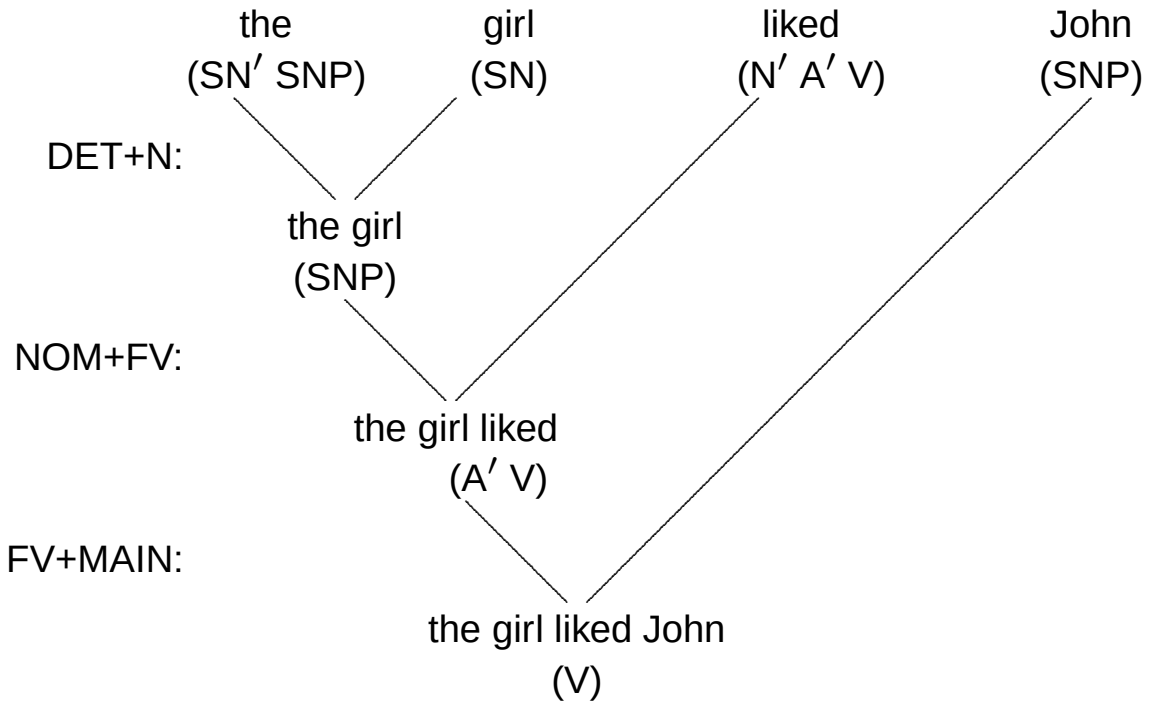
17. LA-Syntax für das Englische

17.1 Komplexe Valenzfüller in prä- und postverbaler Position

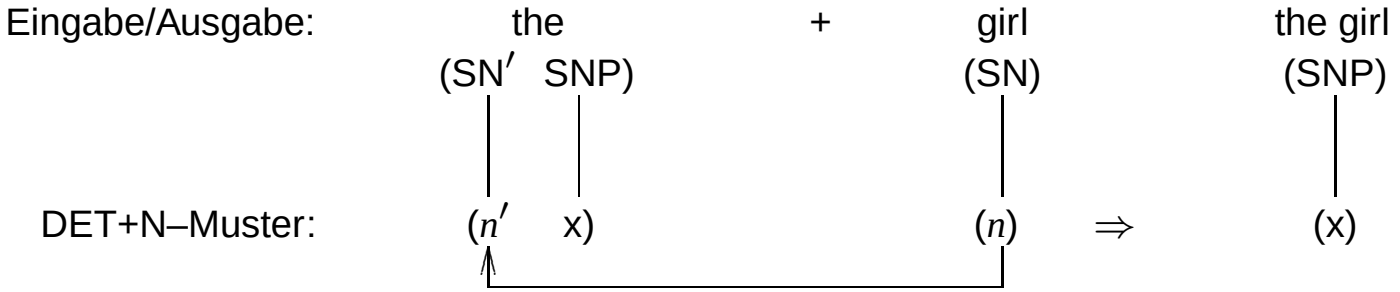
17.1.1 Artikel- und Substantivkategorien des Englischen

Kategorien	*Oberflächen*	*Beispiele der Lemmata*
Singular- und Pluralartikel:		
(SN′ SNP)	a, an, every, the	[a (SN′ SNP) *]
(PN′ PNP)	all, several, the	[all (PN′ PNP) *]
Singular- und Pluralsubstantive:		
(SN)	man, woman, book, car	[woman (SN) *]
(PN)	men, women, books, cars	[women (PN) *]

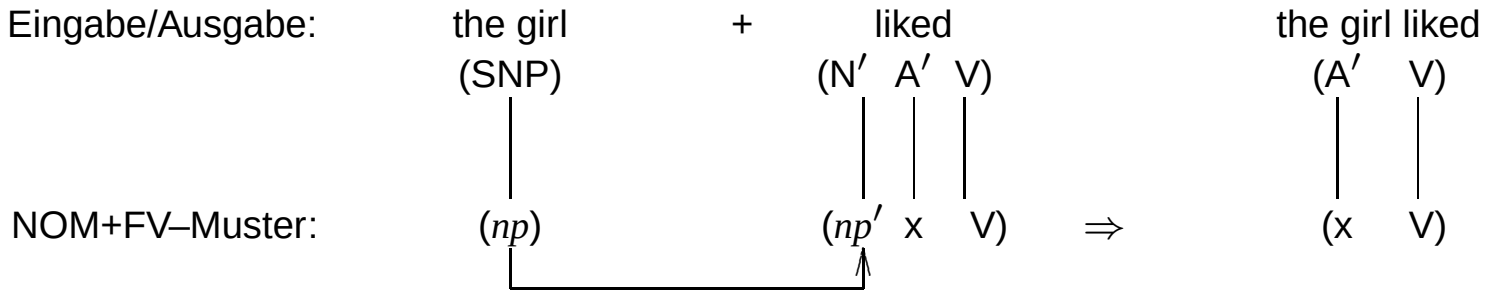
17.1.2 Komplexe Nominalphrase vor dem Valenzträger



