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Triple Task and the Philosophers Stone: discovering a methodology for systemic and reflective participation

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Abstract

The European Union Framework Package 7 project POINT (Policy Influence of Indicators) is exploring the use of indicators in several domains (most specifically

sustainable development) in order to see how their value and ultimate usefulness can be maximised. One key aspect of POINT is to assess the ways in which groups and communities work to gain greatest use of information. Using an innovative methodology called 'Triple Task', the authors are applying a three cornered approach in order to gain an understanding as to how groups work, how they assesses themselves and how they appear to function from an external perspective. In this paper, the three stages of Triple Task are described and explored. Task One is effectively an adapted 'soft systems' approach, encouraging a group to work together on problem identification and action planning. Task 2 is a reflective, 'outside in', external review of group dynamics which makes use of the 'BECM' matrix for group systemic assessment first developed by the Systems Group at the UK Open University. Task 3 is an 'inside-out' self-reflective group analysis applying the well-known SYMLOG method.

By use of a tri-analysis involving both qualitative and quantitative approaches, the authors show how during Triple Task managed events a 'story' emerges of group learning and development and, how a potential diagnostic tool for educating purposeful group behaviour has emerged. The research is in its early stages, but following the analysis of numerous groups from a range of sectors from across the European Union the authors are gaining clarity over what features are most consistent between purposeful group behaviour and group makeup. This is leading towards the development of a 'Triple Task' heuristic device for measuring and even predicting the systemic and reflective capacities of specific groups and communities and this could in turn result in means for improving participative effectiveness in a wide range of social engagements. .

Keywords: Triple Task, soft system, reflective practice, stakeholder participation , Symlog

1. Background

Triple Task or TT is a unique form of systemic participatory action research.

It is systemic in that it applies focus to relationships between and within groups.

(Bertalanffy 1968; Checkland 1981; Senge, Ross et al. 1994; Ackoff 1995; Flood 1998)

It is participatory in the sense that not only does it attempt to arrive at answers to

research questions but also tries to understand what stakeholder held factors may

have been at play in arriving at those answers. (Slocum and Thomas-Slayter 1995;

Chambers 1997; Stowell, West et al. 1997)

It is Action Research (AR) .by involving work within and with groups of stakeholders

(Warmington 1980; Reason 1994; Reason and Heron 1995; Heron 1996)

The synergistic combination of these three attributes make TT an advance on many other participatory techniques which are more focussed on delivering outputs (possibly by representing an apparent 'consensus') and less concerned (if at all) on the dynamic behind that 'consensus' and how the process may have influenced what was produced.

Participatory research takes many forms but the underlying philosophy is that all those involved - be they 'researcher' or 'researched' - are involved in the design of a research process as well as the interpretation of findings. Power should be shared rather than being concentrated in the hands of a researcher. As a result the very process of doing the research can provide many insights and help bring about positive change. Hence the term 'action research'; a research process that catalyses action.

Many participatory action research methods stop at the point where outputs have been achieved, with no attempt to appreciate the dynamics that may have been at play within the group to arrive at those outputs. Therefore while it is likely that within each group there will be some variation in perspective, as well as the meaning of terms such as 'effectiveness', participatory techniques have a tendency to hide this and provide (an often incorrect) appearance of apparent consensus (Githens 2009). Unlike many other approaches to action research, TT begins with an

assumption that it is not only what groups achieve while working together that matters but also the factors at play which have allowed them to get to where they have arrived at. The latter may be multi-faceted, of course, and include the context within which members of the group work and their profession. In addition to these factors is the group dynamic; the way in which the group functioned. TT assumes that an understanding of this maelstrom of influence can help with an understanding as to why insights were arrived at and thus help with an appreciation of variation that may be seen between groups. Until now this association has usually emerged in an anecdotal form. Experienced workshop facilitators can often 'tell' when a workshop has worked "well", whether some groups have been more insightful than others, whether the dynamics within some groups or the background of the individuals within those groups have hindered or helped their process of discovery and so on. Indeed if a team of facilitators are involved in a process they often schedule time at the end of each session to discuss events and outcomes and comments such as the following are often heard;

"Group X has had problems with its internal dynamics – no wonder the outputs were unimaginative."

"Group Y was dominated by Z but the others in the group seemed to be happy with that and they certainly had no trouble producing expected results."

"Group Z has worked very well together with lots of discussion and animation. Their outputs are imaginative and insightful; they have raised points I have not heard before."

Even if the workshop is facilitated by a single individual it is inevitable that he/she will observe such dynamics and consider how they relate to outputs, and the experience will be taken to other events that they may be involved in. Thus there would appear to be a clear learning opportunity for all involved, and it is tempting to draw out an association between outputs and process. TT starts from that point and

attempts to formally elucidate what the learning opportunities and associations may be. Eventually, and in a generalised sense, it may be possible for our research to provide a typography of groups with 'outputs' and 'process' as axes and this may perhaps allow the identification of clusters which link these two variables (taking into account changes over time and group makeup). The key assumption here is that prior experience in action research can help inform facilitators in such ways as to enhance the effectiveness of the process. As pointed out above, this already happens either through de-brief meetings of facilitators during/after a workshop or through individual experience, and TT provides a further enhancement of that learning. Critically, the typology provides a device for facilitator-learning (be this facilitator a member of the group or an external researcher).

This paper describes an outline of the TT process and provides a taste of a typography that may result. Our research has a number of aims, but key among them are answers to the following questions:

- Do purposeful groups always produce the most insightful outcomes?
- Do conflictual groups produce incoherent results?
- What makes a 'good' group?

