

ISSA Proceedings 2002 - Evaluation Of Secondary Students' Written Argumentations. Problems And Proposal Of An Evaluation Procedure.



Abstract

This proposal combines the critical standards we use when assessing argumentations in every day life and the formal and structural criteria we generally use assessing students' writing, integrating not only the linguistic clues and rhetorical aspects of the text but the logical and epistemological features as well. Such a tool is indispensable to appraise consistently the progresses of the students' argumentative writing and to compare the relative effectiveness of different approaches to the instruction in writing argumentation. It would also facilitate the students' metacognitive awareness on the distinctive characteristics of good arguments.

To assess the progresses of secondary school students writing argumentations, and evaluate the consequences of an intended educational intervention, we should elaborate a holistic method for the assessment of their argumentative text that would help us to evaluate the progress of the students through the time and the efficiency of different teaching methods. It would help too the students, to be aware of the features of a good argumentation and to improve their performance as writers and critical readers of arguments.

In every day situations we evaluate argumentations applying more or less consciously, and with more or less precision, the instructions that can be found in many of the manuals of Critical Thinking (Ennis 1995, Helpert 1996, Hoaglund 1995 and), Informal Logic (Walton 1989) or in the Pragma-dialectical approach (Van Eemeren 1992, 2002). Although differences exist among these proposals of evaluation of the arguments, in function of the conception of the argumentation, the type of normative constraints considered, and the differences relatives to the goals of each theory. We can accept that most of the time the form in which we

evaluate, for instance, an opinion essay published in the newspaper follows roughly the steps that could be enforced by many of these models. This mode of evaluating arguments is based on the combination of common sense and education.

Outside the school context, to evaluate an argumentation means to see if it convinces us to the point of changing our beliefs, to modify our value system or to pursue its proposals. Usually we don't worry about its rhetorical quality, unless we don't include under that idea the detection of some trick, dedicated to hide or distort relevant ideas for the justification or the rejection of the claim. In other words, if we don't share the extended prejudice that considers rhetoric as a quibblers' art, not dedicated to convince through a more attractive and appropriate presentation of our ideas, with the purpose of a better communication, but just to persuade the audience at any price. Neither, in general, we worry too much about the spelling or the grammatical correction of the message, but only about its intelligibility. This doesn't mean that the rhetorical and grammatical quality of a text, or the order in which the ideas have been disposed, don't play any role in the exchange of the ideas in a dialogue or in the persuasiveness of a text. The risk of an argumentative text rhetorically deficient, wrong structured or with grammatical incorrectness is to fail engaging the readers' attention, generating a shortcut in the communication. Therefore, we should not undertake the teaching of written argumentation without considering these components.

Usually, in Primary and Secondary School, the argumentation is taught in the classes of language as a specific type of text, and the students write argumentations as exercises of composition. In first language classes, - Spanish in Spain - and more remarkably in second language learning classes, when the teacher evaluates an argument written by the students, the appraisal take usually a different orientation. Here the linguistic correctness, the global and local coherence of the text, the variety of the vocabulary and the suitability of the linguistic register to the audience come to play a privileged role, leaving the teacher's opinion about the strength of the arguments or even its verisimilitude in a second place.

Although certainly this type of tasks is requested with much less frequency than it would be desirable (Voss, Perkins & Segal 1991: VIII), when the students in some circumstances have to respond to open ended questions, which have more than a possible answer, as "Should the purchase and sale of heroine be legalized?" they

usually feel uneasy, and very often complain that they doesn't understand how the teacher can evaluate a personal opinion. The teacher's habitual answer is that the evaluation doesn't depend on the particular answer to the question, but rather, on the justification of the student's position. Anyway, when a text of this type is evaluated, the same teacher does not assess the text written by the students with the same criteria he or she would use to evaluate a letter to the editor. In this last case, instead of the orthographic and grammatical quality, that usually is accurate and don't play any role, what is really considered is the logical traits and the strength of the reasons. At school things are quite different, very often the teacher will become satisfied with the existence of some arguments, because many students consider unnecessary any effort of justification beyond the reference of one or two reasons in favor of their thesis. Very often, when they feel certain of something, after giving one or two reasons, they don't see the necessity of further justification. Certainly, in an argumentation it is not necessary the conclusion to be logically valid; argumentation differs from inference and the rules that regulate the soundness of an argumentation are field dependent (Toulmin: 1958). The school context determines a special situation in which usually, the required logical rigor and epistemological quality of the premises change with the age of the students, and the limitations in their access to the knowledge on the discussion topic.

The argumentative discourse is complex, and the criteria of good argumentation are context dependent (Santos & Santos 1999). Students that are not able to produce a satisfactory text, or to participate appropriately in a debate, are however capable in every day situations of defending quite adequately their points of view. The failure of these students in front of the task proposed by the school, doesn't necessarily imply an inability to defend its ideas, and symmetrically the failure of the students when criticizing a text appropriately, doesn't imply that they can be easily brainwashed. The situation in the school is artificial and the students often are exclusively concerned with the grades, so, they write trying to anticipate the teacher's demands. "The analysis of the way in which the argumentative discourse function in the school environment would require a "psycho-sociological" analysis of these circumstances; the real concern is maybe to demonstrate that one is competent through a successful performance, and therefore, to produce an argumentative discourse whose finality is not convince that one is right but, to convince that one knows how to argue" (Golder 1996: 13).

We could imagine that the teacher who will evaluate the argument, is for the students the personification of Perelman's universal auditory, composed by the elite, the scientists or the most reasonable judge (Perelman 1958). If things were so, the arguments written by the students should undergo the highest standards of rationality but, in fact, the situation is very different. To begin with, the habitual practice of the students during most part of their school life consists on the understanding and memorization of the contents of the curriculum and the later oral or written account of them without too much elaboration. The information is summarized to facilitate the memorization, and the students sometimes, refer in their recitations or writing reports to aspects that had been left implicit in the textbooks or in the teacher explanations. Only seldom, they are requested to express their own opinions. This school environment determines in the students a special epistemological attitude: the students more than the confrontation of its own ideas with the universal auditory try to imagine the professor's point of view and adopt it as the truth, in the same way they do on the more common tests of learned knowledge. The goal is not a defense of its points of view, but an argument that fulfills the requirements demanded by the professor and, above all, defends the "right" thesis.

To change this attitude in addition to the multiple choice or short answer-test, intended to measure knowledge, we should include in our teaching practice open-ended questions that promote the personal reflection and the critical understanding of the contents.

"The school learning, based on clear and undisputed questions, that the students should understand, memorize and express, doesn't always favor the development of the abilities related with the argumentation. Nevertheless the school should offer situations, that serve the students to practice and learn argumentative strategies, that can be hardly acquired through the family and informal linguistic uses, not only in the language classes, but in all the disciplines and especially in the different spaces of the school environment that allow the students to defend their points of view" (Cros and Vilá: 1995: 53).

To achieve this goal the explicit teaching of writing and criticizing argumentation has to play a broader role in the different subjects of the curriculum.

The design of the writing argumentative text instruction around the curriculum of Secondary School requires a conception or model of argumentation that integrate all the components of the argumentation as it occurs in real life situations and specially in the school. The aim of this argumentation model of is twofold

facilitate the integration of the oral and written argumentation in the design of the curriculum and enhance the metacognitive awareness of the students about the features of the argumentative writing. This conception needs to include: a definition of argumentation, a classification of the multiplicity of structures or schemata in which argumentation can be found and elicited, unexpressed premises and claims, the type of arguments, the strength of different kind of arguments, the ways to adapt the voice of the text to the readers, the different ways to negotiate with the audience, the linguistic tools we can use to order the ideas, introduce reasons, claims, restrictions, rebuttals and other constituents of argumentation, the fallacies and some metacognitive rules to regulate the process of writing. The model should be interdisciplinary and adapted to the Secondary School environment and secondary school students.

The pieces for this model of argumentation should be taken from the different approaches to the study of the argumentation. The formal logic must have at least a negative paper in the determination of it. A difference of that occurs in inference the argumentation soundness or validity are not a requisite, but even accepting the limits of the formal logical approach to explain argumentations, we have to admit that contradiction should be avoided and if there are inferences in an argumentation they should be sound. From the informal logic and the critical thinking and pragma-dialectical perspectives we would use the analysis of the structure of the argumentation, the importance of the context, some epistemological consideration about, the argumentation's requirements: relevance, sufficiency, acceptability, the strength of the arguments, implicit elements of argumentation and the study of the most common fallacies. The most important hint from the classic and new rhetoric, speech communication theories, and didactic of the language approaches is the need to adapt our text to the audience. We need to have in mind the audience in all the stages of the writing process: collecting, planning, translating and reviewing. (Kellogg 1994: 26). We can structure all these components of any sound argumentation around two poles: justification and negotiation (Golder 1996).

If we accept that the main goal of the argumentation is persuasion, even rational persuasion as in the new rhetoric (Perelman 1958), it seems that rhetoric should play the principal role in our model. However, I think that, although integrating the rhetoric, we need to emphasize the dialectical essence of the argumentation. Our goal as educators can't be training the students to defend with reasons whatever standpoint (even encouraging them to use reasons instead of violence or

other unacceptable means). We aim the students to consider argumentation as a fundamental path to seek for the knowledge, to test their own beliefs and to find together the better available answer.

“Only if knowledge is seen as the product of a continuing process of examination, comparison, evaluation, and judgment of different, sometimes competing, explanations and perspectives does argument become the foundation upon which knowing rests. Knowledge is never complete or finished, but rather remains open to further argument” (Kuhn 1991: 200). This epistemological attitude that we can characterize as critical, should guide the classroom activity if we aim our students to enhance it.

The traditional way of teaching doesn't see the need of the argumentation because considers the truth as unchangeable, and the task of the students is just to learn it. Very often, the students feel comfortable in such environment and adopt this epistemological attitude that Kuhn (1991) names absolutist. In the opposite side, we find between the students the multiplist or relativist epistemological point of view (Kuhn 1991). For relativist students argumentation is superfluous, because contradictory standpoints can be regarded as truth for different persons as consequence of different experiences. So, they postulate the simultaneous existence of different truths. They infer from the right of defend any standpoint, the equivalence of any idea, and they can memorize anything they have to, even if they have the opposite point of view, without feel the necessity of change their minds. The risk of emphasizing persuasion instead of knowledge is to promote indirectly this epistemological attitude.

The critical attitude, which we see as the goal of school, can be better understood if we integrate it in the constructivist theory of learning.

“When designing curriculum, constructivist teachers organize information around conceptual clusters of problems, questions and discrepant situations, because students are more engaged when problems and ideas are presented holistically, rather than in separate, isolated parts” (Brooks, J. G. and Brooks, M. G. 1993: 46).

The students must take the responsibility of their own learning through a process of reasoning in order to find the answers to these questions. These processes of science learning and explaining it to others involve a considerable amount of argumentation (Kuhn 1992).

One of the components or outcomes of the proposed model of argumentation should be a tool to assess the students' argumentations that integrate all these

inputs that we receive from the different approaches to the argumentation. The elaboration of such evaluation procedure presents several difficulties. The arguments can be seen as good or bad, sound or unsound, valid or invalid, strong or weak more or less convincing or plausible, and the diversity of views difficult the accomplishment of a comprehensive criterion of evaluation. It is possible to evaluate different aspects of an argument independently. Although this can be useful in the context of an experimentation centered specifically in some aspect of the argumentation and can complement the comprehensive view of the text, a tool that integrate the different sides related before in a holistic evaluation of the argumentative text is a necessity, so much from a theoretical point of view as for practical purposes.

The comparison among different approaches of teaching to write argumentations to students of secondary school has not been sufficiently investigated (Fulkerton 1996). The absence of evaluation formula is clearly an obstacle to establish that comparison; “the issues related to the criteria for good argument have not yet been properly addressed by research that takes a more empirical stance on argumentation. Researches assumptions in this aspect tend to remain unspoken and implicit in current empirical research” (Santos and Santos 1999: 75).

If a model overlooks some aspects of the argumentation its presence or absence won't influence the appraisal of the text. So, for example, the absence of rhetorical traces directed to introduce an apparent dialog with the audience (negotiation) won't be considered as a serious defect by an evaluation carried out from the perspective of the Informal Logic that will be centered in the soundness of the argument, namely, in the analysis of the truth or falsehood of the premises and in the deductive validity of the argument or in the strength of the inductive argument used to justify the conclusion (Hoaglund 1995: 197). In the other side, a rhetorical valuation will be centered in the evaluation of the different traces indicative of negotiation present in the text and the adaptation of the arguments to the audience. The persuasiveness of an argument relies on the audience. From a rhetorical point of view, an example emotionally narrated, can be much more persuasive regarding a certain audience than the result of an investigation rigorously performed. However from critical or epistemological point of view, a study that has gathered information from a representative sample provides much bigger support to the conclusion than a single case.

Usually the different proposals of holistic assessment of the arguments written by students in the school setting differentiate three argument levels:

1. Preargumentative text.
2. Basic argumentative Text.
3. Elaborated argumentation.

The distinction between the two first levels is common to the different approaches of the written argumentation. In the first level are placed the texts without claim, or with a claim that is ambiguous or it is inadequately expressed, when there are contradictory standpoints or if it is a standpoint but no argument is advanced to defend it. The basic argumentation is the enthymeme, or rhetoric syllogism, that consists in one unique argument relevant to sustain the claim related with it by an unexpressed premise. The further classification of the arguments in the second or third level depends fundamentally on the role that the two cited components of the argumentation: justification and negotiation play in the model of reference.

One of the ways of elaboration of the evaluation procedure emphasizes the rhetorical aspects of the argument: the existence of negotiation indicators like modal verbs, counterarguments or the employ of different linguistic resources destined to give the reader the sensation of being participating in an imaginary dialog. This position can be found overall in the textbooks of the language classes for Secondary School and in the publications inspired in the didactic of the langue (Dolz 1996, Dolz & Pasquier 1996). The second approach remarks the other pole of the argumentation, the justification from an informal reasoning point of view. Acceptability, truth, relevance, sufficiency and consideration of alternative positions (Johnson 2000: 143) would be the focus in a such analysis; questions about the strength and adequacy of the arguments in order to establish the truth, or at least the verisimilitude of the claim, and the consideration of both sides of the issue will be checked (Means and Voss 1996: 142). Usually these approaches start the teaching of argumentation analyzing arguments -the critical thinking textbooks are conspicuous examples of that- and the teaching of writing and evaluation criteria of the students own writing take the same way used to criticizes the text used in the prior analysis of text from the newspapers an other sources. The same procedure can be found in the Pragma-dialectic (Van Eemeren 1999)

A conspicuous example of the first point of view I mentioned above, is the proposed for Golder:

Level 1: No standpoint (therefore, discourse non argumentative).

Level 2: A non-justified standpoint.

Level 3: A standpoint justified by only one argument.

Level 4: A standpoint justified by two non-related arguments (tabular arguing), each one represents by itself a justification of the defended standpoint (it is enough separately to justify the position).

Level 5: A position justified by two interconnected arguments. In fact, it can be a restriction-specification relation, a rebuttal, or counterargument; in short, an argument that takes into account the other possible speeches.

(Golder 1996: 164).

The first two levels constitute the preargumentative text, second to fourth are basic argumentations and “only the argumentations located in the 5th level can be considered like truly elaborate argumentations. Let’s note that in this model, the use of counterarguments is not the only mean to make operate the dialogical dimension of the argumentation; the negotiation can also be attained by less abrupt procedures, as the restriction or the specification that, while limiting the range of the arguments, open at the same time a space of negotiation to the interlocutor” (Golder 1996: 164).

It is remarkable that there isn’t any reference to the epistemological quality of the premises, or the logical soundness of the reasoning process. The only requirement may be that the arguments have to support anyway the claim. But not every argument gives the same support to the standpoint. This scale was used to study the development of the argumentative skills and can be used to score the Elementary School children’s writings. But, the relative generalization of the elaborated argumentation is achieved when the 14-15 years old students arrived to Secondary School. (Schnewly 1988, Golder and Coirier 1994, Golder 1996) After this age we don’t expect almost preargumentative texts and the way we should evaluate the students’ texts need to be more sophisticated. We find different degrees of success in every one of the rough levels we have considered so far. The question is not alone the existence or not of negotiation but its quality, and the assessment of the justification of the claim. It is necessary to determine the relevance, the strength of the arguments, its internal relationship and the discard of alternative claims, that is, the grade of justification of the claim, in the same way we do outside the school context. At the same time we need to consider different grades of achievement of the rhetorical quality of the argumentation, the adequacy of the voice to the reader, and the complexity of the negotiation with the audience, which would play a decisive role in the persuasive strength of the

text.

We can find a precise example of the second perspective in the evaluation scale of “development” of arguments, adapted from the Toulmin’s model of argumentation, and proposed by Stuart Yeh:

Development, Organization, Focus, and Clarity

Level 1: No single identifiable primary claim or proposal (which might be: “In this essay I will argue that the arguments for X are inconclusive...”).

