ISSA Proceedings 1998 – Evaluating ‘Pros’ And ‘Cons’: More Or Less Polarised Opinions?

1. Introduction

The experiment presented in this paper **[i]** was designed in order to examine whether providing subjects with arguments which supported each side of the case in a casual manner would lead the participants to revise their own point of view and to adopt a less polarised position. The findings from the study by Lord, Ross and Lepper (1979) run against this hypothesis. In their study, there were two groups of subjects who held opposing views on capital punishment. Each subject was asked to evaluate two invented studies, one claiming to demonstrate that capital punishment had a deterrent effect on the incidence of serious crimes and the other concluding that it did not. The studies assessed by the subjects used different methodologies. One was a comparison of crime rates in various states before and after the adoption of capital of punishment; the other compared the crime rates of neighbouring states with and without capital punishment. Subjects tended to be more critical about the study that disagreed with their position, whichever methodology it used. The results of Lord, Ross and Lepper’s (1979) study indicated that people’s beliefs became even more polarised in their original directions, following the evaluation of both supporting and contradicting evidence. It is hypothesised that, in the present experiment, the effect of asking people to evaluate evidence on their opinion may be associated with the type of topic they are dealing with and with the level of attachment to the issue in question. It was expected that the evidence evaluation procedure would have a greater effect on people’s opinions when the issue in question was not closely related to subjects’ basic values. By ‘basic values’ I mean those related to moral notions about life and human behaviour. In these cases, it is hypothesised that, contrary to the results of the previous studies, subjects’ opinion will be less polarised after the examination of the mixed evidence.

In order to investigate the hypotheses raised in this experiment, the participants were asked to give their opinion on two different issues: animal experimentation

and the pros and cons of shopping at a supermarket or local shops. The former topic was regarded as having an 'emotional' content and being more likely to be related to subjects' moral beliefs and the latter as being a less emotive topic. Subjects' opinion on each topic was assessed before and after they had evaluated a list of 'pros' and 'cons' and written down their comments on the two issues.

2. Method

2.1. Subjects

Twenty four subjects recruited from the student population of the University of Sussex (UK) were paid to take part in this study. Fourteen of the participants were female and the remain ten subjects were male. Their age ranged from 18 to 29 with an average of 22 years old. The selection of the subjects took into account their opinion on animal experimentation. Half of them were in favour of it and the other half did not agree with the use of animals in scientific experimentation.

2.2. Material

The materials involved two lists of 'pros' and 'cons' associated with animal experimentation and the idea of shopping at a supermarket or local shops. The list regarding the issue of animal experimentation included general supports for each side of the case based on arguments often used by subjects in previous experiments (Santos, 1996). The list for the 'supermarket versus local shop' issue was presented within the context of the hypothetical case of the construction of a new supermarket in the countryside. Each list contained six statements in favour and six against the subject in question. In both cases, the lists were introduced by a short comment on the associated subject. The introductory comment on each topic and its corresponding list of 'pros' and 'cons' were written on the same page and can be seen below:

Animal experimentation

The debate about the use of animals in scientific experiments is well known. Different groups hold different and opposite views and they can give reasons to support their positions. Below you will find a list of reasons people give for being "for" or "against" animal experimentation. Please, read carefully and after that write what your opinion is about the matter. Please, try to explain it as fully as you can.

'Pros'

1. There is a distinction between humans beings and animals. History civilisation

shows that. So, we should not be sentimental about animals.
2. The value of human lives outweighs the suffering that might be inflicted on animals. Better to sacrifice animals than have humans died.
3. There is a lot of important medical breakthroughs that have been made by animal experimentation Drugs have been developed that have improved the quality of life.
4. It is necessary to test drugs in a living system. It is better to test them on animals before starting a preliminary medical test, so that the animal is at risk, rather than the human being.
5. Some animals do not have a sense of pain and there are also ways and means of limiting suffering in experimental animals.
6. There are regulations to assure that animals are well treated in labs and are not subject to any suffering that is not absolutely essential.

'Cons'
1. Human beings share a lot of molecular and biological similarities with very simple organisms. Life should not be sacrificed, whether it is a mouse or a human being.
2. Animals are beings just as much as humans and so scientists have no rights to make the animals have a horrible existence.
3. There is already a whole bank of data about certain chemicals and substances. So, all the manufacturers have to do is refer to computer data to see what sort of effect certain substances have.
4. The animal model does not really correspond to the human model. So, there will always be an element of risk. We can never be sure that a drug that is non-toxic to, say a dog or a rat, will not have terrible side effects in a human.
5. Scientists can use alternative means, such as cell cultures.
6. Animals go through a lot of pain and torture in the name of "science".

b. Place to shop
A well-known supermarket group is negotiating the purchase of land to build a new store. The site they intend to buy is in the country, in a farm area. There is no supermarket within a radius of 15 miles. The supermarket will serve most people from many villages in the surrounding area. Public opinion is divided. Below you will find a list of reasons people give to be in favour of or against the construction of the supermarket. Please read it carefully and after that write what your opinion is about the matter. Please, try to explain it as fully as you can.

'Pros'

1. People from the villages will save time because they won't have to go to town to do their shopping.
2. There will be a greater variety of items available than in the local shops.
3. people will be able to buy everything they need under only one roof.
4. There will be no parking problem and less traffic congestion in the small villages.
5. It will generate jobs and reduce unemployment in the area.
6. People will be able to buy things more cheaply than in the local shops.

'Cons'

1. it will destroy the landscape. It will be a real eyesore.
2. It will take trade away from local shops and farms.
3. It will increase traffic in small country roads.
4. Roads will have to be enlarged for delivery vehicles, destroying there hedgerows.
5. It will destroy the sense of "community" in the local shopping centres. A major source of social activity will be lost.
6. If local shops close people may be forced to use the supermarket, but some elderly people may have problems getting there.

Together with the lists, subjects were given two blank sheets of paper where they could write their opinions on each topic. The material also included two assessment questions, one about the participants' opinion on animal experimentation and the other about their preference regarding shopping at local shops or at supermarkets. These two questions were presented on a single page. Two copies of these questions were used in two different stages of the experiment, one at the beginning and the other at the end of the session. Finally, the subjects were given a new sheet of paper on which they were asked to write down the reasons why they had either changed or kept their initial opinions after having read the information given to them in the study.

2.3. Design & Procedure

Subjects were tested individually. They were told that they would be asked to write down their opinion on two different issues.

First, the experimenter gave each subject a sheet of paper which contained two questions: one about their preference regarding shopping at local shops or at a supermarket and the other about their opinion on animal experimentation. The

subjects were required to rank their responses on a scale which followed each question. After they had finished these questions, they were asked to give the paper with their responses back to the experimenter. In the following part of this study, the subjects were given lists of ‘pros’ and ‘cons’ related to the topics on which they had just expressed their opinion. These lists were given out one at time and the participants were asked to take their time and read them very carefully.

After reading the list, subjects were asked to write down their opinion on the issue in question and try to explain their position on the topic as comprehensively as possible. Subjects were asked to write down their opinion as a way of making them think about their positions, the reasons they had to support their opinions and the arguments that they had just read on both sides of the topics used in the experiment. Half of the subjects examined the list of arguments in favour and against animal experimentation first and afterwards the ‘pros’ and ‘cons’ that could be involved in the construction of new supermarket in the country. The lists were presented in the reverse order to the other half of the participants.

After the subjects had written their opinion on both topics, the experimenter gave them a new sheet of paper which contained the same questions that they had been asked to answer at the beginning of the experiment regarding the position they held on the topics considered in the study.

3. Results

3.1. Subjects’ opinion: changes & no change

At the beginning of the experiment subjects were asked to rank their opinion about the use of animal experimentation and their preference for shopping at a supermarket or local shops on a two-sided five-point scale (‘for’ and ‘against’ for animal experimentation and ‘supermarket’ or local shop’ for shopping preference). Subjects had been previously selected taking into account their opinion on the use of animals in scientific experiments, therefore, half of them were in favour of it and the other half were against it. Regarding subjects’ shopping choice, seventeen of them said they preferred shopping at a supermarket, five preferred local shops and the remaining two participants said they were undecided about it. The use of a scale allowed the observation of subjects’ position and how convinced they were about their opinion. Table 1 below shows the number of participants who ranked their opinion either on the three lowest points or on the top two points on either side of the scale as a function of the subject matter. That is, the table shows subjects who held more

versus less extreme views, regardless of the polarity of these views.

Table 1 Number of subjects' who showed a more or less extreme position on a five-point scale as a function of topic

	Supermarket/Local shops		
Animal experiment	Less extreme 0* 1 – 3	More extreme 4 – 5	Total (n=24)
Less extreme 1 – 3	12	06	18
More extreme 4 – 5	02	04	06
Total	14	10	24

Table 1 – Number of subjects' who showed a more or less extreme position on a five-point scale as a function of topic

Table 1 shows that in this experiment subjects tended to rank their opinion on the less extreme points of the scale. Half of them gave the lowest ranks to their position in both topics and only four subjects ranked their opinion in both animal experimentation and the locale for shopping in the top two points of the scale. Six subjects demonstrated they were more decisive about the place for shopping than on animal experimentation and the contrary happened with the two remaining subjects.

At the end of the experiment, the subjects were asked once more to rank their opinion on both topics using the same scale they utilised at the beginning of the experiment. That happened after they had evaluated mixed evidence about both issues and written their opinion about the two topics. Table 2 presents the number of subjects who made or did not make some changes to their opinion at the end of the experiment.

Table 2 suggests that changes observed in subjects' positions were related to the topics they were dealing with. At the end of the experiment, eight subjects modified the rank they had initially given to their position on animal experimentation, while 14 of them made some change to their positions about the best place to shop. Only four subjects indicated some changes in their positions in both topics and six of the participants kept their initial ranks on the issues used in the experiment. The fact that most subjects' performance differed from topic to topic seemed to indicate that the fact that they did or did not tend to change their opinion was not associated only with individual differences. The results shown in Table 2 tend to be in line with the hypothesis that subjects would more easily modify their opinion on the shopping issue than on animal experimentation.

However, the relation shown in Table 2 between the type of topic and subjects' tendency to alter their position about them was not found to be significant by the *McNemar's test (X2= 1.78, df= 1)* and, therefore, cannot be taken as confirming the prediction made in this experiment regarding a difference in subjects' performance related to the type of topic they were dealing with. At this point, It is also important to mention that except for two cases where one subject changed her opinion about her preference for shopping in supermarket to local shops and another participant who was initially undecided about that same topic and made up his mind by the end of the experiment, the changes that subjects made to their position were never bigger than two points on the scale they used to rank their opinion.

Table 2 Distribution of subjects that changed or did not change their position ranking as a function of topics

	Supermarket/Local shops		
Animal experiment	Change	No change	Total (n=24)
Change	06	04	08
No change	10	06	16
Total	16	10	24

Table 3 Number of subjects who had initially ranked their position on the top two points of the scale and changed or did not change their position ranking at the end of the experiment as a function of topics

	Opinion		
Topics	Change	No change	Total opinions ranked 4 – 5
Animal experiment	00	06	06
Place for shopping	06	04	10
Total	06	10	16

Table 2 – Distribution of subjects that changed or did not change their position ranking as a function of topics. Table 3 – Number of subjects who had initially ranked their position on the top two points of the scale and changed or did not change their position ranking at the end of the experiment as a function of topics

It is not difficult to suppose that the more convinced the subjects were about their position the less likely they were to modify it. This supposition led me to choose still another way of looking at a possible differences between subjects' performance when dealing with the two topics used in the present study. This alternative analysis looks at the number of subjects who made some change in their position at the end of the experiment and had initially ranked their opinion on the top two levels of the scale, i.e., those who held more extreme positions. The results of this analysis are shown in Table 3.

Table 3 shows that none of the subjects who had indicated they were strongly convinced about their opinion on animal experimentation at the beginning of the experiment changed the ranks they had given to their position after having evaluated the arguments on both sides of the matter. A *binomial test* showed that this result was significant *(N= 6, x= 0, p.05).* A different situation was observed when subjects were dealing with the 'supermarket versus local shop' question. In that case, six out of the ten subjects made some modifications to their position after they had dealt with the 'pros' and 'cons' related to each shopping alternative and the remaining four participants kept their initial position. The difference associated with this topic was not significant *(binomial test, N= 10, x= 4)*. Five of the six subjects who altered their opinion on this issue, ranked their position on a lower level of the scale by the end of the experiment. If examined together with the results previously shown in Table 2, these findings seem to indicate that not only the type of topic, but also the level of attachment that one has to an opinion affect the possible modifications that are likely to be made to their opinion. These results favour the hypothesis put forward in this experiment that the effect of asking people to evaluate evidence on their opinion is associated with the level of attachment that the person has to the issue in question.

It has already been indicated that subjects' inclination to revise their opinion was related to the topics they were dealing with. However, that analysis did not say whether the changes that the subjects made in their opinion led them to adopt a more or less extreme position by the end of the experiment. This aspect of subjects' changes in their position is presented in Table 4.

Table 4 Number of changes in subjects' opinions towards a more or less polarised position as a function of topic

Topics	Opinion More polarised	Less polarised	Total of changes*
Animal experiment	04	04	08
Place for shopping	04	09	13*
Total	08	13	21

* excluding the subject who was initially undecided and made up his mind at the end of the experiment

Table 4 – Number of changes in subjects' opinions towards a more or less polarised position as a function of topic

The changes that subjects made to their position on animal experimentation were evenly distributed between changes towards a more polarised position and those

towards a less definite opinion. The small number of cases included in this analysis, as well as the even distribution between the types of changes that subjects made to their opinion, does not allow any predictions about the direction that the data might take in case of the use of a larger sample of subjects. The data associated with the 'supermarket *versus* local shops' choice, on the other hand, shows a tendency for changes towards a less definite position, even though the difference between the occurrence of more or less polarised opinions was not significant (*Binomial test, N= 13, x= 4*). Once more, these data points to a difference in subjects' performance related to the type of issue they are dealing with. However, this conclusion must be treated with caution since it lacks statistical significance.

3.2. Subjects'reasons for changing or keeping their original opinions

The subjects who did not change their opinion on the issue regarding the idea of shopping at supermarket or local shops tended to remark that nothing new had been mentioned to alter their personal view. At times, they made comments comparing their personal shopping choice with their opinion about the specific case of the construction of the supermarket in a country area used in the present study. When explaining the reasons why they had changed their opinion, subjects invariably referred back to the list of arguments given in the experiment as having made them think or reminded them of a personal experience similar to the particular case used in this study. The reason given by a subject who was initially undecided and at the end made up his mind in favour of the local shops is shown below.

Stephen:
'I have changed my opinion with this second scale because through 'discussing with myself' I have seen that local shops are central to the community existence super-markets destroy.'

The subject's comment shown above is possibly related to a further difference between the two topics used in this experiment. Contrary to what happens with the issue of animal experimentation, the topic about the best place to do shopping is not much discussed. Therefore, it is very likely that when writing about animal experimentation the subjects were discussing predetermined ideas, whereas when dealing with the supermarket *versus* local shops issue in this experiment, it would have probably been the first time that they were led to think about that topic.

When subjects kept their original opinion on animal experimentation, they either said that they had thought about the issue before and had already a formed opinion about it or they repeated the reasons that they had given to support their opinion when they previously wrote about the topic. Among the eight subjects who changed their opinion on this topic, three of them did not justify the change, but, instead, remarked that they had kept a similar position – even though slightly differently ranked in the scale – again because they had already thought about the issues before and there was no new argument in the list they evaluated. Two subjects who held opposing views on animal experimentation made a general evaluation of the list of arguments and remarked that their views had been strengthened in their original direction because the list of arguments that supported their prior opinion outweighed the ones that justified the opposite position. One subject, who was in favour of animal experimentation and showed a less polarised position by the end of the experiment remarked that by looking at the arguments she had realised that they were more complex than she had initially thought and she had started to see both sides of the argument. The remaining two subjects, who also showed less polarised views at the end of the experiment, had initially said they were against the use of animals in scientific experiments. One of them mentioned a counterargument to her original opinion, which, in fact, indicated that she was not as against as she had claimed she was. The same happened with the second of these subjects, who explicitly made a similar comment about his own position. His comment is transcribed below.

Nathan:
'Having thought about it, I am not as sure about being against experimentation in animals as I first thought, though I need to think it over more'.