The paper will begin with an outline of the TT process and follow that with an illustration of the steps and some results from a specific project; POINT (Policy Influence of Indicators), a project funded under the European Union Seventh Framework Programme (FP7/2007-2013; grant agreement n° 217207). POINT is a pan-European project involving researchers from across the Union, and its explicit objectives are to:

“Design a coherent framework of analysis and generate hypotheses on the use and influence of indicators, by pulling together the disparate strands of research and practical experience of indicator use and influence, focusing broadly on European policies, but with a special emphasis on fostering change towards sustainability.

Test the analytical framework and the hypotheses on specific cases of sector integration and sustainability indicators, as well as composite indicators (indices) in order to:

identify the ways in which indicators influence policy, including the unintended types of influence and situations of 'non-use'; and

Identify factors that condition the way in which indicators influence policies, including the technical methods of production, the process and the outcome of designing and producing indicators, the type of indicators, expectations of stakeholders involved, the role of the organisations preparing and disseminating the indicators, as well as general socio-cultural and political background factors.

Recommend ways to enhance the role of indicators in supporting policies”

(POINT project document see: <http://point.pbworks.com/>).

TT is specifically related to Stakeholder analysis within the project. This Stakeholder work package was specifically intended to undertake workshops:

“Seven in-country workshops will be organised A stakeholder-led analysis will be conducted in each workshop, resulting in a report based upon a meta-analysis of the findings from the workshops. One objective of the workshops is to foster peer group learning whereby the participating indicator practitioners will learn from each other just as much as researchers learn from the practitioners.”

(<http://point.pbworks.com/WP6+-+Role+of+stakeholders>)

Please note that this is still very much work in progress and details of POINT and the analysis of the findings of that project will not be provided in this paper. Instead the focus is very much upon using the POINT results to explain the rationale behind TT.

2. Triple Task Process

TT involves three processes or 'tasks'. Task 1 generates a groups answers to research questions while Tasks 2 and 3 are designed to explore the ways in which the groups function and how this influences their analysis both in terms of what emerges under Task 1 but also in terms of the variation one might see between members of the group and how they are able to influence the dynamic. Triple Task is also undertaken in one of two 'modes'. In mode 1, from the perspective of participants they only experience Task 1; Tasks 2 and 3 are largely invisible to them and are employed to help generate the typology and insights for facilitators. The findings from Task 2 and 3 are not necessarily fed back to the participants involved in the research. However, in the mode 2 version of TT participants from the groups involved in the research process have full access to all the group's data and (resulting from this) the diagnostic tool for group dynamic improvement from the 'inside out'¹. The POINT project operated in mode 1 and that is the process outlined here.

2.1 The Task 1 Process

This is derived from systems approaches, specifically a combination of the Soft systems methodology/review of groups' assessment of a variety of tasks and issues (Checkland and Scholes 1990; Haynes 1995; Bell 2000; Checkland and Jayastna 2000; Mingers 2001; Winter and Checkland 2003). In TT SSM is blended with worked/practitioner approaches derived from Participatory Appraisal methods (Chambers 2002; Bell and Morse 2004; Creighton 2005; Barnes, Newman et al. 2007; Gottschick 2008) and elements from the psycho-dynamic tradition – e.g. Bridger's Double Task

¹ The authors are aware of the danger of a research method presenting as a means to extract data and not share findings in partnership between researcher and researched. The mode 2 version of TT will help to address this concern. Much more will be said about this in subsequent papers.

(Klein 2001; Klein 2006; Bridger 2007). Task 1 is the main element of TT in the sense that it is the task which groups directly engage in and thus is the most visible to them and which provides the insights with regard to the research questions (what has been done, by whom, why, how is this assessed in terms of effectiveness?). For convenience, Task 1 is subdivided into three main steps as set out below:

Scoping: A Rich picture (Figure 1) is employed as a means to capture 'stories' from participants. The Rich picture is an important element of Task 1 and each group begins with a pictorial representation of the significant components and linkages of the system being explored in the research. The picture should represent a shared understanding, although in practice it is perfectly possible for a group to be dominated by an individual or individuals who impose their own vision from the onset or for a group to be fragmented with individuals drawing their own personal insight without any regard to the others. Whatever the coherence of the group, the Rich picture is a mental map and thus is an essentially qualitative analysis and participants are encouraged to use the minimum of text. Figure 1 is an example of a Rich Picture produced by one of the POINT groups in Malta. The groups were asked to explore the factors which limit/enhance the use of Sustainable Development indicators in Malta, and the picture is there summary of the issues involved. It takes the form of a road down which indicators must travel from creation towards the top of the picture to eventual use towards the base.

[Figure 1 about here]

Following from the Rich Picture the participants are encouraged to draw out major tasks and issues which form a central concern to them. These are then organised in terms of precedent and priority. Groups of linked tasks and issues are 'clustered' into indicative systems of concern (Systems of Challenges; SoCs). This systemic process binds the group together, forges collective understanding and provides a legitimising process of further discovery.

Visions of Change (VoCs): Moving from a shared understanding as to the challenges this step encourages the groups to explore what changes are required in order to address the SoCs. In other words, what needs to be done? Groups may derive a number of VoCs rather than only one, but the emphasis should be upon what the group deems to be more important and achievable.

Desired change: Groups are encouraged to set out what practical steps are required to bring about their Vision of Change. This step is supplemented by activity planning and scenario setting: 'How might things look given certain kinds of change?' The latter employs another Rich Picture – a futurescape; providing a sort of 'before' and 'after' story when placed next to the rich picture that arose out of Step 1. It also provides the group with the potential to backcast from the potential scenario. Participants not only enrich their own understanding of what is possible but act as vectors of change for colleagues.

2.2 The Task 2 Process

Task 2 is an 'outside in' review of the group dynamic akin to what usually happens (consciously or unconsciously) with facilitated workshops. In effect it is the researcher/ facilitator's assessment of the group process using a matrix approach originally developed at the Open University and known as BECM (used in, for example, the Open University Course: 'Managing Complexity: a systems approach' (Open University 2000)). BECM stands for Being, Engaging, Contextualising and Management. BECM can be used as a form of Socio-Analysis and is related to the psychoanalytic tradition.

