

Explaining Syntactic Universals
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4. Universals of reflexive marking

1. Some explananda

— **contrast between introverted and extroverted verb:**

- (1) Russian
a. *Vanja moeť-sja. (/#sebjä)* b. **Vanja nenavidit-sja. (^{OK}sebjä)*
‘Vanja washes (himself).’ ‘Vanja hates himself.’
- (2) German
a. *Gertrud wäscht sich.* b. *Gertrud hasst sich.*
‘Gertrud washes (herself).’ ‘Gertrud hates herself.’

— **contrast between object and adpossessor:**

- (3) English
a. *Bob₁ admires himself₁. (*him₁)* b. **Bob₁ admires himself’s₁ boss. (^{OK}his₁)*
- (4) Lezgian
a. *Ali-diz wič akuna. (*am)*
Ali-DAT self saw him
‘Ali saw himself.’
- b. *Ali-diz wič-in ruš akuna.*
Ali-DAT self-GEN girl saw
‘Ali₁ saw his₁ daughter.’

— **contrast between disjoint reference and coreference:**

- (5) English
a. *Bob₁ saw him₂.* b. **Bob₁ saw him₁. (^{OK}himself₁)*
- (6) Loniu (Oceanic, Papua New Guinea; Hamel 1994:54)
a. *Suʔu₁ čaʔiti suʔu₂.*
they.DU cut they.DU
‘They cut them.’
- b. *Suʔu₁ čaʔiti suʔu₁.*
they.DU cut they.DU
‘They cut themselves/each other.’

— **contrast between exact and inclusive coreference:**

- (7) English
a. *Maria₁ criticized herself₁.* b. **Maria₁ criticized themselves_{1+x}.*
(^{OK}herself and the others/?them)
- (8) Hausa (Newman 2000:524)
a. *Laadi₁ taa soòki kâân-tâ₁.*
Ladi 3SG criticize self-3SG.F
‘Ladi criticized herself.’
- b. *Laadi₁ taa soòki kâân-sù_{1+x}.*
Ladi 3SG criticize self-3PL
‘(lit.) Ladi criticized themselves.’

None of these contrasts is necessary, so how is explanation possible? After all “explaining something” basically means showing that it is necessary.

2. Introverted vs. extroverted actions

Universal 15:

In all languages, the reflexive-marking strategy employed with extroverted verbs is at least as complex phonologically ("heavy") as the reflexive-marking strategy employed with introverted verbs.

(Faltz 1985[1977], Haiman 1983:801-08, König & Siemund 2000a, Smith 2004)

extroverted: verbs like 'kill', 'hate', 'criticize', 'see', 'attack'

introverted: verbs like 'wash', 'shave', 'dress', 'defend'

Table 1: Extroverted and introverted reflexive forms in some languages

	EXTROVERTED		INTROVERTED	
English	<i>hate oneself</i>		<i>shave</i>	Ø
Russian	<i>nenavidet' sebja</i>	'hate oneself'	<i>myt'-sja</i>	'wash'
Hungarian	<i>utálja mag-á-t</i>	'hates herself'	<i>borotvál-köz-</i>	'shave'
Greek	<i>aghapái ton eaftó tu</i>	'loves himself'	<i>dín-ete</i>	'dresses'
Turkish	<i>kendini sev-iyor</i>	'loves himself'	<i>yika-n-iyor</i>	'washes'
Dutch	<i>haat zichzelf</i>	'hates herself'	<i>wast zich</i>	'washes'
Frisian	<i>hearde himsels</i>	'heard himself'	<i>wasket him</i>	'washed'
Jamul Tiipay	<i>naynaach mat-aaxway</i>	'killed himself'	<i>mat-sxwan</i>	'scratch (oneself)'

generative "explanation":

Reinhart & Reuland 1993: introverted verbs have two lexical entries, one of which is "lexically reflexive"

(purely stipulative — would allow languages with lexical reflexive 'hate' and 'see', while 'wash' and 'dress' are not lexically reflexive)

functional explanation: economic motivation

Haiman 1983:807: "What is predictable receives less coding than what is not."
But why is the reflexive interpretation of introverted verbs predictable?

