Languages of the World

Case marking

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Semantic roles

- Verb describe event types

- Arguments and adjuncts denote participants of the event described by the verb

- **Semantic role**

  - type of relationship between event and participant

  - invariant across verbs and languages

Semantic roles

- Agent

  The cook has diced the carrots.

- Benefactive

  *The chapter has been written for **Lindsay***

- Comitative

  *I always go to the store with **my dog.***

- Experiencer

  ***Freud** feared his mother.*

- Goal

  *Ann arrived at **the store** to buy shoes.*

- Instrumental

  *Blake is walking with **a cane.***

- Locative

  *Elvis lived at **Graceland**.*

- Patient

  *George chopped down **the cherry tree**.*

- Purposive

  *The pauper washed dishes **for his supper**.*

- Recipient

  *Ivana will donate her diamonds to **the Church**.*

- Source

  *Whitney entered from **the rear of the stage**.*

- Temporal

  *Father John left the church **at noon.***

- Theme

  *The Unabomber threatened to send **a package** to LAX.*

Grammatical relations

- functional roles in clauses, such as *subject* or *object*

- characterized by a cluster of morphological and syntactic features

- each subsumes several semantic roles

- much cross-linguistic variation regarding marking and semantic content

Grammatical relations

- universally, languages have three grammatical roles that are realized as arguments

- English:

  - subject
    The man *gave Bill a ticket.*

  - direct object
    *The man gave Bill **a ticket**.*

  - indirect object
    *The man gave **Bill** a ticket.*

Grammatical relations

- inventory differs between languages

German

Der Junge   ist   dreckig.
the boy.NOM   is   dirty
'The boy is dirty.'

Der Junge   wirft   einen Stein.
DEF boy.NOM   throw   a.ACC stone
'The boy is throwing a stone.'

Kalkatungu (Australia)

Kaun   muu-yan-ati
dress.ABS   dirt-PROP-INCH
'The dress is dirty.'

Kuntu   wampa-ngku kaun   muu-yan-puni-mi.
not   girl-ERG   dress.ABS   dirty-PROP-CAUS-FUT
'The girl will not dirty the dress.'

Marking of grammatical relations

- Three ways to code grammatical relations:

  - **word order**
    The stone hits   the bucket.
    subject   object

  - **case**
    Der Stein trifft   den Eimer.
    NOM->subject   ACC->object

  - **agreement**: Kinyarwanda
    umugabo   y-ataaye   umwaana   mu   maazi
    C1.man   C1-threw   child   in   water
    'The man has thrown the child into the water.'

Case an agreement hierarchies

- number of cases as well as number of cross-referenced arguments varies wildly between languages

- WALS on number of cases

- WALS on agreement systems

- case hierarchy:
  subject > direct object > indirect object > other

- agreement hierarchy
  other > indirect object > direct object > subject

Universal syntactic-semantic primitives

- three universal core roles

- more general than semantic roles but more specific than grammatical relations

- cross-linguistically invariant

S - intransitive subject
A - transitive subject
O - transitive object

S, A and O

German

Der Junge   ist   dreckig.
the boy.NOM   is   dirty
'The boy is dirty.'

