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Expression of Goal and Source in Burmese: Is there an asymmetry?

Alice Vittrant\textsuperscript{1}, Karl Seifen\textsuperscript{1}, Pierre-Antoine Champin\textsuperscript{2}

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Outline

1. Methodology and data
   a. SpOTy Project
   b. Burmese data

2. Burmese morphosyntactic devices used to express Goal and Source grounds

3. The Asymmetry hypothesis in Goal and Source expressions

4. Asymmetry in Burmese
1. Methodology and data

*SpOTy Project*

- Projet SpOTy (*Spatial Ontology and Typology*, Labex ASLAN, Université de Lyon, 2020-2024)

- Aim of the project:
  - Typology of Motion expression
  - Ontology of spatial relations (cross-connected network)
  - Web application: incremental database and SPARQL/Sparnatural query tool

- Database:
  - 67 languages (20 phyla)
  - Genetically, geographically, and typologically diverse
  - However: sample is not balanced
1. Methodology and data

Data collected

- For this presentation specifically:
  - Central Burma variety of Burmese
  - Collected in Yangon (Burma) between 2008 and 2010
  - Video stimulus *Trajectoire*, designed to elicit descriptions of motion events (Ishibashi et al. 2006, Vuillermet & Kopecka 2019), but also *Frog Story* (Mayer 1969) and narratives

---

*Trajectoire: Woman runs away from tree coming*

*Trajectoire: Woman exits cave ascends stairs going away*

*Frog Story*
Outline

1. Methodology and data

2. Burmese morphosyntactic devices used to express Goal and Source grounds
   a. About the Burmese language
   b. Spontaneous motion event in Burmese

3. The Asymmetry hypothesis in Goal and Source expressions

4. Asymmetry in Burmese
2. Burmese Morphosyntactic devices used to express Goal and Source grounds

About the Burmese language

- National language of Myanmar (Burma). Native language of 2/3 of the population (± 35 M)
- Phonological features (cf. MSEA languages): complex vowel system, tone system, restricted set of final consonants
- Tendency to monosyllabicity, non-inflectional language (analytic), widespread compounding
- Optionality (pragmatically-driven) of many grammatical categories (grammatical tense, personal marking...)
- (SO)V language, postpositions

(1) pyiN² pe³ laiʔ =me²
V_H: fix V_AUX:BENEF ASP:terminative=IRR

‘(I) will fix (it) for (you)....’
2. Burmese Morphosyntactic devices used to express Goal and Source grounds

About the Burmese language

- Grammatical features
  - ...
  - (SO)V language, postpositions
  - Serial verb constructions (SVC)

(2) ဒီမှာတွေမှာတွေနဲ့ပြော
    
    da.mya¹ -twe² ʔənaʔ =nɛ¹ piʔ  pye³ =tɛ²
    
    bandit -PL  gun =with shoot, throw run =REAL

  ‘The bandits shot with their guns and ran.’

- ‘Directional’ SVC ☐ includes at least one path verb

(3) ၀မီးလမ်းသည် ခြင်္သေ့ ရုပ်ရိုင်း: ၂မ်းငြာ [AA/08, 59_025]
    
    kaɔN²ma²le³  gu² tʰɛ³ =ka¹.ne² tʰweʔ  θwa³ =tɛ²
    
    young.woman  cave  interior =ABL go.out  go/CFG =REAL

  ‘A young lady goes out from the cave [away from the deictic center].’
2. Burmese Morphosyntactic devices used to express Goal and Source grounds

*Spontaneous motion event in Burmese*

- Spontaneous Motion: “Spontaneous motion refers to an event that semantically encode a figure (F) moving (path) from a ground (Source) to another ground (Goal) in a certain manner (manner/ caused)” (Talmy 1972:1, also 2000)

- Burmese Ground expression in spontaneous motion events:
  - Bare noun (*no post-positiion, no relator noun*)
  - Noun and postposition
  - Noun and relator noun
  - Noun and both relator noun and postposition
2. Burmese Morphosyntactic devices used to express Goal and Source grounds

Spontaneous motion event in Burmese

- Burmese postpositions:

<table>
<thead>
<tr>
<th>Table 1a: Burmese postpositions found in motion events</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Postpositions</strong></td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>မာစ</td>
</tr>
<tr>
<td>Goal</td>
</tr>
<tr>
<td>မ</td>
</tr>
<tr>
<td>Medial portion</td>
</tr>
</tbody>
</table>

