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# NEVER LET THE TRUTH GET IN THE WAY OF A GOOD STORY: A CASE STUDY INVESTIGATION INTO EXTRACTING AND ANALYSING STORIES USING CATWOE

## Abstract

*The use of storytelling as a knowledge elicitation tool has attracted much attention in recent years, yet there is limited literature on how to illicit or stimulate the story. The challenge is to find appropriate research instruments that stimulate storytelling and morph vocalised individual narratives into multifaceted stories that provide an insight into the emotions, politics and 'life' of organizations. This paper reports on the use of storytelling as a research instrument to elicit highly contextualized knowledge from knowledge holders. The intention was not to attempt to find an objective truth but rather to stimulate discursive openness. Specifically we present a technique based on CATWOE analysis that can stimulate storytelling and story creation. The technique is particularly useful for those who are new to the storytelling approach and provides a simple formalism for structuring story elicitation and analysis. The paper concludes by reflecting on the concept of 'truth' and the process of story emergence a legitimization, specifically identifying the contribution that alternative 'truths' can make in socializing and disseminating knowledge in organizations.*

*Keywords: Storytelling; CATWOE; Truth; .Storytelling*

## 1 INTRODUCTION

The power of storytelling to understand and elicit the nature of work in various organizational settings has attracted much discussion in recent years (c.f. (Feldman & Skoldberg, 2002; Snowden, 2000; Gabriel, 2000; Denning, 2001; Brown et al., 2004; Golant & Sillince, 2007). However there is limited literature on techniques to elicit or stimulate the story. Indeed the literature is full of examples of information rich scenarios where organizational, experiential and reflective stories are scarce. What is more, as Gabriel (2000) highlights, not all narratives are stories yet most narratives do have an underlying story. Stories provide structure and rationale for know-how, tacit knowledge, nuance, sequence, and multiple causation and can be far more intricate and complex than explanations of events using logical or scientific explanations (Weick & Roberts 1993; Tsoukas & Hatch 2001). Through storytelling organizational understanding emerges not by treating stories as accurate accounts of past events but as mechanisms to stimulate discursive openness by developing symbolic reconstructions of organizational culture and of individual perceptions of organizational norms, boundaries, systems and rules (Gabriel, 2000).

Within a case study setting our aim was to examine the development of stories from large scale events which many individuals participated in or witnessed and the emergence of both individual scenario based narratives and the construction of the collective story that emergences as the individual narratives are brought together, collaborated and the collective story thus constructed. Research instruments available to stimulate storytelling are limited especially as our interest was to stimulate discursive openness (Winograd & Flores, 1986). In this paper we present a research instrument derived from Soft Systems Methodology (SSM) for nurturing and eliciting stories (Checkland, 1981). SSM provides our conceptual foundation as its purpose is *'to improve real-world situations by*

*orchestrating changes of appreciation through a cyclic learning process*' (Bergvall-Kareborn, 2001), the notion of *'orchestrated changes'* emphasises a conscious dynamic of attempting to generate new insights rather than simply gathering existing perspectives together. Specifically we use the conceptual tool of CATWOE which is used in SSM to explore different perspectives of the problem situation and bring structure to the thinking process as a mechanism for teasing out the multiple facets of organizational stories and assisting the legitimization process.

In the following sections of the paper the role of storytelling and the use of focus groups for knowledge elicitation are discussed. A case study of a UK Fire Service is then presented with an explanation of how the CATWOE technique was used as a mechanism for eliciting stories. Finally we reflect on the concept of truth, the evaluative and cognitive legitimization of organizational stories and present future directions for our work.

## 2 BACKGROUND

Bruner (1986) identified two modes of cognitive functioning each providing different ways of ordering experience or constructing reality. He identifies these as logico-scientific and narrative arguing that these are irreducible to one another. According to Tsoukas and Hatch (2001) narrative mode thinking is more likely to reveal and explore motives and purpose than logico-scientific methods. They argue that non-linearity, paradox, feedback loops and sensitivity to initial conditions are not supported by propositional thinking and that the narrative approach more accurately captures these complexities. Kellert (1993) uses the term *dynamic understanding* to describe the awareness of unpredictability, novelty and emergence and the circumvention of deductive systems and causal mechanisms allowed by narrative depiction

From a phenomenological perspective, as embodied beings we cannot 'know' or 'experience' independently from our living body, we mediate between 'internal' and 'external' or 'subjective' and 'objective' (Merleau-Ponty, 1962, p.xii). Thus the perceptual self experiences all interactions in an individual tactile, visual, olfactory and auditory way, hence the notion of 'embodied knowledge' has emerged – *'embodied knowledge ... we know more than we can tell'* (Polanyi, 1966, p.4). Whilst, narrative does allow the individual to convey an interpretation of their individual perceptions, as a communicative process narratives are consciously and unconsciously reshaped in the process of telling. Narrative allows people to build understanding and interpretation of their lives thus providing a *'meaning'* rather than truth (Hansen, 2006). Indeed, whilst the notion of tacit knowledge and narration initially appear diametrically opposed narratives do offer a 'thick' and individualised description that provides recipients with insight into complex or 'messy' situations, like implicit knowledge, by nature narrative changes and evolves over time and space - *'Conversations are the way that knowledge workers discover what they know, share it with their colleagues, and in the process create new knowledge'* (Webber, 1984). In recent years the specific form of social conversation, the story has attracted much attention – *'Stories infuse events with meaning ... through the magic of plot'* (Gabriel, 2000).

