ISSA Proceedings 2002 – Is There An Argument For This Audience?

1. Introduction

Argumentation theory, and particularly the New Rhetoric (Perelman & Olbrechts-Tyteca, 1969) provide a rich background against which to study interaction between two or more participants. It can bring a much-needed structure to inform the process of study, the questions that are asked and the interpretations that are put into place in analysing texts and speech. Crosswhite (1995) has provided an illustration how one's background stance in argumentation theory shapes the question of fallacies. What people do can therefore be explained, made sense of, and maybe even predicted to a certain extent.

On the other hand, practical application offers an opportunity to better understand or refine a theory. Warnick & Kline (1992), for example, have demonstrated how TV discussions can be analysed in terms of New Rhetoric's argumentation schemes. Sillince (1994), Crosswhite *et al*. (to appear) and Stumpf (2001) have included aspects of the New Rhetoric in computational models. But argumentation theory is not set in a vacuum. It impinges on or inspires many fields of research; in the same way, it can draw new understandings from other theories.

In this paper, two main theoretical aspects are employed. The argumentation theory background stems from the New Rhetoric, whilst inspiration is drawn from Personal Construct Psychology and the associated repertory grid technique (Kelly, 1955) to investigate the notion of audiences. The New Rhetoric gains its power from the central notion of audience from which all other principles radiate. In this paper, we will firstly examine the relevant understandings of audience that flow from the New Rhetoric. Secondly, we will interpret Personal Construct Psychology and the repertory grid technique in the context of the New Rhetoric. This leads to the ability to investigate audiences by making a comparison of repertory grids. This point will be illustrated by examples drawn from an investigation into the knowledge of a specialised, particular audience of experts in relation to retail crime investigations. The practical application of the New

Rhetoric and the repertory grid technique opens up a discussion about the role of argument and audience, in terms of whether there is an argument for a particular audience.

2. The New Rhetoric and the notion of audience

The New Rhetoric employs a central notion of audience. In this respect, the relationship between and arguer and an audience is a meeting of minds to debate a question. The aim of argumentation is "to create or increase the adherence of minds to the theses presented for their assent" (Perelman & Olbrechts-Tyteca, 1969, 45). To gain this adherence, the way that the argument is presented has to accord to some degree with the beliefs of the audience to make it acceptable and reasonable. The definition of a successful argument hinges solely on its acceptance by the audience.

The acceptance of an argument can be divided into two broad aspects. The arguer must pay attention to both premises and argument schemes; both independently may be rejected or accepted. In other words, an audience may accept a premise but may reject the way this premise is used further by rejecting the argumentation scheme. Conversely, certain argumentation schemes may be acceptable to the audience but premises are disagreed with.

Every argument is directed at an audience; the difficulty is knowing who the appropriate audience is. An audience intended to be addressed is constructed by the speaker and the construction of this audience must be appropriate for the argument to be successful. Perelman & Olbrechts-Tyteca (*ibid.*) distinguish between the universal audience and particular audiences. Certain arguments, such as arguments concerning justice, should be directed towards the universal audience. A universal audience must be constructed by an arguer (Crosswhite, 1996) by endowing it with, for example, more rationality, greater patience, more intelligence and less sway to emotional appeals or prejudices than particular audiences.

In most cases, however, the arguer addresses herself to a particular audience that she wishes to persuade. Further qualification of particular audiences can be made, e.g. internalised argument, a single hearer or indeed a two-way discussion (Perelman & Olbrechts-Tyteca, 1969; Kallmeyer, 1996). It follows from these considerations that the arguer in essence can be viewed as just another audience who holds certain premises and approves of certain argument schemes**(i)**.

To stay within the framework of the New Rhetoric the notion of what an argument

is needs to be characterised in terms of an audience. Necessary preliminary conditions for an argument are the “intellectual contact of minds”, the existence of the aim to persuade an audience, the absence of force and a construction of the audience (or indeed constructions of the audiences). The successful outcome of an argument is to persuade the audience. However, and more importantly, the notion of argument presumes an element of transformation within the audience during the argument, a process of persuasion: adherence to a viewpoint has to be created or increased in the audience. This means that the audience itself changes and develops over the course of the argument.

To illustrate this point further, consider a mother who wants to persuade her teenage son to clean up his room because it is messy. The son replies, “yes, that’s exactly what I thought” and goes away and does it (we apologise for this not very true-to-life example). Certainly we could presume that there is a meeting of minds, that there is the aim by the mother to persuade the son, the absence of force and that a construction of the audience has taken place. The outcome of the persuasion was also successful. However, it is not certain that there is a transformation within the audience: the audience may have agreed perfectly with the arguer initially and adherence was neither created nor increased as a result of the argument; the mother may have misjudged her audience and may have been ‘preaching to the converted’.

