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A novel approach to challenging consensus in evaluations: The Agitation Workshop

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Abstract: As researchers evaluate organisations, projects, and teams, there is a desire for a consensus from those within the organisations who are participating in the research. A common consensual perspective from a team appears to reflect an optimal state where those being evaluated have a common understanding of the current state of events within the context of their environment. The question arises, though, whether an evaluation finding consensus reflects the reality: there are a variety of reasons why a common understanding may be false consensus. Hidden behind this false consensus may be a variety of unaddressed issues which are actually the core of the problem. This paper proposes an evaluation method incorporating the principles of sensemaking and devil's advocate, where a consensus of perspectives is challenged before they are considered valid. This is achieved in a workshop where participants reflect on their own perception of reality and represent this reality in a matrix of influencing and relevant factors. The individual matrices are then combined and used to highlight disparities in the participants' perspectives through a single matrix visualisation. Discussion in the workshop then focusses on the areas, highlighted by the matrix, where differences of perspectives are identified. In effect, the consensus presented by those being evaluated will be challenged, and a new common understanding will have to be created. Problems such as groupthink can create a false consensus, and it is proposed herein that the workshop provides a mechanism for challenging this. The objective of the research herein was to determine the feasibility and potential benefits of the proposed workshop. The workshop itself is evaluated in this paper, to determine if it has value. The benefits of such a workshop are described, showing how an organisation went from a false consensus concerning problems within the organisation, to the start of a process to address the real underlying issues.

Keywords: consensus, false consensus, workshop, groupthink, evaluation, hidden, sensemaking, shared understanding

1. Introduction

Organisations are faced with increasing demands to deliver, and evaluations are used to determine opportunities for improvement. One of the most common forms of evaluations in organisations is project post-mortems, where the successes and failures of the just finished project are evaluated. These evaluations, like other types of evaluations, are not without their problems, and have been described as problematic (cf. Kwak and Stoddard, 2003, Benyon-Davies et al., 2004, McAvoy, 2006). When evaluating organisations, there is a desire for consensus from the participants as it is assumed that consensus represents the reality of the organisation because all participants agree on this reality. This aligns somewhat with Richardson's (2003, p.1625) description of psychological constructivism where "if the individuals within a group come to an agreement about the nature and warrant of a description of a phenomenon or its relationship to others, these meanings become formal knowledge." Others have noted the importance of consensus both in research and in practice: Bjorn and Morton (2005) describe how individual perspectives can have a negative impact which makes agreement difficult, while McMahon (2003) notes the importance of consensus in Agile software development teams. Authors often write about consensus as something to strive for, and regard the lack of consensus as negative (cf. Takats and Brewer, 2005, Avison et al., 2001, Wang et al., 2012, Karlsson and Agerfalk, 2009). So while it is acknowledged that consensus within a team can be positive, and give a good representation of reality, there are times when this may not be so.

Questions must be raised as to whether consensus is necessarily the optimal goal that evaluators of organisations should strive for. For example, Pfeffer and Sutton (2000) illustrate the existence of a 'knowing-doing gap', where decisions are not made rationally on the basis of related known facts, but are shaped by normative or political-cognitive influences. Additionally, discrepancies between knowledge as 'justified true belief' and actions taken by a social actor are captured by Argyris and Schon (1978) in their conceptualisation of 'espoused theories' versus 'theories in use'. 'Espoused theories' are the beliefs individuals profess as guiding their behaviours and decision making, while 'theories in use' guide actual behaviour – what intentions actually guide social actors, as opposed to what they profess guides them. "*These theories of actions are so taken for granted that people don't*

even realise they are using them" (Argyris, 2002, p.7), and worryingly most people's actual theory in use is usually different than their espoused theory: their beliefs and actions are different than they describe them as. Therefore, what individuals, or groups, describe as reality in evaluations, may not reflect reality at all: real issues may be hidden by false consensus. When evaluations are conducted in groups, further problems arise such as where "various participants attempt[ed] to justify their own position or to persuade others to that opinion" (Love, 2000, p.431). Further, research by Lavery et al. (1999) found that members of a group aggregate their judgements so as to reach consensus

One of the major causes of false consensus within organisations is groupthink, and has been shown to impact on organisations of differing sizes and goals (cf. Esser, 1998; Leana, 1985; Turner and Pratkanis, 1998): from small Information System development teams (cf. McAvoy and Butler, 2009) to the United States government (cf. Janis, 1972). In the context of IS evaluations, it is very difficult to determine or prove if groupthink is impacting on those being evaluated. By challenging all participants' consensus, it is proposed in this paper that groupthink will be challenged if it is present; if groupthink is not present, then by challenging consensus we are still ensuring that the consensus has been properly considered and any assumptions queried.

