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# Towards understanding problem structuring and groups with Triple Task Methodology *'e'*

## Abstract:

The many issues which confront Problem Structuring Groups (PSGs) engaging in applying Problem Structuring Methods (PSMs) are well reported in the literature. Often group problem structuring work is well organised around an array of processes and methods which have received wide-ranging testing in the field however, the assessment of the group in terms of its output, group dynamic and self-assessment tend to be handled piece meal at best. Triple Task Methodology (TTM) has been described as a means to manage the three group assessments – PSG output, dynamic and self-assessment in one frame. In this paper an experimental version of TTM (TTM*e*) is described in use in an Education project setting in Abu Dhabi. It was intended to make TTM less cumbersome and time-consuming and, at the same time, more systemically integrated, a significant objective being to make it easier to use by practitioners who have not used it before or who have only small prior use of group assessment methods. The paper describes the application of TTM*e*, provides an overall assessment of the value of the exercise, discusses the outputs of the group work and points to the value of TTMe in identifying and clarifying unique group qualities or signatures. The major contribution of the paper is to bring to PSG processes a degree of rapid, non-specialist, empirically comparable assessment on the richness of the group use of PSMs.

## 1. Background

Problem Structuring Methods (PSMs) evaluation is an emerging discipline. Assessing group dynamics is complex with contested methods and approaches (as has been long understood - for example see Rosenhead & Mingers in their review of 2001). Making sense of the ways in which groups work with PSMs is clearly a challenging area of study. The demands of assessing the value of what is being done by the group, how they are doing it and what they consider to be the value of their work align as linked but separate challenges for the PSM facilitator. But, if there were greater clarity around the interaction of individual, group and PSM then maybe the specific, comparative value of PSMs would allow more judicious application of particular PSMs to particular groups in particular contexts?

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Given the uniqueness of social context and the difficulty of attribution (showing that any specific social outcome is the result of any specific social input) the task of assessing the specific value of any given PSM in context is bound to be problematic. Means to assess PSMs are varied. Discussions regarding the comparative value of positivist and interpretivist approaches to evaluation are as relevant here as they are in other domains. And yet, despite the complexity of context, attribution and approach to evaluation, the value in making assessment of the use of PSMs to Problem Structuring Groups (PSGs) of all kinds remains.

In this paper we will go into some detail in describing the early results emerging from one means to evaluate the ways in which PSGs work, apply methods and dynamically interact. The paper describes the process and outcomes which followed the application of an evaluatory method in a multi-stakeholder project which took place in Abu Dhabi in 2013. The specific project research objectives, process and results are described in detail elsewhere (Mahroum, et al 2013; Mahroum et al. 2016). This paper is concerned specifically with the details of the method as it was applied in the project and, to demonstrate how it can provide an alternative to piece-meal and unstructured alternatives. We set out the ways in which three key aspects of Problem Structuring Groups (PSGs), namely: outputs, observed group dynamics and self-assessment could begin to be understood in a more systemic manner which could provide useful additional information in helping practitioners and stakeholders in gaining a deeper understanding of why group problem structuring processes act and do as they do (e.g. in deliberative democracy and participatory planning (for example, noted in: Banjade & Ojha 2005)). This should in turn help practitioners to assess the potential and actual use /value of PSMs in specific contexts.

Means to assess, compare and value Problem Structuring Methods in terms of context, purpose, methods and outcomes have been highlighted as being timely and valuable at the higher level of comparative PSMs (Midgley et al. 2013). Indeed, if PSMs are to be understood in and of themselves, this form of meta comparative analysis would seem essential. A need for assessing the value and internal consistency of the PSMs could be argued to be of value if replicated at the lower level of the individual PSM itself. In an earlier paper by Bell and Morse (Bell & Morse 2013) it was argued that there was need to understand not just what groups using PSMs did but also how they did it and on their reflections on what they did. This, it was argued,

would in turn help the developers of PSMs to understand how any specific approach adopted 'performed'. In short, to understand more about the ways in which PSMs were understood and engaged with by groups. Bell and Morse argued:

"In problem structuring methods, facilitators often ask of themselves questions such as: what makes a 'good' problem structuring group (PSG) and indeed what does 'good' mean? How can group dynamics be improved and does it matter in terms of the quality of the problem structuring that that group engages in? On the surface these questions seem to be straightforward. Indeed, those who have helped facilitate many participatory workshops will think they intuitively know the answers to these questions; they can, from their professional practice, 'feel' which PSGs are doing well and producing novel insights and those which are functioning less well and perhaps generating something that is less imaginative and more routine as a consequence." (Bell & Morse 2013 page 959).

PSM work with groups is often evaluated by 'feel', that is to say in terms of intuition and professional observation but less regularly in a systemic and formal manner.

"there is very little evidence with regard to whether PSMs are useful or whether

one particular method is better than another or, indeed, better than doing nothing" (White 2006 page 842)

Triple Task Methodology (TTM) was an attempt to apply to a PSM a level of internal and evidence base, reflective coherence. This seeking for coherence is, at the level of the specific PSM a reflection of the evaluatory search which Midgley et al refer to in their 2013 paper relating to PSM methodologies as a whole. This paper builds upon prior work with the Triple Task Methodology (Bell & Morse 2013) and will suggest a systemic and internally consistent innovation to TTM which we refer to as Experimental TTM or TTM*e*.

In the following sections we introduce the research location in Abu Dhabi and then discuss relevant traditions within PSG and PSM literature in order to locate the relevance of our work. Following a brief overview of the TTM/ TTM*e* innovation and its justification we describe the outcomes of the application of TTM*e*. The paper closes with a discussion relating to the main results of the research and finally our conclusions.

## 2. The Project in Abu Dhabi

The project which provides the basis for the experimentation with TTM was based in The United Arab Emirate (UAE) of Abu Dhabi in 2013 and was a collaborative analysis undertaken between Abu Dhabi Education Council, INSEAD and the UK Open University. The methodological focus for the project was to assess the work and outcomes of a multi-stakeholder group work engagement. Education provision is a matter of growing concern in the country and the purpose of the group work was to provide an opportunity for stakeholders from a variety of backgrounds to consider and comment on current policies and sets of indicators required for performance measurement in schools. The research was undertaken over two 'two-day' workshops carried out in March and May 2013. The workshops participants were comprised of members of distinct but overlapping groups which represented contrasting stakeholders and interests. The groups were provided with minimal direction and prior information but encouraged to think freely. Following a short briefing on the nature of the workshops they were tasked to consider the role and value of Indicators and Policy with regard to performance measurement in the context of schools in Abu Dhabi. The groups assembled represented the views of Abu Dhabi Education Council (ADEC) professionals, professional Administrators from Schools (Heads, Deputy Heads, etc.) and Parents with children in the schooling system in the Kingdom. Around 45 participants took part in the study.

Prior to describing the work of the groups the methodological aspects of the approach undertaken need to be clarified – most specifically the background to PSMs, PSGs and TTM*e*.

