

Word order universals

(based on teaching material by Manfred Krifka)

- Beginning of systematic search for universals:
 - Joseph Greenberg, „Some universals of grammar with particular reference to the order of meaningful elements“, 1963
- Goal:
 - identification of universal properties by using a small sample of languages (30/70 languages)
 - Interpretation of these universals as reflections of the function of language and the human language faculty
- Novel approach: syntax at the center of interest

Word order universals

- Central concept of **basic word order** of a language, i.e. relative order of subject, object, verb, adjective, noun etc.
- Requires to define notions like subject, objects etc. crosslinguistically => sometimes problematic
- Likewise, assumption of a basic word order for each language is problematic:
 - Languages with free word order
 - Languages with different basic word orders
 - Languages with discontinuous constituents

Word order universals

- Languages with free word order: Latin
puer puellam amat
'boy girl loves'
*Puer puellam amat/Amat puer
puellam/Puellam puer amat/Puellam amat puer/Amat
puellum puer.*
- Languages with different word orders:
 - German (main clause V2, embedded clause)
 - French (position of adjective before or after noun)
- Languages with discontinuous constituents: Latin, Warlpiri

Word order in Warlpiri

- Warlpiri: aborigines language spoken in central Australia
- All of the following word orders are possible (meaning *The two small children are chasing that dog*):
 - The two small are chasing that children dog.
 - The two small are dog chasing children that.
 - Chasing are the two small that dog children
 - That are children chasing the two small dog

Order of verb, subject and object

- Order of subject, verb and object
 - Greenberg 1963, 30 language sample

	SOV	SVO	VSO	VOS	OVS	OSV
total	13	11	6	0	0	0
%	43	37	20	0	0	0

Tomlin 1986, 402 languages

	SOV	SVO	VSO	VOS	OVS	OSV
total	180	168	37	12	5	0
%	45	42	9	3	1	0

- Dryer 2005, 1228 languages

	SOV	SVO	VSO	VOS	OVS	OSV	neither
total	497	435	85	26	9	4	172
%	47	41	8	2.5	0.8	0.4	

Order of subject, verb and object

- Geographical distribution

Order of verb, subject and object

- Universal 1: Subject always precedes object
- Possible explanations:
 - Subject is usually topic of the sentence
 - Order „topic before comment“ is usually easier to process
 - Alternative explanations
 - Short before long
 - Animate before inanimate
 - Definite before indefinite
 - ...

Word order correlations

- Question: is there dependency between basic word order in clause and in other constituents (DP, PP)?
- 30-language sample

	VSO	SVO	SOV
NP-P, AN	0	1	6
NP-P, NA	0	2	5
P-NP, AN	0	4	0
P-NP, NA	6	6	0

Word order correlations

- Expected distribution if there is no correlation:

	VSO	SVO	SOV
NP-P, AN	1,4	3,03	2,57
NP-P, NA	1,4	3,03	2,57
P-NP, AN	0,8	1,73	1,47
P-NP, NA	2,4	5,2	4,4

- differences:

	VSO	SVO	SOV
NP-P, AN	-1,4	-2,03	3,43
NP-P, NA	-1,4	-1,03	2,43
P-NP, AN	-0,8	2,27	-1,47
P-NP, NA	3,6	0,8	-4,4

Word order correlation

- Probability to find such a distribution in a 30 language sample if the features are uncorrelated is ca. 0.00003
- Conclusion: solid statistical evidence for a correlation

Word order correlations

- Correlation between VO/OV and P-NP/NP-P

	VO	OV	others
NP-P	38	427	141
P-NP	417	10	

Word order correlations

- Order of object and adjective

	VO	OV	others
Adj-N	101	201	177
N-Adj	404	287	

- No significant correlation (probability to get such a distribution if there is no correlation is 35%)

Basic word order types

- Greenberg's word order universals mostly express a tendency towards **harmonic** word orders
- Harmony: all heads are initial or all heads are final

Basic word order types

- Two maximally harmonic types
 - **Head-final:** NP-P, AN, Gen-N, Adv-V, V-Aux, clause final question particles, clause final complementizer, standard-marker-adjective
 - **Head-initial:** P-NP, N-relClause, V-Adv, Aux-V, clause initial question particle, clause initial complementizer, adjective-marker-standard
- On the following slides, some examples from Dryer 2000 are shown

Head-final: Lezgian (Dagezstan, Caucasus)

SOV: Alfija-di maq~ala kxfle-na
Alfija-ERG article write-AORIST
'Alfija writes an article'

Adv-V: Mirzebeg-a k'ewi-z haraj-na:
Mirzebeg-ERG strong-ADV shout-AORIST
'Mirzebeg shouted loudly ...'

