

Knowledge Elicitation: indirect knowledge Discovery

Part Two of Basics of Organic Knowledge Management



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Knowledge Elicitation: indirect knowledge Discovery

Part Two of Basics of Organic Knowledge Management

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In the first of this series of articles on organic knowledge management, Dave Snowden identified key issues relating to the language we use to describe what we know. In particular he argued that we had out grown the use of 'tacit' and 'explicit' through a mixture of overuse, abuse and misunderstanding. In this second article he examines some of the dangers of knowledge elicitation and outlines approaches rooted in anthropology that enable the identification of knowledge assets in organisations. In the final article these techniques will be expanded to include Story Circles and Anonymity, and a unifying model for identification of ASHEN components and the design of interventions will be discussed.

"There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy"

Shakespeare *Hamlet*

The first of this series of articles described a linguistic framework, designed to enable organisations to identify what they know in such a way as to move directly to action as a result of the description: the ASHEN model. The principle of the model was first, to identify Knowledge Disclosure Points (KDPs) in the form of decisions, judgements, problem resolutions and learning events; then to ask a meaningful question within the context of those KDPs. For example: When you made that decision, what **A**rtefacts did you use or have access to? What **S**kills had you acquired that were necessary? What **H**euristics have you developed that enable you to make that decision quickly on the basis of incomplete and/or unarticulated inputs? What **E**xperiences have you had which were essential or just plain useful in making that decision? What **N**atural talent is necessary and can you give examples of signs that such talent exists as potential in others? ASHEN provides for a meaningful question in a meaningful context.

This second article will explore the need for indirect approaches to knowledge audits, based on the discovery of KDPs through techniques drawn from Anthropology. In the final article these techniques will be extended to cover Story Circles and, more speculatively, the use of anonymity in virtual communities. The final article will also summarise a series of heuristics for use in designing 'interventions' in the knowledge and learning ecologies that are a necessity in the modern organisation.

The need for Knowledge Elicitation¹

In the first of these articles I pointed to the self-evident truth that much valuable knowledge is triggered in context: **it is known when it is needed to be known**. This means that we either have to be present at the time of that need and observe its identification and use, or we need to recreate the use in retrospect. This requires us to take account of one of the great truths of knowledge management, derived

èlī'cīt, v.t. Draw forth (what is latent), usu. Fig.); educe (truths *from* data), draw out, evoke, (admission, answer *from* person). [f. L *E*(*licere licit-* for *lacere entice*)]

from a saying of Peter Drucker at Delphi's IKMS event in San Diego 1998: "In the Knowledge Economy everyone is a volunteer, but we have trained our managers to manage conscripts". Elicitation of knowledge requires a paranoid attention to the conditions of a volunteer society otherwise our investigation will be adversely influenced by camouflage and conformity within the communities we are studying, and we may fail to understand the motivation or nature of knowledge retention or hoarding.

- Camouflage behaviour occurs where individuals fail to buy into the processes and procedures they are being asked to adopt. They will appear to conform, for instance a request for material will be satisfied but the material will be unusable, too dense or missing key data. Here the individual has something of value but they do not want to volunteer it in current circumstances, equally they do not desire a martyr's crown, hence the camouflage behaviour.
- Conformance on the other hand generally does not conceal real knowledge, but is the typical behaviour of 'fashion wave riders' who conform the current in phrase or approach. The understanding of these individuals is superficial at best, misleading at worst and there is no commitment or passion for the subject or behaviour. Several apparently successful knowledge initiatives in large companies have failed when the executive sponsor left, or lost interest and individuals *conformed* to a new norm

Both of the above behaviours are part of survival in a large organisation and to a lesser or greater degree all employees learn to adopt both strategies at need. In addition we see knowledge being deliberately hoarded, sometimes because it presents an opportunity to exercise power, but more frequently because of fear of abuse of something precious, or simply through lack of time coupled with excessive and unreasonable demands for codification.²

For these reasons and many others it is vital to avoid influencing the subject area as such influence will trigger one of the above problems. Knowledge elicitation is an indirect process, developed because the traditional techniques of structured interview, questionnaire and hypothesis based consulting have little application in the early stages of a knowledge audit project, although they are useful once we have worked sufficiently with the ecology to allow its basic patterns and structures to emerge.