The English word 'story' and the related words 'narrate' and 'narrative' all have etymological roots in the Latin and Greek words for knowing, knowledge and wisdom. The seminal work of the socio-linguist, Labov (1972), identifies narratives as stories about a past event which are narrated in a specific chronological sequence. Furthermore, Riessman (1993) developed the concept of stories as having a beginning, participants and a concluding event. Both Labov and Riessman recognise that the receiver of any story is receiving the story as perceived by the specific participant with whom they are interacting together with that participant's associated misconceptions, biases and prejudices. In addition, Alvarez and Urla (2002) build on Labov and Riessman's work and argue that the analysis of stories can assist in understanding interpretive processes that occur as stories are constructed and retold. Hence, storytelling, or more strictly the anecdote – a naturally occurring story (Snowden, 2000), can provide a useful device to pass on experience and knowledge, stories inevitably already exist as an integral part of defining an organization although the receiver should be aware of the

interpretive process (Gabriel, 2000). We use Swap et al's (2001) definition of an organizational story: *'a detailed narrative of past management actions, employee interactions or other intra- or extra-organizational events that are communicated informally within the organization'*. So stories can be anecdotal, scripted (the official line of an organisation), factional (conforms to current requirements of reality) or even fictional. Whilst we are accepting that the story in itself does not need to be real there is a validation process through which stories become legitimised and are accepted as portraying an understanding of the current reality in an organisation and therefore become of tremendous value as an insight into an organisation's character. Suchman (1995) identified both an evaluative and a cognitive dimension to the notion of legitimacy. From a storytelling perspective evaluative legitimacy occurs at the individual level of agency as the contribution of the story is recognised as providing a positive contribution for the storyteller whilst cognitive legitimacy refers to the notion of collective rationalisation and acceptance of the story. Indeed as a story is told control over it may be lost, its message may change and evolve, it may become multi-dimensional in that different story-tellers may recount a different variant of the story, over time it may gain legitimacy whilst becoming 'faction' – an interpretation of events that are infused with meaning through distortion, embellishment and omission. Yet paradoxically the multi-dimensionality or inaccuracy of the story may offer a deeper insight than the facts themselves (Gabriel, 2000; Snowden, 2000). The challenge for researchers is the elicitation of stories from multiple perspectives that, whilst possibly factional maintain their legitimacy and are not 'repackaged' for the researcher by the story givers. In addition the story needs to be presented and maintained in a format that retains its anecdotal worth, is accessible to multiple audiences and can be leveraged and built upon over time. Some work has been undertaken into multiple perspective storytelling, including the ambiguity of beginnings and endings, lack of clarity, complexity of meaning, content of stories and inconclusivity (Boje, 1995; Cohen & Tyson, 2002). However, the underlying assumption has been that there is some concept of 'truth' rather than the emergence of a legitimised story through individual transformation (or evaluative legitimacy) and group consensus (or cognitive legitimacy). There has been considerable work on the role of legitimacy, the contribution of multiple points of view and the social construction of shared meaning to the concept of a 'true' story which holds that truth is constructed by social processes, is historically and culturally specific, and that it is in part shaped through community power struggles. It can be argued that perceptions of truth are viewed as contingent on convention, human perception, and social experience (Gergen, 1997). Consider, psychoanalysts have long been confronted with the issue of trying to identify the actuality of events, as in the 'historical truth', versus the perception and reconstruction of past events as told by patients and referred to as 'narrative truth' (Spence, 1982).

A common vehicle through which stories are elicited or disseminated is the focus group (Stewart & Shemdasani, 1990). Focus groups are employed to gain an understanding of research topics by studying the dynamics of group activity, and in particular the hidden and unconscious motives behind group interactions. Whilst traditional social psychology assumes that the nature of 'self' and characteristics such as 'attitude' are fixed and stable properties of individuals, more recent work in discursive psychology suggests that in many situations people adapt and alter their attitudes in the light of new information, interaction with others' opinions, and dependent on the situation in which they find themselves (Potter, 1998; Billig, 1996). Additionally, focus groups allow the observation of 'natural attitudes' and experiences arising from shared life experiences, preferences, intentions and behaviours, these being more common in groups of people who are socially close, either family groups or close work colleagues (Calder, 1977). Thus the experiential focus group draws out shared experiences rather than those which are unique or individual. The researcher is commonly uninterested in generalizability and the focus of enquiry is the attitudes, beliefs and opinions, not necessarily their underlying dimensions.

Currently, there are few techniques for the elicitation of stories described in the literature. Anthropological techniques have been proposed although the immersed researcher is not able to direct or stimulate storytelling, they are relatively passive recipients of any story that they happen across (Boje, 1991). Snowden (2000) suggests storytelling circles created from groups who have collective past experiences, yet the challenge of how to stimulate the discussion remains. Snowden suggests a

number of approaches including alternative history generation where circle members are asked to explore alternative paths that a project could feasibly have turned down and shifting characters where circle members are asked to assume another participant's role in a specific scenario. Whilst Gabriel (2000) provides a set of potential story initiation questions such as '*Are there special stories about the organization's leaders/founders? Are there any parts of the buildings or other locations you associate with specific incidents?*' Story elicitation techniques require considerable goodwill on behalf of the story providers and are difficult, for all but the most experienced facilitator, to orchestrate successfully. The anthropological approach takes considerable time with limited opportunity to direct or stimulate whilst a number of the other techniques are highly contrived.

There appears to be a dichotomy in the techniques currently proposed for story elicitation. Successful stories emerge from the organisational milieu having been constructed, morphed and legitimised by multiple organisational participants. However current techniques for eliciting stories are prescriptive, are liable to inhibit rather than stimulate the offering of stories to the researcher and do not provide techniques for facilitating the generation of new stories or the nurturing of emerging stories. The focus group aims to provide an informal environment where experiences can be retold and discussed and such a forum would appear to be the ideal environment to generate, nurture and harvest stories. Yet the researcher has few non prescriptive techniques to work with in order to stimulate such a forum.

