

The linguistic turn in project conceptualization



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Abstract

Prior and conflicting stakeholder concerns can make projects complex. Listening to, and integrating, this concern into the project is easier said than done. However the pragmatic ethics of the Australian ‘fair-go’ argues long term success requires an attempt be made. This pragmatic philosophy provides a solution by explaining the relationship between community, conceptualization and agreed reasonable action. After introducing pragmatism, this paper uses an Australian based re-organization project to explain why linguistic concepts might be used to conceive projects made complex by conflicting stakeholders. The philosophy is made operational by using idea networking to reveal the concepts underpinning stakeholders’ comments. This method clusters similar statements to enable exposure of these underlying concepts (themes, meta narrative), which are named. It was found that using this concept driven method provides an internally consistent means of conceptualizing projects with conflicting stakeholders’ concerns.

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1. Problem statement

Project conceptualization provides the intellectual coherence for a project in the face of conflicting stakeholders demanding their concerns be accommodated. Doing this requires some means of coordinating the mindset, mental model, knowledge structure, schema, prior conception, perspective, world view, lens, belief structure, map, cognition, or underlying conceptions of stakeholders (Kaplan, 2011; Mason and Mitroff, 1981; Walsh, 1995; Westley and Mintzberg, 1989). Accommodating all stakeholders’ concerns satisfies the pragmatic ethic summarized in the Australian colloquialism of a ‘fair go’. Pragmatic because it works, it provides projects that are sustainable over the long term.

The management cognition literature has long focused on this issue of how to orchestrate what is going on inside stakeholders’ heads when formulating project strategy (Kaplan,

2011; Walsh, 1995). But rather than face the problem of trying to explain what cognition is, it has pragmatically focused on the consequences of stakeholders having different conceptions. However, pragmatism offers a means of operationalizing stakeholders’ prior conceptions. It takes the linguistic turn; interpreting words as the representation of these prior conceptions (Rorty, 1989; Rosenfield, 1988; Toulmin, 1972). Project conceptualization can be a process of analyzing the stakeholders’ conceptions through network mapping their words (Clarke et al., 2011; Jenkins and Johnson, 1997; Novak and Cañas, 2009; Swan, 1997; Wilhelm and Bort, 2012). This paper explains the linguistic turn including how and why it provides a means of conceptualizing projects.

The pragmatists argue that the linguistic turn explains how we think in language. We interpose different linguistic concepts, where these linguistic concepts are not Kant’s ideals but patterns of experience. Words are when these patterns are named, enabling them to be shared and manipulated. These provide a conception of the world (Dewey, 1929; James, 1907, 1911; Murphy and Brown, 2007; Rorty, 1982; Toulmin, 1972; Vygotsky, 1986; Wittgenstein, 1953/2001). Which of these

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pragmatic linguistic concepts we use determines what future actions seem reasonable; they interpret actions and provide meaning. Examples of concepts named in language include innovation, agility or internationalization. Using each to think about a project provides different interpretations of the project and what would be reasonable future action. How this provides a means of accommodating multiple stakeholder concerns needs some explanation.

This paper will therefore explain why and how humans use concepts to think, and how these concepts can be identified from what we say. This includes explaining how the linguistic turn also provides a collective project conceptualization process. This involves clustering stakeholders' statements using network analysis to expose a set of meta linguistic concepts. If done correctly, this process can be creative and provide useful constructs, priorities, criteria or frames for managing a project. This paper then looks for the linguistic concepts in the planning documents, marketing materials, newspaper reports and the concerns of the staff of an internal fittings supplier. The implications of the findings for project conceptualization are discussed.

2. Pragmatic concepts

Gustavsen et al. (1996) studied 400 development organizations. They found that those that explicitly identified the concepts they wanted to drive change outperformed those who used other means of planning. They distinguish concepts from ideas but when referring to conceptual ideas (Millikan, 2000) this distinction may be blurred. Hamel and Prahalad (2005) argue that strategy be formulated as a plural of objectives drafted into a *Statement of Intent* which can act to coordinate and inspire the mindset of stakeholders. We argue that rather than objects, pragmatic concepts be used. This would open a justifiable language-based approach to project conceptualization. Hamel and Prahalad draw on the example provided by Katada (1994) who reports on Komatsu, a global, Japan-based construction equipment corporation. They claim Komatsu improved considerably when they explicitly articulated the use of the concepts of growth, global, groupwise¹ and to surpass-Caterpillar to coordinate their large corporate divisions. Another more generic example might be a logistics project making a statement of intent to be agile, precise, distributed, secure and networked.