Essentially, the group is periodically reviewed (in Mode 1, or in Mode 2: engages in periodic review) in terms of the Being of the group (how is the group in terms of its own self-reflection – from tyranny to consensual democracy); of the groups Engaging (how is the group working on the issue in hand?); Contextualising (the group's ability evidence of applying it's understanding to the issue) and Managing (how the group organises itself). Each of the BECM criteria is assessed / self assessed in terms of a

seven point scale. A group's progress on this scale can then be reviewed over the research process period.

Task 2 is in essence a formalisation of what a facilitator (or indeed group members) will realise from observation.

2.3 The Task 3 Process

This is the 'inside out' review of the group dynamic – stakeholders' assessment of their group process. Task 3 employs the Symlog (A **SY**stem for the **M**ultiple **L**evel **O**bservation of **G**roups) methodology which is outlined at www.symlog.com. Symlog has been applied in a wide range of situations and examples can be found in Park (1985), Wall and Galanes (1986), Nowack (1987), Keyton and Wall (1989), Hurley (1991), Blumberg (2006). It comprises the completion of a questionnaire of 26 questions by each member of the group. The questions are designed in such a way as to draw out that individual's view of the group as well as themselves. The two questionnaires employed in TT are shown as Table 1. In the POINT project members of each group were asked to complete a questionnaire at the end of each day.

Tasks 2 and 3 represent different ways of looking at group behaviour and there should be an association between the visions. Previous studies have shown that such perspectives can overlap although there are also points of difference. Isenberg and Ennis (1981) for example, compared the results of an analysis based on Symlog with those from Multi-Dimensional Scaling (MDS) which derives dimensions based on a perceived similarity of group members. They found that Symlog and MDS had statistically significant overlaps. The authors have done similar analyses with Symlog (largely quantitative) and BECM (qualitative) and there are also statistically significant overlaps. Difference between the outcomes of BECM and Symlog are to be expected as, after all, one is based upon the opinion of the facilitator (an outsider) and that opinion will entirely be founded upon what he/she observes or hears. By way of contrast, Symlog will be grounded on each individual's intimate experiences of working with the group, and such opinions may vary between

members. Thus BECM is a sort of overview based upon a superficial appreciation of group performance while Symlog will generate a more detailed but variable set of insights.

In the POINT project the results of Symlog are translated into a numerical score and the average score is taken over the two days. The details need not be provided here but it is possible to run a 'best subset' regression analysis to check which components of Symlog best match those of BECM. An example of this is provided as Figure 2 (again taken from the results of the POINT project). Each row of the analysis table represents a statistically significant fit of some of the 26 Symlog characteristics (coded as U, UP etc.) to BECM, with the shaded row being the 'best' fit (lowest value of Mallows statistic). The characteristics represented in this 'best fit' model are certainly those that an external facilitator is likely to observe and be reflected in BECM.

[Figure 2 about here]

3. The TT Mode 1 Model

In an active research context there are a range of possibilities as to the make-up of the groups that could engage in TT (or indeed any group-based participatory process), and decisions are often made after prior literature reviews. For example, there may be 5 to 6 workshops spanning a number of locations around a given geographic spread, chosen because they may be expected to provide a range of answers to the research questions. Alternatively the focus could be on one place with workshops held across a range of different types of stakeholder in that place. The former would provide a more geographical spread of insight while the latter would allow for more in-depth and socio-economic stratification.

Each TT Mode 1 AR Intervention (ARI) usually comprises some 20 or so people divided into 3 to 4 groups, with the nature of the division depending upon the outcome of prior research. For example, a workshop may comprise individuals from a community group in which case they would be asked to divide themselves into 3 groups and asked to address a particular question. Each ARI would last 1 to 2 days. The information collected from the ARI would be analysed with qualitative techniques developed by Bell and Morse (2009). One of which is the 'Triple Task' field diagram (Figure 3) which sets out findings from the three strands of Triple Task plotted against each other. The horizontal axis is used for Task 1 and the vertical axis for Task 3 (Symlog; self analysis of group performance). Groups would be represented by circles within this 2 dimensional axis (not shown in Figure 3), with the size of the circle for each group is used to denote BECM (Task 2).

[Insert Figure 3 about here]

The quadrants of the TT field diagram in Figure 3 can be represented (albeit) simplistically as shown in Figure 4. If a large number of groups are plotted into the TT field diagram then it may be possible to identify patterns in terms of placement. In effect the four quadrants represent a generalised typology of groups and this allows questions to be asked as to why groups are where they are, and how this could potentially translate into 'action'. This can be thought of as a locational form of analysis. As an extension of this typology it may also be worthy to consider assumed transects (or vectors) within any cluster of groups and what may rest behind it; a directional form of analysis. A cluster of groups occupying one or more quadrants may suggest an orientation pointing in a direction within the space. Again, this may suggest a relationship between the quality of outputs from Task 1 and the way in which the group worked and in turn this could provide some clues as to how the group-led analysis may translate into action. Thus, in effect there are two questions of relevance to the analysis:

LOCATIONAL: Do groups from a similar background appear in the same place?

DIRECTIONAL: Are there vectors which can demarcate the direction of a cluster of groups in the 2 dimensional space, and if so is this also related to background?

This is all somewhat speculative at present, as will be discussed later, but patterns within the Triple Task field diagram may provide some useful indicators.

