Introduction to Logical Reasoning Workshop on (ategorical Inferences and (ategorical Syllogisms

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Part I, Problem 1 Solution

"All professors are successful".

1. The subject (S) is professors. The predicate (P) is successful people. The Venn diagram for this statement:



Part I, Problem 2 Solution

If the statement "All professors are successful" is true, then

A. The statement "Some professors are successful" is *true*. (See the slides on subalteration.)

B. The statement "Some professors are not successful" is *false*. (See the slides on contradictories.)

C. The statement "No professors are successful" is *false*. (See the slides on contraries.)

Part II, Problem 1 Solution

"Some students are not journalism majors".

1. The subject (S) is students. The predicate (P) is journalism majors. The Venn diagram:



Part II, Problem 2 Solution

If the statement "Some students are not journalism majors" is true, then

A. The statement "All students are journalism majors" is *false*. (See the slides on contradictories.)

B. The statement "Some students are journalism majors" is *undetermined*. (See the slides on subcontraries.)

C. The statement "No students are journalism majors" is *undetermined*. (See the slides on subalteration.)

Part III, Problem



The argument is valid because the area of overlap between categories *S* and *P* is completely empty.

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Part III, Problem 2



The argument is invalid because we cannot tell for sure whether there is a dot in the area of overlap between categories *S* and *P*.

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The major term (P) is courageous people, the minor term (S) is investigative journalists, and the middle term (M) is social and political activists. The standard symbolic form of this argument is as follows:

- Some *M* is not *P*.
 All *M* is *S*.
- \therefore Some *S* is not *P*.

Part IV



The argument is valid because there is a point that is in S (and also M) but that is not in P.

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We move into the final unit of the course by looking at common informal logical fallacies.

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