respond to risk sharing with the PO/POR and their past experience of how to deal with competitive tensions with their NOP partners from past projects. This will also influence the ambience of the PA. Espoused cultural values alone are not likely to sustain a positive PA ambience. Aspirations cannot be realized unless action follows and is aligned with espoused intentions.

The relational knowledge, skills, attributes and experience (KSAE) of both the PO/POR and NOPs are also factors in shaping the ambience of the PA. The basis and KSAEs required of those being hired or transferred to the PA is critical as these KSAEs need to match and be consistent with the PA-espoused culture. A selection of key people is often focussed on avoiding recruiting people who do not and cannot learn to function within a PA. This results in the PA being staffed by people who engender the required trust of colleagues and to work collaboratively with the necessary people skills required of a PA. The PO/POR must also accept that a PA required considerable resources, time and energy devoted to staff development to enable them to not understand what the ambience of a PA might be but to act and behave in the PA in a manner consistent with its espoused values and assumptions.

PAs are unusual in their ambience in that they exude a sense of community because of the need for high levels of trust, collaboration and both transparency and accountability for performance. This community often extends beyond the internal team stakeholder group to the community served by the project outcome. Infrastructure projects in particular that are delivered by a PA often have explicit 3BL outcomes, KRAs and KPIs and so a challenge to the culture-in-use ambience of a PA is its ability to respect legitimate and valid identified stakeholder expectations and to serve those objectives and needs through considering balanced financial, environmental and social needs.

We now present some more illustrative quotes from our study relating to values-in-use.

Quote 4—IV06—2.2, 2.1—… the big issue with alliances is the idea of the co-location and bringing that all together, and that certainly does make all the difference. We're co-located with the people initiating the projects too, who are just a floor apart, and that's been a huge part of improving that, generating the outcomes that everybody agrees on, we're not dependent on a couple of meetings each month to talk about that, but people are just popping up and down and sorting out issues all the time.

Quote 5—IV06—2.2, 1.3—… within the alliance it [feedback transfer & innovation] happens a few

different ways, it happens through pre-meetings and things like that, where we get people to talk about the ideas they've come up with and what they've learnt from projects. We have a project manager's forum once a month, where we encourage people to bring that kind of information. We have an innovations register, where that gets documented, and once again we've got to get a bit better at how we distribute that information, so less of it falls through cracks.

Quote 6—IV-08 SC 2.1, 2.2—It's your manner, and your approach, and your ability to relate and demonstrate cohesiveness as a team, so that requires an extreme amount of personal commitment.

Quote 7—IV-11 SC3.1, SC3.3—Alliancing has almost become part of our business now. So we don't necessarily have a different approach to it. Five years ago, I think it was a bit different where we did almost quarantine the people that were working on this Alliance and they were solely focused on that, but business is so diverse in terms of the types of projects we do that we have a formula, and as you say, whether it's PPP or whether it's an alliance, or whether it's the D & C [design and construct], we try and stick to that formula as we go through …. Alliances have been the making of this business; it's really opened up possibilities to work more closely with the clients, work more closely with our consulting partners, and just other members of our industry sector. Before alliancing came along, we all stuck to our little silos and didn't interact; it's really opened it up.

Quote 8—IV-09 SC3.2—… I think the people that struggle in going back find the pace of the project, the culture and when I say culture the freedom, the interaction with the number of different disciplines, all that type of thing, [it] is difficult then to return and be very narrow in your work.

PA outcomes and ambience

The PA outcome results in a tangible project deliverable such as a road link, a railway line, a hospital, etc. PM delivery success will be judged using KRA and KPI measures. A PA also results in a behavioural legacy that is dependent on the way that relationships grew, were maintained and the quality of them. Our data from this study revealed some interesting findings. Participants that we interviewed stressed the importance of learning about the value proposition of the PO/POR and about other NOPs. They also were motivated to enhance their learning about technical and relational aspects as well as gaining absorptive capacity to learn more about how to work within a PA. There was also enthusiasm expressed by interviewees about the lessons learned from PAs helping to transform the business models in use in BAU project work. Skills gained in improved perception taking and appreciating issues and challenges faced by other project teams and improved approaches to negotiating disputes or issues around alignment of priorities were seen to be a positive outcome of learning from PAs and from emersion in a PA ambience. We concluded from our analysis that this learning emphasis was more explicit and pressing for participants on a PA than was evident in other forms of project procurement.