Saku and Sillance (2007) explain the role of a project's strategic concepts. They argue concepts are agreed upon before strategic analysis and detailed planning to address that for which one cannot plan or does not want to plan, to represent a proactive mode of strategizing, to provide a means to use and evaluate bottom up ideas, and to provide a symbol of a project's will about the future. They are before, or super-ordinate, to goals, uncertain in achievability, of high

significance, prospective and inspirational. They have the potential to energize all project members through providing a collective purpose but will need long-term maintenance. To this optimistic list could be added that setting strategic concepts seems to align better with neuroscience's explanation of how our mind works, by using reflection (Dewey, 1910; Humphrey, 2006) and learning from social interaction (Dennett, 1989; Rorty, 1989).

The pragmatists argue we learn by using past experiences to reflect on present concerns (Dewey, 1910). Past experiences are memorized as small packages of patterns of activity, each with a pain or pleasure sensation (Rosenfield, 1988). Each pattern is able to be remixed or mutated like visual memories in dreams and words in sentence structure. For example, we experience patterns of activities such as smiles or someone running from which we can generalize a concept which is often named. So a pragmatic concept is an experienced, often named, pattern of activity. These may be memories of something seen, felt, done, or heard. Things are what they do their patterns of activity. Numbers are also patterns (Margolis and Stephen, 2010; Millikan, 2000). These pragmatic concepts are therefore different to Kant's ideal form concepts. When faced with a future concern such as project conceptualization, our past experiences, implicitly or explicitly, are used to reflect on that concern. Innovation and globalization might, for example, be used to reflect on what strategy a project might pursue. Pragmatic concepts are therefore not visions or metaphors (Schon, 1963), although much of the metaphor literature (Morgan, 1986; Oswick et al., 2002) applies to concepts. Using Morgan's (1986) examples, the concepts of mechanization, organisms, brains, prisons and theatres can be used to reflect on a project's intent to be mechanized, organic, brain like and so on. Concepts are also not values, although they are drivers of actions. They are not goals, targets or objectives because they are patterns of activity, not endpoints or drop zones. They are very similar to frames but pragmatic concepts are experienced and remembered patterns of activity, shared through language, not structures in the mind. But like metaphor, much of the frames literature applies to concepts (Kaplan, 2008; Tversky and Kahneman, 1981). Some concepts are more useful than others for providing insight. The concepts of power, evolution and progress, for example, have been very insightful. We seem to use more than one concept at any time. Different sets seem more or less useful in different situations. Miller's (1956) work on human information processing finds that we tend to be using around five. This provides a viable degree of pluralism.

3. Method

As part of the argument for taking the linguistic turn, an empirical investigation is now presented. This undertook a linguistic or concept analysis of a project to reorganize an internal fitting supplier after the global financial crisis had significantly altered its market. This analysis sources their project strategy statements, statements from planning discussions with its staff, web pages from a cross section of other

¹ By groupwise they meant when selling products from one Group (Division) provide the market for products from other Groups. For example if selling tractors then provide the opportunity for other parts of the organization to offer the ongoing maintenance.

suppliers, and industry experts' public statements. It explains how the linguistic turn was undertaken and demonstrates how it provides a method for creative, pragmatic, participatory, planning as well as providing a header project intent document.

The internal fittings supplier OzInteriors published a strategy statement to explain what it wanted to happen in the future. This supplier, which had operated successfully in the fitting supply industry in Australia, is a typical medium-sized manufacturer and supplier to large building projects. Therefore, it is likely to represent the similar practice of a large number of small- to medium-sized suppliers in this industry. It may not represent suppliers of building materials, design services and other project suppliers. Many details have been extracted and altered to maintain confidentiality.

Senior management promoted their strategy statement as:

- defines what we do
- is a reference point for action
- makes clear what we won't do.

The summary stated the main objective as being:

Creating inspirational product solutions for Australia and New Zealand.