[Insert Figure 4 about here]

To compliment the four quadrants (locational analysis) of the TT field diagram shown in Figure 4, Figure 5 provides a few hypothetical examples of transects (directional analysis) that may occur between groups in the field diagram. Figure 5(a) may be regarded as perhaps the 'expected' transects where good group performance equates with good quality Task 1 outputs. Perhaps this implies that these groups are most likely to translate their analysis into action. Figure 5(b) is a set of transects which if found spanning the length of each transect may imply no linkage between group performance and quality. Figure 5(c) is perhaps the most exciting of all; here the relationship is inverse of what may be expected suggested that conflict and disharmony (poor group performance) actually generates good quality outputs. How this may translate into action is uncertain. The dynamic, while productive, could have generated an off-putting experience and members of the group may be glad to see the end of the process. Alternatively the intensity of the dynamic may generate long-lasting influences.

[Insert Figure 5 about here]

A plot of many groups in the field diagram could – of course – encompass all of the vectors in Figure 5 and can really only be seen as clues rather than an attempt to analyse in any empirical or statistical sense. Hence the use of the term 'vector' (or transect) to signify a direction rather than regression. However, it is noteworthy that each transect does not curve back on itself – it only goes in one direction. Thus groups cannot show an improvement with quality of Task 1 outputs with increasing

group performance with an inflection point occurring at some point after which quality of Task 1 outputs declines with increasing group performance. A single transect can only travel in one direction.

Triple Task in its Mode 1 format is Action Research in terms of its orientation and the researcher/ interpreter has to be very careful not to take the field diagram too literally. Generalised typologies and spatial orientation of clusters are useful only in so far that they can allow practitioners to identify potential patterns and thus enhance the action research experience. It is important not to see such workshops in isolation of prior AR experience. In addition to this it is often the case that each workshop will be informed by a prior review phase and provide valuable insights for following, in-depth Action Research components. This could be at a number of levels. Firstly, the experiences gained from those involved in TT might help with selection of who to include in AR. Secondly the insights from TT could provide a basis for some focus within Action Research rather than start with a clean sheet.

4. Triple Task Mode 1 in action

At the time of writing the TT research in the POINT project is in its synthesis phase and a field diagram for 16 groups who took part in the workshops is shown as Figure 6. The groups are given the labels A, B etc. following in sequence from the dates of the workshops (Table 2). Groups can predominantly be found in three of the TT field diagram segments and there are groups in unexpected places, notably the strong showing in the 'conflict maverick' quadrant. Various transects of the forms shown in Figure 5 can be drawn through the groups and the suggestion here is that various assumptions can be made as to how quality of output is related to group performance. Some seem to imply a paralleling (Figure 5b) while others are lined up in an expectation of 'so what to the well oiled machine' (Figure 5a); but the latter is only to a point given that the transect does not fully enter the 'well oiled machine'

quadrant'. Care does have to be taken in assuming that transects extend beyond the cluster of groups they are dissecting.

However, it has to be acknowledged that the vectors drawn through the clusters are subjective judgements rather than being 'statistical'. Together with the locational information the directions are meant to stimulate thought. For example, based upon the TT field diagram in Figure 6 it is possible to provide some preliminary answers to the questions set at the start of the paper:

Do purposeful groups always produce the most insightful outcomes?

Not necessarily so. Groups on fixed purpose often produce results which are dependable but pedestrian. They find what they expect to find and report the same.

Do conflictual groups produce incoherent results?

No. Conflicted groups have a very good chance of producing insight and step change vision .. so long as their internal conflict can be harnessed.

What makes a 'good' group?

Contained conflict/ dis-function [dissymmetry and distributed leadership]. These qualities will tend to produce conflict and at the same time, insight.

[Insert Table 2 and Figure 6 about here]

Discussion

TT attracts much the same critique as participatory action research in general. It is open to the charge that dominant individuals within groups can heavily influence the outputs and that the process can hide much diversity in perspective. While the latter

is included in the earlier stages of the process the tendency is to focus on relatively few 'priority' issues and tasks. The inclusion of Task 2 and 3 help with an elucidation as to how and why a group may have travelled the road it did but they do not seek to interfere with the direction the group has taken; all these tasks do is monitor and help explain what occurs so as to aid facilitators – in the mode 1 version applied in this research. In that sense Task 2 and 3 in mode 1 TT are reactive rather than being immediately proactive. Of course the lessons which have been learnt will benefit the learning of the facilitator and thus over time the experience will enhance the effectiveness of action research. There is in effect a time lag between the process followed by the groups and the ability to translate insights which may have arisen from their group functioning into an immediate 'gain' for them. Hence the ultimate aim of the researchers is to develop the mode 2 form of TT which will help achieve such immediacy of impact. Indeed, associated with this issue is the fact that as with many such participatory-based processes TT in the POINT project has been initiated from outside the community engaged in its practice. This is not unusual of course, but does raise important issues of power. Facilitators can consciously or unconsciously bring influence to bear on the process and thereby direct it in directions which they have predetermined. Bots et al (Bots and van Daalen 2008) describe various means to include stakeholders in the research process (in their case modelling in Natural Resource Management). Citizen participation in research is well understood – Krutli et al (Krutli, Stauffacher et al. 2006) defines five levels: information, consultation, active involvement, collaboration and empowerment. Bots et al articulates these into four participation modes: no participation (NOP); Individual stakeholder engagement (IND); homogenous stakeholder engagement (HOM) and heterogeneous stakeholder involvement (HET). Although there is nothing preventing a community from making a decision to engage in TT and facilitate the process internally it has to be said that this is not the norm. Hence for the most part the reality is that Triple Task has been undertaken in a Mode 1 process, facilitated by outsiders on homogenous groups of stakeholder with the information from Tasks 2 and 3 used to help the facilitating researchers build their knowledge-base. This equates roughly to Bots' HOM and Krutli's collaboration but not empowerment. It is

to hoped that the Mode 2 of TT will provide participants with greater freedom to develop their own group processes and improve their group dynamic through a process which may often be dysfunctional and conflicting involving heterogeneous groups of un-like minded stakeholders. In this sense, mode 2 TT would aim to be (in Bots and Krutli's terms) HET/empowerment type.