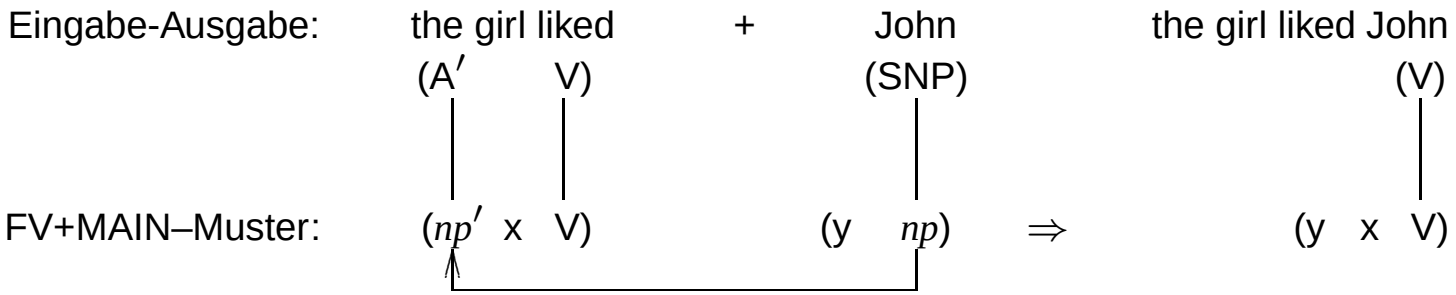
17.1.3 Präverbale Verwendung von Det+N



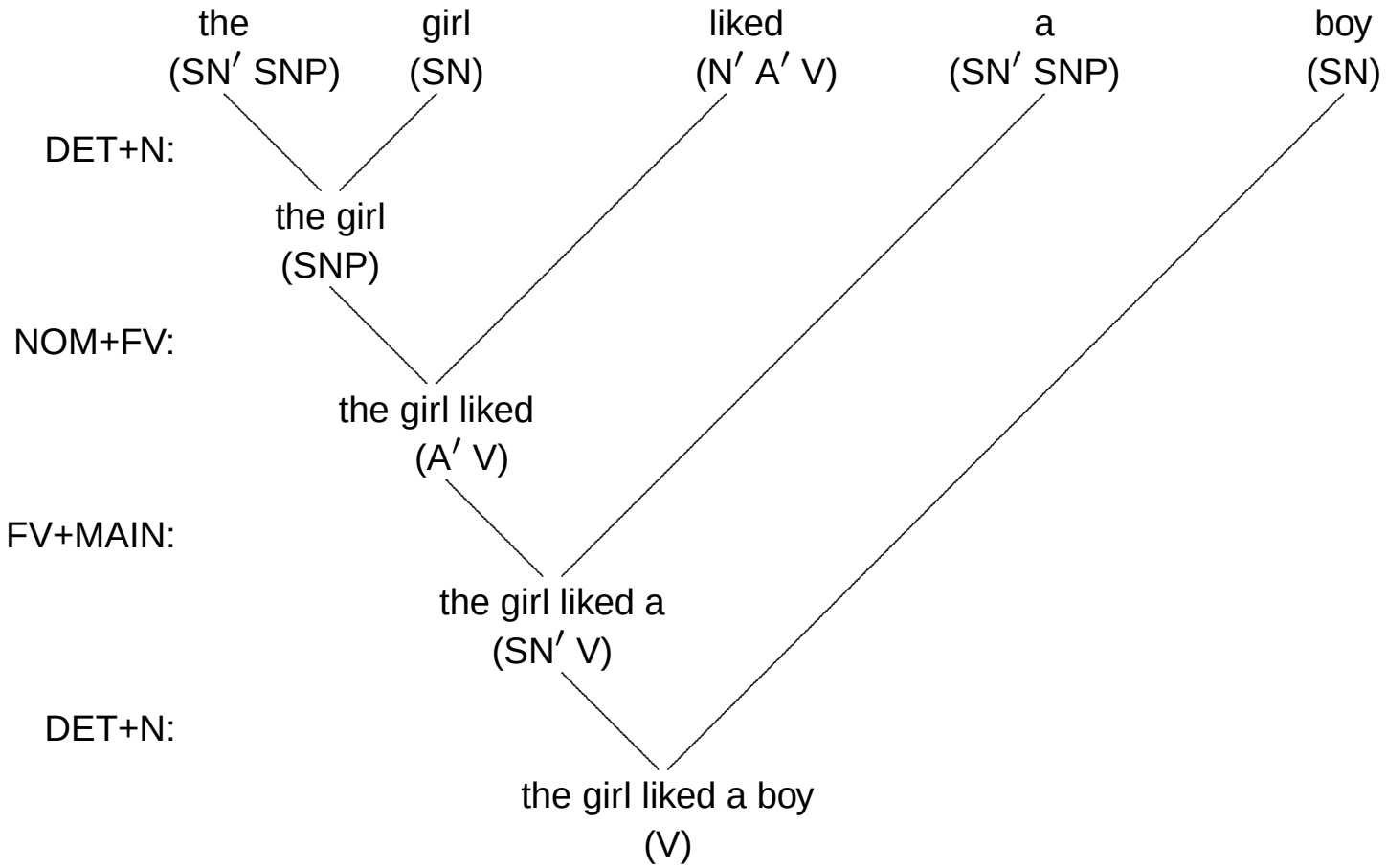
17.1.4 Verwendung von NOM+FV bei komplexem Nominativ



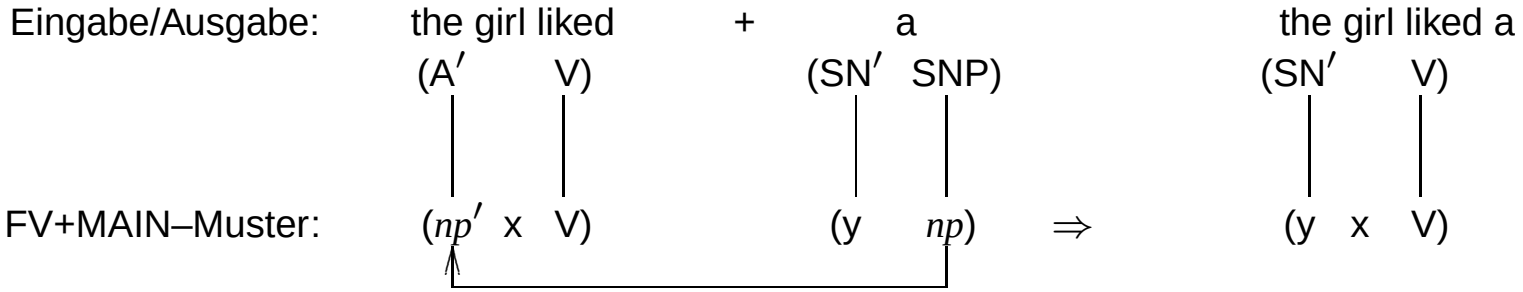
17.1.5 Anwendung von FV+Main auf elementare Objekte



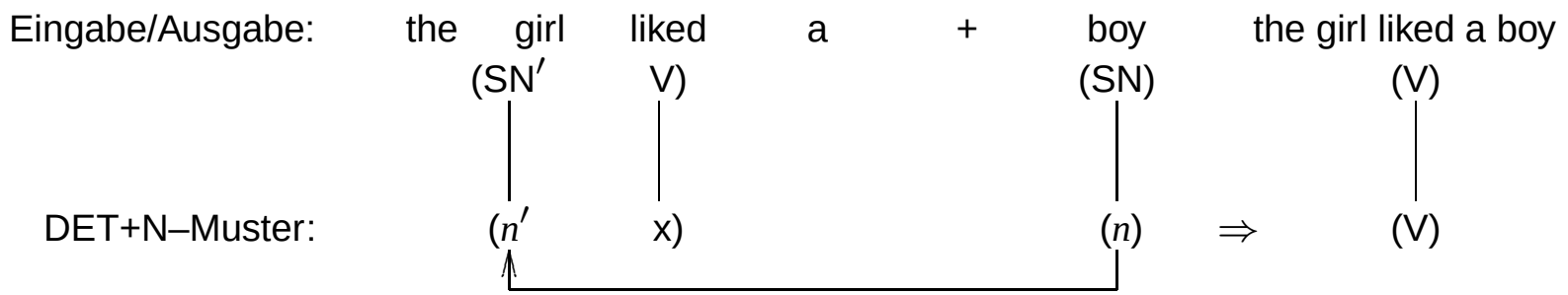
17.1.6 Komplexe Nominalphrase nach dem Valenzträger