Beyond the Newtonian Metaphor

Underlying all of the above is a fundamental statement about the nature of knowledge management and associated consultancy. We can see the development of management science as a linear development, commencing with the adoption of the principles of Newtonian Physics by Fredrick Taylor at the start of the 20th Century and culminating in the work of Hamner and others on Process Re-engineering. The underlying metaphor was of the organisation as a machine, in which cause and effect could be separated and understood through the application of scientific method. The Harry Seldon character of Asimov's Foundation Trilogy in Science Fiction probably summarises best the aspiration of this approach: to develop algorithms that would predict human behaviour in the same way as the movement of the heavenly spheres could be predicted. The argument of this and other articles covering Organic Knowledge Management is that the mechanical metaphor of Newtonian physics fails when we move to the management of intellectual capital: it is fine for process, quality and other activity that is mechanical in nature; it fails when the principle component or actor is organic.

In Physics scientists realised that an electron can paradoxically be both a wave and particle simultaneously, they also became aware that the energy required to see an electron fundamentally changed its position, so you could never really see the thing itself, but had to look for its traces. In Management Science we are starting to make the same transition. Knowledge Management has been one of the trigger points in this transition. Managing knowledge has a significant requirement to understand ephemeral natures; the act of knowing is itself interdependent with a variety of causal factors and

there is no clear distinction between cause and effect. Knowledge is simultaneously and paradoxically a thing and a capability, an actuality and a potential, tangible and intangible. Managing knowledge is more akin to managing a complex ecology of interdependent, unpredictable and fluid entities, than it is to designing and maintaining a sophisticated machine.

It follows that a knowledge elicitation exercise needs to avoid influencing the ecology that it is being studied. The formal hypothesis based techniques of much internal and external consultancy are inappropriate for knowledge work. Aside from the directive nature of such enquiry, the very arrival of a consultancy team engenders a reaction in the ecology. The need to overcome these issues led to the development of the anthropologically based technique outlined below; a recognition of the limitations of that technique to examine the past led to the develop of Story and other methods which will be outlined in the final article of this series.

As with an ecology, the nature of what has happened before profoundly influences what is now possible. The population may be cynical or just plain weary of new ideas and initiatives, coupled with new drives for economies and revenue in an ever more competitive environment.

Anthropological Observation

When an anthropologist studies a community they first become, as far as is possible, a part of that community. They seek to observe as an unobserved observer before they form a hypothesis. In contrast too many consultants draw down a *method* from their internal knowledge systems and seek to shoehorn the situation into that model – the economics of which are those production line, you can have any solution so long as its black! Anthropological techniques are gaining increasing credibility in business and do not require long periods of cultural emersion to be effective. The secret to this sort of work is not to enter in as a consultant wearing a suit with or without clipboard, and certainly not with a pre-prepared set of questions and hypotheses to test. Instead the consultant enters as a servant of the servants. Stack vegetables, carry bags, make tea, sweep metal scarf of the factory floor with the apprentices, dig holes in the road, and shadow office workers. You may not even use consultants; in one successful project school children were used to understand the knowledge flows of a head office. The stated reason for their presence was a half term work experience, but the day before they started they were trained by an anthropologist in observation techniques. The school children exhibited three characteristics of successful operators in the field. They were **naive** so they asked unexpected questions, they were **innocent** and as a result people answered those questions without taking offence and finally they had all the curiosity of youth, and genuine **curiosity** naturally leads to higher levels of elicitation.