The preliminary insights from the POINT project can really be discussed here in any detail given that the paper has not provided much detail over process. However, the insight that groups in conflict can generate new insights has resonance with ideas put forward by Koestler (1964).

*"When two independent matrices of perception or reasoning interact with each other the result .. is either a collision ending in laughter, or their fusion in a new intellectual synthesis, or their confrontation in an aesthetic experience. The bisociative patterns found in any domain of creative activity are tri-valent: that is to say, the same pair of matrices can produce **comic, tragic or intellectually challenging effects.**"*

(Koestler 1964 page 45, our emphasis.).

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Table 1. Symlog questionnaire (group and self)

	Questions applied to group	Questions applied to self
1	active, dominant, talks a lot	material success and power
2	extroverted, outgoing, positive	popularity and social success
3	a purposeful democratic task leader	social solidarity and progress
4	an assertive business-like manager	efficiency, strong effective management
5	authoritarian, controlling, disapproving	a powerful authority, law and order
6	domineering, tough-minded, powerful	tough-minded assertiveness
7	provocative, egocentric, shows off	rugged individualism, self-gratification
8	jokes around, expressive, dramatic	having a good time, self-expression
9	entertaining, sociable, smiling, warm	making others feel happy
10	friendly, equalitarian	equalitarianism, democratic participation
11	works cooperatively with others	altruism, idealism, cooperation
12	analytical, task-oriented, problem-solving	established social beliefs and values
13	legalistic, has to be right	value-determined restraint of desires
14	unfriendly, negativistic	individual dissent, self-sufficiency
15	irritable, cynical, won't cooperate	social nonconformity
16	shows feelings and emotions	unconventional beliefs and values
17	affectionate, likeable, fun to be with	friendship, liberalism, sharing
18	looks up to others, appreciative, trustful	trust in the goodness of others
19	gentle, willing to accept responsibility	love, faithfulness, loyalty
20	obedient, works submissively	hard work, self-knowledge, subjectivity
21	self-punishing, works too hard	suffering
22	depressed, sad, resentful, rejecting	rejection of popularity
23	alienated, quits, withdraws	admission of failure, withdrawal
24	afraid to try, doubts own ability	noncooperation with authority
25	quietly happy just to be with others	quiet contentment, taking it easy
26	passive, introverted, says little	giving up all selfish desires

Table 2. Summary of the POINT workshop groups

Workshop topic	Location	Workshop dates	Number of participants (groups)	Groups
Sustainable Development	Malta	3 – 5 th March 09	11 – 14 (2)	A B
Sustainable Development	Slovakia	15 – 18 th March 09	15 - 23 (3)	C D E
Agriculture	Slovakia	15 th and 16 th April 09	18 (3)	F G H
Sustainable Development	Finland	14 th and 15 th September 09	13 (3)	I J K
Transport	Denmark	26 th and 27 th November 09	17 (3)	L M N
Energy	UK	22 nd and 23 rd February 2010	14 (2)	O P

Figure 1. Example of a Rich Picture created within Task 1. This example explores the influence of indicators in Sustainable Development, Malta