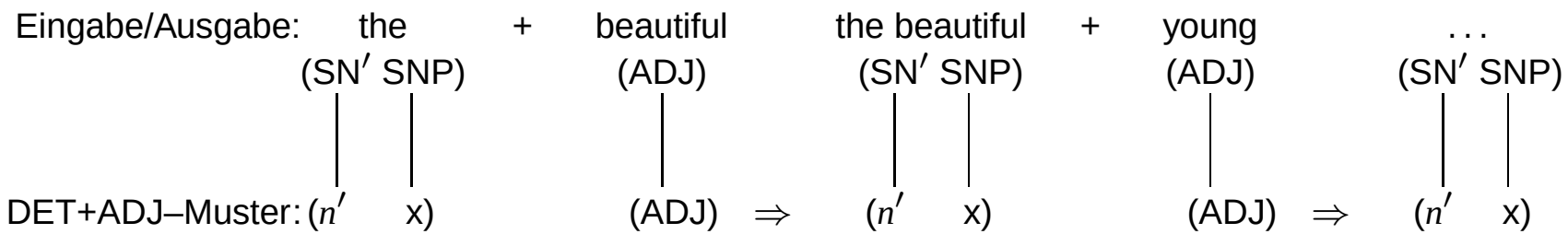
17.1.7 Anwendung von FV+MAIN auf komplexe Objekte



