From the Notebook

USING INDUCTIVE STANDARDS TO EVALUATE ARGUMENTS

Catherine E. Lamb

As recently as three years ago, I remember confusing the definitions of "induction" and "deduction" in a class discussion. But not being able to remember which went with "general to particular" and which with "particular to general" was a minor embarrassment compared to my increasing awareness that much of the logic I was teaching in my advanced expository writing classes--one aspect of our heritage from classical rhetoric--had little or no application to constructing and analyzing informal, everyday arguments, the sort my students were working with in their essays.

When I used these patterns of particular and general in my teaching of Aristotle's logic, I was classifying and evaluating arguments with form as the primary criterion. Once I changed the criterion from form to strength of relationship between premises and conclusion--another of Aristotle's criteria--I had a way to talk about arguments that worked for my students and me as rhetoricians.

Here are two arguments to illustrate the differences between how these criteria work (the premises are above the line, the conclusion below it):

No. 1. Ontario is in Canada.
We backpacked in Ontario.

We backpacked in Canada.

No. 2. All the backpacking trips we have been on have been both pleasant and demanding.
The terrain on this next trip is similar to what we have hiked on before.
We are as well equipped as we usually are.
The time of year is about the same.

We can expect this trip to be pleasant and demanding also.

With form as the criterion, the first one is "deductive," with its general to particular pattern, and the second one "inductive," since there the pattern is reversed. When we test the adequacy of this classification system on this single example, dfficulties quickly become apparent. First, the categories overlap. In Argument No. 2, "All the backpacking trips we have been on..." is more general than the conclusion which follows from it and the other premises, "We can expect this trip to be pleasant and demanding also." Admittedly, I am generalizing from one example, but it is not difficult to find other similar examples. Even if form provided a consistent basis for classification, using it does not permit us to say much more about these arguments beyond what pattern they follow, something we knew intuitively anyway. Finally, we can use the absolute standard of deduction to evaluate the validity and truth of arguments; but in doing so, we are using a standard that applies to very few of the arguments our students (and we) construct as rhetoricians working in the realm of the probable.

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The Inductive Leap

In contrast, notice the possibilities when we use strength of relationship between premises and conclusion as the primary basis for classifying and evaluating arguments. We begin where we did with form, but with a different emphasis. On the one hand, in Argument No. 1, the link between premises and conclusion is as strong as possible if we assume the premises are true. We claim no more in the conclusion than is implicit in the premises. This sort of argument remains

the absolute standard. In contrast, in arguments such as No. 2, which I used before a recent backpacking trip, I claim more than is contained in the premises: as a result, I can say only that I am predicting the nature of the upcoming trip, not guaranteeing it. I am, of course making an inductive leap.

We can now apply inductive standards to differentiate among arguments such as No. 2. For convenience, we assume all the premises are true, allowing us to continue examining only the link between premises and conclusion. In Argument No. 2, the link seems strong, especially to a self-confident backpacker. I can easily alter the strength of the link, however. Notice that additional information, if true, makes my conclusion less warranted because the strength of the link between premises and conclusion is weakened:

> The trail is incorrectly marked on the map.
> In some places, the trail disappears for up to half a mile.
> The black flies and no-see-ums are biting later than usual this year.

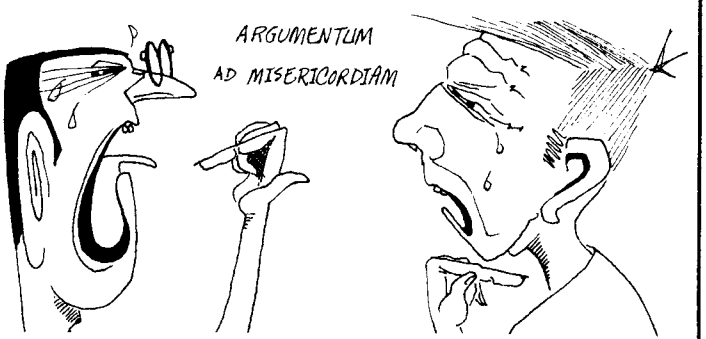
My conclusion is now considerably less probable, depending, of course, on how I define "pleasant" and "demanding." I can also add a premise, which, even if true, does not affect the strength of the link because it is irrelevant: "I live in Sturgis, Michigan."

