"Quid pro quo: Reflections on the value of problem structuring workshops"

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Abstract

Attracting clients who are willing to invest resources in the use of a problem structuring method is difficult. There are many reasons for this, not least that the benefits of a problem structuring intervention are vague and evidence of benefits are often anecdotal, for example claims of constructing a deeper understanding of the problem or building the commitment of a group to implementing an outcome. This paper contributes to the evaluation of problem structuring methods by reflecting on the *quid pro quo* that a client and problem structuring modeller can enjoy from collaboration. The paper reflects on 21 cases where Journey Making (a problem structuring method) was used with 16 organisations to help managers agree a suite of actions to tackle a complex strategic issue. The reflections are clustered around those benefits that pertain to: PSMs in general; PSMs which use computer supported workshops; the Journey Making methodology.

Keywords: problem structuring methods; evaluation; client/consultant relationship; Journey Making.

INTRODUCTION

Problem structuring methods (PSMs) originated in the OR community to support decision makers in understanding the mass of complexity that underpins the problems they face.

The reporting of problem structuring methods (PSMs) has largely concentrated on the explanation, development, application and refinement of the PSMs {Checkland, 1990 #1131;Eden, 1984 #793;Eden, 1988 #11;Friend, 1987 #754;Phillips, 1993 #38} and, more recently, on the use of PSMs in multi-methodology projects {Mingers, 1997 #1129;Casu, 2002 #1116; Pidd, 1996#1108}. There have also been reports of experiences of using PSM workshops to build insight on a particular topic, for example: {White, 2000 #855} who researched community OR; {Ackermann, 1997 #1} who researched delay and disruption; {Edwards, 2003 #1106} who researched knowledge management; and chapters in {Rosenhead, 2001 #1123} eg {Hickling, 2001 #875;Checkland, 2001 #1124;Ormerod, 2001 #1130}.

In these papers, and others {Eden, 1995 #4;Finlay, 1998 #561;Connnel, 2002 #1128}, authors often remark on the clients' and/or participants' experience of the PSM workshop. However, there has been little in the way of a review of the practical strengths of problem structuring workshops as a consulting and/or research tool. This has left the emerging generation of PSM facilitators with little guidance on what might be the key selling features of PSMs. This paper explores two issues to address this gap: [1] the practical benefits offered to a client organization when working in a PSM group workshop; [2] the benefits offered to a researcher in terms of the data gathered using a PSM. Thus this paper argues that a PSM intervention can offer *quid pro quo* between a client organization and a researcher. By appreciating the nature of these *quid pro quo* an emerging researcher can more effectively promote the benefits of PSMs to a client while negotiating access that enables their collection of useful research data. This paper also may interest the emerging generation of consultants who need to understand the value of PSMs in preparation for selling PSM interventions.

A research project (comprising 21 PSM interventions with 16 organizations) is reflectively analysed to understand the range of constructs that are important to participants and clients of a PSM intervention. (We use the term 'client' to refer to any individual who has authority over the workshop eg the champion, the funder. Participants are those who attend the workshop and participate in the discussions.) The PSM used was Journey Making {Eden, 1998 #88}. First we introduce PSMs. Second we provide a background to a study where we used Journey Making as a research tool. Then we evaluate computer-supported workshops against practical performance crite ria and examine the nature of the *quid pro quo* that attracts organizations to participate in this type of research project. We then offer conclusions on the evaluation of PSM interventions.

PROBLEM STRUCTURING METHODS

PSMs are normally applied to "wicked" {Rittel, 1973 #878}, "messy" {Ackoff, 1979 #1061} problems. These are ill-structured problems where the nature of the problem might not even be agreed across interested parties, never-mind any agreement existing on potential solutions. Thus the development of a solution needs to begin with structuring the different perceptions of what is the problem. This can lead to the analyses of what are the components of the problem and perhaps its causes and consequences, as well as other analyses informed by the particular methodology.

Examples of PSMs include: Soft Systems Methodology {Checkland, 1990 #962}; Strategic Choice {Friend, 1987 #754}; Journey Making {Eden, 1998 #88}; Dialog Mapping {Conklin,

2003 #1057}). These methods all rely on building a shared view of a problem through some form of explicit modelling. The process of a group building the model encourages the sharing of diverse opinions, enabling the emergent solution to be in alignment with those shared opinions. Thus, it is aimed for any outcome to be feasible for implementation because the key people in the problem have informed the solution.

BACKGROUND TO THIS PAPER

As a team of three researchers we conducted a study between September 2001 and June 2003 which explored how a collection of managers in UK organizations thought they should improve their organization's knowledge management practices. We conducted 21 problem structuring group workshops (20 of which lasted an entire day, the other was half a day) with 16 organizations. A total of 176 participants worked in these workshops, average 8 (range 5-12). Typically most of these participants were "management", ranging from 'Board of Directors' level down through senior and middle level managers, although some workshops included operational level staff. The organizations were self-selecting in that they responded to an invitation to participate in this research.