To study the legitimisation process we wished to employ a subjectivist and pluralist perspective, stories are inherently subjective with multiple stakeholders from differing backgrounds. The soft systems approach of SSM recognises the multiple interpretations and perspectives that are present in real world problem situations (Galliers & Swan, 2000). Specifically, SSM proposes that participants in the methodology engage in a learning cycle of debate and reflection structured by a number of systemic models. There is considerable synergy here with the human desire to story-tell, a desire to offer rich insight, reflect and convey wisdom. Furthermore, and unusually, SSM emphasizes a distinction between systems thinking models and the 'real world', even suggesting, through a disciplined iterative process, that assumptions are tested so that the model is open to change and shift and does not become fundamentalised. Therefore, this research explores the use of SSM as an investigative tool for studying the multidimensional nature of storytelling and legitimisation. Specifically, this research has employed one of the systemic models provided in SSM, CATWOE, to structure and support the elicitation, analysis and dissemination of stories (Checkland, 1981). CATWOE (Customers, Actors, Transformation Process, World Views (or Weltanschauung), Owners, Environmental Constraints) is a technique to aid in the building of a system's model founded on studying the various Transformations that the system supports and the differing rationales (or Worldviews) behind those Transformations. The Transformations and associated Worldviews are then examined from the perspectives of those who could benefit from the Transformation (the Customers), those who enact the Transformation (the Actors) and those who could stop the Transformation (the Owners). The differing perspectives are then considered with the boundaries of the wider Environmental constraints within which they operate. The following section shows how the principles of CATWOE were applied in a story telling context.

### **3 CASE STUDY**

The work reported on here concerns the researchers' aim to find an appropriate research instrument to support the social elicitation of stories and provide a mechanism to map the evolution or legitimisation of such stories. The research was conducted in a UK regional Fire Brigade using focus groups as this approach was thought to be particularly suitable because fire fighters work together as a 'watch', frequently watch members have worked together for 15-20 years and a strong notion of 'family' exists. Within the focus groups the storytelling allowed different perspectives, viewpoints and angles

to be conveyed. Furthermore, the incident driven nature of the Fire Service meant that storytelling was an organisational norm through debriefing procedures.

This group element is important to the narrative approach as it allows deeper and richer detail to be added to the account of particular incidents and the legitimisation process to be observed. Furthermore, with major incidents, no single individual can witness the entire incident from start to finish and from all sides. Hence during a large incident, any individual would only have their own physical view of angles and elevations of buildings and approaches of police and ambulance, other firefighters or members of the public. They may not have a physical view or cognitive awareness of the other sides of the building or location, the actions of other agents, other immediate incidents, dangers or occurrences. A major incident may also spread over time so that groups of firefighters would finish their shift and leave the incident, and new firefighters, at all levels, may join the incident long after it started. They also may not have a full picture of sequences of events, causes and effects of decisions made and actions and reactions of their colleagues. This factor leads to the notion that the full story does not exist until the group has met and discussed the incident feeding in personal observations and details to form a collective and synthesized view – the notion of cognitive legitimacy.

### 3.1 Stimulating Stories: an Example

During focus group sessions many stories and narratives were produced however due to space limitations, we present a single example in this paper. Specifically, by focussing on particular features of a single scenario (a summary of which is presented in table 1), we aim to convey how the use of the CATWOE technique facilitated rich multifaceted stories to be elicited and legitimised.

The Fire Brigade were called to a fire at a refrigeration unit recycling company situated on the edge of a large industrial park. European Union regulations dictate that all Ozone Depleting Substances (ODS) must be removed from commercial or industrial refrigeration units before they can be recycled. The company offered collection and recycling services, breaking the units down in a sealed environment and removing the ODS before recycling the remaining fridge elements. The Fire Brigade had been called to a fire at this location some 16 months previously, on that occasion a ‘fridge mountain’ of c. 4,000 pre-recycled fridges was blazing when they arrived. The Fire Brigade had extinguished the fire and, due to health and safety concerns, the Environmental Health Agency had then cleared the site and charged the company for the removal and disposal of the burnt out fridges. The majority of the ODS present had been released into the atmosphere.

On arriving at the scene the Fire Brigade discovered that the latest ‘fridge mountain’ consisted of c. 7,000 pre-recycled fridges and measured c. 200 meters square. A small fire was at the very centre of the mountain, the fridges were at all angles and precariously stacked on top of each other. Varying accounts of the initial engagement with the incident suggest that a number of the first Fire Fighters at the scene may have attempted to scramble over the fridges to inspect the fire more closely. The rationale for such a ‘scramble’ or indeed whether any scrambling actually occurred is unclear. The first Fire Crews to arrive at the scene requested a ‘Simon Snorkel’ (hydraulic platform) to create an observation point from which the fire could be monitored, the request was initially refused. The decision was made to wait in order to allow the ‘*fire come to the force*’. As the fire progressed more senior personnel took control of the incident and more equipment was requested until finally 13 standard fire engines and 2 Simon Snorkels were distributed around the edge of the ‘fridge mountain’.

The Fire Brigade finally tackled the fire some 10 hours after having initially being called to the incident and continued to pour water on the fire for 2 days. All ODS in the fridges was lost, the

Environmental Health Agency again cleared the site and charged the company for the clearance, shortly afterwards the company closed.

*Table 1: The Story of the Fridge Fire*

Focus groups were asked to discuss the Fridge Fire incident using CATWOE as a framework. The principles of CATWOE were introduced and an example was constructed collectively, the focus groups then broke out into small 3 or 4 member groups and began populating CATWOE frameworks independently with the roving support of the authors. During the process of populating the CATWOE framework multiple stories and anecdotes emerged concerning different scenarios that had ensued at the incident. Discussion and debate ensued and recalcitrant focus groups rapidly transformed into a relaxed group of individuals reminiscing about various scenarios that they recollected from the incident. This process stimulated the generation of stories that went through a process of individual evaluative legitimisation and whole group cognitive legitimisation. To highlight the elusive nature of ‘truth’ and the emergence of a legitimised story we have deliberately selected quotes which illustrate the alternative views and interpretations of the incident that emerged as stories were told by different individuals in the same focus group or different focus groups (focus groups are differentiated by number – F1-3). Additionally, to provide rich data within the confines of the paper, we have focused on presenting quotes concerning three specific scenarios: firstly the progress of the fire, secondly the identification of the cause of the fire including the ‘scrambling’ that took place supposedly in an attempt to identify the cause of the fire and thirdly the initial refusal and subsequent approval of a hydraulic platform. These aspects are represented as the three key Transformation processes in the CATWOE analysis, we present these and their associated Worldviews first as the core of the analysis. The supporting elements of CATWOE, specifically the Customers, Actors, Owners and Environmental constraints are then presented together with quoted extracts of various stories that emerged from different focus groups as they discussed the incident.