(4) စိုးစားပြီးနောက်တော် နောက်စားသော် တိုင်းပြည်။ [TRAJAA_02]
piN²lε²-kaN³-ce²=ka¹gu²thε³=ko²wiN²θwa³=tε²
sea-shore-origin=ABL cave interior=ALL enter go=REAL
‘(She) went into the cave from the sea shore [away form the deictic center].’
2. Burmese Morphosyntactic devices used to express Goal and Source grounds

Spontaneous motion event in Burmese

- Burmese Relator Noun (RN):
  - Configurational information about the Ground, topological features
  - 9 RNs found in our data

<table>
<thead>
<tr>
<th>Relator nouns</th>
<th>Burmese</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ၸသ ၸသ</td>
<td>tʰɛ³</td>
<td>interior</td>
</tr>
<tr>
<td>ၸပ</td>
<td>po²</td>
<td>top</td>
</tr>
<tr>
<td>ၸပပ ပြေါ်</td>
<td>?aɔʔ</td>
<td>bottom</td>
</tr>
<tr>
<td>ၸပပ (ရင်ေး)</td>
<td>cʰe²(yiN³)</td>
<td>foot, origin</td>
</tr>
<tr>
<td>ၸဖ</td>
<td>shi²</td>
<td>place, in presence of</td>
</tr>
<tr>
<td>ၸဖ</td>
<td>be³</td>
<td>direction</td>
</tr>
<tr>
<td>ၸဖ</td>
<td>je¹</td>
<td>front</td>
</tr>
<tr>
<td>ၸဖ</td>
<td>saʔ</td>
<td>edge</td>
</tr>
<tr>
<td>ၸဖ</td>
<td>be³</td>
<td>side</td>
</tr>
</tbody>
</table>

Table 1b: Burmese Relator Nouns found in motion events
Outline

1. Methodology and data

2. Burmese morphosyntactic devices used to express Goal and Source grounds

3. The Asymmetry hypothesis in Goal and Source expressions
   a. Cognitive hypothesis
   b. Linguistic realization of the asymmetry

4. (A)symmetry in Burmese
3. The Asymmetry hypothesis between the expressions of Source and Goal and its linguistic realization

**Cognitive Hypothesis**

- Differences and similarities in verbalization between the starting point (Source) and the endpoint (Goal) when describing a path followed by a Figure
- The Goal is cognitively more prominent (more salient)
- The Goal is favored over the expression of the Source in the descriptions of motion events

3. The Asymmetry hypothesis between the expressions of Source and Goal and its linguistic realization

*Linguistic realization of the asymmetry*

**(A) Semantic Asymmetry**

- Conflation: tendency to encode Goal (allative) and Location (essive/locative) in the same morpheme. Conflation of Location and Source is rare.
  
  (Creissels 2008)

* Catalan: LOC-ALL conflation  
  
  (Creissels 2006: 20)  

  **(5)** a. Els hem trobat / enviat a la botiga  
  O3PL AUX.S1PL find / send LOC/ALL DEF.F.SG shop  
  ‘We found / sent them at / to the shop’

  b. Vénen de la botiga  
  come.S3PL ABL DEF.F.SG shop  
  ‘They are coming from the shop’
3. The Asymmetry hypothesis between the expressions of Source and Goal and its linguistic realization

*Linguistic realization of the asymmetry*

**(A) Semantic Asymmetry**

- Greater semantic granularity: more morphemes for Goal-encoding than Source-encoding. (Bourdin 1997:190)

<table>
<thead>
<tr>
<th># of forms</th>
<th>Forms</th>
<th>Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>ยัง jaŋ / สู่ sù / ถึง tʰɯ̌ŋ / หา hǎː / ทาง tʰaːŋ / จนถึง con.tʰɯ̌ŋ</td>
<td>Allative, different meaning (to, up to, towards) and uses (places, objects, people)</td>
</tr>
<tr>
<td>2</td>
<td>จาก càːk / แต่ tɛː</td>
<td>Source</td>
</tr>
</tbody>
</table>

*Table 2: Motion-encoding prepositions in Central Thai*
3. The Asymmetry hypothesis between the expressions of Source and Goal and its linguistic realization

Linguistic realization of the asymmetry

- Goals markers are morphologically less complex
  (Kopecka & Vuillermet 2021:10)

French: complexity of Source markers
(Creissels 2006: 22)

(6)  
(a. Je vais chez mon oncle
     S1SG go AT.HOME.OF my uncle
  ‘I am going to my uncle’s.’