Level 2: Definite, well-qualified claim or proposal unsupported by identifiable premises connected to the claim by a warrant.

Level 3: Definite claim supported by a weak premise and warrant; overlooks stronger arguments, important objections or alternatives.

Level 4: Definite claim. Strong but undeveloped reasons: Reader must infer subarguments for premises and warrant, and against objections or alternatives.

Level 5: Definite claim supported by strong, developed arguments. Clarity could be enhanced through definition, elaboration, illustration, explicit connections, and conciseness.

Level 6: Starts with a clear statement of problem, importance, and definite, well-qualified claim or proposal. Chooses and develops one or two strongest supporting arguments, stating and defending each premise with evidence or examples and, if not obvious, how it supports the claim. Responds to major objections and alternatives and the arguments on which they are based. Conclusion punctuates the argument. Each section and paragraph is clearly, if not explicitly, related to thesis. Arguments given one by one; generally one point per paragraph, without repetition, in a logical order, and weighted by importance. Key terms, ideas, and connections are defined, elaborated, and illustrated to avoid misinterpretation. Little knowledge is presumed. Sentences build on each other through connecting words or ideas. Wording is clear, concise, and consistent. (Yeh 1998: 140)

The objective of the study of Yeh was to analyze the relative importance of three different factors in secondary teachers’ holistic assessment of the arguments written by the students. Besides the “development” scale Yeh defines other two scales: “voice” that refers to the degree of maturity of the voice (credibility or emotional appeal) of the text and “conventions” that makes reference to the correction in the use of the words, the grammar, punctuation and spelling. His investigation concludes the strongest influence in the evaluation was the

“development” (including organization, focus and clarity) followed by adherence to conventions. The influence of voice in the scoring was significant, but smaller. In this research, “the three factors explained roughly two-thirds of the variance in holistic ratings of argumentative essays” (Yeh, 1998: 145). The influence of the rhetorical aspects, “voice” seems, according to the study to be in interdependence relationship with the first scale. It is however, remarkable that the “development, organization, focus and clarity” scale is much more developed in this study than the other two. And it is possible that this fact influenced in some grade the outcome of the research. The grade of the maturity of the voice (from no voice to mature voice defined as appropriate) doesn’t integrate all the inputs that the didactic of the language (Dolz 1996 Cros & Vilá 1995) considers under the idea of negotiation.

In sum, one difficulty to evaluate argumentations written by secondary students is that in the evaluation of the quality of the argument, the usual logical and rhetorical perspectives are contaminated with the assessment of the text from a formal perspective: orthographic, grammatical, syntactic correction and the precision in the use of the words; beyond the mere correction in the use of the language, the style, the appropriateness of the vocabulary, etc. modifies considerably the quality of the writing and in some circumstances the persuasive capacity and, even the relevance of an argument can be darkened by a poor writing. Anyway, the conventional evaluation of a writing composition in secondary schools is strongly directed to correct these aspects of the writing. Therefore, an argumentative text that receives a good mark in the school may have a weak justification and the negotiation may be deficient if there aren’t errors in spelling, it is coherent and the grammar is sound.

Secondary students suffer, often, of lack of general writing skills that make difficult the task of writing argumentations. The teaching of writing argumentations needs often to be complemented with the teaching of general writing skills to be fruitful. Reciprocally, the teaching of specific features of argumentative writing may help in the attainment of general writing skills.

The holistic evaluation procedure I try to define in this paper, in my opinion, would not only facilitate the research about competitive approaches to the teaching of argumentation, but the designs of the curriculum and the students’ cognitive awareness of the process of writing argumentations.

“If teachers do not emphasize important functional relationship and the structural

requirements for writing argumentative essays, both in their teaching and in their assessment criteria, we cannot expect students to know what it means to write clear, focused, organized, well-developed arguments” (Yeh 1998: 145). The teacher revision of the students’ argumentative essays must include remarks about the features of that type of text in order to facilitate the metacognitive understanding of the task. The students could accomplish an improvement in their metacognitive awareness as well, using this evaluation guideline to evaluate their mates’ writing. They should be asked to make suggestions to rewriting the text as a form of enhance their metacognitive control of the process of writing. A student can sometimes write a good argumentation without be cognitively aware of the requirements of the task. But students only can know that their argument is adequate or make improvements in their own essays, if they are aware of the requirements of a good argumentation. Competent argumentative reasoning requires, first and foremost, the ability to reflect on one’s own thinking as an object of thought. In the absence of this ability, one’s belief are utilized as basis for organizing and interpreting experience, but only by mean of this second order, reflective thinking ability can one think about evaluate, and hence be in position to justify these beliefs”. (Khun 1991: 14)

The reference of a precise and explicit evaluation procedure may help the students’ reflection on their own thinking. The goal of the metacognitive thinking about writing argumentation is to facilitate the advance from a knowledge-telling to more complex knowledge-transforming procedure of writing. (Bereiter and Sacardamalia 1987).

The evaluation procedure we propose here intends a holistic assessment of the argumentation that integrate mainly the inputs of the dialectical and the rhetorical conception of the argumentation and secondarily the spelling and the grammatical adequacy of the text. There are some correspondences between the requirements of the two points of view. The need of the use of counterarguments, of integrating the audience’s views, as condition for a “elaborated argumentation” level, correlates with the need of discarding other possible alternatives from a critical epistemological point of view. More and More both viewpoints are seen as complementary (Zarefsky 1996, Santos and Santos, 1999, Van Eemeren 1999a). Nevertheless, the relative role that each of them must play is under discussion.

From a pedagogical point of view both views are to be teach together, more remarkably in the teaching of writing than in the teaching of the critical analysis

of arguments. In the first place because rhetorical and dialectical argumentation require the same cognitive skills (Kuhn 1991). A restriction to the claim, using a modal verb, for instance, can be made to be polite, as a way to negotiate with the audience, or as consequence of an epistemological necessity, because the writer cannot ensure a universal assertion. In the second place, because in every day discussion it is usual the shift from one to the other. The questioning of an argument involves usually a lot of reflection about the truth, the likeness, the relevance of the reasons and the soundness of the inferences even in situations of uncertainty or discussions about values or politic decisions, and the acceptance by the audience of a premise in a dialog close the need of warrant it, even in a discussion about facts or in a scientific debate.

This procedure differs from the usual "A to D" or "0 to 10" school grades. The criteria of acceptability of the students' writing change with the age. In the first years of Secondary School we expect at least basic argumentation, and elaborated at the end of the Secondary; the educative goals and the minimal requirements in every school grade must be different. Arguments may be rewritten and improved without pass to the next level, that is especially so for the last level of the proposed scale. An argument scored in the 18th level may be criticize and it would be possible to improve all the aspects of the text: the justification, adding new reasons, the negotiation, adapting the text better to the audience, and the style, for instance, rearranging the arguments to facilitate its understanding.

Evaluation of Secondary School students' argumentations

Level I. Preargumentative text

1. No proposal or standpoint, or it is ambiguous or insufficiently expressed.
2. Various incoherent or contradictory standpoints asserted together.
3. Clearly expressed standpoint, but without arguments to justify it, or the adduced arguments are irrelevant to support the standpoint. (Vg: *petitio principii*, *ignoratio elenchi*)

Level II. Basic argumentation

4. A definite standpoint justified by only one argument. May be followed by some irrelevant arguments.
5. Many *unrelated arguments* (1) in favor of the claim with a *weak justification* (2) as result, without *negotiation traces*, (3) and inadequate expression, misspellings or lack of *global and/or local coherence* (4).
6. Many unrelated arguments in favor of the claim with a weak justification as

result Without negotiation traces, or inadequate expression, misspellings or lack of global and/or local coherence.

7. Many unrelated arguments in favor of the claim, with a weak justification as result. With negotiation traces, coherence, and proper expression and spelling.

8. Many unrelated arguments in favor of the claim with a *reasonable justification (5)* as result, without negotiation traces, and the expression is inadequate or there are misspellings and lack of global and/or local coherence.

9. Many unrelated arguments in favor of the claim with a reasonable justification as result, without negotiation traces, or the expression is inadequate or there are misspellings and lack of global and/or local coherence.

10. Many unrelated arguments in favor of the claim with a reasonable justification as result. With negotiations traces, coherence, and proper expression and spelling.

11. Many unrelated arguments in favor of the claim with a *strong justification (6)* as result, without negotiation traces, and the expression is inadequate or there are misspellings or lack of global and/or local coherence.

12. Many unrelated arguments in favor of the claim with a strong justification as result, without negotiation traces, or the expression is inadequate or there are misspellings or lack of global and/or local coherence.

13. Many unrelated arguments in favor of the claim with a strong justification as result, with negotiation traces, global and locally coherent, and with proper expression and spelling.

Level III. Elaborated argumentation.

14. Many unrelated arguments in favor of the claim generating a strong justification of the standpoint. *Manifest presence of negotiation, (7)* but lack of coherence between the ideas: the ideas appear juxtaposed somewhere disorganized and/or the expression is inadequate.

15. Many favorable interrelated strong arguments in favor of the claim based on data or examples and related explicitly to the conclusion, generating an argumentation deductively correct or inductively strong. Manifest presence of negotiation. Some errors in the order or the coherence between the ideas or an occasionally defective writing.

16. Many favorable interrelated strong arguments in favor of the claim based on data or examples and related explicitly to the conclusion, generating an argumentation deductively correct or inductively strong. Manifest presence of negotiation. The writing is coherent, accurate and almost error free.

17. Many favorable interrelated strong arguments in favor of the claim based on data or examples and related explicitly to the conclusion, including the rebuttal of some possible arguments against the standpoint or the critic of other alternatives. Explicit presence of counterargumentation and other forms of negotiation indicators, appropriate voice adapted to the audience, but with presence of some errors in the order and coherence between the ideas, or an occasionally defective writing.

18. Many favorable interrelated strong arguments in favor of the claim based on data or examples and related explicitly to the conclusion, including the rebuttal of some possible arguments against the standpoint or the critic of other alternatives. Explicit presence of counterargumentation and other forms of negotiation indicators, appropriate voice adapted to the audience. The text is coherent and the writing is accurate and error free.

1. *Unrelated arguments*: the premises appear as an enumeration of reasons. They are unwarranted and not supported by data, examples or other reasons.

2. *Weak justification*: there are some relevant but weak arguments, insufficient to justify the thesis like examples, anecdotic data, etc. Overlooks salient alternatives and arguments, sometimes with some unreliable arguments, or fallacies.

3. *Negotiation traces*: use of expressions like “in my opinion”, “I believe” or similar. Although other possibilities are not considered, these expressions leave open the door to the existence of other alternatives.

4. *Global coherence*: The extent to which the individual sentences of such text help to develop its topic. *Local coherence*: the relative frequency with which a sentence is an elaboration of one that precedes it. (Wright and Rosemberg. 1993: 152).

5. *Reasonable justification*: The reasons, still independent with each other, taken together make, at least in absence of a thorough analysis of the issue, the standpoint plausible.

6. *Strong justification*: Even if the arguments are unrelated the standpoint receives a strong support, the arguments overview different favorable sides of the problem and the result is persuasive and epistemologically consistent.

7. *Manifest presence of negotiation*: different forms of expressing the disputable character of the standpoint, and presence of elaborated ways of negotiation with the audience: concessions, use of modal verbs, restrictions to the conclusion, denial of ideas that could be in the mind of the audience but without dealing explicitly whit them, that is without counter-argumentation

In the first place justification is considered, in the second place negotiation and finally the style, the order, the coherence and the correction of the writing. The three components are necessary to write a good argumentation and should be teach and evaluate in a comprehensive manner.

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ISSA Proceedings 2002 - The Need For A New Rationality



1. Introduction

Looking for a new rationality is a relatively recently started activity in philosophy concerning mostly philosophy of science. It is certainly connected to the developments in the most contemporary natural science in the last decades of XX century. We are going to present some arguments that favour the new approach to rationality. Some philosophers of science, methodologists and scientists have been singled out as the most active proponents of the need to change the basics of rationality. For instance, Ilya Prigogine has entitled the introduction to his recent book "A New Rationality?" (Prigogine 1997). There is a symptomatic question mark at the end of this title as we can see. Prigogine is really quite justified to doubt, whether we have the real need to speak about a new rationality. However, the question mark rather stands for the question, whether the changes are deep enough for speaking about a new rationality than for the doubt, whether the essence of rationality is changing at all. We necessarily have to take a look into the traditional conception of rationality in order to discuss, if a principal alteration of the meaning of the term has really become necessary.

Nicholas Maxwell has put forward another serious challenge to classical rationality by arguing for a new conception of science (Maxwell 1998). In order to succeed in his task, Maxwell asks openly for a new rationality, claiming that classical science is not rational in the genuine sense of the concept. Discussing the claims of Prigogine and Maxwell we try to find out, whether they are asking for the same kind or different kinds of new rationality. In the closing section of the paper, we shall argue that temperate rationalism of William Newton-Smith is not really a new approach to rationality in science, but just an indication of one possible direction out of the outworn classical frames.

2. Understanding of Rationality in Classical Science

The concept of rationality plays the central role in all human activity, not just science. "In its primary sense, rationality is a normative concept that philosophers have generally tried to characterize in such a way that, for any action, belief, or

desire, if it is rational we ought to choose it" ("The Cambridge Dictionary of Philosophy" 1999: 772). This is a pleasantly general formulation of the concept and cannot ask for any alteration. However, it does not give any clue, how to differentiate between rational, non-rational and irrational behaviour. We shall consider non-rational to be the opposite of rational. Irrational is not an issue here, as it is a principally different kind of human reasoning compared to rational. People, especially philosophers, are sometimes irrational on purpose, not by the reason that they are not capable of being rational. It does hardly make any sense, however, to be non-rational on purpose (If not a joke is performed, of course).

We can try to be somewhat more explicit than in the first definition of rationality, saying that: "To give a rational explanation of an action Φ done by A is to show that on the basis of A 's beliefs A did what he thought was most likely to realize his goals" (Newton-Smith 1996: 270-271). In this minimal sense, the majority of aim-oriented human actions are rational. Therefore, there need not be a unique way of acting rationally in a certain situation. However, a definite goal has to be achieved or approached at least. Otherwise, it would not be classical rationality that we are dealing with. We may sometimes fail to act in the rational way for the simple reason that we just cannot recognize it among the several choices available. Such failure does not turn us into non-rational or irrational creatures.

In spite of the general meaning of rationality as a whole, there are good reasons to think that focusing on rationality in science would be a reasonable plan for us here. In that case we have to restrict ourselves to the requirement that the goal in question be scientific. Let us just assume for the sake of brevity, however, that we are able to decide about the scientific nature of the goal in the intuitive manner.

It is the classical Newtonian science where the concept of rationality has been established most clearly. Specifying the concept of classical science is not an issue for us here. Still, some brief explanation is very much in place. By classical science we shall understand the approach to science, which is based on a definite method called scientific and which Nicholas Maxwell has named standard empiricism (Maxwell 1998). René Thom has probably meant the same while speaking about positivist-pragmatist approach to science (Thom 1990). Maxwell states that: "Standard empiricism (SE), remember, is the doctrine that in science no substantial thesis about the world can be accepted as a permanent part of scientific knowledge *independent of the evidence*, and certainly not *in violation of the evidence*" (Maxwell 1998: 37). SE is certainly an aim-oriented activity. By and large, it has been very successful in achieving its aims. The aims, however, are

often narrow and isolated from each other. Their achieving does not contribute to making the world comprehensible. Classical science has been successful just in producing evidence for the support of its narrow specific claims. Evidence necessarily has to be produced in the rational way, *i.e.*, there has to be a definite method for producing the evidence, which has to be applied for many times by different agents. Most important, these attempts must yield analogous results.

The common perception is that there can be an excuse for non-rational action anywhere except science. As far as irrational is concerned, however, it seems that it may have a place in science. It is just non-rational that doesn't. Irrational, just like rational, is connected solely to human beings and does occur in conjunction with rational. The stress in science, however, clearly lies on the rational and it is non-rational that has to be avoided as carefully as possible.

Today, scientists themselves have started to think in a manner, which is hardly compatible to the traditional rationalist one. Philosophers of science, on the other hand, seem to be more interested in the rationality of scientific change rather than science itself. Of course, one may claim that there is no difference as permanent change is going on for all the time. Before continuing, we have to specify our understanding of rationality in the classical sense in a greater detail.