Transformation – The change of state that occurs

Worldview – The perspective that makes the transformation process meaningful in a given context

T 1 Set: Progress of the Fire – T1.1 Fire → No fire; T1.2 Small scale fire, quickly extinguished → large scale fire burning for 3 days: *‘once Steve had been out there it was obvious that we’d have to wait for the fire to come to us’* FG1; *‘you could tell it was going to be big, the weird thing was that we just had to wait and we didn’t really have any idea of how long it was going to take until the fire reached us’* FG3; *‘we were by N—J-- kitchens, the people there were going mad, I mean they could see what we were doing (or weren’t doing!) [waiting for the fire] and were panicking because it was obvious that it’d end up right close to their warehouse. But if you think about it there wasn’t much choice’* FG3.

T2 Set: Cause of Fire - T2.1 Cause of fire unknown → official cause of fire reported; T2.2 Cause of fire unknown → cause of fire child arsonists; T2.3 Cause of fire unknown → cause of fire company arsonists: *‘It was difficult to decide what caused the fire was, it won’t have started by itself so the most logical conclusion is kids .. unless of course we suggest it was the owners but there’s no proof of that, the fire investigation team concluded it was started deliberately so the best guess would be kids, we did briefly discuss it with the police but there’s nothing we could prove, so kids’* FG2; *‘the debrief said it was scallies that had started it, you show me a scally who could be arsed to climb all the way into the middle of that lot with a can of petrol and then set light to it – no way, they’d have just lobbed something in from the edge’* FG1; *‘if you ask me someone had started it deliberately, its mighty convenient that all those fridges go up in smoke rather than have to go through the effort of reclaiming them’* FG3.

T3 Set: Platform Availability - T3.1 Platform for observation requested → platform refused; T3.2 Platform for observation requested → platform provided: *‘you call the platform out whenever you can, there’s talk at the moment of reducing the number of platforms, so if we can show that we use it a lot then, with a bit of luck, they’ll take a platform off another station rather than us’* FG1; *‘at one stage we had 3 platforms and*

*about 6 pumps out there and nothing to do, you could tell it wasn't advancing that fast, it was just a belt and braces approach' FG3.*

**Transformation and Worldview:** for brevity we focus on three sets of Transformations and discuss the associated Worldviews that make them meaningful. The first Transformation set is concerned with the progress and timescale of the fire. The specific decisions that took place concerning the scale and time of the fire are represented by the Transformation '*small scale fire → large scale fire*'. As the quotes illustrate, health and safety concerns regarding fire fighters gaining access safely and the complexity of clearing a path to the fire effectively Transformed the situation from a small incident to a large incident. Additionally, the alternative Worldview of the neighbouring business shows concern and panic rather than a positive interpretation of allowing the fire to become large. The second Transformation set is concerned with identification of the cause of fire. As is illustrated by the quotes three distinct Transformations arise with associated Worldviews. Whilst the official report states that the cause of fire was arson caused by children some individuals thought the official debrief identified youthful troublemakers (or '*scallies*') as the arsonists whilst others implied that it may have been in the company's interest to start the fire. As the decision was reach to let the '*fire reach the force*' evidence regarding the actual cause of the fire was destroyed and the 'truth' lost. The third Transformation set is concerned with platform availability. As illustrated by the quotes two distinct Transformations arise with associated Worldviews. The quotes illustrate that both management and operational personnel's Worldview regard the requesting on platforms as a political act. Whilst operational staff assume that the regular deployment of hydraulic platforms will ensure their continued presence at specific fire stations, as illustrated in an individual interview, unnecessary deployment of platforms will be identified: '*we simply don't need the same number of platforms as we did a few years ago, and calling for a platform when it's not needed is pointless , we record what the platform's used for and at the post mortems the OICs are expected to account for why resources weren't used*' Senior Officer HQ.

Customer - Who were the victims or beneficiaries of Transformations?

Fire fighters at the incident – scrambling as fact finding and informal risk assessment: '*I believe they sent him out there to try and check if it had been started deliberately, but that's the job of the fire investigation team, not some rookie fire fighter*' FG2; '*as it was we sent Steve out, he's ex. Army and has got mountaineering training anyway*' FG1.

Fire fighters at the incident – alleviating boredom: '*anyway, what else were we supposed to do there?*' FG1; '*the problem with Plumwich is that it's full of daft daredevils, bored basically*' FG2.

Fire investigation department – accurate assessment of cause of fire: '*we wanted to get some idea of whether it had been started deliberately*' FG1.

Company: '*That place had gone up the previous summer, they're just stock piling and then burning*' FG1; '*thousands of pounds worth of scrap went up, I'm not surprised they went bust after 2 fires*' FG3.

