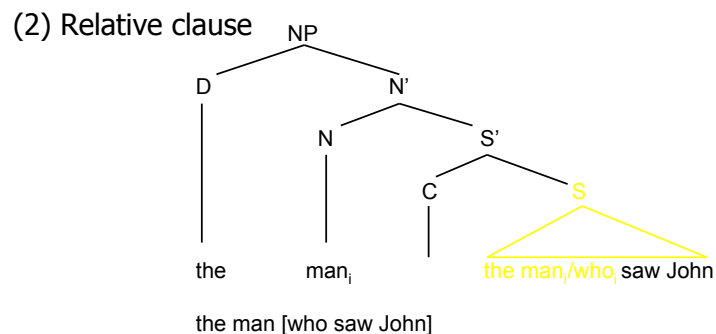


Relativization and Nominalization

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Chomskyan notation of recursion and the RC construction

- (1) a. $S \rightarrow NP VP$
- b. $NP \rightarrow (D)N' (S')$
- c. $VP \rightarrow V (S')$
- d. $S' \rightarrow (C) S$



Issue #1 Nature of recursion in natural languages

Marc D. Hauser, Noam Chomsky, and W. Tecumseh Fitch

The faculty of language: What is it, who has it, and how did it evolve?

Science Vol. 298, 22 November 2002. 1569-1579.

"We submit that a distinction should be made between the faculty of language in the broad sense (FLB) and in the narrow sense (FLN). FLB includes a sensory-motor system, a conceptual-intentional system, and the computational mechanisms for recursion, providing the capacity to generate an infinite range of expressions from a finite set of elements. We hypothesize that FLN only includes recursion and is the only uniquely human component of the faculty of language." (Emphasis added)

Definitions of RCs

Harada (1974/2000:237-238): An RC is a sentence embedded in an NP whose head is PRO in underlying structure.

The RC must contain in underlying structure an NP (REL) which has the same index as does the PRO-HEAD.

Surface forms of RNP's are derived through the following transformations:

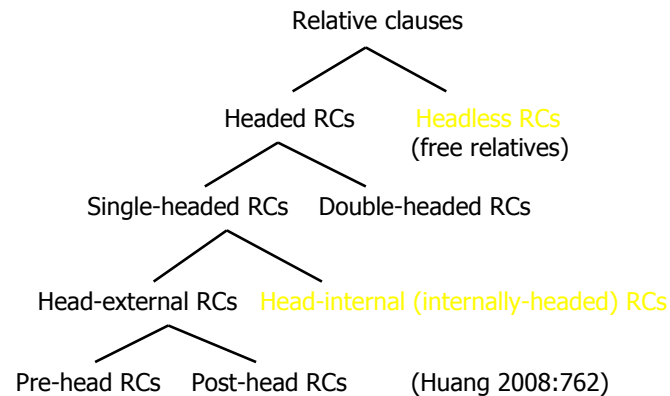
- Pro HEAD Substitution
- REL Fronting
- Shadow Deletion
- Pronoun Drop

Keenan and Comrie (1977: 63-64): an RC "specifies a set of objects (perhaps a one-member set) in two steps: a larger set is specified... and then restricted to some subset of which a certain sentence, the restricting sentence, is true."

Lehmann (1986:664): "a construction consisting of a nominal...and a subordinate clause interpreted attributively modifying the nominal. The nominal is called the head and the subordinate clause the RC. The attributive relation between head and RC is such that the head is involved in what is stated in the clause."

Issue #2 Typological classification of relative clauses

Headedness parameter (Lehmann 1986, Dryer 2007, Andrews 2007, etc.)



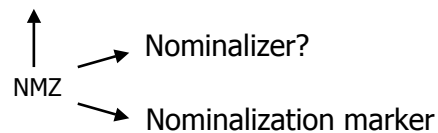
Are **these** really relative clauses?

Aren't we **wrong-headed** about them?

Relativizer or nominalization marker?

Sasak

saq, siq, si, siq-saq → REL (relativizer)



Bahasa Indonesia *yang*

Chinese *de* (的)

Japanese *no* (の)

Pat 1: Nominalizations > Relative clauses

Relative clauses in Sasak (Western Malayo-Polynesian; Eastern Indonesia)

Puyung Meno-Mené Sasak

a. Inaq wah=en beli sebie wiq (Actor focus construction)
 mother PAST=3 buy chili yesterday
 'Mother bought the chili yesterday.'

a'. Dengan nine [saq Ø wah=en beli sebie uiq]=no inaq=ek (A Topic relativized)
 person female REL PAST=3 buy chili yesterday=that mother=1SG
 'The woman who bought the chili yesterday is my mother.'

b. Sebie=no wah=en beli isiq inaq wiq (Patient focus construction)
 chili=that PAST=3 buy by mother yesterday
 'Mother bought the chili yesterday.'

b'. Kanak=no kaken sebie [saq Ø wah=en beli isiq inaq wiq] (P Topic relativized)
 child=that eat chili REL PAST=3 buy by mother yesterday
 'The child ate the chili which mother bought yesterday.'

Sasak expressions marked by *saq, siq*, etc. function as an argument or a nominal predicate, just like any simple nominals

Puyung meno-mené Sasak

- [saq ino] baru
NMZ that new
'That one is new.'
- [saq pertame] mame kance [saq kedue] nine (speaking about
NMZ first male and NMZ second female one's children)
'The first one is male and the second one is female.'
- Gitaq [saq nyenke=n tokol leq bucu]=no
look NMZ PROG=3SG sit LOC corner=that
'Look at the one sitting in the corner.'
- [saq nyenke=n tokol leq bucu]=no amaq=k
NMZ PROG=3SG sit LOC corner=that father=1SG
'The one sitting in the corner is my father.'
- Amaq=k [saq nyenke=n tokol leq bucu]=no
father=1 NMZ PROG=3SG sit LOC corner=that
'My father is the one sitting in the corner/It is my father who is sitting in the corner.'