The remainder of this paper is organised as follows. The next section describes one possible method of deriving real consensus (and avoiding problems such as groupthink), while also highlighting flaws with the approach. This is followed by a description of a proposed new evaluation method involving a workshop in the context of an actual evaluation of an IS development organisation. The results of the workshop are presented, followed by an evaluation of the evaluation method itself.

2. Devil's advocate

Groupthink is defined by its originator (Janis, 1972, p.9) as "a deterioration of mental efficiency, reality testing, and moral judgement that results from in-group pressures." This is further refined as "the psychological drive for consensus at any cost" (Ottaviani and Sorensen, 2001, p.394) or as extreme concurrence seeking (Levine and Moreland, 1990; Turner and Pratkanis, 1998). For Lunenburg (2010), the problem with consensus under the influence of groupthink is the lack of alternative viewpoints, either offered or considered. When evaluating organisations, this leads to problems as those participating in the evaluation, especially if it is a group based evaluation, may be under pressure to conform to the group's views or experience a "a pull towards the group" as described by Asch (1952, p.483). What the researcher (or practitioner) evaluating the organisation is presented with is consensus from the participants; this, though, may only be the illusion of unanimity – if all agree then it must be true (Argyle, 1989; Manz and Sims, 1982; Von Bergen and Kirk, 1978).Solutions to the false consensus seen in groupthink generally involve creating a climate where decisions and perspectives are questioned and critically evaluated, disagreement is encouraged, and external perspectives sought (cf. Janis, 1972; Von Bergen and Kirk, 1978). A commonly proposed method of doing this is through the use of devil's advocate.

The use of devil's advocate, where a member of the team has the task of deliberately opposing or critiquing the group's decision, can provide benefit in creating confrontation within the group (Thomas, 1988). This technique was used effectively by President Kennedy's team during the Cuban missile crisis (Janis, 1972; Thomas, 1988): by using a devil's advocate (in this case the President's own brother Robert), the team avoided errors from an initial superficial analysis, by creating conflict in the team. The use of devil's advocate has been described in a variety of research papers, notably Nemeth and Goncalo (2004), Schweiger et al. (1989), Herbert and Estes (1977), and Schwenk (1998). Those who argue for the use of devil's advocate assume that any decision or perspective that can withstand critique is good.. The use of devil's advocate has also been shown to have benefits beyond just the avoidance of groupthink: in decision making (Hammond et al., 2006), strategic planning (Boland, 1984; Mason, 1969), and, specifically for Information Systems, in ERP projects (Sammon and Adam, 2007). The use of a devil's advocate is argued for by (Cosier, 1982), who believes that there is value in managers performing the role, while (Kellen, 2009) argues that an individual who is well positioned in the company could take the role.

While the benefits of the use of devil's advocate have been noted above, there is no universal agreement as to its effectiveness. While Schweiger et al. (1989) argue that the use of devil's advocate did not impact on a group's satisfaction, this is not an uncontested argument. For example, Nemeth et al. (2001) found that antipathy can arise when the devil's advocate approach is used and that problems can be created for and within cohesive teams (Nemeth and Goncalo, 2004). While Herbert

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and Estes (1977) argue that this antipathy can be reduced, and Sambamurthy and Poole (1992) argue that conflict can be beneficial, they also acknowledge that the problems exist and must be dealt with. Further, Sammon and Adam (2007, p.1071) note that "traditionally, the devil's advocate approach, while useful in exposing underlying assumptions, has a tendency to emphasise the negative." This aligns with the argument of Turner and Pratkanis (1998) that solutions to groupthink may exacerbate problems in the group if they regard them as intrusions that question the group's ability to deal with problems.