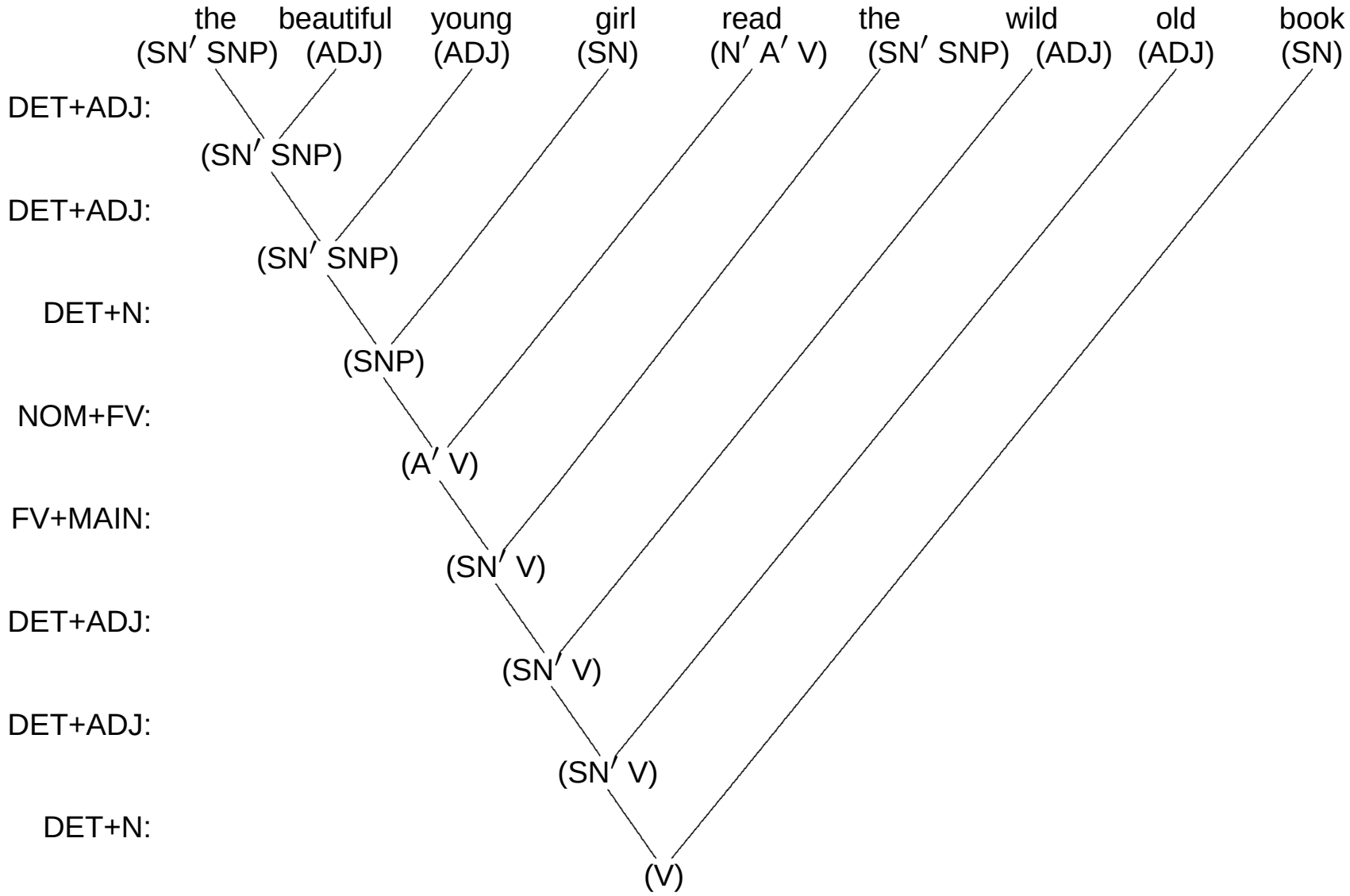
17.1.8 Postverbale Anwendung von Det+N



17.1.9 Rekursive Anwendung von DET+ADJ

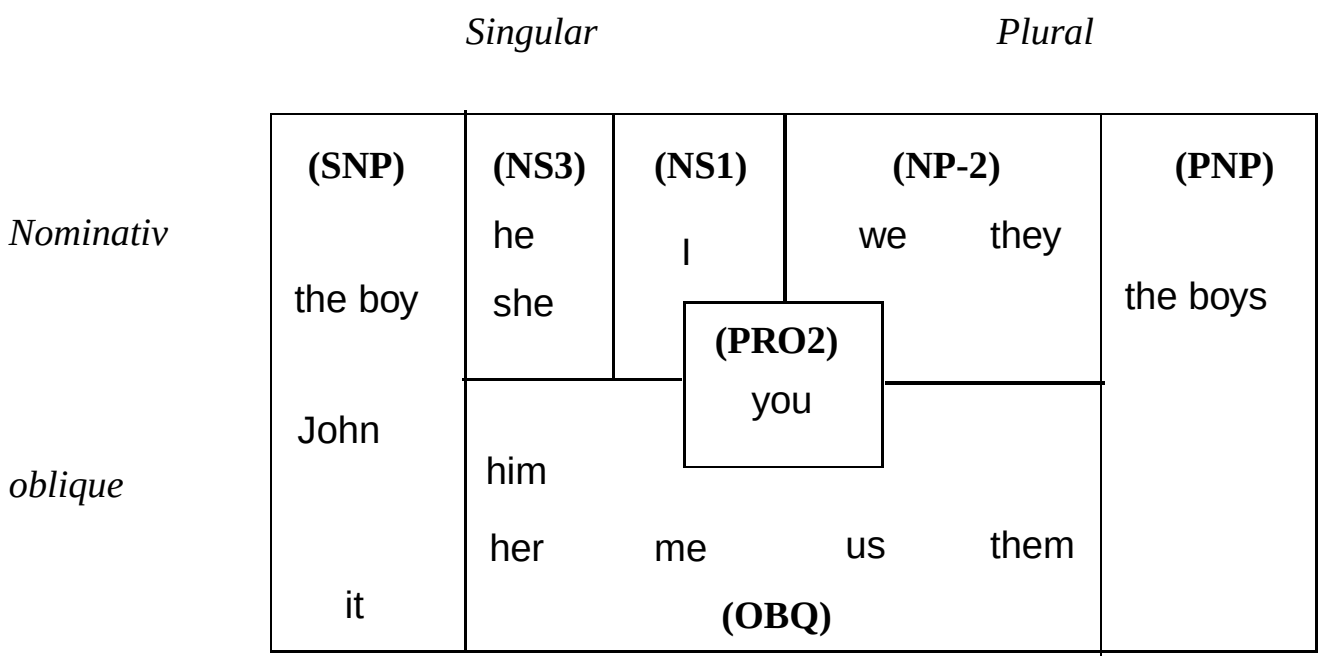


17.1.10 Komplexe Nominalphrasen mit Adjektiven

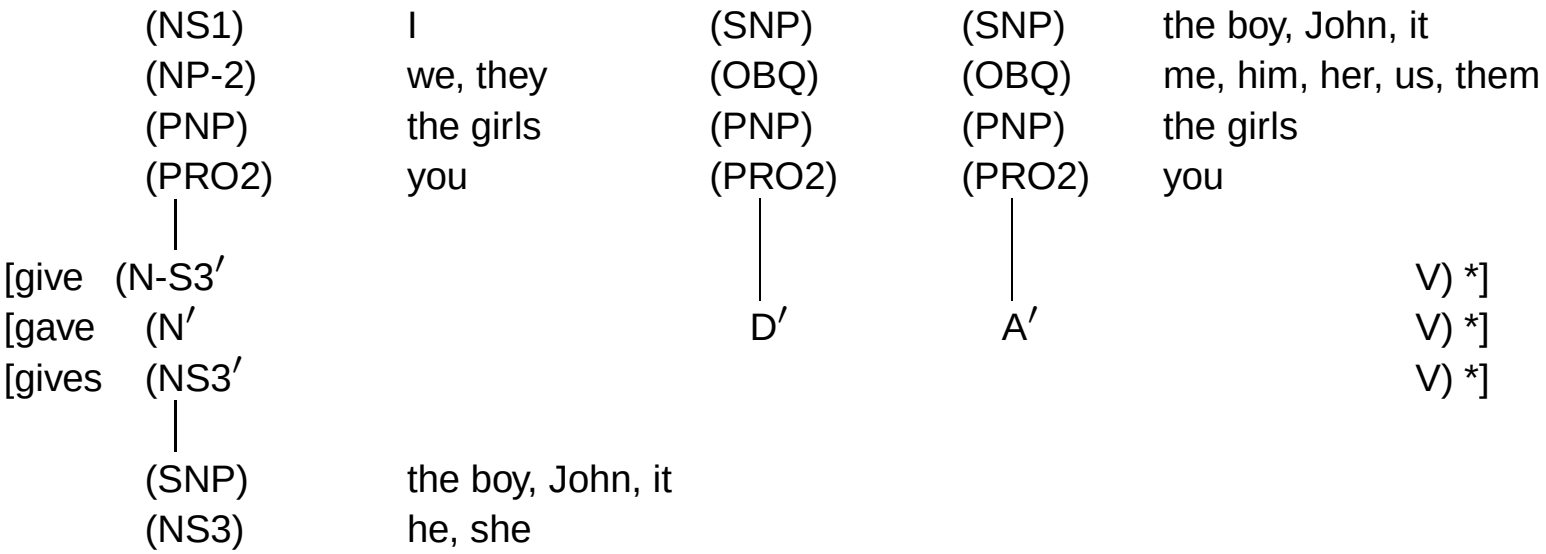


17.2 Referentenfeld des Englischen

17.2.1 Kategorien nominaler Valenzfüller im Englischen

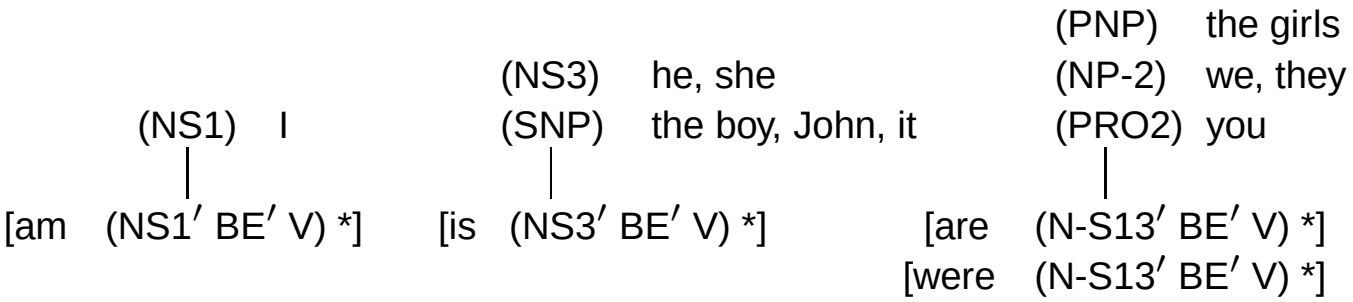


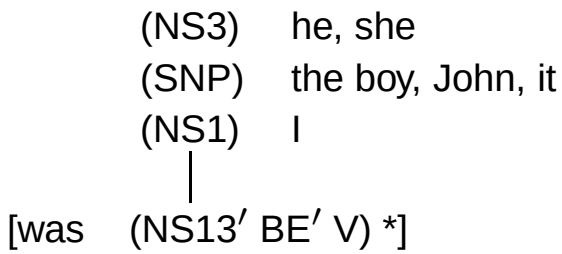
17.2.2 Kongruenz von Füller und Valenz bei Hauptverben