The above comment appears to be an obvious example that sometimes people are not really aware of the opinions they have, as suggested by Kuhn (1991). The analysis of the comments that the subjects wrote on animal experimentation after having read the list of 'pros' and 'cons' on the issue reinforces this suggestion. The examination of subjects' comments shown next finalises the analysis of the data of this experiment.

3.3. Subjects' comments

The most interesting finding observed in the analysis of the comments written by the subjects after they had evaluated the list of arguments was the fact that six of the subjects who had ranked their position as being against animal

experimentation, in fact showed a different opinion when they were writing about the topic. In their argumentation, three of these subjects seemed to be weighing both sides of the case and, at some point, explicitly expressed their agreement with the use of animals in, at least, some of the scientific experiments. One of them claimed that she strongly agreed with all the 'cons' in the list given in this experiment, but, there was one particular 'for' – animal experimentation for medical purposes – that made her say that sometimes it was necessary. In the case of the two remaining subjects included in this group, from the very beginning of their argumentation they stated the conditions in which they would be in favour of experimentation in animals. The inconsistency between what these subjects said they believed and what they really seemed to think about this topic became even more evident from the fact that, at the end of the experiment, they kept on ranking their opinion on the 'against' side of the scale. In three cases they did give a lower rank to their opinion, but the other three subjects maintained the same rank in the scale, one of them being as extreme as '-4'! A direct implication of these results is that we should question the confidence that we can have in the objective assessment of people's opinions and the belief that this has on the status of factual knowledge. The findings of this experiment seem to suggest that in order to have a more accurate picture of people's opinions on certain issues it is necessary to examine the reasons behind the position they claim to hold.

The analysis of subjects' argumentation on animal experimentation showed that, in general, they put forward their opinion by
(a) weighing evidence that supported both sides of the case,
(b) focusing on attacking the other-side arguments or
(c) concentrating on giving support to their position.
The examples below illustrate these three types of argumentation. Except for the fact that the final part of the comment made by the third subject in the following examples was omitted, no other alteration was made to the transcriptions of subjects' responses.

Vida (Weighing evidence):
'I don't have strong views either way since I can see the reasoning behind both sets of arguments. I think that although animal testing does have some shortcomings, and there are limits to the generalisations we can make from animals to humans, animal testing is very important. I do not believe that the use of cell cultures alone would be enough to see the effects of certain drugs upon an

interacting biological system within an organism. I don't think that the argument that some animals do not have a sense of pain is valid: I don't believe that statement is true at all. However, I can't see any alternatives which would give as enough information, so that we could stop animal testing altogether. However, there are probably ways in which we could treat animals more humanely during tests and so these methods should be employed.'

Evan (Supporting my side):
'I think that animals should be used for experiments only when all other methods have been exhausted. If the only way for a scientific discovery to be made is to experiment on animals then that should be done. If the experiment is just for a cosmetic product or other non-essential then I don't believe it is right to use animals in the experiment. I believe animals are a lower life form than humans and it is therefore better for an animal to suffer or die than a human. So, experimenting on an animal with the aim to invent a cure for a human illness is acceptable. Also the number of animals tested must be surely less than the number of humans saved or cured by the discovery. This is also a very good reason for testing on animals.'

Alison (Critising the other side):
I am completely opposed to the use of animals in scientific experiments simply because I do not distinguish between animal as being any less sensitive to pain than human beings. It is ridiculous to say that we shouldn't be sentimental about animals when it comes to scientific experimentation, yet show outrage at animal mistreatment away form the laboratories. The abuse of animals is a punishable crime, yet is acceptable to inflict such suffering in the name of science. As far as I'm concerned animals are on the same level as humans and should be treated accordingly. We are all part of the 'Animal kingdom', and all of God's creations. The sense of cruelty is lightened by the fact that the animal itself is unable to protest, to demand an end to its suffering […]'.

When justifying their opinion, eleven subjects (three against and eight in favour of animal experimentation) besides mentioning arguments that were presented in the list they were given to evaluate, also used arguments associated with this topic that had not been included among the ones listed for them.

None of the subjects explicitly referred in their argumentation on experimentation in animals as being a matter of weighing 'pros' and 'cons'. Two of the participants

made this type of comment only when they were explaining their reasons for having changed their original position about this issue at the end of the experiment. A different behaviour was observed , however, when subjects were writing about the case of the construction of the supermarket in a country area. In this case, 10 subjects used in their comments some explicit expression, such as *'I think the 'pros' outnumber the 'cons'.* This finding seemed to indicate that with this kind of problem, more than with the animal experimentation issue, decisions about their opinion were mainly based on weighing the advantages and disadvantages of each alternative choosing between them. Using Nickerson's terms (1991), when dealing with the supermarket *versus* local shopping issue, most of the subjects were *'weighing evidence'*, whereas when discussing animal experimentation, they were *'building a case'.*

4. Discussion

The general aim of this experiment was to investigate whether subjects opinion on two different issues would become less polarised after they had evaluated arguments on both sides of the question. It was hypothesised that the possible changes in their position would be related to the type of topic they were dealing with. It was expected that they would tend to alter their opinion more often when dealing with the issue of shopping at a supermarket *versus* local shopping than when discussing animal experimentation. This hypothesis was based on the assumption that the topic about shopping at supermarket or local shops would be less strongly associated with the subjects' basic values and therefore more likely to be modified.

The results of the present experiment showed that subjects tended to make some changes in their views about their preferences regarding the locale to do their shopping more often than they did when dealing with the topic of animal experimentation. This tendency was in agreement with the hypotheses put forward in this study. However, the difference observed between subjects' responses to the two different topics did not reach significance. This lack of statistical endorsement does not permit more conclusive inferences about these results.

It might be possible that the lack of statistical significance in the difference found between subjects' performance when they were dealing with the topics was related to the fact that most of the subjects did not hold a strong view on animal experimentation. This fact might have made it more likely for them to revise their

views. The analysis of the performance of subjects who had indicated that they were strongly convinced about their positions in the two topics used in this experiment showed that no changes were made by the subjects in their position on animal experimentation, but six out of ten of these subjects did alter their position on the 'local shops *versus* supermarket' issue. This analysis seemed to indicate that opinion – or beliefs – revision might be related not only with the type of topic, but also to how strongly people are attached to their positions. In most of the cases, where subjects made some changes in their opinion, their positions became less polarised when compared with their initial views. These results go against the findings from the study by Lord, Ross and Lepper (1979) which demonstrated that subjects' opinion on a particular topic became more polarised in their original direction after the evaluation of supporting and contradicting evidence. However, the findings from that previous study were related to a type of issue – capital punishment – which differs very much in nature from the shopping issue used in this experiment, which was the one that led subjects to assume a less polarised position after evaluating the 'pros' and 'cons' of the choices in discussion. It has already been demonstrated in previous experiments (Santos, 1996) that the issue of capital punishment is strongly associated with subjects' moral and religious values, which people avoid revising. It would seem more reasonable to compare the results obtained by Lord, Ross and Lepper (1979) with subjects' responses to the animal experimentation topic used in this experiment. In this case, the incidence of changes towards a more or a less polarised opinion was equally frequent among subjects. This result differed from the tendency demonstrated by Lord, et al (1979), but, certainly, not much can be concluded when there are only eight cases where subjects change their opinions, equally distributed towards opposite directions (Table 4).

The result of this experiment also seems to indicate that the 'weighing of evidence' in order to make a decision – about an action or an opinion – varies according to the type of subject matter one is dealing with. In this study, the use of this argumentative strategy was more associated with the supermarket *versus* local shops issue than to the topic of animal experimentation. This finding might have been related to the fact that it was much more likely that the subjects had had the opportunity to discuss animal experimentation before than they had thought about their preference about the place to do their shopping. That might have led the participants to concentrate more on defending their predetermined ideas on animal experimentation than on evaluating opposing evidence.

Another factor that might have led the subjects to focus on the 'pros' and 'cons' of the supermarket *versus* local shops issue might have been the fact that, in this case, they were asked to evalute the 'pros' and 'cons' of a very specific situation, as opposed to the general nature of the topic of animal experimentation. Perhaps, if the subjects were dealing with the issue of animal experimentation in a more specific context, e.g., the use of certain animals in a scientific project to test a drug that could be used for the treatment of a specific disease, they would also focus on weighing 'pros' and 'cons' in order to adopt a position on that specific matter.

A very interesting finding mentioned in the analysis of the results was the fact that the comments made by some subjects indicated that they actually did not hold the position that they had indicated at the beginning of the experiment. I have already commented that an implication of a finding like this is that it raises doubts about taking people's explicit and categorical claims about their opinions and beliefs as a factual matter. There must be more to them then a first response might indicate. Another interesting aspect of this finding was that the cases where this inconsistency between what the subjects said they believed and what they really thought were invariably associated with subjects who initially said they were against animal experimentation. It might sound like mere speculation, but I am inclined to suppose that this fact was related to a comment made by a subject in a previous experiment in which she remarked that being against animal experimentation is 'the "right" thing to think' (Santos, 1996). Therefore, it might have been the case that, even though subjects considered cases where they did think that the use of animals in scientific experiments was justifiable, when they were asked to state in which 'side' they were in, they went for the 'right thing to think'.

NOTE

[i] This study is part of more comprehensive research submitted as a doctoral dissertation at the University of Sussex, UK., and supported by CNPq (Brazilian National Research Council).

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ISSA Proceedings 1998 – Evasion In Question-Answer Argumentation: An Empirical Extension

1. Introduction

1.1. Rationale

Dialectical theories of argumentation feature question and answer sequences as one basic procedure for building and testing arguments (Hamblin, 1970; Walton, 1989a). In their simplest, ideal forms, questions call on respondents to refine an informational ground presupposed by the question and to commit to the truth of the refined proposition (cf. Bolinger, 1957; Carlson, 1985). Yes/no questions call on the respondent to provide assent ("Yes") or dissent ("No") with a questioned proposition. "Are these clothes dirty?" presupposes that either these clothes are dirty or these clothes are not dirty, and the respondent is called upon to commit to one or the other proposition. Alternative questions call on the respondent to select from among a set of exhaustive and mutually exclusive alternatives. "Is this theory a rhetorical, dialectical, or logical approach?" presupposes that this theory is one and only one of the following: this theory is a rhetorical approach, or this theory is a dialectical approach, or this theory is a logical approach. The respondent is called on to commit to one or another of those propositions. WH-questions presuppose some proposition containing a

variable (the WH-word/phrase) with an open range of values. For example, “Where is Baluchistan?” presupposes that Baluchistan is somewhere. The respondent is called on to declare a proposition that further specifies the value of the WH-variable (who with someone, where with somewhere, how with somehow, what with something, and why with some reason).

And overlaid on these structural constraints on content are additional pragmatic constraints (see Grice, 1975). What counts as a proper and fitting answer to a question depends upon a mutual understanding of the information space carved out by a question and of the activity for which the information is used. What counts as a relevant, informative, and even truthful or straightforward answer depends upon the purpose of the question, and what is taken to be problematic and what is taken for granted. Thus, “Central Asia” may not be an informative answer to the question “Where is Baluchistan?” if the questioner wants to know where Pakistan exploded its nuclear test bomb but may be informationally sufficient if the questioner wants to know where the extinct giant mammal, the Baluchithere, once lived. Or again, the question “Are these clothes dirty?” may get a quite different truthful answer depending on whether the purpose of the question is to obtain information in deciding whether or not they should be drycleaned, added to the current load of laundry, worn for hanging around the house, or worn to a party.

While there is considerable complexity in the circumstances of their use – as well as complexities and variations in the form of questions themselves – the basic point to see is that questions elicit from respondents pragmatic commitments to propositions. Moreover, questions elicit commitments in ways that pragmatically constrain the kind of propositions the respondent can properly select for commitment. And from these constraints, the informational ground of dialogue is refined and positions may be tested.

Of course, the success of even the simplest idealized question-answer argumentation depends upon clear questions with uncontroversial presuppositions and straightforward, truthful answers to those questions. In practice, questions are often complex, their points opaque, their presuppositions loaded with controversial assumptions. Under less than ideal conditions an appropriate and fitting answer may actually require a reply that is not simple, direct, straightforward, and obviously to the point. Hedging, qualifying, elaborating, and framing answers, and various ways of correcting and pre-empting questions often are cooperative contributions to a complicated situation.

Then again, often they are not.

Through the dynamics of questions and answers interlocutors may find themselves faced with defending equally unwelcome choices of position, committed to unanticipated conclusions, forced to abandon positions in which they have a vested interest, or simply compelled to disclose information they would rather not provide. Rather than embrace such consequences, respondents may construct utterances that bend, break, bruise or abandon the principles of cooperative engagement.
Argumentation theorists have long acknowledged that complicated questions of various sorts constitute fallacies that impair argumentative discourse (cf. Walton, 1989a; 1989b; 1991). But they have been less quick to take up systematic problems in answers. This paper examines a type of complicated answer that also constitutes what we think is a fallacy of argument: evasive "answers". Evasive "answers" are, from our point of view, a subclass of the more general class of answer avoidances. Though they appear to be answers to the question asked, evasive "answers" are not really answers at all (thus the scare quotes).

The distinctive features of evasive "answers" can be highlighted by contrasting them with two other forms of answer avoidance.
First, one can avoid giving an answer by simply "opting out" (Grice, 1975). Here one more or less openly declines to answer a question. Commonly enough, this opting out generates a kind of motivational inference akin to a Gricean implicature. The *reason* for avoiding an answer is transparently available to the hearer. But it is not the kind of *content* implicature that Grice was concerned with. The speaker does not implicate information that, once inferred, "saves" Grice's conversational maxims and would thereby make the message a cooperative contribution. Instead, one at best only implicates a motive that clashes with the adherence to the Cooperative Principle. So, for example, in addition to a "No comment" a political spokesperson might reply to a question with "I've already answered that question several times." When it is evident that prior replies did not actually answer the question, the spokesperson's open underinformativeness this time implicates that they are not going to answer the question any further than they already have and that, perhaps, they are growing impatient with the persistence of that line of questioning. Evasive "answers," like opting out, neither directly nor indirectly supply the called for information. Unlike cases of opting out, however, it is not obvious that a non-answer has been

provided.

A second general class of answer avoidance are indirect answers. These utterances do implicate information that answers the question, despite their apparent violation of maxims of relevance, informativeness, truthfulness, and/or manner. They are "avoidances" primarily in these sense that they avoid a direct, open, straightforward, or otherwise perspicuous manner of expression. Often, however, the implicature generated is so nonstraighforward as to be "off-record" (Brown and Levinson, 1987). This is the realm of hint, allusion, innuendo, and insinuation. The speaker can effectively deny commitment to the implicated proposition. Thus, in answer to the question, "Do you think Bill Clinton is guilty of treason?" a radio talk show host might answer, "I've never said that, but many people have said that, and I don't think their concerns can be dismissed lightly." The host does not come out and commit to the proposition that Bill Clinton is guilty of treason; instead, the proposition is cleverly insinuated and even reinforced. Like indirect answers, evasions appear to indirectly answer the question by appearing to implicate information that would constitute a cooperative answer to the question asked, or at least to what the question is getting at. Unlike indirect answers, evasions don't really do so, not even off the record.

In a previous study of the answers supplied in political interviews, we illustrated these three general types of answer avoidance (Polcar and Jacobs, 1998). Through detailed textual analysis of excerpts of interviews from various political news shows, we displayed the features summarized above. Analysis of these excerpts, however, was based on our own intuitions about what was and was not being communicated by the avoidances. Skeptics might rightly wonder whether our classification and analysis was not really just an imposition of our own biases, and our textual justifications a series of artfully persuasive interpretations that would not be spontaneously or ordinarily shared by natural language users. To address these sources of doubt, we conducted an empirical study of the impressions ordinary language users have of these three types of utterance.

1.2. Hypotheses

If our typology is correct, then "opt outs," "indirect answers," and "evasions" should each display their own distinctive pattern of interpretation when read by ordinary language users. First, since evasions are designed to appear to be efforts to answer the question, ordinary language users should see both indirect answers

and evasions as more like actual answers to questions than they do opts outs (which are more or less open refusals to answer). Specifically, we hypothesize the following:
H1a: Respondents will judge opt outs to be less relevant, responsive, and reasonable than indirect answers.
H1b: Respondents will judge opt outs to be less relevant, responsive, and reasonable than evasions.
H2a: Respondents will be more likely to attribute motivational implicatures rather than content implicatures for opt outs than they will for indirect answers.
H2b: Respondents will be more likely to attribute motivational implicatures rather than content implicatures for opt outs than they will for evasions.
Both sets of hypotheses are ways of getting at whether or not evasions, like indirect answers, appear to be answering the question in comparison to opt outs. The outcome of direct comparison of evasions and indirect answers is an open research question. Judgments of relevance, responsiveness, and reasonableness all get at aspects of the quality of answerhood. Motivational implicatures should be preferred where what is inferred is the reason for *not answering* the question in the first place.