Faltz 1985:8: "verbs expressing commonly reflexive actions such as washing oneself"

Faltz 1985:19: "normally reflexive activities"

Haiman 1983:803: "actions which one generally performs upon one's self"

Levinson 2000:329: "stereotypically reflexive actions"

König & Siemund 2000a:60: "The semantic property that plays a fundamental role in the selection of a reflexivizing strategy concerns the question whether the situation denoted by the verb or adjective is typically or conventionally directed at others or not."

König & Siemund 2000a:61: "It is world knowledge concerning other-directed and non-other directed situations that is responsible for the way we interpret..."

World knowledge or semantics?

Not a semantic property of the predicate

(in a culture that prohibits self-shaving, 'shave' would not behave as an introverted verb)

How can “world frequency” get reflected in language structure?

- Speakers can afford to reduce expressions that hearers can predict they will hear, and they have to be fully explicit on expressions that surprise hearers.
- Structural (Zipfian) economy derives from **speech frequency**, not from **world frequency** — frequently used expressions are short, not expressions for items that are frequent in the world (so *oxygen molecule* is longer than *house*, although houses are much less frequent in the world; see also Ariel 2004)
- Speech frequency (unlike world frequency) can be measured rather easily, by doing frequency counts of representative corpora
- Of course, speech frequency is often ultimately due to world frequency, as presumably in the case of introverted / extroverted verbs
- But speech frequency may be due to other factors, e.g. singular / plural asymmetry, present / past asymmetry (these asymmetries show the same structural effects!)
- For the grammarian, speech frequency is sufficient as an explanatory factor; explaining speech frequency is a separate task that is often worthwhile, but will not be pursued here

Do introverted verbs occur “typically” / “normally” reflexively?

Table 2: Different transitive verbs with coreferential and disjoint objects

(source: British National Corpus)

extroverted: <i>kill</i>	disjoint (‘kill someone’)	86 (79%)	(full NP object: 59) (pronoun object: 27)
	coreferential (‘kill oneself’)	5 (5%)	
	objectless (‘be a killer’)	18 (17%)	
introverted: <i>wash</i>	disjoint (‘wash someone’)	35 (70%)	(full NP object: 28) (pronoun object: 7)
	coreferential (‘wash oneself’)	11 (22%)	
	objectless (‘be a washer’)	4 (8%)	

Too strong to say that introverted verbs are “normally reflexive” – at most we can say that they are “commonly reflexive”.

But what counts for explaining the coding of reflexive situations is the contrast between disjoint phoric pronouns and reflexive pronouns.¹ **When a verb has a phoric notional object, in introverted verbs this is more commonly reflexive than disjoint:**

¹ “phoric pronoun” is a cover term for discourse-referring pronouns (“personal pronouns”, “anaphoric demonstratives”) and intrasentential pronouns (“reflexive pronouns”, “anaphors”).

Table 3: Transitive verbs with coreferential and disjoint object pronouns

(sources: for German: Cosmas Corpus of Institut für deutsche Sprache;
for Czech: Czech National Corpus)

two *introverted* verbs:

			disjoint pronoun	reflexive pronoun
German	<i>waschen</i>	'wash'	66 (32%)	141 (68%)
Czech	<i>mýt, umýt, umývat</i>	'wash'	28 (22%)	98 (78%)
German	<i>verteidigen</i>	'defend'	43 (21%)	162 (79%)
Czech	<i>bránit</i>	'defend'	7 (4%)	194 (96%)

two *extroverted* verbs:

			disjoint pronoun	reflexive pronoun	reciprocal pronoun
German	<i>hören</i>	'hear'	196 (96%)	8 (4%)	0
Czech	<i>slyšet</i>	'hear'	201 (98%)	2 (1%)	2 1%
German	<i>hassen</i>	'hate'	160 (76%)	14 (7%)	37 18%
Czech	<i>nenávidět</i>	'hate'	104 (76%)	19 (14%)	13 10%

More fine-grained prediction:

Extroverted/introverted is not necessarily a bifurcation, but a **scale of increasing frequency of reflexive use**:

(9) Universal 15a

In all languages, verbs with higher frequency of reflexive use show shorter reflexive-marking forms than verbs with lower frequency of reflexive use.