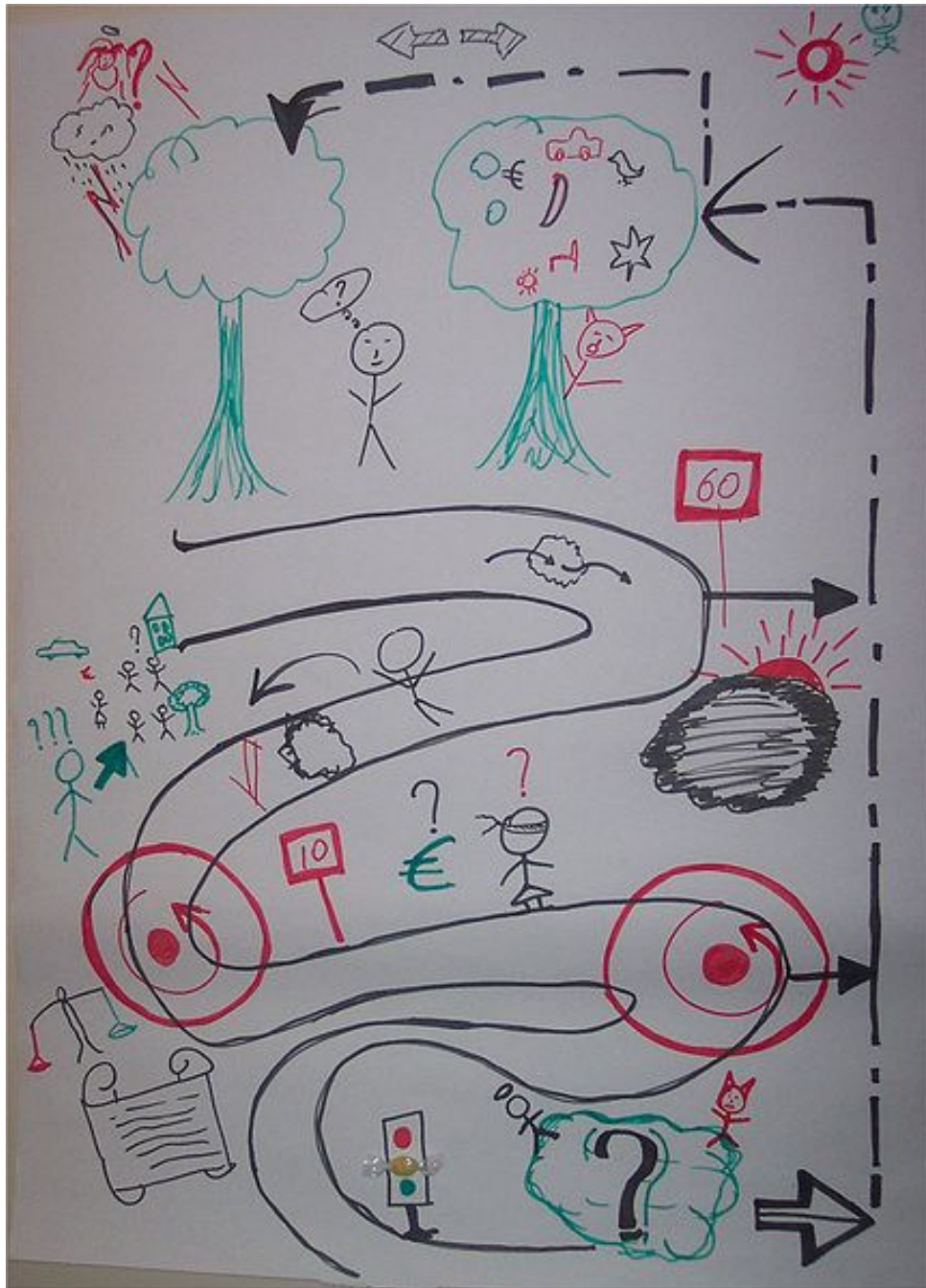


Figure 2. Best subset regression analysis for the 26 components of the Symlog questionnaire and BECM (analysis based upon all groups included in the POINT project).

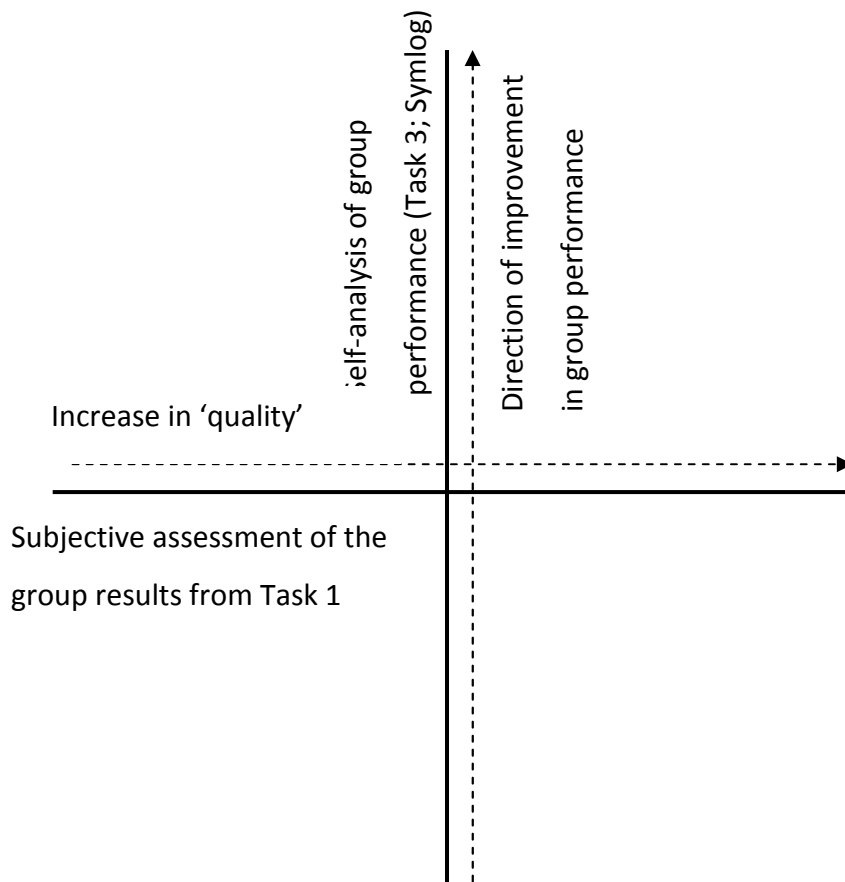
Results of Best Subsets regression (shaded line is the 'best' model)