The second comparison distinguishes indirect answers from opt outs and evasions. Ordinary language users should more easily identify information implicated as an answer for indirect answers than for either opt outs or evasions because only indirect answers actually provide information that is an answer to the question. Specifically, we hypothesize:
H3a: Respondents will be more likely to agree on content implicatures for indirect answers than for opt outs.
H3b: Respondents will be more likely to agree on content implicatures for indirect answers than for evasions.

We expect respondents to identify the implicatures we as researchers intended to design into the messages. The crucial point, however, is that whatever implicature respondents recognize they should more readily recognize it in the case of indirect answers than in the cases of opt outs or evasions, which we hypothesize to have no clear content implicature. For this reason, our third set of hypotheses is cast in terms of agreement rather than accurate correspondence with researcher intentions. Once again, the outcome of a direct comparison of opt outs and evasions is an open research question.

2. Method

2.1. Participants and Procedures

Participants consisted of 474 students recruited from undergraduate Communication and Linguistics classes at the University of Arizona. Due to its brevity, the questionnaire was completed during the regularly scheduled class period. Extra-credit was offered at the instructor's discretion.

2.2. Messages

The independent variable used for this analysis was message type. As proposed in the hypotheses, message type was operationalized as having three levels: opt outs, indirect answers, and evasions. In all, 27 messages were used in this analysis with nine messages typed as evasions, ten as indirect answers, and eight as opt outs. The messages used were generated from the results of a pilot study where 206 participants were placed in hypothetical situations and asked to respond to a "double-bind" question for which no good answer could be directly constructed. Participants' responses were selected to best exemplify one of the three broad types of avoidance. Since the primary interest in the pilot examination was to determine naturalistic responses and appropriate content for messages, some messages were restructured to enhance readability, brevity, and prototypicality.

Each participant in the main study randomly received one of the 27 messages to evaluate. The final messages evaluated by the participants were single question-answer sequences. Each question-answer sequence was contextualized within one of four scenarios:

Chris and Mary; Sam and Diane; Christine and Jay; and Professor Smith and Jim. Each scenario contained a question that demanded a yes/no answer and each constructed response fell into one of the three general types of avoidance described above. Examples of messages used can be found in Appendix A.

2.3. Dependent Measures

After reading the scenario with its question-answer exchange, participants were asked to evaluate the response for its overall relevance, responsiveness, and reasonableness. Ten Likert-type items were used to assess these variables, mixed with 10 distractor questions to help disguise the purpose of the questionnaire. All 20 items consisted of statements to which the participants responded on a five point scale where 1 indicated strongly agree; 2 indicated agree; 3 indicated neutral; 4 indicated disagree; and 5 indicated strongly disagree.

Relevance was operationalized as the degree to which the response addressed the question, appeared to address the question, provided the information asked for, and was on topic. Responsiveness consisted of measures of participants' perception of the respondent's intent to answer the question. This variable was operationalized through assessment of statements that the respondent was trying to answer the question, wanted to answer the question, and did not want to answer the question. Reasonableness was operationalized by two items: an assessment that the respondent's response was reasonable and that it met the demands of the situation. Type of implicature drawn was measured by one multiplechoice type question. Participants were asked to choose one of three statements that best represented a paraphrase of the speaker's message in an attempt to identify what participants' believed the speaker actually communicated. The three answer choices were positive implicature (e.g., "I will move into your apartment"), negative implicature (e.g., "I will not move into your apartment"), or motivational implicature (e.g., "I am not going to answer you now"). For indirect answers, the negative implicature was the target implicature. For opt outs, the motivational implicature was the target implicature. For evasions, none of the options were targeted. (For the latter two message types, the negative implicature could be thought to get at the unexpressed reason for the response). Implicature questions for each scenario are reprinted in Appendix B.

3. Results

In order to protect against alpha inflation, correlations between the dependent variables and a Multivariate Analysis of Variance were conducted before testing hypotheses 1a and 1b (Bray & Maxwell, 1985). Significant correlations (p .000) were discovered among the three dependent measures. As suggested by Keppel (1993), an omnibus F test was performed to protect against Type One error. Results of the MANOVA were significant, $F(8,233) = 11.21$, $p < .000$ (Wilks' A : L = .83), warranting interpretation of tests of the individual hypotheses.

In this analysis, error terms were constructed treating messages as a random factor (Jackson & Brashers, 1994; Keppel, 1993). All F ratios use message type as the numerator with messages nested within message type as the denominator. Overall, the oneway ANOVAs used to test for differences between opt outs, indirect answers, and evasions on the dependent variables were significant.
Message types differed on relevance, $F(2,24) = 9.99$, $p<.001$; on responsiveness,

$F(2,24) = 9.44$, $p<.001$; and on reasonableness, $F(2,24) = 4.72$, p of planned comparisons were conducted.

Hypothesis 1a predicted a difference between opt outs and indirect answers on each of the three dependent measures. Planned comparisons indicated that indirect answers were rated as more relevant ($t(24) = 7.64$, $p<.0001$), more reasonable ($t(24) = 5.00$, $p<.0001$), and more responsive ($t(24) = 5.75$, $p<.0001$) than opt outs. Likewise, consistent with hypothesis 1b, evasions were rated as more relevant ($t(24) = 3.39$, p .001), more reasonable ($t(24) = 4.39$, p .0001), and more responsive ($t(24) = 4.97$, $p<.0001$) than opt outs. Further planned contrasts showed that indirect answers were rated as significantly more relevant than evasions ($t(24) = -3.76$, $p<.0001$), but no significant differences between the two message types were found for reasonableness or responsiveness (see Table One for reported means).

To test the overall relationship between type of implicature and message type, a chi-square analysis was conducted. The chi-square was found to be significant ($x2(4) = 16.80$, $p<.01$). Observed and expected frequencies for the nine cells as well as the proportions of responses evidenced in each category are reported in Table Two. As indexed by Cramér's statistic, the strength of the relationship between implicature drawn and message type was .13. Specifically, consistent with hypotheses 2a and 2b opt outs were more likely than expected by chance to generate motivational implicatures, but not so for indirect answers and evasions. And consistent with hypotheses 3a and 3b indirect answers are more likely to result in negative implicatures than expected while opt outs are less likely to result in negative implicatures than expected by chance. The remaining cells only nominally contributed to the overall chi-square value and the differences between expected and observed totals were minimal. Interestingly, the observed values for the evasion message type were virtually what we would expect due to chance alone.

4. Discussion

The results of this study provide strong independent corroboration for our intuitions that evasion is a distinctive form of answer avoidance, different in kind from indirect answers or opt outs. The overall pattern of results suggest that participants recognize that all these response types are less than full and straightforward answers. The ratings of relevance, responsiveness, and reasonableness in Table One all tilt to the disagree side of neutral. Likewise, the frequencies in Table Two display a pronounced tendency in all message types to

read the motivational implicature ("I am not going to answer you now") as the best paraphrase of what the respondent means.

Nevertheless, each proposed type of answer avoidance displayed a pattern of interpretation in the expected characteristic fashion. Participants' ratings of messages suggest that they see evasions as answers to questions like indirect answers and unlike the more or less blatant failure of an answer in opt outs. This impression was also reflected in their choice of paraphrase: Participants were much more likely to choose "I am not going to answer you now" for opt outs than for either indirect answers or evasions. On the other hand, while evasions look like answers, ordinary language users seem to have a hard time figuring out what the answer is. Subjects in this study were unable to consistently identify exactly what implicature an evasion was expressing – unlike the case of indirect answers where a negative implicature was the predominant choice. Here, the pattern looks more like it does for opt outs. In other words, while participants thought they had an answer with an evasion and did not think they had an answer with an opt out, participants were could no more reliably say what the answer was than if they had been exposed to "I don't know" as the response.

We think these features of evasions qualify it as a genuine fallacy of answering. While we cannot offer any mechanical procedure for constructing an evasion, nor can we provide clearcut recognition rules independent of the functional characteristics laid out here, we think it is clear that evasions are a recurrent and reproducible phenomenon. Their artfulness makes them no less systematic than say, red herrings or strawmen.

Moreover, evasions are a clearcut violation of dialectical principles. Whatever else they do, evasions covertly violate the maxims of relevance and informativeness which underlie any cooperative communicative exchange (Grice, 1975). Now, it is still something of a puzzle as to how, exactly, evasions are able to get away with these violations (Polcar and Jacobs, 1998). In the case of deception, where the violation involves falsification of content information, this can be done covertly because identifying false information often involves comparison between the message and some independent state of affairs that may not be immediately available to the message recipient. But evasion isn't like that. Evasion (in question-answer sequences) involves a relationship between the message given and the communicative demands that are established by the question. That relationship should be open, publicly observable, and readily accessible for inspection. Nevertheless, artful respondents do get away with these violations.

Table 1 Means and Standard Deviations for Ratings by Message Type

	N	Relevant	Responsive	Reasonable
Opt Out	144	4.08 (0.91)	3.96 (0.81)	3.50 (1.00)
Indirect answer	175	3.53 (0.88)	3.44 (0.86)	3.08 (0.95)
Evasion	155	3.67 (0.80)	3.48 (0.85)	3.07 (0.94)

*Table 2 Contingency Table for Message Type by Implicature**

	Type of Implicature			
Message type	Positive implicature	Negative implicature	Motivational implicature	Totals
Opt Out	16 (19.44)	33 (46.78)	95 (77.77)	144
Indirect Answer	25 (23.65)	73 (54.86)	77 (83.70)	175
Evasion	23 (20.93)	48 (50.36)	84 (83.70)	155
Totals	64	154	256	474

Table 1

And that is another reason to treat evasions as genuine fallacies. They work, and they work to the detriment of productive dialectical engagement. One might argue that in the case of opting out, no one is tricked or fooled. Such a move may obstruct deliberation, but not in a way that escapes notice or chance for repair. Likewise, with indirect answers, the answer at least does get on the floor – although often in a way that allows the respondent to elude responsibility for defending what has been conveyed. But at least for many indirect answers, the answer is on record and the violation of manner is trivial or only apparent but not substantial.

That is not the case for evasions. They are neither obvious in appearance, nor are they trivial in impact. The natural response of the questioner is to prod no further and to proceed with another line of inquiry because it appears an adequate answer has now been provided. And that is how to stop an investigation cold.

Appendix A

Examples of Scenarios and Message Types

1. Opt Outs

1a. Professor Smith and Jim

You are taking a class on Interpersonal Communication. For today, you were supposed to read a book that discussed relationship development.

Jim, another student in class, is sometimes unprepared for class discussion. Dr. Smith, your professor, calls on Jim to discuss the reading.

Professor Smith: Did you do all the reading?

Jim: I don’t know.

1b. Christine and Jay
Christine: I just don't think the other members of the group like me.
What do you think?
Jay: Come on, let's talk about something else.

2. Indirect Answers

2a. Chris and Mary
Chris and Mary have been dating for two years. Over dinner, the following conversation occurs.
Chris: Don't you think you should move into my apartment?
Mary: Well, I am awfully busy with school.

2b. Professor Smith and Jim
You are taking a class on Interpersonal Communication. For today, you were supposed to read a book that discussed relationship development.
Jim, another student in class, is sometimes unprepared for class discussion. Dr. Smith, your professor, calls on Jim to discuss the reading.
Professor Smith: Did you do all the reading?
Jim: I got through a lot of it.

3. Evasions

3a. Diane and Sam
Diane: I know you've been working closely with your boss on this recent project. I think he's been making a lot of mistakes, especially at the last meeting, and I am sure you are worried about how the project will turn out. Are you worried about the project?
Sam: One thing my boss does well is stand behind his work. It is an admirable quality and one that I wish I and more people in this company had.

3b. Christine and Jay
Christine: I just don't think the other members of the group like me. What do you think?
Jay: You know, I am really sorry you think that. You really shouldn't be concerning yourself with this and you need to work on developing more self confidence.

Appendix B

Implicature Questions by Scenario Chris and Mary: Which of these best paraphrases what Mary's answer meant?
a. "I will move into your apartment."
b. "I will not move into your apartment."
c. "I am not going to answer you now."

Professor Smith and Jim:
Which of these best paraphrases what Jim's answer meant?
a. "I have done the reading."
b. "I have not done the reading."
c. "I am not going to answer you now."

Diane and Sam:
Which of these best paraphrases what Sam's answer meant?
a. "I am not worried about the project."
b. "I am worried about the project."
c. "I am not going to answer you now."

Christine and Jay:
Which of these best paraphrases what Jay's answer meant?
a. "The study group likes you."
b. "The study group does not like you."
c. "I am not going to answer you now."

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ISSA Proceedings 1998 – Validity Of Distributed Inference; Towards A Formal Specification Of Validity Criteria In Argumentative Models

1. Introduction

Many disciplines, including gametheory, the theory of social choice, conversation analysis, social psychology and organization theory are in some way or another concerned with distributed inference. Roughly put, this notion refers to those patterns of reasoning, arguing or deciding where more than one agent affects (the outcome of) the process of reasoning, arguing or deciding. These agents may fulfill different roles, they may have distinct knowledge, preferences and even conflicting interests, but they are interdependent as well. They are aware that moves and choices of other agents may influence their own interests and they may even adopt their choices and preferences to the expected choices of the others.

However, in order to act in a rational way and to achieve individual or collective goals, this idea of "mutual awareness" usually is not enough. Quite often, agents are urged to commit themselves to some form of joint activity or cooperation. We are aware that this very generic description of distributed inference includes many divergent and hardly related models in the field of reasoning. Indeed, also much work in modern argumentation theory can be qualified as such (Barth 1991). However, for our purposes this description suffices.

Without adhering to a radical argumentativism like Ducrot and Anscombre (all language-use is argumentative) we believe there is a raising conviction that important types of distributed inference are primarily argumentative and consequently should be modeled as such. In (Starmans 1996b) the role of argumentation theory in Artificial Intelligence was reviewed and some relations between both fields were explored. Furthermore, many formal approaches to

commonsense reasoning, including (Loui 1991) (Vreeswijk 1993) (Hage 1993) (Starmans 1996a) and (Verheij 1996) adopt argumentative insights, concepts and methods. But also in organization theory, business communication and qualitative marketing research various diagnostic and evaluative instruments or tools have been developed, that can be considered as argumentative: they can be analyzed as a verbal and social goal-oriented activity, a process of constructing, weighing and combining arguments and counterarguments. They include Porter's 5-forces model (Porter 1980) and the so called MABA-analysis (Market-Attractiveness Business-Assessment), a well-known method in portfolio analysis. What's more, some of these models can be reconstructed rather easily as a critical discussion. (Starmans, forthcoming).

In our doctoral dissertation (Starmans 1996a) it was argued that formal models of distributed inference should be based on a suitable, integrated theory of argumentation. A mere eclecticism of concepts and ideas taken from argumentation theory does by no means provide a solid foundation for developing such models. In this paper we focus on one related and significant problem, that seems to be a bottleneck in the before mentioned models as well; the validity of distributive argumentative models. How can these inferences be validated and what concept of validity do we require?
Unfortunately, the term validity is not unproblematic. It has many uses, meanings and dimensions in logic, argumentation theory and social science, and none of these fields possesses a monopoly of its use.
Avoiding the extensive literature on the topic, in this paper we will focus on one aspect of the problem of validity in distributive argumentative models, that is closely related to the idea of intersubjective validity. Since this notion deals with the conformity between the model's components and the "values, standards and objectives actual arguers find acceptable" (Barth 1982), an important question is: what role, does the initial knowledge of different agents play in the ultimately accepted arguments and conclusions.

How can these "initial commitments" be combined, integrated, adopted or aggregated? Debates may proceed in different ways, but one cannot validate specific moves or rather the entire procedure without representing requirements regarding these initial commitments. It is argued that in order to validate the process of argumentation, these validity criteria have to be represented in a declarative, i.e. non-procedural way. It is shown that this can be achieved by

defining an aggregation function and by specifying formal properties of it.

