PHIL 220: Introduction to Logic

Week 2 Discussion (09/05/2025)

News

- New OFFICE HOUR: Monday, 10 AM - 11 AM, in MHP B7A, or by appointment.

- New WEBSITE: https://gzmla.github.io/logic220-fridays.github.io/

- Don't forget that the first assignment is due next Monday.

Our Goals for Today

To sharpen our abilities to:

1. Extract argument forms from trickier arguments.

2. Check (in)validity of trickier arguments.

1   Argument Forms

Extract the argument forms from the following arguments.

> **Exercise**
>
> 1. If God is a perfect being, then God must exist. God is a perfect being. Therefore, God must exist.
>
> 2. If God is a perfect being, then God must exist. God doesn't exist. Therefore, God is not a perfect being.
>
> 3. If people have the right to a state that imposes border control, then people have a right to a city that imposes border control. People have a right to a city that imposes border control. Therefore, people have the right to a state that imposes border control.
>
> 4. According to established theories of international relations, a nation's long-term geopolitical security is guaranteed through one of two primary pathways: the cultivation of robust diplomatic alliances and soft power, or the maintenance of overwhelming military superiority and hard power. A comprehensive review of the current administration's for-

eign policy reveals a clear and successful emphasis on strengthening diplomatic ties and international treaties. Therefore, this administration must also be pursuing a strategy of military expansion and dominance to secure the nation's future.

5. If the sky is blue, then if you can see far into the horizon, then there is no air pollution. If there is no air pollution, then the air quality is good. However, the air quality is not good. Therefore, if the sky is blue, then you cannot see far into the horizon.

6. The ball is red. Therefore, the ball is colored.

7. Every red thing is colored. The ball is red. Therefore, the ball is colored.

8. Every human being is imperfect. Every USC student is a human being. Therefore, every USC student is imperfect.

9. Some chefs are skateboarders. Some skateboarders are surfers. So, some chefs are surfers.

10. Consider the internal structure of successful states. Every citizen in a functional democracy is protected by a fundamental legal right. From this, we can deduce that there must exist a single, fundamental legal right that protects every citizen in all functional democracies.

2 (In)validity

Let's discuss three things:

- Which arguments above are valid/invalid?

- If valid, how to make it invalid?

- If invalid, how to make it valid?