Der Junge   wirft   einen Stein.
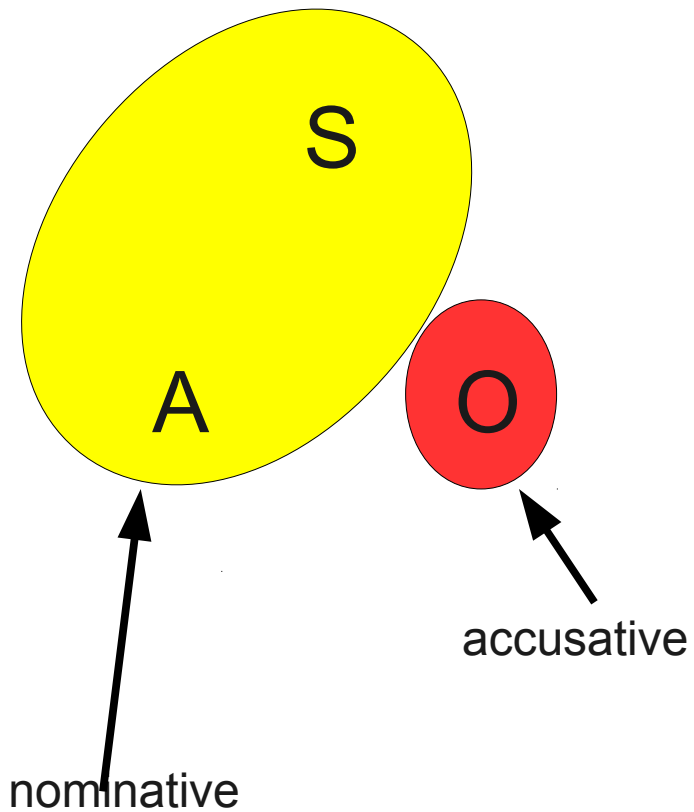DEF boy.NOM   throw   a.ACC stone
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Kalkatungu (Australia)

Kaun   muu-yan-ati
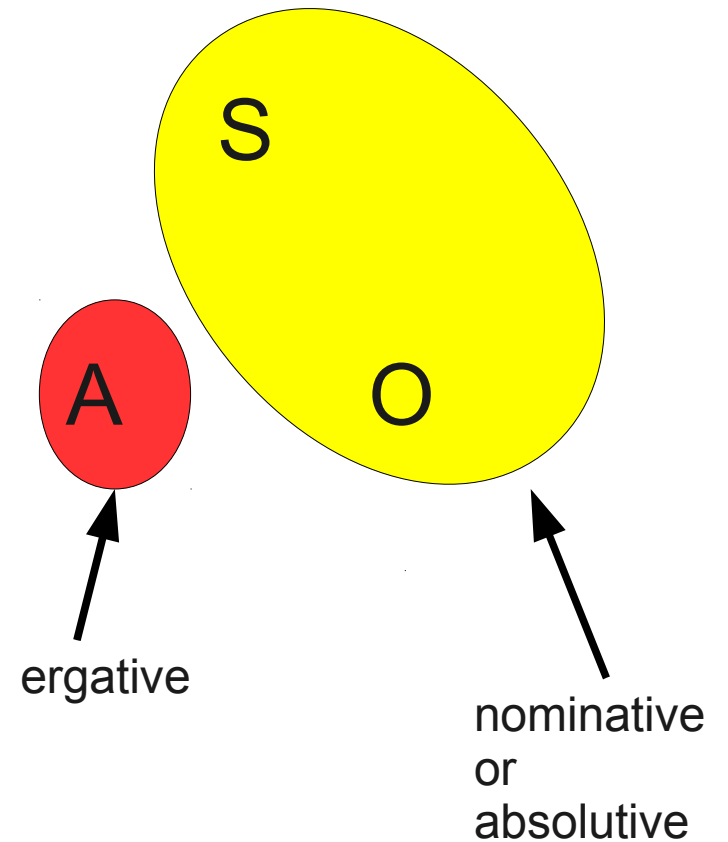dress.ABS   dirt-PROP-INCH
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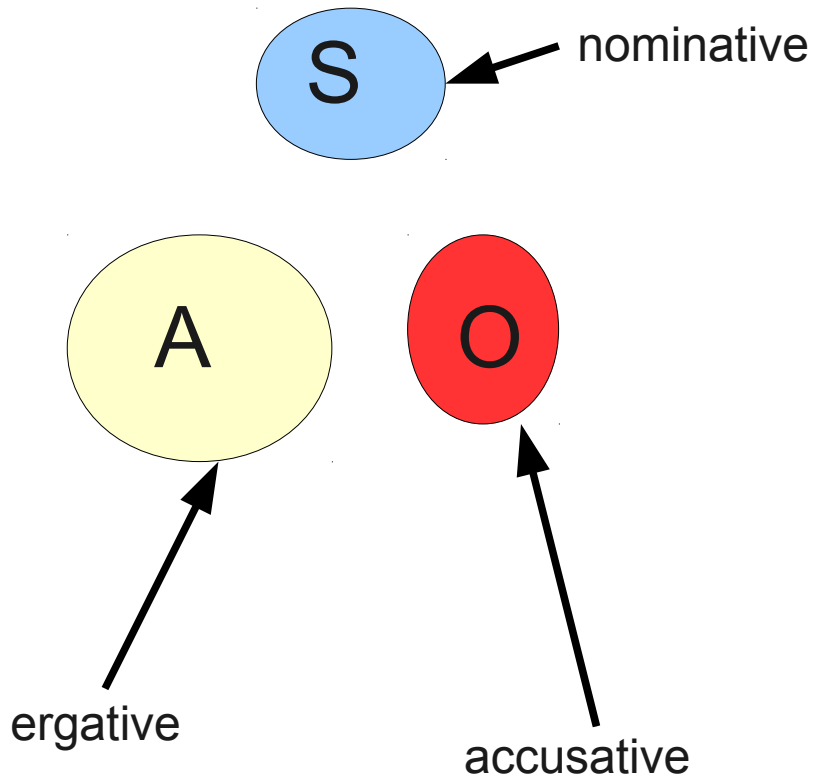'The girl will not dirty the dress.'