"Introversion/extroversion" contrast also for adjectives (e.g. Zribi-Hertz 1995: lexically specified for [±disjoint reference]):

(10) French

- a. *Pierre₁ est fier de lui_{1/2}.*
'Pierre is proud of himself.'
- b. *Pierre₁ est jaloux de lui-même₁.* (...*jaloux de lui_{2/*1}*)
'Pierre is jealous of himself.'

Table 4: Two adjectives with (animate) disjoint/coreferential pronoun complements

(source: British National Corpus)

	PERSONAL PRONOUN	REFLEXIVE PRONOUN
<i>proud of</i>	212 (84%)	39 (16%)
<i>jealous of</i>	41 (100%)	0 (0%)

3. Complexity of the reflexive marker

Universal 16:

In all languages, the primary reflexive-marking strategy is at least as complex phonologically as the primary phoric disjoint-reference-marking strategy.

e.g. Comrie 1999: 342, Levinson 2000:329

primary reflexive-marking strategy (Faltz 1985:4):

the strategy used with extroverted transitive verbs

primary phoric disjoint-reference-marking strategy:

the strategy corresponding to English *him* in *They hate him*.
(non-reflexive phoric pronoun)

Table 5: Reflexive markers and phoric disjoint-reference markers

	REFLEXIVE-MARKING	DISJOINT-REFERENCE-MARKING
English	<i>herself</i>	<i>her</i>
Greek	<i>ton eaftó tu</i>	<i>ton</i>
Hebrew	<i>et sacmo</i>	<i>oto</i>
Turkish	<i>kendini</i>	<i>onu</i>
Oriya	<i>nijaku</i>	<i>taaku</i>
Lezgian	<i>wič</i>	<i>am</i>
Japanese	<i>zibun o</i>	Ø
Mandarin Chinese	<i>zǐjǐ</i>	<i>tā</i>
German	<i>sich</i>	<i>ihn</i>
French	<i>se</i>	<i>le</i>
Swahili	<i>ji-</i>	<i>mu-</i>

generative explanation:

Reinhart & Reuland 1993:663:

“Condition B: A reflexive predicate is reflexive-marked”, i.e. “lexically” or by means of a “complex anaphor”.

But this cannot account for the Oriya, Lezgian, Japanese, German, and French cases.

functionalist explanation: frequency / predictability / efficiency

With extroverted transitive verbs, and indeed with the group of transitive verbs as a whole (in which extroverted verbs are the majority), **disjoint reference is overwhelmingly more frequent than coreference**, so shorter coding for disjoint reference is more efficient.

Table 6. Coreferential and disjoint use of phoric object pronouns in transitive clauses

(source: Ariel 2004, based on Santa Barbara Corpus of English)

disjoint	101	(98%)
coreferential	2	(2%)

cf. already Faltz 1985:241-2:

“in the case of a predication involving more than one argument, the unmarked situation is for the different arguments to have distinct referents”

—> here “unmarked” presumably means “more frequent”

But Levinson (2000:328-9) questions the frequency-based explanation:

“agents normally act upon entities other than themselves; the prototypical action—what is described by the prototypical transitive clause—is one agent acting upon some entity distinct from itself. If that is how the world stereotypically is, then an interpretation of an arbitrary transitive sentence as having referentially distinct arguments is given to us by the I-principle, which encourages and warrants an interpretation to the stereotype. Note that **this is not some kind of behaviorist presumption that the statistical preponderance of nonreflexive states of affairs, or even linguistic statements, is inductively learned and then reflected unwittingly in pragmatic presumption.**” [my emphasis]

—> my claim:

This is exactly what explains the universal: inductive learning of statistical skewings in linguistic statements, reflected in speakers’ tendency to use explicit coding for the rarer situation (which gets grammaticalized).