**Customer:** from the quotes that emerged, when considering who would benefit from the incident (the 'customer'), different beneficiaries emerged dependent on the three specific aspects of the scenario. Firstly, regarding the progress of the fire from a small scale to a large scale fire, a possible beneficiary of the situation emerges as the fridge reclamation company. The implication from one quote is that arson may have been involved and that the fire conveniently removed the expense of reclaiming and recycling whilst another perspective suggests that the fire itself and therefore loss of recyclable materials caused the company to close. Secondly, regarding Transformation set concerning the cause of fire and the associated scrambling activity, in the Fire Fighters view at the time of the incident the expectation was that a key beneficiary of them scrambling to the source of the fire would be the fire investigation team, by reaching the source of the fire they supposed that they would be able to identify the cause and engage in some form of fact finding or risk assessment activity. However, both those who were present when the scrambling occurred (FG1) and other focus groups also identify an alternative beneficiary of the scrambling, the Fire Fighters themselves as alternative rationales for the

scrambling are proposed - to alleviate boredom or indeed as an opportunity to engage in covert training. Note the official view in the fire incident report was that children were responsible for the fire although, despite the scrambling activity, any evidence of the actual cause of fire was lost and there was considerable scepticism regarding the accuracy of the official report: *'the debrief said it was kids – no way, what on earth would kids want to scramble all the way into the middle for? They'd have just set the fridges alight at the edge'* FG2

<p><b>Actor – Those who would carry out the Transformations</b></p> <p>Scramblers – attempting to carry out the Transformation of 'Cause of fire unknown → Cause of fire known': <i>'our OIC [Officer in Charge] sent Steve to scramble over the fridges, Tony went part of the way as well, those fridges are as slippery as hell, lots of them had moss and all sorts of crap over them and the way they're piled on top of each other means that they could shift at any time'</i> FG1; <i>'I heard that one of the guys from Plumwich had been out onto the mountain to have a look but when we came to the debrief it was never mentioned'</i> FG3.</p> <p>OIC – sanctioned the scramble: <i>'our OIC sent Steve to scramble over the fridges'</i> FG1; <i>'I don't know who's idea it was to let him go out there, bloody stupid, but it was obvious that we couldn't tackle it until it got close, I heard that the senior fire fighter responsible was reprimanded but no-one's admitting it ever happened now'</i> FG2.</p> <p>Control – sanction or refuse hydrolic platform requests: <i>'the fact is we called for the platform and our request was turned down, on that occasion it really would have been helpful to have a platform straight away ... finally a more senior guy came out and OK'd the platform'</i> FG1; <i>'there was no real need for the Snorkle, once Steve had been out there it was obvious that we'd have to wait for the fire to come to us'</i> FG1.</p>
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**Actors:** from the various focus groups slightly different 'truths' emerge regarding who engaged in the Transformation process of scrambling in order to move from 'Cause of fire unknown → cause of fire known'. The quotes from the focus group that included members who were present when the possible scrambling occurred (FG1) suggest that one Fire Fighter scrambled all the way whilst another went part way. At a subsequent focus group the story had evolved, suggesting that someone had gone only part way onto the mountain (note that the Fire Crew assumed location of Plumwich was incorrect), indeed the possibility of part scrambling was retold to us as tale (or rumour) rather than 'truth' in a subsequent individual interview *'there's rumours about one of Salford's lot going out onto the mountain but from what we can gather they started to scramble over, a couple of fridges moved and the OIC quite rightly made the decision to call them back, no-one went crawling over into the middle, it would have broken all health and safety and been bloody dangerous'* Senior, HQ based Fire Fighter. Furthermore, in the context of Steve's ex army training and bravado emerging within the focus group session it is difficult to identify the level of truth and whether the extent to which the scramble occurred is exaggerated in a macho culture – regardless the truth has been lost. What is perhaps much more relevant now is that the dichotomous features of bravado and health and safety issues result in two diametrically opposed accounts. The Transformation of a platform being requested to, firstly a platform request being rejected and secondly the platform request being accepted identified the central incident control office (Central Control) as being the Actor who carried out the Transformation. Whilst formally the management of incidents resides with the OIC who is at an incident, the quotes from the focus groups imply that Central Control assumed resource allocation responsibility, additional contradictory inferences were that the scramble only occurred because the platform was reject or that, following the scramble the platform was no-longer required as sufficient information had been gathered as a result of the scramble.

<p><b>Owner(s) - Who could have stopped the transformation taking place or who controlled it?</b></p> <p>OIC – decided to wait: <i>'although there was some talk of trying to clear a path to the fire but that may have taken longer than just waiting'</i> FG1.</p> <p>Fire Safety – enforcement of fire corridors: <i>'they'd [Fire Safety] been and reviewed the storage situation with</i></p>
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*the company after the last fire – they were supposed to have piled the fridges so that there were fire breaks, corridors that we could gain access down, and spaces so that a potential fire won't spread, but they'd not bothered at all. With hindsight they should have gone back and seen them again' FG3.*

**Owners:** a range of Owners who could have stopped the various Transformations occurring existed. The progress of the fire could have been different if the OIC had made a different decision and decided to clear a path to the fire potentially maintaining the fire as a small scale incident and also affecting the various 'cause of fire' Transformations as the uncertainty surrounding the cause of fire may have been eliminated as evidence could have been collected at the source. Similarly, if Control had authorised the dispatching of a platform then the personnel at the incident may have been less inclined to scramble. Finally, as illustrated by the quotes, if the Fire Prevention team had ensured that their advice regarding incorporating fire breaks into the 'fridge mountain' had been followed then the fire may not have occurred or could have been more easily managed.

Environmental Constraints - What broader factors are a given in around the situation?

*Culture: 'there's a macho culture associated with platforms, stations vie for the number of pumps, and other resources that they have allocated to them' FG2; 'there was competition to ensure that 'their' crews were present, the OIC was being pressurized to bring more crews to the incident when, initially it didn't really need it' FG1.*

*Professionalism – 'once they'd called all those pumps out I don't think they could send them back, they'd have looked daft, calling them, standing them down, calling them out again, from their point of view it was better having us standing around doing nothing than standing us down and having to justify why we'd been called out in the first place' FG3; 'when East Commander took over the whole thing went down hill, when's the last time he's been out to a fire? He'd got no idea of how fast it was going to go, he didn't think about where we'd get water from, he just ordered more and more pumps and kept moving us about, no sooner had we got set up in one place then he'd get us moving to somewhere else, bloody annoying. Our Station Commander was out there and was going mad, but you can't say anything can you?' FG2.*

**Environmental Constraints:** the culture, politics and militaristic nature of the Fire Service predetermined much of the way in which the incident was handled. Specific issues regarding the macho culture of the Fire Service were raised as were issues of ensuring a perception of professionalism and a reluctance to question more senior officers.