The classical understanding of rationality means that there exists a model of rationality, which can be applied by all reasonable people and repeatedly so. Behaviour that goes contrary to the model's suggestions cannot be called rational. Normally, rational means in accordance with the rules of classical (Platonic) mathematics, laws of classical logic and statistics. Such approach works well in the situations, where the result aimed for is calculable. If this is the case, the central feature of classical rationality emerges in a natural way. It is the requirement that all rational agents should obtain the same result if dealing with the same problem. Some reasonable error is permitted of course. Otherwise, there would be no rationality in natural science. It could occur only in mathematics and logic. We can see that the possibility of repetition becomes a very crucial issue. Rationality in the classical sense cannot be attributed to a unique act at all. The rational result necessarily has to be reproduced for several times, as a unique act of behaviour may come out as rational by chance. This is one of the main reasons of the importance of reversibility in classical science.

We get a somewhat different picture in the case of Karl Popper's critical rationalism. Sir Karl uses to equate the rational attitude and the critical attitude (Popper 1995: 16). Therefore, there is a strange discrepancy between classical

and critical rationality. The first seems to apply to the situations, where there is nothing to criticise. At least in the case if we don't want to apply the Cartesian malicious deceiver against the whole human understanding of mathematics. Critical rationalism, however, seems to apply in the situations, where classical rationality does not apply anyway. Certainly, the case is not that simple. The Popperian conception of critical rationalism leads us towards the new rationality we are striving for, but itself still remains in the frames of classical science. Popper himself was obviously more interested in careful demarcation of classical science from any other intellectual activity than changing its essence. Critical rationalism was meant to be a tool for achieving this goal. Its central feature is casting doubt on any human intellectual achievement if possible. Normally, it is possible, if we deal with reality, not with mathematics. However, possible does not mean reasonable. Therefore, critical rationalism is not ideally rational in the classical sense and can be applied to any kind of reasoning, both scientific and non-scientific. Besides, Popper considered any activity that is in accordance with the classical criteria scientific. Thus, it would be somewhat awkward to take his attitude as an example of the new rationality we are looking for. Below, we shall give some explicit reasons, why this is impossible.

3. Science as a Tool for Prediction

From now on we shall focus on the rationality of research in natural science, which is certainly the foundation for both of our key authors mentioned above, Prigogine and Maxwell. Let us keep in mind the crucial role of the question of reversibility. The latter has been an absolutely necessary condition of experimenting in natural science in the classical sense. In the most contemporary natural science, however, we have to abandon this condition. Why does such change take place? In order to answer this question, we have to address the problem of the aim of science.

The understanding of the aim of science by different authors differs in many respects. There is a consensus, however, in the point that science should be an effective tool for predicting future events in its field of concern. Seen from this angle, we might say that in the case of rational action we necessarily predict correctly. We make mistakes in predictions only if something non-rational has been executed. Such reasoning works in a determinist world. As we don't know, whether the world is determinist or not, we have to prepare for a more sophisticated argumentation here. As the dilemma of determinism suggests, humans have the ability to choose freely between alternative possibilities of

acting (Popper 1982: xix). Unfortunately, we don't know, whether we really do choose freely. However, it is certainly pleasant to believe that we do.

Still, if we don't believe in determinism, then we have to admit that some events happen by chance. This means that they cannot be predicted in principle, as a predicted chance is not a chance any more. Most that we can predict in this sense is just the general possibility of chance. Therefore, an essentially new approach to rationality seems to have become inevitable. Statistics has to be brought into the picture. But this is not enough. The concept of an event becomes crucial in analysing the development of any system.

Still, the basics of the new rationality cannot be too different from the classical ones as we intend to remain inside the frames of science after all. Therefore, predictability still remains the main goal. But the requirement that different agents working with the same problem should always get the same result has to be dropped. The same applies to the requirement of repetition of experiments. In a certain sense, a successful prediction becomes a unique phenomenon. Still, some regularity has to be observable between the unique events. Here we enter the realm of attractors. Some other contemporary keywords have become very important too, *i.e.*, irreversibility, initial conditions and indeterminism of course. We shall address these issues below in context with the views of our key authors.

4. New Rationality in the Sense of Prigogine

Let us take a fresh start in order to present an intelligible insight into the new rationality. The new rationality is about the world as it is, the classical one being mostly about science itself. In the objective reality we normally deal with systems, which consist of particles. The number of particles in a system is often arbitrarily large. The particles are in incessant mutual impact. Such situation, which is the real one, leaves the Laplacean demon helpless. The latter, if it could exist, would be a perfectly rational creature in the classical sense. In the new sense of the term, the demon would fail inevitably by a simple reason. It is just impossible to describe the current state of things in the world with infinite precision. In fact, there is no current state at all, but rather a permanent becoming.

Bringing the Laplacean demon into the picture is a risky undertaking. We face the danger of confusing determinism with predictability. The inability to predict does not necessarily mean that the system we are dealing with is indeterminist. On the one hand, we just need not have enough information to present a correct prediction. For instance, our knowledge may be limited to the macroscopic level. The system under study may be perfectly determinist, but for finding this out, we

may need access to the microscopic level. On the other hand, systems that are determinist, but exhibit unpredictable behaviour, exist. This has been proved a couple of decades ago already. The latter is an important fact for us. It means that the inability to predict cannot really be equated with not being rational. However, we must be aware of our inability and in the best case, know the reasons for it. This is an important step towards the new rationality.

It has often been stated that the failings of prediction are due to our inability to know the initial conditions of a process precisely enough. To be more precise, it is not even a question of knowledge or measurement, but rather of representation. No intelligence, neither natural nor artificial, can consider infinite decimal fractions. Some approximation is always necessary. As we know from the butterfly effect of Lorentz, for instance, approximation does not necessarily approximate, but can yield quite different outcome. Does it mean then that we can never be really rational? It is hardly a sufficient reason for giving up the whole idea of rationality altogether. Fortunately, while dealing with large systems in the sense that the volume in which the system is located is big enough for the surface effects to be ignored, we have to deal rather with ensembles than with individual particles. In such case the concept of initial conditions has a different meaning. Actually, there are no initial conditions, as any condition is the result of a historical development, is in becoming (Näpinen, Mürsepp 2002).

Both Prigogine and Maxwell agree in sharing the common ancestors, the pre-Socratics. Prigogine also includes the name of Epicurus to the list of his most important forefathers. The pre-Socratics, with Heraclitus at the head, praised the eternal motion stressing that nothing is ever at rest. It is his approach that puts the world into permanent becoming denying being at the same time. Epicurus stands out for having introduced the crucial idea of the *clinamen*, the basis of chance. A very important component of the foundation of the new rationality, however, was not produced in the Ancient times. It is the evolutionary view of the *physis*, of the whole material world. Charles Darwin is certainly responsible for the evolutionary approach in natural science. It was Ludwig Boltzmann, however, who took the crucial turn in physics. "From today's vantage point, Boltzmann's need to choose between his conviction that physics had to understand becoming, and his loyalty to its traditional role, seems particularly poignant" (Prigogine 1997: 21). The situation Boltzmann was facing prevented him from taking full advantage of the idea of irreversibility and introducing the arrow of time permanently. In the case Boltzmann had taken full account of these concepts, the

new rationality should be started with him.

The undisputed merit of both Darwin and Boltzmann is the replacement of the study of “individuals” with the study of populations. “Exactly as biological evolution cannot be defined at the level of individuals, the flow of time is also a global property” (Prigogine 1997: 20). As we know, Darwin’s theory has enjoyed lasting success and remains the basis for our understanding of life. “On the other hand, Boltzmann’s interpretation of irreversibility succumbed to its critics, and he was gradually forced to retreat” (Prigogine 1997: 21).

Now, let us get closer to the idea of new rationality keeping the focus on Prigogine and turning to Maxwell later. In the eyes of the former, it is mostly the idea of irreversibility that plays the crucial role in making the world comprehensible. Putting the *arrow of time* into the centre of our picture of the world has enabled to view our surroundings in a new way. Certainly, this move is in full accord with our everyday life, as we can never accomplish two things in exactly the same way twice. Most probably, the common sense perception was also the basis of understanding for the pre-Socratics.

In general, irreversibility is based on the distinction between past and future. Prigogine considers the latter a *primitive concept* in the sense of Niels Bohr (Prigogine 1980: 213). This concept precedes scientific research in a certain sense. In scientific research we prefer to speak about irreversibility. However, irreversibility on the macroscopic level is obvious. It is the idea of microscopic irreversibility that has initiated the search for a new rationality. “From the methodological point of view, the large Poincaré systems used in the theory of microscopic irreversibility (which is in the stage of development) can be interpreted as mathematical models which grasp the *time-oriented* aspects of the real (irreversible, chance, instable and so on) world” (Näpinen, Mürsepp 2002).

Now, what about the concept of science? Isn’t it so that the narrowly aim-oriented classical science owes its success just to the definite method that is strongly based on the possibility to repeat an experiment? Let us remember at this point that the new rationality implies that all processes that can be studied are necessarily irreversible. This means that strictly speaking, not a single experiment can ever be repeated. Every phenomenon is absolutely unique.

What to do in such situation? Is a science that lacks the possibility to repeat experiments science any more? Strictly speaking, we do not need to drop any other traditional requirement of scientific research, except reversibility. Even the task to predict is still in place. However, the essence of prediction has to change.

We cannot hope of being able to predict events as such. We can rather predict courses of processes and even those with significant limitations. The most crucial limitation concerns reaching the next bifurcation point where the course of the process under study may change significantly. "... we can never determine when the next bifurcation will arise" (Toffler quoted in Prigogine 1984: xxxii).

To sum up with, a rational agent in the sense of Prigogine is an individual, who is able to recognize periods in the course of a system's development, when principal changes can occur (strongly non-equilibrium conditions) and can act during these periods in a way that brings her closer to achieving the goals she is striving for. The rational agent is well aware that any move she makes, either in scientific research or everyday life is unique and its immediate consequences have to be faced. It is never possible to foresee all possible consequences of any act. The latter applies to the results of scientific research as well.

5. New Rationality in the Sense of Maxwell

It seems that rationality becomes equated with comprehensibility for Maxwell, who holds that if standard empiricism is accepted, the achievements of modern science become incomprehensible and science itself becomes irrational (Maxwell 1998: 36). We can make the universe comprehensible only if we act rationally. Thus, Maxwell denies the rationality of classical science, an enterprise, which is normally taken as the model area for rationality. Self-evidently, science is taken as a whole here. The meaning of rationality is connected with the problem of understanding the world as a whole. Therefore, the suggested reformation of science would have fruitful consequences not just for science, but for all inquiry and for all life, i.e., personal, social, cultural, global contexts (Maxwell 1998: 25-26). As it is widely accepted, rationality, in the narrow sense of the term, works well in classical science. The general methodological approach to classical science has culminated with the principle of demarcation, which excludes metaphysical ideas from science by the reason that they are not empirically testable. This approach forms the basis for classical rationality. Aim-oriented empiricism advocated by Maxwell, however, by contrast to standard empiricism, insists that metaphysical ideas - rival conjectures as to how the universe may be comprehensible - form a vital, integral part of the intellectual domain of science (Maxwell 1998: 27). It may be that the traditional metaphysics is still not the one that we need for making the world comprehensible. Why then was it excluded from science with such determination for more than a century? We are face to face with a very complicated question - what would be the correct (in the

scientific sense) metaphysics? We should speak about a metaphysical approach, of course, as metaphysics is metaphysics. There cannot be several different metaphysics in principle.

Ideas belonging to the philosophy of science concerning the aim and essence of science also form an integral part of science for Maxwell. The latter position becomes the most rational attitude in the context of aim-oriented empiricism, which is a philosophy of science itself. Philosophers of science have been working inside the frames of standard empiricism for a long time. "In doing this they have sought to justify the unjustifiable, defend a conception of science which, if honestly put into scientific practice, would bring scientific progress to an instant standstill" (Maxwell 1998: 33).

We have seen that Maxwell and Prigogine are applying quite different terminology. Still, our claim is that they are basically speaking about the same thing or at least the same situation in contemporary science. For instance, Maxwell turns to the limitations on the predictions, if we assume that there exists a true theory of everything, T. It is very likely that we will be able to solve only few very simple equations of T exactly. It may even be that no equations at all can be solved exactly (Maxwell 1998: 33). Although Maxwell is correct in presenting this opinion, it is not clear, whether he has understood the reasons why we cannot obtain exact solutions any more. It is very clear, however, that Maxwell attributes the limitations of the predictive power of T in practice to the impossibility of obtaining precise knowledge of the initial physical state of any physical system (Maxwell 1998: 34). He has not understood that the question is not that of precision. There just does not exist any initial system. The situation is at least as hopeless in the case of non-physical systems, i.e., human experience, human consciousness, meaning.

It is obvious that Maxwell has started to call standard empiricism irrational by the same (or at least very similar) reasons Prigogine is looking for a new rationality. The latter, in addition to his criticism, has proposed a qualitatively new approach to science. Maxwell has proposed his new approach too, calling it aim-oriented empiricism. But is it qualitatively new? Maxwell has called aim-oriented empiricism *the key to scientific progress*. A vital feature of scientific rationality has been a kind of positive feedback between improving knowledge and improving knowledge about how to improve knowledge (Maxwell 1998: 17). Maxwell suggests that it would be more appropriate to speak about positive

feedback between improving knowledge and improving *aims* and methods: “A basic fixed aim of science (fixed for the time being at least) is to discover in what precise way the universe is comprehensible, it being presumed that it is comprehensible in some way or other” (Maxwell 1998: 18). In this light, the feature of science that accounts for the name *aim-oriented empiricism* is the following: “The more or less specific (and highly problematic) aim and methods of science evolve with evolving knowledge within the framework of a (more or less) fixed aim for science and fixed metamethodological methods” (Maxwell 1998: 18). These quotes testify, however, that Maxwell is looking for a new rationality inside the frames of the classical approach, bringing in (meta)methodological and metaphysical ideas. This claim is strengthened by the fact that Maxwell considers Einstein having worked in accordance with aim-oriented empiricism. Now it is very clear that the new rationality of Maxwell and of Prigogine are different. The latter can never call Einstein’s thinking rational in the novel sense, as the creator of relativity theories did not recognize the irreversible flow of time, as it is well known. In this sense, Einstein’s attitude was as bad as could be, because he even called time an illusion. For Prigogine, time is probably the most real quality of all. It is true, that Einstein did put forward scientific hypotheses, which could also be viewed as methodological principles. However, it was just introducing methodology into scientific research. This is a move that generally has not been rejected even by Karl Popper. Certainly, Einstein produces a deeper understanding than regular standard empiricism does. But it is obvious that the problems Einstein was dealing with were not accessible by the classical methods at all. Einstein was just pushed to the edge of standard empiricism. He never showed up real wish to get out of it.

Maxwell’s search for a new rationality has not been entirely successful. His aim-oriented empiricism succeeds in providing a somewhat deeper understanding than standard empiricism does. It is certainly not an irrational activity. But in the light of the most contemporary research methodology based on irreversibility, it is still rather quite non-rational than rational. Especially, when compared to the approach of Prigogine.

6. Temperate Rationalism of Newton-Smith, a Possible Solution?

Could it be that we just have to belittle the requirements for rationality for achieving our goals, namely for presenting an understanding of rationality, which is in accord with the latest developments in natural science? In order to answer this question, we have to make it clear, what a temperate rationalism could mean.

We are in possession of one outspoken form of temperate rationalism. It says that temperate rationalism offers a dynamic theory of science (Newton-Smith 1996: 270). This means that failure to make progress in science leads us not just to test different theories, but also to investigate the effects of altering the list of controlling factors. This in turn, may lead to improve our beliefs about the world by improving the ways we come to decide between theories (Newton-Smith 1996: 270).

Thus, by introducing temperate rationalism, William Newton-Smith certainly adds a new straw to the classical understanding of rationality in science, which has been dominant even in the postpositivist philosophy of science. The latter, however, still remains a firm basis of his argumentation. It should also be stressed that the primary interest of Newton-Smith is the rationality of scientific change studied in the wake of Kuhn and Lakatos. Our main interest here, however, is not necessarily connected to ongoing global change in science. We are rather focusing on the rationality of acting while engaged in scientific research.

“If the temperate rationalist finds that the real reason why a scientist believes that one theory is better than another is not that he has good reasons (on his own terms), but that believing this serves some non-scientific interest, he will seek a sociological explanation” (Newton-Smith 1996: 271-272). This claim is in accord with the aspirations of Prigogine and Maxwell discussed above. In some sense, they both are probably temperate rationalists. But they certainly try to go further. At least Maxwell rather stresses strengthening the idea of rationality than loosening it. There is nothing wrong with this. But the strengthening has to be accomplished at a new level. Prigogine has achieved this level. It is probably not the case with Maxwell and certainly not with Newton-Smith. In the case of Prigogine the social and cultural aspects play important roles. The role of the individual researchers has become crucial in his approach. In addition a whole new network of key terms that characterize the approach of Prigogine has been set up and elaborated. This network is the basis for the new rationality in the sense of Prigogine.