S
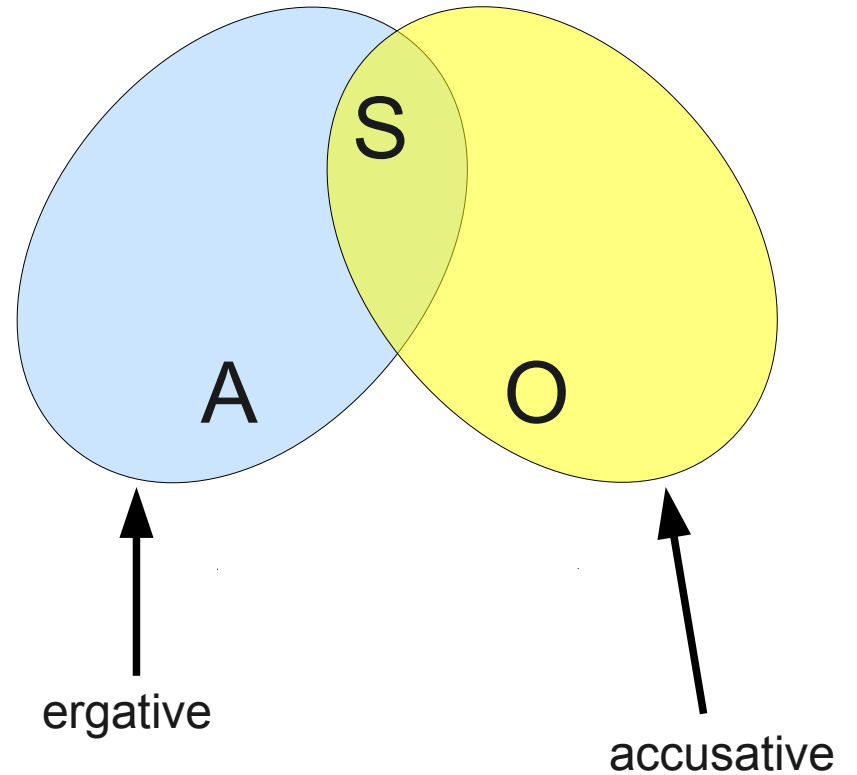A
O
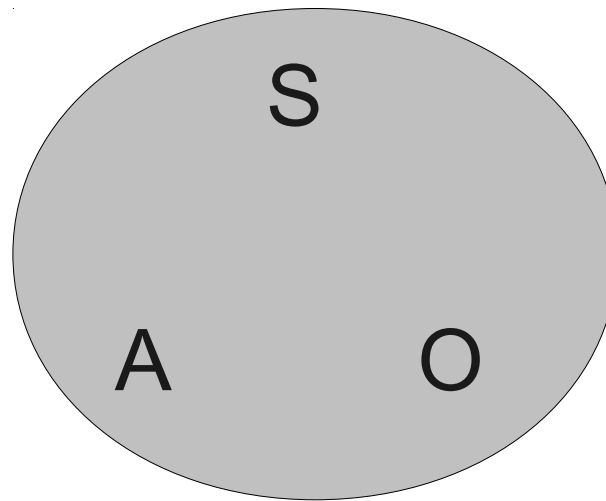
Alignment systems

