Wholes and Parts

The puzzles of material constitution partly arise partly because over claims about when there exists a whole composed of parts. For instance, the puzzles of Tibbles and Tib assumes that Tim exists in the first place. Our focus in this handout is on when some entities compose a whole. Peter Van Inwagen has dubbed this *The Special Composition Question*. For some groups of entities, the *x*s, we can phrase the question in two ways:

- When is it true that there is something the *x*s compose?...the official question.
- Suppose one had certain nonoverlapping objects, the *x*s, at one's disposal; what would one have to do–what could one do–to get the *x*s to compose something?...the practical question.

Three possible general answers:

1. The *x*s never compose something. There is no such thing as composition...nihilism
2. The *x*s sometimes compose something, but not always...moderate
3. The *x*s always compose something. EVERY collection of *x*s is an object...universalism

Mereological Nihilism

The nihilist makes two claims: 1) No composite object exists, where a composite object is one that has material parts, and 2) material simples exist, where a material simple is an entity with no material parts.

Sorites argument for Nihilism

We encounter sorites paradoxes for a predicate 'P' when we cannot determine the range of entities that we can apply 'P' to, e.g. 'heap', 'bald', 'table', 'person', and so on. Here is an example:

P1 A man with 10,000 hairs on his head is not bald.

P2 If a man with 10,000 hairs on his head is not bald, then a man with 9,999 hairs on his head is not bald.

P3 If a man with 9,999 hairs on his head is not bald, then a man with 9,998 hairs on his head is not bald.

PN If a man with 1 hair on his head is not bald, then a man with 0 hairs on his head is not bald.

C A man with 0 hairs on his head is not bald.

Tables do not exist

P1 There exists at least one table.

P2 For anything there may be, if it is a table, then it consists of many atoms, but only a finite number.

P3 From P1-P2 it follows that at least one table exists that consists of atoms.

P4 For anything there may be, if it is a table (which consists of many atoms, but a finite number) then the net removal of one atom, or only a few, in a way which is most innocuous and favorable, will not mean the difference as to whether there is a table in the situation.

P5 If P4 is true, then there can exist a table that consists of no atoms. Proof:

- **P5.1** There exists a table T_1, and T_1 consists of 10,000 atoms.
- **P5.2** From P4 and P5.1, if we (net) remove one atom from T_1, then there exists a table T_2 and T_2 consists of 9,999 atoms.
- **P5.3** From P4 and P5.1-P5.2, if we (net) remove one atom from T_2, then there exists a table T_3, and T_3 consists of 9,998 atoms.
- **P5.4** From P4 and P5.1-P5.3, if we (net) remove one atom from T_3, then there exists a table T_4, and T_4 consists of 9,998 atoms.
- **P5.C** From P4 and P5.1 - P5.N, if we (net) remove one atom from T_N, then there exists a table T_C, and T_0 consists of 0 atoms.

Moderate Answers

Example: Contact

> To get the *x*s to compose something, one need only bring them into contact; if the *x*s are in contact, they compose something; and if they are not in contact, they do not compose anything.

What does 'contact' mean? Aristotle defines contact in terms of boundaries: y and z are in contact if their boundaries touch.

First objection to contact

1. Suppose contact is the correct answer to the Special Composition Question.
2. For anything at all, if it is a composite material object, it is composed of quarks and electrons.
3. No quarks and electrons are in contact.
4. Therefore, there is no thing such that quarks and electrons compose it.

5. Therefore, there are no composite material objects.
6. But there are composite material objects–this table, for example.
7. So contact is not the correct answer to the Special Composition Question.

Second objection to contact

1. Suppose contact is the correct answer to the Special Composition Question.
2. Then when Bob and Sam shake hands, they compose something.
3. But when Bob and Sam shake hands, they do not compose something.
4. So contact is not the correct answer to the Special Composition Question.

Other Moderate Answers

Fastening: Some xs compose a y if and only if the xs are in contact and fastened together such that they are not easily pulled apart.

Cohesion: Some xs compose a y if and only if the xs are in contact such that they cannot be pulled apart without breaking

Fusion: Some xs compose a y if and only if the xs are in contact such that they have fused together and it is no longer clear where the boundaries of the parts are (i.e., there is no obvious place where one part ends and the next part begins).

Van Inwagen's answer moderate answer

The *x*s compose something iff the activity of the *x*s constitutes a life.

A life is a certain kind of self-maintaining event, that is reasonably well-individuated. It also never happens that the activity of some things constitutes two different lives. Two consequence: 1) If Tib is a part of Tibble, then Tib's activity must, with the rest of Tibble's parts, constitute a life. But it's unclear that Tib has any activity at all. 2) There are no inanimate objects like tables - such things would have to be composed by some things whose activity did not constitute a life.