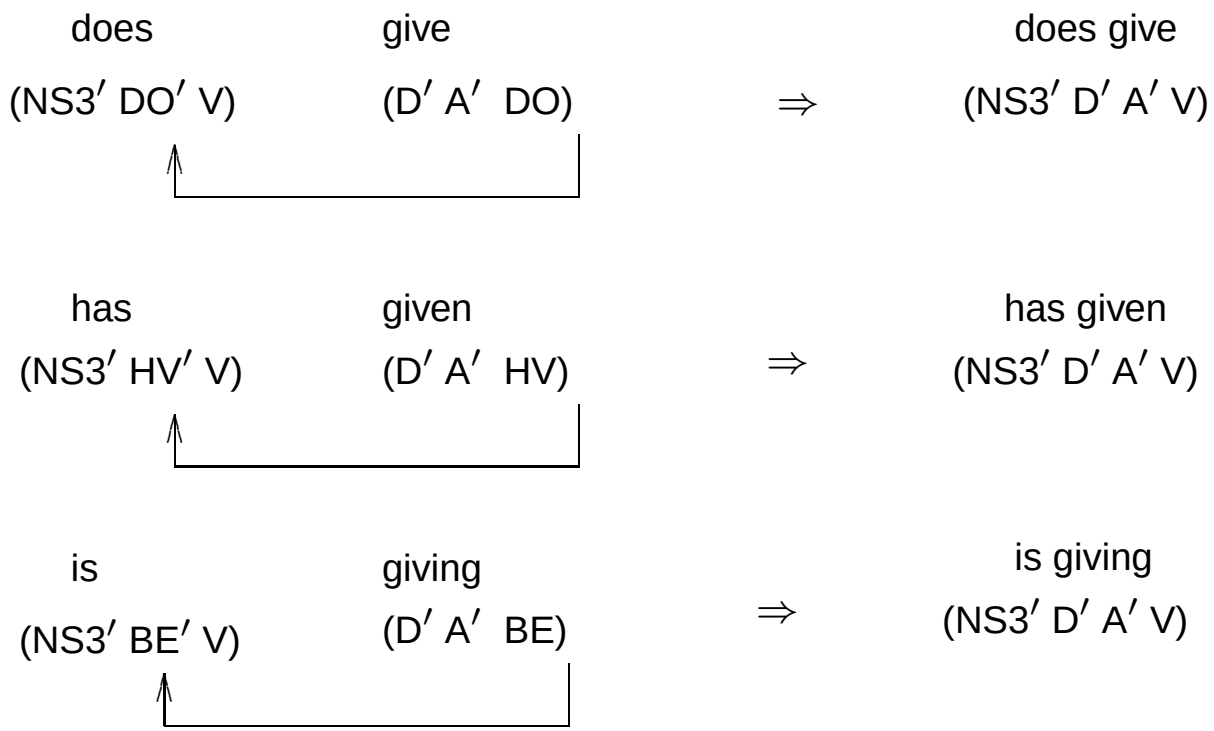
17.3 Komplexe Verbformen

17.3.1 Nominativkongruenz des Auxiliars be

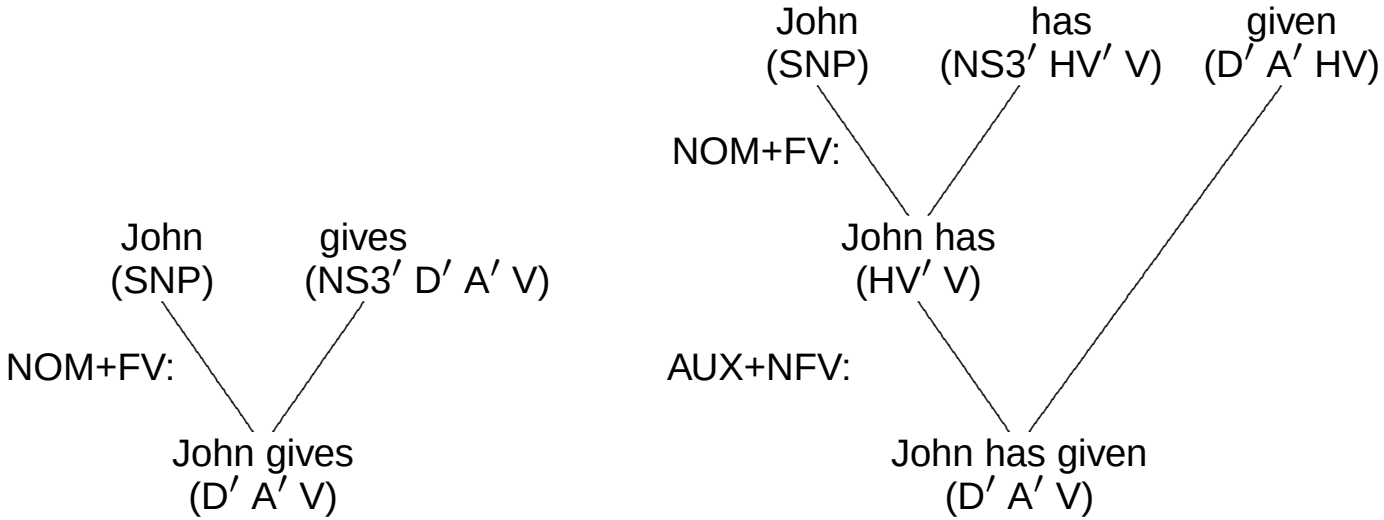




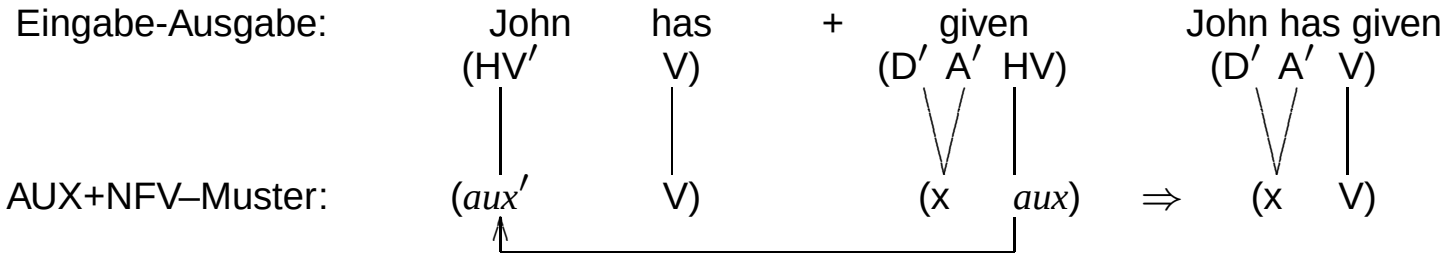
17.3.2 Komplexe Verbformen des Englischen



17.3.3 Vergleich elementarer und komplexer Verbformen



17.3.4 Anhängen eines infinites Hauptverb mit AUX+NFV



17.4 *Finite-state*-Grundgerüst der LA-Syntax (*LA-E2*)

17.4.1 *LA-E2*: eine englische LA-Syntax mit komplexen NPs

LX $=_{def}$ {[Julia (SNP) *], [John (SNP) *], [Suzy (SNP) *], [it (SNP) *],
[boy (SN) *], [boys (PN) *], [girl (SN) *], [girls (PN) *], [book (SN) *],
[books (PN) *], [a (SN′ SNP) *], [every (SN′ SNP) *], [the (SN′ SNP) *],
[all (PN′ PNP) *], [several (PN′ PNP) *], [the (PN′ PNP) *]
[I (NS1) *], [you (PRO2), [he (NS3) *], [she (NS3) *], [it (SNP) *],
[we (NP-2) *], [they (NP-2) *], [me (OBQ) *], [him (OBQ) *],
[her (OBQ) *], [us (OBQ) *], [them (OBQ) *]
[am (NS1′ BE′ V) *], [is (NS3′ BE′ V) *], [are (N-S13′ BE′ V) *]
[was (NS13′ BE′ V) *], [were (N-S13′ BE′ V) *]
[have (N-S3′ HV′ V) *], [has (NS3′ HV′ V) *], [had (N′ HV′ V) *]
[do (N-S3′ DO′ V) *], [does (NS3′ DO′ V) *], [did (N′ DO′ V) *]
[give (N-S3′ D′ A′ V) *], [gives (NS3′ D′ A′ V), [gave (N′ D′ A′ V) *],
[give (D′ A′ DO) *], [given (D′ A′ HV) *], [giving (D A BE) *]
[like (N-S3′ A′ V) *], [likes (NS3′ A′ V), [liked (N′ A′ V) *]
[like (A′ DO) *], [liked (A′ HV) *], [liking (A′ BE) *]
[sleep (N-S3′ V) *], [sleeps (NS3′ V) *], [slept (N′ V) *]
[sleep (DO) *], [slept (HV) *], [sleeping (BE) *]}