## 3. Problem Structuring Methods and Groups

Rosenhead and Mingers (Rosenhead & Mingers 2001), have defined PSMs as: "methods for structuring issues, problems and decision situations, rather than 'solving' them" (page xiii) These authors have presented a number of prominent PSMs and aligned them in a sympathetic analytical conceptual framework – providing an opportunity to judge merits and potential weaknesses. The evaluation of PSMs has been set out more fully elsewhere (for example the classification of Rowe & Frewer 2000) and the task of PSM evaluation has been suggested as:

"to understand how, in a given context, the different meaning and value produced by different actors about an intervention fit into larger patterns of interaction within which the intervention is embedded" (White 2006 page 846)

PSM evaluation has resulted in a wide diversity of observed outcomes for example; the validation of PSMs (Champion & Wilson 2010) the value of embedding PSM in business practice (Franco et al. 2004), the use of modelling in environmental assessment (Jago-on et al. 2009), the importance of 'soft' in developing IT strategy (Sørensen et al. 2004), improving stakeholder integration (Hjortsø 2004) and in reconsidering 'soft' interventions (Alberto Franco 2013). However, it is not our intention here to go into an evaluation of various PSMs although we reference the framework provided by Midgley et al. Rather we are concerned with the evaluation of the group experience of specific PSMs. Of course this has implications for comparative PSMs and, we agree with Midgley et al when they argue:

"It would appear from the literature that most researchers accept the logic of interpretivism and are more inclined to undertake specific, locally meaningful evaluations (and possibly learn across these) than attempt comparisons between methods using generic quantitative measures". (Midgely, et al, 2013, page 145).

Our approach here is interpretivist but based upon observation and responses from stakeholders and could be applied as a means to evaluate between PSMs.

For the purposes of this paper and in a general sense PSMs can range from hard/ quantitative approaches to the soft and more qualitative.

Rosenhead and Mingers (2001) detailed the use of PSMs by individuals and groups but did not focus on how groups work per se. Our contention is that if PSMs are to have wide value then this will be seen primarily in the work of groups.

It is relevant to the development of the methodology discussed in this paper that there have been clear divisions in the practice base which group work and PSM use involves. Bion (Bion 1961) was a formative agent in the development of the European psychodynamic model and his work has found many advocates in the psychodynamic traditions relating to group dynamic. Key to group dynamics is the issue of "no gains without pains" (Jones & Kelly 2009). From the early days of the study of group dynamics it was evident that stakeholders meeting for the first time need to find out about one another, they may have to hear and try to understand unpalatable

arguments, they may have to do a degree of self-revealing in order to be heard. It is also true that this may be an uncomfortable process but if it does not happen not much group progress will be made (Jones & Kelly 2009; Bonebright 2010). Part of our interest in PSGs relates to assessing how group dynamic impacts upon group functionality.

Both the European psychodynamic and systems traditions have produced many methods and techniques to enable reflective and systemic group working. The evidence that this has happened simultaneously but in discrete intellectual domains has provided many opportunities for duplication of effort and/or a lack of cross referencing and referral.

PSMs drawn from the systems traditions usually involve group facilitators in guiding and encouraging groups in their personal analysis of specific problems (Papmichail et al. 2007). In the systems approach to PSM the outputs of the group work tends to be the primary goal and the process whereby the goal is achieved is important primarily as the means to that goal. Usually the PSM facilitator is contracted to deliver these outputs within a clearly defined time frame. This kind of approach rarely involves studying the group and its output in a psychodynamic manner other than in a non-specific and generalised manner (e.g. anecdotal observation about group behaviour, misbehaviour, dominance, spontaneity, etc.). TTM is a method which bridges the gap between complex psychodynamic assessment of groups on the one hand and rule of thumb, informal observational approaches on the other. It is designed to provide a PSM with capacity to work both in terms of the facilitation of groups exploring complex contexts and also self-reflective practice in the group, in line with psychodynamic methods. As noted in the Bell and Morse paper of 2013:

"TTM is a form of multi-methodology designed for the analysis of group work 'in the round', both from internal and external perspectives, and is constructed around the understanding that group dynamic is an important factor helping to influence the nature of PSG outputs." (Bell and Morse, 2013, page 963).

TTM can be defined as a largely 'soft' OR method (Alberto Franco 2013; Mingers 2011) but with internally contrasting elements such as an emphasis on a psychometric approach called SYMLOG which will be discussed later. The value of such multi methodology has been underlined by Smith:

"Overall, what is being suggested here is the use of multiple methods to augment the findings of singular, solitary methods such as observation. By proceeding in such a manner, future researchers should be able to uncover deeper and hidden meanings that underlie group and individual behaviour. In addition, this approach can be used in either a manner in which the various models build upon one another or in such a way that the data gathered provide deeper meaning and insight into the developmental process.". (Smith 2001 page 43).

It was apparent from the outset that the Problem Structuring Method to be applied in the Abu Dhabi context would need to be robust in dealing with "deeper and hidden meanings" with groups which may have divergent and even conflicting values and concerns. Cronin et al has described a PSM aimed at increasing mutual understanding (Cronin et al. 2014). This is largely focused on 'soft' understandings. Trutnevyte et al have discussed means whereby complex and contrasting stakeholder visions can be linked and aligned using a hard OR analysis. (Trutnevyte et al. 2012). To some extent conventional TTM is a multi-methodology which encompasses both hard and soft OR components. However, as noted in previous applications of the methodology, the form of TTM as applied to PSGs is not fixed.

## 4. Methodology evolution from TTM to TTM*e*

TTM as previously applied comprised the following three methods:

1. the PSM Imagine (for Task 1),
2. the observation approach BECM (for Task 2) and
3. the group self-assessment method SYMLOG for (Task 3).

Although Imagine has been used in a wide number of stakeholder engagements in the UK and Europe chiefly for encouraging citizen participation and inclusion in a variety of social contexts (see for example: Bell et al. 2013; Coudert & Larid 2011; ASC 2007; Gillespie et al. 2014). The noted strengths of Imagine as a PSM are its flexibility and capacity to be applied in contexts of social and technical complexity (Coudert & Larid 2011; Larid. 2005)

TTM was originally developed and applied in the EU FP7 POINT project (http://www.point-eufp7.info) and provided a basis for comparing and contrasting mixed stakeholder groups in terms of their understanding of policy issues around sustainability issues.

In Figure 1 TTM is shown in outline. Task 1 involves a group assessment and analysis of the problem/ question under scrutiny. Task 2 is an external review of the groups dynamics and Task 3 is the participants reflection of the process.

The participants' main experience is Task 1; Tasks 2 and 3 are largely but not totally invisible to them and are employed to help generate the overall evaluation of the group and its progress in considering a complex issue. For the purposes of describing the changes made in the project described in this paper, we need to briefly describe each Task in a little more detail.

