M20HSS316-ITP/Assignment-6/20171047/CLD

To start off, let us look at object composition i.e how a collection of smaller objects might create something larger and more significant and yet be a salient part of the composition as a whole. Consider the human body. We have multiple organs forming organ systems which compose the complete organism (we could go down to the cellular level but that is not required here). Each organ is connected physically through certain means to form the organ system, and multiple organ systems interact in synergy such that the human body can perform all of its day-to-day activities. Now that we have some grounding to motivate further discussion, we analyze proposed sets of pre-conditions which must be satisfied by objects in order for them to compose something greater than themselves.

There are two commonly suggested answers here, namely, some objects, say objects in a set S compose another object O if and only if (a) 'they touch', and (b) 'they are stuck together'. Now, both (a) and (b) are open to interpretation and careful scrutiny. In (a), it is not clear if all objects need to touch each other like a fully connected graph (edges representing a valid physical contact) or if all the objects are connected graphically by some means of tangible contact. Whatever the case may be, this 'connection' is not permanent. Hence, the object O gets in and out of existence based on the overall connectedness which is counter-intuitive. In (b), this state permanency is established. The objects are stuck or fused together and cannot be separated. Again, this is the best possible interpretation for (b) going by the principle of charity. Overall, going from (a) to (b), the constancy of connectedness over a time period is made more explicit, i.e we cannot continuously touch and separate two small objects and claim that we are creating and breaking the composed object with each action.

With both (a) and (b), the biconditional becomes a problem. Let's say, we connect a bottle cap to an uncapped bottle, thereby forming a complete bottle. A bottle is a semantic unit and we have a defined mental representation for it. It is a sememe which is being realized in reality by bringing together the cap and the body. But if we take the example of us touching our phone, we are not forming anything new which we can attribute to a mental sememic notion. The idea changes a little when we stick two objects together. Maybe the person performing the action is trying to convey a message. Perhaps, by sticking a human hand representation to the phone, someone wishes to artistically showcase how human beings are attached to their mobile devices. So when we explicitly stick or fuse objects, the pragmatics of doing so comes into the picture. The 'why did they stick them together?' becomes the question with the underlying assumption that they must've had good reason to do so. Still, it may be attributed to insanity and as a whole, may not correspond to a sememic entity i.e an entity which we can imagine as an atomic and independent object.

Now that we have elaborated on the 'if' condition, let's look at the 'only if' side. Objects need to be connected physically for them to form a larger object in both (a) and (b) which may not be true. Again, the definition of object has a high degree of interpretability. Going by etymology, 'object' has roots in medieval Latin '*objectum'* meaning, 'a thing presented to the mind'. Modern definitions agree on the idea that an object is something that can be perceived, some definitions include the 'can be seen and touched' clause and/or the 'stability' clause. In certain definitions, an object can

also be something abstract. Suppose, a physical system interacts by means of forces which do not require a material medium; say, two bodies interacting in a vacuum or even our solar system for that matter. The complete physical system in this case can be regarded as an object (as there is no definition or challenging clause available to refute this claim). If the space in three dimensions within which the object is present is well-defined and satisfiable, the exact means of interaction can be anything, even Newtonian gravity.

Thus, two components can form an object even without touching each other. Nevertheless, the clarification: "by touch or stuck, we refer to any kind of interaction by means of any nature of force either in the presence or in the absence of a separating material medium", would bring in cases involving gravitational interactions into the definition of object. But that does not seem like the motivation or intended purpose of the word 'touch' (or 'stuck') in this context.

Taking this discussion into mind, we can be more lawyer-like and come up with a better response. I would frame my answer as follows: N number of objects within set S compose an object O if and only if:

1. The N objects in S interact periodically or sporadically to operate in a collective manner
2. The collection forms a unified whole, in that, they perform a specific collective function or form an atomic identity of its own
3. The object can be distinguished from its environment by means of a definable boundary which may be either physically tangible or an abstract concept as the case may warrant

Note that all of the above postulates are subject to interpretation. We only lay out the terms in a fashion which reflects the overall spirit governing which compositions should and should not be considered as objects. However, as the legislature formulates the laws and a court has to interpret them, it is upto the interpreter to perform the actual classification of which collective sets form an object and which do not.