Variablendefinition:

np′ ε {N', N-S3', NS1', NS3', NS13', N-S13', D', A'}, (Valenzstellen)

np ε {PRO2, NS1, NS3, NP-2, SNP, PNP, PN, OBQ} (Valenzfüller), und

wenn *np* = PRO2, dann *np′* ϵ {N′, N-S3′, N-S13′, D′, A′},

wenn *np* = NS1, dann *np′* ϵ {N′, N-S3′, NS1′, NS13′},

wenn *np* = NS3, dann *np′* ϵ {NS3′, NS13′},

wenn *np* = NP-2, dann *np′* ϵ { N′, N-S3′},

wenn *np* = SNP, dann *np′* ϵ { N′, NS3′, NS13′, D′, A′},

wenn *np* = PNP, dann *np′* ϵ {N′, N-S3′, N-S13′, D′, A′},

wenn *np* = OBQ, dann *np′* ϵ {D′, A′},

n ϵ {SN, PN} und *n′* entsprechend SN′ or PN′,

aux ϵ {DO, HV, BE} und *aux′* entsprechend DO′, HV′ or BE′

x, y = .?.?.?.? (Beliebige Sequenz bis zur Länge 4)

$ST_S =_{def}$ { [(x) {1 DET+ADJ, 2 DET+N, 3 NOM+FV}] }

DET+ADJ: (*n′* x) (ADJ) $\Rightarrow$ (*n′* x) {4 DET+ADJ, 5 DET+N}

DET+N: (*n′* x) (*n*) $\Rightarrow$ (x) {6 NOM+FV, 7 FV+MAIN}

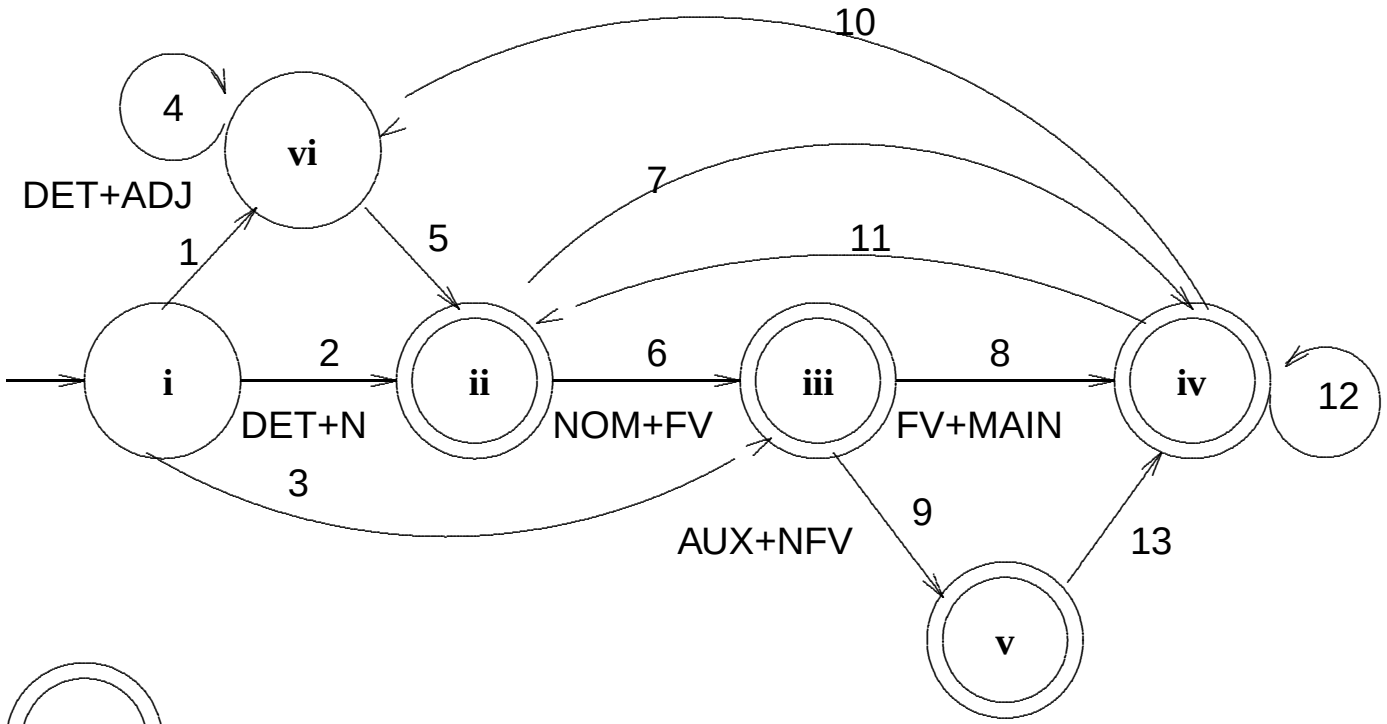
NOM+FV: (*np*) (*np′* x V) $\Rightarrow$ (x V) {8 FV+MAIN, 9 AUX+NFV}

FV+MAIN: (*np′* x V) (y *np*) $\Rightarrow$ (y x V) {10 DET+ADJ, 11 DET+N, 12 FV+MAIN}

AUX+NFV: (*aux′* V) (x *aux*) $\Rightarrow$ (x V) {13 FV+MAIN}

$ST_F =_{def}$ { [(V) rp_{nom+fv}], [(V) $rp_{aux+nfv}$], [(V) $rp_{fv+main}$], [(V) rp_{det+n}]}

17.4.2 Das *finite-state*-Grundgerüst von *LA-E2*



= Möglicher Endzustand

= Kein Endzustand

(ii)	2, 5, 11	DET+N
(iii)	3, 6	NOM+FV
(iv)	7, 8, 12, 13	FV+MAIN
(v)	9	AUX+NFV
(vi)	1, 4, 10	DET+ADJ