The functional motivation is **implemented through language change**; see König & Siemund 2000b, Keenan 2003, Ariel 2004, Levinson 2000:§4.4 for details on how complex reflexives arise diachronically.

4. Reflexive adnominal possessors

Universal 17:

If a language uses a special reflexive pronoun for adnominal possessors, then it also uses a special reflexive pronoun for the object, but not vice versa.

Only three out of four logically possible language types are attested:

(11)

		subject-coreferential pronouns in adnominal possessive position	
		normal	special reflexive
subject-coreferential pronouns in object position	special reflexive	English	Lezgian
	normal	Loniu	—

(12) English

a. *She₁ killed herself₁.*

b. *She₁ killed her_{1/2} lover.*

(*She₁ killed her₂.*)

(**She killed herself's lover.*)

(13) Lezgian

- a. *Alfija-di (wič-i) wič q'ena.*
 Alfija-ERG self-ERG self killed
 'Alfija killed herself.'
- b. *Alfija-di wič-in kic' q'ena.* (vs. *Alfija-di₁ ada-n₂ kic' q'ena.*)
 Alfija-ERG self-GEN dog killed
 'Alfija₁ killed her₁ dog.'

(14) Loniu (Hamel 1994:49)

- Hetow ne?ehin hetow to tiñi tɔp a hetow.*
 3PCL girl 3PCL STAT weave basket POSS 3PCL
 'The girls₁ are weaving their_{1/2} baskets.'

Both the English type and the Lezgian type seem to be very widespread:

(15) Akan (Faltz 1985:170-81)

- a. *Mary hũũ nẽ hõ.*
 Mary see.PAST 3SG.POSS REFL
 'Mary saw herself.'
- b. *John praa nẽ 'fie.*
 John sweep.PAST 3SG.POSS house
 'John₁ swept his_{1/2} house.'

(16) Japanese

- a. *Ken wa zibun o seme-ta.*
 Ken TOP self ACC blame-PAST
 'Ken blamed himself.'
- b. *Jon₁ wa Marii₂ to zibun_{1/2} no ie de hanasi o si-ta.*
 John TOP Mary with self GEN house in talk ACC do-PAST
 'John had a talk with Mary in his/*her house.'

(17) Oriya (Ray 2000:588)

- a. *Raama₁ (taa) nija-ku₁ bahut Teke.* (Raama taa-ku₂ bahut Teke.)
 Rama his self-ACC much praises
 'Rama praises himself very much.'
- b. *Raama₁ nija₁ bahi paDhilaa.* ~Raama₁ taa_{1/2} bahi paDhilaa.
 Rama self.GEN book reads Rama he.GEN book reads
 'Rama reads his book.'

(18) Tsez (Polinsky & Comrie 1999: 329)

- a. *ʕal-a nes-a nesi-r ʕʕutku r-oy-si.*
 Ali-ERG self-ERG self-DAT house GIV-make-PSTWIT
 'Ali built a house for himself.'
- b. *ʕal-a nes-a nesi-z qizaniyo-r ʕʕutku r-oy-si.*
 Ali-ERG self-ERG self-GEN2 family-DAT house GIV-make-PSTWIT
 'Ali built a house for his family.'
- ~ *ʕal-a nesi-z qizaniyo-r ʕʕutku r-oy-si.*
 Ali-ERG he-GEN2 family-DAT house GIV-make-PSTWIT
 'Ali built a house for his family.'

generative explanation: ??

functionalist explanation:

Is coreference more “natural” /“(stereo)typical” /“normal” with possessive pronouns?

Robert₁ brought his₁ umbrella, so he₁ won't get wet.
Robert₁ has read his₂ book, so he₁ admires him₂.

What is the "presumption" here?