In conclusion, temperate rationalism of Newton-Smith is not an appropriate candidate for the role of the new rationality. It is a step in the right direction. It breaks out of the narrow borders of rationality set in classical science, but still remains on the same platform not making the crucial leap that has been executed wholly by Prigogine and partly by Maxwell. Unfortunately, Newton-Smith has just

tried to loosen the frames of classical scientific rationality grounding his arguments on the postpositivist tradition in the philosophy of science. He has accomplished his task successfully. However, this is not the new rationality we are looking for.

7. Conclusion

In the light of the most contemporary developments of natural scientific research we can say that the traditional understanding of rationality, which is well furnished for testing classical science, is not applicable in the new conditions. Today, we have to recognize the principal irreversibility of all ongoing processes. Therefore, the requirement of repeatability of experiments can no longer be applied. *The arrow of time* has been introduced permanently into the research of nature (In social research it is present anyway.) There are no initial conditions for any process. Any condition has its history. The determinist view on the world has to be dropped. The Laplacean demon is helpless in the world full of systems consisting of infinite number of particles. Chance governs, but not in a random way. There are certain patterns of development, which are followed in the case some definite conditions are present. Classical laws of physics have to be replaced by the laws of chaos. This is the situation, where rationality acquires a new meaning. Let us emphasize, however, that this concerns rationality of science. Rationality as preferred human behaviour has retained its general significance.

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ISSA Proceedings 2002 - Differential Argument Construction: Examination Of Attorney And Pro Se Arguments In The Restraining Order Courtroom



1. Introduction

This essay compares the argument styles of pro se parties (those who represent themselves) and parties represented by attorneys in a Restraining Order courtroom in Denver, Colorado, USA. We were interested in examining the extent of differences and similarities in argumentation and their implications upon questions of allocation of justice, the maintenance of a monopoly on court argument held by lawyers in the United States and, especially, the extent to which arguments by lawyers may systematically distort client narratives. Data was gathered in two years of ethnographic observation in the Restraining Order courtroom, as well as twenty-seven qualitative interviews and an examination of one dozen Permanent Restraining Order hearing transcripts.

Types of representation and styles of argumentation are discussed regarding how they influence perceptions and outcomes in the courtroom.

A brief overview of the Restraining Order process is needed to understand the context in which this communication occurs. The Restraining Order courtroom is a dedicated specialized court for survivors of domestic violence to obtain Restraining Orders against perpetrators of violence. An applicant (or plaintiff) is asking the court to order the defendant to have “no contact” with her[**i**]. The no-contact order may be accompanied by orders to vacate shared housing, for custody of children and for visitation. This is a two-step legal procedure in which the plaintiff must come to court two times. The first day in court is referred to as the Temporary Restraining Order. This first day in court the plaintiff is most often the only party present.

The plaintiff returns to court in approximately two weeks for her Permanent Restraining Order hearing at which time the defendant has a right to be present to either agree or disagree with a Permanent Restraining Order (PRO) being placed against him. If the defendant disagrees with having a PRO placed on him, then the case will go to hearing that morning. Permanent is, as it sounds, forever. Although this is a civil complaint, if the defendant violates a “no contact” Restraining Order issued by the court then he is liable for criminal charges.

Parties (plaintiffs and defendants) can represent themselves at these hearings or hire attorneys to represent them, but no person other than an attorney may represent them or help them in presenting their cases. The great majority of plaintiffs represent themselves in court. Those few who do have lawyers are nearly always represented by legal aid programs. Defendants are more likely to be represented by attorneys that they have hired.

We conclude that there were few differences in content presented between attorneys and the unrepresented. However, the style of presentation and, especially, the fact that one other than the party in interest is making the arguments may affect outcomes in the courtroom. In particular, when an argument is made by a representative on behalf of a party, it may be given greater credence, while similar arguments made by the party may actually detract from her credibility by playing into a judge’s preexisting conceptions about the situation of violence in the home.

2. Pro Se Plaintiffs

Most of these women are terrified of the defendant and find facing the defendant

particularly difficult, especially when they have to disclose incidents of how he abused her. For example, one plaintiff describes:

Well, to begin with I was nervous. I couldn't sleep because I knew he was going to be there. I was-I couldn't sleep, all I kept thinking was, what if he's outside, what if something happens in court...It was nerve wracking. I was very nervous, especially when I opened that door and he's sitting right there - looking at me - like, "oh man, you're gonna get it." It was very scary, it was scary...I didn't like that experience at all. I still think, I can still see him. There's times I close my eyes and I can still see him just sitting there looking at me.

Nerves are mentioned as something that influences how pro se women plaintiffs present their cases, especially when they conduct their own cross-examination of the defendant. Fear is evoked when put face-to-face in the same room as the defendant. As one plaintiff mentions,

It was difficult for me to go first because I wasn't totally prepared as to what was procedure. Yeah, the procedure, what was going to happen, what I really needed to present in my case...so I lost my train of thought, so that hurt me too I think...I was-I was nervous - I was internally shaking and I don't, so it's hard to represent yourself when you're nervous like that.

In addition to fear of seeing and confronting the defendant at the Permanent Restraining Order hearing, pro se plaintiffs often are not fully prepared to take on all of the tasks of an attorney. Pro se plaintiffs are often not prepared to go to hearing that second day in court because they get inundated with information their first day in court at the Temporary Restraining Order hearing and often cannot remember everything that was briefly explained by court representatives. This lack of preparation manifests in ways that are detrimental to plaintiffs' cases; for example, women often don't bring witnesses or other key evidence such as taped telephone conversations, hospital and police reports. Also because of nerves and fear women sometimes forget to convey key issues in their testimonies and cross-examinations. As one plaintiff explains,

I also didn't feel like I had an opportunity to make a clear guideline of visitation with my children...I don't really think I had an opportunity to say why I didn't, or conditions about visitation, because he tends to manipulate me through them, so I wanted some kind of condition, and all of a sudden my time was up. And I wanted to speak, but I didn't know how to address that.

Another problematic area for pro se plaintiffs is trouble framing stories in ways

that judges deem appropriate and acceptable. Some problems include court representatives perceiving women as being too emotional, women described as talking in a circular fashion versus a linear format, women talking about violence in general terms versus specific incidents, and women having trouble communicating about the violence in their lives that may not be readily understood by courtroom representatives such as judges who have different contexts and worldviews.

Women may frame their arguments in general terms instead of citing specific cases of violence. For example, women often talk about how, "he's a bad man," or "he's very violent," without offering examples as evidence to back up their claims. This may hurt their cases because judges are often looking for specific, linear stories that involve a scenario like, "on the night of June 10th, 2002 about 2am the defendant broke into my house and held a knife to my throat threatening to kill me and my kids woke up and saw the whole thing." One judge describes how male defendants may present their cases differently than female plaintiffs, "When you're talking about time frames, for example, when you ask, 'when did that happen?' a man's liable to sit there and tell, 'well it happened on December 22, 1998,' or something like that, whereas a woman is more apt perhaps to relate to an event, 'well I was pregnant at the time with my second child.' So that's where they're coming from to begin with in terms of the way they tell their story."

In fact, another related problem is that women will often downplay the violence they experienced when first put on the stand and questioned about it. For instance, they often lead with, "well he called me bad names like "slut" and "whore." Or they will talk about how he makes harassing phone calls and shows up at her house uninvited. Court representatives offer different theories on why this may occur including embarrassment, fear of angering the defendant, intimidation by the courtroom environment, high stress, as well as being ill-received the first time women told stories of violence to an official like a police officer. A court advocate also indicates how "saving face" may also be an issue for women in framing their stories that court might not take into consideration and that may indicate why women downplay relationship violence when the perpetrator is present.

Sometimes if you don't give an indication that you are scared - they're not going to give you a Restraining Order. And I saw that happen in Judge Z's courtroom, where she was asked, 'well, are you scared of him?' 'No, I'm not scared of him!'

Because if she said she's scared of him, number 1) it's a victory for him, and number 2) it makes her look like a punk - in her own eyes and maybe in her peers' eyes. Um, especially to the man who has beaten her up on many occasions, who has threatened to take her kids. So, yeah, she's scared of him, she just wasn't going to say it in those words. She's going to say it in other ways.

Unfortunately, women who do not frame their arguments and stories in ways judges expect may be denied protection. This is an area where attorneys (or others) may be able to act as translators between the court and the plaintiff so that they can mutually understand one another (Amsterdam and Bruner, 2000), which as Shotter (1993) asserts is quite difficult because mutual understanding happens rarely if at all.

Plaintiffs' stories are often not well received by the court when described in the ordinary way that they usually tell stories. Judges will often cut off a woman's testimony (Ross, 1996) in court, especially if she begins talking about things that the judge thinks is irrelevant as far as evidence needed to issue the Restraining Order. This problem is identified by many Restraining Order participants as women presenting their cases in a circular manner and judges expecting a linear account. The following excerpt from a county court judge details this problem:

The biggest thing I see...is women tend to be pretty confused in their testimony, sounding often doubtful...but I try to think what it would be like to be knocked down or thrown against a wall...And all those maybes frequently enter the testimony. There are comparatively few maybes in the defendant's testimony - very rare to hear him unsure of the story line. Um and so the fact finder is sitting there and saying, well here we have the linear, calm story that makes sense. Then I have this confused, emotional mess, and I want to be comfortable with my decision. 'Well, I've got oceans of reasonable doubt, man!' Now I mean I don't feel comfortable telling women, 'okay so first your story, memorize a linear account, eliminate all doubt'...But the two biggest things I see is that difference, and the fact that what's important to her story is going to be episodic, and one thing is going to remind her of another thing which happened a few months ago and then she's going to want to talk about it...The truth is I don't know what to do about that.

In addition to expecting women plaintiffs to construct a linear account of abuse in their intimate relationships, women are expected to deliver these stories in unemotional ways.

The women are also emotional and that makes a lot of decision-makers extremely uncomfortable. And again I can observe it without being sure what to do about it...There is real fear of women out of control, there is real anger that you can't tell the story without making me feel bad. We like our victims un-angry; we white knights like to rescue damsels in distress, not damsels who are pissed off. (County Court Judge)

So a woman who is getting up there telling her own story...one problem with that is it comes off as less truthful to a judge, who is again, who looks at it from this epistemological construction that a truthful story is one that's internally consistent and chronological and has no gaps and is the same every time she tells them and that's just not the way people tell stories, um when they're telling their own stories...And a lot of times they say it in ways that make the judge feel uncomfortable and that hurts them. They say it with a lot of emotion or with all the fear and dread that they really experience and judges can't handle that, they'd much rather just hear a calm and sort of distant explication of their story... (Attorney)

The above comments reify appropriate norms of communication messages (Berger & Luckmann, 1966) that are “un-angry” and unemotional which explains some of the difficulties court representatives have in understanding plaintiffs’ daily praxis (Bruner & Amsterdam, 2000; Lopez, 1992). This inability to understand plaintiffs has silencing functions since women can’t talk about their reality from their own points of views, but instead are expected to have the agency (Giddens, 1984) to frame stories in ways that resonate with judges’ life experience and worldviews.

The next area that makes it difficult for women to frame their arguments revolves around issues of different contexts that women and court representatives have. As one attorney describes, “all communication requires context...that sort of unspoken context of all languages...and the judges are usually coming at their decision or come from a background of different cultures from the people in the courtroom...I think it distorts communication...It definitely influences outcomes...” These different contexts can create difficulties regarding differing perceptions of violence and differing views of importance regarding socio-economic issues such as money. The following examples illustrate some contextual differences that can be obstacles in pro se women constructing their arguments and presenting their cases:

People have ideas about acceptable levels of violence and so sometimes what she speaks about is that he was too violent this time and it's very hard to convey that reality. Well sure he slapped me, but he had his hands around my throat this time and our kid was there. It is very hard to take in that reality and hard not to leap to she didn't mind being hit that much. And if she didn't mind, why should I mind, statute or no statute...she might not be very clear how very different than how peaceful my life is and that is a very peculiar statement...it may be the best approach to say, "you know this may be hard for you to understand, but I can handle some stuff, but this was too far. (County Court Judge)

People confuse different things to be in court and there I think of class again - I'm not sure what to tell people but comparatively often, not surprisingly if you're poor, property discussion may be perceived as a worse thing than being hit. It's harder to get a new car than free health care at DG perhaps. And then that strikes people as, 'oh god all she's talking about is the car,' how serious can she be?...for the very poor and the very rich things have disproportionate importance. And it takes a lot to admit it by a judge. (County Court Judge)

Plaintiffs have many difficulties in framing their stories in ways that judges and other court personnel would find believable such difficulties include differing worldviews and contexts, different storytelling styles, and differing knowledge of normative legal procedures. As Jerome Bruner notes, Law's demand that witnesses speak nothing but the truth violates the law of language that demands coherent and never merely true stories (Amsterdam & Bruner, 2000, p. 110). A further constraint in arguing cases in Restraining Order court for women plaintiffs involve issues of culture. "Like one girl - the Spanish-speaking girl I remember - couldn't concentrate - I don't think she could understand what 'threat' meant" (Plaintiff). Cultural differences is another contextual issue that makes understanding difficult. As well some cultural norms are antithetical to courtroom procedures such as disclosing 'private family matters' in a public courtroom.

Hispanic women in general don't feel as comfortable doing the very uncomfortable- playing the uncomfortable role of having to disclose what happened in the family. So for various ethnic groups it gets more difficult to communicate what had happened so I think that plays a part in able to obtain a Restraining Order if people are unwilling to or unable to impart information that the legal system requires. (Attorney)

Plaintiffs are being asked to construct stories and make arguments that are often in conflict with cultural norms of privacy and gender rules. This conflict could result in women not receiving protection from the state if they are unable to frame arguments the ways the state requires. Another problematic area in non-English speaking women's presentation is having to disclose intimate partner violence to men outside of the family, quite often white males in power such as interpreters, attorneys, and judges. This too can affect what is disclosed and influence outcomes.

Because women plaintiffs are often overwhelmed by intricate court procedures there are court advocates present from a non-profit agency Project Safeguard who will answer questions for women-in-crisis and help guide them through the Restraining Order process, but not represent them as would an attorney. Advocates can play a key role in making court a less daunting and unfamiliar process for women.

I just really appreciate the advocates being there - people walking you through it. That would have been awful if I was standing up there and not known that I could ask those questions, and not knowing how to ask them or what questions to ask...
(Plaintiff)

Because judges listen for stock stories of violence that fit into neat categories of what does or does not warrant a Restraining Order, plaintiffs' knowledge of types of questions to ask defendants during cross-examination has the potential to elicit evidence that may also increase chances of receiving a Restraining Order. The advocates sometimes share a list of questions for pro se plaintiffs to ask during cross-examination, questions like: can you tell me what you are like when you are angry? Have you ever been to domestic violence classes? What's our children's doctors or teachers' names? In our experience, women who have these objective questions to ask, in addition to particular ones unique to the violent relationship, appear to be able to better argue their cases and win in court.

Another way plaintiffs and defendants argue cases is to evoke social identity roles such as wife/mother and husband/father. As mentioned previously, plaintiffs often describe things in general terms such as on a continuum of good to bad. So often in Restraining Order court we hear a lot of "he said/she said" type of arguments in which she claims she's a good mom and he's a bad dad and vice versa as part of elevating one's own credibility and trying to damage the credibility of the opposing party. The following hearing excerpt aptly represents how pro se

plaintiffs and defendants use familial and religious identifications to argue their cases in Restraining Order court.

Plaintiff: My oldest one, he was about six. My little one, she was about three. I was pregnant. He used to hit me and try to choke me, being very jealous, very possessive; he didn't let me go to work, didn't let me go to school. I was a slave for many years to him...The kids used to come back crying because he hit the other one with a belt in front of the little one...He's not a good father.

*Defendant: My wife has lied many times before the court. This is not the first Restraining Order; it's been seven or eight times. I work at a church. I'm a pastor of a church...I've tried to live well with her, but she's abusive. She needs mental health. She's very emotional and nervous. The day of the problem I was returning from a pastor's meeting. I tried to give her a kiss and she was mad. Her mother has a very strong and bad influence over her...She began to argue and I told her to be quiet and she began to insult me, to push me, and she grabbed my right arm and scratched me and quite a bit of blood came out...I have tried to reconcile with her because of my children and also because I'm a Christian[**ii**].*

In the above excerpts we see displays of constructed and contested identifications in the interactants' testimonies. For example, the plaintiff avows her identification as a mother who has been abused, and ascribes an abusive identification to the defendant as someone who beats a pregnant woman as well as his kids. The defendant contests these identifications in a number of ways. He ascribes an identification to his wife as a liar, trying to undermine her testimony as credible; he also claims she's mentally incompetent as well as abusive. While ascribing negative identifications to his wife, the defendant tries to elevate his own credibility by invoking his role as a pastor, a Christian, and a caring father - staying with his abusive wife for the sake of the children.

When both the plaintiff and defendant are pro se there appears to be more of a level playing field than when one of them has an attorney. When both parties are pro se judges may lean in favor of the male who constructs a story in ways judges prefer.

