CRITICAL THINKING

Workshop #9

Analyzing Categorical Statements

Professor David Emmanuel Gray

Explanation of Annotations for These Solutions

The problem is in black Futura Std type.

The solution is in red Garamond Premier Pro type.

Any commentary is in blue Futura Std type.

Please Note: When solving these types of problems for a quiz or an exam, you are expected to format your own solutions in a similar manner as I have done on these slides. Failure to do so may result in a small penalty for not following instructions or even a larger penalty because I do not understand your solution.

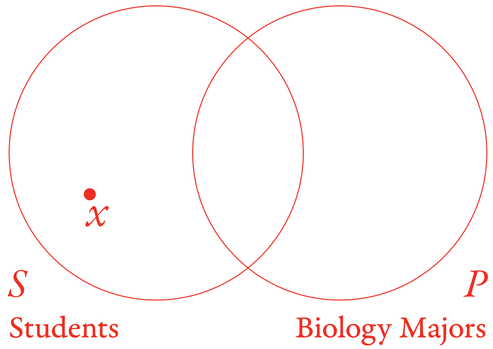
Part I Solutions

1. Some students are not biology majors.

Subject (*S*): Students.

Predicate (*P*): Biology majors.

Logical Form: **O** (Some *S* is not *P*).



Quantity: Particular because it is referring to *some* students but not necessarily to all of them. Some students are not biology majors, but some other students may actually be biology majors, as is seen in the Venn diagram.

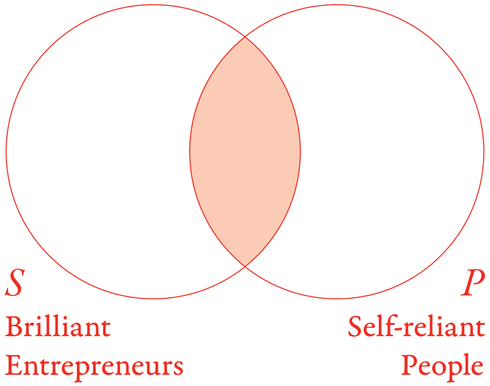
Quality: Negative because it *denies* that one student (marked with an *x*) is also a biology major.

Distribution: The predicate term *is* distributed because the statement refers to *all* biology majors. As the Venn diagram shows, all biology majors are not that one student marked with an *x*.

Part I Solutions

2. No brilliant entrepreneurs are self-reliant!

Subject (*S*): Brilliant entrepreneurs. Predicate (*P*): Self-reliant people. Logical Form: **E** (No *S* is *P*).



Quantity: Universal because it is referring to *all* brilliant entrepreneurs. They are all not self-reliant people, as is seen in the Venn diagram.

Quality: Negative because it *denies* that brilliant entrepreneurs are also self-reliant people.

Distribution: The predicate term *is* distributed because the statement refers to *all* self-reliant people. As the Venn diagram shows, they are all not brilliant entrepreneurs.

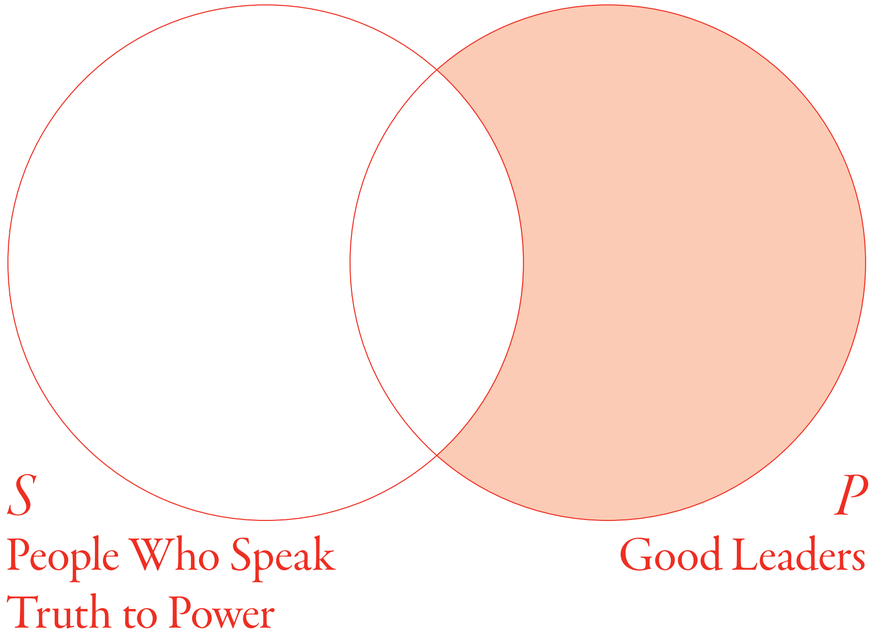
Part II Solutions

1. People who speak truth to power are the only good leaders.

Subject (*S*): People who speak truth to power.

