From the text, pg. 29:
Rule C.P.: *If we can derive S from R and a set of premises, then we may derive $R \to S$ from the premises alone.*
Question from 14 February class: when Rule C.P. is invoked and when R is a premise, do we list the line corresponding to R when invoking rule C.P.?
Answer: The answer is no, see examples of this on line (8) of the deduction on pg. 29 and line (9) in the example on pg. 30. The key fact about **Rule C.P.** is that it is the only rule we have at this point that *allows you to remove premises from the left column.* Practically, this means, in some sense, that we may introduce a new premise, use it to "do something", and then make it "go away".

A "practical" use of Rule C.P.: can you deduce $P \to R$ from the following premises?:

$\{1\}$	(1) $P \to Q$	Premise
$\{2\}$	(2) $\neg(\neg Q) \to R$	Premise

It seems "obvious" that we should be able to conclude $P \to R$ from this, but it also seems difficult to deduce formally because the sentence $Q \to S$ does *not* follow from the Law of Double Negation (it doesn't match the "correct form"). This is an instance where exploiting **Rule P** along with **Rule C.P.** is the easiest way to proceed. Recall what **Rule P** says (pg. 28):
Rule P: *We may introduce a premise at any point of the derivation.*
The strategy: We will introduce a new premise Q and then use it to conclude $\neg\neg Q$, from which we may deduce R. This shows that "*we can derive R from Q and a set of premises*", and so **Rule C.P.** tells us that "*we may derive $Q \to R$ from the premises alone*"

$\{1\}$	(1) $P \to Q$	Premise
$\{2\}$	(2) $\neg(\neg Q) \to R$	Premise
$\{3\}$	(3) Q	Premise
$\{3\}$	(4) $\neg\neg Q$	3 T (Law of Double Negation)
$\{2, 3\}$	(5) R	2,4 T (Law of Detachment)
$\{2\}$	(6) $Q \to R$	3, 5 C.P.
$\{1, 2\}$	(7) $P \to R$	1,6 T (Law of Hypothetical Syllogism)

Challenge: Can you deduce $P \to R$ from premises (1) and (2) without using **Rule C.P.**?

Additional comment: I just want to point out again that there are logics out there which do not accept the "Law of Double Negation" – intuitionistic logic is probably the most common (read the "syntax" section on its wikipedia page!)