This was further explained as:

- Creating = We own and run factories.
- Inspirational = We are in the fashion industry—don't compromise the Brand.
- Product = We sell physical items not a service-only offering.
- Solutions = We are listening to customers and add value by solving their problems.
- Everyone = We will cover all projects—Project builders, DIY, Care, Multi-residential, etc.
- Australian and New Zealand = We will concentrate on our core markets.
- Range = We should have wide offering.

The document then went on to state:

In achieving this objective [OzInterior] will deliver growth and increased shareholder value through the following guiding principles.

Safety and Environment:

- *Striving for a Zero Harm workplace environment.*
- *Creating products with the highest level of safety and environmental performance.*
- *Striving to continuously reduce our impact on the environment.*

Our people make the difference by:

- *Being passionate, determined and striving for excellence.*
- *Communicating and acting in a clear, open, honest and respectful way.*

- *Driving and supporting continuous improvement and innovation.*

Our Business will:

- *Deliver on our service promise to the customer.*
- *Provide a collaborative and rewarding work environment.*
- *Encourage the development and training of our people.*

How this was analyzed is discussed later. To source the linguistic concepts used by the industry as a whole the Internet sites of internal fittings suppliers in Australia were investigated for planning statements. These suppliers' sites were sourced from the Yellow Pages Australia Online, which produced a list of 211 businesses in this industry. A systematic sampling interval of seven was applied to result in 31 organizations.

To source expert opinions about the industry, statements were sourced from the Australian financial press. Over seven months the financial press was scanned by the industry-based author to identify any articles thought relevant to the future of the industry.

Last we sought statements from planning interviews with staff which used a qualitative semi-structured interview design. The 25 interviewed were seen as the enactors of strategy able to either innovatively adapt it into their work practices or else resist its implementation either passively or proactively.

The search for linguistic concepts in these four sources was undertaken by the author who had worked in the industry for a number of years and is therefore considered an embedded practitioner researcher. The use of research practitioners has particular advantages in this type of research including that the choice of topic and methodology is more likely to reflect the immediate concerns and needs of the profession (Amabile et al., 2001). The interpretation required was thought improved by the researcher's particular understanding of context and terminology (Gubrium and Holstein, 2000). There are three epistemologies that can inform how context specific data is collected. One is ethnographic, where some knowledgeable, immersed, motivated person uses their judgment. This is the approach used here. The second is to use a panel of impartial judges. This was not used because we thought low motivation and knowledge of the context would produce poor analysis. The third is to allow those who provided the statements to collectively analyze them. While preferable, this was not possible in this study due to the lack of time available to participants.

The linguistic concepts behind the statements from the four sources were identified by clustering statements deemed to have similar keywords. Miller (1956) found about five to seven concepts reflected how our minds chunk messy information. The clustering method used was network diagramming software with a clustering algorithm. This method was advocated by Christopher Alexander, in his book *A Synthesis Of Form* (1964) where he refers to it as a way of collating, classifying, structuring (Rosenfield, 1988) or making sense of (Weick et al., 2005) stakeholder concerns. Alexander (1964) reasons that if concepts make particular actions seem reasonable, then identifying a set of

related reasoned statements provide a means of abducting the concept, making them seem reasonable. Statements can be networked by linking or pairing those that have common keywords. This will result in clusters of similar statements, each of which can be studied to emerge a theme, meta narrative or linguistic concept that represents the cluster. So, rather than a social network of people who talk to each other, an idea network is drafted with action ideas as the nodes and similarity as the links. Network analysis software can locate nodes in a network diagram so that similar nodes are located close to each other, which usually produces a graph with clusters. Reflection on what each cluster of statements has in common can be used to abduct a concept name for each cluster. For example, a cluster of concern statements about the time it takes to respond to change might be named as drawing on the concept of agility.