Observation of this type led to the discovery of the field engineers café mentioned in the first article and the valuable knowledge artefact of the journal. In a similar case the subject of study was a supermarket in which the management staff were exceptionally good at forecasting fresh products. This is a real issue for a supermarket: failure to have a full range on display as the trading day draws to a close means loss of customers and loss of loyalty, but nearly all items unsold at the end of trading are a loss. No one (including the staff) knew why this particular supermarket were that good. Several days of patient observation, tea making, trolley pushing and shelf stacking resulted in a more relaxed environment and then the reason emerged in the context of need: the individuals knew what they knew when they needed to know it. One Thursday evening demand started to soar to exception levels. Given that the normal weekly peak is Friday/Saturday this was anomalous and pressure grew to increase the order quantities for the next two days. The management team were not so sure and at one point in the discussion, one member suddenly reaching into a drawer and drew out a much-battered five-year diary. While the others were talking she thumbed through it apparently without purpose. The next minute she emitted a quick expletive followed by the

statement "we've got a Baker Day and there's a home match on Saturday". For those not familiar with the phrase it is a reference to an ex British Minister for Education who granted teachers the right to call occasional holidays for training purposes. Such one-day events have entered the vocabulary as "Baker Days" and for working parents they are a problem. The Baker Day coupled with a home match for the local soccer team, meant that weekend shopping was taking place early to allow visits to the beach, preparation for the absence of the family at football on Saturday or like activity. As a result of this the team in question lowered their order rather than increased it and in consequence had less wastage. It turned out that the five-year diary was used to record any exceptional or unusual event and the then best understanding of why. The human being was able to scan this written record and identify recurrences and/or similarities with past events and use them to help interpret the present situation. A very simple mechanism, very easy to replicate over a large number of stores with little cost, and with the advantage that book contains more valuable knowledge than is ever used *in situ*, so its capture (by copying) can provide useful information to the organisation over and above its use for forecast accuracy.

Now consider, in this case there was no indication of hoarding behaviour, but no amount of questioning, structured interviews or the like had triggered the knowledge of the knowledge. It was only the creation of a real need that triggered the use of the knowledge and thereby its elicitation. In ASHEN terms this was an artefact of major use as it was scalable at low cost. There were also associated skills, heuristics and experience that could be managed through training programmes and cross-store mentoring. Such work requires patience and the strength of will not to ask directive questions that will influence the answer. Opinions can be offered, but are only appropriate to provoke or stimulate a response and should be indirect, preferably using a reference to another industry sector all together. Questions of the form "I've noticed that in industry X, Y applies is that the same here?" are acceptable. The more different that X is the less intrusive the question and the more revealing the answer. Not all are capable of doing this type of work, as it requires a high level of personal tolerance for uncertainty. The temptation of most consultants is to prove their industry knowledge, to add value to the process. The observation stage is not the time for this. It also requires a willingness to sacrifice the status of consultant, in a sense the more lowly the work, the better the impact and the more likely you are to find something. One of the ways in which consultants can be tested for their suitability is to given them humble tasks such as note taking on an assignment. Those willing to learn will seize the opportunity; those who are incapable of learning will demand a role more appropriate to their status.

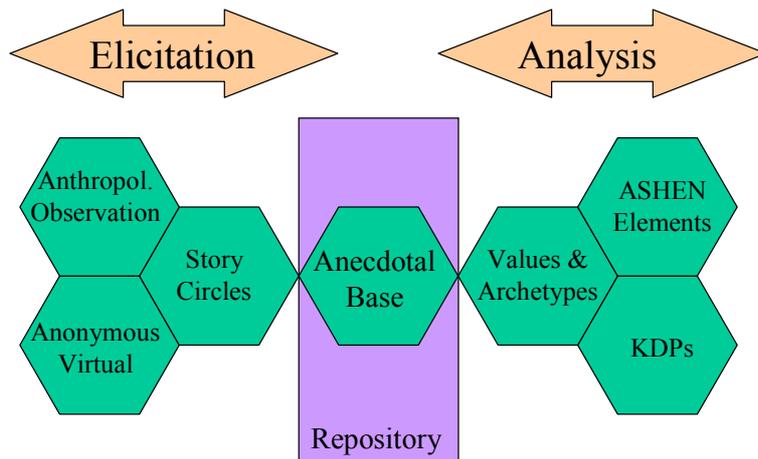
The instruments of observation work are tape recorders, video cameras and notebooks. One wants to record the material as is, rather than filter it through the perception of the observer. The note pad is for opinions and commentary. One of the main dangers is that of over-identification with the subject. Working this way involves its own type of camouflage to the point were the observer can, and almost always does if they do a good job, go native to a degree.