There are further issues for a researcher or practitioner evaluating an organisation. Typically, the evaluator will be external to the organisation or team being evaluated. Intervention by an outsider is not the ideal way of trying to deal with problems such as groupthink as this itself can be part of the problem. Outsiders' perspectives are rejected by teams subject to groupthink (Furst et al., 1999), and an evaluator would be regarded as an outsider. Wastell (1999) talks about a paranoid view of the world outside of the group where any complaints against the team were incorrect and unnecessary (Manz and Sims, 1987), with "sloganistic thinking about the immorality of outgroups" (Oberschal, 1978, p.239). In fact, Janis (1972), the originator of the term groupthink, lists one symptom of groupthink as advice from outsiders not being sought. Even if the evaluation is internal to the organisation, and following the advice of (Kellen, 2009) and (Cosier, 1982) that a manager can perform the role, the team may still regard the manager as an outsider or resent what they see as interference.

For someone conducting an evaluation, therefore, there are problems when dealing with teams and organisations where false consensus may be impacting on their perspective of reality within the organisation, and therefore the evaluation of this reality: e.g. if a round table/group discussion as part of an evaluation was showing symptoms of groupthink. The idea of the devil's advocate creating conflict through critique could have benefits, but if done by an outsider, or manager who is perceived as interfering, could exacerbate the problem: ultimately this would not only lead to an incorrect evaluation but actually worsen the problems that led to the incorrect evaluation. How then can an evaluator, external to the team or organisation being evaluated, create the necessary critique and conflict required to ensure that the evaluation is a valid one? The answer appears to be that the critique and conflict must be done by, and created by, those being evaluated. The question though, is how to get a team/organisation to do this. In the next section, our agitation workshop is proposed and the method of enabling such a solution is presented.

3. The 'Agitation Workshop'

If consensus within the context of an evaluation is suspected as being false consensus, the individual conducting the evaluation, as described above, must facilitate and encourage the critique and conflict necessary to overcome initial perspectives expressed by the participants, which may be incorrect and restricted by problems such as groupthink. If the team appear to have a consensual perspective of their current situation, and appear to be showing signs of groupthink, then they must be encouraged to challenge these perspectives: the steps are described below and illustrated in Figure 1. For example, as described in (McHugh et al., 2011), a team that regularly disagrees with each other is unlikely to be exhibiting signs of groupthink. Contrary to this, though, a lack of disagreement within a team indicates the potential of groupthink having an influence. Even if groupthink is not present, it is still of benefit to challenge consensus and views of those being evaluated: any opinion that can withstand critique is a good opinion (Cosier, 1981). Whether groupthink is suspected or not (and it is difficult to determine if it is impacting), consensual views expressed during an evaluation are challenged in the workshop.

In the agitation workshop the role of the evaluator is to get the team to challenge their perspectives and to break apart their consensual perspectives. Only then can the evaluation be trusted in so far as it can be assumed to be a better perspective that has withstood the challenge, and is free of groupthink (and other issues which impact negatively on an individual's perspective). This has similarities to the breakdown of a shared understanding and the resolving of differences through sensemaking, conflict, and social interaction, as described in (Balogun and Johnson, 2004); although, in their case study, the breakdown in shared understanding was forced by an organisational restructuring rather than a workshop. (Maitlis, 2005) description of sensemaking as "the negotiation of interpretations and explanations among diverse actors" is taken into account in designing the workshop. Further, Ashmos and Nathan (2002) note that there are triggers which necessitate the use

of sensemaking to create new metal models; it is argued herein that the agitation workshop can provide one such trigger.