Idea networking is a subset of concept mapping (Eden, 1992; Metcalfe, 2007; Novak and Cañas, 2009; Trochim, 1989) which has been used extensively to structure participatory planning. However, idea networking's basis in pragmatism draws on a very different philosophy than that of mental models, frames and Kantian concepts as assumed by traditional concept mapping. Also, idea networking aligns with social networking analysis allowing the use of network analysis metrics like clustering, distance and betweenness centrality to provide analysis of the network. It is a problem conceptualization method that links design and management (Boland and Collopy, 2004; Fiol and Huff, 1992). Networking the ideas or concerns of stakeholders, verbal or written, provides a useful visualization that can be studied and edited by all involved. It still affords the senior management significant discretion in naming the concepts, in coordinating the concepts abducted from different stakeholder groups and in deciding on appropriate action ideas to enact the concepts.

Project conceptualization often starts from some means of dividing the marketplace or global environment into a manageable handful of concepts. A popular set of concepts is political, environmental, social, and technological (PEST). Porter suggests customers, competitors, suppliers, products and processes (Hutzschenreuter and Kleindienst, 2006). Hayden suggests the use of institutions, technologies, environment, beliefs and values (Hayden, 1982). However, idea networking uses the stakeholders' concerns, experiences or conceptions of the marketplace to derive the concepts. This is an inductive, grounded, context sensitive means of engaging these stakeholders' concerns.

Therefore in this study, the industry analysis networked 137 statements drawn from 31 web sites. Those statements considered similar due to topic or keywords were linked or paired. For example, the statement 'Established in 1973, AA International has been designing and manufacturing in Australia, world class, household accessories...' was deemed similar to BB Co's statement of 'being founded in 1979 with the aim of producing household fittings...'. The same process of networking statements was repeated with statements from the financial press, the strategy document and the staff survey. With the statement numbers as nodes, and similarity of keywords as the links, these were input to the network analysis software UCINET6 and its

diagramming function NETDRAW (Borgatti et al., 2002; Hanneman and Riddle, 2005). This software creates a visual network from the linked nodes using an iterative process called spring embedding which locates nodes by putting those with smallest path lengths to one another closest in the graph. This makes the node position non-arbitrary and typically results in clusters of similar statements (nodes).

4. Findings

The web sites provided statements explaining the history, location, range of services, that the organizations were environmentally sensitive, offered good customer service and a wide range of products. This was interpreted as reflecting their future preferred identity, or plans. The newspaper articles typically mentioned the threat of the ongoing global financial crisis, the skills shortage, the need for a low carbon footprint, the high cost of labor in Australia, poor productivity and how the easy accesses to global multimedia was causing customers to have increasingly cosmopolitan tastes. The internal strategy statement clearly states a list of concepts the senior management want staff to use to conceptualize the future and evaluate their future actions. In the staff interviews there was mention of things like the need for improved internal communication, the need for having the right stock in the right location, concerns about safety, corporate image and internal efficiency issues. Again, these are all relevant linguistic concepts that could provide a conceptualization of the future.

4.1. Web site concepts

As a means of identifying a handful of underlying conceptions from the web site statements, they were clustered using network analysis diagramming. This resulted in Fig. 1: Industry Web Site Statements.

The map overall visually suggests five clusters of statements. The nodes in each of these clusters have been given different shapes. The figure as shown in this paper is black and white and two dimensions. NETDRAW enables color and a three-dimension image (MAGE) which makes identifying clusters easier. The clusters were confirmed using the Girvan and Newman (2002) analysis provided in the software. Therefore, the mapping has provided a means of classifying the statements into clusters which did not use predetermined labels, is multidimensional, and which show the size, interdependence and relative position of the classes. The statements contained within each of these five clusters were then listed and a collective name or concept name given to each by the researchers. The name represents a summary label or reference for the collection of statements in each cluster. The concept names therefore provide a shorthand structure or classification system for customers' concerns; what they are thought to be looking for from internal fittings suppliers. Knowing the industry, the names given to the clusters were:

- Contemporary Range: proving an ever expanding range of novel modern styles (left).

