A minor observation about conditionals and logical equivalence

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This post will just be a short note about an observation regarding conditionals in propositional logic. I actually read about this in a logic textbook a long time ago, but I don't remember which one exactly. Anyway, the observation is that two conditionals can be logically equivalent, but their converses are not logically equivalent. An example of this are the conditionals $P \to Q$ and $P \to (P \wedge Q)$. They are logically equivalent, as a truth table demonstrates, but their respective converses $Q \to P$ and $(P \wedge Q) \to P$ are not logically equivalent. Another, perhaps more striking example, are these two conditionals: $P \to (Q \to R)$ and $Q \to (P \to R)$. They are logically equivalent, but their respective converses $(Q \to R) \to P$ and $(P \to R) \to Q$ are not logically equivalent.