For an argument to exist, then, the audience and the arguer must not agree perfectly at the outset; indeed, the arguer and audience have to differ in their premises an/or argumentation schemes that are relevant to the claim for there to be an argument. Furthermore, a transformation within the audience has to be effected for the argument to be successful. The two main determinants of whether there is an argument, we propose, are this difference in starting positions and transformation of audiences.

This need for arguer/audience difference presents a problem in ordinary persuasion. Since the audience is a construction of the arguer, she can never be certain whether the difference constructed is accurate, or that a difference exists at all. However, it also presents us with an opportunity. If we are able to find out in advance that arguer and audience differ, and assuming that the necessary preliminary conditions for an argument are present, then an argument could take place. Furthermore, if it can be shown that there was a transformation within an audience then this could be used as a ‘footprint’ to track the process of argument. We propose that the repertory grid technique, which is a way of eliciting how individuals construe the world, can be used to detect differences of audiences and

transformation within an audience.

3. Persuasion and the repertory grid technique

The repertory grid technique, devised originally by Kelly (1955) to support Personal Construct Psychology, has been used extensively as a knowledge acquisition tool in expert systems. The technique compares items of experience (elements) to draw out distinctions (constructs) between these elements. Distinctions are expressed as dimensions. Each element can be rated as to its position within each distinction. The associated technique of 'laddering' draws out an individual's hierarchies of importance and preferences among these distinctions. Repertory grids in this sense are tools for individual reflection that make beliefs about a particular domain explicit. Kelly's view is that individuals have many of these construct systems, which determine how they interpret the world around them.

Reardon (1991) and Plank & Minton (1995) have identified a direct relation between persuasive messages and Personal Construct Psychology (PCP). Reardon makes a link between the arguer's interpretation of a construct system and persuasion: "The success or failure of attempts to persuade another is, to a large degree, a function of the accuracy with which one can construe the construct systems of another." (Reardon, 1991, 18). Furthermore, persuasion may change an individual's construct system. Plank and Milton make propositions regarding the effectiveness of persuasion in relation to PCP. They stress that persuasive messages will be more effective if they fit within the construct system of the receiver and that persuasive messages may be interpreted differently by different receivers. These concerns are also echoed in the New Rhetoric. Persuasion is directly related to the construction of an audience in terms of the New Rhetoric. Successful persuasion depends on the acceptance by the audience. Persuasion aims to introduce a transformation within the audience. An audience is not a homogenous mass; audiences can differ.

It is possible to identify relations between other aspects of the New Rhetoric and repertory grids. Constructs form starting points of argumentation, akin to premises. Facts are individual constructs relating to elements that are accepted as true or measurable, whereas presumptions are assumed to be true unless proven false. A complete construct system can be related to what Perelman & Olbrechts-Tyteca define as a *truth* in the New Rhetoric. Preferences within constructs or construct systems form values and value hierarchies. The aim of

persuasion is to introduce new constructs or modify constructs by way of using argumentation schemes. These argumentation schemes themselves can be represented through constructs; similarly, preferences among the use of argumentation schemes can be expressed through constructs.

In characterising audiences, repertory grids have been used to compare the construct system of experts (Gaines & Shaw, 1989; Gaines & Shaw, 1994). In this extension to the technique, individually elicited matrices, which capture elements, distinctions and ratings, are computationally analysed post-hoc to find an amount of overlap. Gaines & Shaw (1994) distinguish between differing types and amount of overlap as shown in *figure 1.*

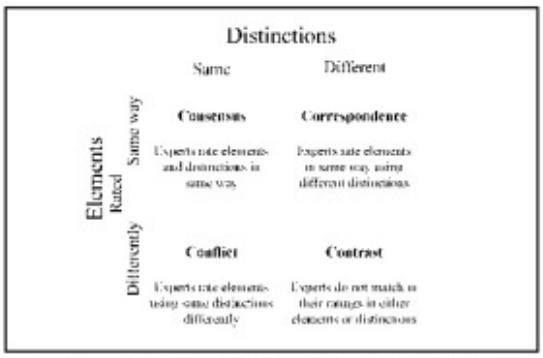

Figure 1 Categorisation of experts' construct system overlap (after Gaines & Shaw, 1994).

