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PHILOS 12A / DIS 102

GSI: Mathias Boehm

Problem Set #2

2.1

Argument	Valid?	Sound in Socrates' World	Sound in Wittgenstein's World?
1.	Yes	Sound	Unsound
2.	Yes	Sound	Unsound
3.	Yes	Sound	Unsound
4.	Yes	Sound	Unsound
5.	No	Unsound	Unsound
6.	Yes	Sound	Unsound
7.	No	Unsound	Unsound
8.	No	Unsound	Unsound

2.2

1. 1 | Anyone who wins an academy award is famous

2 | Meryl Streep won an academy award

3 | Meryl Streep is famous

- a. The argument is **valid**, but it is **not sound**. The first argument is not always true since not everyone who wins an academy award is famous.

2. 1 | Actors who win academy awards are famous

2 | Harrison Ford has never won an academy award

3 | Harrison Ford is not famous

- a. The argument is **not valid** and **not sound**. Even if Harrison Ford never won an academy award, that does not mean he is not famous.

3. 1 | Charlton Heston is never wrong

2 | Charlton Heston said the right to bear arms is important freedom

- 3 | The right to bear arms is the most important freedom
- a. The argument is **valid**, but it is **not sound**. While Charlton Heston said it's the most important freedom, that doesn't mean it's true.
4. 1 | Al Gore is a politician
- 2 | Hardly any politicians are honest
- 3 | Al Gore must be dishonest
- a. The argument is **not valid**, but it is **not sound**. Just because Al Gore is a politician doesn't mean that he *must* be dishonest.
5. 1 | Mark Twain lived in Hannibal, Missouri
- 2 | Sam Clemens was born in Hannibal, Missouri
- 3 | Mark Twain *is* Sam Clemens
- a. The argument is **valid**, and it is **sound**. The equivalence provides that both names are for the same person.
6. 1 | No one bought anything last night
- 2 | We were closed
- 3 | No one under 21 bought beer here last night
- a. The argument is **not valid**. It really just depends on the time. The "we were closed" statement may only apply to a certain time, but that doesn't mean that someone could've bought something before then. For the "no one under 21 bought beer here last night" to the "no one bought anything last night" couldn't also be made because the person under 21 could've bought a soda or food.
7. 1 | Claire lives on the same street as Max
- 2 | Max and Laura live on the same street

3 | Claire must live on the same street as Laura

- a. The argument is **not valid**. Max could be living at an intersection (let's say Telegraph and Bay), while Claire and Laura live on the respective streets that Max's house is on the intersection of. Since Claire lives on Telegraph and Laura lives on Bay, that means that they won't live on the same street.

2.4

1. Can a valid argument have false premises and a false conclusion?

- a. Yes
 - i. 1 | All actors are good piccolo players
 - ii. 2 | Naomi Osaka is an actor
 - iii. 3 | Naomi Osaka is a good piccolo player

2. False premises and a true conclusion?

- a. Yes
 - i. 1 | All bears are humans
 - ii. 2 | Fitch is a bear
 - iii. 3 | Fitch is a human

3. True premises and a false conclusion?

- a. No, it is not possible for the premises being true while the conclusion is false. If a valid argument does have a false conclusion, then it cannot have all true premises. One premise must be false in that case.

4. True premises and a true conclusion?

- a. Yes

- i. 1 | Every human is mortal
- ii. 2 | Socrates is human
- iii. 3 | Socrates is mortal

2.5

In Premise 1, we know that $B = C$, so we can substitute anywhere we see a B with a C by the Elimination Principle/Indiscernibility of Identicals. In Premise 2, we see that $A = B$, and with Premise 1/Elimination Principle/Indiscernibility of Identicals, we can substitute the B with a C, thus making it $A = C$.

2.6

In Premise 1, we see that A and A are in the same row. By Premise 2, we know that $A = B$, so by the Indiscernibility of Identicals, wherever we have an A we can put a B. By Premise 3, we also know that $B = C$. With the same ideology, wherever we have a B, we can put a C. We can rewrite Premise 2 of $A = B$ into $A = C$ because of II. Because of this, it is valid that A and C are in the same row.

2.8

The argument is valid, but it's not sound. The premises may be true but the conclusion false. C could be of Medium instead of Small.

2.10

The argument is valid, but it's not sound. The premises may be true but the conclusion false. They could be two separate blocks.

2.11

The argument is valid, but it is not sound. The premises may be true but the conclusion false. C could be between A and B.

2.13

The argument is valid. In Premise 1, we can see that A and B are the same size. We can also see in Premise 2 that A is larger than C. Because we know that A and B are the same size, Premise 2 also means that B is larger than C. Premise 3 explains that D is smaller than C. As a result, we can say that A and B are Large, C is Medium, and D is Small because D is smaller than C and A/B is larger than C. It can be then concluded that D is smaller than B. Since A is larger than C, B is also larger than C. D is smaller than C, and Premise 2 explains that A/B is larger than C. In the end, D is smaller than B.