### 3.2 Analysis

Examining our case study, the focus group session was often the first time a full collective picture of any incident was vocalised. The collection of stories during the focus group sessions regularly revealed details and particulars that some personnel were unaware of. In this way then, the full complexity of an incident only came into existence during the focus group sessions, and did not previously exist as a unit in the minds of the firefighters present. The coming together of the differing accounts of an incident allowed new levels of meaning and more pertinently understanding, to be derived by those who had experience of the incident, effectively it allowed cognitive legitimacy to be established.

As illustrated there is a need to understand the dynamics between the individual, the group and the incident. The application of CATWOE provided a structuring mechanism that encouraged various 'truths' to emerge, further the vocalization of these various 'truths' effectively stimulated the development of single, consensused and legitimized story. For example consider the Platform Availability Transformation. Whilst the initial OIC requested a platform it was made available only when requested by a more senior officer. Formally Central Control cannot override decisions made by OICs, yet the collective recollection is that they did in fact refuse to deploy the platform until the senior officer's request. It can be argued that the truth in this story is lost but also that the truth is not

relevant, the differing perspectives tell us that the operational fire fighters see Central Control as bureaucratic and obstructive to their operational duties, whilst the management view is that Central Control must minimize the deployment of unnecessary resources and that there are political motives for requests. The differing accounts reinforce the notion of multiple perceptions of the truth. The emergent story is a set of faction-based accounts of what occurred. Over time and in groups, the stories are embellished to highlight injustices and inequalities, and to reinforce the perspectives and positions of the storytellers. Furthermore, the focus on soliciting different actors' accounts of incidents effectively allowed us to reverse engineer the origins of a consensused story.

As further illustration consider the 'truth' of the scramblers. A senior officer clearly denied rumours that any fire fighter crawled or scrambled to the source of the fire: *'no-one went crawling over into the middle, it would have broken all health and safety and been bloody dangerous'* (Senior HQ-based officer). However during focus group 1 the participants identified named 'scramblers', justifying the decision to scramble because they had been refused a platform to enable remote observation and felt some desire to try to identify the cause, accessibility and size of the fire. Other focus groups whose members were not present at the incident suggested that the scrambling was a result of bravado and foolishness and that a formal reprimand had been issued. The fire incident report does not record any scrambling, and thus being the only official record of the incident the scrambling officially *'never happened'*. As a post-incident rationalization, no assessment can be made of which 'truth' is correct, however collective recollection of the incident gives a much richer insight not only into the actuality of what occurred but also into the multiple articulations of the incident. It is best perhaps, to view the textual output from focus groups not as a search for truth but as an analysis that enriches our understanding of a particular incident or phenomena. Therefore the contradictions, denials and opposing accounts of events, such as whether or not the scramble over fridges actually took place reveal much in themselves by the nature of the contradictions. Even firefighters who actually witnessed the incident had contradictory accounts. These contradictions were possibly due to different individual perceptions, but an additional dimension is that individuals did not want to reveal behaviour that may be seen to go against good practice. For example, whilst the 'official account' of the incident did not record any scrambling over the fridges and thus it didn't happen. Indeed the recollection of a few individuals that it certainly did reveals their perceptions of the politics, culture and ethos of the organization. Thus whilst individual stories were elicited they were subsequently legitimized as collective stories that, in their creation, imparted new perspectives amongst the contributors whilst freeing stories from the bounds of the individual raconteur or the bias of nostalgia.

## 4 DISCUSSION

Our aim was to develop a mechanism for examining the emergence of stories, especially concerning large-scale scenarios where both individual and collective stories are constructed through a process of evaluative and cognitive legitimization. Stories are 'ideal devices of simplification' (Weick and Browning 1986) as they are able to encapsulate attitudes, culture and organisational norms. However, individually constructed stories are usually told from a single perspective may not be particularly relevant to others, may differ from other individuals' perceptions of events and can become 'static' particularly with a dry teller or when the story changes over time so that the story comes distanced from the realities and concerns of the current audience. Furthermore, individuals frequently use stories to endorse their own personal attitudes and beliefs and are thus constructed by individuals undertaking a process of evaluative legitimization to enable understanding of a single aspect of the complexity of an organization or event (Suchman, 1995). Work has been undertaken into multiple perspective storytelling, including the ambiguity of beginnings and endings, lack of clarity, complexity of meaning, content of stories and inconclusivity (Boje, 1995; Cohen & Tyson, 2002). However, the underlying assumption has been that there is some concept of 'truth' rather than the emergence of a

legitimised story through individual transformation (or evaluative legitimacy) and group consensus (or cognitive legitimacy).

The story elicitation and collaborative construction process presented in this paper drew on principles from SSM as Checkland's approach outlines a process of model development through the reaching of agreement and consensus between differing stakeholders (Checkland, 1981). SSM accepts that human activity systems are complex and that the reductionist approach of scientific analysis fails to capture the role of groups of people often preferring to focus on individuals. This notion of 'accommodation' and multiple Worldviews has significant synergy with the concept of the cognitive legitimization of emerging stories. Whilst the CATWOE technique still requires skill on behalf of the facilitator and the goodwill of the story providers the use of CATWOE proved particularly useful as a mechanism for stimulating storytelling and provided a framework for reflection, discussion and the vocalisation of multiple stakeholder perspectives. As CATWOE was applied multiple versions of stories emerged demonstrating various conversational implications – implicit meanings inferred from explicit statements. The use of CATWOE within the focus group activity allowed multiple facets of an event to surface, be discussed, argued over and recorded and threw light on reasons behind differing perceptions and on what is missing as well as what is present. The case study demonstrates that the use of the CATWOE framework as a structuring mechanism can stimulate the story elicitation and dissemination process in a way that the more established story elicitation techniques do not. In addition the use of the CATWOE framework provided a mechanism to interpret peoples' experiences and generalise from them.