Figure 1 – Categorisation of experts' construct system overlap (after Gaines & Shaw, 1994)

Consensus exists if experts use elements and distinctions in the same way i.e. distinctions and elements are rated the same way. Correspondence arises if experts use the same elements but differ in their distinctions: their ratings discriminate elements in the same way but their names for the distinctions differ. Conflict exists if they use the same distinctions for differing elements i.e. although they use the same names for distinctions, the ratings they give to elements differs. Contrast exists if experts differ both in their elements and distinctions: no matching is possible. Gaines & Shaw propose that following this analysis technique it should be possible to discern if and how individuals' beliefs differ.

4. Characterising an audience – an illustration

The REMS project is concerned with the capture, representation and sharing of

knowledge about dealing with the problems of theft by staff in retail organisations. The project is about knowledge creation and management, as characterised by Nonaka (1994) to support externalisation, socialisation, combination and internalisation of knowledge in organisations. The project partners include nine large retail organisations, each of which were asked to make available security specialists to take part in repertory grid sessions.

Each repertory grid session typically involved two representatives from each company whose knowledge was elicited using the repertory grid technique. Over a series of two sessions, a within-organisational repertory grid was developed between these representatives. Furthermore, inter-organisational comparison of difference or similarity between companies was conducted by presenting the security specialists with within-organisational repertory grids of other retail organisations and asking them to identify distinctions that were already covered in their own repertory grids or new distinctions that made sense to them.

According to the New Rhetoric, every argument is directed at an audience that is to be persuaded; this audience must be constructed. Initially, several constructions of particular audiences of retail security experts could be made, which accounted for difference. The background of the individuals taking part in the sessions was examined under three categories: previous professional background, managerial responsibility and current role in the organisations.

It was the representatives' opinion that professional background would be a significant influence on their viewpoint. Representatives either 'came up through the company', taking on a security role after extensive retail experience, they had previous experience working in the military or military intelligence, or they had a policing background. It was felt that someone who was previously employed by the military or police would have a different perspective than someone who had no such experience. Representatives with retail experience often claimed that they knew what in practice was going on in the shops better than someone without their experience.

The second difference between the representatives as audiences displayed itself through the level of managerial responsibilities. Representatives ranged from field investigators, the lowest level of security personnel, to security group managers, who usually would manage security area managers, who in turn oversee field investigators. Again, this was judged important by the representatives: a field investigator would see the detailed investigation, whereas managers would see the big picture; a field investigator usually only manages

their own cases, whereas managers think about the impact of all cases on the company as a whole and are therefore responsible for policy and decisions about where emphasis should be directed.
Finally, there was a polarisation between the current roles in the organisation structure that the representatives have in the retail organisations. Whilst all of them dealt with security issues and staff theft investigations, representatives came either from a financial audit role or from the security role. Hence, they referred to themselves as either auditors or investigators and stressed that each would look at different things and find different things important.

Following this initial characterisation of audiences, it was assumed then that these differences between participants would lead to forthright discussions during the construction of an 'agreed' intra-organisational repertory grid, in which two participants would exchange their views and persuade one another to accept certain viewpoints and premises and ratings. Differences between audiences would show themselves in terms of the categorisation of construct system overlap proposed by Gaines & Shaw (1994). It was surmised that representatives from the same company differing in professional background, roles or managerial responsibility would not tend to exhibit consensus.
Representatives further expected that although retail companies differed in the products they sell and the business procedures they have for selling these products, very many aspects of staff theft investigation are similar. Retail companies assume a 'shared experience' of staff theft that reaches across individual organisations. Hence, it was expected that audiences of the same type, e.g. auditors or investigators, would not differ very much across organisations. Therefore, differences between audiences from different companies would not be pronounced and result in more overlapping construct systems.

5. Analysis of construct systems difference
The analysis of construct systems reported in this paper covers six retail companies, who fielded participants for the series of repertory grid sessions. As part of the repertory grid exercise, the representatives of each company were asked to put forward at least six staff theft cases that had been investigated and with which both representatives were familiar (although the level of familiarity could differ). These cases were then used to extract distinctions in terms of what is felt to be important in staff theft to develop a within-organisational repertory grid over two sessions.