A Journey Making approach

The PSM used was the group mapping component of Journey Making {Eden, 1988 #11;Shaw, 2003 #575;Shaw, 2003 #882}. Journey Making encourages JOint Understanding among the group members through their individual and collective Reflection on important issues, enabling more informed NEgotiation on defining the problem and agreeing actions to be included in the strategY which emerges.

Each workshop used Group Explorer computer software to let participants map their knowledge of the issues. To explain, knowledge was shared in brainstorming-type sessions (called "gatherings") by participants typing views/ideas/thoughts/opinions into a laptop computer. The facilitator asked that each view would be about 4-10 words in length to make them descriptive, rather than cryptic or overly wordy. The laptops were network-linked and participants were able to share their views anonymously. When participants had typed in their views the facilitator electronically moved the views into loose content-related clusters {Shaw, 2003 #882;Shaw, 2003 #881}. Those clusters were then projected onto a public screen for all the participants to see and be stimulated by. Participants were encouraged to read other peoples' views and share their own opinion of them. Group discussion followed during which more views were added and participants began to identify relationships between views in order to structure them.

Structuring aimed to help participants to begin to make sense of the mass of issues represented by the views. Sometimes structuring involved re-positioning views into some meaningful clusters and/or coding views using a meaningful framework (eg colour-coding views into those requiring more/less/same effort). Often central to this structuring process was the identification of causal relationships between views {Eden, 1998 #657} – either by participants, or by the facilitator interpreting group discussion and validating relationships with the group. Where a causal relationship existed between views (as identified by either participants or the facilitator) a causal link was inserted in the model (eg 'train people to conduct exit interviews' allowed you to 'conduct exit interviews' in order to 'capture the reasons why people resign'). Where the facilitator identified the causal relationship, they would ask for participant validation of the resulting link to ensure its accuracy. This causal structuring process built a causal map (see Eden and Ackermann (1998b) for examples).

The resulting map would contain detail on appropriate actions ('conduct exit interviews), to achieve goals ('capture the reasons why people resign') and enablers of actions ('train people to conduct exit interviews'). One deliverable for these workshops (and often of Journey Making workshops in general) was the initial commitment of participants to implement the resulting action plan that would address the organisational problem/issue. Facilitators aimed for this commitment partly to be built through the participants investing their energies in negotiating an action plan which they want to implement before they have to renegotiate and possibly become worse off {Eden, 2001 #1060}. Hence, Journey Making emphasises the delivery of an outcome for a client. Potential client organizations may be more receptive to this than to a purely research-oriented intervention.

The research project

In this project our research aimed to "investigate how UK managers understand knowledge management" and "explore how they would improve knowledge management in their organizations". From the perspective of the organization, the workshop focussed on developing a feasible action plan for improving their knowledge management. The main *quid pro quo* for the researchers was our access to the research data detailed in Table 1. Through the process of collecting this research data a range of *quid pro quo* between researchers ad clients emerged. It is this experience of using a Journey Making process which inspires and informs this paper.

Table 1 : The research data captured.

Data collected during the …	**Description of data…**
Pre-workshop discussion with client organisation	Insight on the background of knowledge management in the organisation and contextual workshop factors eg participants, location, culture etc.
Design and agreement of workshop agenda (with the client and then the participants)	Identified the range of concerns within the client organisation, and validated the importance of potential issues.
The workshop	Collected data on: the stakeholders' multiple perceptions of the problem, the rationale for these, the persuasive arguments for a dominant view, and negotiated intentions for taking action. Data was in the form of group built and validated maps, researcher observations, facilitator insights, participant-completed exit questionnaires (on process and outcome). Also the directions of the re-modelling of the workshop agenda provided insight to what was/was not important, and why.
Client de-brief	Insight to the client's impression of the topics discussed, concerns for the future, motivation for next steps and reaction to the workshop process. Initial client validation of the data/process/direction.
Client/participant feedback on final report	Further validation of the outcomes from the workshop.
Client feedback on project report	Further validation of the outcomes from the research project.

EVALUATING WORKSHOPS AGAINST PRACTICAL PERFORMANCE CRITERIA

Using data captured during 21 workshops we now turn to reflect on the PSM workshop against a range of practical performance criteria. These criteria include evaluating the often overlapping topics of: (1) problem structuring workshops for collecting rich insight/data; (2) the benefits that computer technology offers to the process of problem structuring (rather than manual workshops which rely on flipchart paper and pens); (3) the characteristics particular to the Journey Making methodology. In the following discussions direct quotations are from exit questionnaires, unless otherwise specified.