Modification functions of nominalized forms

Pancor Ngeno-Ngené Sasak

- a. suara [si ne=ngerontok lawang loq Ali]
 sound NMZ 3=knock door by Ali
 'sound of Ali knocking on the door'
- b. berita [si angku=n loq Ali beruq merariq]
 news NMZ way=3 ART Ali recently marry
 'the news that Ali recently got married'
- c. Aku lupa [si angku-n loq Ali wah mbilin kota=no]
 I forget NMZ way=3 ART Ali PERF leave town=that
 'I forgot that Ali had left the town.'
- d. waktu [si ku=masih sekolah]=no...
 time NMZ 1=still school=that
 'At the time when I was still going to school.../When I was going to school...'
- f. Ali te-semateq [si=ne lekaq léq rurung]
 Ali PASS-kill NMZ=3 walk in street
 'Ali was killed when/while he was walking in the street.'
- g. buku [si Ø ne=bace isiq loq Ali] (Relative Clause)
 book NMZ 3=read by ART Ali
 'the book that Ali read'

Pancor Ngeno-Ngené Sasak

- a. Kumbaq=meq buku=no?
 what.do=2 book=that
 'What did you do with that book.'
- b. Aku nulak-ang ia tipak perpustakaan
 I return-APPL it to library
 'I returned it to the library.' (Require overt pronominal forms)
- b'. Ku=nulak-ang-e tipak perpustakaan
 1=return-APPL-3 to library
 'I returned it to the library.'
- Buku [si ku=tulak-ang-*e/Ø tipak perpustakaan]=no bagus (RC contains a gap)
 book NMZ 1-return-APPL-3 to library =that interesting
 'The book that I returned to the library was interesting.'

Japanese

Kore=ga [Ø kinoo Ø katta] hon desu 'This is the book which I bought
 This=NOM ↓ yesterday ↓ bought book COP yesterday.'
 boku=ga *sore=o
 I=NOM it=ACC

RC gaps

Comrie on Japanese RC gaps (Comrie and Horie 1995 and Comrie 1998)

- Japanese pro pro
 a. kore=ga [Ø kinoo Ø katta] hon desu.
 this=NOM yesterday bought book COP
 'This is the book that (I) bought Ø yesterday.'
- b. Ø kinoo Ø katta. → "Have you bought the book already?"
 yesterday bought
 '(I) bought (it) yesterday.'

Comrie's claim:

In Japanese noun modifiers can be any ordinary sentences, possibly with **anaphoric (zero) pronouns**;

RCs are just a type of modifying **sentences** <--- (Comrie and Horie 1995; Comrie 1998)

A gap in RC is created in a nominalization process

Nominalization—two types (Comrie and Thompson 1985)

1. "name of activity/state" (e.g. create → creation)
2. "name of an argument" (e.g. employ → employer; employee)

Role of the Austronesian focus morphology:

profiles the grammatical role of the nominalized argument

A-focus: nominalized form refers to an actor; the one who hits

P-focus: nominalized form refers to a patient; the one who is hit

L-focus: refers to a location where an action is performed.

I-focus: refers to an instrument used to perform an action.

Our hypothesis:

A gap representing the nominalized argument is created in the process of argument nominalization; it is this gap that we see in the RC construction, which simply juxtaposes a head nominal and an argument nominalized form. RC formation does not involve a full clause, let alone a full sentence, that undergoes movement/deletion.

Mayrinax Atayal: 4-way focus morphology (Formosan; based on Huang 2002)

- a. Actor focus/nominalization
 βaq-un=mu ku? [m-aquwas] ka? haca?
 know-PF=1SG.GEN NOM.REF AF-sing LIN that
 'I know that singer/one who is singing there.' (あそこで[歌っている]のを...)
- b. Patient focus/nominalization
 ma-hnuq ku? [β-in-ainay nuk? naβakis]
 AF-cheap NOM.REF buy<PF.REALIS>buy GEN.REF old.man
 'What the old man bought was cheap.' (老人が[買った]のは...)
- c. Locative focus/nominalization
 ʎaʎhapuyan ku? [naniq-an cu? βuŋa? nku? ʎulaqi?]
 kitchen NOM-REF eat-LF ACC.NONREF yam GEN.REF child
 'The kitchen is (the place) where the child eats yam.'
 ([子供がヤムを食べる]のは台所(で)だ。)
- d. Instrumental focus/nominalization
 kaa ptiq-ani ku? [pa-patiq=mu]
 NEG.IMP write-IF.IMP NOM.REF IF-write=1SG.GEN
 'Don't write with my pen/thing to write with.'
 ([僕の[書く]の]で...)

Other language families with nominalization mechanisms similar to the Austronesian focus morphology

Tibeto-Burman/Northern Qiang (Ronghong) (Huang, Chenglong 2007: 192-194)

Subject/agent nominalization

- a. fa ɬupu guə-m (equivalent of Austronesian AF)
 clothes red wear-NMZ
 'one wearing red clothes'
- a'. [fa ɬupu guə-s] tɔymi the: (RC by apposition)
 clothes red wear-NMZ child that.CL
 'that child who wears red clothes'

Object/patient nominalization

- b. [qa (-wu) khe]-tɕ (equivalent of Austronesian PF)
 1SG-AGT cut-GEN
 'one I am cutting'
- b'. [qa (-wu) khe]-tɕ səf tho-zgu (RC by apposition)
 1SG-AGT cut-GEN tree that-CL
 'the tree that I am cutting'

Nominalizations as relative clauses

Mayrinax Atayal (Formosan; based on Huang 2002)

- a. yakaat m<in>uwah cuʎhisa? ku naβakis
 NEG AF<PERF>come yesterday NOM.REF old.man
 'The old man didn't come yesterday.'
- b. kia? ʎi? m-aniq ku? [yakaat m<in>uwah cuʎhisa?]
 PROG LIN AF-eat NOM.REF NEG AF<PERF>come yesterday
 'The one who didn't come yesterday is eating (there).'

