May 15th, 9:00 AM - May 17th, 5:00 PM

Macro-Toulmin: the argument model as structural guideline in academic writing

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Argumentation scholars have had varied success in their attempts to use Toulmin's argument model as a pedagogical tool. Fulkerson (1996) has analyzed the difficulties inherent in applying the Toulmin model to practical and pedagogical purposes.

But argumentation scholars are not the only academics with pedagogical problems. Faculty across all departments, perhaps especially in the liberal arts subjects, have trouble teaching students what an academic paper is, and how to write it. Central to this difficulty is the understanding of what Linda Flower and other writing specialists (Flower et al. 1990) have called "task definition." Another way of saying this is that many students fail to understand the *genre* of academic discourse–the overall *purpose* of the academic paper, its *components*, and how the components *contribute* to the overall purpose.

We suggest that a particular interpretation of Toulmin's model is a significant help in solving this general problem. In short, students' problems with genre and task definition in the writing of academic papers may be significantly reduced if we adapt the Toulmin model to explain the genre requirements of the academic paper.

The adaptation implies that we use the model in a *macroscopic* way--hence our title, "Macro-Toulmin".What we propose to do is to use the model to attack the difficulties of the academic paper top-down, saying to students, "The overall purpose, components, and inner functioning of the academic paper as a whole can be better understood with this model."

What this means in practice is that the student is encouraged to apply the model as a criterion and a heuristic during her work on the paper. She should not just apply it microscopically, looking at individual sentences in her text and checking for data or warrants for claims that occur in it. The student, we suggest, should primarily apply the model to her evolving draft in a top-down manner, asking herself, "Does my draft contain material that will fit into each of the six boxes which constitute the model?" Such material may constitute separate sections of the draft, but it may also be there in a less localized way, like the peppering in the stew, or, as we shall see in a little while, some of it might be presupposed and only be there in a virtual way, to be produced on demand. As a general rule, however, we suggest that a "default" good academic paper contains material which fulfils certain criteria by which it fits into each of the six boxes. The following graph will illustrate how.

As the figure shows, the *Claim* in a typical academic paper will usually be found in its conclusion. But in many papers, as we all know, the claim cannot

be located to one single passage. Even so, a good paper does make a claim. There are a many criteria for this claim, but the first one is simply that it should be there. The student should have something to say--a statement that is hers, not just a reiteration of statements made by one or several scholars she has studied.

A further criterion is that a good academic paper is not the kind of paper that many students write, and are sometimes even told to write, titled "An Analysis of ... ." A good paper is not merely an "analysis" of something; analysis is a tool, but the end of analysis is to make a point or a claim.

There is of course much more to say about the criteria for a good claim, even before we come to the question of whether the student has made a good case for it. To mention some of these criteria briefly, a good claim has not been made many times before; it is not circular or vague; it does not go without saying, but in some way it either defeats expectations or fills a knowledge void; and it has perspective, that is, further consequences or question seem to flow from it. Even this short list is a tall order , and we all know that only exceptional student papers fulfil all of these criteria. But the point is simply that by stating that a paper should make a claim, and that some of the criteria for a good claim are these, we have given the student a heuristic tool.

The second box is, of course, *Data*. Data usually constitute the body of the paper. Data should support the claim. Data that are irrelevant to the claim should be omitted. Data may be of at least three kinds; what a specific paper, including the present one, has to prevent by way of data is often a combination of all three types:

> 1) Theoretical data, i.e., theories, concepts, definitions drawn from authorities, either esteemed individuals (for example, "Habermas says ... ") or current paradigms (for example, "it is generally assumed in Generative Grammar ... "). Such general assumptions belonging to a current paradigm that the writer subscribes to are often, as mentioned a moment ago, presupposed rather than stated.

2) Specific data, drawn from studies by others.

3) Specific data, drawn from one's own study.

Specific data may include, according to field, textual evidence, conceptual analysis, examples, qualitative or quantitative empirical data, and many more.

The *Warrant* box has always been problematic. Among the chief difficulties, according to Fulkerson, is the problem of what to understand by warrant. Especially in the micro-analysis of individual arguments, we all know how hard it can be to decide what the warrant is, and whether a given statement is data

or warrant.

We believe it is precisely one of the defining features of *academic* writing that the writer should carefully discuss the warrant for the data she uses, whereas debaters in practical argument are rarely required to do so--which is probably part of the reason why we find it so hard to teach the proper understanding of warrant in practical, extended argument.