Attractions of PSM workshops for capturing rich data

The attractions/benefits discussed below are not unique to Journey Making, but are common across all PSMs. However, due to our data being collected in computer-supported Journey Making workshops, this focus is sometimes evident in our discussion.

A formal modelling methodology

PSMs have grown out of decades of research (see Checkland's 30 year retrospective and early works by {Eden, 1985 #15}{Friend, 1987 #754}). They provide a 'formal' modelling process that is underpinned by experience of research and development with a range of organisations (large and small, public and private).

For the client, an attraction of a problem structuring approach is that a rigorously considered methodology underpins the intervention. This is reinforced by the longevity of research and development which can be shown, building confidence in the credibility of the method and (by association) the consultant/researcher (and vice versa). If they do not have their own anecdotes then consultants/researchers can quote anecdotes published by others who have used the methodology to show its suitability in a client's particular context.

For the researchers, if the methodology is deployed consistently across/within organizations then the 'formal' process may provide confidence that the differences in the data result from the different groups (and not from an inconsistent modelling approach). Furthermore, having a philosophy (and body of literature) supporting the design of the workshop builds confidence in the generalisation of results as the process is informed by that methodology.

Inviting stakeholders to participate

When organising a workshop a facilitator will discuss at length with the client the selection of participants from a breadth of stakeholder groups {Grinyer, 2000 #783;Pidd, 1996 #1108;Ackermann, 2001 #1047;Phillips, 1993 #38}. The number of participants in these workshops is important: too many participants and the facilitator's job becomes much harder, as group dynamics are more complex to manage and the proliferation of data makes effective validation problematic (Phillips and Phillips, 1993). Too few participants and the range of views represented could be narrow. Also, the selection of stakeholders is crucial to ensure the widest coverage of the right expertise and the representation of key groups. Client selection could result in a group that excludes sceptics/opponents for fear of them being a negative energy, and so they might rely more on inviting allies with similar perspectives. This would result in a non-representative group who could generate actions that were infeasible to the sceptics/barriers, thus jeopardising implementation.

In most PSM interventions clients have ultimate control over the selection and invitation of stakeholders. Clients can be advised that (a) the group should include a sufficient spread of stakeholders with awareness of, and responsibility for, the issue (including those who might be barriers to implementation), and (b) that at least one person should be able to secure the commitment of resources towards achieving whatever outcomes and actions are agreed – this may be a Director.

Both of these benefit the client organization: Point (a) ensures the necessary expertise, whether executive, managerial and/or operational level staff, is present for the group to learn about different experiences/perceptions of the problem. This 'breadth' of learning allows for

the generation of actions which are appropriate across a range of stakeholder groups {Grinyer, 2000 #783}. Also, by inviting people who might be barriers to implementation we aim to address their scepticism to prevent them from being a barrier (or even secure their commitment to implementation) {Eden, 1998 #88}. As one participant commented, "considering a range of departments were represented, it was interesting that the outcome was 'right' for all. Prior to the workshop I would not have thought this would be so". Also, the client benefits from the participants developing these actions, not merely being the data source for external consultants who will then tell them what they should do. Being involved in the process, and exerting energy and emotion in developing the actions, might encourage stakeholders to more readily facilitate the implementation of the actions {Phillips, 1993 #38}{Eden, 1992 #16;Mezias, 2001 #1059}, discussed more later.

Point (b) gives the group confidence that at least one person knows how the Board might react, that is the group are generating implementable actions that might have the support of the Board of Directors who have ultimate authority to sanction actions. Thus, for the client, the selection will ensure that the right actions are developed by the best expertise with the commitment of the most crucial people.

Points (a) and (b) also benefit the researchers. Point (a) ensures that the research data is informed by multiple perspectives of a range of stakeholders, suggesting it may be informed by the broadest and deepest knowledge available. Point (b) ensures that the data focuses on the priorities facing organizations – offering an additional layer of external validity of research questions.

Getting together to agree achievable actions

The workshops provide opportunity for the participants to get together, to collectively learn from each others' experiences/perceptions, and discuss the way forward as a group. This is supported by the participants who noted on exit questionnaires that, "Whilst most actions could be identified independently of the session, the session gave the framework that made it easy for people to talk about the actions" and "The majority of the benefits of the session was seeing how [views] developed over the course of the day. Just seeing the final output may not provide sufficient insight". Getting everyone in the same room to discuss, debate, negotiate and agree a way forward which is a core benefit of the workshop process. The sharing of views, and the voting on actions needs to be done collectively. Participants noted "We have an action plan which is achievable and realistic", "[the] group left with achievable objectives"

and “The workshop enabled the group to agree on an action plan that is achievable and will yield benefits in the short term.”