On reflecting on our case study data we were particularly drawn to the accommodations that were arrived at and how stories were constructed pragmatically, that is the storytellers constructed stories that had not only evaluative legitimacy but also cognitive legitimacy, that is that they were acceptable to the wider group regardless of accuracy. Such pragmatism has been explored by Brown and Levinson (1987) in their study of pragmatic linguistics which explores the relationships between the language used and the language user in a situational context. In our case study the focus groups operated outside of the usual bounded institutionalised debriefing sessions used within the Fire Service. Furthermore, ourselves as focus group facilitators were external to the culture and procedures of the organization and therefore expressions like *'daft daredevils'*, *'the company were just stockpiling and burning'* and *'don't know who's idea it was to go out there, bloody stupid'* emerged. It is unlikely that such contentious vocabulary would have been used in the formal reporting structures available to operational and management personnel. In addition the identification of the use of pragmatic linguistics may be used to filter out 'uncomfortable truths' and move the story towards cognitive legitimacy. Further, the exaggerated emphasis put on words said or actions taken may exemplify a generally felt attitude or encapsulate commonly held views. For example, the communication that occurs in indirect speech acts is founded in the observation that language users frequently depart from optimal information exchange dialogues to avoid the embarrassment of the truth (or to maintain 'face'), for example the telling of a 'white lie' in order to either spare the feelings of the person they are communicating with or in order to save their own 'face' (Brown & Levinson, 1987). On reflecting on the case study data a number of instances of 'face saving' occurred, consider: *'once they'd called all those pumps out I don't think they could send them back, they'd have looked daft'* and *'there's a macho culture associated with platforms, stations vie for the number of pumps, and other resources that they have allocated to them'*. In the first instance the implication was that the OIC was more concerned with having to justify call out and stand down decisions than deal with the fire effectively. In the second instance the implication was that stations with permanent platforms have more status than those with no major equipment stationed at them, and that this status controversial opinions and non-evidenced based assumptions for fear of drawing attention to actions contrary to guidelines or codes of conduct, unwanted management interest requiring extra justification, or reprimand in the face of unwise actions. However, the CATWOE framework supported the elicitation and individual construction of stories (or evaluation legitimacy) together with the development of group consensus (or cognitive legitimacy). Furthermore, the emergent stories provided a mechanism to draw

‘uncomfortable truths’, supported through practitioner reflection that can enhance future practice, tacit theories and knowledge being implied in the stories and embedded in the accounts of practice.

## 5 CONCLUSION

To conclude, an important and powerful aspect of storytelling is the organization’s response to the stories. The storytelling literature recognizes the relevance of fact or even fiction as a valuable information giving device which, in comparison to other methods of making truth claims, such as statistics, allows their receivers to vicariously experience the events described whilst also allowing the storytellers to add levels of vividness, emotive personal response and feeling which would not otherwise be available. In this way, stories have greater ‘currency’ and are more easily remembered and recounted particularly by managers and executives who are less likely to have first hand experience of the event. Thus stories are ideal in their capacity to encapsulate attitudes, culture and organizational norms. The untruths, falsehoods and exaggerated emphasis put on words said or actions taken may be used to exemplify, condense and communicate attitudes and beliefs.

However, individual narratives are limited in their ability to include multiple perspectives, ambiguous beginnings and endings, unclear and complex causes, arguments of what goes into the story, or lack of endings. Where stories are treated as texts removed from the circumstances of creation, the complex process of symbolic communication and interaction is oversimplified and a single ‘truth’ may emerge which overlooks the different meanings inferred by participants.

Wilkins and Thompson (1991) suggest that participants should be aware of the constructed nature of narratives as the more people struggle to ‘get the story straight’, the more they focus on issues they see as important and ignore or downplay other possible interpretations. The use of the CATWOE framework provides a structured mechanism to support the construction of narratives and allows multiple facets of an event to be discussed and argued over and throws light on reasons behind differing perceptions and on what is missing as well as what is present. Thus a rich multifaceted story is constructed that encapsulates both evaluative and cognitive legitimacy rather than an oversimplified, single ‘truth’ that overlooks the different meanings inferred by participants.

In conclusion, the current popularity of the storytelling approach is laudable yet the purist view that stories should be allowed to naturally emerge is not sustainable. The research approach reported in this paper has demonstrated that stories may be viewed as abstract representations, some detail may be omitted or sketchy, accuracy is not as significant as interpretation and multiple interpretations or ‘truths’ are equally valid. The CATWOE framework has demonstrated that it is possible to stimulate storytelling without destroying the unique features of a useful knowledge rich story: bias, opinion, fact and even fiction.

## References

- Alvarez, R. and Urla, J. (2002) Tell me a Good Story: Using Narrative Analysis to Examine Information Requirements Interviews during an ERP Implementation *The DATABASE for Advances in Information Systems*, Winter 2002, 33(1), 38-52.
- Ball, N. and Ragsdell, G. (2003) Telling knowledge management stories: Creating and implementing a new technology-society knowledge base at the university of Waterloo. *OR Insight* 16 (4), 5-12.
- Bergvall-Kareborn, B. (2001) Enriching the model building phase of soft systems methodology. *Systems Research and Behavioural Science* 19, 27-48.
- Bhardwaj, M. and Monin, J. (2006) Tacit to explicit: An interplay shaping organization knowledge. *Journal of Knowledge Management* 10 (3), 72-85.