In an evaluation of an organisation or team, participants will have expressed their views, be they positive or negative. If the views expressed in the evaluation suggest the possibility of false consensus, or even if those conducting the evaluation feel it best to challenge perspective, then these perspectives must be broken apart. The term "break apart their consensual perspectives" is deliberately used above as it will involve conflict. As the evaluator is an outsider, though, the conflict must come from the team and not the evaluator. The evaluator uses a set of factors which are relevant to the focus of the evaluation (in this study, the factors used were measures of agility to examine a team's suitability for Agile methods adoption (see McAvoy and Sammon (2005))). Each workshop participant provides an individual assessment of the area being evaluated, using a simple binary 'yes' (1) or 'no' (0) as to the 'positive impact' or 'negative impact' of a factor; leaving a factor blank implies that it has no influence Which factors used are not of importance, and are chosen based on what is being evaluated. The critical element of this stage of the workshop is that each participant provides their own assessment of the factors without any group discussion. If a group discussion on the factors were to take place during the workshop, it is likely that participants would be influenced by others and the picture presented to the evaluator would be one that was, what Furst et al. (1999) describe as, an illusion of consensus and cohesion.

Once each participant has provided their assessment, these are amalgamated into a single matrix visualisation. This amalgamated assessment is then presented to the group for discussion in a round table meeting with all participants taking part. As this represents the perspectives of the participants, the possibility is removed of the group feeling that it has been influenced by the 'incorrect and unnecessary' (Manz and Sims, 1987) or 'immoral' (Oberschal, 1978) views of the outsider – in this case, the evaluator. The evaluator can now lead a round table discussion based on the matrix (see table 2 for a sample single matrix visualisation). To facilitate discussion, and to further ensure that it is those being evaluated (as opposed to the evaluator) who critique their perspectives, the evaluator needs to concentrate on some elements of the matrix to promote discussion (and/or conflict). The factors where there is disagreement between the participants need to be highlighted in order to promote discussion on these factors. This is especially relevant where it appears that the perspective of the factors in the workshop contradict the outcome of the evaluation prior to the workshop: although the factors are not used in the evaluation prior to the workshop, connections between the evaluation outcome and the factors used in the workshop can be made. It is the disagreements that will provide the evaluator with the most opportunity to facilitate the critique/conflict necessary to generate a true picture of the reality under investigation. Within the single matrix visualisation, a simple count of the 1's, 0's, and blanks will suffice to show workshop participants that there is no universal agreement on these factors. This does not mean that factors displaying agreement from participants should be ignored: they too must be challenged. Rather, by concentrating on factors where disagreement is present in the workshop which contradict any opinions expressed in evaluation prior to the workshop, it becomes clear to the participants that they do not have the consensus that they thought they had. It is then possible to look at factors with consensus, as participants should be more willing to question the agreement themselves after seeing how previous agreement has changes to disagreement.

The discussions and critique of the differences uncovered in perspectives of the factors is still a team discussion as opposed to a critique by the evaluator (an outsider or an "interfering manager"). As such, the participants are less likely to reject the different perspectives that they are confronted with than if it was an outsider trying to give advice (as per Janis, 1972). Whereas groupthink creates a false consensus, the difference in perspectives between participants cannot be ignored or easily reconciled to a single (false) consensual perspective: therefore, this is working against the pressure to conform to the group's perspective (as per Asch, 1952). Discussions now take place where the workshop participants must confront their differences and critique the differentiated perspectives that are being presented. Again, the conflict and critique is based on the perspectives expressed by the participants through their assessments (without the potential for the 'corrupting influence' of outsiders). The term 'agitation workshop' comes from the premise that the (group influenced) collective consensual perspective has been agitated, through the use of the single matrix visualisation, to the point that there are now differing perspectives and an openness to challenge agreement. In terms of sensemaking, this is restricted sensemaking as per (Maitlis, 2005), as the discussion is a once off event and is controlled. A consensual perspective no longer exists and a new

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perspective must be created by the participants though discussion and critique of the differing perspectives. In the next section, a case study is presented showing the agitation workshop in practice and the benefits that it brought to an evaluation of a global software development organisation.

