

## A.10 System network conventions (1)

<p>entry condition <math>a \xrightarrow{\text{SYSTEM}} \begin{cases} \text{output feature } x \\ \text{output feature } y \end{cases}</math></p>	<p><b>System:</b> ‘if <math>a</math>, then either <math>x</math> or <math>y</math>’. Possible feature selection expressions: <math>ax, ay</math>.</p>
<p><math>s \xrightarrow{\quad} u</math> <math>t \xrightarrow{\quad} v</math></p>	<p><b>Conjunct entry condition:</b> ‘if both <math>s</math> and <math>t</math>, then either <math>x</math> or <math>y</math>’. Possible feature selection expressions: <math>s, t, stu, stv</math>.</p>
<p><math>a \xrightarrow{\quad} m</math> <math>c \xrightarrow{\quad} n</math></p>	<p><b>Disjunct entry condition:</b> ‘if either <math>a</math> or <math>c</math>, then either <math>m</math> or <math>n</math>’. Possible feature selection expressions: <math>am, an, cm, cn</math>.</p>
<p><math>a \xrightarrow{\text{SYSTEM 1}} \begin{cases} x \\ y \end{cases} \xrightarrow{\text{SYSTEM 2}} \begin{cases} p \\ q \end{cases}</math></p>	<p><b>Systems ordered in delicacy:</b> ‘if <math>a</math>, then either <math>x</math> or <math>y</math>, and if <math>x</math>, then either <math>p</math> or <math>q</math>’. Possible feature selection expressions: <math>axp, axq, ay</math>.</p>
<p><math>a \xrightarrow{\quad} \begin{cases} \xrightarrow{\text{SYSTEM 1}} \begin{cases} x \\ y \end{cases} \\ \xrightarrow{\text{SYSTEM 2}} \begin{cases} m \\ n \end{cases} \end{cases}</math></p>	<p><b>Simultaneous systems:</b> ‘if <math>a</math>, then both either <math>x</math> or <math>y</math> and, independently, either <math>m</math> or <math>n</math>’. Possible feature selection expressions: <math>axm, axn, aym, ayn</math>.</p>
<p><math>a \xrightarrow{\quad} \begin{cases} x * \Rightarrow \\ y \Rightarrow * \\ f \Rightarrow * \end{cases} \xrightarrow{\quad} \begin{cases} \xrightarrow{\text{SYSTEM 1}} \begin{cases} x \\ y \end{cases} \\ \xrightarrow{\text{SYSTEM 2}} \begin{cases} f \\ g \end{cases} \end{cases}</math></p>	<p><b>Conditional marking:</b> In either case (<math>*</math> or <math>@</math>): ‘if <math>x</math>, then <math>f</math>’. Possible feature selection expressions: <math>axf, ayf, ayg</math>.</p>
<p><math>a \xrightarrow{\quad} \begin{cases} 0.9 - x \\ 0.1 - y \end{cases}</math></p>	<p><b>Inherent probability:</b> ‘probability of choosing <math>x</math> is 90%’. Predicted feature selections (1000 traversals): <math>ax</math> (900 times), <math>ay</math> (100 times).</p>

## A.11 System network conventions (2)

	<p><b>Recursive system</b></p> <p>'if <math>a</math>, then both either <math>z</math> or <math>y</math> or <math>x</math> and, independently, either 'stop' (<math>\parallel</math>) or 'go on' (i.e., re-enter)'.</p> <p>Possible feature selection expressions:</p> <p><math>ax\parallel, ay\parallel, az\parallel,</math>  <math>axx\parallel, axy\parallel, axz\parallel,</math>  <math>ayx\parallel, ayy\parallel, ayz\parallel,</math>  <math>azx\parallel, azy\parallel, azz\parallel,</math>  <math>axxx\parallel, axxy\parallel, axxz\parallel,</math>  <math>axyx\parallel, axyy\parallel, axyz\parallel,</math>  <math>axzx\parallel, axzy\parallel, axzz\parallel,</math>  <math>ayxx\parallel, ayxy\parallel, ayxz\parallel,</math>  <math>\dots</math></p>
	<p><b>Realization statement:</b></p> <p>'if <math>x</math>, perform realization(s) stipulated'.</p> <p>Here: insert Function1 into structure (of unit being generated).</p>

## A.12 Realization operators

(Table based on a classification by Christian Matthiessen.)

Type		Name of Operator	Operator Symbol in Use
Structure-building (presence of function, constituency, ordering)	Presence	Insert	+ Function
	Constituency	Expand	Function1 ( Function2 )
	Ordering	Partition	Function1   Function2
		Order	Function1 ^ Function2
		OrderAtFront	§ ^ Function
		OrderAtEnd	Function ^ #
Layering		Conflate	Function1 / Function2
Inter-rank realization (via preselection in lower-rank networks)	Grammatical preselection	Preselect	Function:feature
		Subcategorize	Function1::Function2
	Lexical pre-selection	Lexicalize	Function=lexical item
		Classify	Function ∈ class
		Outclassify	Function ∉ class
	Partial preselection	IncreaseProbability	↑p{:feature}{0,5→0,9}
		DecreaseProbability	↓p{:feature}{0,5→0,1}

## A.13 Functional grammatical analyses: examples

Helmut Kohl	went	to	Halle
		Fokus	
←		—	Neues
Thema	Rhema		
Subjekt	‘did’ Finites	‘go’ Prädikator	Adverbialbestimmung
Modusteil	Restteil		
Beteiligter:: Medium/ Täter:: Reisender	Prozeß:: Handlung:: Fortbewegung		Begleitumstand:: Ort:: Endpunkt:: Reiseziel

where	he	was	greeted	by the	citizens
Gegebenes → ←					Fokus
					Neues

Thema		Rhema			
WH-/Adv.best.	Subjekt	Finites	Prädikator	Adverbialbestimmung	
Rest-	Modusteil		-teil		
Bglt.umstand:: Ort	Bteilgtr:: Medium/ Ziel	Prozeß:: Handlung		Beteiligter:: Agens/ Täter	

They	threw	eggs	at the Chancellor
Gegebenes → ←			Fokus
			Neues Gegebenes

Thema		Rhema			
Subjekt	'did'	'throw'	Prädikator	Komplement	Adverbialbestimmung
Modusteil				Restteil	
Beteiligter:: Agens/ Täter	Prozeß:: Handlung::		Beteiligtes:: Medium/ Ziel	Begleitumstand:: Ort:: Endpunkt	

The police	arrested	the rascals.
	Fokus	Gegebenes
	←	Neues

Thema		Rhema			
Subjekt	'did'	'arrest'	Prädikator	Komplement	
Modusteil				Restteil	
Beteiligter:: Agens/ Täter	Prozeß:: Handlung::		Beteiligtes:: Medium/ Ziel		