Accusative system

Ergative system

Alignment systems

Tripartite system

Active system (split intransitivity)

Alignment systems

Neutral system

S

A   O

Accusative systems

- **German**

Der Förster   fällte   den Baum.
the.NOM woodman   cut-down the.ACC tree
'The woodman cut the tree down.'

Der Förster sägt
the.NOM woodman saws 'The woodman saws.'

Der Baum fällt.
the.NOM tree falls. 'The tree falls.'

Accusative systems

- **Latin**

Puer puellam vidit.
boy.NOM girl.ACC saw 'The boy saw the girl.'

Puer venit.
boy.NOM came 'The boy came.'

Puer cecedit.
boy.NOM fell 'The boy fell.'

Accusative systems

- **Quechua**

Juan aywa-n.
Juan go-3S   'Juan goes.'

Juan maqa-ma-n.
Juan hit-1S-3S   'Juan hit me.'

Juan Petro-ta maqa-n
Juan Petro-ACC hit-3S

Ergative systems

- **Dyirbal** (Australia)

ŋuma yabu-ŋgu bura-n
father mother.ERG see-NONFUT
'The mother saw the father.'

ŋuma banaga-nu
father returns-NONFUT
'The father returned'

Ergative systems

- **Avar** (Caucasian)

W-as w-ekér-ula
MSC-child MSC-run-PRES
'The boy runs.'

Inssu-cca j-as j-écc-ula
father-ERG FEM-child FEM-praise-PRES
'The father praises the girl.'

Tripartite systems

- **Wangkumara** (Australia)

  Kana-ulu kalkana titi-nana.
  man-ERG hit dog-ACC(FEM)
  'The man hit the bitch.'

  Kana-ia paluna.
  man-NOM died
  'The man died.'

Tripartite systems

- **Marathi** (ie., India)

Sudhā zhoplā
Sudha sleep.PAST.3SG
'Sudha slept.'

Madhu-ne Sudhā-lā parwā bādzārāt pāhila.
Madhu-ERG Sudha-ACC yesterday marketplace.LOC
see.PAST.3SG
'Madhu saw Sudha on the marketplace yesterday.'

Active systems

- in active systems, the S in intransitive clauses is marked with ergative or accusative, depending on its semantic role

- **Manipuri** (Tibeto-Burman, Northern India)

əy-nə mabu phuy.
I-ERG he beat   'I beat him.'

əy-nə celli
I-ERG ran   'I ran.'

əy sawwi
I became-furious   'I became furious.'

Active systems

- **Eastern Pomo** (Kokan: USA)

Yá:su:la wí ko:kʰóya.
rattlesnake.ERG 1S.ACC bit   'A rattlesnake bit me.'

Há: mí:pal śá:Ḱa.
1s.ERG him.ACC killed   'I killed him.'

Wí qa:lálma.
1S.ACC sick   'I got sick.

Há: xá:qákki.
1S.ERG bath   'I bathed.'

Active systems

- **Eastern Pomo** (cont.)

Wí će:xélka
1S.ACC slip   'I am slipping (accidentally).'

Há: će:xélka
1S.ERG slip   'I am sliding (deliberately).'

Neutral systems

- **Mandarin**

  rén lái le.
  person come CRS
  'The person has come.'

  zhāngsān mà lǐsì le ma.
  Zhangsan scold Lisi CRS Q
  'Did Zhangsan scold Lisi?'

