Relative clauses

*(based on material by Manfred Krifka)*
What are relative clauses?

- Relative clauses (RC) serve to modify a nominal expression
  - *Peter read [the book]*
  - *Peter read [the book that Paula bought]*
  Meaning of *book* is restricted by the property to be bought by Paula

- Two perspective:
  - External perspective
    How is RC related to expression that is modified
    e.g. German: gender agreement, right adjacency
    *das Buch [das Paula gekauft hatte]*
  - Internal perspective:
    How is role of the modified expression within the RC expressed?
    e.g. German: movement to clause initial position + gap
    *[das Paula __ gekauft hatte]*
Restrictive and non-restrictive RCs

- two basic functions of RCs
  - restrictive RCS
    restrict the set of objects within the extension of a noun
    *We will reward every boy [who does his homework].*
  - non-restrictive (appositive) RCS
    add background information about extension of modified noun without restricting it
    *Yesterday I met Bill, [who had just returned from a journey]*
Restrictive and non-restrictive RCs

- different syntactic integration into main clause
  - restrictive:  
    \[Peter \text{ mentioned } [_{dp} \text{ the } [_{np} \text{ book } [\text{which/that he knew}]]]\]
  
  - non-restrictive:  
    \[Peter \text{ mentioned } [_{dp} [_{dp} \text{ the book } ] [\text{which he knew}]]\]

- therefore
  - proper nouns can only be combined with non-restrictive RCs
  - only restrictive RCs can appear within quantified DPS

(see examples on previous slide)
Restrictive and non-restrictive RCs

- systematic syntactic distinctions between restrictive and non-restrictive RCs
  - English: *that* only with restr. RCs, comma only with non-restr. RCS
    
    *Peter read the book that Paula had recommended.*
    
    *Peter read the book, which Paula had recommended.*
  
  - Persian: -*i* as marker on the modified noun
    
    *Mardha-i [ke ketabhara be anha dade budid] ratand Men-SUB which books to them given have went* 'the men to whom you gave the book have gone'

    *Mo'allef [ke nevisandeye xubi-st] in sabkra exteyar karde ast author this writer good-is this style chosen has* 'the author, who is a good writer, chose this style'
RCs, internal perspective

- The entity which the head of the RCs refers to is picked up again within the RC
  - *Peter read the book [that Mary gave him]*
  - *Peter read a book x* & *Mary gave him x*

- Function of RC:
  - variable x has a role within the RC
  - it also has a role within the matrix clause

- first function is marked in various ways across languages:
  - relative pronouns
  - subordinator
  - gaps or resumptive pronouns
  - head of RCs occurs within RC
Strategies of RC formation: relative pronouns

- relative pronouns: the variable within the relative clause is realized as a clause-initial pronoun
  *Peter read the book [which Mary gave him]*

- relative pronoun indicates case, number, gender
  *Peter las den Roman, den Paul ihm ___ empfohlen hatte*
  *Peter las den Roman, der ___ von Paul gelobt wurde*
  *Peter traf den Jungen, dem Paul ___ ein Eis geschenkt hatte*
  *Peter traf den Jungen, auf den Paul ihn ___ aufmerksam gemacht hatte*
Strategies of RC formation: relative pronouns

- (language-specific) constraints on how deeply the relative pronoun is embedded

Russian: matrix objects can be relativized, but not embedded objects

 девушка, [которую я люблю]  
girl who-ACC I love  
'the girl that I love'

*девушка, [которую ты думаешь, что я люблю]  
girl who-ACC you think that I love  
'the girl that you think that I love'
Strategies of RC formation: relative pronouns

- (language-specific) constraints on how deeply the relative pronoun is embedded

English:
embedded objects are easier to relativize than embedded subjects

the girl [that you think (that) I love ]
the girl [that you think (*that) loves me ]

Hungarian:
(with some inter-speaker variation) embedded objects can be relativized, but not embedded subjects

a penz, [amit mondtam, hogy a fiu elvett]
the money which-ACC I-said that the boy took-away
'the money that I said that the boy took away'
*a fiu, [aki mondtam, hogy elvette a pentz]
the boy who I-said that took-away the money-ACC
'the boy that I said took away the money'
Strategies of RC formation: subordinators

- subordinators only indicate that the RC is subordinate to the head

examples:

- English *that*, carrying neither case nor number or gender
- German participial constructions, where agreement with the head noun indicates subordination
  
  Peter las [das [ [ __ ihm von Maria gestern empfohlen]-e] Buch]
  Peter sah [einen [ [ __ mit dem Hund um die Wette laufend]-en] Menschen]

Gap corresponds to subject role of participial construction
Strategies of RC formation: subordinators

- Turkish:
  non-finite participial construction, formed with nominalization suffix -dig:
  \[\text{Hasan-in Sinan-a ver-dig-i} \ patates-i yed-im\]
  Hasan of Sinan to give his potato-ACC I-ate
  'I ate the potato that Hasan gave to Sinan'

- Basque:
  finite participial construction, marked by subordinator -n
  \[\text{Gizona-k emakunmea-ri liburua eman dio}\]
  man-ERG woman-DAT book has-given
  'The man has given the book to the woman.'