The term academics most often use when they mean warrant is *method*. The presence of warrant means that the writer has used a general method of getting from data to claim that the paper's intended audience will acknowledge. Method is the manner of collecting, selecting, and interpreting data. A given academic field allows and makes possible the use of certain types of data, and it prescribes ways these data may or may not be interpreted. In some fields the methods are few and very strictly defined; this is so, for example, in empirical effect studies in clinical medicine. In such a field, there is little need for a writer to explain and defend a method; one simply has to follow it. In other fields, it is common that new studies gives methodology a slightly new twist, e.g., by suggesting new types of data (such as a new type of qualitative interview). In such cases it is essential that the paper clearly explains how these data are collected, selected, and interpreted. It may be that the method is drawn or at least inspired by studies in a neighbouring field; it may also be a combination of traditional features, borrowed or adapted features, and new features. Some fields, especially in the hard sciences, use data types that constitute a major innovation and are not available to amateurs; other fields, such as literary criticism, or law, use data that are available to anyone visiting a library; but all academic fields are alike in the sense that they have professional codes regulating how to collect, select, and interpret data. By codifying how to interpret data, methods constitute the bridge between data and claim; and this is why method is another words for warrant. Like warrants, methods are field-dependent, and that is precisely one of Toulmin's main points. In fact, warrants or methods are not only field-dependent, they are actually constitutive of fields. The mastery of the codes we call method or warrant is at the heart of what constitutes professional competence in any academic field.

Backing. Backing, according to Toulmin, is what we come up with if we are asked "why *in general* this warrant should be accepted as having authority" (1958, 103). That is, the "backing" box should contain something about how we are justified in interpreting our data in support of our claim. And that implies discussing and defending not only this way of interpreting, but also the way we collect and select our data. Here again we have various options. We may refer to authority, either authority figures or a current theory or paradigm that sanctions such an interpretation; or we may point to parallel studies where a similar method has borne fruitful and reliable results. This discussion will often imply an assessment of our method that is less than categorical. For example, historical sources that we interpret in a given way may only be so interpreted with a certain degree of probability or on certain conditions; the discussion of

backing should address not only the question of whether a warrant or method has authority, but also what *degree* and *kind* of authority it has.

The two remaining features of the Toulmin layout are Qualifier and Rebuttal. Both of these are also central to academic writing, and both are, like backing, connected with Warrant.

Rebuttal indicates "circumstances in which the general authority of the warrant would have to be set aside" (Toulmin 1958, 101). The criterion that there has to be something in the rebuttal box means that the paper must show awareness of what counts against allowing the step from data to claim. This may take man forms, according to field. If, for example, a student has used a group of readers' responses in discussing the interpretation of a poem, the step from such data to any claim about the poem is one that many literary scholars in the current paradigms would raise doubts about. Therefore, one important value criterion of the paper is the awareness it shows of these doubts, and how well it answers them.

In a case like this the doubts would be of a general nature concerning whether claims supported by a certain type of data have any warrant. Such doubts might lead into fundamental problems of theory or paradigm common to many fields, for example on whether the study of human phenomena is better or worse off by limiting itself to the observation of behavior, or whether introspection is allowable or preferable, and the like. In other situations, there might be specific, practical or even ethical questions that might be raised about the warrant of the data used. What we see generally is that awareness of what might count in rebuttal of one's methods of interpreting is central not only to the merit of an individual paper, but also to the professional competence and identity of the writer.

Taken together, the three elements Warrant, Backing and Rebuttal constitute what we might call a full-blown statement and discussion of Method. Depending on how well-known and accepted that method is by the intended audience, the boxes with Backing and Rebuttal may contain more or less material. Again we find that in the case of very well-established scholarly paradigms, there may be very little explicit material about them; they will then be presupposed in the sense that the writer is expected to be able on demand to produce such material about them, and experts reading the paper from the vantage point of that paradigm will be looking closely for any indications that the writer would not be able to produce such material. On the other hand, if the method is in any way new or tentative, in the sense that the Backing or the replies to any possible Rebuttals are not entirely persuasive, then this should be reflected in the Qualifier--the last of the standard element in the model, and the one we come to now.

