PHILOSOPHY

How do I use the "Barbara, Celarent, … etc." mnemonic?

Asked 7 years, 11 months ago Modified 3 years, 2 months ago Viewed 23k times

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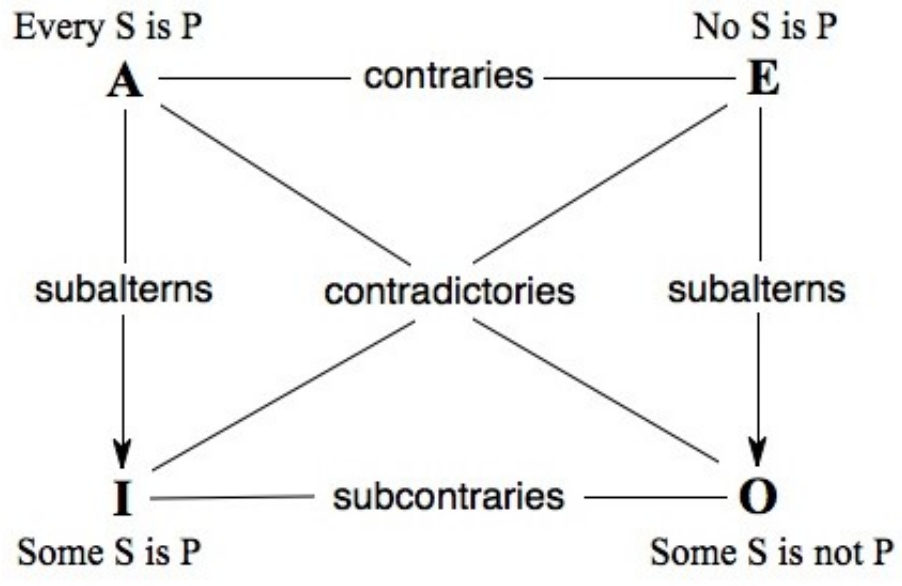
Medieval logicians memorized this most famous logic mnemonic:

Barbara, Celarent, Darii, Ferio ← direct first figure
Baralipton, Celantes, Dabitis, Fapesmo, Frisesomorum ← indirect first figure
Cesare, Camestres, Festino, Baroco ← second figure
Darapti, Felapton, Disamis, Datisi, Bocardo, Ferison ← third figure

The 3 vowels of each name tell what the major, minor, and conclusion are; each vowel corresponds to one of 4 possibilities from the square of opposition:



So **Barbara** is an AAA syllogism, e.g.:

1. Every man is an animal.
2. Every animal is a creature.
3. ∴ Every man is a creature.

There is more to the mnemonic than this. Apparently the consonants in the names allow one to reduce the corresponding syllogism to that of a simpler figure.

Are there any references that overview how to fully use all that is packed into this very elaborate, well-thought-out mnemonic?

logic | reference-request | syllogism | medieval-logic

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edited Aug 9, 2019 at 2:44

asked Nov 3, 2014 at 19:09

Geremia
7,315 1 23 51

Comments are not for extended discussion; this conversation has been moved to chat. – stoicfury Nov 11, 2014 at 4:25

2 Answers

Sorted by: Highest score (default)

7

A good introduction is the second volume of Gabbay & Woods (2008), *Handbook of the History of Logic*, where you'll find the mnemonics explained on pp 331ff. The mnemonics themselves seems to have originated in 13th century textbooks. For the original, see: de Rijk (1967), *Logica Modernorum*, vol 2, pp 362ff. I would also recommend Kretzmann, Kenny & Pinborg's *Cambridge History of Later Medieval Philosophy*: Together with Gabbay this will give you a couple of hundred pages on the development of mediaeval logic, but it will also show you that it was rather more sophisticated than just an mnemonic which you could apply blindly. For even more detail see: Parry & Hacker (1991), *Aristotelian Logic*, which seems to give a very comprehensive exposition (I have only skimmed this, though).

Unlike @jobermark, I find classical logic an endlessly fascinating topic (I am in no way an expert, though). The value in studying it? Partly seeing the development of an extremly sophisticated system over hundreds of years, partly experiencing the strain between the formal system and that which it is trying to formalize. I would not, however, recommend it as an alternative to modern logic; much less as a guide on how to think. For a very readable comparison with modern logic, see Jan Lukasiewicz (1957), *Aristotle's Syllogistic*

from the Standpoint of Modern Formal Logic. And while you will often find a very polemical stance in 19th and 20th century philosophy, Karl Menger, »The New Logic« (in Sarkar (1996): *Logical Empirism at its Peak*) presents a rather nuanced motivation for modern logic.

