

Necessary and Sufficient

A *state of affairs* is a way for the world to be. A state of affairs is said to *obtain* if the world is that way. For example: *Socrates being wise* is a state of affairs which obtains if Socrates is wise and fails to obtain if Socrates is not wise.

Now let S , P and N be states of affairs: S is said to be *sufficient* for P if S obtaining is enough for P to obtain: i.e. no matter how things are, P obtains if S obtains. Similarly, N is *necessary* for P if N obtaining is required for P to obtain: i.e. however the world is, P obtains only if N obtains. Finally, a *counterexample* to S being sufficient for P is a (perhaps counterfactual) scenario where S obtains without P obtaining.