A Review of Three Methods for Assessing Invalidity

Consider a claim that someone might make:

> "Everyone in favor of gun control is a terrible person, since people in favor of gun control clearly hate freedom, and terrible people also hate freedom."

Let's put this in numbered argument form:

1. All people in favor of gun control are people who hate freedom.
2. All terrible people are people who hate freedom.
3. Therefore, all people in favor of gun control are terrible people.

Now, let's replace the terms with variables. Let S="people in favor of gun control", and let M="people who hate freedom", and let P="terrible people". The argument becomes:

1. All S are M.
2. All P are M.
3. All S are P.

But, the major premise needs to come first and the minor premise second in order to get the proper form, so let's swap the premises:
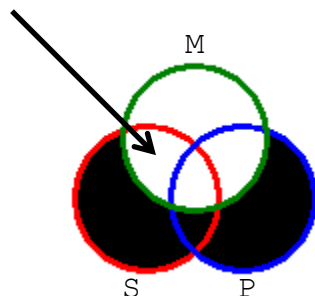
1. All P are M.
2. All S are M.
3. All S are P.

We have learned several methods for determining that this argument is invalid:

(1) First, we can look up the **figure** and **mood** on the figure/mood chart:

This is an AAA-2 syllogism (NOT one of the valid forms) and it is therefore **invalid**.

(2) Second, we could draw **Venn Diagrams**. The Diagram would look like this:

The conclusion says that all of the S's are P's. But, this is not necessarily the case. For instance, there is an unshaded portion of the S-circle that does NOT overlap with the P-circle (where the arrow is pointing). For all we know, there might be some individuals that exist in this portion of the diagram (i.e., some people who are in favor of gun control who are NOT terrible people). So, since the information claimed in the conclusion is NOT contained in the information supplied by the premises, the argument is **invalid**.

(3) Third, we could use the **Counter-Example Method**. Can we come up with an argument that has the same FORM as the one given, but which has premises that are clearly true, and a conclusion that is clearly false? Remember, the form was this:

1. All P are M.
2. All S are M.
3. All S are P.

Here is another argument with the same form:

1. All pandas are mammals.
2. All sheep are mammals.
3. Therefore, all sheep are pandas.

This argument has the same form as the one about gun control, but has **true premises and a false conclusion** and is therefore **invalid**. So, here is a clear counter-example to the form of the argument above about gun control which demonstrates that the argument about gun control is ALSO invalid.