Towards a concept of validity

The notion of validity is crucial in AT. “The general objective of the study of argumentation is to develop criteria for determining the validity of argumentation in view of its points of departure and presentational layout and to implement the application of these criteria in the production, analysis and evaluation of argumentative discourse.” (Eemeren 1996; 22). And since the process takes place “before a rational judge” it is the task of argumentation theorists to indicate the “validity criteria to be applied by a rational judge in carrying out a reasonable evaluation of argumentation”. In these endeavors, the term valid “acquires a pragmatic meaning which accords with the interests of argumentation theorists”. Therefore, “soundness criteria are validity criteria in a pragmatic sense, relating to all elements that are part of the argumentative discourse, from the premises, whether explicit or implicit, and other constituents of the point of departure of argumentation, to the argumentation structures and the argumentation schemes employed in its presentational layout.” (Eemeren 1996; 21)

However, argumentation theorists differ in the meanings they assign to the term valid.

Usually, these differences relate to the various conceptions of rationality or reasonableness. As a result, “every theoretical contribution to the study of argumentation provides us with a definition of (particular aspects of) pragmatic validity” (Eemeren 1996; 23). According to many argumentation theorists modern logicians restrict themselves to a concept of validity that neglects “the actual reasoning processes and the contextual surroundings in which they take place; a great many verbal, contextual, situational, and other pragmatic factors that play a part in the communication process are not taken into account, so that the problems of argumentative discourse cannot be adequately dealt with.”

Several attempts to develop alternative concepts of validity can be found in literature. Toulmin’s attacks on the concept of validity as adopted by logicians and Barth’s introduction of problem-solving validity and intersubjective validity are the most well-known. Although we cannnot discuss all these important issues here, we will further elaborate on this idea of intersubjective validity.

Validity criteria that are to be applied by a rational judge, whether they are described formally or informally, must be independent of the moves, the actual proceeding of the debate. The basic idea underlying this paper is that one

important aspect of validity concerns the role that the initial knowledge of the individual agents plays -in some way or another- in the ultimate outcome.
Ideas on dominance, equality, autonomy, unanimity and so on – depending on the specific dialectical situation- must be represented. These ideas can be made somewhat more precise in the following way. Let an information-state or theory represent the initial knowledge of an agent. Then, as debate proceeds, this agent will perform speechacts, raise arguments and make commitments, based on this initial knowledge. Other agents will do the same and the ultimate result is that some arguments and conclusions are accepted by the group. These arguments and conclusions are based on knowledge that is "accepted" as well and it can be represented in an information state too, a so called aggregated information-state. In a way, this is a declarative representation of the actual procedure of the debate.
Among other things, validating a debate or an argumentative procedure demands a representation of the construction of this aggregated theory, based on the individual information-states of the actors. So we need an aggregation-function which maps the individual information-states into an aggregated information-state. In the following sections such an aggregation function is defined in a straightforward way and it is shown how the theory of social choice can be useful in describing formal properties of this aggregation function.

Preliminary definitions
Assume that the knowledge of an agent is represented in well-formed formulas of some language L and that (is a set of these formulas. Usually this set is assumed to be consistent, but we will not take this aspect into account here.

Let N = {a1, ..., an} be a non empty set, the elements of which are called actors or agents. N is called a *group* and each M ⊆ N is called a *subgroup* of N. Next ($\Sigma_1$denotes the information-state associated with actor a_1 and *Th*(L) denotes the set of all information-states.
Then, a profile of N is a mapping □: N□Th(L), which assigns to each member of N an information-state. A profile p is a combination of individual information-states and will usually be denoted as a tuple p = ((1, ..., (n). So for each profile p based on N we have p e Th(L)n, where Th(L)n denotes the set of all n-tuples of information-states. Now, we can define an aggregation function that maps each profile of each subgroup of a group N = {a1, ..., an} into a new information-state. It is an operator U such that

$\theta : \cup \{Th(L)^K | k < n\} \rightarrow Th(L)$

Roughly spoken, it maps each combination of individual information-states into a collective information-state. So, given a group N = {a1, ..., an}and a profile p = ((1, ..., (n) of N also U((1), U((2) or, for example, U((1, ..., (n-1) should be defined. Theories which are the result of such an aggregation procedure are called aggregated theories. More formally:
Let *N* = {a1, ..., an} be a group and p = ((1, ..., (n) a profile of N and U an aggregation procedure. Then G = ((1, ..., (n) (is called an aggregated theory based on p.

The fact that U is also defined for subgroups of N, enables us to model specific behavior of small groups of participants and some of the dynamics of a debate. For example, in some "ideal" circumstances division of tasks might even be possible by creating two debates performed by subgroups if the following equation holds:
θ ((Σ₁, ..., (Σ₁, (Σ

Given our considerations on the relation between and , the following functions are preferable, though unrealistic as well:
U((1, ..., (n) = U((1) È ... È U((n)
U((1, ..., (n) = U((1) Ç ... Ç U((n)

In order to make a more profound use of these functions, three classes of more useful properties are introduced.

Principles of preservation
Debates can be characterized according to the degree in which characteristics of the individual information-states are preserved in the ultimate aggregated theory. Sometimes this can be highly desirable, sometimes it is virtually impossible. In all examples we assume a group N = {a1, ..., an}. A natural, but at the same time trivial situation where preservation seems reasonable, arises if a profile ((1, ..., (n) e Th(L)n shows full unanimity, i.e. (1 = (2 = ... = (n =G. Although this will occur infrequently, it goes without saying that any notion of intersubjective validity will demand that the aggregated theory at least comprises G. Preservation of Unanimity (for groups): an aggregation procedure U represents preservation of unanimity if for each tuple ((1, ..., (n) e Th(L)n we have:
if (1 = (2 = ... = (n = G then G Í U ((1, ..., (n)

Preservation of unanimity in this form requires a full consensus in the entire group. Since U should also be defined over subgroups of N, unanimity among members of a subgroup of N should also be “rewarded”, by generalizing the above definition.

Preservation of Unanimity (for subgroups): an aggregation procedure U represents preservation of unanimity if for each profile ((1, …, (m) e Th(L)m with 1 < m < n based on any subgroup M of N we have:
if (1 = (2 = … = (m = G then G Í U ((1, …, (m)

Of course, this does not entail G Í U ((1, …, (n). It does not say anything about the relation between G Í U ((1, …, (m) and G Í U ((1, …, (n). Although it will be more common that unanimity appears in a subgroup M, than that it appears in the entire N, this property is neither very realistic, nor desirable. A more important property deals with unanimity for subtheories and this will be called the Pareto-principle, which resembles the well known Pareto-principle in the theory of social choice. Again
intersubjective validity seems to require it.

Pareto-principle: an aggregation procedure U satisfies the Paretoprinciple if for each profile ((1, …, (n) e Th(L)n we have
G Í (1 and … and G Í (n then G Í U((1, …, (n)

This principle states that information once accepted by the entire group cannot be ignored in the aggregated theory. The principle can be generalized as well by taking profiles ((1, …, (m) e Th(L)m with 1 < m < n into account. But of course other types of preservation can play a role as well. U may preserve “lack of information” or ignorance as well.

Preservation of Ignorance: an aggregation procedure satisfies preservation of ignorance under unanimity if for each profile ((1, …, (n) e Th(L)n we have: if D Í (1 and … and D Ë (n then D Ë U((1, …, (n)

The principle can be generalized as well by taking profiles with 1 < m < n into account. Obviously the combination of preservation of unanimity and preservation of ignorance does result in a full determination of the aggregated theory by the individual informationstates. There is no influence of external sources at all, if all actors agree about the available information. So:
if (1 = (2 = … = (n = G then G = U ((1, …, (n)

In some cases this seems a most rational and -from a democratic point of view- desirable property. On the other hand many situations simply forbid this principle. A well governed and decent society simply requires external standards or laws that have to be obeyed by all members, whether or not these standards and laws are part of their individual information-states or not.

Autonomy

Principles of autonomy deal with the relation between the group and external norms and sources of information. To what extent is the ultimate outcome determined by the members of the group only? And how are the initial commitments constrained by external norms? Obviously, these principles are related to the previous ones.

Autonomy demands certain principles of preservation, though we usually will not demand the strong unanimity preservation (whether for groups or for subgroups) we gave in all previous examples of preservation. The degree to which a group is able to preserve information in the aggregated theory is an indication of the influence of the members themselves. Full autonomy is stronger as it demands exterior information to be fully irrelevant, also when there is no unanimity in the group! Again, usually this seems more realistic and desirable.

An extreme and total absence of autonomy can be found in the following situation. In all examples we assume a group N = {a1, …,an}.

A traditional group: an aggregation procedure U represents a traditional group if there is a fixed theory G such that for each profile ((1, …, (m) e Th(L)m with 1 < m < n we have: U ((1, …, (m) = G

Clearly, this leaves no room for real debate, the individual knowledge and preferences of the members are completely neglected; the outcome of the reasoning process is determined by some external source. The requirement to prevent this traditional society to arise is usually called the property of non-imposition. A more important aspect of autonomy is the following well-known principle.

Principle of Universal Domain: an aggregation procedure is said to satisfy the principle of universal domain if:

U : È {Th(L)k | k < n} Õ Th(L) is a total function

Every theory based on L is allowed and each n-fold profile of these theories as

well. There are no external standards or constraints, limiting the commitments of the individual members. The following principle resembles this feature of Universal Domain.

Principle of Universal Scope: an aggregation procedure satisfies the principle of universal scope if: for each theory G there is a profile p = ((1, …, (n) such that U((1, …, (n) = G
Or, put differently, for each theory G there is an input ((1, …, (n) such that G is the aggregated theory. Having developed these traditional principles of aggregation, let us now take a more essential type of autonomy into account.
Strong autonomy: an aggregation procedure is said to satisfy strong autonomy if for each profile ((1, …, (m) e Th(L)m with 1 < m < n and with M = {a1, …, am}, we have U((1, …, (m) Í È {(j | j e M}

So there are no facts in the aggregated theory which are not believed by at least a subgroup.

Dominance and Equality
Even more important are the relations between the members of a group; their individual influence, their roles in coalitions. To what extent can individuals influence the aggregated theory. Some preliminary definitions are required first. In the following examples we presume a fixed subgroup M Í N with |M| = m and m < n. For the sake of convenience, we assume that M = {a1, …, am} but every arbitrary subgroup suits.

Decisive Group: a subgroup M Í N with and is called decisive if U((1, …, (n) = U((1, …, (m)

The aggregated theory is completely determined by a subgroup of N. In fact the members of N\M appear to function as “dummies”. If M Ì N this means that at least one agent has no influence at all. If |M| = 1, a kind of dictatorship arises, a property that will be discussed in this section as well.

Semi-Decisive Group: a subgroup M Ì N with |M| = m and m < n is called semi-decisive if
U((1, …, (m) Í U((1, …, (n)

Here the dominance of the subgroup is less, since it does not determine the aggregated theory completely.

Minimal Decisive Group: a decisive group M is called minimal decisive, if each subgroup H Ì N is not decisive.
It goes without saying that a debate does not permit very small decisive groups. Nevertheless, it would be too easy to stipulate that the modelling requires the entire N to be the minimal decisive group. It can be quite reasonable that a specific source does not in fluence the outcome.

Another principle deals with the ability of subgroups to prevent information from being adopted into the aggregated theory.

Veto-power: a subgroup M Ì N with |M| = m and m < n possesses veto-power if:
if G Ë U((1, …, (m) then G Ë U((1, …, (n)

Here the dominance concerns the absence, rather than the presence of information. Now, clearly aggregation procedures can be characterized according to the way they allow specific subgroups (decisive or with veto-power) to dominate the other members of the group. Related notions are based on them.

Strong Dictatorship: an aggregation procedure allows for strong dictatorship if there is a minimal decisive group of only one individual, i.e.,
if U((1, …, (n) Í (i

Weaker versions of dictatorship correspond with the notions of semi-decisive group and veto-power.

Weak Dictatorship: an aggregation procedure allows for weak dictatorship if:

if G Í (i then G Í U((1, …, (n)

One-person veto power: an aggregation procedure allows for one-person veto power if:

if G Ë (i then G Ë U((1, …, (n)

In fact, strong dictatorship is the most extreme type of dominance in debate. If a1wants all his initial commitments to be adopted, i.e. (i = U(()i than the operator U is just a projection-function: the aggregated theory coincides with a (sub)theory of one particular actor.
The others are basically dummy’s and do not contribute to the debate. In a way it satisfies a (rigid) interpretation of problemsolving validity, but it neglects

intersubjective validity.

A usually undesirable, but rather opposite property deals with suppression.

Suppression: an aggregation procedure allows for suppression if U there is a ai e N = {a1, ..., an} such that for each profile ((1, ..., (m) e Th(L)m with 1 < m < n in which ai participates and for each theory D we have:

if D Í (1 then D Ë U((1, ..., (m)

Accordingly, non-suppression demands that there is no individual whose knowledge will be systematically neglected. One person veto power is a strong type of dominance as well, since one individual may obstruct information from being adopted in the aggregated theory. However, unlike a dictator this actor is not able to determine the aggregated theory.

Until now, we only discussed extreme types of dominance. The opposite situation occurs when only the whole group is decisive. i.e., there is no real subgroup M Ì Nwith M = {1, ...m} such that U{(1, ..., (m) Í U{(1, ..., (n) .

An attempt to fully prohibit dominance of one specific subgroup needs the following property of anonymity.

Anonymity: an aggregation procedure fulfills the requirement of anonymity if all members have equal power. Let N = {a1, ..., an} be a group and p be a permutation on the index-set of N. Then U has the property of anonymity if
U((1, ..., (n) = U((p(1), ..., (p(n))

All contributors are of equal importance. It does not matter which agent makes the commitment. For notational convenience, we restricted ourselves to the entire but obviously it can be extended to each profilet U{(1, ..., (m) e Th(L) with 1<m<n.

Conclusion

In this paper only one, though important aspect of distributive validity was scrutinized. We have presented our ideas on aggregation in debate in a straightforward way, since we primarily wanted to sketch the basic principles of one aspect of validation, that is closely related to intersubjective validity. First and foremost, it seems obvious that at least some preservation principles and some notion of autonomy and equality are required in fairly all kinds of debate.

Furthermore, anyone concerned with intersubjective equality should at least preserve unanimity and follow the Pareto-principle. Taking autonomy seriously, will imply a rejection of the idea of traditional groups and adherence to at least universal domain and universal scope. Finally, some ideas of dominance and equality imply a rejection of dictatorship and very small decisive groups as well. However, full equality (anonymity and neutrality) is not always desirable in a debate as well.

Whether, or rather to what extent, the enumerated principles –that are well-known in the theory of social choice- are desirable or not, may depend on the type of debate, the dialectical situation and the adopted theory of argumentation.

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ISSA Proceedings 1998 – The Strategies And Tactics Used By F.W. De Klerk And Nelson Mandela In The Televised Debate Before South Africa's First Democratic Election

1. Introduction

1.1 Research questions and method used

Presidential debates began as an innovation in the 1960 election campaign between John F. Kennedy and Richard M. Nixon. Since then televised debates have become a permanent and major part of the election process in the United States (Nimmo & Sanders 1981: 273). A similar debate took place between President Nelson Mandela (then, leader of the African National Congress, ANC) and the former President F. W. de Klerk, (then, leader of the National Party, NP) before South Africa's first fully democratic election. It is highly probable that this debate – a first for SA – will set an example for similar debates. With the second election for the new SA in 1999, it seems apposite to do research on this trend-setting debate.

This study is a step in understanding and evaluating the processes involved in debating. From this analysis might come further discussions to improve the quality of debating and argumentation, in order to enrich democracy and allow citizens to make well informed decisions.

The focus of this paper is on the discursive logic or rational aspect of the message (Smith 1988:268), namely the verbal strategies and tactics. Therefore, this study endeavours to answer the following questions:

* Which verbal strategies and tactics have been used by the two debaters?

* Are there significant similarities and/or differences?
* Were they more “issue” or more “image” oriented?

In order to answer these questions the so-called Humanistic approach has been used. According to Smith (1988:269), this approach generates descriptive and inferential information, but its principal contribution consists of interpretations and criticism. In a certain sense this is a qualitative case study of a communication artefact (Watt & Van den Berg 1995:256; Marshall & Rossman 1995:124).
The following method has been used:
A verbatim transcription of the debate from video;
1. the strategies that Martel (1983:62-72) identified, as well as Rank’s model (Larson 1995: 15-21) have been used to identify and apply tactics and strategies;
2. a descriptive analysis (De Wet 1991:160) to indicate similarities or differences in the use of strategies and tactics;
3. an evaluation of the descriptive analysis.