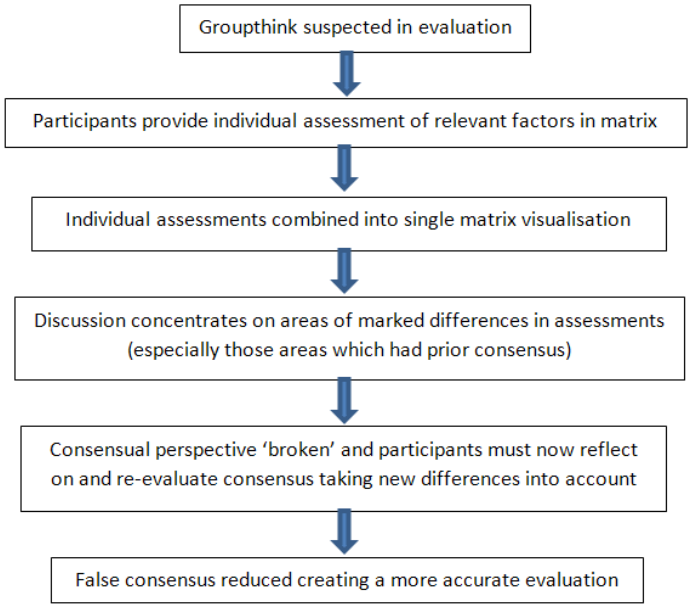

Figure 1: Agitation workshop protocol

4. The Agitation Workshop in practice

The objective of a large exploratory study was to perform an evaluation on an organisation's ISD processes and, in doing so, to determine the feasibility and potential benefits of the agitation workshop. As part of that study, the research reported in this paper was conducted in order to assess the feasibility of the agitation workshop: for this case study research, TexunaTech was the organisation in which the workshop was run. TexunaTech has established itself in the global market as a trusted service provider of web-based data management applications, serving a range of government, healthcare and private sector organisations. Coupling geographical location with specific segments of the ISD lifecycle, the organisations structure is defined as follows: (i) London (UK) – incorporates business analysis, project management and business development, (ii) Cork (Ireland) – incorporates call centre operations, after sales service and first line support, (ii) Moscow (Russia) - incorporates software development, technology infrastructure maintenance, and software testing. The research objective was in line with the CEO's requirement, emerging from a strong organisational necessity, for an external analysis and evaluation of TexunaTech's ISD lifecycle and his belief that it could be more efficient. This was the point of departure for the three person research team from which the case study research protocol was developed (see Table1 below).

An evaluation of TexunaTech's development lifecycle commenced with round table discussions with the various groups in the organisation. In these round table discussions, the different teams within TexunaTech were asked to provide their perspectives of TexunaTech's software development process. It was during these round table discussions that the researchers noted that there was a consensus of views expressed in each of the organisation's departments (which aligned mainly with organisational location: it appeared that groupthink may have been impacted upon this consensus. The symptoms of groupthink (from Janis, 1972) were a pressure to conform to the group's views (where there appeared to be a 'team perspective' and 'team answer' rather than individual perspective) and a stereotyping of outsiders (where other groups or departments were described negatively and collectively i.e. *'the developers don't take ownership'*). This subjective opinion of the researchers led to concerns that an evaluation based on the perspectives expressed might not be accurate as it appeared to be corrupted by norming and cohesive power of the team. Because of this, it was necessary to 'explode' or break apart the consensual perspective in order to get an accurate portrayal of each individuals 'real' perspective. Even if groupthink was found not to be impacting,

challenging the consensus would still lead to a better evaluation. The agitation workshop was the method used to break apart the consensus and challenge the views expressed in the evaluation. The workshops took place in both the Cork office and the Moscow office, with London staff travelling to one or other of the locations.

Table 1: Case study research protocol (after: Kelliher (2005))

Research Activity	Description
Objective	To determine the feasibility and potential benefits of the agitation workshop
Approach	Case study
Motivation	CEO's desire for an evaluation of ISD lifecycle
Case Selection Process	A software development organisation where the CEO sought an evaluation of the organisation's ways of working
Case Access	A unique openness to share information and a willingness to make personnel available for the research, to the extent that operations were suspended for three days to enable workshops to be carried out. Access provided to all internal communications between developers and business analysts. Regular meetings with senior management in the company.
Instrument	The research team (3 researchers)
Boundary Device	ISD lifecycle
Data Gathering Techniques	On-site agitation workshops, project documentation analysis, and group based interviews
Data Analysis Techniques	The agitation workshop single matrix visualisationis used to present and analyse data

For the agitation workshop itself, using the protocol described in Figure 1, each participant performed an individual assessment of the organisation's suitability for Agile. As can be seen in the single matrix visualisation in Table 2, there was a large variation in assessments between the participants: due to space restrictions, only a portion of one of the workshop assessments is presented, and is reflective of the other assessments.