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answered Nov 4, 2014 at 1:31

olaf b
434 2 7

Wow, I'd never heard of the multi-volume *Handbook of the History of Logic*. Thank you! – Geremia Nov 5, 2014 at 2:37

6

Explanation of the Mnemonic

Brody, Boruch A. "Logical Terms, Glossary of." *Encyclopedia of Philosophy*. Ed. Donald M. Borchert. 2nd ed. Vol. 5. Detroit: Macmillan Reference USA, 2006. 533-560. *Gale Virtual Reference Library*. Web. 19 May 2016.:

mnemonic terms

The names that the medieval logicians introduced for the valid syllogisms. One such term is "Barbara." The key for these mnemonics is as follows: The three vowels respectively indicate the three constituent propositions of the syllogism as A, E, I, or O. For first-figure syllogisms the initial consonants are arbitrarily the first four consonants; for the other figures the initial consonants indicate to which of the first-figure syllogisms the syllogism in question may be reduced. Other consonants occurring in second-, third-, and fourth-figure mnemonics indicate the operation that must be performed on the proposition indicated by the preceding vowel in order to reduce the syllogism to a first-figure syllogism. The key for this is as follows: "*s*" indicates simple conversion, "*p*" indicates conversion *per accidens*, "*m*" indicates metathesis (interchanging of the premises), "*k*" indicates obversion, and "*c*" indicates *convertio syllogism* (that is, the syllogism is to be reduced indirectly). In mnemonic terms the only meaningless letters are "*r*," "*t*," "*l*," "*n*," and noninitial "*b*" and "*d*." More elaborate mnemonics have been devised for syllogisms in which two or more of the premises exhibit modality. See entry "Logic, Traditional."

Mnemonic Terms

Name	Figure	Major premise	Minor premise	Conclusion
Barbara	first	A	A	A
Baroco	second	A	O	O
Bocardo	third	O	A	O
Bramantip	fourth	A	A	I
Camenes	fourth	A	E	E
Camestres	second	A	E	E
Celarent	first	E	A	E
Cesare	second	E	A	E
Darapti	third	A	A	I
Darii	first	A	I	I
Datisi	third	A	I	I
Dimaris	fourth	I	A	I
Disamis	third	I	A	I
Felapton	third	E	A	O
Ferio	first	E	I	O
Ferison	third	E	I	O
Fesapo	fourth	E	A	O
Festino	second	E	I	O
Fresison	fourth	E	I	O

Reduction

So, what are the different types of reduction mentioned above?

1. simple conversion
2. conversion *per accidens*
3. metathesis (interchanging the premises)
4. obversion
5. *convertio syllogism* (indirect conversion)

> ## reduction of syllogisms
>
> The process whereby syllogisms in imperfect figures are expressed in the first figure. Reduction is *direct* when the original conclusion follows from premises in the first figure derived by conversion, obversion, etc., from premises in an imperfect figure. Reduction is *indirect* when a new syllogism is formed which establishes the validity of the original conclusion by showing the illegitimacy of its contradictory. See entry "Logic, Traditional."

conversion

In traditional logic, a type of immediate inference in which from a given proposition another proposition is inferred that has as its subject the predicate of the original proposition and as its predicate the subject of the original proposition (the quality of the proposition being retained). The process of conversion yields an equivalent proposition only when the original proposition is an E- or I-proposition; when it is an A-proposition traditional logicians allowed for conversion *per accidens* (or by limitation)—that is, conversion plus a change in the quantity of the proposition from universal to particular. Thus, the E-proposition "No men are immortal" yields "No immortals are men," but the A-proposition "All men are mortal" can be converted only by limitation, yielding "Some mortals are men." The process of conversion yields no equivalent proposition if the original proposition is an O-proposition. See entry "Logic, Traditional."

obversion

In traditional logic, a type of immediate inference in which from a given proposition another proposition is inferred whose subject is the same as the original subject, whose predicate is the contradictory of the original predicate, and whose quality is affirmative if the original proposition's quality was negative and vice versa. Obversion of a proposition yields an equivalent proposition when applied to all four types (A, E, I, and O) of propositions that traditional logicians considered. See entry "Logic, Traditional."

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edited Aug 7, 2019 at 3:29

answered May 19, 2016 at 18:01

Geremia

7,315 1 23 51