Figure 1. Triple Task Methodology
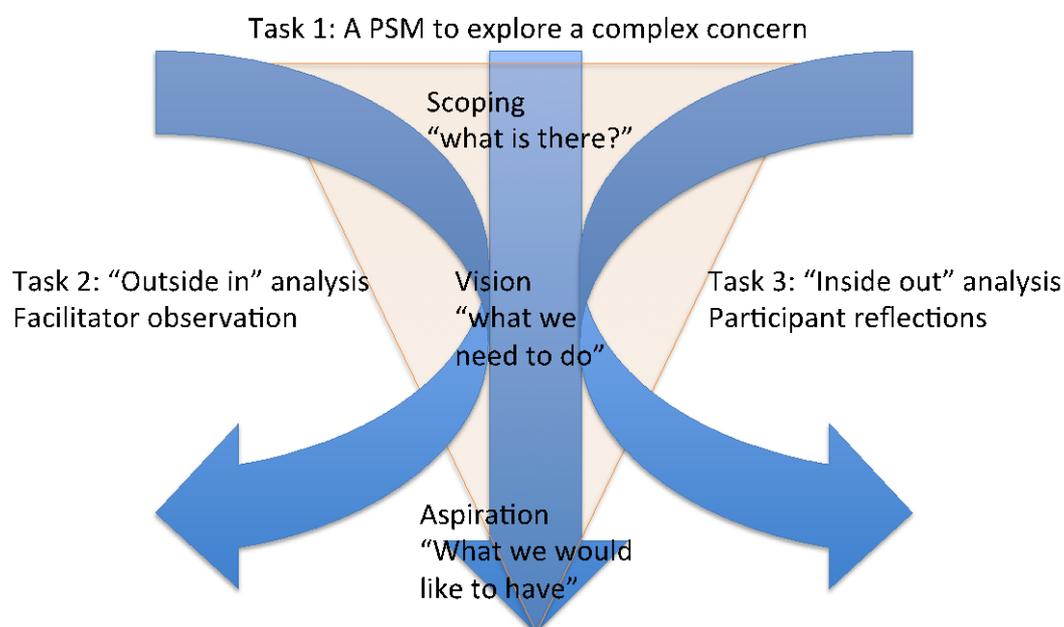


(developed from Bell & Morse 2012 page 47).

## Tasks in a little more detail

Task 1 involves the application of concepts largely taken from soft systems thinking and practice and is based on the Imagine method (Bell 2011). Imagine itself can be seen as conforming to a Kolbian Learning Cycle (Kolb 1984) interpreted here as:

- Connect with issues in the problem context
- Model possible means to consider the issues

- Explore or do the model
- Reflect upon experience and
- Connect again, etc.

Task 1 is subdivided into three main stages:

Stage 1: Scoping (connecting/ modelling in Kolbian terms): A diagrammatic device – the Rich Picture is employed as a means to capture anxieties, stories and concerns from participants. These are then organised in terms of precedent and priority and clustered into indicative groupings.

Stage 2: Participants are asked to develop Visions of Change (or VoCs). In doing this they migrate from a shared understanding of the background to an assessment of the challenges ahead.

Stage 3: Scenarios development. At this point the groups are encouraged to set out what practical steps are required to bring about their Vision of Change.

We argue that Task 1 could be any PSM which explores a problem context in a manner which is consistent with a learning cycle. We return to this point in our discussion.

Task 2 is an 'outside in' review of the group dynamic. It is the research or facilitator team's assessment of the group process using a matrix approach originally developed by the Systems Group at the Open University and known as BECM which stands for Being, Engaging, Contextualising and Management. In the BECM assessment (Bell & Morse 2011) the groups are reviewed on a seven point scale against the observable levels of Being (general behaviour and mood), Engaging (the levels of enthusiasm and active participation in the activity), Contextualising (how much the participants are bringing their past and current experience to bear in the context) and Managing (how well the group organizes itself and accommodates each member in the process) – see Table 1. Level 1 BECM behaviour is excellent. Level 7 corresponds to tyranny and contempt. BECM is usually undertaken at various stages in the group work and is undertaken by two or three members of the facilitation team in order to triangulate results and reduce the likelihood of one-off or anomalous activity to be reported as 'routine'.

Table 1. The BECM Matrix

| Broad guidelines for team assessment – the group shows ... | Being - respecting perspectives The group is ... | Engaging with complex situations: the group shows that ... | Contextualising an approach: The group does ... | Managing practice: the group manages by... |
|---|---|---|---|---|
| 1. That it has internalised the concepts/ skills associated with effective practice - can use and apply ideas in a logical way - varying approach in reflection with context. The group can adapt and change approach in creative ways. Learning is bi-directional. Evidence of realistic, astute, practical judgement and perception | Self-aware, aware of others and ethically focused. Written material uses 2nd and 3rd order language ('I' and 'We') | Complexity seen as being within the nature of relationships not something overwhelming 'in the world'. The group understands that good qualities emerge from reflective engagement | adapt concepts, approach and methodology to context with ease, responsibility and creativity. | Inviting and welcoming others to join in and share enquiry. The group is aware of the value of people sharing in enquiry. They appreciate the need for evaluating own managing. The group is responsive to opportunities and 'environmental' problems |
| 2. A solid grasp of methods which can be applied over a wide range of contexts – without the innovative ability to reflect imaginatively. Good straightforward and sensible approach. Potential but needs to develop reflective capability | Aware and sometimes self-aware. Evidence of considering ethical issues. Frequent use of 'I' and 'we' in group discourse | Complexity usually seen as being understandable and not something overwhelming 'in the world' | Some good at adapting approach to context. Good grasp of approach and methodology | Providing the where-with-all for mutual and effective enquiry. It demonstrates awareness of modes of managing (for, with, or enabling others to). It acknowledges the need to be responsive to environment |
| 3. That it has good qualities and can manage an enquiry but understanding of arguments and engaging are flawed and limited. Not wholly confident about methods. | Aware but not really self-aware. Some use of Ethical approaches. Written material uses mainly 1st order language ('it', 'them') | Complexity sometimes seen as being understandable and not something overwhelming 'in the world' | Generally well at adapting approach to context. Better than adequate grasp of approach and develops own methodology | Sometimes providing mutual effective enquiry and sometimes aware of different modes of managing. Some, though inconsistent acknowledgement of, and responsiveness to, the environment |
| 4. That it has adopted an instrumentalist (line of least resistance) approach to getting through. Has difficulty contextualising approaches to changing circumstances - low to poor ability to engage reflectively. | Very limited awareness. Very limited thought about the ethics of an intervention as demonstrated by use of 'it' and 'them' language | Complexity usually 'in the world' - sometimes abstractly considered as being understandable | sometimes prove to be able at adapting approach to context. Adequate grasp of approach - applies methods and sometime methodologies | Showing little but occasional thought of viability in enquiry - fairly instrumentalist. Little acknowledgement of environment outside immediate managerial concerns |
| 5. Some reference to methods but mainly an instrumentalist approach of the most limited and basic kind. No coherent logical thread going through work. Work full of bald and stereotypical 'this is what you want to hear' comments but not based on learning. Repeating known and preferred ideas without thought. | Not aware of how the self is or relates to others as demonstrated by limited use of 'it' and 'them' language. | Complexity is always 'in the world' – always divorced completely from different perceptions including that of the practitioner | Not prove able to adapt approach to context. Very limited grasp of approach -applies methods in a simple, though not incomplete systematic, unreflective manner | Highly instrumentalist. Little awareness of different modes of managing. The style tends to be a narrow and sketchy focus on elements bound within a presumed 'system'. |
| 6. Little of reflection on behaviour. A few isolated points. Grossly flawed understanding and representation of points. Incoherent. | Domination and self-assertion. Possible signs of egoistic attitude permeating reports, accompanied with dogmatic assertions | Complexity is someone else's fault | not adapt approach to context. Muddy view of any approach - square peg in round hole | Showing no awareness of different modes of managing. Non-responsive to values, beliefs and circumstances outside the managers own sphere. |
| 7. No understanding of methods for reflection. Joining the dots. | A tyranny. Frequent use of dogmatic assertions and no evidence at all of being self-critical | Complexity is not understandable and chaos is expected | Not have any kind of grasp of systems concepts or approaches at all | Flagrant abuse of others values, beliefs and circumstances. No idea of what 'managing' involves |