3. Pro Se Defendants

Defendants as well as plaintiffs utilize role identifications on a good/bad continuum as evidence for their arguments. However, as mentioned previously by judges and others, defendants' testimonies are much more likely to be linear

versus circular and thus in accord with judges' expectations of a creditable story.

So you know unless he's a real thug, and most guys aren't real thugs, he will have put together a story that protects his ego, and it will probably be linear, and it will involve issues of being in control, not being angry, wanting to help her, wanting to keep her safe from herself, wanting to keep him safe from herself, wanting to keep the kids safe from herself. (County Court Judge)

Defendants tend to deny that they are abusive and often, as a tactic, claim that they are the abused ones.

The guy is much more likely to deny the obvious. And even though it often works he's very likely to be there saying, "no, I wasn't angry, I'm not angry at all. Nope, nope it was all her, I was in control." Or my favorite, "if I was that out of control I would have really hurt her, she can't be telling the truth..." (County Court Judge)

Also a defendant will often claim that he only responded to her physically abusive acts towards him by pushing her away. As Zorza (1998) argues, abusers often rely on false myths and folk knowledge about domestic violence survivors (e.g., women are mentally ill, women lie about the abuse, and women cause the abuse), and the abusers testify that their partners embody these myths to gain sympathy from court officials who may believe in the myths themselves. In the hearing transcripts we consulted, it also appears that defendants will frequently argue that the plaintiff is an adulteress, lazy, and and/or a user of drugs or alcohol as an attempt to undermine her credibility and/or as a justification of why he hit her/stalked her.

4. Attorney for Plaintiff

Having an attorney is seen by many women and court representatives as helpful in part because as one attorney asserts, "the attorneys know what the judge is looking for." Attorneys may also act as protectors as one plaintiff describes, "it felt good for a change to have a big, strong person beside me - powerful and I needed that." Attorneys also know the processes and procedures that pro se plaintiffs do not and can be a sounding board for women to tell their full stories that would not be acceptable to judges.

The attorney can say, you tell me the story, but what we need to tell the judge is when we get to the following...And that gives her an opportunity to tell her story, but to impart the knowledge that the judge needs to know...and if an attorney can

say, "but did he do anything to physically harm you?" Then she can say, "well, yes, there was the time he picked up a fireplace poker and hit me with it," but he really hurt my feelings when he insulted my mother - there are some lines that should not be crossed and that's one of them.

Consequently, the security of having an attorney has the potential to allow space for women to tell full stories and prepare women to focus on the specific acts of violence - stories or catch phrases that will be rewarded with protective orders. Judges also like to communicate with attorneys because it is easier for them to talk with someone who speaks the same legal language, "well you've got more of the head approach so it becomes a little easier for me to communicate where we are going" (County Court Judge). Because lawyers and judges share a common speech genre (Bakhtin, 1986) of legal etiquette and jargon then they are much more likely to reach some sort of mutual understanding than plaintiffs would, particularly if they have similar worldviews and contexts that would facilitate understanding. Attorneys have the ability to bridge the gap between plaintiffs and judges by translating women's narratives into stock stories that judges are prepared to hear. However they may do so at the cost of reinforcing those established stock stories and thus occluding a portion of women's experience (Giddens, 1984).

5. Attorney for Defendant

When attorneys are present it is mostly defendants who have them due, in part, to financial isolation of a woman in an abusive relationship. Consequently, defendants often have more resources to hire attorneys, and "there aren't many women who come into court on domestic violence cases that have attorneys, there's few of them" (County Court Judge). Defendants' attorneys' argument style is typically aggressive.

What you often see and this is interesting to me as a family law type, is women hiring family law - legal aid or private attorneys. Where the men or the respondents tend to hire criminal lawyers to represent them, even though this isn't a criminal hearing. The criminal lawyer ones take the form of bears, they're the ones that are on the attack. Family law types tend to try and work together to settle things, but criminal layers are much more trying to cut the party down.
(Attorney)

There are several forms of attorney aggression including harassing and

intimidating women before and during court sessions.

His lawyer kept coming up to me and telling me that I was supposedly lying about him hitting me that I shouldn't get the Permanent Restraining Order on him...And he kept telling me that I was supposedly lying about him hitting me that he had never hit me and that there's no way I could pull this off. That's what he kept telling me. (Plaintiff)

They will try to talk her out of it and that's what I - what I have seen mostly with every attorney - when she doesn't have an attorney, but he does...or trying to scare her into um vacating the order by saying, "well, we're going to bring up your doing drugs" or...so they use a lot of intimidation tactics. (Advocate)

Another form of defendant attorney aggression is shaming and blaming women in cross-examination.

And then to be cross-examined too, and have someone say, "no you didn't - you're weak, stupid, defensive, ah why didn't you leave before?" It is blaming, it is putting the fingers all back on you and saying, "oh you're complaining, you had another choice you could have left earlier." (Plaintiff)

Butler & Bowe (1996) explain that shaming and blaming survivors of domestic violence often take the form of casting blame on women for the abuse they suffered. "American patriarchal society has relieved men of much of the responsibility for their abusive acts while blaming victims and sometimes condoning abuse (Locke & Richman, 1999, p. 2). Defendant attorneys often minimize women's fears via blaming and shaming and outright denial that the abuse occurred.

I've seen many, many women the majority of times, walk out without Restraining Orders when they didn't have attorneys and the defendants did. But, what ends up happening there is - whether the attorney intends it or not - it acts as another level of intimidation for the plaintiff. Um, the defendant most certainly means it to be that. (Advocate)

The presence of an attorney for the defendant can also intimidate the judge, "I think that judges are very aware of...dotting their "i's" and crossing their "t's" when an attorney is present" (Advocate). In addition to intimidating judges, we have seen where attorneys for the defendant will use manipulative tactics to align

with the judge by saying things like, “your honor, we shouldn’t allow this Restraining Order to be made permanent because...” or “I know plaintiff is not aware of court procedures, but...”

6. Discussion

Plaintiffs and defendants use many similar argument styles in presenting their cases in the Restraining Order court such as positive self-avowals regarding social identification roles like good: wife, mother, dad, and father as well as negative other-ascriptions such as bad: wife, mother, dad, and father. However, defendants are described as having more credibility than plaintiffs due to relying more on chronologically -ordered, linear story lines, rather than the circular context-laden emotional appeals that plaintiffs often exhibit. Defendant attorneys will often utilize this disparate gender story structure to the defendant’s advantage. Instead of claiming these characterizations blatantly as plaintiffs and defendants do, attorneys tend to infer these by asking questions that will prompt answers describing stories that paint these pictures for the judge. For example, in one hearing the attorney asked a series of questions about how the defendant procured citizenship for his wife and her daughter, thus the inference was that he is a good husband and provider and the judge attributed these positive characterizations to the defendant in his findings. Consequently, plaintiffs, defendants, and attorneys all use ethical appeals in their legal arguments.

However, few attorneys are knowledgeable about Restraining Order laws and successful argument styles in this court, and fewer still make direct appeals based on legal doctrine or frame presentations with any apparent eye on narrative theory. Nevertheless attorney outcomes were more likely to be favorable.

One primary advantage in having an attorney argue for you in this particular court is that she can be a physical and mental buffer between the plaintiff and the defendant or his attorney. This is an imperative aspect because there is much verbal and nonverbal intimidation occurring against historically battered women. As one attorney noted, “but when he gets to cross-examine her he can sort of utilize the resources of the state to reenact the abuse.”

Finally, it appears that having a third party such as an attorney would elevate one’s case due to having a person outside of the relationship believe your side and advocate on your behalf. So having a somewhat neutral person like an attorney can boost the ethos or credibility of a pro se party because the appearance of sponsorship by a third party may lend credence, because a third party can make claims that would sound boasting, evasive, or half crazy coming from a litigant.

Finally there may be value in blanching these cases of some of their emotional content by means of agent representation; forcing judges to directly confront the emotions of battering situations often hurts women's cases perhaps because of avoidance strategies or cognitive dissonance on the part of the judge (O'Keefe, 2002).

However, some courtroom participants argue that what attorneys do is not related to their training or does not require a limited-entry monopoly such as provided by a law degree and bar admittance.

I have seen women with lawyers where the lawyer basically, I don't think, did anymore for her than she could have done for herself. She basically had a pretty good case and he just stood up and spoke for her. When clients are pro se the major difference is that they're speaking on behalf of their own selves. And when there is an attorney there somebody else is speaking on their behalf - somebody who is well versed in the language of the court (Advocate).

Indeed, some attorneys argue that the omnipresent court advocates who often spend more time in Restraining Order court than do some attorneys would do just as good a job representing women plaintiffs in this court.

I think maybe what we need to do is make Project Safeguard a party in the action...And so Project Safeguard could go on the record - and that's all that the attorneys do - they just explain to the court what the petitioner is having difficulty explaining. So that's a role that advocates could easily fill. (Attorney)

I think the one suggestion I have for your study is to open up the lawyers' monopoly...there's no reason why advocates can't represent women, other than lawyers maintain a stranglehold on representation for no good reason other than to make lots of money off of it...There's lots of women and the best ones I suspect would be people who were victims and got Restraining Orders and could actually speak on other women's behalf. And the Project Safeguard people are doing 90% of that now they're just not allowed to stand before the judge and make the arguments and there's no reason to bar them from doing that. So that would be my suggestion. (Attorney)

(See also Bezdec, 1992)

7. Conclusion and Implications

Legal systems operate principally to settle disputes, enforce societal prescriptions

and allow for appearance, at least, of public input into societal decision-making. In popular conception, legal systems also serve as forums for truth finding and the allocation of justice. In the latter two matters at least, a significant drag on the Restraining Order courtroom is differential in access to legal services.

We find that this differential is likely to result in systematically more favorable outcomes for represented parties; in this case the overwhelmingly male perpetrators of domestic violence.

Where we expected to find vast disparities in argument styles between lawyers and unrepresented parties, instead we found lawyers making similar appeals in a (slightly) different voice. Attorneys have potential to change participant stories and court understandings of the world by using poetics and rhetoric to recreate client life situations in terms a court can understand. (See Soloman, 1954). Under present conditions this result is rarely realized and courts receive distorted visions of the world as one side of this debate disproportionately makes its case through an agent representative.

Lawyers failed to effectively make appeals to legal rules of evidence or to frame stories in terms of legal doctrines. Lawyers made little apparent use of advances in narrative theory (Burns 1999). They used sweeping generalities, reprehensible personality and guilt by association appeals with similar frequency, as did pro se litigants.

The difference in outcomes for attorney- made appeals suggests that there is value in the dynamic of an agent making an appeal on behalf of another (Aristotle in Soloman, Ed. 1954), not least because the agent can make the appeal without reinforcing negative stock stories that judges hold about the battering situation: excuse-making and failure to take responsibility on the part of the male; overly emotional and mentally unstable exaggeration on the part of the female. Attorneys may also enact social connectivity with judges as part of a rarified elite accorded monopoly power over access to justice. As such attorney effects may suffer composition effects: the same advantages may not be apparent as more are represented. Loosening the monopoly offers the promise of fuller mutual understanding among courts, people, and society.

Nevertheless our recommendation is that, in the restraining order courtroom at least the lawyer's monopoly should be relaxed (cf. Bezdec 1992). Lay advocates could offer the same advantages of agent representation while lessening the impact of disparate access to justice owing to attorneys' exclusive hold. In the context of the Restraining Order courtroom, institutions affect interactions in

ways that may limit women's knowledge, ability to tell their stories, and the likelihood that court personnel will define them as credible and worthy of Restraining Orders.

NOTES

[i] In this essay the authors refer to plaintiffs as women and defendants as men. This assumption is consistent with literature that asserts the majority of people who are battered are women, and those who batter are more often men (National Coalition Against Domestic Violence, 1997).

[ii] Permanent Restraining Order hearing number 1 of 12. Transcripts on file with the author. Transcripts requested and transcribed from the Court Transcriber, Denver County Court, Denver, CO, USA.

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ISSA Proceedings 2002 - Thinking Critically About Media Violence: Does Media Violence Contribute To Real-World Violence?



The United States has one of the highest homicide rates among developed nations. While the overall crime rate has dropped in recent times, the occurrence of violent crimes involving children and adolescents has not declined. For Americans aged 15 to 34 years, homicide is the second leading cause of death, and for young African Americans, 15 to 24 years, it is the leading cause of death (Foege, Rosenberg and Mercy 1995). During recent times there has been passionate and ongoing debate about whether there is a causal relationship between media violence and aggression in society. Current events, especially in the United States, have highlighted the need to understand the nature and causes of domestic violence. Recent school killings have been shocking and naturally enough, debate continues on why such gratuitous violence does occur. Is violence an intrinsic part of human nature, something innate, or is it learned? Or is it both? Reflective persons everywhere look for causal connections and wonder if media violence is a causal factor and, if it is, how much does it contribute to real world violence.

Almost everyone has his or her own theory about what causes or contributes to violence. Among other theorists, this paper will focus primarily on the work of Sissela Bok (1998) and George Gebner (1993). They have for a long time been investigating the role of media violence as a contributing factor to real world violence. It is clear from the research that has been done that there are no easy, universally agreed upon answers. Some believe that focusing on media violence makes it easier for United States citizens to avoid or ignore more significant causes such as poverty, poor parenting, or the easy access to guns. Still many wonder if the United States culture always been as violent as it is today or is the

media simply presenting Americans with a greater exposure to violence, wherever it occurs, for purely economic reasons? Good news, we all know, is not particularly exciting. It neither sells newspapers nor boosts TV ratings. Bad news, on the other hand, events such as murders, rapes, assaults, and general mayhem, does sell. "If it bleeds, it leads," as the media adage goes.

During the nineteenth century, educators and others warned about the effects of lurid dime novels and newspaper crime stories on the young. In the early twentieth century, motion pictures and radio were both viewed as significant social threats. Today, concerns are expressed about violence in computer games, popular songs, and on the Internet. Throughout the evolving changes in media technology, some fundamental questions remain the same: Do depictions of violence in the media somehow contribute to real-life violence such as the Jonesboro and Littleton tragedies in the United States? Are viewers of media violence encouraged to commit real world violence?

Those of us involved in the teaching of critical thinking know how difficult it is to make convincing causal arguments. In thinking about media violence and its effects none of us wishes to be accused of committing either "the post hoc, ergo propter hoc," or the oversimplified cause fallacies. Hopefully both of these fallacies will be avoided in the discussion that follows, and an argument will be made that media violence is a significant contributing factor to real world violence.

Causal arguments about a general relation between two things such as that between smoking and lung cancer, relate to the causal effects in an entire population. This means generally that a certain factor "X" causes a higher rate of factor "Y" in the population as a whole, not that every individual who uses X will get Y. Consider, for example, the claim that cigarette smoking causes cancer. This does not imply that everyone who smokes will get cancer. Rather it means that smoking cigarettes causes a higher rate of cancer in people who smoke as opposed to people who don't smoke. Also when one talks about a cause factor, one need not mean to suggest that it is a necessary or sufficient condition.

Smoking cigarettes, for example, is not a necessary condition for getting cancer (even lung cancer). People who do not smoke can get lung cancer. Smoking cigarettes is also not a sufficient condition for getting cancer. Some rare individuals may smoke cigarettes nearly every day of their lives, and live to be a hundred without getting cancer, as the late American comedian George Burns did. So cigarette smoking is neither a necessary nor a sufficient cause of getting

lung cancer. Rather, we might say that cigarette smoking is a contributory factor in developing cancer for a population of people who smoke, raising their risk of acquiring cancer. For most of us the evidence constitutes good grounds for not smoking. Are we prepared now to say that media violence causes real world violence or that is in some way a contributory factor as so many studies indicate and the public seems to believe?

As the Center for Media Literacy argues “The never-ending debate about media violence has been fueled by one unanswerable question: ‘Does watching violence cause someone to become violent?’ The reason we’ve gotten nowhere on this issue for 40 years,” the Center continues, “is because this is the wrong question to ask about violence. The real question the Center claims is “What is the long-term impact on our national psyche when millions of children, in their formative years, grow up decade after decade bombarded with very powerful visual and verbal messages that demonstrate violence as the preferred way to solve problems and normalizing fear and violence as ‘the ways things are?’ (Center for Media Literacy, 2002). Of course, this rhetorical question does not prove anything but it does make us wonder perhaps if we have become desensitized to the violence that we see.

In her recent book, *Mayhem; Violence as Public Entertainment*, Sissela Bok contributes to the debate, with special focus on works produced, marketed, and consumed as entertainment violence, for pleasure, excitement, and thrill. She wonders if they contribute to callousness and violent crime, as large majorities of Americans tell pollsters, or do they merely provide harmless amusement? In either case, might such works also help viewers confront and deal with violence in real life, perhaps informing them better or satisfying some deep-seated need that might otherwise find more brutal expression? Is it alarmist or merely sensible to ask with Bok about what happens to the souls of children nurtured, as in no past society, on images of rape, torture, bombings, and massacre that are channeled into their homes from infancy?