Vars	R-Sq	R-Sq(adj)	Mallows C-p	S	U	U	U	U	P	N	N	P	D	D	D	D
					U	U	U	U	P	N	N	P	D	D	D	D
					U	P	F	F	F	F	N	B	B	B	B	B
1	21.7	19.1	90.7	0.65448												
1	19.6	16.9	94.0	0.66329			X									
2	40.5	36.4	64.3	0.58035		X										
2	33.3	28.7	75.1	0.61427		X	X									
3	47.0	41.4	56.3	0.55704	X	X										
3	46.2	40.5	57.5	0.56138	X	X										
4	55.2	48.5	45.9	0.52186	X	X										
4	54.7	48.0	46.6	0.52445	X	X										
5	61.5	54.1	38.4	0.49299	X	X		X								
5	59.8	52.0	41.0	0.50397	X		X	X			X		X			
6	67.1	59.2	31.9	0.46499	X	X		X	X			X		X		
6	65.1	56.8	34.9	0.47839	X		X			X	X		X			X
7	71.6	63.3	27.1	0.44081	X	X		X	X			X	X			X
7	70.9	62.4	28.1	0.44583	X		X			X	X		X			X
8	75.9	67.6	22.5	0.41431	X	X		X	X			X	X			X
8	75.2	66.5	23.6	0.42088	X		X	X		X	X		X			X
9	79.4	70.9	19.3	0.39244	X	X	X	X				X	X		X	X
9	79.2	70.7	19.6	0.39406	X	X	X	X			X	X	X		X	X
10	83.0	74.9	15.8	0.36462	X	X	X	X			X	X	X		X	X
10	82.2	73.7	17.1	0.37337	X	X		X	X	X	X	X	X		X	X
11	84.5	76.0	15.5	0.35664	X	X		X	X	X	X	X	X		X	X
11	84.4	75.8	15.7	0.35790	X	X	X	X	X	X	X	X	X		X	X
12	88.4	81.2	11.5	0.31586	X	X	X	X	X	X	X	X	X		X	X
12	87.1	78.9	13.6	0.33395	X	X		X	X	X	X	X	X		X	X
13	90.1	83.0	11.0	0.29981	X	X		X	X	X	X	X	X		X	X
13	90.1	82.9	11.0	0.30074	X	X		X	X	X	X	X	X		X	X
14	91.6	84.7	10.7	0.28454	X	X	X	X	X	X	X	X	X		X	X
14	91.5	84.5	10.9	0.28623	X	X	X	X	X	X	X	X	X		X	X
15	93.8	88.0	9.4	0.25247	X	X	X	X	X	X	X	X	X	X	X	X
15	93.2	86.8	10.3	0.26456	X	X	X	X	X	X	X	X	X	X	X	X
16	94.7	89.1	10.0	0.24053	X	X	X	X	X	X	X	X	X	X	X	X
16	94.2	88.0	10.8	0.25160	X	X	X	X	X	X	X	X	X	X	X	X
17	95.5	90.0	10.8	0.22979	X	X	X	X	X	X	X	X	X	X	X	X
17	95.2	89.3	11.3	0.23791	X	X	X	X	X	X	X	X	X	X	X	X
18	96.0	90.4	12.1	0.22530	X	X	X	X	X	X	X	X	X	X	X	X
18	95.8	90.0	12.4	0.23052	X	X	X	X	X	X	X	X	X	X	X	X
19	96.2	90.3	13.7	0.22650	X	X	X	X	X	X	X	X	X	X	X	X
19	96.2	90.2	13.8	0.22808	X	X	X	X	X	X	X	X	X	X	X	X
20	96.5	90.2	15.3	0.22783	X	X	X	X	X	X	X	X	X	X	X	X
20	96.3	89.6	15.6	0.23452	X	X	X	X	X	X	X	X	X	X	X	X
21	96.6	89.5	17.1	0.23600	X	X	X	X	X	X	X	X	X	X	X	X
21	96.5	89.3	17.3	0.23851	X	X	X	X	X	X	X	X	X	X	X	X
22	96.7	88.6	19.0	0.24602	X	X	X	X	X	X	X	X	X	X	X	X
22	96.6	88.4	19.1	0.24734	X	X	X	X	X	X	X	X	X	X	X	X
23	96.7	87.2	21.0	0.26062	X	X	X	X	X	X	X	X	X	X	X	X
23	96.7	87.1	21.0	0.26082	X	X	X	X	X	X	X	X	X	X	X	X
24	96.7	85.4	23.0	0.27835	X	X	X	X	X	X	X	X	X	X	X	X
24	96.7	85.3	23.0	0.27854	X	X	X	X	X	X	X	X	X	X	X	X
25	96.7	83.0	25.0	0.30032	X	X	X	X	X	X	X	X	X	X	X	X
25	96.7	82.9	25.0	0.30063	X	X	X	X	X	X	X	X	X	X	X	X
26	96.7	79.6	27.0	0.32897	X	X	X	X	X	X	X	X	X	X	X	X

Symlog characteristics associated with the 'best' subsets model

Question	Code	Characteristics
1	U	active, dominant, talks a lot
2	UP	extroverted, outgoing, positive
3	UPF	a purposeful democratic task leader
4	UF	an assertive business-like manager
5	UNF	authoritarian, controlling, disapproving
6	UN	domineering, tough-minded, powerful
7	UNB	provocative, egocentric, shows off
8	UB	jokes around, expressive, dramatic
9	UPB	entertaining, sociable, smiling, warm
10	P	friendly, equalitarian
11	PF	works cooperatively with others
12	F	analytical, task-oriented, problem-solving
13	NF	legalistic, has to be right
14	N	unfriendly, negativistic
15	NB	irritable, cynical, won't cooperate
16	B	shows feelings and emotions
17	PB	affectionate, likeable, fun to be with
18	DP	looks up to others, appreciative, trustful
19	DPF	gentle, willing to accept responsibility
20	DF	obedient, works submissively
21	DNF	self-punishing, works too hard
22	DN	depressed, sad, resentful, rejecting
23	DNB	alienated, quits, withdraws
24	DB	afraid to try, doubts own ability
25	DPB	quietly happy just to be with others
26	D	passive, introverted, says little

Figure 3. The Triple Task field diagram and interpretation



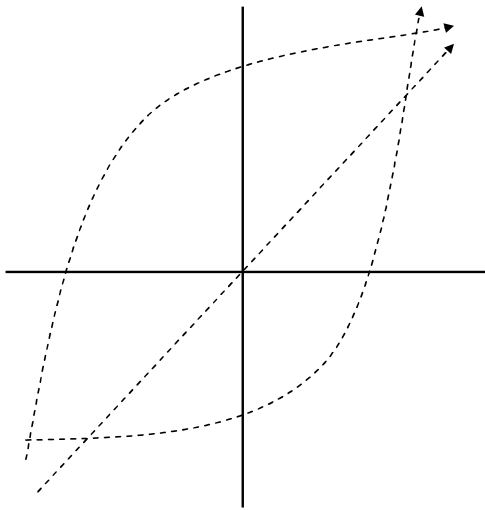
Groups are plotted as circles into this two-dimensional space, with the size of the circle representing performance as assessed using the BECM criteria (Task 2). Larger circles (filled) equate to good group performance.

Figure 4. Indicative meaning of group placement within the TT field diagram.