In contrast to Task 2, Task 3 is an 'inside out' review of the group dynamic. In this Task the participants make their own assessment of their group process. Task 3 in conventional TTM employs the positivist SYMLOG (A SYstem for the Multiple Level Observation of Groups) method which is outlined at www.symlog.com. SYMLOG has been applied in a wide range of situations (Park 1985; Wall & Galanes 1986; Blumberg 2006). SYMLOG is a key element of the change suggested for TTM in this research and will be described in more detail shortly.

Tasks 2 and 3 represent different ways of looking at group behaviour. Previous studies have shown that such perspectives can overlap although there are also points of difference (Isenberg & Ennis 1981). Both the overlap and points of difference between the external review of group dynamic and the internal experience of group behaviour are of interest to research. Sometimes a group may look 'terrible' (e.g. shouting, domination, standing) and yet be experienced as transformative by group members. Sometimes a group which appears conflicted will produce great outcomes. Sometimes a quiet group will do the same. Sometimes a noisy group will manage its dynamic well and sometimes not.

TTM was originally produced by Bell and Morse following a long period of collaboration on a number of projects. There was a high degree of understanding between the two researchers and a high degree of mutual empathy. Such mutual understanding is not necessarily usual among researchers and the research team working in Abu Dhabi were strangers and would have minimal time to find out about each other and to learn the TTM approach. Two of the team had no previous experience of TTM in any form. It was decided that the method could be adapted to the context and made both quicker to learn and less complex to apply. So, part of the research challenge was to adapt the approach so that it could be used quickly and easily by a mixed facilitation team with minimal prior time to get used to each other, the PSM and to the context of research. Such an approach, if successful, could have the additional value of being used by non-specialists, by those interested in the effectiveness of groups in a variety of contexts.

**Adjusting from TTM to TTM*e***

TTM represents a blend of traditions and the psychodynamic element included as Task 3 is SYMLOG. The research contained in the present paper sought to explore

an alternative to this. Swensen, provides a brief assessment of the SYMLOG measurement of group process. It is:

"based upon three dimensions that have been empirically derived. These dimensions are dominance-submission, friendliness-hostility, and instrumentally controlled-emotionally expressive. The interaction of the group is measured along these three dimensions at three general levels of interaction. The levels of interaction that are measured are overt behavior, the content of verbal communication, and the evaluation of the content image of the communication". (Swensen 1981 page 99).

An issue with SYMLOG in TTM was the lack of correspondence between it and the positivism of its assumptions and the two other component parts of TTM which are both qualitative and interpretivist. Sjovold has noted this issue – an issue of cultural variation between European and US approaches:

"The American tradition of behavioral sciences, which grew out of the Chicago School of sociology, emphasizes the impartiality and objectivity of the external observer. This emphasis pushed research efforts toward the development of instrumentation and category systems like Bales's (1950) Interaction Process Analysis (IPA) and the SYMLOG system. In contrast, the European behavioral sciences are more generally characterized by action research, with emphasis on engagement and experience-oriented approaches to theory development." (Sjovold 2007 page 616 - 617).

Identifying this cultural issue as a problem where the "European heritage is not recognized in the more instrumental approach that SYMLOG theory and method suggests" (Ibid, page 617). Sjovold was making the case for an adapted and European alternative to SYMLOG but many of his arguments for the development of Systematizing Person-Group Relations or SPGR also appear as reasonable in describing our approach to the adaptation of TTM. TTM with SYMLOG provides a group self-analysis which is quantitative and objectively strong. TTM*e* with the adapted version is less quantitative, less objective but more in line with the other two elements of TTM derived from the interpretivist tradition. Sjovold's conclusion regarding the use of SYMLOG also has resonance for the adaptation made here to TTM:

"For clients, SYMLOG seemed both cumbersome and time consuming. Presentation materials for data display were both difficult to understand and vague about the real message embedded in the data". (Sjovold, 2007. Page 620. Emphasis added).

We would go further and suggest the SYMLOG is not just cumbersome and time consuming for the understanding of the clients, it provided similar challenges to researchers not familiar with the US behavioural science tradition but attempting to understand group behaviour. Emerging from Sjovold's analysis and from the needs of the research context already described in the previous section, two reasons contributed to the innovation of TTM to TTM*e* (where *e* = experimental):

Firstly in order to tie the 'third task' more effectively into the assessment method of the first two – making them more internally coherent and; secondly to provide an approach which is less cumbersome and easier to apply by non-specialists allowing the team more flexibility in learning rapidly and gaining proficiency in limited time. Indeed this is a key element of the contribution claimed by this research – that is to bring to PSG processes a degree of rapid, non-specialist assessment on the richness of the group use of PSMs. The next section of this paper sets out the TTM*e* process as applied in Abu Dhabi.

## The operational form of TTM*e*

During the research process each of the three Tasks was evaluated according to a scale which was representative of certain self-reported or observed behaviours. The application of metrics in the interpretation of the responses produces an ordinal scale of results which could be argued to be misleading, suggesting a spurious metric accuracy. We need to make clear at the outset that the numbers are a convenient way of grading behaviour (as for example is achieved in the marking of student essays) which we subsequently relate to certain types of quality. The Tasks were assessed in the following manner:

Task 1 encourages participants to explore their group understanding of performance indicator or policy in the school system (depending on which of the two workshops). The six groups which engaged in each days work produced a number of outcomes over the four hours of the workshop:

1. A Rich Picture – a free form diagrammatic representation of the groups considered view of the performance indicator situation at the present time (for an example see Figure 2).