Relative clause

- c. kia? ʎi? m-aniq ku? cuqliq ka' [yakaat m<in>uwah cuʎhisa?]
 PROG LIN AF-eat NOM.REF person LIN NEG AF<PERF>come yesterday
 'The person who didn't come yesterday is eating (there).'

Relativization

cuqliq ka' [yakaat m<in>uwah cuʎhisa?]

Sasak buku [siq baca isiq Ali] 'what Ali read'
 '(the) book which Ali read'

Instrumental nominalization

- c. pies khukhu-s (equivalent of Austronesian IF)
 meat slice-NMZ
 'what (is used) to slice meat.'
- c'. tse: [pies khukhu-s] xtɕepi ŋuə (RC by apposition)
 that:CL meat slice-NMZ knife COP
 'That is the knife that is used to slice meat.'

Nominalization as an argument

Northern Qiang (Courtesy of Chenglong Huang)
 qa [ləyz tse-m] e: u-təu-a (Subject nominalization)
 1SG book read-NMZ one.CL DIR-see-1SG
 'I see one who is reading books.'

Uto-Aztecan: Yaqui (González 2007)

- a. jú-me usí-m yeéwe
 DET-PL child-PL play
 'The children are playing.'
- a'. jú-me [yeéwe-me] (equivalent of Austronesian AF)
 DET-PL play-NMZ
 'the ones playing'
- a''. jú'u yoéme jú-me usí-m [yeéwe-me] kákam máka-k (RC)
 DET man DET-PL child-PL play-NMZ candy-PL give-PERF
 'The man gave candies to the children who were playing.'
- b. inepo uka chu'u-ta tea-k
 1SG DET.AC dog-ACC find-PERF
 'I found the dog.'
- b'. in uka tea-ka-'u (equivalent of Austronesian PF)
 1SG DET.AC find-PERF-NMZ
 'what I found'
- b''. U chu'u [in tea-ka-'u] chukuli (RC)
 DET dog 1SG.GEN find-PERF-NMZ black
 'The dog that I found is black.'
- c. Wa kari [nim bo'o-pea-'apo] ujoyoli (equivalent of Austronesian LF)
 DEM house 1SG.GEN sleep-DES-NMZ pretty
 'That house where I want to sleep is pretty.'

Turkish object nominalization (-dik, -cek plus a personal suffix)

- a. bir tani-diğ-im
 one know-P.PTCPL-1SG
 'one I know, an acquaintance of mine'
- b. [tani-diğ-im] bir adam
 know-P.PTCPL-1SG one man
 'a man I know' ('a man characterized-by-my knowing')

Turkish participles (Lewis 1967: 158ff)

Subject nominalization

- a. bekliy-en-ler
 wait-PTCPL-PL
 'those who are waiting'
- a'. [bekliy-en] misafir-ler (appositive RC)
 wait-PTCPL guest-PL
 'guests who are waiting'

Future participle

- b. Haber gelecek. (future sentence)
 news will.come
 'The news will come.'
- b'. gelecek (subject nominalization)
 'who/which will come, the future'
- b''. [gelecek] haber (appositive RC)
 will.come news
 'news which will come'

Old and Modern Japanese

[moropito=no asobu]=wo mireba...(M5.843)
 all people=GEN play.ADNM=ACC see-EXC-PROV
 'When I see all the people play.' (Janick Wrona)

[hitobito=no asobu]=no=o mireba... (Mod. Japanese)

[terite tateru]=pa pasiki ta=ga tuma (M20. 4397)
 shine stand.ADNM=TOP beautiful who=GEN wife
 'the one standing there shining whose wife is that? (Wrona)

[terite tateru] wotome (RC)
 shine stand.ADNM girl
 'the girl who is standing there shining'

[kagayaite tatteiru]=no=wa.... (Mod. Japanese)

[kagayaite tatteiru] syoozyo (RC)

What are the following *no*'s?

- a. [Taroo=ga katta] **hon**=o boku=mo hosii. (RC)
Taro=NOM bought book=ACC I=too want
'I too want the book that Taro bought.'
- b. [Taroo=ga katta]=**no**=o boku=mo hosii.
Taro=NOM bought=NMZ=ACC I=too want
'I too want what Taro bought.'
- c. Kore=ga [boku]=**no** hon de, are=ga [otoosan]=**no** da.
this=NOM I=NMZ book COP that=NOM father=NMZ COP
'This is mine and that's the father's.'
- d. boku=**no** hon I=NMZ book
'my book'
- e. gengogaku=**no** hon linguistics=NMZ book
'a book of linguistics'

Other types of modification by juxtaposed nominals

Noun compounds:

gold watch, **song**bird, **dance** lesson, etc.

hon-bako 'book case', **tori**-kago 'bird cage', etc. (Japanese)

Participles:

singing bird, a man [**singing in the bath**] etc.

kaer-i miti 'return road', **asob-i** tomodati 'play mate' (Japanese)

Chinese *de* (的)

- a. nǐ méi yǒu [wǒ xǐhuān]=**de** chènshān
you not have I like NMZ shirt
'You don't have a shirt which I like.'
- b. nǐ méi yǒu [wǒ xǐhuān]=**de**
you not exist I like NMZ
'You don't have what I like.'
- c. Zhè shì [wǒ]=**de** shū, nà shì [fùqīn]=**de**
this is I NMZ book that is father NMZ
'This is my book, and that's the father's.'