Predicate (*P*): Good leaders.

Logical Form: A (All *P* is *S*).



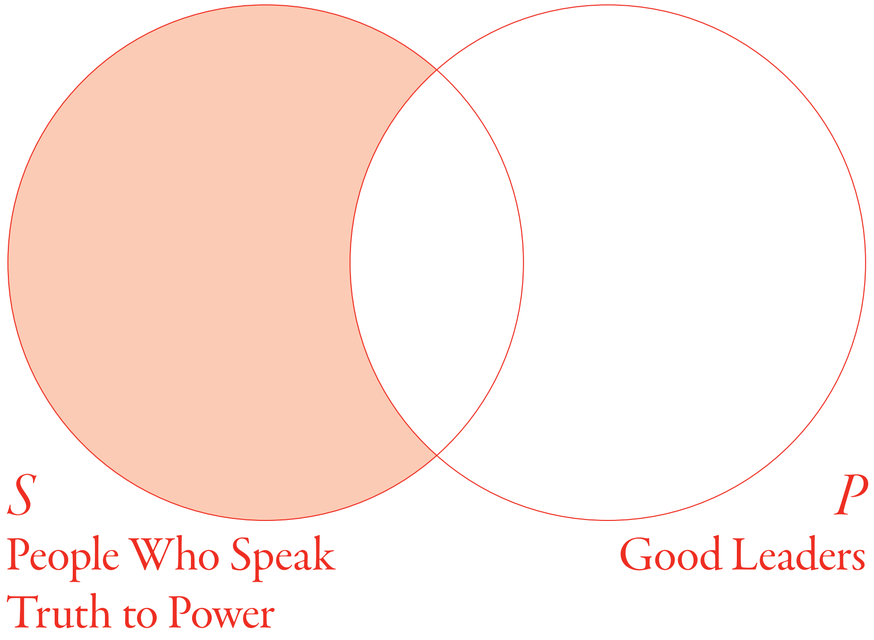
Part II Solutions

2. People who speak truth to power are only good leaders.

Subject (*S*): People who speak truth to power.

Predicate (*P*): Good leaders.

Logical Form: A (All *S* is *P*).



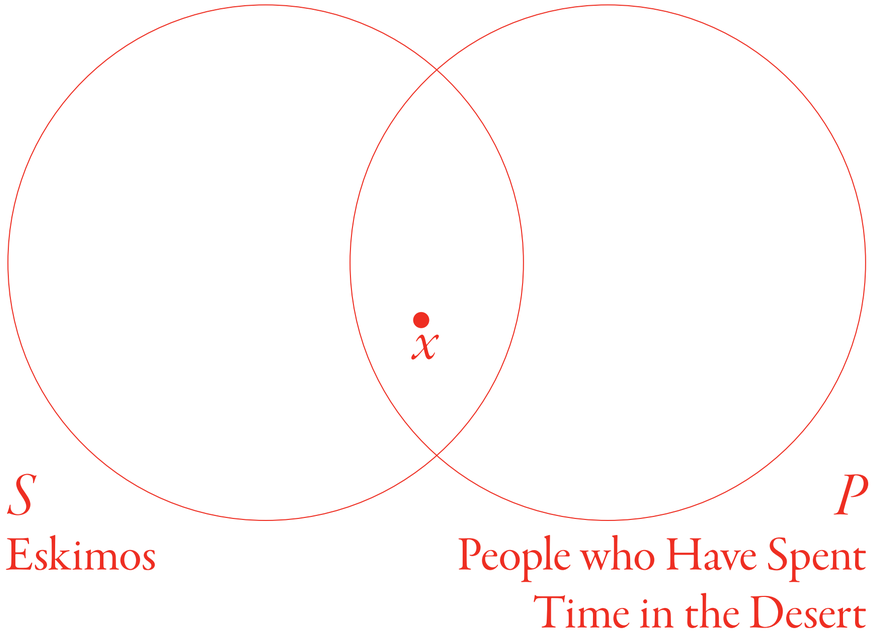
Part II Solutions

3. There are Eskimos who have spent time in the desert.

Subject (*S*): Eskimos.