2. A series of key ideas, emergent from the Rich Picture, that need to be done to improve the current situation and items that present as issues or problems

3. A series of suggested performance indicators which are seen as being important to the group.

Figure 2. A group rich picture
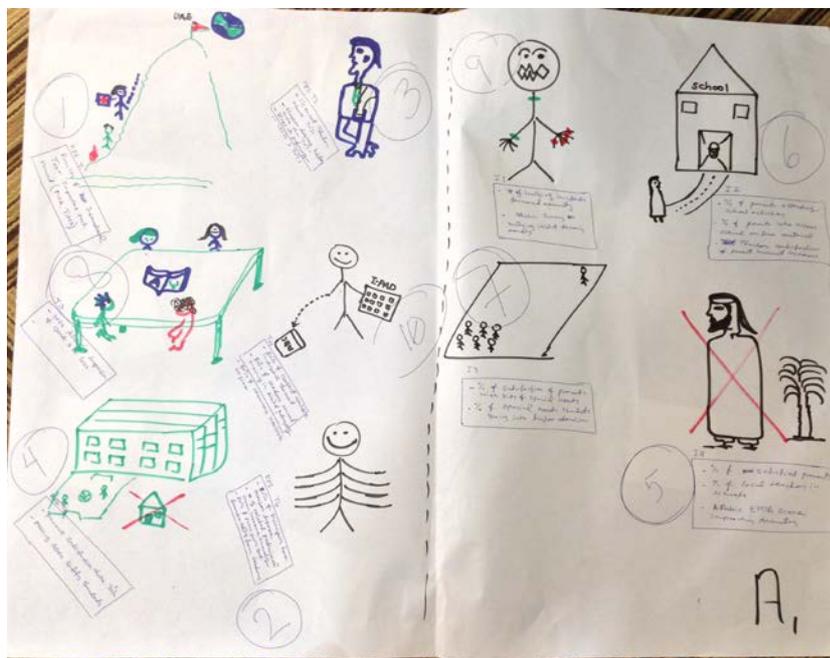


The work of the groups was evaluated by researchers who worked closely with the groups over the days. The researchers graded the process and output of the groups on a four point scale where

$0 – 1.1$ = Highly systemic output with mechanistic and linear outputs being noted purely as incidental (e.g. in matters of project planning and agenda setting).

$1.2 - 2$ = The group demonstrates systemic, less linear and mechanistic group thinking – the groups output bears more of the hallmarks of systemic analysis and less in the mechanics of process. A higher degree of original insight and less purely descriptive.

2.1 - 3 = Some features of systemic insight[1] but largely mechanistic. Some systemic qualities evident in the group output. The outputs of the group are largely descriptive of what 'is', lacking in insights.

From 3.1 to 4 = The group outputs are generally minimal and lack any major insights (e.g. elements of the rich picture which open up new themes and ideas or emerging tasks and issues which provoke creative ideas about change).

These assessments are subjective. The researchers observed the group outputs closely and compared and contrasted their separate observations during and after each days group work. By this means they were able to agree a consensus score for each group. When there was a wide divergence in the observed values of two of the researchers supplementary observations could be made.

Task 2 was the observer analysis of group behaviour. In order to undertake this analysis each group was observed by the three researchers and 'marked' against the seven point BECM scale. The scale assesses group behaviour in terms of the quality of a groups Being (how it is in terms of its internal manner and behaviour), Engaging (the manner in which the group goes about its work), Contextualising (how the group uses its existing knowledge in problem structuring) and Managing (how the group manages its work). On the BECM scale 1 = Reflective Practitioners and 7 = very poor BECM characteristics

In more detail:

1 = Reflective practitioner

2 = Practical practitioner and occasionally reflective

3 = Practical but rarely reflective

4 = Instrumentalist

5 = Instrumentalist and mechanistic

6 = Mechanistic and possibly dismissive

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[1] Systemic insight was interpreted as evidence in the outputs of the groups of one or all of three additional elements drawn from systems science; these were: a focus on relationships in the diagrams, emergent outcomes in the tasks and issues and systemic wholeness's implied in the scenarios. For example, the group output could have identified new links and relationships with other, related approaches in other sectors or other countries or, describing outcomes which are emergent from the context and not 'given' as part of the known landscape of education in the Kingdom or, presenting the current situation in a diagram as a 'system' as opposed to a disorganized and un-integrated 'mess' or 'complex reality'.

7 = Tyrannical approach

(See Table 1 for more detail about the characteristics of each level on the seven point scale).

The adaptation of Task 3 was achieved by developing it in line with Task 2 and to make use of the BECM matrix but blending this with a greatly simplified questionnaire. In their 2011 paper Bell and Morse discussed the value of applying BECM to the Task 3 role. They observed:

"A more 'open' version of BECM is being planned by us as a research tool. This would require the approach to be used 'outside in, as is the case at present, but also 'inside out'; allowing members of the researched group to undertake their own self‑analysis and perhaps to contest/ compare this to the outsiders view. This kind of approach is in keeping with advocates of self‑analysis (Horney 1994; Moon 1999). The benefits of such an innovation might be multiplex:

• allowing the group to consciously review its progress and, in an ethical sense, to take responsibility for the reporting on the group owned work;

• therefore, to explore its behaviour and to respond to its own assessment;

• thus, tackling difficult issues that are now explicit but that might otherwise remain obscure; and

• possibly improving group dynamic in certain contexts." (Bell & Morse 2011 page 331).

The Task 3 questionnaire was shorter than that applied in SYMLOG, allowing for relatively easy and rapid completion by those involved in the workshops. The questionnaire comprised two series of eight questions and a Likert scale of responses. The first series of eight questions related to how each group member felt their group operated. The second series of eight questions related to how the individual felt when working within the group. For each set of eight questions, two are probing each of the BECM criteria of Being, Engaging, Contextualising and Managing. Scale responses are assessed in terms of 'Rarely', 'Sometimes' and 'Frequently'. An example of a questionnaire relating to one of the groups in this research project is shown in Table 2. In this table the results of one of the Groups (Z2) are set out. The first 8 questions

Table 2. An example Third Task Questionnaire for Group Z2

| Your group: | Rarely | Sometimes | Frequently |
|---|---|---|---|
| felt like a warm place to be with people who were sociable | | | **4** |
| people said very little to each other; quiet | **4** | | |
| got on with each other | | | **4** |
| had some tough-minded and powerful people who dominated the discussion | 3 | | 1 |
| was task-oriented and focused on the problem at hand. There was a lot of problem-solving based on what we already knew | | 1 | 3 |
| thinking was constrained tended to be tramlined into an 'established' point of view. What we did had to be right according to our existing culture | 2 | 1 | 1 |
| had a nice atmosphere and was equalitarian in management style, with everyone given an opportunity to contribute | | | 4 |
| worked like a group of business-like managers and made sure that it delivered what we were supposed to. | | | 4 |
| **In my group I felt like:** | **Rarely** | **Sometimes** | **Frequently** |
| making others feel comfortable and sociable | | 1 | 3 |
| Not saying a lot .. I was restrained. | 2 | 2 | |
| I cooperated with others. | | 1 | 3 |
| I was assertive and made sure my point was made | | 2 | 2 |
| I was using established social beliefs and values – they dominated our discussions | 1 | 2 | 1 |
| What we thought about was set out in terms of what we already knew and believed | | 2 | 2 |

(the questions arranged in pairs relating to the BECM criteria of Being, Engaging, Contextualising and Managing) refer to how the group process was experienced by the individual. The second 8 questions (also organised according to BECM criteria in pairs) refer to how the individual worked within his/ her group. There were four members in the group and the incidence when the four responses were unanimous are shown in bold (e.g. 'felt like a warm place to be with people who were sociable'). In terms of our assessment, we only used responses which were unanimous in groups of 4 members as indicative of definite trends in the groups experience. With larger groups of six or seven - where unanimity is less likely - the second highest scores were also included in analysis (e.g. items where only 6 members of a group of 7 agreed were taken as indicative of a trend). The intention of our analysis was to gather information from the group about areas where they strongly/ unanimously agreed on how they felt their work progressed. Of course this would not preclude later assessment of the less unanimous responses. For this study, we were interested in gaining a rapid and as unambiguous as possible view of each group's self-perception. In this self-assessment, the group members combine to provide an insider evaluation of elements of the group dynamic (e.g. if people felt they got on with each other, if they felt they could contribute easily, etc.) which can subsequently be compared to the observed output from the groups (as shown in Task 1) and the observed behaviour of the group (as monitored in Task 2). It was intended that the new version of the third Task would, nonetheless, provide evidential insights into the invisible (to the facilitator) effectiveness of the group and help the research team to understand multi-stakeholder collaborative planning. It would also present as a rapidly adoptable methodology which others could apply in complex contexts requiring detailed group analysis.