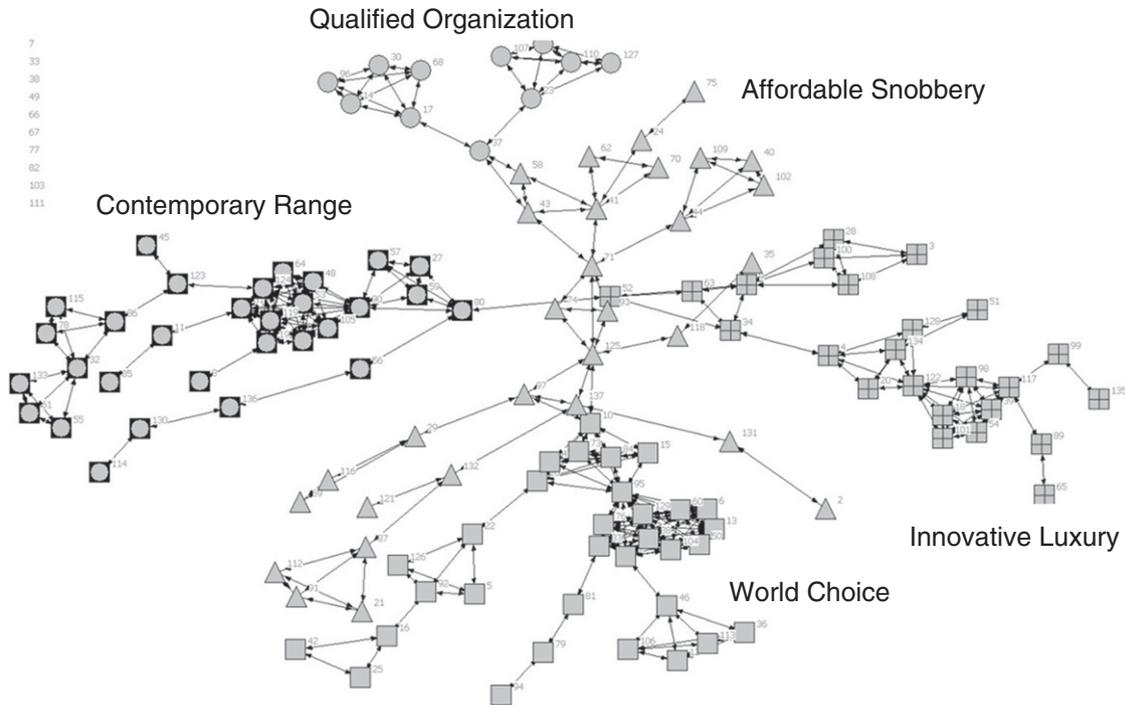


Fig. 1. Industry web site statements.

- Qualified Organization: supplied by a stable, large, skilled professional organization (top).
- Affordable Snobbery: offering low cost alternatives corresponding to very high class products (left lower).
- Innovative Luxury: providing a means of offering environmentally friendly yet quality products (right).
- World Choice: providing a selection of products and styles from around the world to be installed locally (bottom).

So for example, the following is an extract of the sorts of statements that were interpreted as suggesting a strategy of offering a Contemporary Range:

11. With a functional and versatile range available, AX will inspire and compliment both contemporary and classical interiors.
31. We supply a wide range of different X's to fit different needs. The types of products we sell ranges from plain Cold Water ones to the mid-range side control ones; up to the most preferred ones, The Remote Control model.
- 119 Trend Household Centre has a comprehensive range of products; they range from Innovative, Modern, Contemporary to Classic.

Identifying these five concepts of Contemporary Range, Qualified Organization, Affordable Snobbery, Innovative Luxury and World Choice, provide a workable means of thinking about the industry.

4.2. Newspaper concepts

The statements extracted from analysts' news reports, linked and networked produced Fig. 2.

The clusters were named as the concepts:

1. Post Global Financial Crisis (GFC): the market is slowing recovering from the GFC which has a significant impact on the housing and loan sectors.
2. Expertise: the market needed more world quality designers and installers.
3. Sustainability: the market was demanding more consideration of carbon footprint and careful water use.
4. Labor Cost: the struggle between unions and shareholders continued with a risk of high labor costs forcing operations offshore.
5. International Tastes: with TV, films, international travel and high levels of immigration, customer tastes are getting more discerning and cosmopolitan.

For example the Post Global Financial crisis cluster contained statements like 'Housing Slump to Cost State \$4.8bn', the Expertise cluster contained statements like 'Don't be scared to hire the best'; and the International Tastes cluster contained statements like 'Arty Apartments toast of the town'.

The five concepts abducted from the analysts' concerns provide a workable means of thinking about experts concerns for the industry.