(b. Je viens de chez mon oncle
     S1SG come ABL AT.HOME.OF my uncle
  ‘I am coming from my uncle’s.’

(B) Morphosyntactic asymmetry
3. The Asymmetry hypothesis between the expressions of Source and Goal and its linguistic realization

*Linguistic realization of the asymmetry*

- Encoding of Goal is more straightforward: Goal markers may be optional
  (Bourdin 1997: 187, Ikegami 1987)

*B(B)Morphosyntactic asymmetry*

*Stieng (Austro-Asiatic, Cambodia):* (7)  
*optionality of the Goal preposition*  
*(Bon 2014:551)*

a. sədianŋ lap  di  ga:h  
   person enter  to  forest  
   ‘The person enters (to) the forest.’

b. sədianŋ lap  Ø  ga:h  
   person enter  Ø  forest  
   ‘The person enters the forest.’
3. The Asymmetry hypothesis between the expressions of Source and Goal and its linguistic realization

*Linguistic realization of the asymmetry*

(C) Syntactic Asymmetry

- Syntactic constraints on Goal / Source arguments. (Kopecka & Vuillermet 2021)

(8) a. I climbed from my room up the ladder onto the room.
   b. I climbed onto the room.
   c. I climbed up the ladder
   d. *I climbed from my room.

All these examples point in the same direction: from differences in the way languages express Source and Goal to a tendency to favor the Goal or the endpoint when expressing a motion event.
Outline

1. Methodology and data
2. Burmese morphosyntactic devices used to express Goal and Source grounds
3. The Asymmetry hypothesis in Goal and Source expressions
4. Asymmetry in Burmese
   a. Semantic asymmetry
   b. Morphosyntactic asymmetry
   c. Syntactic asymmetry
4. Asymmetry in Burmese
(A) Semantic asymmetry: Case conflation

- Locative postposition မ a² can be used with:
  - Static Locative Ground
    (9) ကပလေးပတွေကမ်ေးပပြေမကစောေးပနတယ်
    kəle³-twe²  kaN³ch²=ma²  gəza³  ne²=te²
crack-PL   shore=LOC    play  IPFV=REAL
    ‘The children are playing at the beach.’
  - Goal Ground
    (10) အဲပတောစ်မပရောက်တဲဲအြေကျပတောဲ့...
    [FROG_13]
    ʔɛ³  tɔ³  saʔ=ma²  yacʔ=te¹  ᵃʔha2  ca1=To1 ...
    DEM   forest   edge=LOC    arrive=REAL   moment   fall=WHEN
    When he arrived at the edge of the forest,
4. Asymmetry in Burmese

(A) Semantic asymmetry: Put on / Take off

- In the clothing lexicon, verbs show more semantic granularity with ‘put on’ (Goal-oriented) than ‘take off’ (Source-oriented)

<table>
<thead>
<tr>
<th>Put on (Goal oriented)</th>
<th>Take off (Source oriented)</th>
</tr>
</thead>
<tbody>
<tr>
<td>စီေး si³ ‘put on, wear (shoes, etc.)’</td>
<td>ြေျွတ် cʰuʔ ‘take off, remove’ (shoes, clothes, hat, etc.)</td>
</tr>
<tr>
<td>စွေ suʔ ‘put on (socks, gloves, mask, etc.)’</td>
<td></td>
</tr>
<tr>
<td>ရန်ေး yaN³ ‘(of monk) wear or put on robe’</td>
<td>ဖိုး pʰyouʔ ‘take off,uncouple, unhitch’</td>
</tr>
<tr>
<td>ရို youN¹ ‘wear or put on (a cloak or robe)’</td>
<td></td>
</tr>
<tr>
<td>ဝတ် wuʔ ‘wear, put on’</td>
<td></td>
</tr>
<tr>
<td>ပဆောင်ေး sʰaN² ‘wear a hat’</td>
<td></td>
</tr>
<tr>
<td>ပ ြုတ် pʰyouʔ ‘take off, uncouple, unhitch’</td>
<td></td>
</tr>
<tr>
<td>န် paN² ‘wear in the hair’</td>
<td></td>
</tr>
</tbody>
</table>