However, a participant noted “Don't know whether we have enough time to achieve the tasks set. Think they are too ambitious.” In the excitement of collectively structuring the problem, when agreeing commitment to act care must be taken to ensure participants do not over-commit time, energy or resources. We found this particularly important in volunteer organisations where the will to act is very strong, but multiple demands on resources make selecting between actions essential.

For the client, getting everyone together allows the participants to collectively agree the actions. They can then voice disagreement to unachievable and/or infeasible actions. The resulting action plan should satisfy the participants as being achievable as well as satisfying the requirements of the organization.

For the researchers, the actions provide insight to what the participants want to implement and think they can implement. The data therefore includes: original, conflicting views on the topic; the arguments supporting negotiation to agreement; the negotiated agreement. This data is best captured through video-taping workshops as real-time research notes are unlikely to capture the full richness of the data.

A participant-validated model

At the core of a problem structuring intervention is model building – the precise nature of the model(s) depending on the methodology used.

For the client, this model is a validated artefact of progress {Sutton, 1996 #217}. The group continuously validate the model during the group discussion as they need an accurate model to inform decision-making activities. It is therefore a validated artefact that might have recorded (depending on the methodology): argument; breadth of consideration; rationale for actions; agreement reached; the distribution of opinion through the votes cast for an option. The modelling approach also ensures that the outcomes are rigorously thought-through, and can be demonstrated to others as being such. Unlike some other methods of qualitative data collection, the validation of the model is done in the workshop by the participants and so there is no need for extensive post-workshop validation, perhaps by revisiting the participants {Anson, 1996 #653}. As one participant noted on their exit questionnaire, “The computer-supported model allows the participant to input the issues, as they want, that is without facilitator interpretation.” The model(s) might even be distributed around the organization

with ease (email or printouts), and can inform progress on actions, however we should be mindful of the participant's comment above that "Just seeing the final output may not provide sufficient insight".

For researchers, this model is a validated record of views that retains the original wording of the participants, or the negotiated re-wording of the group. Most of the argument, rationale, reasoning and agreement should be captured in the model, and (if used) the computer log from each laptop. During the discussion the participants and the facilitator can add notes to the model to record additional issues. From the research perspective, the discussion builds the richness of the model through expansion, clarification and validation of issues. Essentially the model contains original and elaborated data that has been validated by the experts, and through validation, they have captured the logical arguments supporting validation.

Two-way feedback

In problem structuring group workshops the clients, because of the public nature of discussion, researchers are not in an ethical dilemma of feeding back information to the client about anything which the participants have shared in confidence or 'off-the-record', such as they might during interview. Even hurried conferences (between any of the: facilitators, participants, clients) in gaps between the sessions can be raised sensitively with the group for everyone to feed into.

The benefit for the client (if they attend the workshop) is that they are getting real-time feedback, and they can make that active and dynamic feedback by exploring issues as they arise. The danger is that participants feel less free to share their real view {Camacho, 1995 #222}, but anonymity when contributing views helps overcome this {Cooper, 1998 #1032}. As we will discuss later, anonymity is heightened when using computer technology, but the importance of anonymity for honest feedback to the client is illustrated through the comments: "being anonymous on the computer really allowed delegates to express their feelings" and "[the computers] allows participants to be more honest and open". Anonymity is discussed more later.

The final report which summarizes the workshop and identifies next steps for the organization is also a source of feedback to the client. For one client this was soon "heavily tea-stained" – a phrase used to signify its relevance and importance. When part of a research study this workshop report can be supplemented with another report which compares the organisations. For many of our clients this second report was a main attraction of participating in this research project.

For researchers, as well as amassing data on a subject (in our case knowledge management) they can gather participant feedback on how to improve the facilitation and workshop process. This feedback enables evaluation of the effectiveness of the workshop approach, and provides direction for where research effort should be made to improve the process.

Two-way feedback is a strength as clients receive immediate feedback from participants and detailed feedback from the reports, while researchers get participant feedback on the focal issues and on the process.

The attraction of computer-supported problem structuring

To initially capture views to feed into the PSMs model facilitators can use some form of gathering sessions, as well as group discussion or perhaps some form of idea collection prior to the workshop. When gatherings are used they can be verbal, where people 'shout out' their views. There are many problems with verbal brainstorming, not least: [1] being unable to share views because others are talking (ie production blocking {Diehl, 1991 #82}) [2] a fear of views being negatively evaluated {Camacho, 1995 #222}; [3] early convergence on a solution without exploring all of the solution space (ie groupthink {Janis, 1982 #330}). Thus 'manual' gatherings are often used. This involves participants writing their views down prior to sharing them, sometimes asking them to write these onto post-it notes'™ and putting these on flip-chart paper for critical reflection by the group. Manual gatherings help the individuals/group work towards overcoming some of the problems with verbal gatherings, that is [1] offering the simultaneous sharing of knowledge; [2] offering a limited level of anonymity to lessen inhibitions of sharing views; [3] forcing the solution space to be broadly defined from multiple perspectives prior to convergence.