1.2 Election background
The analysis must be viewed against the particular context of this debate. This election was not a normal one, but the first fully democratic election with a regime change. According to political scientist Theo Venter (1998) it was a so-called “designer” election, because the result was a forgone conclusion. The ANC’s take-over had been built on their high legitimacy because of the struggle against apartheid, where as Mr. De Klerk (hence: De Klerk) and the NP enjoyed deligitimation in the eyes of the masses. President Mandela (hence: Mandela) knew the ANC was the majority party and indeed they won the election gathering 62.7% while the NP got 20,3% of the votes. One can assume that Mandela’s goal was to reassure his supporters, or simply to avoid doing anything that might jeopardise their support.

De Klerk, on the other hand, wanted a strong as possible opposition against the ANC: “We need a balance of power. There is only one party (NP) which can form the balance of power against the ANC”. Both of them knew beforehand that the ANC would win. The margin of winning was in doubt.

1.3 Procedure
The debate started and ended with each of the debaters delivering a three-minute introduction and a four-minute closure respectively. Four panellists decided the

issues that had been debated. They asked in alternative sequence four questions to Mandela and four to De Klerk. For each question each had two minutes to answer; after which each one had 1 minute for rebuttal.
It needs to be mentioned that De Klerk used 4109 words at an average of 133 words per minute or 406 words per answer. Mandela used 2598 words at an average of 84 words per minute or 253 words per answer. Mandela used 37% fewer words than De Klerk. Mandela talked slower, but in fourteen instances he didn't use the full time that he was allowed to: 4,45 minutes were not used. (Figure 1)

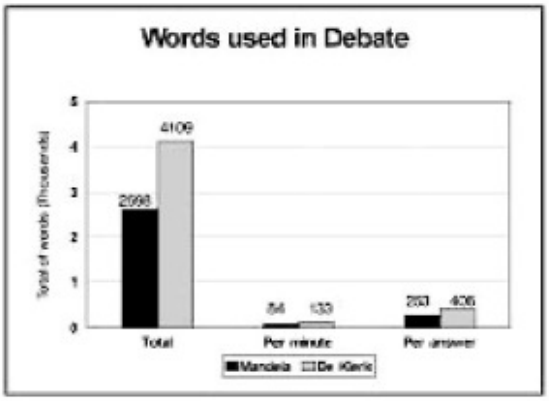

Figure 1

At least two interpretations are possible: De Klerk can be regarded as more knowledgeable and Mandela as not that knowledgeable or Mandela may be more concise and succinct. It was probably a strategically decision: De Klerk would like to give the image of the rational debater that goes into specificity, because he realised that with the NP's past record he should have done as much as possible to sell his New NP. Mandela would give the image of the frontrunner who does not need to do a lot of explaining. With this cryptic background the relational strategies can be discussed.

2. Relational Strategies

The relational strategies refer to those dominant modes of conduct intended to influence the audience's perception of the candidate's personality, and can be directed toward either the opponent, the panellists or the audience itself (Martel 1983:62). In this debate the two men mostly address the panellists and spoke only three times directly to each other.

According to the descriptive analyses the following relational strategies have been used:
Sell your case, which is realised in the form of a verbal testimonial and also in the stating of the party's policies.
"*Me too .... me better*" is a strategy where the candidate identifies himself with some of the opponent's goals, but persuades viewers that his party is better qualified or equipped to carry them out.
Attack the opponent's arguments, evidence and/or reasoning by demonstrating that they are invalid, erroneous, or irrelevant to weaken the opponent's case.
Defend, or rebuild, by introducing new and additional evidence and/or reasoning to further substantiate your arguments or the response after being attacked.
Ignore means paying little or no heed to the opponent's attacks or even panellist's questions.
Other refers to any other information that are mere formalities, or general aspects that are not related to the parties' distinct policy or image issues. (*Figure 2 & 6*)

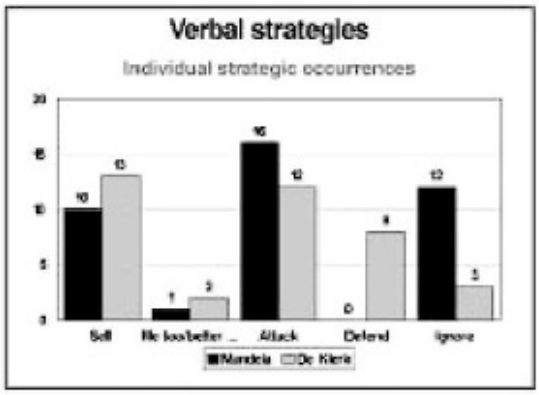

Figure 2

2.1 Sell
Selling normally is appropriate if the candidate's policy or credentials are not known or questioned. Thus, selling was the strategy that De Klerk used the most to explain the policies of the so-called New NP. He knew that he had to wipe out the image of the "old" NP and to fill their minds with the spirit and views of the New NP. Mandela knew that it was not necessary to sell a lot, because the outcome in the ANC's favour was secured. Therefore De Klerk's words were more selling orientated while Mandela's were most frequently simply stating his party's position:

(1)
Mandela:
“The ANC is committed to national reconciliation and to nation building. There is no organisation in this country, which has issued a statement to compare with the Freedom Charter, which is the most devastating attack on all forms of racialism. We have come out with a clear program to ensure a better life, to built houses, to offer employment, to provide free quality education. We are going to address these problems and restructure the police force, so that it could be a community police.”.
(2)
De Klerk:
“It is a new party. It is a party, which has renewed itself from within. It was an internal process. We cleansed ourselves from within. .. This New NP is a growing party. We believe in sound values. .. We believe in Christian norms and standards. We believe in free enterprise. We believe in universal human rights and feel that the bill of rights needs to be strengthened. We believe in religious freedom and we care about the needs of our people. We know many people are suffering. We must accept the challenge to fight hunger, to fight poverty; to ensure that more jobs will be created; to build homes for the homeless; to improve the quality of education. We have accepted it as a party, and we will work together with all those who also stand for that.”

2.2 Me too…. Me better
This strategy, which is a special kind of selling, was only used three times. De Klerk indicated two times that they will realise the promises better than the ANC:
(3)
“We also promised houses, better education, better health facilities and more jobs. The real test is who has a plan, which can achieve it? And I say the NP has a plan, which can work, because we can only achieve that if we have dynamic economic growth. And we can only have economic growth if we get investments. And we’ll only get investments and new factories being build and increased economic activity, if we follow economic policies, which are in step with our policy, because our policy is in step with the economic policies, which have succeeded across the world. The ANC’s policy is riddle with that which has failed, clinging to nationalisation. You will not get investments if that is the case. Therefore, we will have to generate wealth, and that is the only way.”

Mandela used it once when he mentioned that they “will be able to use the country’s resources in a more efficient manner and to prevent the corruption, which is so endemic in the NP Government”.

2.3 Attack

Attack was the most used strategy by Mandela. He used it 16 times and De Klerk 12 times (Figure 3). The analysis shows that Mandela succeeded in keeping De Klerk on the defensive, while Mandela himself didn’t defend at all. It was easier for him to attack De Klerk and the NP’s record, because they made the mistakes in the past. He even mentioned in one reply that he still could not vote, in spite of the fact that the election took place less than two weeks after this debate!

The nature and content of the attack differ substantially between De Klerk and Mandela. Mandela didn’t attack any policy issue as such, but focused nearly all of his attacks on the ethos or moral character of De Klerk. He also attacked the NP’s campaign tactics and crucial mistakes of the past. Except for a few times, his attacks were mostly short without much detail and at times without supporting evidence:

(4)

Mandela:

“He is less than candid in putting facts before the public”. (Repeated 3 times in varied forms.)

(5)

“This is the reply of a man who is not used to address the basic needs of the majority”

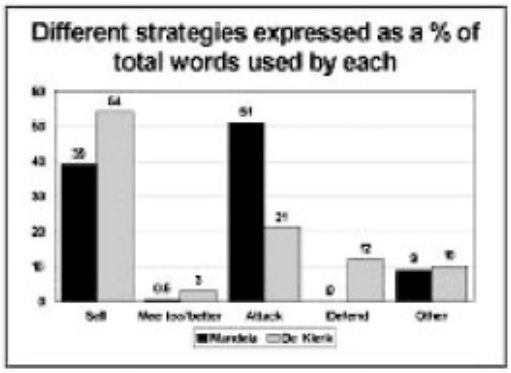

Figure 3

(6)

“This document is full of the most scandalous, outrages, racist allegations, where

they say the slogan of the ANC is Kill the coloured. Kill the Boer! I challenge Mr. De Klerk to renounce that statement now (De Klerk: "I have last night."), if he is less than candid. Last night when you knew you are coming to this debate."
(7)
"They used state funds in order to finance the murderous activities of the IFP (Inkhatha Freedom Party)." De Klerk focused his attacks, except for a few other aspects, mostly on policy issues: the economic policy of the ANC, their clinging to nationalisation, the intimidation in their campaign, their lack of experience and the corruption in former homelands by two men that were on their candidates' list. De Klerk's attacks were in more detail, but were sometimes phrased in an indirect manner, which softens the attack:
(8)
De Klerk:
"And the Goldstone commission, when it brought out its report, I immediately acted. Can the ANC say the same with regard to people who have been implicated by the Goldstone commission? They are high on the ANC's candidates' list."
(9)
"I didn't have to intervene to get a coloured person appointed into an important position in the Western Cape as Mr. Mandela had to do…. I don't have a R150 000.00 fine against me in the NP for intimidation as the ANC now has."
(10)
"I am very glad that we are going to have a government of National Unity, because it is clear that our experience will be absolutely essential if we want to have good government in SA."
(11)
"The ANC's policy is riddled with that which has failed. Clinging to nationalisation, … stronger government intervention and more centralised control. Those policies will not succeed in generating wealth… Their plan will cost 70 billion Rand … Income taxes will be doubled; 12,000 new MK's will be admitted to the defence force. The defence budget will rise and not decrease."

2.4 Defence

With his standing in the polls one could expect that De Klerk would have done the most defending. Although a candidate who defends a lot seems guilty, defending is of the utmost importance when a decisive issue has been attacked (Martel 1983:67). Except for two counter statements (see 3.1.9), Mandela declined to react on the attacks to secure a degree of immunity. By making accusations

where De Klerk's credibility was at stake, Mandela succeeded to keep De Klerk on the defensive.

The nature of de Klerk's defence, which tried to give as much detail as possible, can be illustrated with the following examples:
(12)
"Yes, the fact of the matter is that the Goldstone Commission was an initiative of the government. And I have constantly said if there's any evidence of any involvement of any members of the security forces in the fomenting of violence, then it must be reported to the Goldstone commission. And when it brought out its report, I immediately acted. Lastly, the report refers to a small group of people. Judge Goldstone went out of his way to emphasise that it is not the police force as such which is involve."
(13)
"Mr. Mandela, our plan is on the table, and it has been accepted by the National Housing Forum… But let me say, Mr. Mandela, my comments were not the comments of a man who is less than candid, but of somebody with experience. Of somebody who sat in the cabinet and worked through budgets since 1978 and who knows how the economy works. I'm giving you the assurance when you share responsibility in that government you will realise that we have already cut the budget to the bone."

De Klerk also defended the following issues: The accusation that they promote racial hatred, the funds to the IFP, the issue of accountability and handling of corruption and the fact that the Steyn-report wasn't published.

2.5 Ignore
Mandela ignored all the attacks and even ignored crucial aspects of some questions. In the first question Mandela ignored a crucial issue on what should be done, because "almost 300 people died in political and criminal violence in this month alone". Another example concerns Tim Modise's question:
(14)
"Are the people going to feel safe on the streets after the government of National Unity has been selected? They want to know whether here will be a delivery of social services, given the strikes that had been taken place? Will violence be eradicated completely? Above that, will there ever be racial reconciliation?" The problem with such questions is that there are actually five issues to be covered, which gives any debater the gap to answer only those which suits him best.

Mandela didn't address the strikes issue or how they are going to deliver the promises. The only answer to the violence was that they would restructure the police to a community police (see 2.1).

Mandela chose to ignore all the attacks from De Klerk and rather reacted with counter attacks. This lack of responsiveness is often the strategy of the frontrunner (Martel 1983:68). And in this case even more so where there was no doubt about the outcome of the election. De Klerk reacted to most of the attacks except those attacks that Mandela launched at the end of his rounds.

3. Tactics

3.1 Forensic and substantial tactics

While strategies indicate the debater's broad approach, tactics refer to the specific verbal behaviour on micro level. In other words, the strategies are realised through the tactics. Thus, the strategies and tactics are not mutually exclusive. According to Martel (1983:77) three interrelated categories embrace the tactical choices, namely physical, forensic, and tonal categories. In this analysis only the forensic or argumentative behaviour and a few crucial tonal tactics are investigated and not the non-verbal or physical tactics. The focus is thus on the verbal manner of couching the substance for maximum strategic advantage. No distinction has been made

Figure 4

between the forensic and the substance tactics, because the line between them is not always clear.

Tactics that have been used by the debaters, are the following: outright denial, turning the tables, shotgun blast, highlighting vagueness or evasiveness, quotable

lines, tossing bouquets, timing tactics and surprising closing statements, apologies or confession, asserting counter arguments, direct questions, rhetorical questions, appeal to commonly held values, visual aids, and pseudo-issues and pseudo-clash. (Figure 4)

3.1.1 Outright denial

The tactic of denial was forcefully used four times by De Klerk and two times by Mandela.

(15)

De Klerk:

"I disagree with the analysis that the government is not dealing effectively with violence."

(16)

"The answer is a frank, no. I'm white, but I am no longer the leader of a white party."

(17)

"This government does not fund murderer's activities."

(18)

"I totally reject the accusation that the NP is racist."

(19)

Mandela:

"And I don't accept the explanation which the State President has given."

(20)

"That is the false claim of building unity which my friend is making. I reject that totally."

De Klerk followed the first two examples up with elaboration while Mandela gave the reasons before the conclusion. So, De Klerk handled his denials deductively and Mandela his inductively (Rieke & Sillars 1993:28).

3.1.2 Turning the tables

Mandela very effectively turned the tables after De Klerk mentioned the eight instances of violence which were, according to the Goldstone report, attributed to the ANC and IFP supporters. Mandela mentioned the fact that the report also referred to the involvement of policemen. One of the crucial tactical mistakes that De Klerk did was not to mention the involvement of the police and possible third force activities. This gave Mandela the gap to label De Klerk as not candid. He repeated this several times and it developed into a so-called "quotable line". This

happened in the very first round of the debate, which made it even worse for De Klerk. Had De Klerk at the same time acknowledged the facts, and also that he acted against the policemen, as a forewarning tactic, he probably would have been seen in a much better light.

3.1.3 Shotgun blast

This tactic is supposed to be a "forceful, concentrated multifaceted denunciation of the opponent's character, record, position, or campaign" (Martel 1983:85). Both men used a variation of this tactic. De Klerk used it when he gave a rather detailed explanation of the implications of the ANC's economic policies after he had an "independent investigation", and in his rebuttal in the fifth round (see 3.1.9). Mandela ended the fifth round with a shotgun blast:

(21)

"Mr. De Klerk is alarmed because he is the leader of a party which even today is maintaining apartheid. He is spending 3 times more on education on a white child than he does on a black child. What is the reason if apartheid has died? He has not built houses for Africans for more than ten years. I cannot vote. There are 5 million people unemployed."

3.1.4 Highlighting vagueness and evasiveness

Only Mandela used this tactic by labelling De Klerk five times as evasive, not listening and not transparent:

(22)

"It is of great concern those vague and starry eyed claims which have no bases what so ever."

(23)

"We are dealing with somebody who either does not know what he is talking about. If he does know… he does not tell."

The irony is that De Klerk could have accused Mandela of the same thing: Mandela didn't reply on attacks and crucial aspects in questions put to him. He also didn't explain how the ANC are going to realise their policies.

3.1.5 Quotable lines

Phrases that are used "to introduce or to end a line of argument can have more impact than other things said during the debate" says Martel (1983:88). Mandela labelled several times De Klerk as not candid. This, with the highlighting of evasiveness, became a quotable line:

(24)

“Mr. De Klerk is less than frank in making important statements on National issues.”
(25)
“He is less than candid in putting facts before the public”
(26)
“Mr. De Klerk is less than candid in analysing national issues” – several times.