The *Qualifier*, in Toulmin's own words, indicates "the strength conferred by the warrant" on the step from data to claim. For the academic paper, this means that somewhere in it the student should discuss or at least signal how definitely

and how categorically she wishes to advance her claim. Often it is indicated along the way by means of phrases like "this strongly suggests" or "a possible interpretation would be," as well as through the general tone prevalent in the text. In any case, there has to be an explicit qualifier connected with the main statement of the claim, whether that occurs at the end or at the beginning. Many academics would agree that a criterion in assessing a paper is whether the writer has shown proper awareness of the strength or weakness of her inference from data to claim. Interestingly, studies in contrastive rhetoric (cf. Grabe and Kaplan 1995) suggest that students from different cultures tend to make opposite mistakes here. Many North American students, it seems, tend to believe that making a claim in an aggressive and categorical fashion is a value criterion; by contrast, students from Asian cultures tend to present evidence but leave it up to the reader what to make of it. Students making both types of mistakes need to be taught that there has to be "something in the Qualifier box," neither too much nor too little.

So far, we have argued that whatever else the Toulmin layout may be good for in the study of argumentation, it seems an obvious tool in teaching the macroscopic features of academic papers and professional academic discourse generally. We believe the model may not only help students understand the task definition of that problematic genre, the academic paper, it may also be a procedural help to them in producing such papers: While work on the paper is in progress, the student may use the model as a criterion for checking material that is already in the draft, and as a heuristic for finding material still missing by asking, "What have I got in this draft to go into each of these boxes?" Thus, the model may help giving an awareness of the overall function of the genre, as well as of its component parts. Also, just as it may be a help in assessing one's own writing-in-progress, it may also help students read and assess academic writing by others.

It may be objected that the model is very general and does not teach students the specific knowledge and skill central to a given academic field. We believe this is a strength rather than a weakness. On the one hand, it may be argued that beginning students need some understanding of values and criteria that are common to all academic fields. The academy should be understood not just as a cluster of subcultures, but as one culture that has subcultures within it. And the model might be a tool in explaining this culture. On the other hand, one of Toulmin's main objects was precisely to highlight the field-dependency of the warrants used in various fields. Accordingly, we will try to show how the model can do just that.

If our application of the model to academic discourse is relevant, then the nature of warrants and their attendant elements, backing, rebuttal, and qualifier, is not only specific to the given field, it is also central and constitutive to the identity of that field.

A case in point is the study of history. Although many people know and write about history, not all of them qualify as historians in the academic sense. The

professional credentials of the historian consist mainly of her mastery of *historical method.* That method, as established originally by Leopold von Ranke, has to do with *Quellenkritik*--the critical assessment of the kind and degree of validity and reliability that can be ascribed to source data. In other words, historical method has to do with warrant, backing, qualifier, and rebuttal.

Other examples come to mind the moment we use words like "validity and reliability." Empirical fields across a wide range, such as experimental psychology, communication studies, sociology, clinical medicine, or meteorology, all have a core of methodological concerns relating to the manner and degree in which data may or may not be interpreted as valid and reliable support for claims. In other words, professional method in all of these fields has to do with warrant, backing, qualifier, and rebuttal.

Even in "soft" humanistic subjects like literary criticism an awareness of how the model applies can help students understand the constitutive criteria of the field. Literary scholars too make certain types of claims based on certain types of data--usually, data from texts. They have characteristic criteria for collecting, selecting, and interpreting these data, and these criteria, which constitute their warrant, allow them to step from data to claim--usually, from texts to interpretations. However, students of literature must know more than how to make such a step. Contrary to what many students think, it is not enough just to select a method and proceed. One should also have and demonstrate an awareness of what makes the step valid, and with which reservations, as well as what could be said against it. In other words, for any method or warrant the student or scholar should be able to supply a discussion of backing, qualifier, and rebuttal.

As reflected in the phrase "should be able," our claim for the model has the important qualifier that in many cases discussion of Warrant, Backing, and Rebuttal may be wholly or partly implicit. This is so in particular when the student is writing within a scholarly standard paradigm, such as Chomsky-based Generative Grammar in linguistics. Such a paradigm can be seen as a "package deal" that exempts the student from coming up with this kind of discussion because is is assumed that Chomsky has, so to speak, done it for us. As a token gesture, the student will then probably be expected to make a few parenthetical references to canonical writings, such as "(Chomsky 1965; 1981)".

With these few examples, and with these qualifications, we want to suggest that the features of Toulmin's model can help single out the specific criteria and assumptions which academic discourse in a given field is expected to fulfil. This claim is the basis for our use of the model in teaching academic writing. What we do in practice is also dictated by the strict format: What we offer is voluntary, non-credit courses of 6 hours' duration. In this limited space, we try to do two things: First, we present the model as an overall heuristic to be applied to the entire draft that the student may be working on, and we supply some criteria to be used as a heuristic for each box in the model. Secondly, we

present a standard or default outline of an academic paper, based on the elements of the model. In the Introduction part of this outline, we suggest placing an hypothesis or problem statement that anticipates the Claim, which will emerge in response to it. Also, this is the place for briefly stating what will be the Data and the Warrant, that is, the method of interpreting the Data.