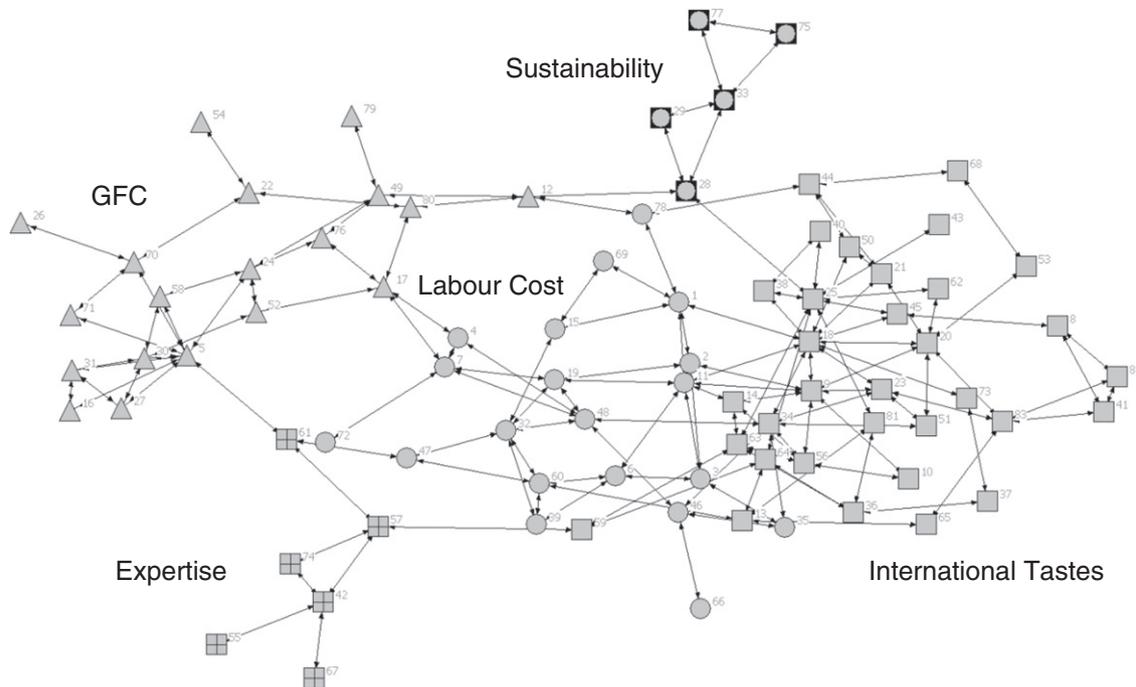


Fig. 2. Newspaper analysts.

4.2.1. Project strategy statement

Rather than concept map, the keywords in the senior managers' visionary statement were used as the linguistic concepts. In this way, 14 concepts were extracted directly from the language used in this document. The disadvantage of this is that no idea network map was available to see the amount of concern about each concept—the statements were not available to further explain the concepts or their relative independence.

4.3. Staff interviews

The statements collected from the staff interviews were linked and input to the network software to produce Fig. 3.

Five clusters were again abducted from the network. Again each cluster was given a name following reflection on the particular collection of statements in each cluster. These were

- Internal Communication: the need to improve communications through all levels including via formal meetings (right).
- Appropriate Range: contemporary and accurate—ensuring the right products at the right locations (bottom centre).
- Safety Consciousness: becoming a formally certified safe organization (bottom left).
- Stability: being and presenting as a large stable structured company (right).
- Process-Driven: able to effectively control and drive efficient processes (top left).

For example, the statements collectively named *Internal Communication* included:

7. 'What do logistics do?'

33. 'There is no communication.'

36. 'We need communication.'

Therefore, the linguistic concepts drafted from the employees say that there is a need to be more communicative, appropriately ranged, safety conscious, stable and process driven. As a set of planning concepts (priorities, principles) useful for evaluating future decisions, they may be too inward looking. This is a common problem with employees' concepts. They do not explain how a project is to compete in the marketplace. But they do represent what is on the minds of those who will be charged with enacting a project.