The first session consisted of developing a matrix of elements, constructs and ratings. In the first session the number of constructs gathered for individual companies ranged from 20 distinctions at the lowest end to 54 distinctions at the highest end, with an average of 26 distinctions. In individual repertory grid sessions, a straightforward analysis using the technique developed by Gaines & Shaw (*ibid*.) was not appropriate, since this technique involves analysis and comparison of individual repertory grids. Instead, the security specialists in each retail organisation worked together from the outset to develop a joint repertory grid for their company. In the construction of the joint repertory grid, there did not appear to be any disagreements between the representatives. Although distinctions were extracted from individuals by taking turns alternately, both representatives were in agreement about the distinctions. More importantly, further support for the observation of agreement between the representatives comes from the applications of ratings to each distinction and element: both representatives readily agreed on the values to be applied. Using the terms defined by Gaines & Shaw (*ibid*.), there appeared to be consensus between the two representatives of the organisations, i.e. elements and distinctions were used in the same way. This surprised us and the representatives somewhat: it appears that in terms of audiences' differences, the professional background, managerial level and role in the company does not play as much of a role as originally thought. There was no argument for these particular audiences since they did not display any difference between them.

At the second intra-organisational session, the representatives were able to modify ratings and constructs, add new elements, constructs and ratings or delete constructs after consideration of patterns of meaning. After the second session the number of distinctions in a repertory grid ranged from 19 distinctions at the lowest end to 57 distinctions at the highest end, with an average of 42 distinctions. On average, 4 distinctions were deleted between the first and second session, whereas, on average, 7 new distinctions were added. In terms of transformation to the construct system in repertory grids, the least amount of transformation involved around 5% of the final repertory grid, the largest amount of transformation involved around 77% of the final repertory grid, with an average of around 32% transformation within the construct system. The within-organisational repertory grids from the first session and the second session can be compared in terms of Gaines & Shaw's (*ibid*.) overlap categorisation: they exhibit correspondence and even contrast. There appears to be a considerable element of modification in the construct systems of a particular audience over

time. This change within the construct system is accounted for by the view of an argument as a transformation within the audience during the argument. In this instance, within-organisational repertory grid development involved an internal argument for particular audiences where the audience itself changed and developed over the course of the repertory grid sessions.

An inter-organisational comparison of difference or similarity between companies, conducted by presenting security specialists with within-organisational repertory grids of other retail organisations, exposed a problem in applying Gaines & Shaw's technique to the situation encountered in our investigation. In Gaines & Shaw's technique it is assumed that a categorisation of overlap is possible based on elements that are the same (consensus and correspondence in figure 1). For example, if two elements receive the same ratings in each distinction under consideration, then it is implied that they are the same even though they may not have identical names. The situation encountered in our investigation on inter-organisational repertory grids contrast with this in that cases (i.e. elements under consideration) are inherently not the same since they are different items of experience. Therefore, if the Gaines & Shaw's comparison technique were to be applied to our situation, it would only be able to discriminate instances where elements are different (conflict and contrast in figure 1), i.e. in ratings the same names are used for distinctions or no matching at all is possible. To circumvent this complication, our investigation adopted a strategy that allowed experts to see other experts' constructs and identify the difference or similarity themselves.
Representatives were asked to set apart distinctions that were already covered in their original repertory grid, use new distinctions to rate their cases that made sense to them or reject constructs as inappropriate for any reason. The security specialists' classification of the repertory grids showed that, on average, 24% of constructs in a repertory grid caused disagreement, 11% of constructs in a repertory grid existed in the representatives' original output, whilst around 65% of constructs were newly adopted for use. These figures show that the difference of construct systems was relatively large: the intersection of construct systems stands only at around 11% – the highest similarity found was 29% of constructs. The difference in construct systems is also backed by the amount of constructs rejected (24%) as inappropriate. Therefore, there is a marked difference in terms of the audiences in different organisations and it contrasts with the retailers' expectation of a "shared experience" of staff theft that reaches across individual organisations. However, there is also a high proportion of new constructs adopted

by the representatives, ranging from 34% at its lowest to 86% at its highest level. It shows that security experts are willing to make dramatic transformations to their construct system in response to another audience's constructs: there is most definitely an argument for these audiences. This finding look promising for our work in knowledge creation and knowledge sharing as there seems to a rich potential for organisations to learn from each other.

6. The notion of audience and argument revisited

The notion of audience was employed to motivate two main aspects of persuasion: that for an argument to exist, audiences have to differ to some extent and that some transformation has to be effected within an audience for the argument to be successful. Personal Construct Psychology echoes these concerns of rhetoric and relations between repertory grids and the New Rhetoric were identified. Constructs form starting points of argumentation. The aim of persuasion is to transform a construct system.

A technique is available that allows characterisation of audiences in terms of their difference by comparing the construct system of audiences. The overlap of construct systems can categorised as exhibiting consensus, correspondence, conflict and contrast.