Chinese *de* (and Japanese *no*) cannot be a linker;
linkers cannot be stranded.

Recapitulation:

1. Languages may have nominalization processes that are sensitive to grammatical roles; Subject/Agent nominalization, object/patient nominalization, etc. The Austronesian focus morphology has its origin in this kind of argument nominalization; similar mechanisms are also seen in other languages.
2. RC gaps are those created in the process of argument nominalization; They don't have anything directly to do with relativization, which simply juxtaposes a nominal head and a nominalized form. **Modification by nominalizations qua RCs is a function of the [Nominal + Nominal] construction**, as in other types of nominal construction consisting of two nominal elements.
3. RCs do not involve a full clause or full **sentence—there is no sentence/ clause recursion in RC formation**.
4. Grammatical relations and the Keenan-Comrie Accessibility Hierarchy are irrelevant in **the relativization process** in the languages that recycle nominalizations as relative clauses—and there are a lot of languages that do (see below).

Part 2: *Wh*-relatives and their ilk

What about languages like English, where there are relative pronouns that stand for the gaps in relative clauses?

- a. I met a man [who knew my old friend]
- b. I met a man [whom my old friend knew]

There are nominal expressions headed by an interrogative pronoun (so-called “free relatives”); but unlike those studied above, they cannot be used as relative clauses.

- a. I want [what John bought] too.
- a'. I want the book [*what John bought] too.
- a". I want the book [which John bought] too.

- b. I will meet [whoever comes tomorrow].
- b'. I will meet the man [*whoever comes tomorrow]
- b". I will meet the man [who comes tomorrow.]

(1) Ancient Greek (Adams 1972: 9, 13, 14)

- a. [hòn gàr theoi philoûsin], apothnē□iskei
'whom the god loves, dies young'
- b. [hós ou lambáneî tôn stauròn autoû kai akoloutheî opíso mou]
ouk éstin mou áksios
'(He) who does not take up his cross and follow me is not worthy of me'

(2) a. Lázaros, [hòn égeiren ek nekrôn Iēsoûs]

- 'Lazarus, whom Jesus had raised from the dead'
- b. Teúkros, [hòs áristos Akhaiôn]
'Teukros, the best of the Achaeans'

(1) Latin (Ehrenkranz and Hirschland 1972: 24, 28)

- a. [qui mentiri solet], peierare consuevit
'Whoever is in the habit of lying, is accustomed to swear falsely'
- b. at sunt [qui dicant]
'but there are those who might say'

(2) Latin (Gildersleeve and Lodge 1895: 395, 396)

- a. Iūsta glōria, [qui est frūctus virtūtis]
'real glory, which is the fruit of virtue'
- b. Uxor contenta est [quae bona est] ūnō virō
'A wife who is good is contented with one husband.'

Complementarity of English “free relatives” and RCs

- a. I saw the man who/*what won the first prize. (RC)
- b. I read the book which/*what you recommended to me. (RC)
- c. I will meet the man who/*whoever comes tomorrow. (RC)
- d. I read what/*which you recommended to me. (FR)
- e. I will meet whoever/*who comes tomorrow. (FR)
- f. I will visit the place where you live. (RC)
- e. I will visit where you live. (FR)

This complementary pattern of the distribution of “free relatives” and RCs is in fact rare, if ever, even among IE languages of Europe. Even in English, it is a recent development.

Spanish (SP), Brazilian Portuguese (PO), French (FR)

(courtesy of Noritaka Fukushima, Michael Colley, Hiroshi Hayashi)

- (1) a. Veré al hombre [que viene mañana] (SP)
Verei o homem [que vem amanhã] (PO)
Je verrai l'homme [qui viendra demain] (FR)
I will.see the man that comes tomorrow
'I will see the man who comes tomorrow.'
- b. Veré al [que viene mañana] (SP)
Verei a [quien viene mañana] (SP)
Verei [quem vem amanhã] (PO)
Je verrai (celui) [qui viendra demain] (FR)
I will.see (to the) that comes tomorrow
'I will see the one who comes tomorrow.'
- (2) a. Leeré el libro [que usted recomienda] (SP)
Lerei o livro [que você recomenda] (PO)
Je lirai le livre [que vous recommandez] (FR)
I will.read the book that you recommend
'I will read the book that you recommend.'
- b. Leeré lo [que usted recomienda] (SP)
Lerei o [que você recomenda] (PO)
Je lirai ce [que vous recommandez] (FR)
'I will read the one you recommend.'

Slavic languages

Russian (courtesy of Alexandra Aikhenvald)

- a. (tot,) [kto vymyl ruki], mozhet nachatj jestj
(that) who washed hands can start eat
'The one who has washed his hands can start eating.'
- b. *Maljchik, [kto vymyl ruki], mozhet nachatj jestj
boy who washed hands can start eating
'The boy who has washed his hands can start eating.'

Czech (courtesy of František Kratochvíl)

- a. (ten,) [kdo stojí tám-hle], ještě ne-měl dort
(that) who stand.3SG.PRES there-PART yet NEG-have.3S.MASC.PAST cake.ACC
'The one who stands over there, hasn't got the cake yet.'
- b. *kluk [kdo stojí tám-hle], ještě ne-měl dort
boy who stand.3SG.PRES there-PART yet NEG-have.3SG..MASC.PAST cake.ACC
'The boy who stands over there, hasn't got the cake yet.'