There’s nothing new about the attraction of violence – people have been thrilled by it since the beginning of time. As Bok points out, however, it is only in the last five decades that it has become possible for people to tune in to violent programming with graphic immediacy on home screens at all hours of the day and night (Bok 1998:51). Television brings into most homes news reports of rape, torture, and murder worldwide, rebroadcasting the most brutal scenes such as the Rodney King beating or the Oklahoma City Bombing over and over until they become

burned in the mind's eye. In some cities what has been called the "Mayhem Index" - the percentage of local news reporting that deals with violent topics such as crime, war, terrorism, and disaster - reaches levels over 75 percent. And during the 1990s, while the homicide rate dropped in the United States, network evening news coverage escalated: between 1993 and 1996, it soared by an average 721 percent, compared with the three previous years.

There are many ways, Bok tells us, by which attempts are made to cutoff debate about violence: Some of the more important ones are:

a. Violence cannot be defined specifically enough. Some define it broadly others narrowly. Line drawing is needed, she tells us. We need some agreed upon baseline minimal definition. She suggests the Oxford English definition: violence is "the exercise of physical force so as to inflict injury or damage to persons or property." So portrayals of such violence would then constitute media violence.

b. Another argument holds that our (American) society is so inherently violent (our country's history of slavery, frontier violence, labor strife, racial conflict, crime and warfare) that debates about media violence are largely beside the point. Who could possibly imagine that policies with respect to media violence could have much effect on attitudes so ingrained in our national psyche? It's true that America has the highest level of homicide among advanced industrial democracies, but many developing societies have homicide rates several times that of the U.S., Colombia, South Africa, and Russia, are three countries in the lead. Bok claims that invoking perennial American patterns does nothing but obscure inquiry into explanations for present levels of violence and into contributing factors and remedies.

Perhaps the most important objection is that blaming the media, making it the scapegoat for violence, diverts attention from the true roots of violence. Anyone looking for causes of rampant violence in American society, one author holds, would do better to stick to the familiar list: poverty, racism, parental violence, the ready accessibility of guns. There is little political will for a war on poverty, guns or family breakdown. Instead, one author contends, we are offered a crusade against media violence... a feel-good exercise, a moral panic substituting for practicality. Political leaders, these writers claim, exploit public concern over media violence to avoid dealing with more pressing social problems.

Such challenges, Bok holds (1998:5-10), are valuable insofar as they caution against exclusive focus on media violence, or indeed on guns or any single factor.

There is clearly good reason, she holds, to address the role of each and every one. To concentrate on media violence, in an effort to understand societal violence more generally, would be not only mistaken, but also dangerous. But it would be equally misguided to allow such claims to block any concern with media violence or with any other risk factor until all the other problems contributing to societal violence have been adequately dealt with.

Complex multidimensional human problems cannot be effectively addressed in this manner. "Take heart disease:" she tells us, "No one maintains that just because a number of risk factors such as smoking and heredity and cholesterol contribute to the prevalence of this disease, we should focus on no single one of them or on the ways in which they interact. Instead research and public health policy must continue to take each into account, including those of lesser magnitude. So long as media violence is not seen as the only contributing factor, moreover, the claim that paying attention to it 'represents an easy way' out is beside the point. Why not address the easier as well as the harder aspects of the problem?" she contends.

The Impact of Media Violence

There have been literally hundreds of studies done on the impact of media violence. One headed by Al Austin from PBS's Frontline and his associate, Leonard Eron, a psychologist was begun in 1960. This study is reported in PBS's Frontline documentary entitled "Does TV Kill?" In the program Austin and his crew set up video cameras to record some of the children in Eron's study while they watched television.

In 1960 Eron interviewed 835 third graders in Hudson, New York. He found the more violent the TV programs they watched at home; the more aggressive they were in school. He came back in 1971, and again in 1980, to re-interview the same subjects and found that a higher proportion of those who had been heavy consumers of TV violence as children turned out to have problems with violence in late adolescence and early adulthood. The more aggressive they were at eight, the more aggressive they tended to be at thirty: they logged more arrests and more criminal convictions, were more aggressive in their homes, and had more aggressive children.

Returning again in 1993 Eron's interviews confirmed his earlier findings about the links between television viewing and higher levels of aggression. For most reporters following Eron's study the greatest revelation was not about the role of

television violence but “the stupefying amount that people watch”. It was only five decades ago that the first American families acquired their first television sets. By now 98 percent of households have television, and a majority of children have sets in their bedrooms (Murray 1994:811). The typical American household has the television set on for more than seven (7) hours a day, and children ages ten to eleven watch it on an average of three to four hours a day. With TVs in their own bedrooms, children have become more isolated from their parents: the time spent by parents with their children has continued to dwindle; a 1992 study shows that children have lost ten to twelve hours per week of parental time compared with 1960.

Sizing-Up the Effects

A great deal of research has been done to sort out the kinds and amounts of violence in the media and to learn how exposure to media violence affects viewers, and especially children. Focusing primarily on children, they all confirm the common sense observation that the screen is a powerful teaching medium, for good and ill, when it comes to violence as to all other materials. The following summarizes the 1993 report by the American Psychological Association on media violence, which claims

- a. There is absolutely no doubt that higher levels of viewing violence on television are correlated with increased acceptance of aggressive attitudes and increased aggressive behavior.
- b. Aggressive habits learned early in life are the foundation for later behavior.
- c. Aggressive children who have trouble in school and in relating to peers tend to watch more television; the violence they see there, in turn, reinforces their tendency towards aggression, compounding their academic and social failure. These effects are both short-term and long lasting. What a child sees as an eight years old can have effects such as serious violent criminal offenses and spouse abuse 22 years later – a longitudinal study showed.
 - a. Even those who do not themselves increase their violent behaviors are significantly affected by their viewing of violence in 3 further ways;
 1. Viewing violence increases fear of becoming a victim of violence, with a resultant increase in self-protective behaviors and increased mistrust of others,
 2. Viewing violence increases desensitization to violence, resulting in calloused attitudes towards violence directed at others and a decreased likelihood to take action on behalf of the victim when violence occurs (behavioral apathy) and

3. Viewing violence increases viewers' appetites for becoming involved with violence or exposing themselves to violence.

This report, like most of the research that it surveys, speaks of viewing violence as correlated with effects rather than as directly causing them. And it specifies a number of risk factors capable of contributing to the first of these effects - increased aggression. Among these contributing risk factors, are access to firearms, substance abuse, and the experience of abuse as a child. These latter factors doubtless play a larger role than media violence.

Psychologist Richard Slaby, a member of the APA report committee, has named these effects "the aggressor effect, the victim effect, the bystander effect, and the appetite effect. Not all these effects, he suggests occur for all viewers; much depends on how they identify themselves in relation to the violence they see and on their ability to evaluate such programs critically (Slaby1993:1). The American Academy of Pediatrics, the AMA, and the National PTA are among the many organizations signaling such effects and calling for reduced levels of television violence and greater parental involvement with children's viewing.

In the early 1990's researchers frequently mentioned the estimate that the average child leaving elementary school has watched 8,000 murders and more than 100,000 acts of violence. Because network television was for decades the primary source for screen violence in most homes, its role has been especially carefully charted in this regard. In recent years, growing access to numerous cable channels, slasher and gore films on video, and video games offering players the chance to engage in vicarious carnage of every sort, add greatly to the amount of violence to which viewers now have access. As a result, it may well be necessary to revise the earlier figures sharply upward (Hamburg 1992:192).

Taking a closer at the four effects:

A. Fear

Even though the first effect on the public - increased levels of aggression - the other three have a more widespread and debilitating impact on adults as well as children. Exposure to media violence is often singled out as among the factors contributing to the heightened fearfulness, but concern has been directed also at the depression, and pessimism that affect a far greater proportion of children and young people today than in the past.

Studies show that the sense that threats abound in the outside world is common among heavy TV viewers of all ages. George Gerbner's studies show that "heavy

viewers (more than three hours a day) are more likely to feel at high risk of victimization from violence, take their neighborhoods to be unsafe, and regard the world as 'mean and gloomy'" (Gerbner 1993:193).

As noted earlier newscasts play as large a role in the increased sense of fear as entertainment violence. The media have dwelt to a vastly disproportionate degree on rare forms of violence such as serial killing, terrorism, and kidnapping. Instant and long-continued media coverage of the most shocking crime stories, (such as the murders of Nicole Brown Simpson and Ronald Goldman and that of JonBenet Ramsey), add to the sense of dread about dangers "out there" and help explain why a majority of Americans wrongly believe that crime is uniquely high and rising in the United States (Bok 1998:62).

Because disadvantaged youngsters in poor urban communities watch more TV than other children, they are more likely to experience fear and vulnerability, especially if violence in their own families or neighborhoods corroborates with what they see on the screen. Studies indicate that parents either fail to anticipate or even to notice their children's fright responses to mass media, and that enduring, and sometimes severe emotional disturbances occur in a substantial proportion of children.

B. Desensitization

No one can possibly supply genuine compassion for all the disasters and epidemics and crimes witnessed on the screen. The multitudes of victims blur in many people's minds; the more so if they feel unable to imagine how they might be of help even to a few sufferers. The result can be what has come to be called "compassion fatigue," a state of mind that makes it possible to view violence as an uninvolved bystander (Bok:1998:68). Such compassion fatigue is often premature, but for individuals feeling bombarded by information about murder and mayhem, a measure of desensitization may be an increasingly indispensable psychological survival skill to avoid the resulting debilitating anxiety.

Bok argues that to the extent that people seek out violent programming for the enjoyment and the excitement that the violence itself can provide, to that degree they may run a higher risk of suppressing empathy - the crucial ability to feel with and for others and to respond to their suffering. For many philosophers, Kant, for example empathy and fellow feeling form the very basis of morality. The capacities for empathy, for feeling responsibility towards others, and for reaching out to help them can be stunted or undermined early on, depending on the child's experiences in the home and neighborhood. When might violence, and especially

entertainment violence, be most likely to counteract the normal development of resilience (the ability to bounce back) and empathy among children? The children most heavily exposed to such violence are at the greatest risk when they are deprived of adequate parental empathy, nurturance and guidance (Bok 1998:70). What about adolescents and adults? Their own exposure to violence may make it easier for them to take a passive bystander's attitude when witnessing aggression and the infliction of pain. For example, research on college-age men who view films portraying violence against women suggests that the viewers became increasingly comfortable with the violent content of the films, eventually considering it less offensive and degrading to the victims and the films less violent than they had initially thought (Donnerstein, E., Slaby, R., & Eron, E. 1994:237). A growing proportion of young adults appear to perceive nothing problematic about TV violence. There is thus a "video violence" generation gap. Those under 30 are far less bothered by violence on TV, less likely to feel that violence is harmful to society than are older Americans.

The Third Effect: The Appetite for More Violence

Bok develops this effect with a description of a 14-year-old boy and his love for viewing violence. He spends more than \$100 a year at the arcade playing the latest version of Mortal Kombat and knows such moves as the "head inflation," the skull rip," and the "death scream." With his parents footing the bills, he spends far more than that on home versions of this and other games and on videos and movies. As parents of other youngsters attest, and as soaring sales figures for such games confirm, this boy's tastes are by no means unusual (Bok 1998:79).

Why be concerned? Isn't all this violence make-believe? It is their children's passionate involvement with violent programming along with their eerie lack of empathy toward suffering that causes growing numbers of parents to worry. They worry that the pleasure derived from such games may lead them to regard violence as a more acceptable way of dealing with problems and victimization as a more tolerable so long as it befalls others, not themselves. We are then left with the question of whether the appetite for violence also makes it easier for some people to shift from enjoying it on screen to resorting to it in real life.

The 4th Effect - Increased Levels of Aggression.

Media violence remains at the center of public debate because of the belief that it glamorizes aggressive behavior, removes inhibitions toward such conduct,

arouses viewers, and invites imitation. Public concern about a possible link between media violence and societal violence has further intensified in the past decade, as violent crime reached a peak in the early 1990's, and yet has shown no sign of downturn, even after crime rates began dropping in 1992.

When it comes to viewing violent pornography, levels of aggression towards women have been shown to go up among male subjects when they view sexualized violence against women. Viewers, who become accustomed to seeing violence as an acceptable, common, and attractive way of dealing with problems, find it easier to identify with the aggressors and to suppress any sense of pity or respect for victims of violence. In explicit depictions of sexual violence, a report by the American Psychological Association's Commission on Youth and Violence, concludes, it is the message about violence more than the sexual nature of the materials that appears to affect the attitudes of adolescents about rape and violence towards women (American Psychological Association 1993: 34). Media violence has been found to have stronger effects of this kind when carried out by heroic, impressive, or otherwise exciting figures, especially when they are shown as invulnerable and are rewarded, not punished for what they do.

While the consensus that such influence exists grows among investigators, as research accumulates, there is no consensus whatsoever about the sizes of the correlation involved. Most investigators agree that it will always be difficult to disentangle the precise effects of exposure to media violence from among the many other factors contributing to societal violence. Such tentative estimates that have been made suggest that the media account for between 5 and 15 percent of societal violence. As Bok warns us, however, these estimates are rarely specific enough to indicate whether what is at issue is all violent crime or such crimes along with bullying and aggression more generally (Bok 1998: 85). Although America's homicide rate has declined in the 1990s, the rates for suicide, rape, and murder involving children and adolescents in many regions have too rarely followed suit. For Americans aged 15 to 34 years, homicide is the second leading cause of death, and for African Americans, 15 to 24, it is the leading cause of death. In the decade following the mid-1980s, the rate of murder committed by teenagers 14 to 17 more than doubled.

Whatever role the media are found to play in this respect, to be sure, is but part of the problem. Obviously, not even the total elimination of media violence would wipe out the problem of violence in the United States or any other society.

Nevertheless, the television screen is the lens through which most children learn about violence. Through the magnifying power of this lens, images of shooting, family violence, gang warfare, kidnappings, and everything that contributes to violence in our society suffuse their everyday life. It shapes their experiences long before they have had the opportunity to consent to such shaping or developed the ability to cope adequately with this knowledge. I shall conclude with Bok, with her claim that "the basic nurturing and protection to prevent the impairment of this ability ought to be the birthright of every child" (Bok 1998:89).

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ISSA Proceedings 2002 - Persuasive Success And Normatively-Desirable Argumentative Conduct: Is It (Persuasively) Bad To Be (Normatively) Good?



One recurring concern in argumentation studies is the interplay of descriptive and normative approaches to argument. For example, van Eemeren, Grootendorst, Jackson, and Jacobs (1993) have discussed problems encountered in using normative models to describe natural argumentative discourse. This paper addresses a different but related aspect of the relationship of descriptive and normative concerns, by comparing the results of studies of factors influencing persuasive effectiveness (that is, research findings indicating what makes for persuasive success) against conceptions of normatively-desirable argumentative practice (particularly as suggested by the pragma-dialectical approach). The general question is that of the potential tension between practical persuasive success and normative directives about argumentative conduct. The nature and extent of such tension is an empirical question, and hence this paper closely inspects existing persuasion research to see what light might be shed on whether (and the degree to which) persuaders face a choice between being normatively sound or practically persuasive.

1. Preliminaries

Three preliminary observations are appropriate concerning some uncertainties attendant to this undertaking.

First: There is no single detailed normative argumentation framework that enjoys thoroughgoing acceptance, and hence there is no easily-identifiable set of obvious specific normative standards to employ in this sort of undertaking. In what follows I will often refer to elements of the pragma-dialectical approach (van Eemeren &

Grootendorst, 1984), because I think its focus on arguer conduct is especially congenial to the task at hand; but my hope is the relevant pragma-dialectical elements can be seen to be realizations of broader normative principles likely to enjoy widespread endorsement.

Second: Claims about the influence of various factors on persuasive effectiveness necessarily carry with them all sorts of caveats about the evidence underwriting such claims (both general caveats and ones specific to the particular research reviewed). This paper has not been burdened with all the hedging that might have been given. But-by way of reassurance-I do think that the empirical generalizations invoked here are sufficiently secure to permit us to consider their relationship to normative argumentative standards.

Third: Persuasion researchers have commonly not set out with the explicit aim of seeing the persuasive effects of variations in normatively-desirable argumentative conduct. That is to say, there is necessarily some imperfect articulation here, because the research evidence has been gathered with different purposes in mind. Even so, it turns out that various lines of persuasion research do speak to the question of the persuasive effects associated with various normative directives.

2. Normative requirements and persuasive effects

This analysis is organized by four broad requirements for normatively-sound argumentative conduct: that arguers make clear what overall claim is being advanced, that they specify their support for that overall claim, that they defend their views against objections, and that (broadly) they pay close attention to arguments.