Our respondents also stressed the advantages gained from collaboration that allowed them to focus on problem-solving within a more constructive and no-blame setting that exhibited an ambience of travellers on a collective journey of discovery about a range of things many expected but also with unexpected experiences. The reduction of energy expended on resolving disputes and misunderstandings was clearly evident from our interviews.

We now present some illustrative quotes from our study relating to ambience outcomes.

Expected and confirming results about the PA ambience

Observed PA ambience as recounted to us from research respondents provides a sense of the PA being a safe haven with low information and power asymmetries that provide a milieu in which trust and confidence are nurtured and enhanced. This is contrasted with their project experience engaged in other procurement forms. PA decision-making becomes more informed; risk can be better managed by those able and prepared to bear it; and participants feel more inclined to expend energy constructively and positively in making best-for-project decisions than is evident in many alternative procurement forms.

This prevailing ambience imbues confidence and feelings of uniformity in affective commitment to agreed goals, aims and project vision. Meyer and Allen (1991) present a three-level model of commitment with *continuous* being a 'need-to' level in order to maintain a status quo (pay, support, etc.), a *normative* level 'ought-to' level which relies on loyalty and obligation and *affective* commitment representing a 'want-to' level. Therefore the prevailing ambience appears to generate a positive environment that is created by the PAA through the agreement to 'sink or swim' together and through the gainsharing and painsharing provisions. Additionally, the selection process that chooses NOPs and AMs with technical competence,

sound PM competence and very good 'soft' people management skills reinforces these ambience setting conditions. Both NOPs and PO/POR teams expressed an appreciation of and recognized the value of what each party brings to the project in terms of skills, experience and knowledge creating an ambience of an appreciative society. AMs demonstrated that the ambience of a PA was supportive of developing team members' skills and experience.

Innovation is expected and valued in PAs, providing intellectual and professional challenge and stimulation. There is evidence of a focus on continuous improvement, with associated stress and stimulation that generates excitement. Innovation thrives in an environment where it is 'safe' to experiment, openly and honestly evaluate results, and to access both internal and external organizational knowledge and experience repositories. Research into innovation and knowledge management by Maqsood (2006) found that the development of an organizational learning culture was important. This was also discussed in terms of relationship-based procurement systems (Walker and Maqsood, 2008). The ambience within studied alliances indicates safety and a readiness to challenge the status quo within an environment in which it is felt comfortable and expected to do so because innovation was assumed to be part of the alliancing culture.

A focus on performance, through agreed and well-defined KPIs and KRAs, has become a standard approach to be used and this was mentioned throughout the interview transcripts. This demonstrates a high level of client sophistication in developing up-front expectations of what constitutes success and what is valued, as well as what indicates key performance requirements. This removes a lot of uncertainty about the project outcome and values while it leaves precise methods, techniques and approaches as something to be negotiated and worked out in a pragmatic way by parties that are committed to the values expressed by KRAs and monitored through KPIs. While this adds some structure and rigour that may appear to increase bureaucracy it actually increases flexibility and responsiveness because it has a focus on the outcomes and outputs rather than the tasks and things to be done as per specifications and schedules —these details about the 'what to do' plans are not overlooked, rather they are means to an end that can be adjusted to accommodate innovation, improved approaches, etc. This mindset is consistent with a value management culture of managing uncertainty and ambiguity creatively (Thiry, 2002) and creates an ambience of excitement about how challenges can be creatively addressed rather than one where a feeling of doom may prevail that plans 'do not work' or blame will inevitably follow.