Predicate (*P*): People who have spent time in the desert.

Logical Form: I (Some *S* is *P*).



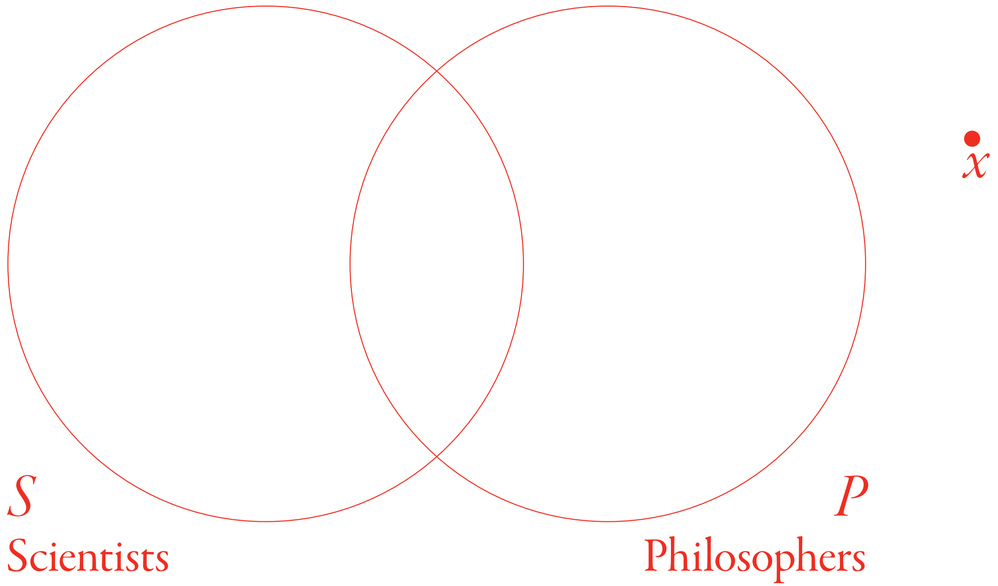
Part II Solutions

4. Some non-scientists are non-philosophers.

Subject (*S*): Scientists.

Predicate (*P*): Philosophers.

Logical Form: I (Some non-*S* is non-*P*).



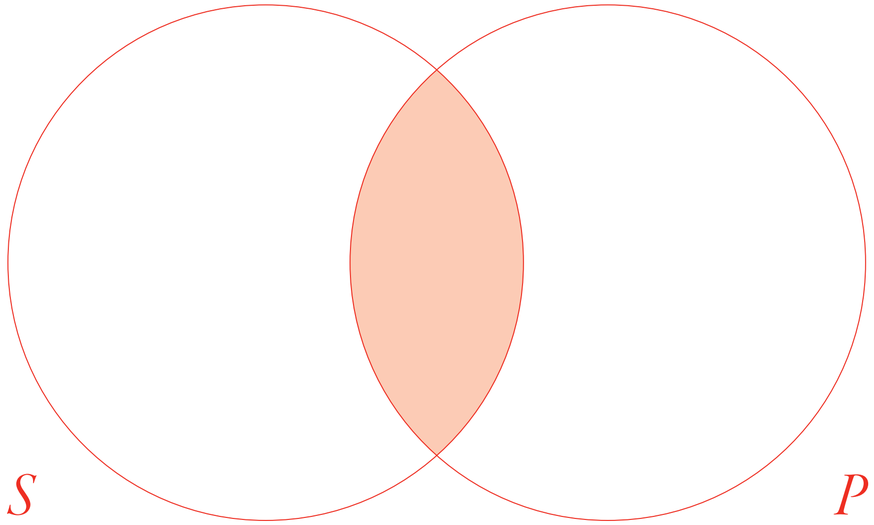
Part II Solutions

5. Hafsa does not like *Game of Thrones*.

Subject (*S*): People identical to Hafsa.

Predicate (*P*): People who like *Game of Thrones*.

Logical Form: A (No *S* is *P*).



Next Class…

We will see what we can infer from the truth of a single categorical statement. This will give us more practice using Venn diagrams.