

Book Review

Understanding Arguments: An Introduction to Informal Logic
by Robert J. Fogelin and Walter Sinnott-Armstrong

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Fogelin, Robert J. and Sinnott-Armstrong, Walter (1990). *Understanding Arguments: An Introduction to Informal Logic* (4th ed.). New York: Harcourt Brace College Publishers. 496 pp. ISBN 0-15-592672-1. Paper. US \$28.75.

This highly serviceable text surveys virtually all the staple topics of informal logic and critical thinking courses: uses of language, the analysis of arguments presented in natural language, fallacies, elementary formal logic up to truth tables, rudiments of scientific method, and moral, legal and philosophical reasoning. Except for the lastmost subject, and having fewer (perhaps too few) exercises, *UA* parallels Copi's *Introductory Logic* quite closely. There is also a long section on the syllogism, a topic many instructors may feel has long been passé. Still, this is a good book. It breathes sense, its authors know how to motivate the material, and it has been written with a feel for the vernacular. (Positions so hedged with ad hoc qualifications as to be irrefutable are described as "self-sealing," for instance.)

What most philosophers will notice right away is the extensive influence on *UA* of Austin and, even more, Grice. Not only is conversational implicature explained and distinguished from implication, it is used effectively to clarify some of the quirks of reasoning both formal (the paradoxes of

material implication) and informal. Thus, the authors explain that non sequiturs can often be put across because "anyone who offers a reason conversationally implies a connection, and we do not like to admit that we fail to see this connection. This combination of generosity and fear of looking stupid leads us to accept all sorts of irrelevant statements as reasons" (114). It is striking that Grice-theory has now filtered from graduate seminars to elementary texts. The authors don't turn the logical screw as far as they could. Just as the ramified Gricean analysis of "A means p in uttering u " is "A utters u intending that his audience believe that A believes p (through recognition of this very intention)," a speech act conversationally implicates that its utterer *believes* he has said everything relevant. The ambitious instructor can use the text as a foil for developing Grice theory further, or he can just let it go.

Unquestionably the most welcome innovation in *UA* is its replacement of Mill's Methods, with their aberrant names, by straightforward equivalents deduced from the definitions of "necessary condition" and "sufficient condition." The mere mention in three brief footnotes of the "Method of Agreement," in which cases differ in all but one respect, and the "Method of Difference," in which cases agree in all but one respect, caused a glazing over of the reviewer's eyes, and he is pleased to think

he need never again inflict Mill on his students. Fogelin and Sinnott-Armstrong introduce instead the Sufficient Condition Test, according to which a factor F is not sufficient for a target factor G if F is sometimes present when G is absent, and the Necessary Condition Test, according to which F is not necessary for G if F is sometimes absent when G is present. The authors make it quite clear that these tests only eliminate candidates, and cannot establish the necessity or sufficiency of a factor unless some list of possible candidates has been stipulated to be exhaustive. That wasn't so bad, was it? Somewhat earlier there is a nice discussion of the point that the totality of conditions necessary for a phenomenon need not be sufficient for it, and a bit later comes a very crisp discussion of the meaning of "cause." The material on conditions and conditionals makes *UA* worth the price of admission, in my view.

Readers familiar with recent work on vagueness—this excludes beginning students—will be struck by *UA*'s treatment of the Sorites. The problem is familiar enough: a fat man remains fat if he loses but one ounce, so 1600 applications of modus ponens leave him fat still after losing one ounce daily for five years. The authors now in effect point out that, since losing 1600 ounces is the same as losing 100 pounds, the loss of an ounce per day for five years is the same event as the sudden loss of one hundred pounds, just more spread out in time. Therefore, if the sudden loss of 100 pounds can warrant the reclassification of a former fatty as svelte, so can the slower loss. The Soritist (and with him the alert student) may complain of question-begging, since his conclusion from the identity of 1600 ounces with 100 pounds is precisely that losing 100 pounds cannot change anyone's figure. Still, *UA*'s treatment is a nice introduction to the puzzle.