A principal feature of alliancing is that there is a focus on managing uncertainty rather than strictly managing risk. Risk management takes place in terms of those best to deal with and cope with risk taking in that responsibility and is concerned with known–knowns and known–unknowns. Uncertainty management relates to ways of dealing with the contextual surprises and unforeseen events or circumstances that impact upon the project and these are usually within the realm of unknown–unknowns. The way to deal with this kind of complexity, according to Snowden and Boone (2007), is to probe the situation, make sense of it and respond accordingly. Complex situations are often 'messy' and unordered but do fall within arrays of interwoven systems. Sensemaking helps in understanding the interconnectedness of interacting systems and enables some order to be made out of apparent lack of order or disorder. Uncertainty can also lead to apparent chaos, especially with recursive situations where gaining certain information leads to an action which requires the situation to be re-evaluated for further action. This probe, sense and respond set of actions requires a great deal of flexibility and negotiation between involved parties and a governance framework that allows open, transparent and clear communication, low asymmetry of information and power and the ability to openly discuss the 'undiscussables'. The evidence presented from the interviews confirmed time and again that openness, collegiality and the joint affective commitment of all parties to a best-for-project (as opposed to individual or NOP organization-specific interest) explains the need for an environment within which the PA ambience we have identified can prevail. This effectively provides an atmosphere where risk management moves to uncertainty management and the possibility of it providing an opportunity for innovation; moving from a negative to positive disposition towards uncertainties as they arise.

Unexpected PA ambience results

Often, unintended consequences arise out of actions. This discussion refers to findings that suggest that the ambience of alliancing may generate features that we did not expect. We also include in this section observations from the data we gathered that we did not anticipate.

One positive feature that we encountered with PAs is that they seem to be projects that provide the opportunity for team members to develop professionally, managerially, and to grow through being challenged by complexity and having to deal with uncertainty in solving everyday problems. Team members also become involved partners in developing innovative ways to deliver project outcomes or in making design

decisions. However, the PA structure can nevertheless inhibit team members' development and position within their base organization. Several respondents expressed problems of transience of team members moving between alliance and base organization roles, or alliance-to-alliance, with minimal contact with their base organization. In this way a problem associated with a PA ambience is that it can create an expatriate mentality such as that reported upon in the literature on expatriate reintegration and identity construction and reconstruction in Sweden (Näsholm, 2011). Söderlund *et al.* (2010, p. 3) use the term *liminality* as being betwixt and between; it is a state denoting a transition from one social status to another. Söderlund *et al.* (2010, p. 3) studied 20 consultants in Sweden to explore their experience of moving in and out of assignments with clients in much the same way that PA team members moved between projects in our study. In the Söderlund *et al.* study, they voice interviewees' anxiety and concerns about timing issues, such as how long they should stay on an assignment; when to move on; how to move on in terms of maintaining interesting and challenging work that develops them. Another concern is the possibility of missing other career development opportunities or roles (Söderlund *et al.*, 2010, p. 3). Baruch and Altman (2002, p. 240) state that 'expatriation poses the intricate task of recruiting, preparing, relocating, placement, integration, rewarding, appraising, promoting, and repeating the process for repatriation thereafter'. PAs can be viewed in a similar way to international organizations attracting talent but the cultural adaptation and creation or re-creation involved occurs intra-organization, rather than in the national, cultural context. We saw little evidence of HRM involvement in these alliances, in identification and selection of PA team staff or in assisting employees to adjust on return to, for instance, head office roles. This was surprising as several of the AMs interviewed stated that their original discipline was HRM. When questioned, responses provided suggested that many of the PO organizations, as well as NOP organizations, operate on an operational rather than strategic level. The paradox is that PAs need their highest level people to deal with complexity, uncertainty, requiring excellent communications skills to create the ambience we have been describing. Keegan and den Hartog (2013) suggest that new models are required to support new ways of working in today's organization and it may be time for project-based organizations to consider how their practices have been adjusted to support their dependence on high-quality professionals undertaking work within non-traditional organizational structures.