Table 7. Coreferential and disjoint phoric possessors

A. English *his*

(source: first 20 chapters of the English translation (CEV) of Genesis (the first book of the Bible))

subject-coreferential	43 (53%)	(Abraham went to his tent, Gen 18.6)
conjunct-coreferential	19 (23%)	(Noah and his sons, Gen 9.18)
disjoint	19 (23%)	(she was taken to his house, Gen 12.15)

B. German *ihr- 'her; their'*

(source: 19 of Grimm's fairy tales)

subject-coreferential	79 (68%)
conjunct-coreferential	1 (1%)
disjoint	36 (31%)

Thus:

Adnominal possessive phoric pronouns are much more likely to be coreferential with the subject than object pronouns. So unlike object pronouns, they do not need any special marking, and they behave just like ordinary personal pronouns in many languages.

Question:

But if possessive pronouns are largely coreferential, why do some languages have heavier reflexive possessive pronouns than disjoint possessive pronouns? (e.g. Japanese *zibun/kare*, Lezgian *wičin/adan*)

Answer:

These languages show **strategic streamlining** (i.e. possessive pronouns pattern after object pronouns), whereas English-type languages show **functional streamlining** (cf. Faltz 1985). “System pressure” beats economic motivation. Note that strategic streamlining can only create symmetries. It is still predicted that all asymmetries must be functionally motivated.

5. Reflexives in locative phrases

Universal 18:

If a language uses a special reflexive pronoun in locative phrases, it also uses a special reflexive pronouns for objects, but not vice versa.

(Faltz 1985:§3.3, Comrie 1999:338)

		subject-coreferential pronouns in locative position	
		normal	special reflexive
subject-coreferential pronouns in object position	special reflexive	English	German
	normal	Loniu	—

(20) English *Maria₁ saw a snake near her₁.*

(21) German *Maria₁ sah eine Schlange neben sich₁/ihr₂.*

(22) Loniu (Hamel 1994:80)

Suʔu ɲetu suʔu ime peliŋeʔi suʔu.
 3DU child 3DU 3SG.come with 3DU

'Their₁ two children₂ came to be with them_{1/2/3}.'

Universal 19:

If different reflexive pronouns are used for objects and in locative phrases, the locative-phrase reflexive is phonologically less complex.

(23) Dutch (Reinhart & Reuland 1993:665-6)

a. *Max legt het boek achter zich.*

'Max puts the book behind him.'

b. *Max haat zichzelf.*

'Max hates himself.'

generative explanation: (Reinhart & Reuland 1993)

Condition B: "A reflexive predicate is reflexive-marked"; locative phrases form their own predicates, hence they do not have to combine with complex ("SELF") anaphors.

But different locative prepositions / different predicates behave differently, suggesting that this is not a matter of pure configurational syntax (predicate vs. no predicate) (Faltz 1985:107):

- (24) a. *Krag the robot placed a sandwich in front of him/?*himself.*
 b. *Krag the robot unscrewed a panel in his abdomen and placed a sandwich inside himself/?him.*

- (25) *He looked about him/*himself.* (Smith 2004: 598)
 (26) *She has a lot of money on her/*herself.*
 (27) *The box has a spider in it/*itself.*
 (28) *Pedro put his past behind him/*himself.*

And what about benefactive phrases? Do they belong to the verbal predicates?

- (29) *Leyla₁ bought a cake for herself₁/her₂.*

functionalist explanation:

Subject-coreference is significantly more common in locative phrases than with objects. Hence, languages do not need special reflexive pronouns as much as for objects, and reflexive pronouns can be shorter.