*Table 3: Verbs for ‘put on’ and ‘take off’*
4. Asymmetry in Burmese

(B) Morphosyntactic asymmetry: Inventory size

- More postpositions dedicated to Source than Goal:
  - 1 Goal postposition
  - 2 Source postpositions

<table>
<thead>
<tr>
<th>Postposition</th>
<th>Meaning</th>
<th># of Goal</th>
<th># of Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>မော်မ ော်</td>
<td>Locative</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>ကို ကို</td>
<td>Allative</td>
<td>96</td>
<td>-</td>
</tr>
<tr>
<td>ကပန ကပန</td>
<td>Ablative</td>
<td>-</td>
<td>53</td>
</tr>
<tr>
<td>က က က</td>
<td>Ablative</td>
<td>-</td>
<td>74</td>
</tr>
</tbody>
</table>

Table 4: Postpositions used for Goal and Source Grounds

Asymmetric but in favor of Source (against general tendency)
4. Asymmetry in Burmese

(B) Morphosyntactic asymmetry: Inventory size

However, no semantic distinction between the 2 Source postpositions

(11) a. ကရင်မပလေးတစ်ပယောက် ဂူထဲက ထွေက်ေွေေတယ်။ [TRAJHNTH_44]
kaɔN²ma²le³  tə=yaɔʔ  gu²  tʰɛ³=ka¹  tʰweʔ?  θwa³=te²
young.woman one=CLF cave inside=ABL exit go=REAL
‘A young woman goes out of a cave.’

b. ပကောင်မပလေးတစ်ပယောက် ဂူထဲကပေထွေက်ေွေေတယ်။ [TRAJAA_36]
kaɔN²ma²le³  θə=yaɔʔ  gu²  tʰɛ³=ka¹ne²  tʰweʔ?  θwa³=te²
young.woman one=CLF cave interior=ABL go.out go=REAL
‘A young woman goes out of a cave.’

Against general tendency
4. Asymmetry in Burmese

(B) Morphosyntactic asymmetry: Optionality

- Out of 126 Goal expressions, 25 are not marked with a postposition > Goal-marking is optional
- Source-marking is compulsory

Number of Goals and Sources with and without postposition

Follows the asymmetric tendency
4. Asymmetry in Burmese
(B) Morphosyntactic asymmetry: Complexity

Source marking is **NOT** fundamentally more complex than Goal marking

<table>
<thead>
<tr>
<th>Construction</th>
<th># of Goal</th>
<th># of Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare noun</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>N – Rel</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>N – Rel – Rel</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>N – PostP</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>N – Rel – Post</td>
<td>85</td>
<td>109</td>
</tr>
<tr>
<td>N – Rel – Rel - PostP</td>
<td>7</td>
<td>13</td>
</tr>
</tbody>
</table>
4. Asymmetry in Burmese

(B) Morphosyntactic asymmetry: Complexity

- We note that all Relational Nouns appears in both Goal and Source expressions

<table>
<thead>
<tr>
<th>Postposition</th>
<th>Meaning</th>
<th># of Goal</th>
<th># of Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ထဲ tʰɛ³</td>
<td>Inside</td>
<td>51</td>
<td>47</td>
</tr>
<tr>
<td>ပ ေါ် pɔ²</td>
<td>Top</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>ကကောေး ca³</td>
<td>Between</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>စ ် saʔ</td>
<td>Edge</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>ပအောက် ʔa ɔʔ</td>
<td>Place, in presence of</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>လီး sʰi²</td>
<td>Underside</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 6: Number of relator nouns occurring with Goals and Sources (only showing forms with at least 5 total occurrences)
4. Asymmetry in Burmese  

(C) Syntactic asymmetry: Biclausal constructions

- Biclausal construction for Source expression
  - Source is often expressed in a different, non-finite clause, in an iconic sequence
    - Source is syntactically more complex than Goal