3.1.6 Tossing bouquets
Mandela used this tactic by using the following verbal interaction:
(27)
“I am happy that we are working together… and that is what I am committed to in spite of all our differences that we have”.
(28)
“In spite of my criticism of Mr. De Klerk, sir, you are one of those I rely upon.”
(29)
“But we are saying, let us work together for reconciliation and nation building. I am proud to hold you hand for us to go forward.
(Mandela holds De Klerk’s hand.). Let us work together to end division and suspicion.”

For some this may be seem like hypocrisy: speaking from two mouths (Johannesen 1991:73). For other this may be brilliant tactics, because it suggests a very noble man: Although De Klerk is untrustworthy, not candid, does not know what he is talking about, evasive, still promote racist policies, etc, Mandela is willing to take his hand, forgive him and work with him to create nation building in SA.

3.1.7 Timing tactics and closing with a surprise
Three times Mandela saved his strongest attacks for the last response opportunity within a round. This allowed him to end strongly, since his arguments were to stand unrefuted. He made damning statements that couldn’t be responded to. This tactic is unethical (White 1991:143) and according to Martel (1983:90) this can be perceived as foul play since the opponent had no opportunity to respond (see examples at 3.1.3 & 3.1.10).

3.1.8 Apology
Considering the NP’s past, it was essential that De Klerk used this tactic twice during his last two speech encounters:
(30)

“One can never forget injustice, but you can forgive, and we need forgiveness.”
(31)
“We have admitted that our past policies led to injustice. We have apologised for that… We also want to rectify those injustices.”

3.1.9 Counter arguments

As mentioned earlier, Mandela didn’t defend, but he reacted only on two issues by using counter arguments, not immediately after they were raised. The two aspects were the ANC’s lack of experience and De Klerk’s opening words of the evening, which was not meant to be an issue:
(32)
“As State President it has been my privilege to lead the process which brought us to this historic moment. In that I have been assistent by leaders. Also Mr. Mandela, here, and I pay tribute to them. ... I promised a new constitution through negotiation.”

In the fifth round where the question by John Simpson focused on the possibility that whites will no longer play a part in the political process, Mandela gave a counter statement by saying that “Everybody knows that negotiation is the result of the suffering of the masses of the people, supported by the international community”. In the seventh round he suddenly mentioned: “I started negotiations when I was in jail.”

Mandela stated in the third round and also at the very end that the “ANC is an organisation with more than 80 years of building national unity in this country”. This was to counter De Klerk’s reactions in the second round:
(33)
“My comments were not the comments of a man who is less than candid, they were the comments of somebody with experience. Of somebody who sat in the cabinet and worked through budgets since 1978 and who knows how the economy of the state works.” De Klerk also used this tactic in the form of counter evidence. After Mandela asserted that it was “the racist security police of the NP” who shot and killed those who have suffered and who “threw them in jail. Who turned our lives into nightmares”, he countered it with the following:
(34)
“Mr. Mandela can’t bluff with these accusations. The families of the victims of the necklace murderers which we had from supporters of his organisation. The people in the townships who are suppressed and intimidated by the SDU’s (Self-Defence

Units), they know who are suppressing. The people whose houses have been burnt down, know who are the guilty ones, and the parents of the children whose lives have been ruined by the misuse of education by the ANC, know who cause the misery for their children."

3.1.10 Direct questions and rhetorical questions

Mandela asked during the very last encounter of the debate:

(35)

"I would like to know from Mr. De Klerk, who was disciplined when 8 million (earlier Mandela mentioned R250.000) of taxpayers money was given to the IFP." This could be viewed as unethical, because of the misquote and the unfairness, because De Klerk could not respond. Both made use of rhetorical questions. De Klerk used it when he asked:

(36)

"The real test is, who has a plan, which can achieve it? Can the ANC say the same with regard to people who have been implicated by the Goldstone commission?"

Mandela used it when he asked:

(37)

"Where is their housing plan? What is the reason for discrimination? What is the reason for not giving me the report?"

3.1.11 Appeal to commonly held values

De Klerk appealed to values twice:

(38)

"We believe in free enterprise, good family values, real peace, in reconciliation, Christian norms and standards, universal human rights, in a value system which has proven itself across the world. And that is bringing together all the people across the old divisions from all the population groups into our party. Colour has become unimportant. And that is giving impetus to our party which ensures that for those who believe in this value system which is in step with the successful part of the world, will become the dominant political factor." Generally accepted values, when they are applicable to most segments of an audience, can motivate people in their everyday behaviour (Ross 1994:48).

3.1.12 Visual aids

Visual aids are not often used in debates, but can add spark to a dull exchange. Mandela's tactic to show twice a copy of the document, served as visual proof of

the campaign tactics of the NP where, according to Mandela, racial hatred had been promoted (see 2.3). It was used to give credibility to his attack especially at the very end where he showed it again.
Another dramatic use of a "visual aid" by Mandela was the handshake with De Klerk at the end: "I am proud to hold your hand for us to go forward". Tactically this suggested that he is fair-minded, forgiving and visually demonstrating reconciliation, willing to "end division and suspicion". This was probably one of the tactics that was mostly imprinted on the minds of the viewers.

3.1.13 Pseudo-clash and pseudo-issues
Pseudo-clash gives the impression that disagreement exists when it may not (Martel 1983:103). Mandela didn't deny the words of De Klerk that there "has been very good co-operation between the NP and the ANC" to get the IFP to participate. Mandela, however, created pseudo-clash in mentioning the funds that were given to the IFP.
That was not the issue and De Klerk was also against it and stopped the covert action. Mandela went even further to make a connection between the money given to them and the murders that took place: "They used State funds in order to finance the murderers activities of the IFP"; an assertion without a warrant (Toulmin 1969:97-107, Freely 1990:152).
According to Martel (1983:103) a pseudo-issue "is a position taken by a candidate for selfish political gain which in reality is far less important than he implies – if not actually insignificant. He exaggerates the importance of weaknesses, normally because he has difficulty assailing its strengths."

When De Klerk spelled out what the plan of the ANC would cost, Mandela turned it into a pseudo-issue by labelling De Klerk's explanation as an alarmed man because "we have to devote so much resources to blacks whose concerns they (NP) don't care for." He also used this tactic when he mentioned:
(39)
"It is a false statement to suggest that any one individual started the negotiations. Everybody knows that negotiation is the result of the suffering of the masses of the people, supported by the international community."

The question put to De Klerk focused on the issue whether the whites will play any role at all in the future. How it came to this stage was not important, but what would happen after the election when the ANC is in office, was. The use of this tactic is in sharp contrast with Mandela's statement at the beginning: "I will resist

the temptation to deal with issues which are unimportant".

3.2 Tonal tactics

The tonal tactics refer to the general attitude or tone of their presentation to be consistent with their image goals and other strategies and tactics. Martel (1983:94) mentions four tonal aspects, namely controlling backlash, wit or humour, avoiding defensiveness and reference tactics. Three of these are applicable on this debate. Defensiveness has been dealt with under strategies (see 2.4).

3.2.1 Humour

The two men were very serious and no real wit or humour had been used during the debate. The nearest to that is in the words of De Klerk, which evoked a laugh from his studio supporters:

(40)

"If he thinks that he can save on the salary of politicians, enough, to solve the economic challenge which we have in SA, then he is in for a big surprise."

3.2.2 Reference tactics

The reference tactics are also worth mentioning. De Klerk refer to Mandela as *Mr. Mandela* and *he*. This way of reference connotes both respect and distance (Martel 1983:97). Mandela also used Mr *De Klerk* and *he*, but on strategic moments he used other ways when he attacked De Klerk's ethos or credibility:

(41)

"And what I find unacceptable is the fact that the *President* should misquote the reports. I don't accept the explanation which the *State President* has given." The implication is that a President of a country should be above misrepresentation.

(42)

"There is no organisation in this country as deceitful as the so called New NP of *my friend* on my left. *It* is actually promoting racial hatred. This is the false claim which *my friend* has made." Strategically the choice of reference is effective: It is bad to have an opponent or enemy who deceives you and promotes racial hatred, but it is much worse if your friend does such unethical things.

(43)

"This is the reply of *a man* who is not used to address the basic needs of the majority of the population. It is quite clear that we are dealing with *somebody* who either does not know what he is talking about…" He moved from *State President* and *my friend* to *somebody*. This was a rather disrespectful way of

addressing De Klerk. *It, man* and *somebody* were used to diminish the stature of his opponent (Martel 1983:97).

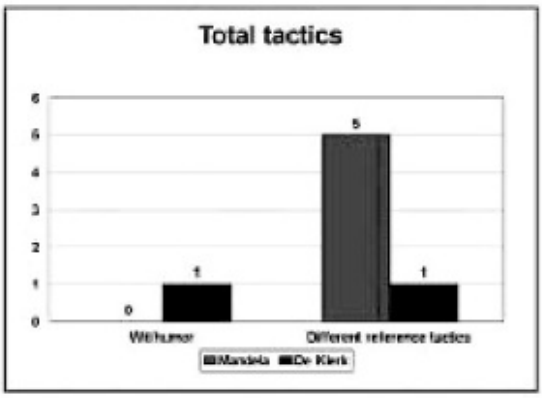

Figure 5

4. Issue Knowledge Versus Image Building

With the above strategies and tactics in mind, an answer can be given to the question which Zhu, Milavsky & Biswas (1994:302) ask in their article: *Do televised debates affect image perception more than issue knowledge?*

It is difficult to distinguish clearly between content that is issue related and content that is image related, because they are closely intertwined. For issue related content, I took any information that has to do with policy matters which the panellists put on the table: the dealing with violence, the realising of all the promises, the future role of whites; the handling of the non-participated IFP, the handling of accountability, the realising of racial reconciliation.

Aspects like campaign methods, trustworthiness of debaters, happenings in the past and conduct of followers, have been classified as image related. In these cases the image of De Klerk and the NP or Mandela and the ANC were at stake.

In De Klerk's case he used 55% of his content for issue related aspects and Mandela only 26,5%. Of all the words that had been spoken only 40,7% had the slightest relation with the candidates' position on policy issues. (*Figure 6*)

A conclusive answer about the *effect* on the viewers cannot be given, but according to the analysis, the main focus was on the images of the candidates and their parties. The general perception is that no substantial or new information about their issue positions, especially in the case of Mandela, had been given. This

Organisational function	Goal	Prototypical action	Type of warrant	Example of warrant	Proto-typical artifact
Market positioning	Competitive advantage		*dissociative*	"Fundamentalists are not real Christians"	Marketing strategy document
			qualitative difference	"The product is new, has no competitors, and creates an entirely new market"	
			dissociative	"The company is not a real market leader"	
			scenario	"The market will shrink rapidly"	
			analogy	"The enemy have the Press on their side"	

Figure 1 (continued). Organisational function and warrant appropriateness.

Figure 6

corresponds to Kraus & Davis' (1981: 275) view on other debates. The reason may be found in the fact that Mandela knew the ANC would win the election by a large majority. The nature of the information contributed little to new issue knowledge: mostly vague and very generally put. At best they offered condensed statements, without the practical implications or the operasionalising of the policies.

5. Ranks's Model Of Persuasion

According to Rank (1976), on the strategic level, a persuader/debater can choose to intensify his own good points and/or the weak points of the opponent; and to downplay their own weak points and/or the opponent's strong points. The tactics to realise these strategies are repetition, association and composition to intensify aspects; and omission, diversion and confusion to downplay certain aspects.

Mandela especially focused on the intensifying of De Klerk's weak points by using all three tactics: He used repetition by mentioning at least ten times that De Klerk was not candid, frank, trustworthy or did not know what he was talking about. (Whether these accusations are true or not, is not the issue here.) He further associated De Klerk and the NP with the bad things of the past, namely racial hatred, injustice, lack of accountability and funders of murderers' activities.

Mandela also used the tactic of composition. Three times he attacked De Klerk at the end of a round, knowing that it will stick in the memory of the audience, because there were no counterarguments or defence (see 3.1.7).

Mandela further downplayed his party's own weaknesses by omission and diversion. He didn't respond to the attacks that De Klerk had launched on his party: the R150,000 fine they got for intimidation; the connection of their economic policy with communism, the eight instances where the ANC and IFP caused serious violence, that their plan will cost 70 billion Rand the first year. He used diversion by sometimes focusing on irrelevant arguments (Govier 1992:146) and by attacking De Klerk's character, called ad hominem (Pfau et al. 1987:141), when a policy issue should be addressed (see 3.1.13).

De Klerk intensified the NP's strong points sometimes with repetition, but more

with association. Although he mentioned twice the general philosophy of the NP and their appeal to commonly held values (see 3.1.11), he associated their economic policy with the successful economies in the world, and that their policies are associated with acceptable and ethical values.

De Klerk downplayed the ANC's policy to associate it with "that which has failed" namely nationalisation and communism. He tried to downplay the police's role in the violence by omitting it at first, but Mandela turned the tables on him. He also downplayed the past when he mentioned that the debate would be about the future and not the past and when he apologised for the injustice that had been done in the past. He did not use diversion or confusion. According to his values, this would be wrong (Schuurman 1996:208).

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ISSA Proceedings 1998 – ‘Blocking

The Enthymeme' – Does It Unblock Identity Problems In Argumentation?

"There are some men. . . so wild and boorish in feature and gesture, that even though sound in talent and art, they cannot enter the ranks of the orators (Cicero 1942, 1988: 81)."

This is a quote from Cicero's *De Oratore*. Cicero argued that appearance trumps oratorical skill, thereby keeping otherwise articulate people from being able to effectively use their discursive powers. Cicero did not suggest that these "wild and boorish" men would be unsuccessful orators, instead, their appearance served as an insurmountable barrier forcing their silence. While acknowledging the effect of a speaker's appearance on a rhetorical situation, Cicero removes appearance from the realm of rhetoric. This position is consistent with rhetorical theory both before Cicero and today.

The appearance of a speaker has been largely ignored within the field of rhetoric. When appearance is addressed, it usually serves as background information rather than an analytic focal point. One reason for this may be that much of rhetorical criticism engages texts that are in written form and removed from the original speech situation. This explanation is inadequate because text-based rhetorical criticism allows contextual readings, based on both textual and extra-textual historical information. Therefore, there must be another reason. I hypothesize that appearance is not considered rhetorical. When I use the term rhetorical, I am referring to an Aristotelian definition of rhetoric. According to Aristotle, rhetoric is composed of arguments constructed by the speaker during the speech (artistic proofs) made up of enthymemes and examples. I turn to Aristotle in part because his well-known handbook, The Rhetoric, is the oldest known treatise on rhetoric, and because his theory of rhetoric serves as the cornerstone of the contemporary incarnation of rhetorical studies.

Aristotle did not discuss the physical appearance of orators. He argued that a speaker's character (*ethos*) is constructed during the speech with words (Aristotle

1954, 1984: 24). Aristotle maintained that there was a clean separation between a person's public identity and his/her private identity. It is also important to note that the cultural perspective from which Aristotle wrote required that to be an orator one must be a male Greek citizen. The specific appearance issues with which I am concerned, namely race, gender, and ethnicity, were not relevant in ancient Athens.

However, it is time for rhetoricians to stop regarding appearance issues as being the realm of rhetoric and, therefore, not our theoretical responsibility. Visual characteristics can, and do, prevent otherwise articulate speakers from effectively addressing audiences. In the multi-cultural world in which we live, it cannot be the case that discourse is only persuasively powerful for those born looking a certain way. If rhetoric, as a field of study, dooms to failure all people who are not completely void of non-dominant features, then the field itself is doomed.

Fortunately, appearance does function rhetorically. If we understand how it works, we can create rhetorical strategies which will allow all people, regardless of their appearance, to use their discursive powers effectively. A speaker's appearance, although unchanging, has different meanings to different people in different situations. According to Stuart Hall, race (and by extension gender and ethnicity) are "floating signifiers." Hall's "floating signifiers" are signifiers whose meaning can never be fixed because they are based on relations not essences (Hall 1996). The inability to fix the signification of a person's appearance makes it contingent. This contingency designates appearance as potentially rhetorical. In order to understand why appearance can be understood as rhetorical we must understand what exactly rhetoric is. Aristotle contended that different methods of argumentation beget different types of understanding. According to Aristotle, there are three methods of argumentation: demonstration, dialectic, and rhetoric.

Demonstration is a scientific procedure for discovering and demonstrating universal non-changing verifiable truths. Demonstration can be composed of inductive or deductive (syllogistic) reasoning. Induction constructs a conclusion based on numerous pieces of specific evidence. For example, by examining many individual orchids and determining that they do not smell, a conclusion that all orchids are odorless is inductively construed. On the other hand, deduction is the process of moving from major premise, to minor premise(s), to a conclusion. For example, "any animal that breathes through its gills is a fish. A tuna breathes through gills. Therefore, a tuna is a fish."