Table 2: A sample of the participants differing perspectives of the Agile factors

Factor / Role	DP	LC	CI	AC	TS	SLT	ORS	P	DR	LW
Developer	0	0	0	1	1				0	1
Developer	0	1	1	0	1	1	0	0	0	1
Tester	0		0	0	1	1				
Lead Developer	0		0	1	1	0	1	1	1	
Lead Developer	1	0	0		1	1				1
Project Manager	1	0	0	1	1	1	1			
Business Analyst	0	0	0	0	1	1	0		1	1
Project Manager	1		1	0			1			
Developer	0		0	1						
Developer	0		0	0		1	1	1	1	
Business Analyst	1	0	0	1	1	1		0		0
Number of 0's	7	5	9	5	0	1	2	2	2	1
Number of 1's	4	1	2	5	8	7	4	2	3	4
Number of blanks	0	5	0	1	3	3	5	7	6	6

When the single matrix visualisation was presented to the group and a roundtable discussion began, it became clear to the workshop participants that, rather than having a consensual perspective, there were marked differences in perspectives within the group. They realised that there were areas where the group did not have consensus and that these issues needed to be addressed. In addition, the lack of consensus in the workshop was in direct contrast to the consensus seen in the evaluation conducted prior to the workshop where the teams had been in agreement in most areas evaluatedFrom this point on, there was a noticeable increase in discussion, to the extent that a degree of conflict entered the discussions. In effect, the group had moved from presenting a false consensual perspective of the organisation in the evaluation to a situation where the group was discussing and disagreeing with each other in the workshop as to the reality within the organisation. It was also noted that the group were more open to accepting that fault existed within their own team (geographic location) as opposed to with outsiders (other teams).

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5. Evaluating the evaluation

For the evaluator, the question arises as to whether the new perceptions of the participants in the workshop are now valid: are they still corrupted by the norming and cohesive power of the group (i.e. is groupthink still influencing the results?) There are two methods of determining whether the evaluation is now free of corrupting influences from the group. The first is subjective while the second is a more quantifiable determination. In the first case, the evaluators can see for themselves whether the perspectives of the workshop participants are sufficiently different as to create a debate and critique. In TexunaTech, it was clear that the participants were no longer expressing the 'group's perspective'; rather they were specifically expressing their own perspective. The level of discussion and disagreement among participants, during the roundtable discussions after viewing the combined matrix, showed that there were differences between the participants that had not been expressed before the agitation workshop. As an example, in the discussions before the workshop, business analysts (BAs) had all agreed that they were good at dealing with customers. After seeing the single matrix visualisation (customer involvement (CI) factor in Table 2), they came to realise that, despite the previous agreement, customer involvement was problematic: several BAs then commented that they *"felt helpless"* when dealing with the customer. Additionally, in the TexunaTech case, it became very clear that individuals no longer solely blamed other groups for problems and were more willing to blame their own group and themselves. The second method involved conducting a mindfulness assessment to evaluate the state of the organisation before and after the 'agitiation workshop'. For more details on the state of mindfulness within TexunaTech see Nagle et al. (2011).

Mindfulness assessments were conducted by each participant, and standard deviation in mindfulness assessments was used to quantify the degree of difference in perspectives, and how much the differences have increased/decreased between the pre and post agitation workshop. These mindfulness measures were taken before and after the workshop to determine the impact of the agitation workshop, where mindfulness was a measure of the workshop effectiveness; it was not the focus of the evaluation. The differences in assessments were noticeable, with the group lowering their evaluation of the organisation (and in a minor number of cases raising it). Overall, the difference in assessment (the assessment returns a numeric assessment of mindfulness) was negative: e.g. one element of the assessment dropping by 24% between pre and post workshop. If the standard deviation of the participants' mindfulness assessments has increased, then the level of disagreement has also increased. In some cases the standard deviation may decrease for some parts of the evaluation: in these cases it shows that any debate and discussion has actually led to more agreement within the team. This would not be unexpected, but the evaluator would need to be cautious with the perspectives expressed if all the values came closer to agreement (as this implies that normative pressures, such as groupthink, may be corrupting the discussions). For the TexunaTech case, some values had a decrease in standard deviation (more agreement between individuals) but the majority of standard deviations increased (more disagreement within the team). It is argued herein that the increase in standard deviation shows that the individual values (perspectives) are less likely to have been corrupted by normative pressure, and thus are more likely to be a more accurate reflection of reality: in essence, disagreement is good. This more accurate version of reality can now be used, with more confidence, in the evaluation of the team/organisation. Table 3 illustrates the differences in standard deviation in TexunaTech, between the individual perspectives before the agitation workshop (represented as Pre STDEV) and the perspectives after the agitation workshop (represented as Post STDEV).