(12)

a. ပက င်မပ ြေးတစ်ပက် သစ်ြင်ပပြေရင်ြေးကပေ

[ŋəʔN²ma¹le³ tə-yaŋ tʰʔpiN² cʰe²yiN³=ka¹ ne²=pyi³tɔ¹]  myeʔkʰiN³ pɔ²=ko² pye³ la²=te²

young.woman one-CLF tree foot=TOP stay=SUB.TIME lawn on=ALL run come=REAL

'A young woman comes running onto the lawn from the foot of the tree.'
(lit. 'having stayed at the foot of the tree, the young woman ran onto the lawn')

b. ပက င်မပ ြေးတစ်ပက် ဂူထဲကပေ

[ŋəʔN²ma¹le³ tə-yaŋ tʰweʔ la²=te²]

young.woman one-CLF cave inside=ABL stay=SUB.TIME exit come=REAL

'A young woman came out of the cave.' (lit. 'having stayed inside the cave, a young woman came out.')
4. Asymmetry in Burmese

(C) Syntactic asymmetry: Constraints on arguments

- Syntactic constraint: Goal-oriented verbs may licence Source arguments

\[(13)\]

\(\text{a. } \begin{array}{l}
\text{လူတစ်ပယောက်} \quad \text{ဂူထဲက ို} \quad \text{ဝင်ေွေောေးတယ်။ [TRAJHNTH_03]}
\text{lu}^2 \quad \text{tə-yaw}^? \quad \text{gu}^2 \quad \text{tʰɛ}^3=\text{ko}^2 \quad \text{wiN}^2 \quad \text{θwa}^3=\text{tɛ}^2
\end{array}\)

\(\text{person one-CLF cave inside=ALL enter go=REAL}
\text{‘A person went into the cave.’}\)

\(\text{b. } \begin{array}{l}
\text{ညောင်ရိုးမောင်သည်} \quad \text{ဂူထဲက ို} \quad \text{ဝင်ေွေောေးတယ်။ [TRAJAA_02]}
\text{piN²e}^2-\text{kaN}^3-ce^1 \quad \text{gu}^2 \quad \text{tʰɛ}^3=\text{ko}^2 \quad \text{wiN}^2 \quad \text{θwa}^3=\text{tɛ}^2
\end{array}\)

\(\text{sea-shore-origin=ABL cave interior=ALL enter go=REAL}
\text{‘(She) went into the cave from the sea shore [away from the deictic center].’}\)

\(\text{c. } \begin{array}{l}
\text{အပြင်ကပေ} \quad \text{ဝင်ေွေောေးတယ်။ [Elicited]}
\text{ʔəpyiN²=ka¹ne² \quad wiN² \quad \text{θwa}^3=\text{tɛ}^2}
\end{array}\)

\(\text{outside=ABL enter go=REAL}
\text{She entered from the outside.’}\)

Symmetric (against general tendency)
5. Conclusion

Expression of Goal and Source in Burmese: Is there an asymmetry?

- **Spatial symmetries:**
  - Source-marking is not more morphologically complex than Goal marking
  - Goal-oriented Verbs may licence Goal and Source arguments

- **Spatial asymmetries favoring Goals:**
  - Locative postposition can be used for Goal Grounds
  - Goal markers are optional
  - Source marking can be more syntactically complex than Goal marking, using biclausal constructions

- **A spatial asymmetry favoring Source?**
  - More postpositions are *dedicated* to Source: *ka¹* and *ka’ne²*
  - However, they convey the same meaning (true synonyms) and do not add any semantic granularity into the postpositional system
## 5. Conclusion

<table>
<thead>
<tr>
<th>Domain</th>
<th>Cross-linguistic tendency</th>
<th>Case of Burmese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantic</td>
<td>Conflation Locative-Allative rather than Locative-Ablative</td>
<td>Locative postposition မော m̥a² can be used for Goal Grounds</td>
</tr>
<tr>
<td></td>
<td>More semantic granularity for Goal markers</td>
<td>No semantic granularity</td>
</tr>
<tr>
<td>Morphosyntactic</td>
<td>Goal marking is less complex</td>
<td>Goal marking is not less complex</td>
</tr>
<tr>
<td></td>
<td>Goal markers are optional</td>
<td>Goal markers are optional</td>
</tr>
<tr>
<td></td>
<td>More markers for Goals than Sources</td>
<td>More forms dedicated to Source marking</td>
</tr>
<tr>
<td>Syntactic</td>
<td>Verbs tend to allow for Goal arguments but not Source arguments</td>
<td>Goal and Source Arguments licensed by verbs</td>
</tr>
<tr>
<td></td>
<td>More complex syntax for Source expression</td>
<td>Yes, with biclausal constructions</td>
</tr>
</tbody>
</table>
Thank you for your attention!
References


References


