

This rule can seem a little odd: like we are randomly introducing an additional proposition without giving any justification. However this is just a consequence of the fact if  $P$  is true, so is  $P \vee Q$  since disjunction is not the same as conjunction: only one disjunct needs to be true for the compound disjunction to be true. This is represented in the context of truth-trees by the fact that truth can pass up via either branch of a disjunction pattern. This rule is sometimes also referred to (confusingly) as *Addition*.



Figure 1: disjunc-intro.png