- Billig, M. (1996) *Arguing and thinking: A rhetorical approach to social psychology*. Cambridge University Press, Cambridge.
- Boje, D. M. (1991) The storytelling organization: A study of story performance in an office-supply firm. *Administrative Science Quarterly* 36 (106-26),
- Boje, D. M. (1995) Stories of the storytelling organization: A postmodern analysis of Disney as *tamara-land*. *Academy of Management Journal* 38 (4), 997-1035.
- Boy, G. A. (1997) The group elicitation method for participatory design and usability testing. *Interactions* 4 (2), 27-33.
- Brown, J. S., Denning, S., Groh, K. and Prusak, L. (2004) *Storytelling in organizations: Why storytelling is transforming 21st century organizations and management*. Elsevier Butterworth-Heinemann, Burlington, MA.
- Brown, P. and Levinson, S. C. (1987) *Politeness: Some universals in language usage*. Cambridge University Press.
- Calder, B. J. (1977) Focus groups and the nature of qualitative market research. *Journal of Marketing Research* 14 (14), 353-364.
- Checkland, P. (1981) *Systems thinking, systems practice*. John Wiley & Sons.
- Cohen, D. and Prusak, L. (2000) *In good company: The role of social capital in organizations*. Harvard Business School Press, Boston.
- Cohen, D. and Tyson, D. (2002) Teaching blind men to see the elephant: Using narrative in assessment and change management. *Knowledge Directions* 3 (2), 66-75.
- Cook, S. D. N. and Brown, J. S. (1999) Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. *Organization Science* 10 (4), 381-400.
- Davenport, T. H., Jarvenpaa, S. L. and Beers, M. C. (1996) Improving knowledge work processes. *Sloan Management Review* 37 (4), 53-65.
- Denning, S. (2001) *The springboard: How storytelling ignites action in knowledge-era organizations*. Butterworth Heinemann.
- Feldman, M. S. and Skoldberg, K. (2002) Stories and the rhetoric of contrariety: Suntexts of organizing (change). *Culture and Organization* 8 (4), 275-292.
- Gabriel, Y. (2000) *Storytelling in organizations: Facts, fictions, and fantasies*. Oxford University Press.
- Galliers, R. D. and Swan, J. A. (2000) There's more to information systems development than structured approaches: Information requirements analysis as a socially mediated process. *Requirements Engineering* 5 (2), 74-82.
- Gennari, J. H., Musen, M. A., Ferguson, R. W., Grosso, W. E., Crubezy, M., Eriksson, H., Noy, N. F. and Tu, S. W. (2003) The evolution of protege: An environment for knowledge-based systems development. *International Journal of Human-Computer Studies* 58 (1), 89-123.
- Gergen, K. J. (1997) *Realities and Relationships*, Harvard University Press
- Golant, B.D. and Sillince, J.A.A. (2007) The Constitution of Organizational Legitimacy: A Narrative Perspective. *Organization Studies* 28 (8), 1149-1167
- Hansen, H. (2006) The ethnographic approach *Human Relations* 59 (8), 1049-1075
- Kane, A. A., Argote, L. and Levine, J. M. (2005) Knowledge transfer between groups via personnel rotation: Effects of social identity and knowledge quality. *Organizational Behavior and Human Decision Processes* 96 (1), 56-71.
- Kupers, E. (2005) Phenomenology of embodied implicit and narrative knowing. *Journal of Knowledge Management* 9 (6), 114-133.
- Labov, W. (1972) *Socio-Linguistic Patterns*, University of Pennsylvania, Philadelphia
- Lubit, R. (2001) Tacit knowledge and knowledge management: The keys to sustainable competitive advantage. *Organizational Dynamics* 29 (3), 164-78.
- Merleau-Ponty, M. (1962) *Phenomenology of perception*. Routledge, London.
- Nonaka, I. and Takeuchi, H. (1995) *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press, New York.
- Patriotta, G. (2003) Sense-making on the shopfloor: Narratives of knowledge in organizations. *Journal of Management Studies* 40 (2), 349-75.
- Polanyi, M. (1966) *The tacit dimension*. Routledge and Kegan Paul, London.

- Potter, J. (1998) Discursive social psychology: From attitudes to evaluations. *European Review of Social Psychology* 9, 233-66.
- Reissman, C.K. (1993) *Narrative Analysis*, Newbury Park, Sage
- Schreiber, G., Akkermans, H., Anjewierden, A., De Hoog, R., Shadbolt, N., Van De Velde, W. and Wielinga, B. (1999) *Knowledge engineering and management: The commonkads methodology*. MIT Press.
- Schultze, U. (1998) Investigating contradictions in knowledge management. In *IFIP WG8.2 & WG8.6 Joint Working Conference on Information Systems: Current Issues and Future Challenges*, Omnipress, Wisconsin, USA, Helsinki, Finland.
- Snowden, D. J. (2000) The art and science of story or 'are you sitting uncomfortably?' part 1: Gathering and harvesting the raw material. *Business Information Review* 17 (3), 147-156.
- Spence, D (1982) *Narrative Truth and Historical Truth*, New York, Newton
- Stewart, D. W. and Shemdasani, P. N. (1990) *Focus groups: Theory and practice*. Sage, Newbury Park CA.
- Stewart, T. A. (1998) *Intellectual capital: The new wealth of the organization*. Nicholas Brealey Publishing, London.
- Swap, W., Leonard, D., Shields, M. and Abrams, L. (2001) Using mentoring and storytelling to transfuse knowledge in the workplace. *Journal of Management Information Systems* 18 (1), 95-114.
- Tsoukas, H. and Hatch, M.J. (2001) Complex thinking, complex practice: The case for a narrative approach to organizational complexity. *Human Relations* 54 (8) 979-1013
- Tsoukas, H. and Vladimirou, E. (2001) What is organizational knowledge? *Journal of Management Studies* 38 (7), 973-993.
- Webber, A. (1984) What's so new about the new economy? *Harvard Business Review*,
- Weick, K. and Roberts, K. (1993) Collective mind in organizations: Heedful interrelating on flight docks. *Administrative Science Quarterly* 38 357-81
- Wenger, E., McDermott, R. and Snyder, W. (2002) *Cultivating communities of practice*. Harvard Business School Press, Boston, Massachusetts.
- Winograd, T. and Flores, F. (1986) *Understanding computers and cognition*. Ablex Publishing Corporation, New Jersey.