Germanic languages

Danish *hvem* 'who' and *hvad* 'what'

Danish (Examples and the grammaticality rating courtesy of Bjarke Frellesvig)

- a. *[hvem står der] er min fars ven
[Who is standing there] is my father's friend.
- b. ???[hvem jeg så igår] er min fars ven
[Whom I saw yesterday] is my father's friend.
- c. ???[hvad er på bordet] er min fars
[What is on the table] is my father's.
- d. ?[hvad jeg læser nu] er meget interessant
[What I am reading now] is very interesting.
- e. [hvad jeg læser nu] er avisen (OK but not very natural)
[What I am reading now] is the newspaper

hvem 'who' and *hvad* 'what' **do not** form RCs

- *Mande-n [hvem står der] er min fars ven
man-DEF.ART who stand there is my father's friend
'The man standing there is my father's friend.'

Russian

- a. tot, [kotoryj/chto stoit tam], eto drug otca
that which/what stand there it friend father
'The one who is standing there is my father's friend.'
- b. tot chelovek, [kotoryj/chto stoit tam], eto drug otca
that man which/what stand there it friend father
'That man who is standing there is my father's friend.'

Czech

- a. ten, [kter-ý/co sto-jí tám-hle],
that.MASC.NOM which/what.SG.NOM stand-3SG.PRES there-PART
to je otcův přítel
it.SG.NOM is father's.SG.GEN friend.SG.NOM
'The one standing there is my father's friend.'
- b. ten muž, [kter-ý/co sto-jí
that.MASC..SG.NOM man.SG.NOM which/what.SG.NOM stand-3SG.PRES
tám-hle], je otcův přítel
there-PART is father's.SG.GEN friend.SG.NOM
'The man who is standing there is my father's friend.'

Danish

- (1) a. Den [som/der står der] er min fars ven.
DEF.ART AS/THERE stands there is my father's friend
'The one who is standing there is my father's friend.'
- b. Mande-n [som/der står der] er min fars ven.
man-DEF.ART AS/THERE stands there is my father's friend
'The man who is standing there is my father's friend.'
- (2) a. Den [som jeg så igår] er min fars ven.
DEF.ART AS I saw yesterday is my father's friend
'The one whom I saw yesterday is my father's friend.'
- b. Mand-en [som jeg så igår] er min fars ven.
man-DEF.ART AS I saw yesterday is my father's friend
'The man I saw yesterday is my father's friend.'

Swedish *vad* 'what'

Swedish (courtesy of Martin Hilpert)

- a. Jag läser [vad ni rekommenderar]
I read what you recommend
'I read what you recommend.'
- b. ?Jag läser boken [vad ni rekommenderar]
I read book what you recommend
'I read a book that you recommend.'

German (courtesy of Akio Ogawa)

- (1) a. Ich empfangе den, [der morgen kommt]
 I receive ART ART tomorrow comes
 'I receive the one who comes tomorrow.'
- b. Ich empfangе den Mann, [der morgen kommt]
 I receive ART man ART morning comes
 'I receive the man who comes tomorrow.'
- (2) a. Ich lese (das), [was Sie empfehlen]
 I read ART what you recommend
 'I read what you recommend.'
- b. % Ich lese das Buch, [was Sie empfehlen]
 I read ART book what you recommend
 'I read the book which you recommend.'
- (3) a. Ich empfangе, [wer (auch) morgen kommt]
 I receive who (also) tomorrow comes
 'I receive who(ever) comes in tomorrow.'
- b. *Ich empfangе den Mann, [wer morgen kommt]
 I receive ART man who tomorrow comes
 'I receive the man who comes tomorrow.'

Part 3: Are nominalizations headless/free relatives?

Sneddon (1996) on Bahasa Indonesia

Bahasa Indonesia (Sneddon 1996:300)

- a. Mobil [yang di-beli Ali] berwarna biru.
 car NMZ PASS-buy Ali colored blue
 'The car which Ali bought is blue.'
- ↓
- b. ∅ [yang di-beli Ali] berwarna biru. "Headless/free RC?"
 NMZ PASS-buy Ali colored blue
 'The one Ali bought is blue.'

"Nominalization occurs when the head noun is ellipited ...The **yang** phrase then functions like a noun." (Sneddon 1996:300)

Deletion analysis of headless/free relatives:

Adams (1972) on Ancient Greek, Weber (1983) on Quechua, Huang (2008) on Qiang (2008), Wrona (2008) on Old Japanese, et cetera, et cetera, et cetera ∞.

Middle English

Middle English Dictionary (2000)

which: "[a]s an independent relative with indefinite or generalized force referring to a thing, an abstraction, et., introducing noun clauses"(492)

whō: "[a]s an independent relative referring to a person or persons used as subj. or pred. nom. introducing noun clauses" (538)

- a. And [which falleþ on þat furste flur] schal beo Quene.
 b. [Who aske this] Leseth his asking trewely.

Modern English

- a. Invite [who/whom you like]. (Huddleston and Pullum 2002:1076)
 b. After silence, [that which comes nearest to expressing the inexpressible] is music. (Aldous Huxley *Music at Night* 1931)

Functional specialization { *what(ever), whoever, ...* — Argument/Referring
who, which — Modification

Matisoff (1973) on Lahu nominalization particle *ve*

Overweighing this consideration [a deletion analysis] is the simple fact that an underlying Nrh [relative head nominal] is not at all necessary to explain how these sentences work. To interpret the *ve*-clauses as ordinary Nominalizations does not distort the meaning, and has the crucial advantage of avoiding multiplication of covert entities...Once we admit deleted Nrh's after some *ve*'s, consistency would demand that we stick them in after every post-verbal *ve*, even in the (very numerous) cases where the only semantically possible Nrh would be an empty one like *ɔ□-cə□* 'thing' or *ɔ□-b* 'matter'. (Matisoff 1973:484-485)

More compelling evidence against a deletion analysis

There are nominalizations (headless/free relatives) that do not modify a head nominal or that do not form a headed RC construction

Russian

- a. (tot,) [kto vymyl ruki], mozhjet nachatj jestj
(that) who washed hands can start eat
'The one who has washed his hands can start eating.'
- b. *Maljchik, [kto vymyl ruki], mozhjet nachatj jestj
boy who washed hands can start eating
'The boy who has washed his hands can start eating.'