NP-P: Duxtur-rin parariw
Doctor-GEN.PL to
'to the doctors'

G-NP: Farid-an wax
Farid-GEN sister
'Farid's sister'

Standard-comparative-adjective:
Sad müküda-laj žizwi ask'an-zawa
one other-SUPERL a.little low-IMPERF
'one is a little shorter than the other one'

Clause-final complementizer
rus-az reguü xana k'an tus-ir -wiläj
girl-DAT ashamed be want be.NEG-PARTIC-because
'because he did not want the girl to be embarrassed'

Head-final: Slave (Athapaskan, Northern Canada)

SOV: t'eere li ráreyiht'u
 girl dog 3,hit
 S O V
 'The girl hit the dog'

NP-P: dene hé
 man with
 NP Po
 'with the man'

Adv-V dzá dahehte
 bad 1,dance
 Adv V
 'I dance badly.'

G-N: ?abá gok'erí?eé
 father jacket
 G N
 'father's jacket'

Standard-comparative-adjective: sodee nodee ts'ε?óné hįshá
 1SG,older.brother 2SG,older.brother than 3,big
 St M Adj
 'My brother is bigger than your brother.'

Clause-final complementizer: [kó segħo húle] t'áh
 match 1SG,for 3,be.none because
 Clause Subord
 'because I had no matches'

Head-final: Siroi (Papua New Guinea)

SOV: fe-nge tango make-te
 taipan-SPEC man bit-3SG,PRES
 S O V
 'a taipan bites a man'

Adv-V nu pitik kin-it
 he quickly go-3SG,PRES
 Adv V
 'He is going quickly'

NP-P mbanduwan mbi
 bow INSTR
 NP Po
 'with a bow'

G-NP tisa tuku age
 teacher of dog
 G N
 'the teacher's dog'

Complementizer clause-final [ne kuayar-at] tukunu
 you steal-2SG,PAST because
 Clause Subord
 'because you stole it'

Head initial: Fijian (Austronesian, Fiji)

VSO/VOS	e rai-ca a gone a qase 3SG see-TRANS ART child ART old.person V S/O S/O	
	‘The old person saw the child’ or ‘The child saw the old person’	
V-Adv	bau 'ada va'a-.totolo noo somewhat run ADV-quick ASP V Adv	
	‘Try and run more quickly’	
P-NP	mai Wairi'i from Wairi'i Pr NP ‘from Wairi'i’	NP-G
		a liga-i Jone ART hand-POSS John N G ‘John’s hand’
adjective-comparative-standard	e vina'a ca'e o Waitabu mai Suva 3SG good more ART Waitabu from Suva Adj M St	
	‘Waitabu is better than Suva.’	
clause initial complementizer	ni-[u sa daga.daga va'a-levu] when-1SG ASP tired ADV-great Subord Clause	
	‘when I’m very tired’	

Head initial: Lealao Chinantec (Mexico)

VSO	ka ^L -kiú [?] M PAST-strike,COMPL,3 V ‘That person struck my head.’	mi ^{VH} -zií ^L -i CLSFR-head-1SG O ‘I will wash it well’	[za ^M ni ^M] person that S
V-Adv	ʔi ^H -u [:] LH ⁻ⁱ INTENTIVE-wash-1SG V ‘I will wash it well’	zií ^L well Adv	
P-NP	he:LH nu:M among weeds Pr NP ‘among the weeds’	NP-G	siá: ^{VH} [diá [?] L sií ^M iü: ^M i] mother,3 PLUR baby N G ‘the mother of the babies’
adjective-comparative-standard	gá: ^M i gi [?] VH tí: ^{VH} i niu ^M lia [?] M sií ^M ké ^L hniá ^M big,3 more foot,2SG 2SG like as of,1SG 1SG Adj M St ‘Your foot is bigger than mine.’		
clause initial complementizer	kia: [?] VH [ʔa ^L ʔe ^M na ^M fá [?] L ⁱ hŋi: ^{LH} -a ^L] because not significant pay-1SG Subord Clause ‘because my wages aren’t sufficient.’		