Some observation is by necessity an interview. In these cases the secret is not to allow the subject to know the precise nature of the enquiry. For those readers who read spy novels, you will know that one interrogation technique involves always asking more questions after you have found what you were looking for. This means that the subject does not learn from you and you are able to test or validate their statements. Open questions, discursive questions, disruptive ideas and indirect enquiry are the tools to apply. One useful technique is to always interview the individual in the context of their work so that clues such as pictures on walls, trophies and even the layout of the room and the attitude to interruption can provide clues and opportunities for indirect questions. That way the context creates material around which the subject can talk without directly tacking the subject.

The output of observation or the less effective interview process is three fold in nature:

1. Anecdotal material in the original words of the subjects being studied. This is the core output and subsequent listening to tapes allows the consultant to identify knowledge disclosure points in the form of decisions, problem resolution, acts of judgement, learning points, solution identification and the like. A KDP is a focus point that satisfies two criteria: firstly it must be meaningful to the subjects of the study and secondly it must entail the use or acquisition of knowledge. The anecdotal material can also be used as the base material for the creation of purposeful stories, this will be discussed when we look at interventions.

2. KDPs will also be directly noted during the observation. These should be captured at the time. If they are clear and distinct then the ASHEN question may be directly asked: "What



Artefacts, Skills, Heuristics, Experience and natural talent were necessary when you made that decision? However this should only be done when the knowledge is immediate and vivid. The primary focus of this stage is to

identify the various KDPs so that they can subsequently be clustered and the ASHEN question be focused on individuals and communities based on the totality of the observations. Again one is seeking to avoid biasing the sample at this stage as much as is possible.

3. Finally examples of the various ASHEN components will be encountered. A key rule for the observer is not to comment or to judge but simply to record. A knowledge asset is a knowledge asset, if you look pleased or are disturbed by something you will influence one-way or the other the subject. A fastidious expression of horror when working with Engineers in a Sewer will ensure more exposure rather than less to some stomach churning tasks! It's the nature of field communities to shock and to initiate. This is a part of being accepted within the community. In one case the moment of acceptance came when the observer was sent to the local depot to pick up a 'Stand Alone': having stood alone in the depot for an hour or so, the individual was accepted: it was an initiation rite. To the observer this is a sign that they are accepted and should alert them to the immediacy of obtaining a higher degree of confidence and consequently more exposure to what really happens. An over reaction to such an event would invalidate it or lead to mischievous repetition. In some cases observers have had to be pulled because they lost respect through over reaction.

Observation has its limitations as a technique. It is highly effective where the life cycle of knowledge use can be observed over a period of one or two weeks. Where knowledge use is revealed over longer time periods there are two other techniques that are valuable: Story Circles and Anonymity. These techniques will be discussed in the next article in this series, along with the process by which the various KPDs, are clustered and ASHEN components gathered, structured and used to create interventions to sustain and build the knowledge ecology.

One final word of warning; in training and testing consultants in this sort of work over several years, it would appear that those capable of carrying out the work pick it up very

quickly, whereas as others will struggle for ever. What has become known, as the 'deep end' test is a useful way of sorting sheep from the goats. The candidate consultants are metaphorically taken to the deep end of the municipal swimming pool and thrown into the deep end. You then go and have a cup of coffee and read the paper – the ones who are still swimming when you come back are worth working with. The reason for this is simple, a more conventional approach means that it is a long time before you can identify who has 'got it' and who hasn't. Most consultants are naturals at camouflage behaviour and conformity; early exposure is less risk to the project and to the method.

¹ In the 1998 series of articles I used the term Knowledge Disclosure. I have now changed this to Knowledge Elicitation to reflect the need to be more proactive in identifying KPDs. Although this is necessary it carries with it an increased danger of influencing the subject of study. While this is partly reduced through the use of fiction and faction in Story Circles, it is still present and practitioners need to maintain constant vigilance.

² An expansion of the reasons for Knowledge Retention is due to be published as an article in the fall, advanced copies of material can be obtained on application to the author.