German

- a. Ich empfange, [wer (auch) morgen kommt]
I receive who (also) tomorrow comes
'I receive who(ever) comes in tomorrow.'
- b. *Ich empfange den Mann, [wer morgen kommt]
I receive ART man who tomorrow comes
'I receive the man who comes tomorrow.'

Japanese

[Boku=ga tabeta] udon=wa umakatte keredo, [Taroo=ga tebeta]=no=wa
I=NOM ate noodle=TOP delicious though Taro=NOM ate=NMZ=TOP
mazu-katta rasii.
tasteless-PAST EVID
'Though the noodle soup I ate was delicious, the one that Taro ate seemed tasteless.'

Spanish

María está leyendo su libro y yo voy a leer
Maria is reading her book and I GO.1SG to read.INF
lo [que Juan me dio].
ART that Juan me gave
'Maria is reading her book and I am going to read what Juan gave me.'



Pro?

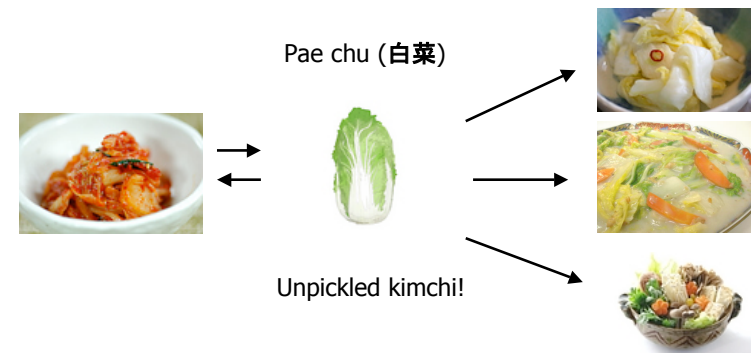
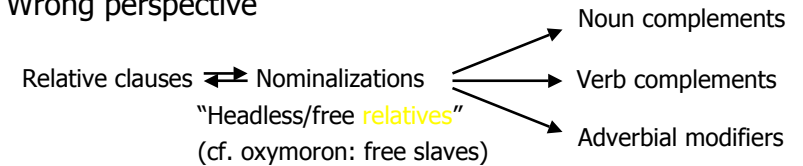
Japanese

- a. [Taroo=ga tabe-ta]=no=wa...
Taro=NOM eat-PAST=NMZ=TOP
'the one that Taro ate is...'
- b. [[Taroo=ga tabe-ta](=no) Pro]=wa...

Spanish

- a. lo [que Juan me dio]
ART that Juan me gave
'what Juan gave me'
- b. lo [Pro [que Juan me dio]

Wrong perspective



What is nominalization?

Creation of a referring (nominal) expression, which refers to an entity pertaining to a particular person/object/property/event.

1. A state of affairs characterized by an event denoted by the clause (event nominalization—may not have a gap)
[Taroo=ga konakatta]=no=wa zannen datta. (Japanese)
Taro=NOM come.NEG.PAST=NMZ=TOP sorry COP.PAST
'That Taro didn't come was too bad.'
2. An entity characterized in terms of the denoted event in which it has crucial relevance (argument nominalization—gap)
[Ø konakatta]=no=wa Taroo da.
come.NEG.PAST=NMZ=TOP Taro COP
'The one who didn't come is Taro.'
3. An entity having crucial relevance to the referent of a noun ("genitive" nominalization—no gap)
Taroo=no hon gengogaku=no hon
Taro=NMZ book linguistics-NMZ book

Typically occur in the following four kinds of context

1. Relative clause construction, where the head noun identifies the entity
[Taroo=ga katta] hon 'the book which Taro bought'
2. Cleft-sentences
[Taroo=ga katta]=no=wa hon desu.
'What Taro bought is a book.'
3. Cleft-type questions
[Taroo=ga katta]=no=wa nani desu=ka
'What is it that Taro bought?'
4. Where the identity of the referred entity is clear from the context
Kore=ga boku=no hon de, are=ga anata=no desu.
'This is my book and that is yours.'
[sotti=no akai]=no=o kudasai.
'Give me that red one over there.'
Boku=mo [Taroo=no motte iru]=no=ga hosii.
'I also want what Taro has.'

Properties of (non-lexical) nominalized expressions

1. A particular object/object/event is presupposed.

[Taroo=ga Ø katta]no=wa kono hon da
Taro=NOM bought=NMZ=TOP this book COP
'What Taro bought is this book.'

[Taroo=ga Ø katta] hon (presuppositions carry over to RCs: evidence for
Taro=NOM bought book NMZ → REL)
'The book which Taro bought.'

2. While what is referred to may be specific, its **identity** is not known (to the hearer)—it **doesn't name** (or put a label on) the entity it refers to.

Lexical nouns: book, employer, etc.

Nominalizations: What John gave me, the one who employs John, etc.

(Lexicalization of nominalizations also occur: m-aquwas 'one who sings/singer' (Mayrinax Atyal); bir tanı-diğ-im 'one I know, an acquaintance of mine' (Turkish))

Are RCs really subordinated to the head nominal?

Apposition I saw John **the butcher** in the market.

I saw **a butcher** in the market.

Boku=wa [Taroo=ga kureta] hon=o yonde iru.
I=TOP Taro=NOM gave.me book=ACC read be
'I am reading a book which John gave me.'

Boku=wa [Taroo=ga kureta]=no=o yonde iru.
I=TOP Taro=NOM gave.me=NMZ=ACC read be
'I am reading what Taro gave me.'