Hierarchical systems

- **Mixe** (Penutian: Mexico)

Tə paat ha həyuhk t-wopy
PST Peter ART animal 3-hit   'Peter hit the animal'

Tə paat ha hɔɔʔy t-wopy
PST Peter ART person 3-hit   'Peter hit the man'

Tə mehc ha hɔɔʔy s-wopy
PST you ART person 2-hit   'You hit this person'

Tə əhc ha hɔɔʔy n-wopy
PST I ART person 1-hit   'I hit the person'

Tə əhc mehc n-coky
PST I you 1-want   'I wanted you'

Hierarchical systems

- **Mixe** (Penutian: Mexico)

Tə paat ha həyuhk w-[y]opy-ə
PST Peter ART animal 3-hit   'The animal hit Peter'

Tə paat ha hɔɔʔy w-[y]opy-ə
PST Peter ART person 3-hit   'The man hit Peter'

Tə mehc ha hɔɔʔy m-wopy
PST you ART person 2-hit   'The person hit you'

Tə əhc ha hɔɔʔy š-wopy
PST I ART person 1-hit   'The person hit me'

Tə əhc mehc š-coky
PST I you 1-want   'You want me'

Hierarchical systems

- In hierarchical systems, arguments are ranked according to a scale (usually based on animacy):

  1st/2nd person > pronoun > proper noun > human > animal > inanimate

- the higher ranking of {A, P} receives special treatment

- In Mixe:

  - agreement with highest ranking argument
  - special inverse marking on verb if P>A

Geographical distribution of marking systems

- case marking systems (full NPs)

- case marking systems (pronouns)

- agreement systems

- ergative systems are common:
  - Caucasian languages
  - Australic and Oceanic languages
  - Siberian languages
  - Maya languages, many South-American languges
  - not in Africa

Split systems

- many languages use hybrid systems
- geographical distribution

Split systems

- **English**

  - accusative case marking system for

    - 1st person pronouns

    - non-neuter 3rd person pronouns

  - neutral case marking system otherwise

    I walked./I met John./John met me.
    We walked./We met John./John met us.
    He walked./He met John./John met him
    She walked./She met John./John met her.
    They walked./They met John./John met them.
    It fell./It hit the surface./The stone smashed it.
    Mary walked./Mary met John./John met Mary.

Split systems

- **German**
  - Accusative case system for
    - personal pronouns 1st and 2nd person
    - masculine singular
  - Neutral system otherwise

Split systems

- **German**

  Ich sehe mich./ Ich lache.   Wir sehen uns./Wir lachen.
  Du siehst dich./ Du lachst.   Ihr seht euch./Ihr lacht.

  Er sieht ihn./ Er lacht.
  Sie sieht sie./Sie lacht.   Sie sehen sie./ Sie lachen.
  Es sieht es./ Es lacht.

  Der Mann sieht den Teller. Der Mann lacht.
  Die Frau sieht die Schüssel. Die Frau lacht.
  Das Kind sieht das Besteck. Das Kind lacht.

  Die Männer sehen die Teller. Die Männer lachen.

Split systems

- for a given sentence with a given meaning, only one case marking pattern is possible (in each language)
- in split systems, choice of system may be induced by
  - semantics of NP
  - tense/aspect/mood of verb

Split induced by semantics of NP

- **Turkish**
  - accusative system for definite/specific objects
  - neutral system otherwise

Ben kitab-i oku-du-m.
I book-ACC read-PAST-1SG
'I read the book'

Ben kitap oku-du-m.
I book read-PAST-1SG
'I was book-reading.'

Split induced by semantics of NP

- **Spanish**

  Pedro besó a Lucía.
  Pedro kissed to Lucia
  'Pedro kissed Lucia.'

