

fumes

PHILOSOPHY 412 (QR)
PAUL MCNAMARA

rusted

unused sewer

morphine

slippery

desperate escape

shoeprint

midnight encounter
accomplice

BEGINNING LOGIC

IN A CERTAIN BANK, THE POSITIONS OF CASHIER, MANAGER, AND TELLER ARE HELD BY BROWN, JONES AND SMITH, THOUGH NOT NECESSARILY RESPECTIVELY. THE TELLER, WHO WAS AN ONLY CHILD, EARNS THE LEAST. SMITH, WHO MARRIED BROWN'S SISTER, EARNS MORE THAN THE MANAGER. WHAT POSITION DOES EACH PERSON FILL?

Taking the conditions of the puzzle above as given, a solution can be justified by a chain of reasoning called a 'deductive argument'. That is our subject.

THIS COURSE is an introduction to the systematic study of elementary **deductive logic**, roughly, the study of what follows from what. Deductive logic has become a *formal* discipline: the emphasis is on the form of inferences, rather than on their content, since that allows us to study a vast array of arguments that are correct solely in virtue of their form. Deductive logic has also become a *symbolic* discipline: it employs symbolic techniques similar to those used in mathematics to concisely and precisely express forms that arguments have. For example, a simple argument like this one is correct in virtue of its form, "If Bob's car is at his house, then he is home. His car is at his house, so he is home." It might be expressed as $C \rightarrow H$. C , so H , with C standing for "Bob's car is at his house" and H for "Bob is home". It will turn out that *any* argument with this pattern must be correct in that the conclusion must be true if the premises are, and in virtue of its form.

The main focus in this course will be on acquiring facility in recognizing an argument's form, learning to express it in concise symbolic form, and deriving its conclusion (if the original argument is correct). By working through the course materials, you can expect to enhance your capacity to quickly see what is implied by what is said (by yourself and by others), to gain a better understanding of the logical structure of natural languages, to be able to more carefully express yourself, and to enhance your capacity for problem solving generally.

Grading will be a function of the student's performance on a series of tests. Typically, the class will be run as a workshop, learning together by doing, going over regular homework problems, and introducing a new concept or technique. You will learn logic a small step at a time.

For more info, please email me (paulm@unh.edu).