

M20HSS316-ITP/Assignment-1/20171114/CSE

August 2020

1 She's a witch!

For this part of the assignment, we had to watch a video in which some villagers claimed that a woman is a witch. They put forward their premises and make logical deductions (which may not be correct) to conclude that the woman is a witch. I will first reconstruct the argument and present the premises and logical deductions drawn by the villagers and then decide whether these deductions are valid and what are the ways in which these can be improved.

1. The villagers present a woman before an officer and claim that **she is a witch** (C). The basis of their claim (C) is that the **woman has a long nose and hat like a witch** (P_1). One of the villagers also claims that **the woman turned him into a newt (salamander)** (P_2).
2. From the above we observe that the villagers give statements like P_1 , P_2 and logically conclude c from these. ($P_1 \wedge P_2 \rightarrow C$).
3. The officer also concludes that the woman is a witch (C), but in a slightly different way. He makes the following set of logical deductions to arrive at the conclusion.
 - (a) He first proposes that **witches burn in the same way as wood** (which is a combustible material). (Q_1)
 - (b) Also, **wood floats on water and ducks also floats on water**. (Q_2).
 - (c) So, if **the weight of the women is the same as that of a duck** (Q_3) then it implies women floats on water, which in turn implies that woman is comparable to wood. It is also commonly known that wood is combustible, so the woman can also burn, which implies the woman is a witch (from the first proposition). ($(Q_3 \rightarrow Q_2 \wedge Q_1) \rightarrow C$).
4. These arguments are not at all valid due to a number of reasons:
 - (a) The arguments presented by the villagers are inaccurate as the woman has been forced to adone a appearance similar to a witch, she actually doesn't have a long nose as described.

- (b) Also, the claim that she transformed a person to a newt has no evidence to back it up.
 - (c) The logical deductions performed by the officer are also false. He says witches burn in the same way as wood, which is true. But it doesn't imply that witches are made of wood as a lot of things are combustible.
 - (d) Also, he claims that both wood and ducks float on water, which is true but it doesn't imply that every floating thing is the same as wood, or everything that weighs the same as a duck is similar to wood.
5. The following changes can be made to the premises in order to make the argument logically valid:
- (a) We can add the premise that: **Weighting similar to a duck doesn't imply that the object is similar to a duck.**
 - (b) **If something floats on water, then it doesn't imply that it is similar to wood.**
 - (c) **All things that burn are not made up of wood.**

If we add these premises to the officer's argument, it would become valid and he would be able to come to a valid conclusion.

2 Should Philosophy be taught to all students

In this part of the assignment, we are given a passage and we need to dissect it for premises and corresponding conclusions. We also need to tell which is the weakest premise and reconstruct the argument by modifying premises if applicable.

1. The premises and corresponding conclusion are as follows:
 - (a) **P₁**: Philosophy teaches critical thinking skills that are applicable in every career.
 - (b) **P₂**: Coding is a narrow skill that is only of value to people who intend to pursue careers in the tech industry.
 - (c) **C₁**: Philosophy should be a part of every student's curriculum.
 - (d) **C₂**: Those who argue that philosophy should not be taught and that we should educate every student in coding simply do not know what they are talking about.
2. The premise **P₁** is correct as studying philosophy helps develop critical thinking skills as we are forced to search for answers for unanswerable questions. Also, the debates help the student to gather different points of views and understand that things are not black and white in this world.

3. The premise \mathbf{P}_2 is not true in my opinion as coding is not a narrow skill but has a similar impact as philosophy. Coding is simply a set of instructions that we give to other objects that can interpret these instructions and execute them. Coding is at par to other artistic skills like painting, dancing, singing and has an intrinsic beauty in it. By practicing coding, students learn the skill to communicate his idea in elegant ways or in ways which do not seem intuitive at first glance. A simple example is sorting, there are a number of ways to sort n items. One intuitive way is to compare every two items and exchange if necessary. Another very interesting way of thinking is to divide our problem into smaller subproblems and solve them instead and use the results to solve the original problem.
4. \mathbf{C}_1 follows from premise \mathbf{P}_1 , that is philosophy must be a part of every student's curriculum as it is applicable in every career.
5. \mathbf{C}_2 cannot be directly concluded from premise \mathbf{P}_2 , as there may be many other reasons for preferring coding over philosophy in selected career options.
6. I think the weakest premise is \mathbf{P}_2 . It represents a very biased version of the truth which may not be true in various situations. Also, the conclusion \mathbf{C}_2 doesn't follow directly from premise \mathbf{P}_2 . So, we need to add more premises to improve \mathbf{P}_2 and arrive at a logical conclusion.
7. We can add a premise like: People give more weightage to coding in comparison to philosophy and using this and \mathbf{P}_2 to conclude that these people don't understand the importance of philosophy.