A related issue is the 'war for talent', that is, attracting the best people to an alliance. It is possible that POs and PORs are missing an opportunity to present themselves as a 'brand' or to 'provide opportunities' in the same way that some international companies attract expatriate specialists. These companies do this through adopting strategies ranging from being a 'global' firm with a strong and desirable reputation of offering opportunities on a global scale or being an 'emissary', where the company is established internationally 'with a long-term view as to its international positioning; however, it is firmly rooted in a particular "home" culture and this serves as its repository ideology, power base, and expatriate source' (Baruch and Altman, 2002, p. 243). We saw evidence of some AMs consciously attempting to brand the PA as a desirable space to work and having a conducive ambience. We did not expect this competition for talent to be as crucial as content of the transcripts suggests. POs/PORs who have consciously thought about using a PA approach for strategic reasons may need to consider the 'talent' attraction, development and retention issues more fully if they are to create a pool of available AMs with the base technical skills, the excellence in PM skills as well as the higher-level PM skills for stakeholder engagement and dealing with uncertainty and complexity. Using the unique ambience of an alliance entity as an attraction and retention mechanism may be possible.

Conclusions

The purpose of this paper was to reveal the ambience of PAs to respond to the research question *what characterizes the project ambience experienced by participants engaged in Australasian infrastructure PAs*? We built upon previous work that defined differences between a PA and other relationship-based procurement systems and we also built upon several cited recent studies of alliancing, including the study into the attraction, development and retention of AMs in Australia. Our paper is based on a comprehensive survey of AMs yielding 250+ pages of transcript from which we selected eight representative quotes from AMs to support our findings.

We summarize the ambience of a PA as being a work space where complexity and at times chaos, but always high levels of uncertainty, prevails. It is an environment in which trust and transparency values dominate. PA teams seek to cope with uncertainty and indeed view it as an opportunity to trigger refining and improving the project design through innovation and responding to a best-for-project mentality that often encompasses CSR, sustainability and 3BL issues. They do so by developing an open, collegial and appreciative work environment that allows alliance teams to jointly accept responsibility for project outcomes and make decisions based on low information and power

asymmetries. This allows 'undiscussables' to be raised, discussed and considered so that uncertainty and risk management is more positively pursued.

Finally we found, based upon over a decade of Australia PA experience and a decade experience for many of the NOPs interviewed, that PA ambience is valued as encouraging collegiality, trust and commitment.

This study was restricted to Australasia, including only one PA from New Zealand. We acknowledge that we have cited literature of the use of PAs in the UK and elsewhere that the experiences of those we interviewed are confined to Australasia. Further research could test whether our findings can be more generalized. The industry using this procurement approach needs to transition through a maturity process to develop in staff the behaviours required of PAs.

PA participants may experience varying and variable degrees of feelings such as warmth, safety and cosiness. At times they may sense an intense and confronting atmosphere, but the PAA requires that they sink or swim together. This means that those participants must use their high-level communication and empathy skills and respect the ideas and expertise of others in order to capitalize upon diverse opinions. The ambience can appear to participants and observers as being 'tribal' or family like in nature, with co-location and/or shared communication platforms adding to a sense of intimacy. We speculate and suspect that the health and performance of an alliance might be measured by its ambience, but suitable measures are yet to be defined. This is an area ripe for further research.

The principal implications emerging from this study are that the ambience that we describe has a distinctly collaborative and knowledge-sharing flavour requiring team members to behave in a different way from working in the traditional highly competitive and claims-oriented BAU approaches. PAs need to recruit people who can function and thrive in the ambience described in this paper in the manner that HR practitioners describe as 'person–organization culture fit' (De Cooman *et al.*, 2009; Ng and Sarris, 2009). For a PA, that means needing people who can operate within an open, sharing and non-competitive environment. Results also suggest that continual staff development is needed to maintain effective PA team member behaviours but sometimes there is a conflict between the PA and home base organization of those engaged on PAs about who should fund and support that development. This suggests that HRM within these organizations may also need to be reconsidered to allow new ways of operating to support the changes in KSAE and to help shape a positive project ambience.

An important implication from our findings is that PA staff, particularly AMs and others in leadership roles, are a rare breed of talent that often need to un-learn the combative skills developed in the traditional PM environment. While those skills may be seen to be commercially valuable in the rough-and-tumble of traditional construction projects (where being able to extract profits from contract variation claims is often valued) they are counter-productive for a constructive PAs ambience.

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