Unlike SSM, Strategic Choice and Dialog Mapping, Journey Making offers participants the facility of full electronic data entry directly into the model, that is computer-supported gatherings. Other non-PSM approaches also use computer-support, but more for electronic brainstorming for example GroupSystems. This section reflects on the *quid pro quo* offered by technology that are not supported by either verbal or manual brainstorming/gathering.

Anonymity

Through the laptops each participant (or pair if logistics do not allow individual laptops) can have anonymity on the views they share (in that views were not attributed to a participant pair). Anonymity allows freer sharing of views, especially on sensitive issues, as the following anecdote reveals.

In one workshop, when considering why two departments did not co-operate with each other, one pair typed in that the reason was "John [Director of Department 1] and Jane [Director of Department 2] don't get on". Jane was sitting in the workshop. Talking to the client afterwards (who was neither Jane nor John) it seems that this issue had not before been articulated so clearly in public, although privately it had been the source of much gossip and frustration. At a later workshop Jane publicly commented that she "left the last workshop with a totally different view of the world" although she did not explicitly cite the reason why.

From questionnaire feedback from participants: "the degree of anonymity afforded by the [computer] approach can encourage greater openness, and ease of putting forward [views]"; "anonymous input, reduced 'fear factor' of contributing"; and "More fun, less intimidating for those with less to contribute or who may have wished to express opinions they were uncomfortable about articulating in a public forum."

No manual problem structuring approach we have worked with can provide this level of anonymity during groupwork. Certainly hand-writing can be recognised when manual brainstorming, and previous research has found that participants can be concerned enough that theirs will be recognised not to share controversial views {Shaw, 2001 #919}.

Participant anonymity can benefit the client organization and the researchers by encouraging controversial views to be more readily shared, thus ensuring that the outcome/research data can be informed by those views.

Displaying views electronically

The electronic display of views offers significant process gains over 'post-it notes'™ on a wall, or writing directly onto flip-chart paper. For example, electronically views can be moved, edited, copied, elaborated and changed font, *en masse*, instantly, cleanly and seamlessly. There is none of the messy scribbling inevitable with manual techniques. Multiple screens can display different combinations of different views, in a way manual techniques could never replicate.

On comparing manual gatherings with computer gatherings, participants noted that computer brainstorming was: "Far, far better. So impressive and powerful, visually. Enables <u>all</u> concepts to be captured."; "Fantastically easy to move things about, saves rework!"; "Much more flexible than could be with flipchart/post it"; "(1) Easier to see the [views]. (2) Easier to group and link the [views]. (3) Helps to generate more [views], [than] say a "post-it"

exercise. (4) Much easier to produce a record of the workshop."; "Results were immediate not, a whole series of flip charts to then be made into another format"; "Much quicker to achieve results. Hand written take too long and loses momentum. Results much clearer."; "Excellent for seeing instant results, ability to link ideas & colour code."; "The speed at which [views] could be consolidated/manipulated enabled the pace at which issues were addressed to be accelerated. It also eliminates the need for re-keying charts post event."

For the participants/client organization an electronic display is beneficial as it enables rapid progress to be made. As one participant noted, "you achieved exceptional results and feedback to a difficult process in a quarter of the time". Also the facilitator can rapidly clean-up a screen display to enable the participants to cognitively process the material more effectively {Grise, 1999 #411}. It also enables coverage of more issues (or deeper coverage of a narrower range of issues) due to rapid progress {Shaw, 2003 #881}. Electronic voting is also often supported, this sometimes being smoother to conduct than manual methods, and the presentation of results is often more versatile.

For the researchers, in addition to the effects of the above points on the data, an electronic display makes the identification of data straightforward and makes it easier to manipulate data for analysis. A claimed benefit is that it also makes it easier to retain, copy and transmit the data after the workshop {Eden, 1998 #88}, but we have not found this to be the case as often people unfamiliar with how the maps are structured struggle to interpret them

Equality and dominance

Normally in a workshop the aim is that (as far as possible) views are treated equally, unless the client or senior member clearly wants to pull rank. Anonymity can help here by each view being evaluated on its own merit, not on the status of its contributor. Also the facilitator can press the group to justify them retaining or discarding an issue with rational argument rather than personal authority {Eden, 1995 #4}.