With this overview of what affects the link in an inductive argument, we examine next what is usually a prior step in evaluating an argument, the basis for the claims made in the premises. Here the standards are more familiar. In evaluating factual statements, we test their inductive probability by examining how the statement was arrived at: for example, if the statement is a generalization, whether the sample from which it is derived is large enough, representative, and precise. Further, has all relevant knowledge been considered? For evaluative statements, we take into consideration the statement's correspondence with an ethical or aesthetic system, the simplicity or economy implicit in it, and the amount of relevant knowledge considered in arriving at the statement.*

In short, we ask two questions in applying inductive standards to an argument:

1. What is the basis for claims made in individual premises?
2. If the premises are true, what is the strength of the link between premises and conclusion?

Consider just one, relatively straightforward example of using inductive standards to evaluate students' arguments. In my advanced expository writing



classes, I always ask students to turn in a written evaluation of an argument along with the essay in which the argument is developed. A student, Laura, maintained in her evaluation that the link between premises and conclusion in this argument was strong:

> Many people in the United States cannot afford health care.
> Health care facilities are not evenly distributed.
> Our health care system is inefficient.
> Health care costs will continue to rise.
>
> ---
>
> The United States must have a national health care plan.

With inductive standards as the basis for

(cont. on p. 52)

*For a more complete introduction to inductive standards, see Brian Skyrms, Choice and Chance: An Introduction to Inductive Logic, 2nd ed. (Belmont, California: Dickenson Publishing Company, 1975).

Stephen Judy (cont. from p. 44)
In general, response to the MCTE proposal has been favorable. Governor Milliken noted that literacy was an important priority in his State-of-the-State message and wrote:

> There has been a suggestion [that] to broaden the certification code revision to include writing, speaking, and listening along with reading would be a substantial contribution to code revision. There has been support for this broadened revision, and I, too, favor the expansion of the amendment to include the communication skills. (Letter of October 2).

But the final wording of the proposals, and whether the changes will go through the State Board, the Senate, both, or neither, remain undecided as of this writing. MCTE urges concerned teachers to express their opinions by writing the State Board, the Governor, and their State Senator.

The Michigan Council of Teachers of English is also concerned that passage of the proposals in their present form might have a negative effect on future developments in the teaching of writing and oral English in Michigan. For instance, though the present proposals are chiefly aimed at new teachers, it seems quite likely that in the future the State may want to extend the requirement to teachers in-service as well. It would be unfortunate if a massive retraining program for teachers were to exclude oral and written composition. Even more important, the proposed revisions present a one-dimensional view of literacy which places reading at dead center and ignores related language skills. That is an incomplete view, not acceptable to those who consider themselves teachers of more than decoding skills, who are, in fact, teachers and professors of "English."

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our discussion, I could show Laura why I disagreed wih her evaluation, while at the same time recognizing what she had done well in her argument. We both knew the criterion of completeness could not be met, given the limitations of the time she had for reseach, the resources available to her, and the length of the paper. I also agreed with her that her first two premises--statements about what is--were well enough supported with factual evidence meeting the other criteria of quantity, variety, and precision. However, in the third premise, she had not defined "inefficient." In the fourth, as she knew, she was speculating, but she also relied only on a quotation from then Secretary of Health, Education, and Welfare, Joseph Califano. Finally, she had not recognized that, even if all four premises were well-supported, they pointed to a different conclusion from the one she had drawn, something like, "The United States' health care system is in serious difficulty." These premises with their new conclusion could be the statement of the problem in a revised essay. She might then claim that any solution would have to meet the problems of high cost which will continue to get higher, uneven distribution, and inefficiency, and demonstrate that a national health care plan will do this best.

One other point becomes evident in a discussion such as this one. When students begin applying inductive standards to evaluate arguments, they see quickly that, at best, inductive standards can account for only part of why an argument is rhetorically effective--why people change their minds, or are moved to take action. The world of logic is neat and orderly; that of rhetoric, messy and unpredictable (and much more interesting, I tell my students). Because of what inductive standards <u>are not</u>, they help to show us what else rhetoric <u>is</u>.

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