17.4.3 Spezifikation der Transitionsnummern in der Eingabe

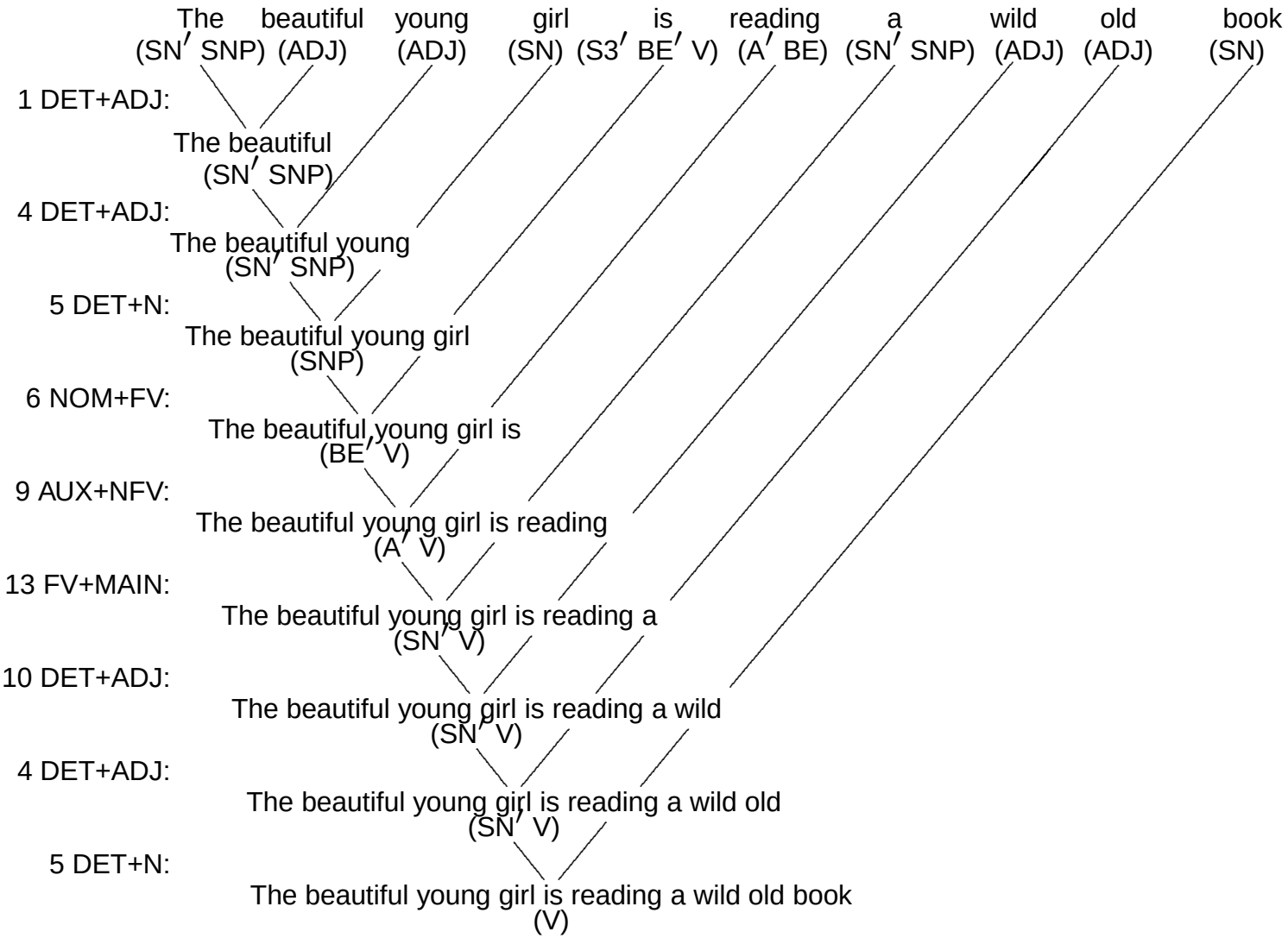
Peter 3 gave 8 Mary 12 a 11 book

the 1 beautiful 4 young 5 girl 6 is 9 reading 13 a 10 wild 4 old 5 book

the 2 boy 6 gave 8 the 11 girl 7 a 11 book

Peter 3 gave 8 Mary 12 Suzy

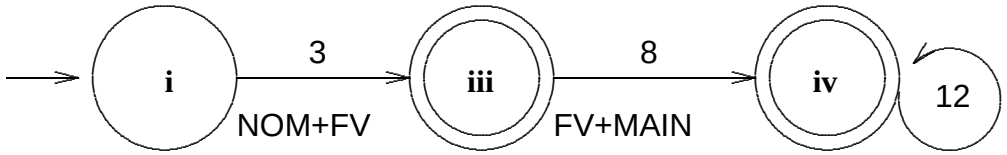
17.4.4 Syntaktische Analyse mit Transitionsnummern



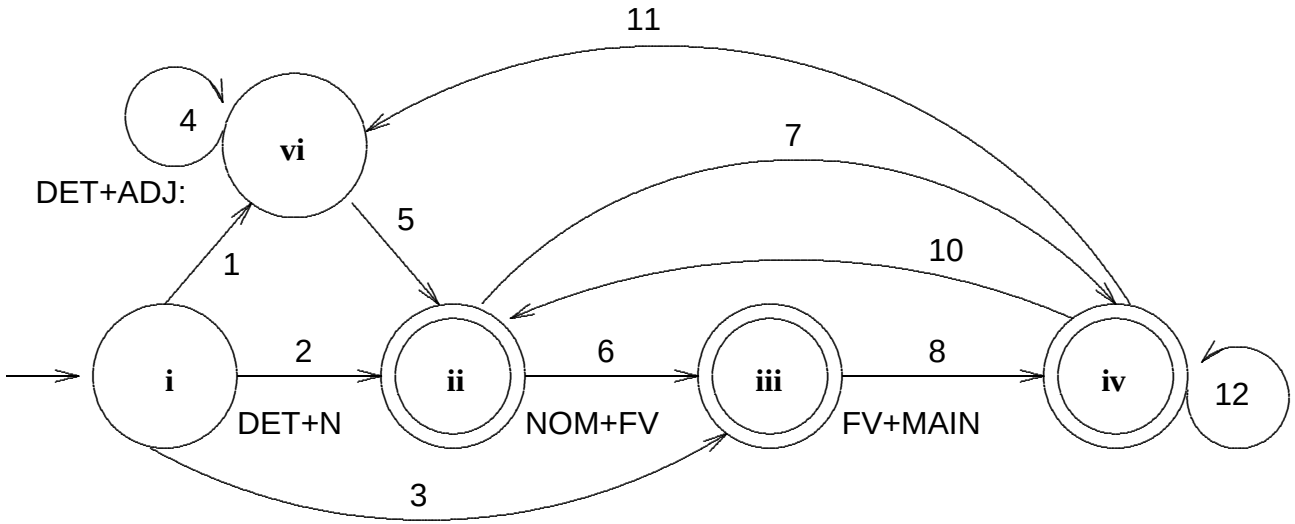
17.5 Ja/Nein-Interrogativa (*LA-E3*) und grammatische Perplexität

17.5.1 Erweiterung von *LA-E1* auf komplexe NPs

LA-E1



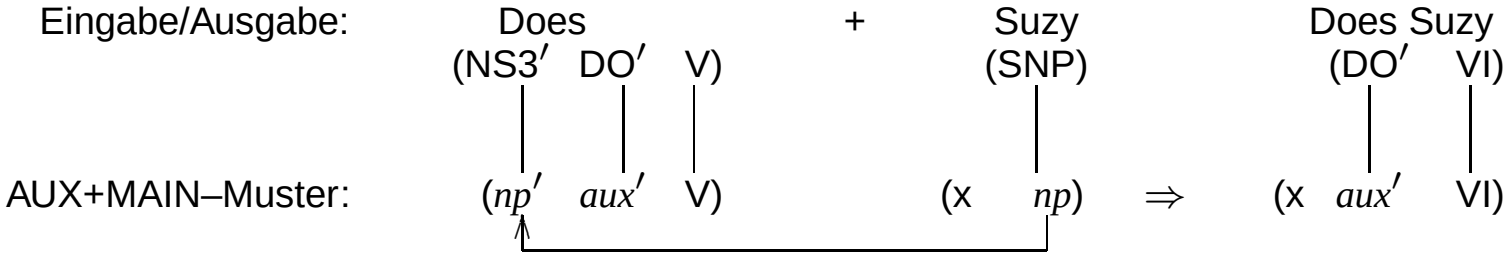
LA-E1.5



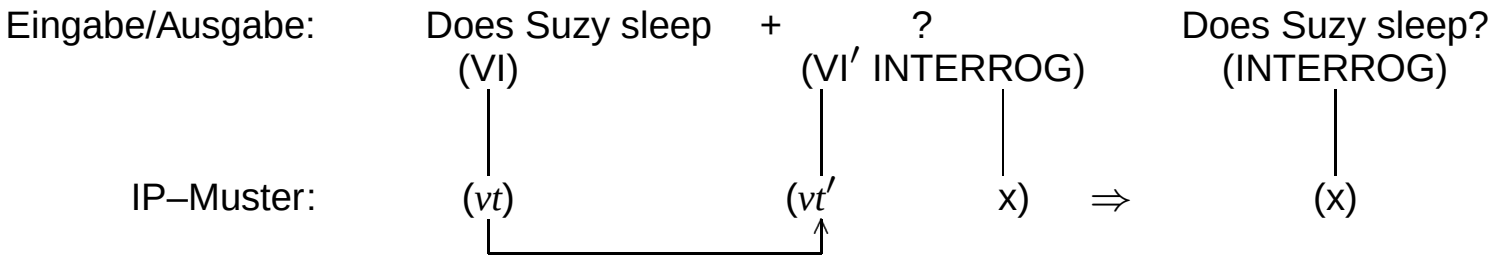
17.5.2 Vergleich Deklarativa und Ja/Nein-Interrogativa