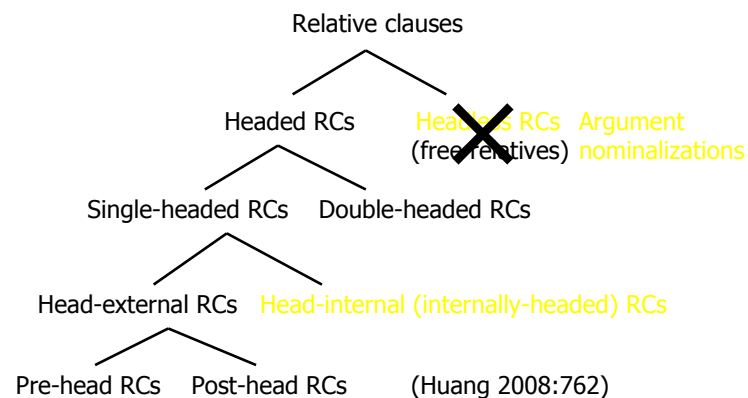
Chinese

a. nǐ méi yǒu [wǒ xǐhuān]=de chènshān
you not have I like=NMZ shirt
'You don't have a shirt that I like.'

b. nǐ méi yǒu [wǒ xǐhuān]=de
you not have I like=NMZ
'You don't have what I like.'

Issue #2 Typological classification of relative clauses

Headedness parameter (Lehmann 1986, Dryer 2007, Andrews 2007, etc.)



Are **these** really relative clauses?

Aren't we **wrong-headed** about them?

Head internal/Internally headed RCs?

Modern Japanese (Kuroda 1976:269, 270) (主内在関係節)

Taroo=wa [ringa=ga sara=no ue=ni atta]=no=o totte,
 Toro=TOP apple-NOM plate=GEN top=LOC existed=NMZ=ACC take.CON
 poketto=ni ireta
 pocket=to put.PAST
 'Taro picked up an apple which was on a plate and put it in a pocket.'

Cf. Externally headed RC

Taroo=wa [sara=no ue=ni atta] ringo=o totte,
 Taro=TOP plate=GEN top=LOC existed apple=ACC take.CON
 'Taro picked up an apple which was on a plate and...'

Double-headed RCs

Kombai (Irian Jaya, Western New Guinea; Dryer 2005:366)

a. [[doũ adiyano-no] doũ] deyalukhe
 sago give.ePL.NONFUT-CONN sago finished
 'The sago that they gave is finished.'

b. [[gana gu fali=kha] ro]
 bush.knife 2SG carry-go-2SG.NONFUT thing
 'the bush knife that you took away.'

Ronghong Qiang (Tibeto-Burman; Huang 2008:740)

[[zəp itətəimaqa zawa tshu-tshu] (-tə) zəp tha-kua]
 place usually rock drop-REDUP-GEN place that-CL
 'the place where rockslides often occur'

Japanese (correlative RC?)

[Taroo=ga ringo=o motte kita] sono ringo=o minnade tabeta
 Taro=NOM apple=ACC bring came that apple=ACC all ate
 'We all ate the apples, the apples that Taro brought.'

Head internal/Internally headed RCs?

Kuroda (1976) on Japanese internally-headed relatives

Syntactically **each of them [headed and head-internal relatives] is characterized as a relative clause** by the fact that (the referent of) **a noun phrase in it (the pivot) assumes double grammatical functions, one determined inside the relative clause and the other by the noun phrase position of the matrix sentence**, the position in which the relative clause is embedded. (274)

Modern Japanese (Kuroda 1976:269, 270)

Internally headed RC

a. Taroo=wa [ringa=ga sara=no ue=ni atta]=no=o totte,
 Toro=TOP apple-NOM plate=GEN top=LOC existed=NMZ=ACC take.CON
 poketto=ni ireta
 pocket=to put.PAST
 'Taro picked up an apple which was on a plate and put it in a pocket.'

Externally headed RC

b. Taroo=wa [sara=no ue=ni atta] ringo=o totte,
 Taro=TOP plate=GEN top=LOC existed apple=ACC take.CON
 'Taro picked up an apple which was on a plate and...'


Deletion analysis

Counter-Equi analysis by Harada (1973) (also see Weber 1983 on Quechua)

- (a) Keisatu=wa [doroboo=ga nigeru]=tokoro=o tukama-ta.
 police=TOP thief=NOM ran.away=PLACE=ACC catch=PAST
 'The police caught the thief as he ran away.'
- (b) Doroboo=wa [nigeru]=tokoro=o keisatu=ni tukamae-rare-ta.
 thief=TOP run.away=PLACE=ACC police=by catch-PASS-PAST
 'The thief was caught by the police as he ran away.'


[Keisatu=wa doroboo_i=o [doroboo_i=ga nigeru]=tokoro=o tukamaeta]
 ↓ Counter Equi-NP Deletion
 Keisatu=wa ∅ [doroboo=ga nigeru]=tokoro=o tukamaeta

Problems of coreference in RC constructions



花子が玉ねぎをきざんだ。

[花子が ∅_i きざんだ] 玉ねぎ_i {は、白くてまん丸かった。
 を中火で丁寧に炒めた。



Argument nominalization

「花子がきざんだ」の {は、白くてまん丸い玉ねぎだった。
 を中火で丁寧に炒めた。

“Evocative” nominalization

黒田 (1999: 49)

1. ...[[...NP_i...]]_S Pro_i]_{NP}...
 2. ...[[...NP_i...]] [e]_{NP}]_{NP}...
 ...[[...t_i...]]_S NP_i]_{NP}... (LF)
- Θ-role assignment
 ↓
3. ...[[...NP...no]_S]_N...V... (Kuroda)