  Pedro besó el retrato.
  Pedro kissed the picture
  'Pedro kissed the picture'

  - animate objects are marked with preposition 'a', inanimate objects aren't

  - in other words: neutral system for inanimates, accusative system for animates

Split induced by semantics of NP

- **Russian**

  - accusative system for animate masc. and neut., neutral system otherwise

    Misha uvidel dom/kot-a/brat-a
    Misha saw house/cat-CM/brother-CM

Split induced by semantics of NP

Split between accusative system and neutral
system is mostly called
Differential Object Marking (DOM).

Split induced by semantics of NP

- **Dyirbal** (Australia)
  - accusative system for 1st/2nd person pronouns
  - ergative system for 3rd person

Split induced by semantics of NP

- **Dyirbal**

ŋuma banaga-ɲu
father returned-PST   'Father returned.'

yabu ŋuma-ŋgu bura-n
mother father-ERG see-PST
'Father saw mother.'

ŋana banaga-ɲu
1P return-PST   'We returned.'

ɲura banaga-ɲu
2P return-PST   'You returned.'

ɲura ŋana-na bura-n
2P 1P-ACC see-PAST 'You saw us.'

ŋana ɲura-na bura-n
1P 2P-ACC see-PAST 'We saw you.'

Split induced by semantics of NP

- **Dyirbal**

  - same sentence may contain accusative and ergative

    yabu-ŋgu ɲurra-na bura-n
    mother-ERG you-ACC see-NONFUT
    'Mother saw you.'

Split induced by semantics of NP

- **Dyirbal**

Table 4.1. *Dyirbal*

	1st & 2nd person pronouns	3rd person pronouns	proper names	common nouns
A	-∅	-ŋgu	-ŋgu	-ŋgu
S	-∅	-∅	-∅	-∅
O	-na	-∅	-∅	-∅

(from Dixon 1994)

Split induced by semantics of NP

- **Cashinawa** (Panoan, Peru)

Table 4.2. *Cashinawa*

	1st and 2nd person pronouns	3rd person pronoun	proper names and common nouns
A	-∅	*habũ*	*nasalisation*
S	-∅	*habu*	-∅
O	*-a*	*haa*	-∅

Split induced by semantics of NP

- **Yidin^y** (North Queensland)

Table 4.3. *Yidin^v*

|					
A	∅	ERG	ERG	ERG	ERG
S	∅	∅	∅	∅	∅
O	ACC	ACC	(ACC)	∅	∅
	1st and 2nd person pronouns	human deictics, interrog.	inanimate deictics, proper names, kin terms	inanimate interrog.	common nouns and adjectives