We introduced the particular audience of retail security experts made up of representatives of various retail organisations. An initial characterisation of the audiences within an organisation involved differences in its perception of professional background, managerial responsibility and current role in the organisational structure.

In practice, within-organisational repertory grid sessions lead to the construction of a joint repertory grid and no argument between audiences characterised as above could be observed during a session. However, it was noticed that audiences transformed their construct system over time, from one session to another. The repertory grids from the first session and the second session could be compared in terms of the difference exhibited. So, firstly, the construct systems differ and secondly, they have been transformed; an argument has taken place.

In an inter-organisational setting, the comparison of construct systems in our investigation is not straightforward. It was pointed out that a conventional comparison technique based on the same elements is not applicable to our situation; instead, a strategy was adopted to ask audiences to identify differences and similarities of distinctions from a different audience's repertory grid. The amount of common distinctions was relatively small and audiences disagreed with

a number of distinctions. Therefore, audiences do differ between organisations. However, audiences' construct systems were also transformed since a high proportion of distinctions are then adopted by audiences into their construct systems. There is most definitely an argument for these audiences.

The notion of audience, as illuminated by the repertory grid technique, has turned out to be more complex that first anticipated. There are more audiences than expected, separated by space and time; constructions of certain audiences are not backed by what was considered important even by the audiences itself. The repertory grid technique can help us understand the practicalities of the New Rhetoric in more detail by determining differences in audiences and by examining the footprints an argument leaves in transforming construct systems.

7. Acknowledgements

Our investigation was conducted as part of the Retail Enterprises Management Systems – Staff Theft (REMS ST) project, funded by the Department of Trade and Industry (DTI), UK and the Engineering and Physical Sciences Research Council (EPSRC), UK, GR/R02917/01. We especially would like to thank Ray Bell, Risk and Security Management Solutions, for his assistance in repertory grid elicitation.

NOTES

[i] Of course, a manipulative arguer may also make use of premises and argument schemes in the pursuit of persuasion that she does not accept herself but this discussion is beyond the scope of this paper.

REFERENCES

Crosswhite, J. (1995). Is there an audience for this argument? Fallacies, theories and relativisms. *Philosophy and Rhetoric*, 28(2).

Crosswhite, J. (1996). *The Rhetoric of Reason*. Madison: University of Wisconsin Press.

Crosswhite, J., Fox, J., Reed, C.A., Scaltsas, T. & Stumpf, S. (to appear). Computational Models of Rhetoric. In C. Reed, T. Norman & D. Gabbay D (Eds.), *Handbook of Argument and Computation.*

Gaines, B.R. & Shaw, M.L.G. (1989). Comparing the Conceptual Systems of Experts. *Proceedings International Joint Conference on Artificial Intelligence* (IJCAI'89). San Francisco: Morgan Kaufmann Publishers.

Gaines, B.R. & Shaw, M.L.G. (1994). Using Knowledge Acquisition and Representation Tools to Support Scientific Communities. *Proceedings National Conference on Artificial Intelligence* (AAAI'94), Menlo Park: AAAI Press.

Kallmeyer, W. (1996). *Gesprächsrhetorik – Rhetorische Verfahren im Gesprächsprozess*. Tübingen: Gunter Narr Verlag.
Kelly, G. (1955). *The Psychology of Personal Constructs*. New York: WW Norton & Co.
Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, 5(1), 14-37.
Perelman, C. & Olbrechts-Tyteca, L. (1969). *The New Rhetoric: a treatise on argumentation*. Notre Dame: University of Notre Dame Press.
Plank, R.E. & Minton, A.P. (1995). Persuasion and Personal Construct Systems: An Alternative Framework for Understanding the Impact of Persuasive Communications. In B.T. Engelland & D.T. Smart (Eds.), *Proceedings Southern Marketing Association* (pp. 69-75), Evansville: Southern Marketing Association.
Reardon, K.K. (1991). *Persuasion in practice*. London: Sage Publications.
Sillince, J.A.A. (1994). *Multi-agent conflict resolution: a computational framework for an intelligent argumentation program*. Knowledge-Based Systems, 7(2), 75-90.
Stumpf, S. (2001). *Analysis and representation of rhetorical construction of understanding in design teams' experiential learning*. PhD Thesis, University College London.
Warnick, B. & Kline, S.L. (1992). The New Rhetoric's argument schemes: A Rhetorical View of Practical Reasoning. *Argumentation and Advocacy*, 29, 1-15.