  \[\text{emakumea-ri liburua eman dio-n} \ gizona\]
  'the man who has given the book to the woman'

  \[\text{gizona-k emakumea-ri eman dio-n} \ liburua\]
  'the book which the man has given to the woman'

  \[\text{gizona-k liburua eman dio-n} \ emakumea\]
  'the woman to whom the man has given the book'
Strategies of RC formation: no marking

- English reduced relatives
  
  the man [Bill introduced Ben to _ ]
  the man [Bill introduced _ to Bob ]

  no relative pronoun
  no subordinator
  gap inside relative clause
Strategies of RC formation: marking of variable within RC

- How is the variable within the RC identified?
  - relative pronoun strategy:
    *der Roman, den [der Mann der Frau gegeben hat]*
    *den*: accusative, i.e. head of RC fills accusative argument role of RC
  - subordinator strategy 1:
    *der [von Paul empfohlen-e] Roman*
    head always fills subject role of RC
  - subordinator strategy 2:
    *the novel [that Paul recommended]*
    direct object within RC is missing, thus head fills this role

- These strategies are complex and frequently lead to ambiguities:
  *the model that the artist helped to paint*
Strategies of RC formation: marking of variable within RC

- Some languages mark variable within RC with **resumptive pronoun**

- Sometimes possible in English too:
  *This is the road which I don't know it.
  This is the road which I don't know where it leads.*

- In many languages this strategy is standardly used

- Persian, relativization of non-subjects:
  *Mard-i [ke (*u) bolandqadd bud] juje-ra kost*
  man that he tall was chicken-ACC killed
  'The man that was tall killed the chicken.'

  *Hasan mari-i-ra [ke zan (u -ra) zad] misenasad.*
  Hasan man-ACC that woman he-ACC hit knows
  'Hasan knows the man thet the woman hit.'

  *Man zan-i-ra [ke Hasan be u sibe zaminı dad] misenısam.*
  I woman-ACC that Hasan to her potato gave I-know
  'I know the woman to whom Hasan gave the potato.'
Strategies of RC formation:
marking of variable within RC

- Head-internal relative clauses
- head noun appears in its canonical position within the RC; the RC as a whole functions as DP within the matrix clause
- example: Bambara:
  marking of head by *min*

*N ye so ye.*
I PAST house the see.
'I saw the house.'

*Tye be [n ye so *min* ye] dyo.*
man PRESENT I PAST house REL see build
'The man is building the house that I saw.'
Strategies of RC formation: marking of variable within RC

- example: Maricopa (Arizona):

  aany=lyvii=m ['iipaa ny-kw-tshqm-sh] shmaa-m
  yesterday man 1-rel-slap.dist-subj sleep-real
  ‘The man who beat me yesterday is asleep.’
Strategies of RC formation: marking of variable within RC

- Some languages repeat the head noun
- it occurs both within and outside the RC
- example: Piraha (South America)

\[ \text{boitóhoi bog-ái-hiab-i-s-aoaxái boitó báosa xig-i-sai (hix)} \]
\[ \text{boat come-atelic-neg-epenth-?-inter boat barge bring-epenth-nmlz (comp/inter)} \]

‘Might it be that the boat (which) tows barges is not coming?’
Strategies for subject relativization

- WALS map
Strategies for oblique relativization

- WALS map
The Accessibility Hierarchy

- In many languages, relativization is restricted to certain syntactic positions
- restriction to subject:
  German participial constructions

  *der [dem Kind ein Bild zeigende] Mann
  *das [von dem Mann dem Kind gezeigte] Bild

Malagasy (VOS language, Madagascar)

*Nahita ny vehivavy ny mpianatra*

saw the woman the student
'The student saw the woman.'

*ny mpianatra [izay nahita ny vehivavy]*
the student that saw the woman
'the student who saw the woman' / *the student who the woman saw...*
The Accessibility Hierarchy

- other meanings are expressed using diathesis

*Nividy ny vary ho an'ny ankizy ny vehivavy.*
bought the rice for the children the woman
'The woman bought the rice for the children.'

*Novidin' ny vehivavy ho an'ny ankizy ny vary*
was-bought the woman for the children the rice
'The rice was bought for the children by the woman.'

*Nividianan' ny vehivavy ny vary ny ankizy.*
was-bought-for the woman the rice the children
'The children were bought the rice by the woman.'

*ny var [izay novidin'ny vehivavy ho an'ny ankizy]*
'the rice that was bought for the children by the woman.'

*ny ankizy [izay nividianan'ny vehivavy ny vary]*
'the children who were bought rice by the woman'
The Accessibility Hierarchy

- general hierarchy:
  
  subject > direct object > indirect object > posessor

- universal generalization:

  If a language admits relativization of a position within the hierarchy, it admits relativization of all positions to the left of it.

  (There are a few known exceptions; some West-Austronesian languages admit relativization of subject and possessor, but not of objects.)
The Accessibility Hierarchy

- examples:
  - only subject-relativization:
    Malagasy, German participial constructions (see above)
  - only subject and object:

    Kinyarwanda:

    *N-a -bonye umugabo [w -a -kubise abagore].*
    I PAST see man RELATIVE PAST strike woman
    'I saw the man who struck the women.'

    *Nabonye abagore [Yohani yakubise]:*
    I-saw woman John he-struck
    'I saw the woman taht John struck.

    **not possible to relativize the instrument in**
    *Yohani yanditse ibaruwa n -ikaramu.*
    John wrote letter with pen
    'John wrote the letter with the pen.'