Understanding Japanese through its Invisible Structures: How Linguistics can Contribute to Language Learning

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First Language (L1) Acquisition

A complex and perfect grammar is internalized:
- on the basis of limited, fragmented data
- without formal instruction
- very early, during “critical period” (by age of 3)

→ Innateness theory of language acquisition

→ Universal grammar hypothesis
Second Language (L2) Acquisition

- Typically after critical period is past
- Unclear whether innateness device is still active
- (Therefore) other means of learning required: STUDY
- L1 has already been internalized: possible effects

⇒ How are invisible structures acquired in L2 acquisition?

⇒ Role of linguistic research in clarifying invisible structures.
Structure type 1:
How many nouns does a verb need?

Verbs can be put in classes according to how many nouns they take.

Every verb has a hidden structure formed by the pattern of nouns it takes, whether you see the nouns or not.

This pattern is called argument structure.
Structure type 1: Argument structure

One-place predicates: $X$が 走る “X runs” (n=1)

\[ X \text{ ga hashiru} \]

Two-place predicates: $X$が $Y$を 食べる “X eats Y” (n=2)

\[ X \text{ ga } Y \text{ o taberu} \]

Three-place predicates:

$X$が $Y$を $Z$に かえす “X returns Y to Z” (n=3)

\[ X \text{ ga } Y \text{ o } Z \text{ ni kaesu} \]
Structure type 1: Argument structure

In natural conversation, most clauses come with only one noun

(1) A: この間貸してあげた本、どうなっている？
   B: まだ読んでいる。もうすぐ返すよ。

A: Kono aida kashite-ageta hon, doo natteiru?
B: Mada yonde-iru. Moo sugu kaesu yo.

A: What happened to the book (I) lent (you) the other day?
B: (I’m) still reading (it.) (I’ll) return (it) (to you) soon.
Structure type 1: Argument structure

(1) もうすぐ返すよ。
   Moo sugu kaesu yo.
   ‘(I’ll) return (it) (to you) soon’

… X-ga Y-ni Z-o kaesu. →
… (X-ga) (Y-ni) hon-o kaesu →
…(watashi-ga) (anata-ni) hon-o kaesu

→ (Invisible) argument structure is critical to both COMPREHENSION and PRODUCTION of natural discourse.
Structure type 1:
Argument structure

Transitive/intransitive verbs:

\[ n(V_{in}) = n(V_{tr}) - 1 \]

- **n=1 (intransitive)**
  - あく (aku) “open”
  - 直る (naoru) “be fixed”
  - 上がる (agaru) “rise”

- **n=2 (transitive)**
  - あける (akeru) “open”
  - 直す (naosu) “fix”
  - 上げる (ageru) “raise”

- **n=3**
Structure type 1: Argument structure

Some verbs have no partners

<table>
<thead>
<tr>
<th>n=1 (intransitive)</th>
<th>n=2 (transitive)</th>
<th>n=3</th>
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</thead>
<tbody>
<tr>
<td>泣く naku “cry”</td>
<td>Ø</td>
<td></td>
</tr>
<tr>
<td>歩く aruku “walk”</td>
<td>Ø</td>
<td></td>
</tr>
<tr>
<td>Ø</td>
<td>殴る naguru “hit”</td>
<td>Ø</td>
</tr>
<tr>
<td>Ø</td>
<td>食べる taberu “eat”</td>
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→ In such cases the causative SASE form and passive RARE form step in to fill in the blank.
Structure type 1: Argument structure

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<td>Ø --&gt; 歩かせる arukaseru “walk”</td>
<td></td>
</tr>
<tr>
<td>Ø --&gt; 被られる nagurareru “be hit” 被る naguru “hit”</td>
<td></td>
<td></td>
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<tr>
<td>Ø --&gt; 食べられる taberareru “be eaten” 食べる taberu “eat”</td>
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SASE acts to INCREASE the number of noun slots, and RARE acts to DECREASE the number of noun slots in argument structure:

\[ n(V_{sase}) = n(V) + 1 \]
\[ n(V_{rare}) = n(V) - 1 \]
Structure type 1: Argument structure

What happens when SASE and RARE are combined?

\[ n((Vsase)rare) = n(Vsase) - 1 = (n(V) + 1) - 1 = n(V) + 0 = n(V) \]

(3) 子供が納豆を食べる.
   *Kodomo ga nattoo o taberu “The child eats nattoo”*

→ 母親が子供に納豆を食べさせる.
   *Hahaoya ga kodomo ni nattoo o tabe-SASEru “The mother makes the child eat nattoo”*

→ 子供が(母親に)納豆を食べさせられる.
   *Kodomo ga (hahaoya ni) nattoo o tabe-SASE-RAREru “The child is made to eat nattoo (by the mother).”*
Structure type 2: Information structure

Old information: information that both the speaker and hearer know of or are able to identify from previous context

New information: information that either the speaker or hearer does not know of or is unable to identify from previous context

Patterns of interaction between these two types of information in text or discourse are referred to as information structure.
Structure type 2: Information structure

WA and GA and information structure (Kuno 1973):

A. Topic WA
   あの白い建物は図書館です。“That white building is the library.”
   Ano shiroi tatemono WA toshokan desu.

B. Contrastive WA
   この町には本屋はたくさんあるけれども図書館は一つもありません。
   Kono machi ni wa honya WA takusan aru keredomo toshokan WA hitotsu mo arimasen.“In this town there are many bookstores, but there isn’t one library.”