5. Discussion

This empirical study revealed that the conceptions of the four stakeholder groups could easily be identified and compared. This suggests it is practical to use the linguistic turn to conceptualize projects. It enables a systematic or process driven connection between what is said and project conceptualization. It is possible to easily identify linguistic concepts, to identify them, to audit them, to put them in hierarchies, to compare them and create new ones from hybrids of old ones. They can be used later as explicit criteria to evaluate decisions, and be drafted into a header document. The use of a Statement of Intent is discussed below. The concepts can be used to coordinate and inspire stakeholders by clarifying priorities and being developed from a consultative process.

The marketers, analysts, senior management and staff each had their own set of concepts. There was some but not

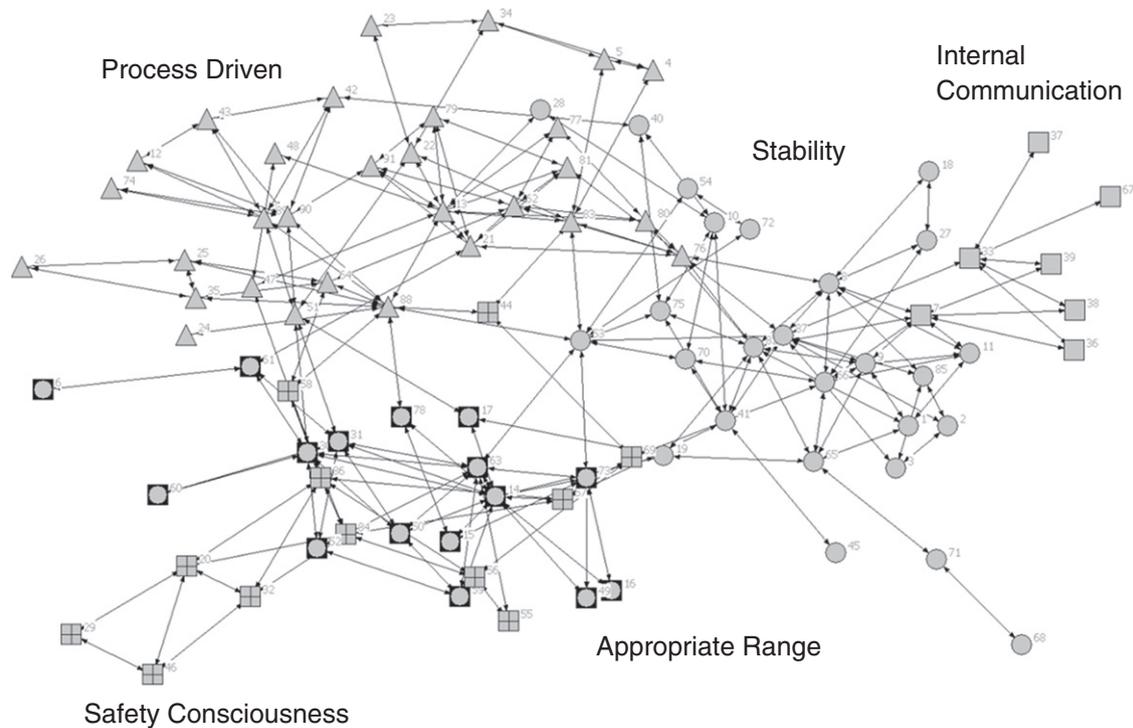


Fig. 3. Employees' concerns.

extensive overlap. This makes explicit issues of coordination, or alignment. Kaplan (2008) discussed this in terms of framing contests. Projects of any size can be expected to be a community, a loose grouping of people each with their own conceptions of what should be done. One role of project conceptualization is to ensure that everyone is coordinated or aligned in their thinking about the future of the project. This may require some form of hierarchy of the differing concepts to be negotiated. However, having identified the concepts used by each group does provide some means of articulating these in negotiations.

For example, the set of concepts in the senior managers' strategy statement can be compared with the concepts in the web pages, the analysts' news reports and the staff survey. In summary, the web sites are saying there needs to be stable, handling affordable, and internationally designed, outcomes. The analysts are saying there needs to be awareness of the post global financial crisis world, the relative cost of labor and international tastes. The staff are saying they want improved process efficiency including regional stock control. It may be assumed that the project conceptualization needs to cover these interrelated concepts. The mention of intending to focus on the Australian and New Zealand market reflects the global crisis concerns. The mention of wide range says it will offer both affordable international products and traditional lines. It further says it will supply both the domestic and commercial markets, something not mentioned by the other sources. The strategy statement concepts included that they will supply products and not become a design only or distribution supplier. This sort of

comparison between the analysts, staff, marketing and senior management is only possible because of the process of identifying a set of concepts from each. Bouncing the concepts off each other raises questions and is expected to lead to innovation solutions.

