Movement

1 Relative clauses

(1) Every book which is good is expensive.

Example (1) can be easily given a truth-conditionally-equivalent paraphrase without a relative clause, as in (2):

(2) Every [good book] is expensive.

The relative clause *which is good* must be part of the *restrictor* (first argument) of *every*.

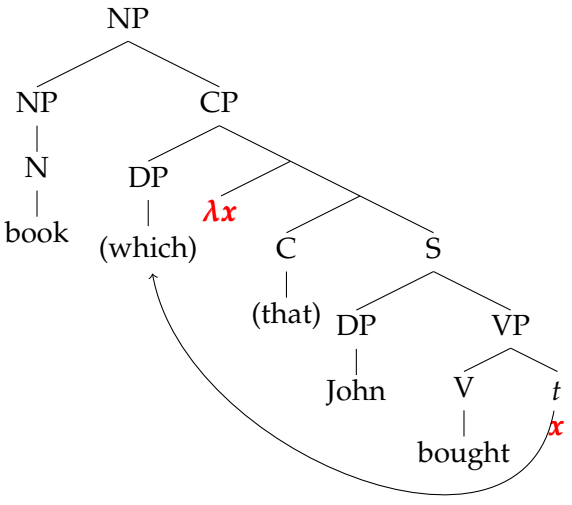
But in general, most relative clauses cannot be rewritten with adjectives in this way:

(3) Every [book that John bought] is expensive.

Notice that the relative clause *has a gap*.

> "...the peculiar genius of the relative clause is that it creates from a sentence '...*x*...' a complex adjective summing up what that sentence says about *x*." (Quine, 1960: §23)

Relative clauses always involve *movement* of the relative pronoun (for example *which*) from the *gap* position to Spec,CP (Chomsky, 1977, and many others).



Exercise: Compute this NP *book that John bought*. Assume ⟦that⟧ = Id and ⟦which⟧ = Id.

Syntax notes: We assume that, syntactically, the complementizer *that* (C) triggers movement of the relative pronoun to Spec,CP. They are both optionally pronounced, and they cannot both be pronounced at the same time:

(4) a. the book John bought ____
b. the book which John bought ____
c. the book that John bought ____
d. * the book which that John bought ____

Following Chomsky and Lasnik (1977), we assume a "Doubly Filled COMP Filter" that states that both positions cannot be pronounced at the same time, explaining (4d). Subject relatives, like (1), require *that* to be pronounced if the relative pronoun is not pronounced.

2 Logical Form

We have opened up the possibility that *what we pronounce* is different than *what we interpret*.

(5) Structure is built in Syntax. Syntax has two outputs:
a. *Phonological Form (PF)*: what is pronounced
b. *Logical Form (PF)*: what is interpreted
Additional operators may take place at these "interfaces"; for example, covert movement (like QR) may take place at LF.

A hypothesis developed by May (1977), Huang (1982), and others is that operations at LF are *syntactic* operations, (generally) subject to the same constraints as overt syntax. Here is one argument for this. Consider example (6):

(6) **A sentence with a scope ambiguity:** (ex from Fox, 2003)
A (different) student likes every professor.
a. $\exists x$ [Student(x) $\wedge$ $\forall y$ [Professor(y) $\rightarrow$ Like(x, y)]]
b. $\forall y$ [Professor(y) $\rightarrow$ $\exists x$ [Student(x) $\wedge$ Like(x, y)]]

Suppose the second reading in (6) is the result of covert movement (QR) of *every professor* to a position higher than *a student* at LF:

(7) LF: [every professor] λx a student likes x

Now note that *overt* movement is subject to the Coordinate Structure Constraint (8):

(8) **The Coordinate Structure Constraint (Ross, 1967):**

a. Which professor does John like ___?

b. * Which professor does John [[like ___] and [hate the dean]]?

(9) **Embedding within a conjunction blocks wide scope of *every professor*:**

A (#different) student [[likes every professor] and [hates the dean]]. (ex from Fox, 2003)

a. ✓ $\exists x$ [Student(x) $\wedge$ $\forall y$ [Professor(y) $\rightarrow$ [Like(x, y)]] $\wedge$ Hate(x, d)] (d = the Dean)

b. * $\forall y$ [Professor(y) $\rightarrow$ $\exists x$ [Student(x) $\wedge$ [Like(x, y)] $\wedge$ Hate(x, d)]]

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