von Stechow (1984) proposes a comprehensive constructive analysis of comparisons, which becomes the so-called standard analysis later (Bale, 2011). A brief account of major contents given in his analysis will be given in the following paragraphs, organized in an order to unfold semantic components of comparative constructions, where readers will see that the framework of generative grammar is compatible with this semantic analysis.

The Meaning of gradable adjectives are interpreted as a measure function plus an ordering relation. The measure function maps the individual to the dimension denoted by gradable adjectives and the ordering relation ensures that the scale of the individual exceeds the degree to compare. In generative grammar, a gradable adjective is the head of AP. It functions as a two-place predicate, with an individual typed and a degree typed as its two arguments. What deserves a note is it is von Stechow who in first seriously regards degrees denoted by symbol as one of the primitive semantic types and it is degree that captures the difference between gradable adjectives and non-gradable adjectives. Here the semantic type of gradable adjectives is manifested as . Giving *tall* as an instance, the lexical entry of a gradable adjective is shown as below, in which *height* denotes the measure function encoded by *tall* and denotes the ordering relation between the individual and the degree:

The analysis of DegP headed by a degree morpheme is much more complicated. The semantic type of DegP is . Based on the approach in generative grammar, DegP lands at an adjunct position of AP in the deep structure and then undergoes quantifier raising (QR) in the logical form (LF) to a node above the original IP inside which DegP is initially located, with the trace left denoting a type argument. The motivation for this movement is that, according to von Stechow’s analysis DegP can be regarded as isomorphic to a generalised quantifier phrase (QNP), an account under large debate afterwards.

The head of DegP, giving the comparative morpheme *er* as the typical one, takes a “than phrase” (thanP) as its complement and a differential phrase (DiffP) as its specifier. Depending on various categories of complement in thanP as well as the overt appearance, such as *6 feet*, or covert appearance of DiffP, *er* has kinds of semantic variants:

1. thanP can take three types of complement:
   1. a direct degree expression, such as *than 6 feet*, which denotes a degree argument typed ;
   2. a comparative clause, such as *than Mary is tall*, which denotes a property of degree argument, typed because according to the view of Chomsky (1977), the comparative clause *than Mary is tall* owns a deep structure looking like *than howi Mary is ti tall* which undergoes *wh*-movement, leaving the trace *ti*denoting a degree variable bound by -operator;
   3. a bare NP, such as *than Mary*, regarded as a deletion from the full comparative clause *than Mary is tall*, also denotes a property of degree argument typed .
2. DiffP with overt appearance denotes a degree argument, typed ;

Here some examples of possible semantic variants of *er* are illustrated as below:

1. (a) John is taller than 6 feet.
2. John is taller than Mary.
3. John is taller than Mary is.
4. John is 6 inches taller than Mary is.

thanP takes a direct degree expression as complement in (1a), a bare NP in (1b), a comparative clause in (1c) and (1d). Optional DiffP only owns overt appearance in (1d). Based on the analysis above, sematic type of *er* in (1a) is, in (1b) as well as (1c) is , in (1c) is .

According to type-driven computation in formal semantics, the gradable adjective typed first combines the trace of the semantic type which is left by DegP in the process of QR, then combines the subject in the matrix clause of the semantic type , outputting a type proposition with a free degree variable. -abstraction turns this type open proposition into a property of degree typed which saturates DegP typed . Finally, a type proposition is made out. Here we have successfully recapitulated the procedure in von Stechow’s analysis of how to derive a comparative construction.

/Reference

von Stechow (1984)

(Bale, 2011)

Chomsky (1977)