General tendencies for NP based splits

definiteness hierarchy →

1. PERS	2. PERS	3. PERS	proper nouns	nouns

animacy hierarchy ↓

animate
inanimate

accusative   neutral or tripartite   ergative
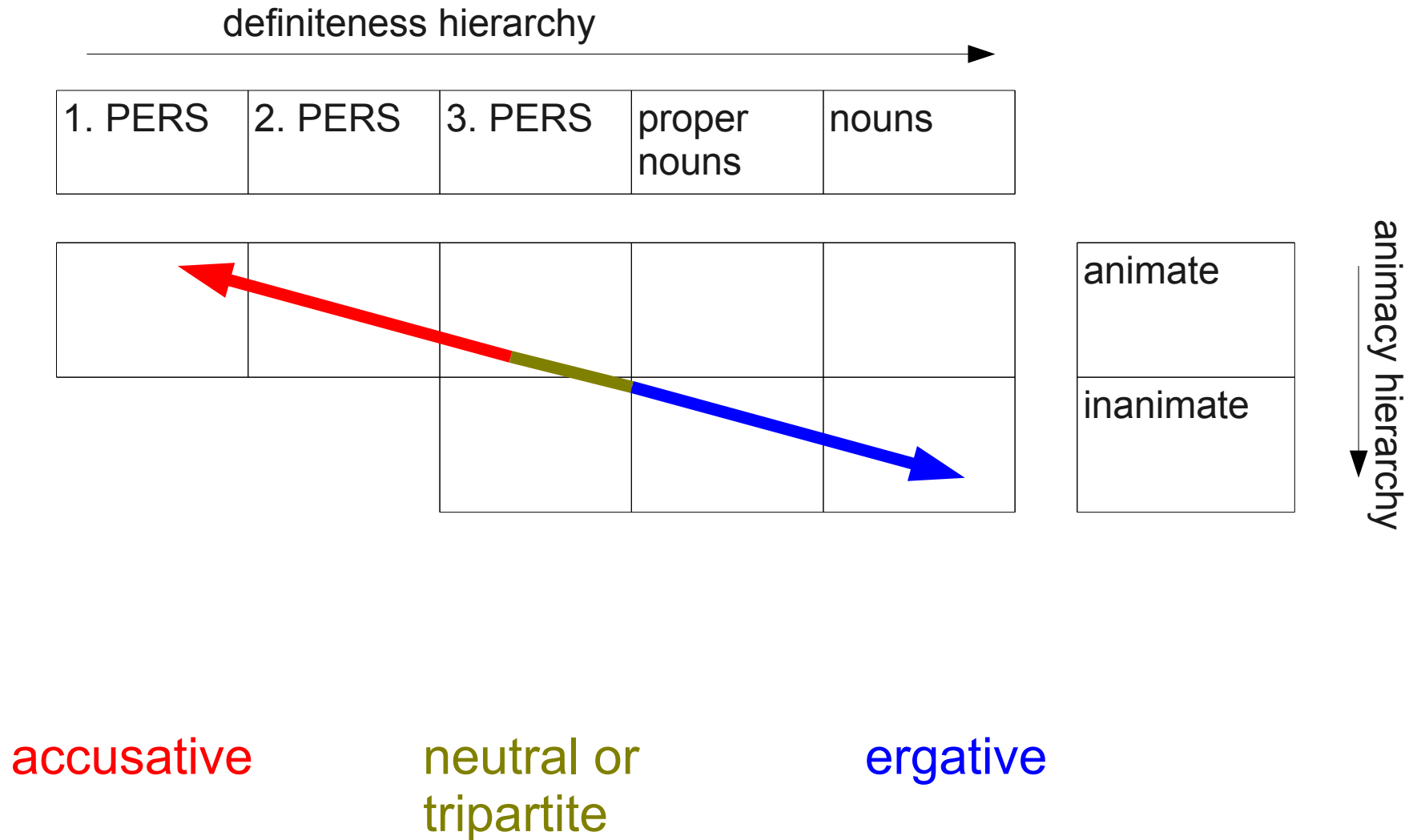
Functional explanation

- NPs which are high on the scales are likely to be Agents

- NPs at the lower end of the scales are likely to be Objects

- languages tend to mark unusual configurations (like pronominal objects or 3rd person agents)

- next slide: results of corpus study (CHRISTINE corpus of spoken English)