The body of the paper will be dominated by a discursive presentation of the Data. Any more detailed discussion, if necessary, of Warrant, Backing, and Rebuttal also goes in the Body of the paper, possibly in separate sections at the beginning or at the end; however, material to go into these boxes may also be woven in along the way. The Claim may gradually emerge and be reiterated in the course of these discussion, or it may saved for a "discussion" section near the end.

The Conclusion will state the Claim with any appropriate Qualifiers clearly expressed. Here it should be made clear how the Claim is directly related to the hypothesis or problem statement laid out in the Introduction. And just as the introduction should attempt to show that the problem is a relevant one that calls for an answer and may be plausibly addressed by the paper, so the Conclusion should ideally point onward to further hypotheses or problems raised by the Claim.

In our experience, the main pedagogical advantage of using the Toulmin model as a macroscopic layout of the academic paper is that it increases the student's sense of the paper as one focused or functional unity. They get a better understanding of what intimidating words like data, method, and theory are by better understanding what they *do*. This in turn helps them tie the components of their paper together. This is true on the verbal level, where we may see an increased and more discriminating use of meta-discourse–, that is, "signposts" telling the reader how the parts of the text work together. On the level of substance, students may, for instance, suddenly realize how theories may supply the Backing that legitimizes or even prescribes a certain methodological choice; this again may help them determine how to collect, select, and interpret the material that constitutes their data. They may realize the various functions that theory may have in academic discourse, which may help them generate theoretical ideas of their own and give them a critical understanding of what goes on in professional debates within a field. A functional awareness of Backing and Rebuttal may help them make a Claim that is no taller than their data will plausibly permit, and with the appropriate degree of qualification. Students realize how important it is for the plausibility of their claim that Method is made explicit (Warrant), legitimized (Backing) and scrutinized (Rebuttal). Essentially, students may learn to *assess* critically the merit of their own work--a skill high in the Bloom hierarchy of educational goals. This in turn may help them assess strengths and weakness in the work of others, either their peers or established authorities in their field.

We have made rather bold claims for the value of Toulmin's model as a macro-structure for academic papers. Reasoning from theory, we have advanced the

hypothesis that it ought to be a useful pedagogical tool in teaching students to write such discourse. It is appropriate now that we present data to support this hypothesis. We do have a fair amount of data, but we are quite aware that the warrant we can present for the strength of our data is not the strongest. We have no classic effect study to present, but we do have the experience of having used the model in lectures to about 1,000 students from all humanistic departments in voluntary, non-credit courses: also, from 264 of these students we have received subjective written evaluations of the usefulness of the course. On a 3-point scale, 78.8 % deem the course to have been "very useful," 20.9 % say "useful," and .3 % say "not very useful." In addition, we have a large number of written comments. The most frequent type of comment is to effect that the model gives a useful overall idea of the design or skeleton of an academic paper. Also, many students state that they now understand what they are meant to do in academic papers, that is, what sort of thing their instructors are expecting of them. Many students mention that it has been very useful to have their own or a fellow student's actual paper-in-progress discussed in terms of the model.

There are at least two comments that should be added.

First, we have made a bid to map the academic paper as one standard macro-argument. The "default" model is of course a pedagogical simplification. Obviously, much academic discourse, including some student papers, have a different or more complex macrostructure. They may either not be argumentative throughout, but may, for example, be entirely or partly expository; or they may not constitute one single argumentative structure, but be more like a battery of parallel arguments, or a hierarchy of arguments. Even so, we believe our simplification helps students understand what fundamentally goes on in academic writing. Like other models or structures taught by rhetoricians through the ages, we believe this structure may have a liberating rather than a constricting effect on intellectual creativity--because many students' main problem is to get a first idea of "the name of the game."

Secondly, the present paper itself is admittedly not an ideal specimen of our default structure. In this paper there is a lot of hypothesis, that is, a large claim with a lot of qualifiers. The data is mainly of the theoretical kind, insofar as we have transferred Toulmin's theory from one area, that of everyday micro-arguments, to the macro-level of another field for which he did not intend it, that of academic discourse. As for our empirical data, they are of a kind that leaves much room for rebuttal and calls for much qualification.

As you can see from these remarks, our notion of the academic paper as one Macro-Toulmin argument sometimes has the merit of promoting reflective self-appraisal. The reason we come forward with a bold hypothesis based on debatable evidence is that we believe the hypothesis is a promising one that others might help investigate.

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