2.1 Articulation of conclusion

One general requirement for normatively-sound argumentation is that an arguer make clear just what overall claim is being advanced. In van Eemeren and Grootendorst's (1992) simplified (nontechnical) presentation of the pragma-dialectical rules for critical discussion, this idea is at least partly represented by a portion of rule 10: "A party must not use formulations that are insufficiently clear or confusingly ambiguous" (van Eemeren & Grootendorst, 1992, 209). Any sort of vagueness or ambiguity thus is potentially normatively questionable: "Evasion, concealment, and artful dodging... are and should be excluded from an ideal model of critical discussion" (van Eemeren et al., 1993, 173). And of all the argumentative elements that might want clarity, surely none is more crucial than

the advocate's overall claim.

Of course, arguers might think that explicit articulation of their overall advocated position (the arguer's overall conclusion, recommendation, standpoint) can somehow undercut persuasive success. For instance, it might be feared that an explicit statement of the desired overall conclusion could be insulting to the audience (because it states the obvious), or might seem too aggressive or insistent; or it might be thought that leaving the overall conclusion unstated would enhance persuasive effectiveness because it invites the audience's participation (in an enthymematic way). Hence even though an advocate's argumentation contains appropriate materials to support the advocate's overall conclusion, an advocate might nevertheless opt for coyness, thinking that however normatively questionable such coyness might be, it will perhaps enhance persuasion.

A number of experimental studies bear on this possibility. The most relevant studies are ones that compare the persuasiveness of two messages varying specifically in whether the message contains an explicit statement of the advocate's overall conclusion. For example, Struckman-Johnson and Struckman-Johnson's (1996) research compared AIDS public service announcements with and without an explicit recommendation to use condoms.

A systematic meta-analytic review of such studies has been reported by O'Keefe (in press; see O'Keefe, 1997, for an earlier review). Meta-analysis has become the preferred means of research synthesis in research domains such as this. In contrast to traditional narrative reviews that focus on whether individual studies achieved statistically significant effects, meta-analytic reviews focus on the size of the effects obtained in individual studies, on whether the overall average effect is dependable, and on the identification of variables that might influence the size or direction of any observed effect.

Across the 17 studies identified as relevant in O'Keefe's (in press) review, a dependable overall effect (corresponding to a correlation of about .10) was observed, such that messages containing an explicit statement of the advocate's overall conclusion were significantly more persuasive than parallel messages omitting such a statement. Moreover, there was no evidence that this effect was influenced by such factors as the audience's intellectual capabilities (e.g., explicit conclusions appeared to enjoy the same advantage among less-educated receivers as among better-educated receivers) or the audience's initial position (that is, explicit conclusions appeared to enjoy the same advantage when receivers

initially favored the advocate's view as when receivers opposed it). O'Keefe (in press) discusses several explanations for these results, but here the point of interest is simply the overall effect itself: Advocates did not profit persuasively—and in fact damaged their persuasiveness—when they adopted the normatively-questionable tactic of avoiding an explicit statement of their overall standpoint. That is to say, with respect to this particular element of normatively-desirable argumentative practice, there is no contrast between being normatively good and being practically effective.

A related set of studies (also reviewed by O'Keefe, 1997, in press) also speaks to the question of the persuasive effects of variation in how advocates render their overall conclusion. In these studies, the advocate states the conclusion explicitly but varies the degree of detail or specificity in the rendition of the conclusion. For example, Evans, Rozelle, Lasater, Dembroski, and Allen (1970) compared messages giving relatively general, unelaborated dental-care recommendations with messages giving more detailed, specific recommendations. Thus in these studies, the experimental contrast is not between messages that contain an explicit conclusion and ones that omit such a conclusion, but rather between relatively more or less specific renditions of the overall conclusion.

Across the 18 studies identified as relevant in O'Keefe's (in press) review, a dependable overall effect (corresponding to a correlation of about .10) was observed, such that messages containing a more specific statement of the advocate's overall conclusion were significantly more persuasive than parallel messages with less detailed conclusions. That is to say, paralleling the effects observed for including or omitting explicit conclusions, advocates profited persuasively when they provided (the presumably normatively-desirable) greater specificity concerning their overall recommended views. Thus, again, with respect to this particular element of normatively-desirable argumentative practice, there is no contrast between being normatively good and being practically effective.

Taken together, then, these two lines of research suggest that an advocate's lack of explicitness about the advocate's overall standpoint—whether through omitting a statement of the overall conclusion or through stating the conclusion in a global (general) rather than specific fashion—impairs persuasive success. That is to say, the normatively-sound argumentative practice of explicitly articulating the advocate's conclusion will, if anything, commonly enhance persuasive effectiveness.

2.2 Articulation of support

A second broad requirement for normatively-sound argumentative practice is that arguers spell out (or be willing to spell out) their arguments in support of the overall claim being advanced. In the simplified (nontechnical) presentation of the pragma-dialectical rules for critical discussion, this idea is at least partly represented by the general “obligation to defend” represented in rule 2: “A party that advances a standpoint is obliged to defend it if asked by the other party to do so” (van Eemeren et al., 1996, 283; see also van Eemeren & Grootendorst, 1992, 208). The conjunction of an obligation to defend one’s claim and an obligation to (be willing to) maximize explicitness naturally produces a generalized normative imperative to be willing to make one’s supporting arguments explicit.

Notice that the appropriate (realistic) normative requirement is not that every argument be made in a completely explicit form (in which every premise and sub-premise is expressed), but rather that arguers be capable of making explicit their underlying reasoning. Of course, the best evidence of such capability is actual explicitness, and hence arguers who provide a more explicit rendition of their argumentation may be said to more straightforwardly represent adherence to this normative ideal.

But arguers might fear that adhering to this normative ideal could impair practical persuasive success. The more explicit one’s supporting arguments are, the more opportunities there are for listeners to find defects. Detailed articulation of an advocate’s supporting materials naturally invites closer scrutiny, counterargument, and rejection. Such explicitness can be said to enlarge the “disagreement space,” in the sense that it puts more claims on the table for discussion – claims to which objections might be raised (for discussion of the idea of disagreement space, see van Eemeren et al., 1993, esp. 95-96; Jackson & Jacobs, 1980).

The empirical evidence that bears on this matter is limited, in that sense that it has taken up only a few of the various ways in which supporting argumentation might be made more explicit. But two particular forms of variation in support explicitness have been studied relatively extensively. The first is variation in whether the advocate explicitly identifies the source(s) of information and opinion that are offered in the message. For example, Cathcart’s (1955) research included a comparison between one message in which “all contentions and assertions in the speech were directly supported with evidence, but none of the evidence was linked to a source or documented in any way” and a second message with the

same evidence but also with accompanying information about the source (“the name of the person or document quoted and the place and date of its promulgation”; Cathcart, 1955, 228-229).

O’Keefe (1998) reported a meta-analytic review of 13 such studies. Across these studies, a dependable difference (corresponding to a correlation of about .07) was observed such that messages providing citations to information sources were more persuasive than their less explicit counterparts. As noted in that review, these studies typically used what would be likely be perceived to be relatively high-quality information sources - which means one cannot be sure that the same effect would obtain were lower-quality sources to be cited. (Little research exists on the question of the effects of citing lower-quality sources - and the extant studies have not produced consistent results; see Cronin, 1972, and Luchok & McCroskey, 1978.) But the evidence in hand does indicate that the normatively-desirable practice of identifying information sources will at least sometimes enhance persuasive effectiveness.

The second form of variation in support explicitness that has been examined is variation in what might be called the completeness of arguments - that is, whether the advocate lays out explicitly the underlying bases of claims advanced by the message (provides explicit articulation of premises and conclusions, supporting information, and the like). For example, in research informed by Toulmin’s (1958) model of argument, Munch, Boller, and Swasy (1993) varied whether consumer advertisements explicitly stated the warrants for its arguments. O’Keefe’s (1998) meta-analytic review of 18 such studies reported a significant persuasive advantage (corresponding to a correlation of about .14) for messages with more complete supporting arguments. Thus more complete renditions of an advocate’s supporting arguments are likely to commonly engender greater persuasion.

In short, then, what relevant research evidence exists suggests that the normatively-desirable practice of clearly articulating one’s argumentative support - concretized here as specifically involving explicit identification of information sources and explicit statement of supporting arguments - will commonly make messages more persuasive. Thus with respect to this element of argumentative conduct, there appears to be no general conflict between normatively-sound practice and practical persuasive success.

2.3 Defense against counterarguments

A third expectation for normatively-sound argumentative practice is that arguers

must be willing to defend their views against objections. The obligation to defend (rule 2 of van Eemeren et al., 1996, 283) contains the idea that an arguer must be willing to defend the advocated view against objections (attacks, counterarguments). That is, the normatively-responsible advocate, rather than ducking opposing arguments, confronts these head-on and attempts to defend against them, presumably by refuting them.

Quite a few experimental persuasion studies bear on the question of the relative persuasive effectiveness of ignoring as opposed to refuting opposing arguments. The relevant investigations are often labeled studies of “one-sided” messages (which ignore opposing arguments) versus “two-sided” messages (which discuss opposing arguments). But this contrast is insufficiently sharp for present purposes, because two-sided messages can vary in the way in which opposing arguments are discussed. Some instantiations of two-sided messages simply mention opposing considerations without specifically attacking them, but other versions of two-sided messages do attempt refutations of opposing arguments. The former sort of two-sided message (that is, nonrefutational two-sided messages) thus does not represent an attempt to defend the advocate’s standpoint; nonrefutational mention of opposing arguments discharges no argumentative burdens. The latter sort of two-sided message (refutational two-sided messages), on the other hand, does represent an effort at meeting the obligation to defend, and hence is of specific interest here.

O’Keefe (1999) reported a meta-analysis of 42 studies comparing the persuasive effectiveness of refutational two-sided messages and one-sided message. Refutational two-sided messages enjoyed a general persuasive advantage (corresponding to a correlation of .08) over their one-sided counterparts. That is to say, the normatively-desirable practice of defending against opposing arguments by refuting them - as opposed to simply ignoring such arguments - seems commonly to enhance persuasive effectiveness.

The effects of nonrefutational two-sided messages are also worth noticing in this context. Nonrefutational mention of opposing arguments, as mentioned above, does not represent an attempt at defending the advocate’s standpoint; indeed, if anything, it would seem to be an evasion of the responsibility to defend (though perhaps not so normatively dubious as ignoring opposing arguments altogether). Notably, nonrefutational two-sided messages are dependably less persuasive than their one-sided counterparts (O’Keefe, 1999; across 65 studies, the average effect corresponds to a correlation of -.05).

Thus when an advocate gives voice to opposing arguments without attempting to refute them - when the advocate as much as offers reasons to oppose the advocated view - then the advocate's persuasive success naturally suffers. But when an advocate actively takes up the burden of refutation, persuasive success is likely to be enhanced. So here (again) there appears to be no conflict between normatively-desirable practice (defending against objections) and persuasive success.

2.4 Critical scrutiny of arguments

It is commonly taken to be normatively desirable that arguers carefully scrutinize arguments. This idea is more commonly implicit than explicit, but one recurring theme in argumentation studies concerns the value of close, careful attention to argumentative materials. Indeed, argumentation instruction often aims at enhancing argument-analysis skills (as distinct from argument-production skills) with the hope of encouraging closer (and more critical) scrutiny of arguments.

As it happens, there is some potentially illuminating persuasion research that bears on the question of the effects (on persuasive outcomes) of increasing message scrutiny. This research concerns the effects of variation in the amount of issue-relevant thinking in which message receivers engage (as indexed by, for instance, the number of issue-relevant thoughts that receivers list when asked to do so following exposure to a persuasive message). This issue-relevant thinking is commonly labeled "elaboration," and one well-known model of persuasion processes - Petty and Cacioppo's (1986) elaboration likelihood model (ELM) - treats elaboration variation as an important determinant of how persuasion operates. Of course, elaboration can take forms other than increased message scrutiny. For example, presented with a persuasive message, a receiver might be led to think about various arguments recalled from memory (as opposed to the arguments being presented in the message). But obviously one common realization of increased elaboration is increased message scrutiny (increased thinking about the message's arguments).

So now consider the question of the effects (on persuasive outcomes) of increasing elaboration (and specifically increasing message scrutiny). One might plausibly entertain opposed hypotheses here. On the one hand, one might suppose that people can't be persuaded unless they actually engage the message somehow - and hence one would expect that increasing elaboration could only enhance persuasion. On the other hand, one might suppose that increasing message

scrutiny would naturally make receivers more critical of the message's arguments - and hence one would expect that increasing elaboration could only diminish persuasion.

But the research evidence in hand suggests a much more complex picture, sufficiently complex that not all the details can be discussed here (for some recent discussions, see O'Keefe, 2002, 145-161; Petty & Wegener, 1998, 1999). However, there is one particular finding of special interest for the present enterprise, namely, the finding that increasing elaboration makes message receivers more sensitive to variations in the quality of the presented arguments.

The research evidence that bears on this conclusion consists of studies in which receivers are exposed to messages containing either high-quality arguments (good evidence, important consequences, sound reasoning, and the like) or low-quality arguments (weak evidence, trivial issues, poor reasoning, and so forth) under conditions in which the receivers' degree of elaboration is likely to vary. A number of factors have been identified as influencing the degree of elaboration (including the personal relevance of the topic, personality dispositions, knowledge about the persuasive topic, and so forth), and such factors can be used to produce experimental variations in elaboration. So, for example, a large number of studies have varied the personal relevance of the topic as a means of influencing elaboration (because increased relevance produces increased elaboration).

Now as one might expect, higher-quality arguments are generally more persuasive than lower-quality arguments. But - and this is the result of interest here - the persuasive advantage of higher-quality argumentation is increased under conditions of higher elaboration (a result obtained in many studies; for a classic example, see Petty, Cacioppo, & Goldman, 1981). That is to say, the greater the scrutiny receivers give to messages, the more sensitive they are to variations in the argumentative quality of those messages. Of course, this is precisely the result one might hope for, in that it suggests that the normatively-desirable practice of attending closely to presented arguments has the effect of privileging (with respect to persuasive effects) more meritorious arguments (This treatment passes over some important complexities concerning the definition of argument quality in this research area. For discussion, see O'Keefe, 2002, 155-157; O'Keefe & Jackson, 1995).

But this does mean that there is potentially a conflict between normatively-desirable conduct and persuasive success, in the sense that a persuader will not necessarily want to enhance the degree of message scrutiny undertaken by

receivers. Specifically, a persuader with poor-quality arguments will suffer (in terms of persuasive effects) as elaboration increases, and hence such a persuader would presumably be disinclined to do anything that might enhance critical scrutiny. Of course, on the other hand, persuaders with high-quality arguments will welcome such scrutiny. So enhancing message scrutiny is at least not necessarily inconsistent with persuasive success—and indeed under some circumstances enhanced message scrutiny will be likely to enhance persuasive effectiveness.

3. Conclusion

The claims offered here have to be seen as rather circumscribed. I am certainly not asserting that there are no persuasively-successful-but-ethically-dubious argumentative tactics. And I am not saying that normatively-good argumentative conduct is invariably rewarded with a corresponding persuasive payoff. But at least to some extent, it does seem as though some very general normative desiderata (with respect to argumentative conduct) are at a minimum not incompatible with practical persuasive success.

And perhaps it is worth noticing that the normative criteria explored here are rather fundamental elements of responsible argumentative practice – clearly articulating one’s claim, spelling out the support for that claim, meeting objections head-on, critically scrutinizing presented arguments. That these facets of normatively-desirable argumentative conduct are consistent with persuasive success suggests that – at least with respect to these very basic practices – persuaders do not face a choice between being normatively sound or practically persuasive.

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ISSA Proceedings 2002 - Reasoning In Listening



1. Introduction

Our main thesis is that reasoning plays a different role in understanding oral discourse than it does in understanding written discourse [i]. In particular, this seems to be the case for listening to lectures, speeches, and other forms of monologue, as opposed to reading comparably long texts. The reason for this difference, as we shall see, is that listening takes place in “real time,” in the sense that one is not free to look ahead or back as one is in reading (We shall not deal explicitly with dialogue, which is the other main form of oral discourse, except to note here that it has a written

counterpart, viz., the internet medium of “Instant Messenger” (IM), which is a kind of hybrid, in that, while it takes place in real time, it does permit the user to look backwards, though not forwards).