Equality and anonymity can be abused however as individuals might strategically attempt to raise the importance of an issue by sharing a mass of entries and raise its profile on the screen. Group Explorer can help here by allowing the facilitator to identify who shared each view, and how many participants shared views on a particular issue. Hence the facilitator can declare to the group that a cluster has been shared by a single person (without identifying the person).

Also, we have often had senior figures admit to the group that they have made a contribution, 'just to see what other people thought about the idea'. Effectively they planted an idea without personally supporting it to understand what was people's genuine reaction. In these cases they did not want to legitimize the idea or influence others' reaction to it. Associated with equality is the dominance of individuals. Dominant individuals can attempt to raise the profile of their views to ensure their views are adequately accounted for in the outcome, perhaps at the expense of other peoples' views {Eden, 1992 #2}. The facilitator's role is crucial here in maintaining equality of participants {Schwarz, 2002 #1069}. Also crucial is the model building process as the dominant individual can be appeased by demonstrating to them that their views have been fully and accurately captured in the model and will inform the outcome {Eden, 1998 #88}. However, the initial electronic gathering is crucial to allow both quiet and dominant individuals to share and record their views ensuring that they will be considered in due course during the group discussion/validation stage of the session. On this part of the process, one participant commented that "[the process] definitely allows participants to formulate their own [views] without any outside influence." Another participant noted that "[it] allowed those less confident to make anonymous contributions if they wished." reinforcing the importance of providing quieter group members with adequate opportunity to share their views in ways other than verbally.

Sharing views through computers enables each participant to at least record their views equally and without influence, thereby enabling the facilitator to direct group discussion to each view (largely) with equality of time, energy and impartiality. Thus the completeness of outcome is enhanced (benefiting the client organization) as well as the completeness of research data (benefiting the researchers).

The attraction of a Journey Making methodology

Particular features of the Journey Making methodology bring *quid pro quo*. Some of these features are shared with other PSMs, but are core to a Journey Making approach.

Pairing participants

In workshops, people can be allocated to pairs to work on particular tasks. In Journey Making workshops often participants are paired on the laptops (Shaw, 2003a), the pairings being changed for each session to enable different people to work together. Although each person in the pair can enter their own views, there is the additional creativity offered from constantly having a new person to bounce ideas off (Taylor et al, 1958; Nagasundaram and Bostrom, 1995), and it encourages negotiation to start immediately between the pair as they debate the wording of their views (Shaw et al, 2003a). Pairing also assists in building confidence by people working together. Furthermore, pairing has important consequences

for team development as it enables personal relationships to be built among the group members. For example, one participant commented on their exit questionnaire that,

> 'At one point during the day I was [paired with] someone that I had recently had a 'professional run-in' with. Much to my surprise this seating arrangement proved an advantage rather than a problem. I feel that by spending [part of] an afternoon with this individual, I had the opportunity to show that I do know my stuff! I think that the two of us left the session with a
> 'better/different' opinion of each other. I would strongly recommend that this tactic of sitting people with 'issues' next to each other at future sessions.'

Through having a physical shared focus (in our case a laptop computer) pairs are encouraged to work together. Thus they, the client organization and the outcome benefit from the creativity, early negotiation and improved interpersonal relations which come from such close working.

Clustering views

During the gatherings the facilitator clusters the shared views by moving them into content related clusters. These are then displayed on the public screen to stimulate the participants' wider consideration before group discussion {Shaw, 2003 #881}.

There is a note of caution here concerning a rational mindset whereby participants and the facilitator may automatically cluster views functionally (for example, production, marketing, finance) rather than across processes – this risk is further heightened by time pressure and the need to make progress through the range of workshop issues. However, one client appreciated the facilitator's impartial clustering of the material rather, they said, than the participants falling into assuming the same old clusters exist. Another participant noted on their questionnaire that, "The initial idea grouping provided an independent foundation around which the participants could debate the content and links rather than debate how the grouping should work." Another noted that "The clustering & discussions were very valuable though time consuming" [their emphasis].

For the client and the researchers this is beneficial as the outcome is based on clustering which is done and validated by the participants (not by researchers post-event).

Adding value through causal mapping

The process of mapping causal knowledge adds value to the normal brainstorming event. Through identifying causality between the issues, the participants are able to learn more about the relationship between the issues to inform their decision making activities. For the client, participants can understand the drivers of change and the consequences of actions and can encourage them to think in a more causal way on issues. Hence before implementing actions,

they can explore and mitigate risk. For the researchers, it is an additional source of data that adds to the depth of insight.

Releasing creativity

Journey Making sessions concentrate on occupational knowledge, rather than blue-sky thinking. Feedback from participants suggest this is an appropriate approach, for example "The sessions were defined by us, it was our issues that worked, not 'blue sky' thinking. Much more realistic."