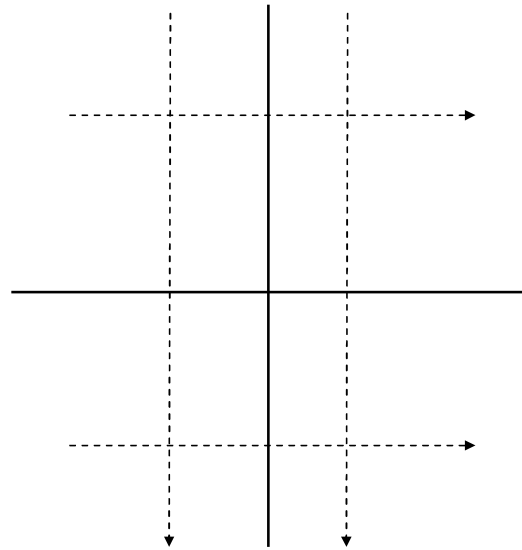
<p>Quadrant 1 “Disinterested Team”</p> <p>Expected characteristics – High group function but low quality output – is the group interested in what it is doing? Does it value the process? Possibly switched off from the process?</p>	<p>Quadrant 2 “Well oiled machine”</p> <p>Expected characteristics – High group function and high quality outputs – a well organised and engaged group of people who overcome any initial problems of the group makeup and work well on the task suggested.</p>
<p>Quadrant 3 “So what?”</p> <p>Expected characteristics – Low group function and low quality outputs – the group does not rise over any issues which it has as a divergent set of individuals. They do not engage well in the task and cannot function as the process would expect.</p>	<p>Quadrant 4 – “Conflict Mavericks”</p> <p>Low group function and yet high quality output. Very interesting group which performs well on the task despite possible conflict and issues over group membership. Here we have high output arising in part as a consequence of the problems which the group has. Does this quadrant represent the best space for novel insights to emerge?</p>

Figure 5. Some expected transects within the Triple Task field diagram.

(a) **'So what to the well oiled machine'**. The assumption here is that good group performance (as assessed by themselves and outsiders) will equate to good outputs and vice versa.



(b) **Paralleling**. No relationship between group performance and quality of the Task 1 outputs.



(c) **Disinterested to the Conflict mavericks**. Here there is an interesting hypothesis that conflict and disharmony within groups can be constructive and lead to good quality Task 1 outputs.

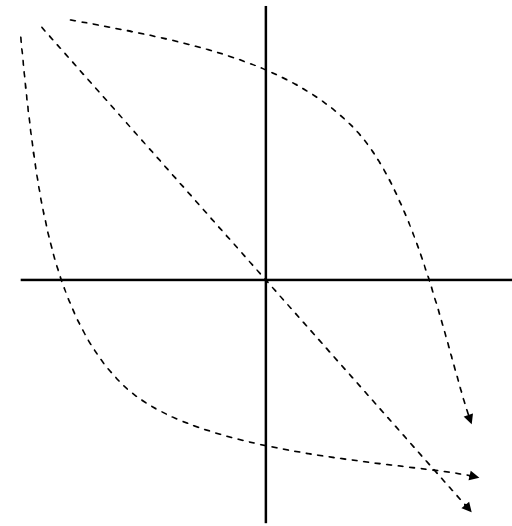
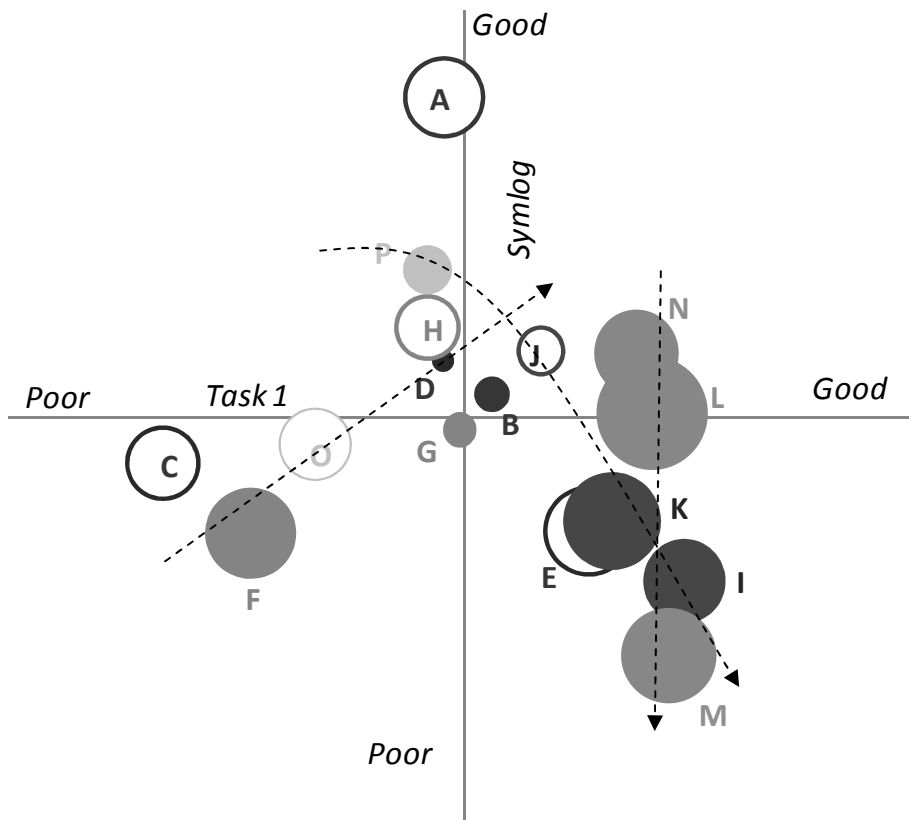


Figure 6. Results from groups engaged in the POINT project arranged in a Triple Task Field Diagram.



Letters denote results from different groups:

A, B = Malta

C, D, E, F, G, H = Slovakia

I, J, K = Finland

L, M, N = Denmark

O, P = UK

Size of each circle and whether it is filled or not is related to the BECM score over the workshop. Three vectors are shown here suggesting orientations for different clusters of groups.