Although dialectic argumentation is also composed of inductions and deductions,

it differs from demonstration as it is a process of critique rather than a scientific process of discovery. Argument through dialectic involves a conversation between the dialectician (speaker) and the interlocutor (audience). The dialectician asks the interlocutor a question. If they agree on the answer, the answer becomes a premise and the argument can continue. Dialectic argumentation works inductively when a speaker asks a series of related specific questions and uses the answers as the foundation for a conclusion. Such as, "did your friend pass Introduction to Argumentation? Did your roommate pass Introduction to Argumentation? Did your sister pass Introduction to Argumentation? Did your classmate pass Introduction to Argumentation?" Consecutive affirmative responses allow the speaker to effectively argue that the interlocutor will also pass the introductory course on argumentation. Deductive dialectic occurs when the interlocutor asks questions the answers to which provide the major and minor premises. For example, the dialectician may begin, "do you think Meryl Streep makes good movies?" After getting an affirmative answer, the dialectician asks "was *Out of Africa* a Meryl Streep movie?" If the answer is again affirmative, the dialectician can deductively conclude that the interlocutor will agree with the conclusion that *Out of Africa* is a good movie. Because dialectic argumentation uses a "human" rather than scientific approach to creating the premises, dialectic argumentation produces probable truths rather than universal truths.

The third method of argumentation is rhetoric. Unlike demonstration and dialectic, rhetoric does not produce a truth of any kind. It does not use induction or deduction. Rather, a rhetorical argument is composed either of examples or enthymemes. If a rhetor wanted to make the argument that President Clinton lied about his affair with Monica Lewinsky, she might use as an example the fact that he previously lied about having an affair with Gennifer Flowers. The rhetor assumes that the audience will be persuaded that the example about Flowers is representative enough to warrant the conclusion that he lied about the affair with Lewinsky. An example can be viewed as a truncated induction with only one piece of powerful evidence rather than multiple minor related pieces. Similarly, an enthymeme can be seen as a syllogism, except that either the major premise, minor premise or conclusion, is "missing." The missing element(s) is not orally provided by either the speaker or the audience. Rather, it is supplied as a silent understanding between the parties involved. For example, an enthymeme is constructed when a speaker says: "more women die of breast cancer each year than all of the American soldiers that died in the Viet Nam War." The premise that a large number of soldiers died in the war is an unspoken understanding between

the speaker and the hearer. Likewise, both parties are brought to the silently agreed upon conclusion that too many women are dying of breast cancer each year. The use of examples and enthymemes often involves using far less propositions than is used in demonstration or dialectic. Aristotle explained, "[f]or if any of these propositions is a familiar fact, there is no need even to mention it; the hearer adds it himself (Aristotle 1954, 1984: 28)." It is this process of the audience silently responding to the speaker that makes an argument rhetorical. By relying on commonalities between the speaker and the audience, an enthymematic argument appears to be unable to produce new ideas. Given that the speaker relies on the audience to fill in the missing premises and/or conclusions, it is possible that enthymemes may merely reinforce and disseminate prejudice.

In order to clarify how a rhetorical enthymeme functions I will lay out an obvious example, that of the stereotype. George P. Boss gave the example of the stereotype that Jewish people are thought to be, "shrewd, mercenary, industrious, grasping, intelligent, and ambitious (Boss 1979: 25)." Boss argued that when a speaker says, "Joe Greenblatt is a Jew. What else could you expect (Boss 1979: 25)?" the speaker has verbalized the minor premise. The minor premise, according to Boss, inspires the listener to "create[d] the major premise, 'All Jews are shrewd, etc.,' and the conclusion that 'Joe is shrewd, industrious, etc.' (Boss: 1979: 25)." The minor premise, the articulation of Joe's identity, engages the audience. It invites them to construct the rest of the enthymeme using their own ideas about Jewish people.

This process works similarly for visible identities. In Boss' example the only verbalized part of the argument is the minor premise: "Joe Greenblatt is a Jew." When dealing with visible identities this verbal naming is not required to instigate the enthymeme. When a speaker is visibly female or black, the minor premise "Robin is a woman" or "Samantha is black" is not spoken. Although unspoken, the identity is known to the audience and allows the audience to create a major premise, based on stereotypes associated with that identity, and a conclusion that the individual has those stereotyped traits.

Former United States Representative of Texas, Barbara Jordan, is an excellent case in point. Barbara Jordan, an African-American women, was a champion debater, trained as a lawyer, and was a successful politician. In 1976, she gave a keynote address at the Democratic National Party's convention. At the convention, the party nominates its candidates for president and vice-president

and articulates the party's platform. The keynote speaker(s) is responsible for expressing the essence of the platform not the details. In 1976, Jordan was not the only keynote speaker. She was balanced by a white man: United States Senator from Ohio, John Glenn. Glenn is famous for being the first American to orbit the globe.

Jordan opened her 1976 Democratic Convention keynote address with the statement: "there is something different about tonight. There is something special about tonight. What is different? What is special? I, Barbara Jordan, am a keynote speaker (Jordan: 1976: 359)." This statement does not make sense when read as disembodied words. Every keynote address is made by someone, usually someone who has not given it before, making it a unique experience. Why did she focus on the fact that she was the speaker?

Jordan immediately clarified her questions in her next utterance: A lot of years have passed since 1832**[i]**, and during that time it would have been most unusual for any national political party to ask that a Barbara Jordan deliver a keynote address . . . but tonight here I am. And I feel notwithstanding the past that my presence here is one additional bit of evidence that the American Dream need not forever be deferred (Jordan 1976: 359).

Jordan never states exactly what it is about her that would have made it "most unusual" for her to be giving the speech. She presents her selection as if it were obvious. In doing so she invites, if not demands, her audience to infer their own conclusion. She asks them: what is the obvious thing about "a Barbara Jordan" that would make her selection as keynoter an "unusual" choice?

Looking at her, they decide it is because she is a black woman. By filling in the premise that black women have been kept from delivering keynote addresses, Jordan establishes the fact that her audience was constructing enthymemes regarding her race and gender, similar to the "Joe is a Jew" example. Instead of allowing her audience to use her appearance to unconsciously prejudge her, she forced them to face their own prejudices. In doing so, she created a new enthymeme that suggested that her race and gender was a symbol for the essence of the new Democratic Party and its platform.

This example illustrates how an enthymeme could exist entirely within the audience's mind. In the mind of the audience, it exists, in its entirety, before the speech begins. This type of an argument, where there is no collaboration between the speaker and the audience, seems more akin to demonstration than rhetoric.

This is exactly the reason appearance issues are not seen as rhetorical. People's preconceived opinions about appearance have an argument structure that precedes the speech situation making it an *inartistic proof* not an *artistic proof*. Given this understanding of how unspoken enthymemes can be constructed merely by viewing a person it would seem that all a speaker could do is block the audience from being able to construct the enthymeme.

Kathryn Olson and G. Thomas Goodnight in their article, "Entanglements of Consumption, Cruelty, Privacy, and Fashion: The Social Controversy Over Fur," offer "blocking the enthymeme" as positive oppositional strategy (Olson and Goodnight 1979: 250). Olson and Goodnight present the controversy in the United States in the 1980's and 90's over the wearing of animal fur. They identify two enthymemes as obstacles to the anti-fur advocates position. These two enthymemes are:
1. it is acceptable to use animals for clothing as long it is done humanely (Olson and Goodnight 1979:259) and
2. the wearing of fur reflects positively on the wearer in terms of wealth, status, and/or glamour (Olson and Goodnight 1979: 262). Olson and Goodnight found that the anti-fur advocates successfully engaged in an opposition strategy which they called "blocking the enthymeme." They explained that:

Whereas the Aristotelian enthymeme accomplishes the end of persuasion by affiliating the claims of the speaker to the conventional knowledge or opinions of an audience, oppositional argument functions to block enthymematic associations and so disrupt the taken-for-granted realm of the uncontested and commonplace. So, oppositional argument unsettles the appropriateness of social conventions, draws attention to the taken-for-granted means of communication, and provokes discussion. The work of oppositional argument, thus, is not 'adjusting ideas to people and . . . people to ideas' as much as rendering evident and sustaining challenges to communication practices that delimit the proper expression of opinion and constrain the legitimate formation of judgement within personal and public spheres (Olson and Goodnight 1994: 250).
This oppositional strategy of "blocking the enthymeme" seems to describe the strategy employed by Jordan in her 1976 keynote address. Clearly she is blocking enthymematic associations and disrupting taken-for-granted conclusions. She is unsettling the appropriateness of social conventions and provoking discussion. Finally, I believe her speech was a sustaining challenge to communication

practices that constrain the legitimate formation of judgement within personal and public spheres. Given the effectiveness of Jordan's speech and the theoretical possibilities of "blocking the enthymeme" as an oppositional strategy, it would seem to be the strategy of choice for responding to appearance constraints in a rhetorical situations.

I have found four dominant strategies which speakers use to reduce the negative effects of their appearance: separatism, anonymity, physical transformation (recasting), and discursive strategies by "blocking the enthymeme." Even though all four block enthymemes around appearance only the discursive strategy offers a way for people in a multicultural and gendered world to speak from within their bodies. The first three strategies allows speakers to express ideas but not from within their marked bodies. Separatism is a strategy where the speaker chooses to speak only with those who will not be hostile to her appearance, such as, when a woman speaks to an entirely female audience. Anonymity refers to a situation in which a speaker engages in discourse when her body is not in the scene. Examples of this include writing, computer mediated communication, speaking over radio waves, or puppetry. Physical transformation occurs when a speaker alters the audience's visual experience of the appearance's appearance. Dressing in drag is an example of this strategy, as is the long-term deception carried on by President Franklin D. Roosevelt to hide the extent of his physical infirmity. Finally, in the discursive strategy, the speaker makes a verbal argument in which her appearance is a premise and the effect of the appearance on the rhetorical situation is the conclusion.
All four of these strategies have the ability to be effective and all four of them engage in "blocking the enthymeme." The strategies of separatism, anonymity, and physical transformation "block" the preexisting enthymeme, but they do not replace it with a new enthymeme. Rather than take the minor premise from the audience and construct an argument for a favorable conclusion, they accept the audience's prejudice and work around it by attempting to "block" the audience from using the premise to reach a "prejudicial" conclusion. Accordingly, these strategies are non-rhetorical.

Take the enthymeme:
The speaker is visually an X
All X's are Y

The speaker is Y

The speaker who employs separatism avoids a situation were Y has a negative value by refusing to speak to certain audiences at all. By using either the anonymity strategy or physical transformation, the speakers prevents the audience from knowing that she is an X thereby completely avoiding the association of the X identity with the Y characteristic. All three strategies successfully block audiences from physically seeing the speaker and therefore from drawing negative conclusions based on their visible identities.

However, the ultimate effectiveness of these strategies is limited. First, such strategies are not always possible. If a black woman wants to be able to give the televised keynote address at the Democratic National Party, she can not engage in separatism, anonymity or physical transformation. Second, they are temporal solutions.

These strategies do not offer "sustaining challenges to communication practices that delimit the proper expression of opinion and constrain the legitimate formation of judgement within personal and public spheres (Olson and Goodnight 1979: 250)." Every time a speaker's body is visible she will be confronted with the same problem. Third, these strategies accept the prejudicial interpretation of the speaker's appearance instead of enacting the idea that a visible identity may have different meanings to different audiences in different situations. These three strategies do not allow for a rhetorical transformation of the audience's ideas.

In contrast, the discursive strategy does not only "block" the enthymeme, it replaces it. The minor premise (the appearance) remains in tact, and the major premise (the stereotype, preconceived notion or prejudicial belief) is blocked when the speaker argues that the audience's preconceived ideas about the speaker's visual identity does not take into account all the specifics of the rhetorical situation. Thus, the distinction between this strategy and the other three is that the discursive approach blocks the enthymeme by replacing the major premise with a new premise. Using discourse, the speaker argues that the audience should reinterpret the speaker's appearance in terms of the specific speech situation. When Barbara Jordan gave the keynote address, she used the fact that she was a woman of color as evidence of the Democratic Party's progressive platform. Moreover, she took the audience's predisposition regarding her appearance, and used those prejudices as premises for a new enthymeme with a favorable conclusion regarding the party's future. The discursive approach is based on the belief that while a person's appearance is a

constant (inartistic proof), the interpretation of the meaning of that appearance is contingent (artistic proof) and able to be rhetorically constructed. By offering an alternative major premise, the speaker directs the interpretation of her appearance resulting in a positive enthymematic conclusion.

Olson and Goodnight hint that successful blocking of the enthymeme requires replacing the enthymeme:
[t]o block audience completion of this enthymeme, anti-fur advocates invert the valence of fur from a social positive to a social negative. If the move is successful, people will be deterred from uncritically supplying the unspoken assumption that a fur garment comments on its wearer in an unambiguously positive way (Olson and Goodnight 1979: 262).

Clearly Olson and Goodnight are not arguing that "blocking the enthymeme" is enough. A successful speaker must not only block the enthymeme (through use of separatism, anonymity and physical transformation) but must also replace the enthymeme in order to sustain challenges to communication practices that delimit the proper expression of opinion and constrain the legitimate formation of judgment within personal and public spheres (Olson and Goodnight 1979: 262).
Accordingly, the field of rhetoric must begin to acknowledge that enthymemes do not need to be verbal and that appearances can function enthymematically. Once we embrace the idea that a speaker's visual identity can be rhetorically constructed, we can find rhetorical solutions to appearance based obstacles. Enthymemes which would otherwise prevent the "wild and boorish" from speaking, can be blocked and replaced with powerful rhetorical arguments. All people throughout the world can learn to discursively overcome appearance issues and communicate effectively.

NOTES
i. 1832 was the year of the first Democratic National Convention.

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ISSA Proceedings 1998 – Students' Skill In Judging Argument Validity

1. Introduction

Within the context of a national assessment study into argumentation skills a large number of paper-and-pencil tests were administered for the measurement of receptive and productive argumentation skills. This study revealed large individual differences. Students vary considerably in their skills in identifying and analysing argumentation (cf. Oostdam 1990; Oostdam & Eiting 1991; Van Eemeren, De Glopper, Grootendorst & Oostdam 1995) as well in their skills in producing argumentation (cf. Oostdam, De Glopper & Eiting 1994; Oostdam 1996). Obviously the cognitive field of argumentation skills is as heterogeneous as the cognitive fields of other language skills such as reading, writing, speaking and listening (cf. Oostdam & De Glopper 1995). In oral and written arguments language users make an appeal to diverging knowledge and skills.

In this article we will focus on the paper-and-pencil test for the measurement of students' skill in judging argument validity. The test has been constructed according to a facet design in which the different facets define a specific form of valid and invalid arguments. Representative samples of students in secondary education were tested: grade nine students in junior vocational and lower general secondary education, grade ten students in higher general secondary education

and grade eleven students in academic secondary education. The following research questions will be addressed: 'To which degree are individual differences in skill in judging argument validity substantial and correlated with grade and school type?', 'To which degree are arguments correctly identified as valid or invalid?' and 'Do different types of valid and invalid arguments invoke different cognitive components or processes?'.

2. Research questions

In the pencil-and-paper test for judging argument validity we were concentrated on the students' skills in evaluating the argument validity of four types of argumentation: a syllogistic argumentation based on all-premises (e.g. 'All A are B. All B are C. So: all A are C'), a syllogistic argumentation based on some-premises (e.g. 'All A are B. Some C are A. So: Some C are B'), the modus ponens ('If P than Q. P. So: Q') and the modus tollens ('If P than not Q. Not Q. So: not P').
In former empirical research into argumentation skills we revealed considerable evidence for individual differences in students' performance in identifying and analysing argumentation. Therefore we would like to know whether individual differences also exist with regard to the judging of argument validity. Moreover we were interested in the correlation between the school type students visit and their ability of judging argument validity. After primary school students are referred to the different school types in Dutch secondary education on the basis of their general cognitive skills. It may be expected that occurring differences in argumentation skills correlate with differences in the general cognitive abilities of students. This assumption leads to the following research questions:
1. How substantial are the individual differences in judging argument validity?
2. To which degree are the individual differences in judging argument validity correlated with the type of school attended by the students?