## 5. The Research outcomes

Because we only had a small sample of eighteen groups we have not tried to apply statistical analysis to our findings (other than the most basic assessments of central tendency). Rather we have sought to explore the nature of any "value added" which TTM*e* might provide to the facilitator of PSGs and therefore insights into how such groups can be most effectively delivered. In the following three sections the outcomes

of each of the three Tasks is described. Further analysis of the meaning of the outcomes is reserved for the discussion section.

## Task 1 outcomes

The Workshops involved participants working together in 18 groups of between 4 and 8.

| Groups | Task 1 | Task 2 | Task 3 | Task 1 | Task 2 | Task 3 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3.65 | 5 | g | g | p |
| 2 | 2 | 3 | 4 | g | g | p |
| 3 | 1.75 | 2.3 | 1 | g | g | vg |
| 4 | 2.5 | 1.6 | 5 | p | g | p |
| 5 | 2.5 | 1.8 | 1 | p | vg | vg |
| 6 | 1.5 | 2.1 | 5 | g | g | p |
| 7 | 2.5 | 2.5 | 5 | p | g | p |
| 8 | 2.5 | 2.7 | 6 | p | g | vp |
| 9 | 1.25 | 2.4 | 7 | g | g | vp |
| 10 | 3 | 2.6 | 4 | p | g | p |
| 11 | 1.75 | 2 | 3 | g | g | g |
| 12 | 2.5 | 2.2 | 2 | p | g | g |
| 13 | 2 | 3.5 | 7 | g | g | vp |
| 14 | 0 | 3.4 | 7 | vg | g | vp |
| 15 | 3 | 2.25 | 5 | p | g | p |
| 16 | 2.75 | 2.5 | 3 | p | g | g |
| 17 | 2.25 | 1.95 | 2 | p | g | g |
| 18 | 2.5 | 2.3 | 2 | p | g | g |

For Task 1:    0 - 1 very good, 1.1 - 2 = good, 2.1 - 3 = poor, 3.1 - 4 = very poor

For Task 2:    1 - 1.5 = very good, 1.6 - 3.5 = good, 3.6 - 5.5 = poor and 5.6 - 7 = very poor

For Task 3:    1 - 1.5 = very good, 1.6 - 3.5 = good, 3.6 - 5.5 = poor and 5.6 - 7 = very poor

very good = vg
good = g
poor = p

Table 3. Triple Task Results Review Table.

The primary outcomes of the workshops were to provide responses to two questions relating to the importance of indicators (our question to the first workshop was: "What indicators are considered to be most valuable in performance measurement of schools among all key stakeholders?") and policy (our question to the second workshop was: "What policies are considered to be most valuable in the performance measurement of schools among all key stakeholders?").
The indicators which were considered to be most valuable were (in frequency of response order:

- Suitability of curriculum,

- ICT,
- Safety facilities,
- Student performance,
- Teacher qualifications,
- Involvement of parents,
- Alumni,
- Employment.

The policies which were considered to be most valuable in terms of performance measurement were (again in frequency of response order):

- Safety, Security and Health,
- Teaching, Learning and Development,
- Governance,
- Inspection

Perhaps one item of specific interest here is the primacy of safety in both indicators (third most significant issue) and policy (primary, judged as more important than Teaching, Learning and Development). Although security and safety are necessarily important factors it was surprising to the research team that it would appear so dominant in both workshops – although it had been evident from our facilitation of the workshop groups that these were topics which were regularly under discussion.

In terms of the general perusal of the workshops, appearances would indicate that those attending had fun working in interesting groups. There was a zero drop out rate over the workshops (indicating that the participants felt that the workshops were interesting of themselves and worth sustained attendance). All groups proceeded with the workshop structure and all produced all the necessary outputs (Rich Pictures, rankings, scenarios) required. However our assessment of the groups indicate that only 8 of the 18 produced good to very good output (see Table 3), with 10 producing poor output. No Task 1 outputs were judged as very poor and one group's output was judged as very good. It is useful to reflect that there may be a number of distortions which Task 1 does not pick up. For example, a couple of dominant people in a group might produce a good 'systems thinking' output whilst alienating the other members of the group. Group 14 might be of that kind. But is that really a 'good enough' output from the PSM? When you have a number of different stakeholders in the group, and

reaching a good solution means the group has to hear and work with the interests of all the stakeholders, having some people working well whilst others are excluded is not going to lead to a good outcome that will have everybody committed to it. These are issues which the other Tasks may help to address.

## Task 2 outcomes

Task 2 was the outcome of the BECM analysis arising from a consensus assessment, emerging from three separate sets of observations of the eighteen groups. Overall all groups were either seen as performing well (17) or very well (1 – all results shown on Table 3). To emphasise the rigour of the evaluation process, this assessment was the result of the triangulation of the observations of the researchers and the production of an agreed average from nine separate visits to groups. Of course some variation has tended to be lost in the averaging process but the scores were broadly in line with the anecdotal observation of the researchers. Most groups appeared for most of the time to be working well and getting on with the work in hand. On occasion groups appeared dominated by one or two individuals, at times members of group appeared to lose interest for a while and, on some occasions all members of groups were on their feet challenging, cheering or asserting certain points. The BECM observation analysis was a snapshot in each case and overall the observed dynamic was positive.

## Task 3 outcomes

Task 3 was the task which had been adjusted from the previous version of TTM and was the element which was most variable in terms of results. 2 groups reported very good, 5 as good, 7 as poor and 4 as very poor. This places 12 groups in the middle ground with 2 very happy with their internal dynamic and 4 dissatisfied.

In Task 3 we have an added an element of additional detail or granularity in the analysis. Task 1 suggested that the majority of outcomes were poor. Task 2 suggested good group dynamics. Task 3 outcomes were ambiguous. As already noted, the basis of Task 3 as reconstructed for TTM*e* was to select only elements from the brief questionnaire on which the participants were unanimous (in small groups of 4) or almost unanimous (with one contradiction) in larger groups. This selection on near unanimous themes does mean that many of the minor themes were not assessed or reviewed but it also means that items of particular agreement were highlighted. It must also be noted that a group that had few unanimous responses to the questions did

not necessarily perform poorly or experience more issues and concerns than the more unanimous groups. It just means that opinion was more divided in these cases. A poor or very poor result here indicates a lack of unanimous opinion about positive experience and <u>not a unanimous opinion of poor experience.</u> The results of Task 3 indicate that most groups did not have a unanimously opined positive experience.