Table 3: Measuring differences in perspectives caused by agitation workshop

	Reluctance to simplify interpretations				Preoccupation with failure			Sensitivity to operations				
	MDRS1	MDRS2	MDRS3	MDRS4	MDPF1	MDPF2	MDPF3	MDSO1	MDSO2	MDSO3	MDSO4	MDSO5
Pre STDEV	1.191	1.095	1.044	1.834	0.786	1.342	1.272	0.505	1.036	0.688	1.000	0.647
Post STDEV	1.598	1.246	0.991	1.506	1.389	1.506	0.835	1.414	1.642	1.669	1.309	1.356
Difference	0.407	0.151	-0.053	-0.328	0.603	0.164	-0.437	0.909	0.606	0.981	0.309	0.709

	Commitment to Resilience				Deference to expertise			
	MDCR1	MDCR2	MDCR3	MDCR4	MDEX1	MDEX2	MDEX3	MDEX4
Pre STDEV	0.647	0.674	1.567	0.944	0.522	0.688	0.944	0.786
Post STDEV	0.535	1.302	1.165	1.356	1.414	0.835	1.553	1.188
Difference	-0.112	0.628	-0.402	0.412	0.892	0.147	0.609	0.402

To determine the effectiveness of the agitation workshop, there are two relevant points to be taken from the differences in the standard deviations above. Firstly, the count of values that showed an increase in standard deviation was four times greater than the count with a decrease in standard deviation. This clearly shows that perspectives are much more differentiated across values, post workshop. Secondly, the size of the increase versus the size of the decrease is noticeable. As the mindfulness measurement values ranged from 1 to 7, a standard deviation change of 0.5 or more was regarded as significant. Nearly half of the increases in standard deviation were greater than this value, showing that there was a significant increase in the differences of perspectives between the workshop participants; there were no decreases in standard deviation (coming together of perspectives) of significance. Even ignoring the use of a significant value (0.5 in this case), the mathematical sum of all changes in standard deviation is positive (more disagreement than agreement) and the average increase in difference was twice the size of the average decrease in difference. Taking all of these numerical calculations together, it is clear that the workshop created more differences between the participants in their assessment of the organisations software development process.

6. The impact of the Agitation Workshop

As can be seen above, the workshop was effective in breaking consensus and creating new differences in perspectives amongst the participants. To determine the long term success of the workshop, the researchers continued to work with TexunaTech to determine what changes were brought about by the agitation workshop. It is not proposed that the workshop provides a quick solution to an organisation's problems. The sole purpose of the workshop is to identify areas of consensus that did not necessarily reflect the reality in the organisation and to highlight areas where false consensus may be hiding real issues and problems. Some problems identified by the workshop may be easy to solve, but the majority will be difficult and involve considerable work to address the problems: these problems were most likely hidden for a reason, and this reason must be overcome. Since the workshop, TexunaTech have put considerable amount of time and effort into addressing the problems uncovered, and two such problems are described below.

During the initial evaluation of the ISD lifecycle, each group (developers, business analysts and project managers) had consensus on the areas that they believed that the organisation was doing well and areas which were problematic. As can be seen in Table 3, this consensus was not maintained after the workshop – the consensus had been broken. In the evaluation prior to the workshop, the participants agreed that the organisation excelled at meeting their customers' expectations. This was clear from their customers' view of the organisation where contracts were maintained, and new and repeat contracts were awarded. This shows that the participants' views were reflected in reality. So, from a customer perspective, the organisation continued to deliver as required, to the extent that their reliability was rewarded with further and new contracts. The problems that emerged appeared to be 'under the hood'. These problems did not impact upon their customer, but caused internal problems.

