Necessity

Modalities are ways in which truths or facts should be understood, of which the most interesting to philosophers are necessity, possibility and impossibility. Something is necessary if there is no way it could have been otherwise. Originally this was taken to be a condition of reality, when the ancients said that 'even the gods must bow to necessity'. It was later seen that it might be expressed using the more obvious notion of non-contradiction, by saying that something is necessary if its denial would produce a contradiction. This captures the feeling of necessity, but doesn't pin down the general truths we are interested, so we may just say a truth is necessary if nothing could possibly affect it. Rationalist philosophers were drawn to the idea that necessities are directly understood by rational intuition (known 'a priori'), but empiricists saw insufficient grounds for this, and became cautious about the whole idea that anything was necessary. Maybe the a priori insight needed to be a proof, which would guarantee the necessity, but that seems too narrow for more intuitive ideas of necessity (such as that the past cannot be changed).

In modern times necessity is expressed using quantification, where a proposition is true for all values of the variables in a possible sentence (thus, for all x, if x is a past event, then x cannot be changed). Modern precision reveals further issues, such as whether a necessity has to be necessary (or can it be 'possibly necessary'?), and whether the necessity applies to the truth of a whole sentence (an 'operator'), or to a term within the sentence (a predicate modifier), or to the nature of the objects referred to. This last point distinguishes between 'de dicto' necessity, which concerns the truth of a proposition, and 'de re' necessity, which concerns necessities about things in the world.

If we say something could not have been otherwise, this raises the question of whether that claim only concerns certain circumstances, or whether the claim is universal. The latter is 'absolute' necessity, but there seem to be many conditional necessities, such as that if you are taller than me, then necessarily I am shorter than you. We also see that necessities are met in many different areas, such as language, mathematics, logic, natural sciences, time and space, and even in our moral duties. We may want to say that there are thus many different kinds of necessity, or else that there is just one kind of necessity, but divided up according to what gives rise to the necessity.

If necessity just means that something must be the case, that suggests that there is just one idea of necessity. However, when different types of necessity are compared, some have wider scope than others, and may even include one necessity within a broader necessity, which suggests that there are necessities of different kinds. So what are the major kinds of necessity? We can distinguish the 'strong' from the 'weak' by saying that strong necessities must be the case in all possible worlds, where weaker necessities only apply in restricted circumstances. Absolute necessity has maximum breadth, but the relative strengths of other necessities may depend on how they are specified. Students of modality dream of reaching a consensus on how various necessities fit together, perhaps resulting in a clear map, but there are many rival views. (It is important to remember that a map of types of possibility will be quite different from a map of what is necessary).

Two species of necessity are felt to be reasonably clear, which are the logical and the natural kind. Logical necessity rests on the contradictions that result when it is denied (or perhaps on the rules and terms of logic), and natural necessity (sometimes called 'nomological' necessity, because it is required by the laws of nature) rests on our observations of what has to be the case in nature, such as the power of gravity, or the speed of light. More controversial is 'metaphysical necessity', which is a broader and less clearly founded claim that some truths are just inescapable, even if it is not clear why. Empiricists particularly disliked metaphysical necessity, and dismissed it, or reduced it to analytic truths, perhaps depending on how our words are defined. More recently metaphysical necessity has been revived by the idea that large necessary truths may arise in science – truths which go beyond mere conformity to descriptive laws of nature, indicating how even those laws must behave.

If we consider how logical, natural and metaphysical necessities relate to one another, the usual consensus is that natural necessity is the weakest, because it only seems to apply in the current state of nature, and so is neither metaphysically nor logically necessary. That rests, though, on the empiricist assumption that the laws of nature might (for all we know) have been different, though the claim that those laws are metaphysically necessary now has some supporters. It would be nice if the concept of possible worlds could distinguish logical from metaphysical necessity, but they can both be understood as applying in all possible worlds. Even 'conceptual' or 'analytic' necessity (usually seen as one form of logical necessity) may be true in all possible worlds, if (for example) there is no world where a man can be a married bachelor, or a vixen can be a male fox.

Perhaps the most promising strategy for distinguishing necessities is to ask what gives rise to them. We can then say that in all possible worlds certain necessities will hold if their grounding exists in each world. The strongest necessity will be a metaphysical necessity grounded by everything (or even not needing any grounds). Logical necessity is grounded either just by the laws of logic ('strict'), or also by definitions of terms ('narrow'), such as 'bachelor' or 'vixen'. There may then be further necessities grounded in moral values ('normative' necessity), and natural necessities grounded in the nature of the substances or laws that are foundational to physical reality. One approach to mapping is to ask which types of necessity are entailed by the others. Must a logical necessity also be a metaphysical or absolute necessity? If there were one universal logic that might be so, but different systems of logic can ground different sets of necessities. Could a metaphysical necessity fail to be logically necessary? That a green object cannot also be pink seems absolutely necessary, but not grounded in logic. And yet the claim that an object is entirely green and entirely pink sounds like a contradiction (even if not a formal one), which seems to invoke logic.

Sceptics about necessity will usually allow that you can make something necessary by stipulation (such as the meaning of a word), but whether some truth is necessary depends too heavily on how it is expressed for necessity to have any universality. Thus we say that 7 is necessarily less than 9, by stipulation, but if the number of our planets is 7, that is only contingently less than 9. Thus big claims about necessity may collapse when analysed.