Table 8. Coreferential and disjoint use of phoric pronouns in locative phrases

A. German locative prepositions

(source: Goethe Corpus of Institut für deutsche Sprache Mannheim)

<i>bei sich</i>	coreferential	93	(31%)
<i>bei ihm/ihr/ihnen</i>	disjoint	209	(69%)
<i>vor sich</i>	coreferential	188	(55%)
<i>vor ihm/ihr/ihnen</i>	disjoint	153	(45%)
<i>hinter sich</i>	coreferential	39	(48%)
<i>hinter ihm/ihr/ihnen</i>	disjoint	42	(52%)
<i>unter sich</i>	coreferential	30	(42%)
<i>unter ihm/ihr/ihnen</i>	disjoint	42	(58%)
<i>über sich</i>	coreferential	66	(47%)
<i>über ihm/ihr/ihnen</i>	disjoint	75	(53%)

B. English locative prepositions

(source: British National Corpus, simple search):

<i>near him</i>	coreferential	10	(20%)
	disjoint	40	(80%)
<i>behind him</i>	coreferential	12	(24%)
	disjoint	38	(76%)
<i>in front of him</i>	coreferential	17	(34%)
	disjoint	33	(66%)
<i>above him</i>	coreferential	7	(14%)
	disjoint	43	(86%)
<i>below him</i>	coreferential	8	(16%)
	disjoint	42	(84%)

6. Long-distance reflexives

Universals 20-21:

6. If a language uses a special reflexive pronoun in long-distance contexts, it also uses a special reflexive pronouns in local contexts, but not vice versa.
 7. If a language has different reflexive pronouns in local contexts and long-distance contexts, the local reflexive pronoun is at least as complex phonologically as the long-distance reflexive.

Faltz 1985:153: “compound reflexives tend to obey the [clause mate condition]”
 Pica 1987: long-distance reflexives are monomorphemic

Table 9: Local reflexives and long-distance reflexives

	LOCAL REFLEXIVE	LONG-DISTANCE REFLEXIVE	
Mandarin Chinese	(<i>tā</i>) <i>zìjǐ</i>	<i>zìjǐ</i>	
Icelandic	<i>sjálfan sig</i>	<i>sig</i>	
Dutch	<i>zichzelf</i>	<i>zich</i>	
Telugu	<i>tanu tanu</i>	<i>tanu</i>	
Bagvalal	<i>e-b-da</i>	<i>e-b</i>	(Ljutikova 2001)
Malay	<i>diri-nya</i>	<i>diri-nya</i>	
English	<i>him-self</i>	<i>him-self</i>	

generative explanation (for universal 20):

Long-distance-reflexives become local by head movement, and heads are monomorphemic while phrases are not (e.g. Pica 1987, Cole et al. 1990, Cole et al. 2005+).

Conceptual problem: multi-morphemic entities are not necessarily phrasal -- there is very little evidence that Dutch *zichzelf*.

Empirical problem: Malay and English have multi-morphemic long-distance reflexives (however, Cole et al. 2005+ claim that they are not "bound anaphors").

Kiparsky 2004:§2.1: "What we have here is not a true universal, but a typological generalization with a historical explanation"

functionalist explanation:

Phoric pronouns in subordinate clauses are much more likely to be (subject-) coreferential than phoric pronouns in object position. Hence they do not need as much coding as object pronouns.

Comrie 1999:341:

“As we move to more and more extended domains, the expectation of non-coreference is relaxed, so that ... at some particular point an individual language will decide to shift from reflexive to ordinary pronoun even in cases of coreference.”

But what is the connection between “domain” and coreference?

some frequency figures:

Table 10. Coreferential and disjoint use of phoric pronouns in finite complement clauses

A. German *dass*-clauses, all phoric pronouns

(source: German translations of Acts (Bible))

disjoint in the sentence	57 (47%)
coreferential with superordinate subject	46 (38%)
coreferential with superordinate nonsubject	14 (11%)
antecedent within subordinate clause	5 (4%)

B. Czech *že*-clauses, all phoric pronouns

(source: Czech National Corpus, sub-corpus of spoken language)

disjoint in the sentence	135 (55%)
coreferential with superordinate subject	76 (31%)
coreferential with superordinate nonsubject	15 (6%)
antecedent within subordinate clause	21 (9%)

Thus, phorics in complement clauses are very similar to phorics in adnominal possessive function and in locative phrases. Like these, they are often not obligatory (i.e. can be replaced by non-reflexive pronouns without significant meaning change).