However, this focus on occupational knowledge is not at the expense of sharing creative ideas, for example participants thought: "Computer based workshops are more pro-active as there is generally no reluctance to put forward off the wall suggestions."; and "During the day I had several 'light-bulb' moments where a comment sparked ideas which I can certainly implement."

For the client, this ensures that the time spent in the workshop is seeking creative solutions to relevant problems ie the workshop is an effective use of the participants' time. For the researchers, this ensures that their data includes new and creative solutions that address issues of organisational relevance.

Having a flexible agenda

The flexible and fluid agenda is an important feature of the Journey Making process. If the participants feel that their time would be best employed discussing another issue then, after validation by the group, this is integrated into the agenda. Thus, for the client the workshop is tailored to their needs, as one participant commented: "The group on occasion tended to want to go off the subject. I felt that the group were allowed to explore other areas and clearly identify an area not on the agenda … this was then incorporated within the day. On the other occasions the facilitator challenged the deviations in order to ascertain the purpose. Where appropriate that line of discussion was halted [by the group]."

While a flexible structure provides insight to the issues which the participants think are important, for a research study it makes comparison across organisations problematic as each organization could have a slightly (or radically) different workshop {Edwards, 2003 #1106}. It is important therefore, from a research point of view, to be aware that changes in the agenda will have effect on the availability of data to address the research questions.

The client organization benefits from having a workshop which is tailored and is adaptable to their needs and the knowledge in the group. For the researchers, despite deviation from the agenda making comparison across workshops more effortful, a flexible agenda ensures that the research focuses on issues that are important to organizations.

Building commitment to taking action

A main aim of a Journey Making intervention is often to have a facilitator build the initial commitment in a group of people to implement (what becomes) their agreed set of actions. Much of the evidence of PSMs for building commitment to taking action has been anecdotal. Below we offer evidence collected from our 176 participants.

From the client's perspective, these participants evidently perceived value in the Journey Making process, responding strongly on exit questionnaires that (in Table 2, question 1) 'the process was useful in helping us to explore knowledge management'. The group maps (research data) offers insight to the perspectives of participants as they confirmed that they had good 'ability to share ideas with group members' (question 2), and felt that they 'had an impact on the outcome' (question 3) suggesting those ideas were used in the map to inform the outcome.

The participants 'enjoyed the workshop' (question 4) and felt 'the outcome was generated in an appropriate way' (question 5), to the extent whereby they felt 'the outcome of the workshop was the right list of things that we need to do' (question 6) and they did 'hope that these outcomes will influence what [our organization] does on knowledge management' (question 7). However, despite buying into the workshop process, some participants were less confident that the actions would 'influence what our organization does on knowledge management' (question 8) often citing the reason that implementation required the sanction of very senior management who were not in the workshop i.e. that it was not clear if the Board would give their authority. Overall, the group members were very positive in 'how [they] would … rate the workshop' (question 9), and the client benefits from a group of influential participants perceiving that the event was a success.

Table 2: Questionnaire responses

Question number	Question	Average	Standard deviation
1	I thought that the process was useful in helping us to explore knowledge management.	1.58	0.64
2	Regarding the ability to share ideas with group members, how would you rate the workshop.	1.67	0.71
3	I feel that I have had an impact on the outcome.	1.86	0.78
4	I enjoyed the workshop.	1.50	0.67
5	I think that the outcome was generated in an appropriate way.	1.76	0.61
6	I think that the outcome of the workshop was the right list of things that we need to do.	1.95	0.75
7	I hope that these outcomes will influence what [our organization] does on knowledge management.	1.49	0.69
8	I expect that these outcomes will influence what our organization does on knowledge management.	2.19	0.83
9	Overall, how would you rate the workshop	1.67	0.62

Where 1=strongly agree, 5=strongly disagree. N=149 (from 176 participants)

Again, benefiting the client is that many respondents commented (on their questionnaire) on the ability of the workshop to help them to develop an outcome, including: “we are left with an achievable and relevant action plan, and a team focussed and committed to implementing the desired improvements it contains.”; “an excellent approach to brainstorming, it helped involve all participants in a non-threatening way and will be a catalyst for change in the business.”; “The workshop generated far more specific ideas for our group than I had expected. It enabled a diverse group to participate in a very open, dynamic way where everyone can participate and benefit.”; “I am not looking forward to going back to ‘usual’ brainstorming techniques, as I now know there is a much better alternative.”; “I tend to find workshop a long and sometimes frustrating process. I enjoyed participating in the tasks, the computer was a useful way of doing things. It added value to the process. Often technology is used because it is there and adds nothing to the process.”