## Overall outcomes

Returning to the observation from our assessment of Task 1 that the majority of groups produced poor outcomes. The results of the Task 2 assessment did not provide insights in terms of the group dynamic because the groups – as viewed by the researchers independently and then triangulated had at least a 'good' process. This means that a group can have what is observed to be a good group dynamic but this may not be the participants experience and it does not necessarily lead to a good Task 1 outcome. This leads to a question about whether a difficult dynamic is important (or even essential?) to getting a quality output? The mantra already referred to in the psychodynamic community is 'no pain, no gain', i.e. that an effective group cannot form until its members have struggled to understand one another and to find a way in which each can have a voice in the group. The Task 3 results show that the majority of groups had poor or very poor experience (11 of the 18). This implies a greater degree of flux and contesting of views than was picked up by Task 2. Does this contradict the assessment in Task 2 that most groups applied themselves and seemed to find the process good? One or two specific examples of group overall performance measured by TTM*e* are instructive of the assessment capability of TTM*e*. Group 3 in Table 3 score good (Task 1), good (Task 2) and very good (Task 3) and produced four indicators in their group work. Of these four indicators three were in the top four identified as being most important to the groups as a whole. By contrast, Group 8 appeared to do badly on the Task 1 and Task 3 assessment but set out seven indicators, and had two indicators in the top four of the groups overall. On looking more specifically at the two groups, Group 3 were unanimous on eight of the sixteen questions in the Task 3 questionnaire and were very positive in particular in terms of their responses to questions relating to Being. The group reported a good experience throughout. Their responses included the following unanimous responses:

- Felt like a warm place to be with people who were sociable
- People said very little to each other (RARELY)

- Got on with each other
- Had a nice atmosphere
- Making others feel comfortable
- Not saying a lot (RARELY)
- I cooperated with others
- What we thought about was set out in terms of what we already knew and believed.

Whereas, Group 8 had only two points of unanimity and the vast majority of their responses were equivocal. There were strong minority responses on negative issues. These two examples are not intended provide any conclusive information but we might like to look more deeply into what worked and did not work with groups 3 and 8 and try to identify more clearly what the points of issue were for Group 8 in particular.

A noteworthy point is the variety of relations between Tasks – particularly those which are not intuitively obvious. In the case of Task 1 comparisons to Tasks 2 and 3, Groups 13 and 14 did well at the task and yet scored poorly in dynamic (observed – Task 2 - but even more so self-assessed- Task 3). This could be due to the group being 'driven' by a dominant member but not enjoying the process. But is this also an interesting point of note? Could it be that non-consensual groups (a generalised overview of a poor Task 3 score could be put in this term) can, under certain circumstances provide excellent Task 1 outcomes (gain through pain)? Is this an anomaly or a useful leverage point for group achievement? In terms of anomalies in Tasks 2 and 3. It might be assumed that a group which was observed to have good dynamic, might share this view of themselves. In some cases Tasks 2 and 3 relate closely (e.g. groups 3, 5, 11, 1 – 18). But on some occasions a group will have a good observed dynamic and a poor self assessment (e.g. group 9). No groups were recorded as having a poor observed dynamic (Task 2) and a good self assessment (Task 3). Potential anomalies (e.g. lack of a clear relation between Tasks 2 and 3) we argue provide room for further understanding of the uniqueness and intricacies of group work. For example, a good Task 2 and poor Task 3 may be indicative of a compliant group, working to a dominant plan set out by one senior member of the group but, beneath the surface providing little satisfaction for most group members. Yet, this could also result in a good Task 1 outcome.

Our results do not show clear cross-group tendencies or trends. Rather it shows that groups engaged with a PSM respond in a complex and individual way. TTM set out to gain a deeper understanding of the variations between groups – demonstrating significant differences in group behaviour both as observed and as self-reported. TTM*e*, applied rapidly by researchers with minimal time for learning about its use, provides similar insights. To return to White quoted early on in this paper:

"there is very little evidence with regard to whether PSMs are useful or whether one particular method is better than another or, indeed, better than doing nothing" While our initial results are not conclusive, we argue that the Task 2 and Task 3 assessments of group work provide greater scope to assess the value of the PSM and the ways in which group dynamic can impact (or not) the process of PSM work.

## 6. Discussion

The use of PSMs has been widely reported but is idiosyncratic in that each encounter is unique, each social context is unrepeatable and each human group interaction is a 'one-off'. This realisation frames our work and amplifies the need for means to understand the unique factors at work behind each PSG. Our research was based on a very small sample of 18 groups and the analysis of method does not take into account the group composition or the flux of the groups members variable contributions over the workshops. We are interested to know more about the relations between groups undertaking tasks and the dynamics of these groups and if the adapted method could be applied rapidly by non-specialists to aid in understanding group problem solving. If the method was robust it might be possible for groups to apply it themselves – to act as their own facilitators and evaluators – and this in turn could improve group self-understanding and have implications for improving participation and deliberative democracy. A test of our approach was to see if the one member of the research team could lead the method application and teach the other two members of the team in the two days prior to the first workshop and whilst the research was in process. Our experience was that the team appeared to cope well with the learning gradient. The experienced member of the team led on all group work processes and the two non-experienced members quickly learned to apply BECM as an observation technique and could fully engage in the critical, triangulated appraisal of the group dynamics and outputs during and at the end of each day. It is true that facility with the TTM*e* process improved with practice and it was also apparent that early triangulation

conversations were often lengthy joint learning exercises whereby the team discussed in great detail why certain attributes of behaviour or aspects of the outputs of the groups were considered to be of more or less significance; and that these conversations grew easier and were undertaken with brevity as confidence increased. Nevertheless, the research team felt it coped well with its relative inexperience with the elements of TTM*e* and that the adapted version posed no specific issues in terms of complexity. Of course, this experience would have been significantly altered if there had been no prior depth of understanding of the method in the research team.

In observing the group work various 'common sense' observations can be made.

- No participants departed early and there were no obvious points of open conflict - all participants seemed to enjoy the process
- Useful outcomes emerged from Task 1 – reflections on policy and indicators
- The artefacts resulting from the workshop were colourful and interesting.

Supporting these observations it would seem a desirable consequence of the TTM*e* if all the three measures showed a strong correlation, that people who reported enjoying the dynamics created good solutions and presented positively, but our findings suggest reasons to argue that more lies beneath the common sense observation and that the kind of simple correlation suggested above occurs rarely and is questionable anyway. Rather, it could just as justifiably suggested that an uncomfortable group experience might be key to forming a viable PSG.

The BECM basis of Task 3, and its inbuilt similarities to Task 2 made comparisons across Tasks easier to conceptualise but this was as much a function of the simplification of Task 3 as much as it was due to the improvement of fit between Tasks 2 and 3 in TTM*e* as opposed to the use of SYMLOG as the grounding for Task 3 in TTM. TTM*e* is a more internally coherent methodology in Sjovold's terms, no longer conflating positivist and interpretivist strands of social analysis on Task 3. Our interpretivist analysis of the outcomes of Task 3 are on-going and it is certain that the BECM format of the Task lacks much of the positivist precision and statistical scope of SYMLOG, nevertheless it does allow the research team to note the unseen and unrecorded points of issue to the teams. It is clear that what could otherwise have been seen as poor to good outputs (noted in Task 1) from good to very good group dynamics (observed in Task 2) is a simplification of the output and group dynamic

situation. Task 3 gives us more depth and more to think about. Groups which produced good outputs had significant issues at times. Groups which claimed to be internally consensual produced poor output. This deeper understanding of the group, invisible to the observer of dynamic, informing of the potential benefits (for example) of a conflicted group in terms of still producing a good Task 1 outcome, remains to be more fully assessed but promises to provide a useful means to gain further insights.