7. What has been explained and what can be explained

– The universals corresponding to the first three contrasts in §1 have been explained (plus a few more):

Russian	* <i>Vanja nenavidit-sja.</i>
English	* <i>Bob₁ saw him₁.</i>
English	* <i>Bob admires himself's boss.</i>

– Can we also explain why Russian is not like German, or why English is not like Lezgian, for example?

The answer is no (until we find further, hitherto unknown universals and explanations for them).

– This is the same for both functionalist and generative approaches; but in the generative approach, linguists simultaneously offer synchronic descriptions of particular languages, which may create the impression that language-particular facts are also explained.)

– The language-particular facts have been explained to the extent that they instantiate the universals, i.e. weakly (cf. Vennemann 1983), in the sense that

knowing that a language-particular contrast falls under an explainable universal gives us some "relief from puzzlement".

– These facts are of course still unexplained in the sense that it is an historical accident that Russian is not like German, that English is not like Lezgian, etc.

– The fourth contrast (in (7)-(8) has not been explained, and no attempt at explanation has been made, because there is no known universal that it instantiates. We simply don't know the cross-linguistic facts here, so we cannot achieve explanation. Explanations presuppose universals.

8. What about Chomsky's Binding Theory?

Chomsky (1981)'s binding conditions have generally been taken as part of the innate Universal Grammar:

Condition A. An anaphor must be bound in its local domain.

Leyla₁ liked herself₁.
**Leyla₁ thought that Yusuf liked herself₁.*

Condition B. A pronominal must not be bound in its local domain.

Leyla₁ thought that Yusuf liked her₁.
**Leyla₁ liked her₁.*

Condition C. A nonpronoun must not be bound.

**Leyla₁ thought that Yusuf liked Leyla₁.*

So a version of the Binding Theory should be universal. But are there any testable universal claims that it makes?

Problem: The concepts 'anaphor', 'pronominal', and 'nonpronoun' (= 'r-expression') are not independently defined. It seems that 'anaphor' is defined as 'whatever is subject to Condition A'.

?Universal: "All languages have an element that is subject to Condition A."

NO: Clearly, not all languages have anaphors – see Loniu above, which has no element that falls under Condition A.

Thus, Condition A seems to claim only that some languages have an element that must be bound in its local domain (and we call such elements "anaphors"). This is an existential claim, but not a universal claim that can be tested and falsified. It seems that the Binding Theory is not relevant to explaining syntactic universals.

9. Fischer's (2004) OT approach

Reflexivity constraints penalize the binding of non-maximally anaphoric elements in domains of different size;

universal fixed ranking (smaller domains ranked higher):

$\text{Refl}_{\text{ThetaD}} \gg \text{Refl}_{\text{CaseD}} \gg \text{Refl}_{\text{SubjectD}} \gg \text{Refl}_{\text{FiniteD}} \gg \text{Refl}_{\text{IndicativeD}} \gg \text{Refl}_{\text{RootD}}$

Anaphoricity constraints penalize the occurrence of elements;

universal fixed ranking (less anaphoric elements are generally preferred):

*SELF \gg *SE \gg *PRONOMINAL \gg **R-EXPRESSION

progress:

the domain ranking of the reflexivity constraints corresponds to Comrie's "extended domains" (and broadly to increasing likelihood of coreference)

problem:

