

EXISTENTIAL IMPORT

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The chief difference between classical (Aristotelian) logic and modern (Russellian) logic, it's often said, is a difference of existential import.

(1) In classical logic, all categorical propositions ("All S is P"; "Some S is P"; and so on) have existential import; in modern logic, particular affirmative (PA) and particular negative (PN) propositions do, while universal affirmative (UA) and universal negative (UN) do not, have existential import.

My purpose in this paper is to determine whether (1), which is asserted or assumed in many logic texts and papers,¹ is true. I shall argue that (1) is confused and should be replaced with (7) (see below), and, more importantly, that the notion of

¹ For example, A. R. Lacey, "Quantifier Words", in A. R. Lacey, *A Dictionary of Philosophy* (Charles Scribner's Sons, N. Y.: 1976); Alex Orenstein, *Existence and the Particular Quantifier* (Temple U. Press, Philadelphia: 1978), pp. 105-07; Baruch Brody, "Glossary of Logical Terms", *Encyclopedia of Philosophy*, Vol. 5 (Macmillan, N. Y.: 1967), p. 64; Antony Flew, "Existential Import", in Antony Flew, *A Dictionary of Philosophy* (St. Martin's Press, N. Y.: 1979), p. 107; Wesley Salmon, *Logic* (Prentice-Hall: Englewood Cliffs, N. J.: 1973), pp. 48-49; Howard Kahane, *Logic and Philosophy* (Wadsworth Publishing Co., Belmont, California: 1982), pp. 167, 174-75; Robert Baum, *Logic* (Holt-Rienhart-Winston, N. Y.: 1981), pp. 360-61, 377; E. J. Lemmon, *Beginning Logic* (Hackett Publishing, Indianapolis, Indiana: 1978), pp. 175-77; Hugues Leblanc and William A. Wisdom, *Deductive Logic* (Allyn and Bacon, Inc., Boston: 1976), p. 163 n. 34; P. F. Strawson, *Introduction to Logical Theory* (Methuen and Co., London: 1952), pp. 164-69; Morris R. Cohen and Ernest Nagel, *An Introduction to Logic and Scientific Method* (Harcourt, Brace and Company, N. Y.: 1934), pp. 41-44; Irving Copi, *Introduction to Logic* (Macmillan, N. Y.: 1978), pp. 187-89.

existential import is itself confused, and should be banished from logical theory.

Let us first be clear about (1). What (1) says is that there is a disagreement between classical and modern logic over whether UA and UN propositions have existential import. Clearly, then, the truth or falsity of (1) depends on what existential import is.

How is "existential import" defined? Two very common definitions are that a (categorical) proposition has existential import just in case (a) it, or the person asserting it, assumes, or is committed to, the claims that there exists something which answers to its subject term, and there exists something which answers to its predicate term;² and (b) "its subject term and predicate term are taken to refer to classes that are not empty".³ (Hereafter, for simplicity's sake, I shall focus mainly on the subject term alone, and mainly on UA propositions.) The problem with such definitions is that the notions of *assuming*, or of *being committed to the claim*, that there exists something which answers to the subject term, and of *taking* the subject term to refer to a nonempty class, are not at all clear. What does such assuming, committing, or taking amount to? I can think of only two answers.

The first is entailment, which in fact is how existential import is sometimes defined.⁴

(2) All S is P

has existential import, then, just in case it entails

(3) There is at least one thing that is S (and at least one thing that is P).

² Careful classical and modern logicians, however, do not say that the existential import of PN propositions involves taking, assuming, or being committed to the claim that there exists something which answers to the predicate term. See, for instance, Strawson, *op. cit.*, pp. 164, 166.

³ Kahane, *op. cit.*, p. 167. But see the caveat issued in fn. 2.

⁴ See, e. g., Wisdom and Leblanc, *op. cit.*, or Karel Lambert, "Existential Import Revisited", *Notre Dame Journal of Formal Logic* (1963): 288-92; p. 288, for an implicit definition of this sort.

This interpretation would seem to accord well with many things modern logicians have said. For (2) does not entail (3) and

(4) No S is P

does not entail (3) either, according to modern logic; and neither (2) nor (4) has existential import, according to modern logic. On the other hand,

(5) Some S is P

and

(6) Some S is not P

both do entail (3), and both of these propositions are said to have existential import, according to modern logic.⁵ Thus “entailment (of the sort noted)” seems to be what modern logicians mean by “existential import”.