Building on this assessment of Task 3, we have noted that we were interested – following Smith 2001 - in the "deeper and hidden meanings" which TTM*e* might reveal. This was in part because we wanted to gain some sense of the issues below the surface which some PSGs experience. As noted in the overall outcomes section, our blend of Tasks 2 and Task 3 in particular allowed us to gain more understanding of the characteristics of certain groups and their output. This is an area we continue to explore but it provides us with a pointer and clue as to where certain groups may be benefitting or suffering in terms of the impact of the group dynamic on the output.

Ideally we would have liked to know more about how effective PSGs can be encouraged. More could emerge from a deeper understanding of group behaviours. For example, Groups 3 and 11 performed very well overall. It would be interesting to further analyse the groups' function to assess what qualities might be replicable in troubled groups. Similarly, Groups 5, 16, 17 and 18 performed poorly at Task 1 and yet had healthy dynamics by external and internal review. Could a different PSM maximise the positive group dynamic and allow a more functional PSG? Might our analysis suggest that there are qualities of goodness of fit between the PSG and the PSM for groups 3 and 11 which were absent in groups 5, 16, 17 and 18?

In the interpretation of group work it is easy for researchers to be seduced by apparent "success". For example, a busy group with a range of outputs in terms of diagrams might be considered to be such a success. Such a group which also claims to be broadly happy with the event could be argued to be even more successful. These are readily available outcomes from Tasks 1 and 2. This form of naïve "successfication" can be easily understood and accepted. In these terms, without the results of Task 3, we might have considered our own PSGs to be a success. It is only with the additional insights of Task 3 that we gain a sense of a deeper story and a more complex causality to the various group outcomes. TTM*e* could be argued to provide for a more thoughtful analysis and the results are, if still not bad, not as ubiquitously 'good' as a

less structured group self-review analysis might suggest. Task 3 outcomes certainly provide a pause for thought and provides a caveat to an easy perception that good dynamic = good group = good process. We see that the actual group experience is richer and more complex.

We noted at the outset of this paper that the PSM applied in Task 1 is not intended to be a fixed item in the methodology. Our (suggested but yet to be tested) observation is that many PSMs, consistent with a learning cycle approach, could be applied in the space provided by Task 1. In fact, given the universal problem structuring nature of these methods and their explicit focus on social and ethical issues, Task 1 would appear to us to be a fluid opportunity to apply and test a range of different PSMs.

The data from Task 3 shows many people struggled but we don't know whether this was just a stage and that the group could "mature" and work well together or whether these people would struggle all the way to the end. This suggests, that in developing TTM we may need additional observational work and perhaps some interim self-reflections to show the evolution of the dynamic process capture in Task 3.

Finally, following our research we are deeply sceptical when we meet with claims of 'success' from PSM facilitators – if such claims relate solely to observation of group process and assessment of group output. This might appear quite surprising to many PSM practitioners.

## 7. Conclusions

In this paper we have set out our assessment of the application of the Triple Task method as a means to better understand group work with PSMs. This is against the background of Midgley et al's interest in the systemic assessment of comparative context, purpose, methods and outcomes among PSMs. Midgely is concerned with comparative PSM assessment. We are concerned with specific PSG/ PSM assessment. TTM allows groups to be more deeply assessed in terms of the context of their own dynamic (in Task 3), in their purpose as understood in their deliverable (in Task 1) and in the methods and outcomes applied and achieved (in Tasks 2 and 1 respectively). Our assessment of the specific value of TTM feeds into Midgley et al's comparative work but this is of secondary importance to the primary value of the analysis of TTM*e* as a PSG/ PSM assessment method.

As shown in Table 3 and discussed in the previous section, there is value in engaging with insightful approaches to evaluating PSGs using PSMs because this evaluation can tell us unexpected things about the relationship between group dynamic, group output and group self-assessment. A 'good' PSG may not be what we think it is and 'poor' PSG behaviour may still result in powerful and useful outputs. Simply put, PSG assessment such as that shown by TTM*e* are necessary in order to improve the understanding of the significance of PSM application and to gain more insights into the drama behind group behaviours and how this impacts on what the group achieves.

The research described in this paper makes the case that TTM*e* (and variants of it – based on a multi-perspective assessment of output, dynamic and self-evaluation) provides capacity for researchers, without psychodynamic training or a grasp of the original TTM, to understand the complex and unexpected interactions between PSMs and PSGs. From this knowledge we can proceed to a more empirical evaluation of the value of PSMs in PSG contexts.

We also suggest that Problem Structuring Groups have unique modes of operation and we might think of this as a unique *group signature* which can be identified and evaluated by TTM*e*.

This research team has more progress to make in the assessment of the current data and the development of a larger data set upon which more fundamental conclusions can be based. We would also strongly encourage the use of the TTM*e* approach with PSMs other than Imagine operating as Task 1. For example, it would appear to this research team a range of PSMs including Soft Systems Methodology, SODA, Agile or ETHICS forms of analysis could all be undertaken as Task 1 with Tasks 2 and 3 adapted to lock into the activities and outputs of the PSGs. To some extent we would see Task 1 as almost endlessly replaceable with alternative PSM approaches and we see no reason why comparatively 'hard' approaches could not be treated in this way along with the more 'soft' ones of which Imagine (as applied in this research) represents.

Given our experience it would seem clear that methods like TTM*e* can be applied in complex organisations which are attempting to gain greater insight into group work processes. The method can be applied by facilitation teams of mixed experience and from a compilation of the results of PSG processes a deeper understanding of the

value of PSMs in group processes could be developed. It would be interesting to compare and contrast the groups combined performances on a single 'field diagram' which would represent and compare the groups visually.

We seek to organise further analysis based upon the current TTM*e* model and hope to construct a significant database of PSGs using this methodology. Our ambition would be to develop a rapid single point of analysis relating to the outcomes of TTM*e* so that the data informing the three analyses is captured and the obvious relationships between the three tasks identified. However, a detailed and qualitative assessment would also be needed. The nuances in the data and the unpredictability of the relationships between group dynamic and group output are too various to ever allow for an analysis based upon a tried algorithm to be adequate on its own.

Our suggestion is that, even with the undeniable issues which any assessment of group work (group size, commitment, task orientation, focus, etc.) TTM forms of analysis provide a potential for greater evidence based understanding of the comparative value of PSMs  and more generally – "to provide a method by which the social world is not only investigated, but may also be engaged" (Lury & Wakeford 2012 page 30).

Finally, there is a crucial interface between individual, group and method and we want to understand that. This is what our research is aimed at. If we can understand the reasons for PSM/PSG success and failure, we may understand better what are the constituents for a resilient, problem structuring society fit to meet the complex issues of the 21st Century.

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