

Structure of Existence

Ontology asks 'what exists?', but also grapples with the nature of existence, and extends into its structure and order. Physical existence is complex, and is studied by the sciences, but the general structural principles of reality matter to philosophers. Abstract systems in logic and mathematics also have structural features that parallel the natural world. We can ask about the components of a structure, and then the types of relations involved. It seems natural to start with 'things', though one might focus on processes or events, and even physical material may not fall neatly into things, as with water. Discussion tends to focus on types of relation, leaving issues about the relation for another day.

A first question is how much structure exists that needs explanation. Order in nature seems self-evident, but humans often exaggerate how orderly things are. We take 'things' for granted, but in the centre of the sun they all melt away. We take separate lives for granted, but in the swamps and undergrowth lives can merge together. A standard assumption is that there are 'levels' in the structure, but if there are, we should not assume they are neat and tidy. A basis for levels in reality might be 'building blocks' (such as atoms, or living cells), which proliferate at one 'level', and combine into complex structures at the next level. We can cautiously work with the structure of things existing in levels, but should not forget the tangles that characterise reality.

If the structure of reality has levels, there are relationships between them. 'Reduction' is where all the facts about a higher level can be equally well presented in terms of the lower level. 'Identity' is where the upper level facts just *are* the lower level facts in a different guise. 'Dependence' is when the very existence of a thing requires the existence of another (often at a lower level). 'Supervenience' is when things at one level seem to track something at an adjacent level. 'Grounding' is when things at one level are explained (in existence and qualities) by what exists at lower levels. 'Fundamentals' are what exist at some very low or bottom level, helping to explain everything found above them.

Reduction is interesting because there are routine threats to reduce mind to brain, values to emotions, life to chemistry, and so on. Strong reduction says there are two different ways to conceptualise or talk about a single thing. Reduction is then a sort of translation, resulting in a claim that we are looking at only one thing ('identity'), met under two different descriptions. This is 'eliminative' reduction, because the upper level can then be written out of the ontology. Critics may say the translation is impossible, because we need to talk in the higher level vocabulary. It may be that we understand one level (the mind, perhaps) much better than the other (the brain), so that identifying the two is not possible, and may never be possible. The strongest resistance would come from saying that there may exist real features or causal powers at the higher level (and not just higher descriptions), so that reduction would eliminate some of our knowledge of the world. There is more to a house than its bricks, and more to me than my neurons.

If there are dependence relations in reality, they will form a strong part of its structure. If we say "p if and only if q", then p depends on q, but we can substitute a variety of things for p and q, and give many reasons for the dependence. Properties may depend on the substances which support them (as bearers). Crowds may depend on their members (as constituents). Being human may depend on being alive (essential). Being human may depend on oxygen (necessary). Being square may depend on having a shape (conceptual). Rather than things and properties and concepts showing dependence, we may talk of truths that depend on one another. This invites the speculation about how much interdependence there is in reality, and whether it might run through the whole system. System builders try to track wide-ranging dependence, but sceptics say this is wishful thinking, or mere theoretical convenience.

Supervenience is an ambiguous relation, sometimes invoked when the explanation is unclear. The term is usually employed when there seems to be a strong dependence between things, but explaining them as a reduction doesn't seem quite right. Whereas dependence usually concerns the very existence of the dependent entity, supervenience usually concerns its properties and behaviour. It can best be described as one thing 'tracking' another, so that A's events are always mirrored by some event in B. The concept is most useful when the mirroring is one-way, so that B always responds to A, but A often ignores events in B. If supervenience is two-way, this implies a very close relation, and we might suspect that there is a strong reduction present, or even that A and B are identical (even if they don't superficially seem so). One-way supervenience is more puzzling, and invites subtler explanations. If A really does seem independent of B, despite the supervenience, we may say it has 'emergent' properties or causal powers.

To explain the generalised structure of reality the concept of grounding seems indispensable, since a 'ground' is taken to be a reason or explanation. If there is a 'sufficient reason' for everything, then everything will have a ground. This may be some feature of the next level down, or connected features at the same level. The term is fairly broad and a little vague, but the grounding relation seems to transmit across chains of explanations, and two things cannot ground one another, or a thing ground itself (unless, perhaps, it necessarily exists). A given thing will have a unique ground, but that ground might be the reason for other things as well. The grounds of something might be what determines it (such as its cause), or its constitution, or its covering law, and they may be presented as facts or as sentences. A mathematical proof tries to show the grounds of a theorem.

An interesting division in the structure of reality is between the concrete and the abstract, though the boundary may seem blurred. The Equator, for example, seems to be an abstract concept with a precise physical location. If there is a sharp division, then nominalist and physicalist deny the existence of the abstract part of reality. It is also interesting to ask whether reality contains anything vague. Electrons seem rather vague things, and a precise rock may gradually become vague if it crumbles, though many would say that this uncertainty is entirely in our minds.

Structure can be discussed without asking about ultimate foundations, but the question of whether anything is fundamental is enticing. A bold speculation is that there must be a profusion of unified entities ('monads') containing the driving forces of reality, which is otherwise inexplicable. Others stick to some unspecified atoms (or 'simples') which prop up the whole system, since endless divisibility and infinitely receding explanations seem incoherent.