If listening does make different demands on reasoning than reading does, this may account for some of the differences between oral and literate cultures. It is sometimes assumed that oral cultures are generally less sophisticated than literate ones, but this assumption can hardly survive exposure to history. Havelock, writing about Greece in the time of Homer, offers an admittedly speculative corrective to such a view:

We can hazard the guess, in short, that that specific and unique Hellenic intelligence, the source or cause of which has baffled all historians, received its original nurture in communities in which the oral technique of preserved communication threw power and so prestige into the hands of the orally more gifted. It made the competition for power, endemic among all human beings, identifiable with the competition for intelligence. The total nonliteracy of Homeric Greece, so far from being a drawback, was the necessary medium in which the Greek genius could be nursed to its maturity. (Havelock, 1963, 127)

The classical civilizations retained an oral character long after the development of literacy. A modern listener would find it difficult to follow the oratory of Cicero, with its long sentences, or periods, characterized by subordinate clauses, often nested within one another. In *The Art of Memory*, Frances Yates describes the elaborate methods employed by ancient orators to commit their speeches to memory. But it is unlikely, to say the least, that the short-term memory of ancient listeners was more capacious than our own. Cognitive scientists have found severe and apparently universal limits on short-term memory. Consequently, if ancient listeners were more proficient at processing complex oral communications, it is probably because they employed different strategies than we are accustomed to. When Mark Twain made fun of Germans waiting with rapt attention for the verb at the end of a sentence, he was, of course, exaggerating for comic effect. But apprehending the ornate periods of a Cicero in real time must have involved the sort of suspense Twain describes.

Literacy expanded in stages. Readers of the *Confessions* will recall the surprise of Augustine and his companions at St Ambrose’s uncanny ability to read silently. It seems likely that the advance of literacy resulted in a certain atrophy of the strong listening ability manifested by ancient audiences. By way of compensation,

it permitted a deeper level of understanding than listening made possible. Avicenna reported having read Aristotle forty times before he began to understand him, and then only with the aid of a book by Alfarabi. Snow, Burns, and Griffin (1998, 64) cite empirical studies indicating that reading comprehension exceeds listening comprehension for college-age students but not for younger students. They propose to demarcate the boundary between mature and immature listening “when the advantage of listening over written comprehension disappears, in seventh or eighth grade.” It is extremely hard to follow an intricate argument or proof presented orally without visual aids. We believe that this is chiefly owing to the difficulty of recalling individual propositions, let alone sentences from hearing them. One of our central claims is that a successful listener discards sentences and propositions once they have played their role in updating an internal model of the subject matter of a discourse

2. Basic Differences Between Listening and Reading

Listening and reading are of course both acts of decoding messages to extract their meaning. They thus involve many of the same underlying abilities. Consequently, many of the kinds of questions we would ask to determine if someone is a good listener or a good reader will be the same. For example, we would want to know whether the listener or reader grasped the discourse’s main point. In the case of discourse with intellectually demanding material, we would want to know whether the listener or reader was able to follow an extended argument.

But apart from the obvious difference in sense modality, the most fundamental difference between listening and reading would seem to be their relation to time. It is what chiefly accounts for the fact, widely acknowledged in the literature (e.g., Bostrom, 1984 or Richards, 1983), that they place very different demands upon memory. Listening takes place in ‘real time’ in the sense that the listener is not free to look ahead or back the way a reader is. It is a commonplace that reading is not always a very linear task. Listening also places a higher premium on the ability to anticipate. Both reading and listening involve reasoning in that they involve the framing of hypotheses about the direction in which the discourse is headed, the construction of a kind of theory of the discourse. But since a reader can skip ahead to see if his or her hypothesis is correct, and can also look back to see both where a disconfirmed hypothesis went wrong and how to replace it with a better one, the reader’s stake in getting it right the first time is not as great as

that of the listener, who runs the risk of getting hopelessly lost. Suppose that, in a book on vector spaces, we read the following:

Let W be a subspace of vector space V . We show that every basis for W is a subset of some basis for V . (Adapted from Geroch, 1985, 56.)

(Familiarity with vector spaces is not required, or perhaps even desirable, for understanding this example. You can treat the unfamiliar terms as dummy variables.)

We may immediately feel uneasy because of the potential quantifier ambiguity. Is the author offering to prove that there is some basis X for V such that every basis for W is a subset of X , or only that for every basis Y for W there is some basis or other for V of which Y is a subset? Assailed by this doubt we will probably scan the proof to see which of these propositions it establishes, if either. Then we will go back and read the proof from the beginning, secure in our knowledge of what it is about. Contrast this with the case in which the sentence appears in a lecture. We may be able to ask the speaker for clarification, but in some formal lectures this is not permitted. Then our best strategy may be to hold both meanings in suspension until the ambiguity is resolved. The greater demands placed by listening not only upon memory but on active hypothesis formation account for some of the typical differences between written and spoken discourse, for example, between a paper read aloud and a good lecture. The lecture has to incorporate both redundancy and explicit signposts of the direction in which the talk is going.

It is no doubt in large part because of the above differences that oral language itself is different from written language. For one thing, it is usually syntactically simpler. In particular, it has often been pointed out (for example, by Richards, 1983) that the basic unit of oral speech is the clause, rather than the sentence, with the listener being left to *infer* connections that would be made explicit in written prose. Colloquialisms are tolerated and such devices as contractions are actually preferred. Even incomplete sentences are common. Rubin and Rafoth (1984, 17, cited in Rhodes, Watson, and Barker, 1990, 72) go so far as to deny that the medium of delivery is what is essential: "oral language is not defined by the channel in which a message happens to be transmitted, but rather by specific syntactic and text-level features and by its power to evoke a sense of situation." Written language, by contrast, is not designed to be processed aurally, as anyone can testify who has tried to follow a paper read aloud.

3. Mental Models

Cognitive psychologists have discovered that verbatim memory of a sentence typically persists only for a few seconds, in what is called short-term memory (Witkin, 1990, esp. 13-14). Once its meaning has been apprehended the sentence is discarded like a booster rocket. When you are asked about the contents of a passage or talk some time after reading or hearing it, your sentences rarely stand in a one-one correspondence to those of the original. Instead, you rely on an internal representation of the content. This representation is constructed incrementally as the discourse unfolds.

For consider that short-term memory has limited capacity. In a famous paper, Miller (1956) summarized a body of research that showed that it can hold only about seven items at a time, though this limitation can be overcome to some extent by "chunking," that is, encoding several items into a single item that can later be decoded. Acronyms are simple examples of such chunking. The limitations of short-term memory also apply to mental activities that depend upon it, such as inference, which typically requires mentally juggling several items at once. Hence, another term for short-term memory is 'working memory', which is intended to suggest that it is the scratchpad, as it were, on which conscious work is carried out.

Because short-term or working memory holds what is needed for a current task, most people do not even think of it as memory. What most people call 'memory' is really long-term memory (Bostrom, 1990, 6). Information undergoes a transformation before being stored in long-term memory. Barring conscious memorization, which usually involves extensive repetition, we do not typically recall the exact words in which information comes to us. "Permanent, or long-term memory works with meaning, not with form. The propositional meaning of sentences is retained, not the actual words or grammatical devices that were used to express it" (Richards, 1983, 221). There is usually a time lag of 60 seconds or more between the presentation of a stimulus and the activation of long-term memory, which may depend on rehearsal in the meantime, and "entry into long-term memory may be dependent on both rehearsal and organizational schemes" (Bostrom, 1990, 6).

Yet the world itself is not a set of propositions; it can be more accurately regarded as a system of objects having various properties and standing in various relations to each other. For example, in the sentences 'Venus is the second planet from the sun', 'Venus is approximately the same size as the earth', and 'Venus is covered

with dense clouds' the name 'Venus' occurs three times as subject, each time with a different predicate. In most theories, a similar subject-predicate structure can be defined for the corresponding propositions, even though these propositions are not themselves linguistic objects. But in the solar system Venus 'occurs' only once, replete with all its properties and its nexus of relations to other heavenly bodies. Johnson-Laird (1983) has argued that much of our knowledge is represented in the mind in a form that corresponds more closely to structures in the world itself than to the discursive propositions and sets of propositions we use to communicate that knowledge. He refers to such representations as "mental models":

Unlike a propositional representation, a mental model does not have an arbitrarily chosen syntactic structure, but one that plays a direct representational role since it is analogous to the structure of the corresponding state of affairs in the world - as we perceive or conceive it. However, the analogical structure of mental models can vary considerably. Models of quantified assertions may introduce only a minimal degree of analogical structure, such as the use of separate elements to stand for individuals. Alternatively, models of spatial layouts such as a maze may be two- or three-dimensional; they may be dynamic and represent a sequence of events; they may take on an even higher number of dimensions in the case of certain gifted individuals. One advantage of their dimensional structure is that they can be constructed, and manipulated, in ways that can be controlled by dimensional variables. But a propositional representation, as Simon (1972) pointed out, can be scanned in only those directions that have been encoded in the representation. Simon also drew attention to the fact that people who know perfectly how to play noughts-and-crosses (tic-tac-toe) are unable to transfer their tactical skill to number scrabble, a game that is isomorphic to noughts-and-crosses. Just as they can scan an external noughts-and crosses array, so they can scan its internal representation, but that process is irrelevant to the game of number scrabble (156-157).

The main thrust of Johnson-Laird's work concerns *inference*. He provides a substantial body of argument and empirical evidence that even simple syllogistic inferences proceed by manipulating mental models rather than by combining propositions by means of rules of inference, which is more abstract. Johnson-Laird is not committed to the claim that mental models constitute an irreducible level of representation. On the contrary, he acknowledges the possibility that, just as higher-level languages in a computer are ultimately realized as strings of 0's and

1's in machine code, so all mental representations, including mental models, may be realized in a mental 'machine code', which may, for all we know, consist of finite strings of symbols (155). His point is just that at some level we manipulate mental models and their contents as such.

Johnson-Laird gives an example from a Sherlock Holmes story (158-160) to show how a certain kind of question about a passage can be answered only by constructing a mental model, and not by employing a purely propositional representation of the content. In the story, Holmes and Watson break into the house of a blackmailer. Their progress through the house is described in some detail. The question is whether they proceeded from right to left or from left to right. The passage does not say explicitly. If one makes a mental model of the house as one reads the passage, especially with the question in mind, one can answer the question fairly easily, though it would take many steps to derive it logically.

It seems a promising hypothesis that both reading and listening comprehension rely on mental models. Evidence is provided by the fact that we do not typically recall the exact propositions making up a passage or talk, but we can often reconstruct the content. It is plausible that good readers and listeners are ones who constantly update their mental models of the content by integrating new propositional information into them. But listening would seem to be more dependent on such models than reading, because a listener, unlike a reader, cannot look back to recover the exact propositional content of the stimulus.

The listener also seems to have a greater need for coping strategies, for example, in cases of indeterminacy, where the discourse allows too many possible models, and of inconsistency, where there is no possible model. There are two approaches to indeterminacy. One is to represent an indeterminate object by a set of completely determinate ones; the other is to embrace partiality. The former approach is adopted by possible worlds semantics in its identification of propositions with sets of possible worlds, the latter by situation theory, which is basically a theory of partial worlds. Which of these strategies we actually employ on a given occasion is to some extent a topic for empirical research. But it seems unlikely that we are able to entertain complete mental models of any but the simplest states of affairs, so that much of the time our models must of necessity be incomplete. And it also seems unlikely on the face of it that we can entertain more than a couple of models, however simple, at the same time. Inconsistency

comes in two strengths. The weaker occurs when we have opted for a particular model which is ruled out by the subsequent direction taken by the discourse. In that case, we may have to replace it with a model, if one is available, that is compatible with the new information (Follesdal discusses cases like this in connection with Husserl, saying that in this case what Husserl calls the “noema” explodes and is replaced with another one). The stronger kind of inconsistency occurs when the discourse is actually self-contradictory. In this case, of course, it has no model. But if the contradiction is not central we will not be prevented from forming a partial model of the discourse. For example, the author may carelessly attribute two different eye colors to a character without seriously impairing the integrity of the narration.

4. Pragmatics

The assumption that every sentence expresses a determinate proposition is of course an oversimplification (e.g., Perry, 1977). The same sentence can express different propositions in different contexts of use. This is because sentences often contain so-called ‘indexical’ elements, such as pronouns and tense. The study of such contextual aspects of language is called ‘pragmatics’. The scope of pragmatics is rather broad, since it encompasses all the facts surrounding an utterance, including the speaker and addressees. Pragmatics is generally taken to include speech act theory, which concerns itself with the so-called ‘illocutionary force’ of utterances, namely, the kinds of acts utterances are used to perform (Searle, 1969). Most or all languages grammatically mark the distinction between declaratives, interrogatives, and imperatives. But this distinction corresponds only somewhat loosely to illocutionary force. For example, the sentence ‘Could you pass the salt?’, which is grammatically a yes-or-no question, is more commonly used to make a request than to elicit information. Simply answering ‘Yes’ would be inappropriate. Moreover, the distinction between assertions, questions, and commands only scratches the surface. Stalnaker (1972, 178) gives an idea of the kinds of problems involved:

Assertions, commands, counterfactuals, claims, conjectures and refutations, requests, rebuttals, predictions, promises, pleas, speculations, explanations, insults, inferences, guesses, generalizations, answers, and lies are all kinds of linguistic acts. The problem of analysis in each case is to find necessary and sufficient conditions for the successful (or in some cases normal) performance of the act. The problem is a pragmatic one since these necessary and sufficient conditions will ordinarily involve the presence or absence of various properties of

the context in which the act is performed, for example, the intentions of the speaker, the knowledge, beliefs, expectations, or interests of the speaker and his audience, other speech acts that have been performed in the same context, the time of utterance, the effects of the utterance, the truth-value of the proposition expressed, the semantic relations between the proposition expressed and some others involved in some way.

Pragmatic concerns loom much larger in standard or paradigmatic listening situations than they do in paradigmatic reading situations. This is true because in the standard listening situation, the speaker and audience are in the same place at the same time; the speaker can thus exploit this shared context in ways that a writer cannot. In understanding oral discourse then, the task for the listener is to use this shared context or (following Barwise and Perry, 1983) “discourse situation” to determine the types of speech acts and the interpretations of indexical elements of the discourse. For example, consider a speaker who in a talk uses the word ‘here’ in its nondemonstrative sense. It is commonly accepted that the meaning of this word, as for any indexical, consists of a rule that specifies the referent for any utterance of it: it refers to the place of its utterance (e.g., Kaplan, 1989; Plumer, 1993). The reasoning task for the listener is the simple one of using Universal Instantiation in applying the rule to determine the referent. In contrast, a writer typically refers to places by using proper names, descriptions, or some spatial coordinate system. And if, say, the author of a travelogue uses an indexical such as ‘here’, the referent will have been previously established by one or more of these means.

The logic of indexicals includes certain straightforward validities such as the sentence ‘I am here now’ (which may be regarded as analytically true): every possible utterance of the sentence is true, unlike for the sentence formed by replacing ‘I’ with any proper name or definite description (in which no indexical is used) (cf. Kaplan, 596; Plumer, 203). But the logic also includes some rather complex reference-fixing rules. Consider this proposed statement of the rule for ‘here’ in its demonstrative sense (which is more or less equivalent to ‘there’): an utterance of it refers by relating a place to the place that would have been referred to had ‘here’ in its nondemonstrative sense been uttered instead, where this relating is accomplished through an act of ostension or focusing of sensory attention carried out by the utterer (adapted from Plumer, 205). Nevertheless, there are some very unsophisticated or basic elements of this, viz., an act of

ostension or focusing of sensory attention. To a large measure these define the meaning of any demonstrative, yet they are certainly something of which nonhuman animals are capable.

In a linguistic study it may be difficult, as Stalnaker puts it, “to find the necessary and sufficient conditions for the successful... performance of the act,” but this does not mean that for the user of the language the rules are difficult to assimilate or apply. For example, with respect to the speech act of promising, Searle argues that one of the necessary conditions for “sincerely and nondefectively” performing it is “*It is not obvious to both S [the speaker] and H [the hearer] that S will do A [the action] in the normal course of events*” (1969, 57, 59). Given the right information, it may be easy to see whether this condition is instantiated in the particular case. Yet the information may unfold or be revealed in quite different ways in a listening as compared to a reading situation, as for example where S is a speaker giving a talk or a character in a novel, respectively. Typically, the latter is through description, but in a listening situation much information is implicit or inherent in the context as events occur, as in the case of a verbose speaker’s promise to finish on time.

5. Conclusions

Both reading and listening involve the construction of a theory or model of the underlying discourse. They are thus far from passive, but involve active reasoning, consisting notably in the forming and testing of hypotheses at every stage. But because listening takes place in real time, it places a greater premium on flexibility. Moreover, the reasoning that takes place in listening is likely to be more semantic in nature, consisting in the manipulation and updating of mental models, not in the combining of sentences or even propositions. Because even relatively formal listening is situated in a context, this context can typically be exploited to relieve some of the burden on mental representation. This, too, is a kind of reasoning, though apparently of a low level. It would thus appear that reasoning plays a greater role in basic listening *comprehension* than in basic reading comprehension. This is perhaps especially true of comprehension of discourse that is not itself a record of reasoning. But writing can record much more complex chains of reasoning than speech can, and the comprehension of such texts involves, as Brouwer pointed out, the recreation in the mind of the reader of the reasoning they record.

NOTES

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