Once reduced to a manageable set, the concepts can be structured into some form of *Statement of Intent or Purpose* (Hamel and Prahalad, 2005). This uses the concepts to provide the purpose or intent. Examples from the OzInterior case may include intending to be more Product Effective, Responsive and Regional. These concepts provide Drucker's purpose, a statement *why* action is needed. Aligned with the pragmatists' definition of a concept, this *Statement of Intent* could be followed by an *Action Plans Statement*, justifying new technology, incentives, re-organizations, alliances and/or staff to achieve the concepts. For example, it may argue the need for a new 3D computer graphics system to enable overseas design to be more carefully understood. The *Statement of Intent* would therefore also provide the basis of any performance or decision criteria. Continuing the example, 'what have you done to make us more international', or 'how will that decision make us more international?' If sought, detailed goals can be set to project manage the action plans.

The idea networking means of clustering statements into concepts provides a useful graphic for explaining the concepts to stakeholders. Latour (1986) argues that any group knowledge creation exercise requires maps. He refers to these as immutable mobiles—asynchronous forms. Documentation may not be enough and mapping provides a more flexible format. For science these are provided in the forms of charts, 3D

computer models, and X-rays. Once in this asynchronous form, whole communities can contribute partly by imposing critical reasoning to specific parts of the strategy. This allows for improvements to the accuracy or usefulness of knowledge, without losing any overall intent. Process or roadmaps are for communicating plans after they have been formed. The use of linguistic concepts, and idea networking, provides an explicit means of capturing and generalizing from the concerns of stakeholders (Trochim, 1989). The idea network maps provide an immutable mobile for demonstrating to stakeholders that their concerns have been included in conceptualizing a project.

6. Conclusion

This paper has argued for idea networking as part of conceptualizing projects made complex by the conflicting concerns of stakeholders. This was mainly driven by a desire to include conflicting stakeholders concerns prior to conceptualization, to give stakeholders a ‘fair go’ (Fischer, 2012), and to acknowledge Drucker’s original call for a statement of purpose, open to analysis. It is accepted that when operating long-term in a turbulent environment some sense of purpose or identity is required to inform members of a project how to respond to events as they actually occur. Some abstraction is required but not too much, and the form of the abstractions should make use of stakeholders’ existing thoughts and align with linguistic philosophy (Vygotsky, 1986).

This paper introduced a pragmatic interpretation of making the linguistic turn in project conceptualization, explaining why and how it might be operationalized by focusing on sets of linguistic concepts (frames, priorities, mindset, mental models). We explained the underlying philosophy and presented a study of an internal fitting supplier to justify the approach. Our analysis of statements easily revealed the use of numerous conflicting linguistic concepts as predicted by the pragmatic and cognitive literature (Kaplan, 2008). A pragmatic linguistic concept is a named, experienced, pattern of activity, used to reflect on, or conceptualize, events as they occur (Rorty, 1982). It does therefore seem possible to identify, manage and prioritize the concepts that people are using or might use to think about their futures. Idea networking provides a convenient means of extracting, collating and communicating pragmatic linguistic concepts from the language, words or statements of the narrative around a project. Once the linguistic turn is made, using concepts to conceptualize projects provides structure, it sense makes.

It is predicted that using concepts, as priorities, for designing projects, provided these are fully integrated through all a projects’ activities, including its incentive schemes, organizational structure and technology investments, will provide a coherent means of complex project conceptualization. With this approach, project conceptualization becomes a process of selecting the right concepts with which stakeholders might interpret their role in a project. Moreover as an example of taking the linguistic turn to think about project management, this paper suggests a new and fair-go research agenda. For example, do those projects that use a concept drive approach

outperform other approaches? Where else might a linguistic analysis of narrative or dialogue assist project managers?

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