Suzy does like the book.	Does Suzy like the book?
Suzy has liked the book.	Has Suzy liked the book?
Suzy is liking the book.	Is Suzy liking the book?

17.5.3 Kategoriale Operation von AUX+MAIN



17.5.4 Kategoriale Operation von IP



17.5.5 *LA-E3* für englische Ja/Nein-Interrogativa

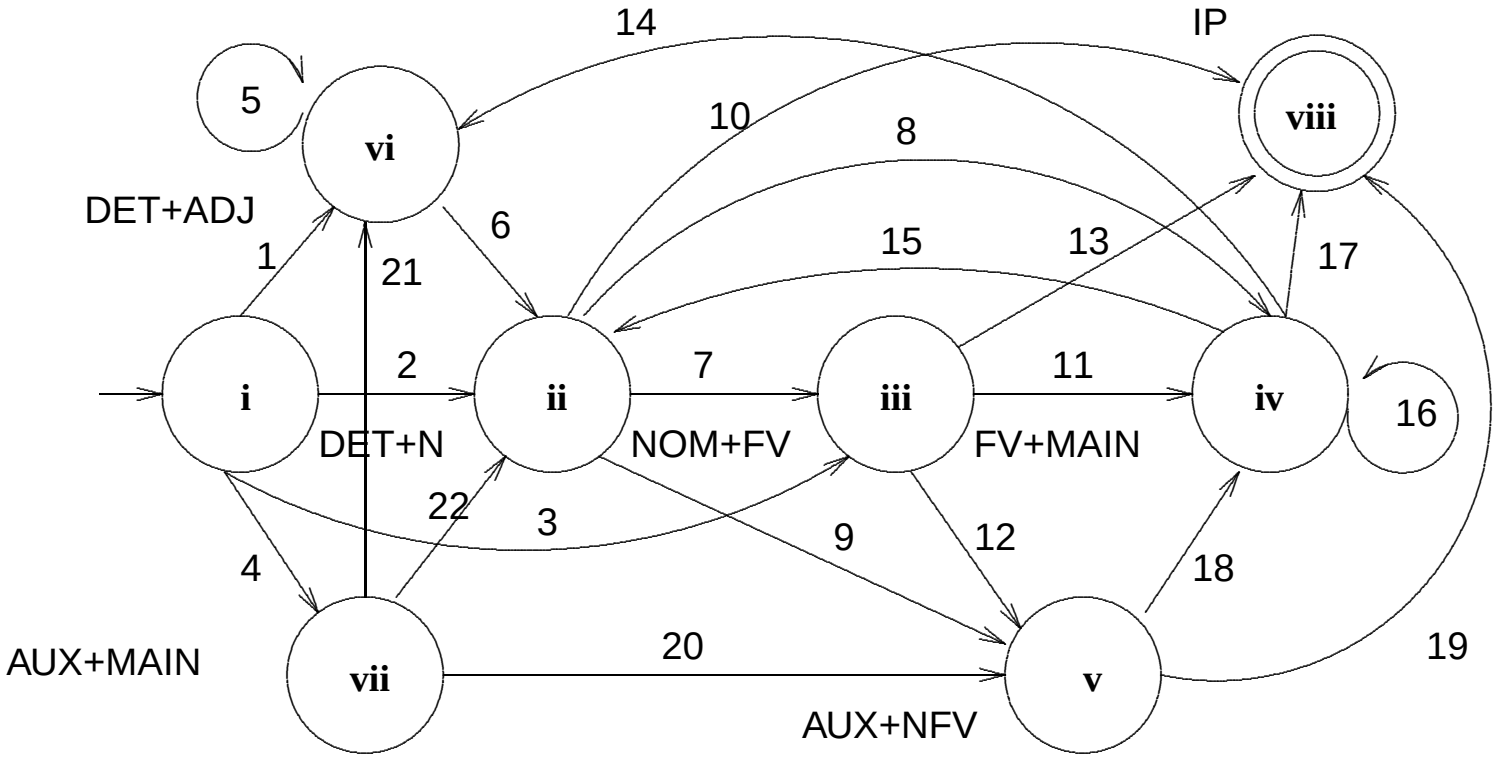
LX = LX of *LA-E2* erweitert um {[. (V′ decl) *], [? (V′ interrog) *], [? (VI′ interrog)*]}
Variablendefinition = die von *LA-E2* erweitert um $vt \; \varepsilon$ {V, VI},

$ST_S =_{def}$ { [(x) {1 DET+ADJ, 2 DET+N, 3 NOM+FV, 4 AUX+MAIN}] }

DET+ADJ: (*n*′ x) (ADJ) ⇒ (*n*′ x) {5 DET+ADJ, 6 DET+N}
DET+N: (*n*′ x) (*n*) ⇒ (x) {7 NOM+FV, 8 FV+MAIN, 9 AUX+NFV, 10 IP}
NOM+FV: (*np*) (*np*′ x V) ⇒ (x V) {11 FV+MAIN, 12 AUX+NFV, 13 IP}
FV+MAIN: (*np*′ x V) (y *np*) ⇒ (y x V) {14 DET+ADJ, 15 DET+N, 16 FV+MAIN, 17 IP}
AUX+NFV: (*aux*′ V) (x *aux*) ⇒ (x V) {18 FV+MAIN, 19 IP}
AUX+MAIN: (*np*′ *aux*′ V) (x *np*) ⇒ (x *aux*′ VI) {20 AUX+NFV, 21 DET+ADJ, 22 DET+N}
IP: (*vt*) (*vt*′ x) ⇒ (x) {}

$ST_F =_{def}$ { [(decl) rp_{ip}], [(interrog) rp_{ip}]}

17.5.6 *finite-state*-Grundgerüst von *LA-E3*



ii	2, 6, 15, 22	DET+N	v	9, 12, 20	AUX+NFV
iii	3, 7	NOM+FV	vi	1, 5, 14, 21	DET+ADJ
iv	8, 11, 16, 18	FV+MAIN	vii	4	AUX+MAIN
			viii	10, 13, 17, 19	IP

17.5.7 Perplexität

Perplexity is, crudely speaking, a measure of the size of the set of words from which the next word is chosen given that we observe the history of the spoken words.

[Perplexität ist, grob gesprochen, ein Maß für die Größe der Wortformenmenge, aus der das nächste Wort gewählt wird, unter Berücksichtigung der bisher gesprochenen Wortformen.]

S. Roukos 1995