Unfortunately, though, this interpretation of “existential import” will not do if the truth of (1) is to be preserved. For if classical logicians meant “entailment (of the sort noted)”, (2) would be false if (3) were false. But so then would (6) be false, since, according to classical logic, (6) has existential import as well. Thus both (2) and (6) would be false—and (4) and (5) false, too—and so the square of opposition could not be preserved. Since classical logic accepts both the square of opposition and the so-called existential import of all categorical propositions, classical logicians do not mean “entailment (of the sort noted)” by “existential import”.

The other interpretation which occurs to me is that “existential import” should be read as “presupposition”, in Strawson’s sense of the term.⁶ (2) does not entail but presupposes (3), in that if (3) is false, (2) would be neither true nor

⁵ But see the caveat issued in fn. 2.

⁶ *Op. cit.*, p. 174.

false. This interpretation seems to accord well with what classical logicians mean by “existential import”: since the presupposition noted, it is said, is “necessary and sufficient for the correctness. . . of traditional Aristotelian logic,”⁷ in particular, for preserving the square of opposition and the validity of classical immediate and syllogistic inference.

Unfortunately, it does not accord well with what modern logicians seem to mean by “existential import”. Modern logic has it that (2) is true if (3) is false. And if, in denying that (2) has existential import but affirming that (5) and (6) have existential import, modern logicians meant “presupposition (of the sort noted),” then they would have to regard (5) and (6) as neither true nor false, if (3) is false (and so, of course, would classical logicians). But clearly what modern logicians claim is that (5) and (6) are false if (3) is false; modern logicians allow no truth-value gaps for propositions (5) or (6).

However, one definition seems sufficiently irenic: a mongrel interpretation of “existential import,” as “either entails or presupposes” will suffice, on purely logical grounds.⁸ Thus it would seem that the only way to use the term univocally, so as to preserve the truth of a large number of claims involving “existential import,” is to interpret it as essentially disjunctive, one disjunct being the donation of modern logic, the other the contribution of classical logic. But such an interpretation is ill-advised, for three reasons. First, it has no very strong historical pedigree; certainly no one in the past seems to have thought he was using the term as a covert disjunction. Second, disjunctive definitions are, generally speaking, hard to understand and, moreover, always logically eliminable, by “factoring” into disjuncts. Thus they are not good conceptual foundation stones for theories, other things being equal. Third, the mongrel definition in question simply obscures the real

⁷ Copi, *op. cit.*, p. 188. This is open to question, however, since it has been forcefully argued that the notion of presupposition is confused, and wreaks inferential havoc. See G. Nerlich, “Presupposition and Entailment”, *American Philosophical Quarterly* 2 (1965): 33-42, esp. pp. 35-37.

⁸ I would like to thank Walter Weber for reminding me of this “mongrel interpretation”.

nature of the difference between classical and modern logic: it grabs a term deeply entrenched in and confined to classical logic with its left hand, while holding fast to a term just as deeply entrenched in and just as irrevocably confined to modern logic with its right. The real difference between classical and modern logic, that between presupposition and entailment, is thus hidden by the embrace. I conclude that such composite Aunt Sallys as our mongrel definition are best left for conceptual families in which laziness, confusion, obscurity, illegitimacy, and no very sure sense of family history are the prevailing norms. In logical theory they are no welcome resident.

So, as no other interpretation of “existential import” occurs to me, and as no other is advanced in the literature, I conclude that there is no single, non-problematic interpretation of “existential import” under which (1) is true. Rather, the dispute between classical logic and modern logic should be put this way:

(7) In classical logic, all categorical propositions presuppose that subject and predicate terms denote; in modern logic, PA and PN propositions entail that subject terms denote, and PA propositions entail that predicate terms denote, while UA and UN propositions carry no such entailments.

When so expressed, the notion of existential import drops out. And, indeed, I think it should drop out of philosophical discussions altogether, since it does no work, since theoretical problems come in its train, and since we already have clear, hard-working, and problem-free, or at least relatively clear, hard-working and problem-free, concepts to express what needs to be expressed.⁹

⁹ My thanks to an anonymous referee for a number of useful comments on an earlier draft of this paper.

RESUMEN

Aunque se emplea el concepto de "contenido existencial" con frecuencia en los textos de lógica formal, y aunque se emplea el concepto frecuentemente como linde del territorio disputado de la lógica filosófica, el significado preciso del concepto es difícil de precisar. En este artículo quiero indagar el concepto, y arguyo que el concepto es de poco valor. La tradición clásica interpreta el concepto de una manera, los filósofos modernos lo interpretan de otra manera, y el esfuerzo de hacer las paces disyuntivas entre los dos es, desde el punto de vista teórico, tanto problemático como innecesario. Mi conclusión es que debemos proscribir el concepto.

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