A great problem in teaching informal logic is to find illustrations of text-book maneuvers realistic enough not to look contrived, yet not so interesting as to

distract. Here the authors have mixed success. They use the abortion issue well to illuminate the role of facts, principles, analogy, and the weighing of countervailing factors in moral reasoning. The example might have been more pointed still had the problem posed been the legality of abortion instead of its morality, as the authors have it. All in all, *UA*'s treatment suggests that abortion is better served by being an example in an intro logic course than as a topic in its own right in an intro ethics course, where feelings run higher. However, the use in *UA* of *Plessy*, *Brown* and *Bakke* to illustrate legal reasoning is unfortunate. A less contentious issue than race should have been chosen, and, while both *Plessy* and *Brown* are instructive as interpretations of the 14th Amendment, *Bakke* so plainly flouts the language of the Civil Rights Act as to make it useless as an example of reasoning of any sort. *Bakke*, as is well known, was rejected by the U. Cal.—Davis Medical School because he was white. The relevant Title of the Civil Rights Act states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." But Justice Brennan found *Bakke*'s rejection consistent with these words because it did not "in any sense stamp [him] as inferior," and Justice Powell found no violation when an applicant "loses out on the last available seat to another candidate receiving a 'plus' on the basis of ethnic background." These holdings show something, but not adamant chains of logic.

A less than gripping selection from a creationist is opposed to one from Stephen Jay Gould to illustrate controversy in science; a selection from Galileo on inertia, on the other hand, is extremely effective. Finally, philosophical reasoning is illustrated by a rather repetitious dialogue on the Turing test by Douglas Hofstadter,

together with a concise statement by Searle of his Chinese-room argument. This pairing is provocative, but Fogelin and Sinnott-Armstrong do not use it to say much about the special ways philosophers argue. Discussion of this material will simply be a unit on philosophy of mind—not a bad thing, perhaps, but the instructor will have to work hard to keep it connected to informal logic.

The book is impeccably politically correct in its details: shortstops are "she's," Valerie is a lawyer, Marian is clever, and so on. One gets used to this sort of thing, but the authors go too far when they cite the case of Cyril Burt to illustrate the danger in appealing to authority that experts may "lie because it can bring fame and professional advancement." Burt presented studies of the IQs of twins reared apart to show that individual differences in IQ are due primarily to genetic differences, and was accused (after his death) of falsifying his data. Fogelin and Sinnott-Armstrong do not treat these accusations for what they are, namely accusations; they state as fact that a significant portion of Burt's data "were cooked—that is, made up." However, two recent books, R. B. Joynston's *The Burt Affair* (Routledge, 1989) and Ronald Fletcher's *Science, Ideology and the Media: The Cyril Burt Scandal* (Transaction, 1990) seem pretty much to establish that Burt's studies were not cooked (or inaccurate) after all. The main evidence of fabrication, that Burt's data are too consistent to

be true, seems to have resulted from Burt's recycling his data again and again in different publications—hardly "outright fraud." Ironically, the authority cited by Fogelin and Sinnott-Armstrong on this subject, Stephen Jay Gould again, has himself admitted to miscalculating data on race differences in cranial volume because a small value for Caucasian skulls "fit my hopes" (*The Mismeasure of Man*, Norton, 1981: p. 66, n. 2). The entire discussion in *UA* leaves the overall impression that non-zero estimates of the heritability of intelligence depend to a very significant extent on Burt's work. This is wholly untrue; if Fogelin and Sinnott-Armstrong were aware that it is untrue, they have violated their own Gricean "rule of quantity"—that a communication act should get across all that should be said. If they were not so aware, perhaps they should have avoided the topic.

There is also a small error in the calculation of the probability of overlapping events on p. 265. The event in question is that of picking someone who is either a female or over 19, not picking "a female over 19," as the text asserts.

Despite its treatment of the Burt affair, this is an excellent book for critical thinking courses.

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