However, building buy-in to the outcome depends on the facilitator as much as the process as participants need to be confident that the facilitator can lead/has led the group through the

complexity to generate an appropriate outcome {Eden, 1992 #2}. This was reflected by one participant who wrote, "[the facilitator] kept us going, made us 'buy into' the process."

For the participants and client, through concentrating on occupational knowledge the process is meaningful and applicable for them, rather than blue-sky. By trusting and buying-into the process participants might be more likely to commit to the outcomes that they generate through this process – thus benefiting the client. For the researchers, this offers validation that the process and the deployment of the process is appropriate for similar problems in similar situations. This is important when negotiating access to the organisation for the next research study, and when considering the nature of the data which has been captured (ie that it is grounded in the participants' social constructions thus enhancing the credibility of the data).

CONCLUSION

Through problem structuring group workshops researchers aim to provide client organizations with a process that can move beyond merely surfacing and exploring views, and more enables the expanding of a group's collective knowledge to quickly develop a realistic set of actions which have the commitment to implementation of the participants. The *quid pro quo* is the client's provision of research access and data, the opportunity cost of their time, and an assurance that the research questions are relevant to organizations' needs.

Quid pro quo brings a strong mutual dependence that reinforces the client/researcher relationship and, we have found, often extends beyond the immediate workshop to future collaboration. We know that some organisations have made good progress on implementing their action plans. One organisation we have continued to work with, using PSM workshops, rapidly implemented nearly all their actions – their progress is reported in Shaw et al (2003b) and Shaw et al (2005). A second organisation wrote a major strategy document based on the workshop outcome, and also sponsored additional PSM workshops. Another organisation hired a MBA student to support their implementation, while a fourth organisation sponsored a PhD student to look at knowledge management in more depth. During a discussion about future collaboration a fifth organisation made the comment (noted earlier) that their workshop report was "heavily tea-stained".

Westcombe {Westcombe, 2003 #1071} discussed the nature of the client-consultant relationship as a transfer and adoption of power. To ground his discussion in this context, let us assume that, prior to the initial client/consultant/researcher meeting, the client(s) bears most responsibility for taking action to improve the situation (as in the case of our clients in

this study, for improving knowledge management practices). During that pre-workshop meeting when the aims, objectives, format and participant-list are decided, the client transfers some of that responsibility onto the consultant/researcher. Hence, during the workshop the consultant/researcher shares responsibility with the client as they have been charged with building commitment to action in the group of participants. During the workshop the consultant/researcher transfers their responsibility to the participants through engaging with them in building, agreeing and committing to them taking action. Following the workshop the participants have adopted the consultant's/researcher's responsibility for taking action (the transference coming through their agreement to taking action beyond the workshop), which they now share with the client. Consequently, the consultant/researcher is more than a facilitator of group process, their role extends to being an agent to distribute responsibility for action across a group.

The consultant/researcher cannot dictate that action will be taken by the participants. They can only design a groupwork process for the participants to learn enough about the consequences of inaction to encourage action, and about the consequences of action to encourage the best action to be taken. This process is not dissimilar to education – by introducing students to ideas we open their minds to new possibilities but we cannot influence them to do anything differently. The process of education (and workshop attendance) should be as valuable to the participants as any outcome.

For the emerging generation of researchers, there is a note of caution. There is a distinction between research that seeks an answer, but is not worried if there is not one, and research (not just a PSM approach) that has to produce a deliverable to obtain access. In Journey Making, participants' shared understanding must precede an agreed action plan. However an over-emphasis on the deliverable of an action plan may cause participants to build one that is a hurried result of time constraints, and maybe even one that is being developed by the wrong people – a 'garbage can' style of decision making {March, 1976 #859}. This is in contrast to the research that can spend lots of time capturing, building, and reflecting on the shared understanding of the group members (and producing high quality research data). Under garbage can conditions, the output (actions) might be appropriate for the organization (or then again they might not), but the process would be inappropriate for providing high quality research data because of the amount and severity of the uncontrolled, inconsistent and unknown factors affecting how the data was collected. Furthermore, a poorly deployed PSM workshop can, with no doubt, be guilty of supporting only garbage can decision making leading to the collection of equally poor research data.

This paper contributes to the evaluation of PSMs. It highlights a need for future research to evaluate the process and outcome of a problem structuring intervention. Such research would highlight directions for the development of PSMs in line with what the participants/ clients/ organisations experience. Research could seek to understand the impact of the PSM process or facilitator on the group and the outcome. This could help the emerging generation to appreciate the selling points that might attract potential consulting/research clients. Relying exclusively on personal charisma and/or reputation to secure consulting/research access could result in an elite, but very small and unsustainable community of PSM practitioners. Existing PSM practitioners can encourage the expansion of this community by providing insight to the range of business-benefits from using PSMs.

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