Furthermore we were interested in effects on task difficulty of the different factors, type of argumentation and validity of argumentation, which are systematically manipulated by means of the facet design. This addresses the following research question:
3. What are the effects on task difficulty of the factors type of argumentation (syllogistic argumentation/modus argumentation) and validity of argumentation (valid/invalid)?

Finally we want to address the question whether the judging of different types of argumentation measure one single underlying skill or different cognitive skills or

components. This leads to the question:
4. Do different types of valid and invalid argumentation invoke different cognitive skills or components?

3. Design

A paper-and-pencil test has been constructed in order to test students' skills in judging argument validity. The test contains a series of multiple choice items which can be objectively scored. The assumption is that students have greater command of a specific skill if they make fewer mistakes.

Test items have been constructed by means of a facet design (see figure 1) in which each cell defines a certain form of appearance of syllogistic argumentation (with all-premises or some-premises) and modus argumentation (modus ponens or modus tollens). The use of a facet design optimises the content validity of a test and makes it possible to examine the effect of the facets systematically.

The items in the test contain two premises and a conclusion (e.g. 'If you cannot handle money, than you are no businessman. Quinten cannot handle money. So Quinten is no businessman'). There is little variation in length of the sentences. The style and level of abstraction are such that students can readily understand sentence meaning. In order to prevent sequence effects the presentation of the items was randomised. The test instruction had to be read by the students without any interference from the teacher. The concept of valid and invalid argumentation was defined with the help of examples. Furthermore, some examples of items were presented to demonstrate the test task. It was emphasised that there was no time-limit. The test contained 32 multiple-choice items. For the construction of the test the following 16 cells were distinguished (see Scheme 1). Each cell was filled in with two items.

Scheme 1: Definition of cells with the factors type of argumentation (syllogistic/modus) and validity of argumentation (valid/invalid)

Syllogistic argumentation		Modus argumentation	
Valid	Invalid	Valid	Invalid
All-premises All A are B All B are C So: All A are C	*All-premises* All A are B All B are C So: All not A are not C	*Modus ponens* If P then Q P So: Q	*Modus ponens* If P then Q Not P So: not Q
All-premises All A are B No B are C So: No A are C	*All-premises* All A are B No B are C So: Not all A are C	*Modus ponens* If P then not Q P So: not Q	*Modus ponens* If P then not Q Not P So: Q
Some-premises All A are B Some C are A So: Some C are B	*Some-premises* All A are B Some C are A So: All C are B	*Modus tollens* If P then Q Not Q So: not P	*Modus tollens* If P then Q Q So: P
Some-premises Some A are B No B are C So: Some A are not C	*Some-premises* Some A are B No B are C So: Some C are A	*Modus tollens* If P then not Q Q So: not P	*Modus tollens* If P then not Q Not Q So: P

Scheme 1: Definition of cells with the factors type of argumentation (syllogistic/modus) and validity of argumentation (valid/invalid)

An example of a valid syllogistic argumentation with all-premises (All A are B. All B are C. So: All A are C) is: ‘Everybody who plays tennis, is sporting.
All people who are sporting are in a good condition.
So, people who play tennis are in a good condition’.

An example of an invalid form of this type of syllogistic argumentation is:
‘All clothing of good quality has a long life duration.
All clothing with a long life duration is expensive.
So, all clothing with a bad quality, is not expensive’.

A valid syllogistic argumentation with a some-premise (All A are B. Some C are A. So: Some C are B) is for example:
‘All pikes are greedy.
Some fish are pikes.
So, some fish are greedy’.

An invalid form of this type is:
‘Everybody who loves sensation is curious.
Some journalists love sensation.
So, all journalists are curious’.

Examples of valid and invalid modus ponens are:
‘If it rains the laundry gets wet.
It’s raining cats and dogs.
So, the laundry gets wet (valid)’ and

‘If it is the queens birthday, all the houses are beflagged.
Today it is not the queens birthday.
So, today the houses are not beflagged (invalid)’.

Examples of valid and invalid modus tollens are:
‘If the neighbours are at home, their car is at the drive.
Right now their car is not at the drive.
So, the neighbours are not at home (valid)’ and

‘People who adore sun bathing go on holiday to Greece.
Marius goes on holiday to Greece.
So, Marius adores sun bathing (invalid)’.

4. Subjects

The test was administered within the context of a national assessment in the pre-final grades of secondary education. Representative samples of students were tested: grade 9 students in the junior vocational (J-VOC) and lower general (LO-GEN) streams, grade 10 students in the higher general stream (HI-GEN) and grade 11 students in the academic stream (ACA). For the purpose of this study additional samples of grade 9 students from the higher general and the academic stream were tested, thus allowing for an unbiased answer to research questions 1 and 2. Research questions 3 and 4 are answered on the data of the main sample. Three-stage random samples were drawn: within each sampled school, one classroom was sampled and within each classroom the tests were administered to a sample of at least 10 students.

Table 1: Main and additional sample: school type, grade level, modal student ages, N of schools, N of students

Sample	School Type	Grade	Modal Age	N Schools	N Students
Main	J-VOC	9	15	34	318
Main	LO-GEN	9	15	27	415
Main	HI-GEN	10	16	39	492
Main	ACA	11	17	32	356
Additional	HI-GEN	9	15	9	134
Additional	ACA	9	15	7	91

Table 1: Main and additional sample: school type, grade level, modal student ages, N of schools, N of students

5. Results

5.1 Individual differences

The first research question is answered by computing standard errors of measurement for individual test scores. For the grade nine strata the mean score, standard deviation, reliability, standard error of measurement and the 95% confidence interval was calculated (see table 2). The results show that individual differences are substantial
in the grade nine sample.

Grade nine students on average evaluate 19 out of 32 items correctly. The standard deviation in this group is as large as 4.48 points. The standard error for individual test scores is 2.57 in size, which indicates that observed scores which differ 10 score points indicate true individual differences within a 95% confidence interval (the 95% interval for a true score is constructed as the observed score plus or minus the product of the standard error of measurement and the z-value corresponding to the 95% confidence level).

5.2 Individual differences and school type

With respect to research question 2 the correlation between grade nine students' school type and their argumentation skills was computed in the following manner. For each of the four strata a dummy variable was constructed, indicating for each individual student strata membership. The multiple correlation of the four dummy variables and the total scores on the test is .43 (p=.000), which shows that the correlation between school type and judging argument validity is substantial. In terms of effect sizes, the effect of school type is between medium and large. The differences in general cognitive capabilities and achievement of students that underlay the school type differences appear to be associated with their skill in judging argument validity.

Table 2 Size of individual differences in judging argument validity: mean score, standard deviation, reliability (Cronbach alpha), standard error of measurement and 95% confidence interval for grade 9 sample (N=958)

Mean	19.13
Standard deviation	4.48
Reliability	.67
Standard error of	2.57
measurement	± 5.04
95% confidence interval	

Table 2: Size of individual differences in judging argument validity:
mean score, standard deviation, reliability (Cronbach alpha), standard error of measurement and 95% confidence interval for grade 9 sample (N=958)

5.3 Effects on task difficulty

Research question 3 is answered by means of analysis of variance. The proportion correct responses for the four strata of the main sample was calculated for each item. The resulting item level data (n= 128, i.e. 32 items x 4 groups) were input to an analysis of variance with type of argumentation, validity of argumentation and school type as fixed factors (see Table 3).

Table 3: Analysis of variance with type of argumentation, validity of argumentation and school type as fixed factors (N= 128)

The results show significant main effects of the factors type of argumentation, validity of argumentation and school type. The modus argumentation is easier to evaluate than the syllogistic argumentation and valid argumentation is easier to evaluate than invalid argumentation (see table 6). Furthermore there is a significant interaction effect between type of argumentation and validity of argumentation. In the case of valid argumentation modus ponens and modus tollens argumentation is easier to evaluate than syllogistic argumentation; in the case of invalid argumentation there is no difference in difficulty (see table 6).
To investigate whether there are also significant differences between the evaluation of the two subtypes of syllogistic argumentation and modus argumentation two further analyses of variance were carried out (N= 64, i.e. 32 items x 2 groups), one with syllogistic subtype (all-premises versus some-premises), validity of argumentation and schooltype as fixed factors (see table 4) and one with modus subtype (modus ponens versus modus tollens), validity of argumentation and school type as fixed factors (see table 5).

Table 3: Analysis of variance with type of argumentation, validity of argumentation and school type as fixed factors (N= 128)

		SS	df	MS	F	p
Main Effects	Type of argumentation	1.979	5	0.396	34.054	.000
	Validity of argumentation	0.073	1	0.075	4.329	.036
	School type	1.097	3	0.366	22.293	.000
2-Way Interactions	Type * Validity	0.149	1	0.149	9.089	.003
	Type * School	0.003	3	0.001	0.066	.978
	Validity * School	0.013	3	0.045	0.273	.843
3-Way Interactions	Type * Validity * School	0.023	3	0.008	0.499	.683
Model		2.170	15	0.145	8.785	.000
Residual		1.843	112	0.016		
Total		4.014	127	0.032		

Table 4: Analysis of variance with syllogistic subtype (all/some), validity of argumentation and school type as fixed factors (N=64)

		SS	df	MS	F	p
Main Effects	Syllogistic subtype	0.047	1	0.047	2.285	.136
	Validity of argumentation	0.131	1	0.131	6.375	.015
	School type	0.573	3	0.191	9.259	.000
2-Way Interactions	Syll sub * Validity	0.117	1	0.117	5.681	.021
	Syll sub * School	0.063	3	0.021	1.021	.392
	Validity * School	0.003	3	0.001	0.041	.989
3-Way Interactions	Syll sub * Validity * School	0.005	3	0.002	0.083	.969
Model		0.939	15	0.063	3.038	.002
Residual		0.989	48	0.021		
Total		1.929	63	0.031		

The results in table 4 show that there is no significant main effect of the factor syllogistic subtype. The factors validity of argumentation and school type have a significant effect and furthermore there is a significant interaction between the syllogistic subtype and the factor validity of argumentation. An inspection of the

proportion of correct responses (table 6) shows that in the case of valid argumentation students evaluate argumentation with some-statements better than argumentation with all-statements. When invalid argumentation is at stake, there is no difference between the subtypes.

The results in table 5 show significant main effects of the factors modus subtype, validity of argumentation and school type. Modus ponens argumentation is easier to evaluate than modus tollens argumentation. Contrary to previous analyses, there is no interaction between modus subtype and argument validity.

5.4 Underlying skills or components

Research question 4 is answered by means of confirmatory factor analysis with LISREL. When the different items all evoke one common skill or set of cognitive components, one general factor will be sufficient do describe the test data. If different types of items address different skills multiple factors will be needed to account for the inter-item covariances.

The analyses were performed on a set of 16 variables, each consisting of a cluster of two items that have common values on the factors type of argumentation (syllogistic/modus), validity of argumentation (valid/invalid), syllogistic subtype (all-premises/somepremises) and modus subtype (modus ponens/modus tollens). Each combination of factor levels is represented by two item clusters. The table in the Appendix clarifies the composition of the item clusters and their distribution across the factor levels.

Table 5: Analysis of variance with modus subtype (ponens/tollens), validity of argumentation and school type as fixed factors (Model)

		SS	df	MS	F	p
Main Effects	Modus subtype	0.069	1	0.069	8.579	.005
	Validity of arg.	0.826	1	0.826	79.379	.000
	School type	0.527	3	0.176	16.892	.000
2-Way Interactions	Mod.sub * Validity	0.015	1	0.015	1.850	.180
	Mod.sub * School	0.009	3	0.003	0.299	.828
	Validity * School	0.036	3	0.012	1.142	.342
3-Way Interactions	Mod.sub * Validity * School	0.005	3	0.002	0.166	.919
Model		1.512	19	0.080	9.687	.000
Residual		0.499	48	0.010		
Tot.		2.011	63	0.032		

Table 6: Proportion of correct responses (PC) for distinct levels of factors, type of effect (TE): main (M) or interaction (I) and statistical significance (SS)

Factors/Levels	Levels/Tablevels	TE	SS	PC
Type of argumentation	Syllogistic argumentation	M	+	.63
	Modus argumentation			.69
Validity	Valid argumentation	M	+	.73
	Invalid argumentation			.57
Syllogistic subtype	All-premises	M	-	.60
	Some-premises			.66
Modus subtype	Modus ponens	M	+	.71
	Modus tollens			.64
Valid argumentation	Syllogistic argumentation	I	+	.67
	Modus argumentation			.79
Invalid argumentation	Syllogistic argumentation			.58
	Modus argumentation			.56
Valid argumentation	All-premises	I	+	.60
	Some-premises			.74
Invalid argumentation	All-premises			.60
	Some-premises			.57
Valid argumentation	Modus ponens	I	-	.83
	Modus tollens			.74
Invalid argumentation	Modus ponens			.58
	Modus tollens			.54

Table 7: Goodness of fit of models with different numbers of factors (N=4)

Partners	NoF	DF	χ^2	P	GFI
One general factor	1	104	2797.97	.000	.78
Two factors: Valid/Invalid	2	103	1128.10	.000	.88
Two factors: Syllogistic/Modus	2	103	2146.92	.000	.78

Table 5: Analysis of variance with modus subtype (ponens/tollens), validity of argumentation and school type as fixed factors (N=64) Table 6: Proportion of correct responses (PC) for distinct levels of factors, type of effect (TE): main (M) or interaction (I) and statistical ISSA1998-page-624significance (SS) Table 7: Goodness of fit of models with different numbers of factors (NoF)

From Table 7 it is clear that a model with one general factor gives an inadequate representation of the test data. A two factor model with distinct factors for argument validity gives a much better account. This does not hold for the two factor model with factors for type of argumentation.

The conclusion must be that more than one skill or set of cognitive components underlies the test performance of the students. Separate factors for valid and invalid argumentation must be distinguished.

6. Conclusion

In this article we analysed data collected with a test for the measurement of students' skill in judging argument validity. The test was administered to representative samples of students in the pre-final grades of secondary education. The estimated test reliability was sufficient enough to discriminate between the different levels of students' ability in judging argument validity.

The results show that individual differences in judging argument validity are substantial. We furthermore found a sizeable correlation between school type and students' skill in judging argument validity. The differences in general cognitive skills of students that underlie their distribution across school types seems to be strongly associated with the differences in their skill in judging argument validity.

Manipulations of the test items according to the employed facet design clearly affect test difficulty. Analyses of variance show significant main effects of the factors type of argumentation (syllogistic/modus) and validity of argumentation (valid/invalid). Modus argumentation is easier to evaluate than syllogistic

argumentation and valid argumentation is easier to evaluate than invalid argumentation. An analysis of variance with the two subtypes of syllogistic argumentation shows a main effect of the factor validity of argumentation and a significant interaction effect with validity of argumentation. Valid syllogistic argumentation with some-premises is easier to evaluate than valid argumentation with all-premises. An analysis of variance with the two subtypes of modus argumentation shows significant main effects for the factors subtype and validity of argumentation. Modus ponens argumentation is easier to evaluate than modus tollens argumentation. Like in the case of syllogistic argumentation the valid forms of modus ponens and modus tollens are easier to evaluate than the invalid forms. There is no significant interaction between modus subtype and validity of argumentation.

Results of confirmatory factor analyses show that a one factor model gives an inadequate representation of the test data. A model with two factors (valid/invalid) fits much better. A model with two factors for syllogistic and modus argumentation does not fit the data. We therefore can conclude that the skill in judging argument validity is not unidimensional. Apparently, separate factors for valid and invalid argumentation seem to be at stake.

Appendix

Cluster	Items	Type of arg.	Validity	Syll subtype	Modus subtype
01	02 + 17	Syllog	Valid	All	–
02	09 + 18	Syllog	Valid	All	–
03	11 + 28	Syllog	Valid	Some	–
04	12 + 19	Syllog	Valid	some	–
05	01 + 26	Syllog	Invalid	All	–
06	10 + 25	Syllog	Invalid	All	–
07	03 + 20	Syllog	Invalid	Some	–
08	04 + 27	Syllog	Invalid	Some	–
09	05 + 22	Modus	Valid	–	Ponens
10	14 + 29	Modus	Valid	–	Ponens
11	07 + 24	Modus	Valid	–	Tollens
12	08 + 31	Modus	Valid	–	Tollens
13	06 + 21	Modus	Invalid	–	Ponens
14	13 + 30	Modus	Invalid	–	Ponens
15	15 + 32	Modus	Invalid	–	Tollens
16	16 + 23	Modus	Invalid	–	Tollens

Appendix

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