While the business analysts and project managers excelled at delivering to the customer, their relationships with their customers impacted further down the development lifecycle. For example, late arriving requirements, and requirements that were not fully specified until near project completion allowed the customer too much flexibility in defining what they required from TexunaTech. During the workshop, it became clear the impact that this was having on the development group, where resources had to be shifted between projects to meet the customers' expectations of new or late requirements. From the combined matrix, this can be seen in the AC factor – acceptance of changes to requirements. From Table 3, this can be seen as sensitivity to operations, where meeting the customers' requirements (the role of the business analysts and project managers) was causing large problems for the development group. The business analysts and project managers taking part in the workshop became aware of the impact this was having, and the organisation is now striving to address this issue. Further, the developers acknowledged that they needed to take time to address problems such as this by diverting time from dealing with day to day project issues to time for reflection on what they were doing and why.

A further issue uncovered was with requirement documentation. In the evaluation prior to the workshop, there was consensus from the business analysts that the developers continually reverted to them with questions regarding requirements: examples where shown from the internal ticketing system of communications regarding requirements. During the workshop, there were marked

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differences between individuals' perceptions of the DR factor from the matrix (documentation requirements (DR) in Table 2) and the positive views they had expressed in the evaluation. In the initial evaluation, the business analysts and project managers had considered TexunaTech to be good in this area; in the workshop developers marked the factor negatively and the business analysts were not as positive in their views. This lead to, at times intense, discussions as to what needed to be done about requirements in the organisation. The problem was not resolved during the workshop, but at least a discussion had started. Since the workshop, TexunaTech has started to implement new processes and procedures and are considering the use of more visualisations in requirements documentation. Again, these solutions are on-going and there is no complete consensus on the way forward with this. What is noticeable about this, though, is that the workshop started a dialogue which is now on-going. Without the workshop, it is highly unlikely that the problem would have surfaced in such a way as to ensure that the analysts present in the workshop acknowledged and discussed the problem.

What is noteworthy about the two problems above is that they are not unique to TexunaTech. Other organisations have problems with poor requirements documentation and late changing requirements. The problem for TexunaTech (as with many other organisations) is that these problems were not addressed. People may agree what the problem is and complain, but over the years and across projects, the problems still remain; dealing with urgent operational issues prevents consideration of how to address these issues. Further, the complaints concerning the problems can actually be misdirected, and the real hidden problems remain. The agitation workshop brought these problems to the fore and ensured that they could not be ignored any more. As was observed in TexunaTech, these hidden problems that lie beneath the apparent consensus are difficult to deal with and take considerable time to address. The agitation workshop can help to identify these problems by breaking consensus, and gain acceptance that there is a problem; it cannot, though, solve these problems and is not intended to. This requires considerable work from the organisation after the evaluation.

7. Conclusions

The protocol for the agitation workshop demonstrated the desired effect: 'breaking up' the common consensual perspective and giving the participants the opportunity to create a new (more accurate) perception of reality. It is clear, from the example in the case above, that the views taken after the workshop are free (or more free) of corrupting normative pressures such as groupthink. This should give the evaluator more confidence in the perspectives expressed by the participants after the workshop. Ultimately this should ensure a more accurate representation of the reality being evaluated and the problems (or positive aspects) observed.

It is not relevant to the researcher whether the new reality represented by the participants is a more positive perspective of the team/organisation or a more negative perspective. What is important is that the evaluator has more confidence in the picture of reality presented by those being evaluated: i.e. the evaluator has, through the agitation workshop, minimised the level of normative group corruption of the participants' individual perceptions. This can only lead to more accurate evaluations. As can be seen, the evaluation discovered hidden problems within the organisation in the workshop, and these have been used to create change in the organisation, which are bringing positive impacts. The agitation workshop provided the organisation with the ability to determine the real issues impacting on the organisation and to identify the steps required to deal with them. Without breaking consensus through the workshop, it is likely that false consensus would have kept these issues hidden and unaddressed.

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