So-called internally headed relatives are evocative nominalizations

[花子がリンゴを買ってきてくれた]のをみんなで食べた。

[花子が木からぶらさがっているリンゴをもぎ取ってきてくれた]のを
 みんなで食べた。

≠ (僕らは) みんなで木からぶら下がっているリンゴを食べた。

[花子がトリ肉を料理した]のがテーブルの上のっている。





[おばあちゃんが**ジャガイモ**をスジ肉と煮込んでくれた]のを食べた。

Cf. 「おばあちゃんがスジ肉と煮込んでくれた」**ジャガイモ**を食べた。

[花子が**リンゴ**を絞ってくれた]のを一息にのんだ。



[**ウサギ**の皮を剥いだ]のが店頭にぶら下がっていた。

主部内在関係節 (黒田1999:67)

[警官が[[**暴漢**がおそいかかってきたのを]_S逆に組み伏せてしまった]_V]_{VP}

次郎長は[**黒駒親分**が子分を引き連れて殴りこんできた]のを**全員**
たたきのめしてしまった。

Cf. *次郎長は、[子分を引き連れて殴りこんできた]**黒駒親分**を**全員**
たたきのめしてしまった。



状態変化型関係節

おたまじゃくしがかえるになったのが庭を跳ねている。

「状態変化型関係節は主部内在関係節と同じ外観をもちながら主部内在関係説に関する記述状の通則に従わず、そのため、通則の反証と取られかねない擬似反例を提供する。状態変化関係節は主部内在関係節でないということが周知であれば、擬似反例は通則の証例と対比されて、かえって通則の傍証と化するのであるから、状態変化関係節は閉関係節の特殊なものであることを示すことは、主部内在関係節の分析・理解にも有益なことであるが、本稿では状態変化型関係節の仔細には立ち入らない。」(黒田1999:32)

Kuroda's relevancy condition

- (a) Taroo=wa [Hanako=ga ringo=o sara=no ue=ni oita] no=o totte...
'Taro picked up an apple which Hanaka had (just) put on a plate.'
- (b) #Taroo=wa [Hanako=ga **kinoo** ringo=o sara no ue=ni oita] no=o totte...
'Taro picked up an apple which Hanako had put on a plate yesterday.'
(Kuroda 1976:271)
- (c) Cf. the headed version
Taroo=wa [Hanako=ga **kinoo** sara=no ue=ni oita] **ringo**=o totte...

THE RELEVANCY CONDITION: For a headless relative clause to be acceptable, it is necessary that it be interpreted pragmatically in such a way as to be directly relevant to the pragmatic content of its matrix clause. (Kuroda 1976:270)

Why such a condition on "internally headed relatives" if they are syntactically well-defined constructions?

Evocative nominalizations with a head

[太郎が戸をたたく]音

[太郎が戸をこっそりたたく]のを聞いた。

[秋がしのび寄る]気配

[秋がしのび寄る]のが感じられる。

[魚が焼ける]におい

[魚が焼ける]のがにおう。

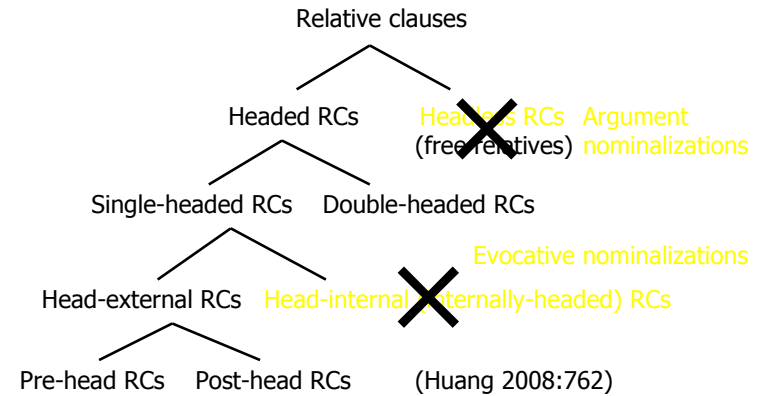
Evocative nominalizations in other languages?

Quechua

- a. [Maria(-q) wayk'u-sqa-n] waλpa-ta mikhu-sayku
 Maria(-GEN) cook-NMZ-3 chicken-ACC eat-PROG.1PL.EXCL
 'We are eating the chicken which Maria cooked.'
 - b. [Maria(-q) wayk'u-sqa-n]-ta mikhu-sayku
 Maria(-GEN) cook-NMZ-3-ACC eat-PROG.1PL.EXCL
 'We are eating what Maria cooked.'
 - c. [Maria(-q) waλpa-ta wayk'u-sqa-n]-ta mikhu-sayku
 Maria(-GEN) chicken-ACC cook-NMZ-3-ACC eat-PROG.1PL.EXCL
 Lit. 'We are eating what Maria cooked the chicken.'
 - e. [Maria(-q) laranjas-ta ch'irwa-sqa-n]-ta ujanya
 Maria(-GEN) oranges-ACC squeeze-NMZ-3-ACC drink.1SG
 Lit. 'I drank the oranges that Maria squeezed.'
- Cf. **laranjas-ta ujanya*
 oranges-ACC drink.1SG
 'I drank oranges.'

Issue #2 Typological classification of relative clauses

Headedness parameter (Lehmann 1986, Dryer 2007, Andrews 2007, etc.)



Are these really relative clauses?

Aren't we wrong-headed about them?

Correlations of Evocatives and V-finality and Zero pronouns (Cole 1987)

[Hanako=ga ringo=o motte kite kureta] □ o tabeta

John ate □ [Hanako brought apples]

What is evoked must be available in the head position.

Evocatives as zero pronouns

きのう太郎がやってきてね、~~o~~ こんなものくれたのよ。

もし太郎がガールフレンドを連れてくるなら、~~o~~/~~o~~ 会いたいわ。

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