the universal fixed rankings remain arbitrary

References

- Ariel, Mira. 2004. "The rise (and potential fall) of reflexive pronouns." Ms., Tel Aviv University.
- Chomsky, Noam A. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Cole, Peter, Gabriella Hermon, and Li-May Sung. 1990. "Principles and parameters of long-distance reflexives." *Linguistic Inquiry* 21, 1-22.
- Cole, Peter & Hermon, Gabriella. 2005. "The typology of Malay reflexives." *Lingua* 115.5: 627-644.
- Cole, Peter, Gabriella Hermon, and C.T. James Huang. 2005+. "Long distance anaphors: an Asian perspective." To appear in *Syntax Companion (SynCom)*, edited by Henk van Riemsdijk and Martin Everaert.
- Comrie, Bernard. 1999. "Reference-tracking: description and explanation" *Sprachtypologie und Universalienforschung* 52: 335-46.
- Everaert, Martin. 1986. *The Syntax of Reflexivization*. Dordrecht: Foris Publications.
- Faltz, Leonard M. 1985[1977]. *Reflexivization: a study in universal syntax*. New York: Garland. (Published version of 1977 UCLA dissertation.)
- Fischer, Silke. 2004. "Optimal binding." *Natural Language and Linguistic Theory* 22:481-526.
- Haiman, John. 1983. "Iconic and economic motivation." *Language* 59: 781-819.
- Hamel, Patricia. 1994. *A grammar and lexicon of Loniu, Papua New Guinea*. (Pacific Linguistics) Canberra: Australian National University.
- Keenan, Edward. 2003. "An historical explanation of some binding theoretic facts in English." In: Moore, John & Maria Polinsky (eds.) *The nature of explanation in linguistic theory*. Stanford: CSLI Publications, 153-189.

- Kiparsky, Paul. 2004. "Universals constrain change, change results in typological generalizations." Ms., Stanford University.
- König, Ekkehard & Siemund, Peter. 2000a. "Intensifiers and reflexives: a typological perspective." In: Frajzyngier, Zygmunt & Curl, Traci S. (eds.) *Reflexives: forms and functions* (Typological studies in language, 40) Amsterdam: Benjamins, 41-74.
- König, Ekkehard & Siemund, Peter. 2000b. "The development of complex reflexives and intensifiers in English." *Diachronica* 17.1: 39-84.
- König, Ekkehard & Letizia Vezzosi. 2004. "The role of predicate meaning in the development of reflexivity." In: Wiemer, Björn & Bisang, Walter & Himmelmann, Nikolaus. (eds.) *What makes Grammaticalization? A Look from its Fringes and its Components*. Berlin: Mouton de Gruyter.
- Levinson, Stephen C. 2000. *Presumptive meanings: the theory of generalized conversational implicature*. Cambridge/MA: MIT Press.
- Ljutikova, Ekaterina A. 2001. "Anaforičeskie sredstva." In: Kibrik, A.E. (ed.) *Bagvalinskij jazyk*. Moskva: Nasledie, 615-681.
- Miller, Amy W. 2001. *A Grammar of Jamul Tiipay*. Berlin: Mouton de Gruyter.
- Newman, Paul. 2000. *The Hausa language: an encyclopedic reference grammar*. New Haven: Yale University Press.
- Pica, Pierre. 1987. "On the nature of the reflexivization cycle." *North-Eastern Linguistics Society* 17:483-499. (University of Massachusetts, Amherst, GLSA)
- Polinsky, Maria & Comrie, Bernard. 1999. "Reflexivity in Tsez." In: Raxilina, E.V. & Testelec, Ja. G. (eds.) *Tipologija i teorija jazyka: ot opisanija k ob'jasneniju*. Moskva: Jazyki ruskoj kul'tury, 319-339.
- Reinhart, Tanya & Eric Reuland. 1993. "Reflexivity." *Linguistic Inquiry* 24:657-720.
- Smith, Mark. 2004. "Light and heavy reflexives." *Linguistics* 42.3: 573-615.
- Vennemann, Theo. 1983. "Causality in language change: Theories of linguistic preferences as a basis for linguistic explanations." *Folia Linguistica Historica* 4: 5-26.
- Zipf, George K. 1935. *The psycho-biology of language: an introduction to dynamic philology*. Houghton Mifflin (Republished 1965 by MIT Press.)
- Zribi-Hertz, Anne. 1995. "Emphatic or reflexive? On the endophoric character of French *lui-même* and similar complex pronouns." *Journal of Linguistics* 31: 333-74.