Functional explanation
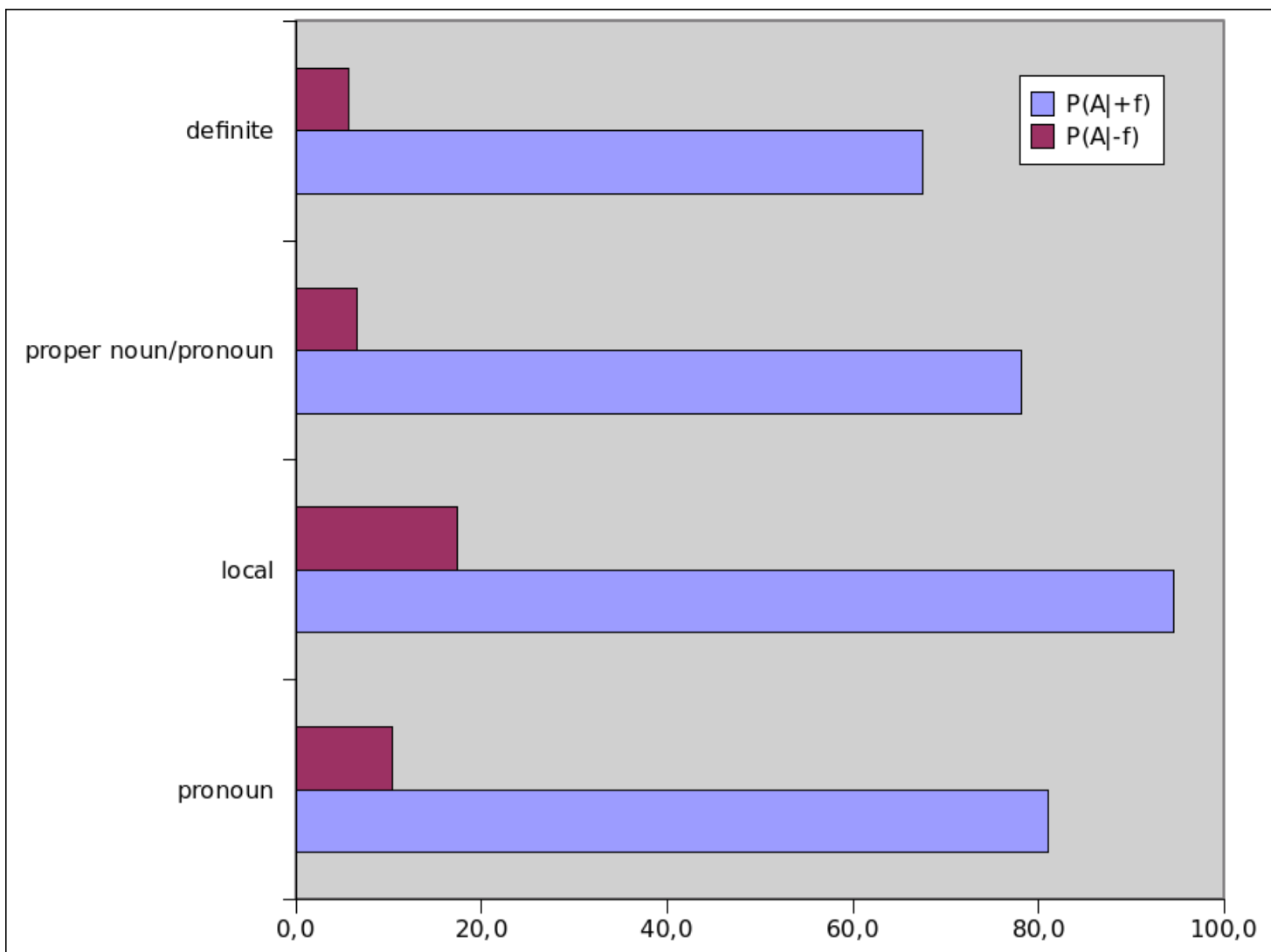
Split based on tense/aspect

- If a split is based on tense or aspect, the ergative pattern is always found either in the past tense or in the perfect aspect.

Split based on tense/aspect

- **Georgian**
  - accusative system in present tense, ergative system in perfect

Split based on tense/aspekt

- **Georgian**

Student-i midis.
student-NOM goes.PRES   'The student goes.'

Student-i ceril-s cers.
student-NOM letter-ACC writes.PRES
    'The student writes a letter.'

Student-i mivida.
student-NOM went.PERF 'The student went.'

Student-ma ceril-i dacera.
student-ERG letter-NOM wrote.PERF
    'The student wrote the letter.'

Split based on tense/aspect

- Hindi

  - ergative system for perfective aspect, otherwise accusative system

लड़का	किताब	ख़रीदता	है
laṛkā	kitāb	xarīdtā	hai
boy-Msg.NOM	book.Fsg.NOM	buy-IMPERFECTIVE-Msg	be.PRES.3sg [1]

"The boy buys a book."

लड़के-ने	किताब	ख़रीदी
laṛke-ne	kitāb	xarīdī
boy.Msg-ERG	book.Fsg.NOM	buy-PERFECTIVE.Fsg [1]

"The boy bought a book."