C. GA of neutral description
   大学のキャンパスの真ん中に図書館があります。
   Daigaku no kyanpasu no mannaka ni toshokan GA arimasu.
   “In the very middle of the college campus is a library.”

D. GA of exhaustive listing
   あの白い建物が図書館です。“That white building is the library.”
   Ano shiroi tatemono GA toshokan desu.
Structure type 2:
Information structure

A basic pattern involving GA of neutral description and topic WA:

(4) 晩々あるところにおじいさんとおばあさんがいました。ある日おじいさんは山の方へ芝刈りに出かけました。

Mukashi mukashi aru tokoro ni ojiisan to obaasan GA imashita. Aru hi, ojiisan WA yama no hoo e shibakari ni dekakemashita.
‘Once upon a time there was AN old man and old woman. One day, THE old man set off for the mountains to gather firewood.’
Structure type 2: Information structure

How is exhaustive listing GA different from neutral description GA? The key lies in looking at question patterns.

Exhaustive-listing GA:
(5) あの白い建物が図書館です。“That white building is the library.”
Ano shiroi tatemono ga toshokan desu.
←どの建物が図書館ですか。“Which building is the library?”
Dono tatemono ga toshokan desu ka.

←→図書館(であるの)はどの建物ですか。
Toshokan (de aru no) wa dono tatemono desu ka.
“Which building is it that is the library?”

→図書館(であるの)はあの白い建物です。
Toshokan (de aru no) wa ano shiroi tatemono desu.
“It is the white building that is the library”

→ With exhaustive listing GA, the noun marked by GA is new information, but the rest of the sentence is old information.
Structure type 2:
Information structure

How is exhaustive listing GA different from neutral description GA?

Neutral-description GA:
(6) 大学のキャンパスの真ん中に図書館があります。
   Daigaku no kyanpasu no mannaka ni toshokan ga arimasu.
   “In the very middle of the college campus is a library.”

≠ 大学のキャンパスの真ん中にあるのは図書館です。
   Daigaku no kyanpasu no mannaka ni aru no wa toshokan desu.
   “What is in the very middle of the campus is the library.”

→ With neutral description GA, the noun marked by GA is new information, but is not new relative to the rest of the sentence.
Structure type 2: Information structure

How about contrastive WA--how is it different from topic WA?

*Topic WA:*
(7) 太郎は学生だ。“Taroo is a student.”

    *Taroo wa gakusei da.*

*Contrastive WA:*
(8) 太郎は学生だ（けど、花子は学生じゃない）。

    *Taroo wa gakusei da (kedo Hanako wa gakusei ja nai).*

    “Taroo is a student, but Hanako is not (a student).”

→ When a noun X is marked with contrastive WA, the implication is that there is another specific noun Y and the property that X is said to have is NOT true of Y.

→ Topic WA is NOT just a special case of contrast. The two patterns have different intonation patterns and differences in noun types that can be used (e.g., *dokoka* ‘somewhere,’ *itsuka* ‘sometime,’ etc.).
Structure type 2: Information structure

What kind of context is contrastive WA used in?

(9) 太郎は学生だ[けど、花子は学生じゃない]。

*Taroo wa gakusei da [kedo Hanako wa gakusei ja nai].
“Taroo is a student, [but Hanako is not (a student)].”

→ assumes that both speakers know who both Taro and Hanako are AND that the matter of “being a student” or “not being a student” has already been mentioned.

→ With contrastive WA, BOTH the noun marked with WA AND the information in the rest of the sentence are old information (information mentioned before)--the entire sentence is old information!
Understanding WA and GA requires thinking not only in terms of the noun itself that takes WA or GA, but its informational relationship to the rest of the sentence.
Structure type 3: Sentences are trees

(10) Aki wa Mari kara moratta chokoreeto o Ken ni ageta.

‘Aki gave to Ken the chocolate he got from Mari.’
Sentences, like trees, have both vertical and horizontal structure!
Structure type 3: Sentences are trees

Thinking about **WA** and **GA** in terms of trees:

(11) 洋子は食事をしている間に家を出た。
    *Yooko wa shokuji o shiteiru aida ni uchi o deta.*
    Yooko left the house while (we) were eating.

(12) 洋子が食事をしている間に家を出た。
    *Yooko ga shokuji o shiteiru aida ni uchi o deta.*
    While Yooko was eating, (we) left the house.
Structure type 3: Sentences are trees

洋子は Yooko
家を出た house left
中に while
食事している (was) eating

NP NP NP V NP S S N NP V S NP ∅
Structure type 3: Sentences are trees

NP 洋子は Yooko
S すべて
V 吃食

NP 家を
S 間に
S' 走
V left

∅ 食事をしている (was) eating

NP 家を
S 間に
∅ 走
V left

NP 洋子が
S 食事をしている (was) eating
Structure type 3:
Sentences are trees

Adverbs and trees:

(18) この間友達に教えてもらった店で食べた料理はおいしかった。
    Kono aida tomodachi ni oshiete-moratta mise de tabeta ryōri wa oishikatta.
    “The food I ate at the restaurant that my friend told me about the other day was delicious.”
The food was delicious. I ate it at the restaurant. My friend told me.
food was delicious

other day

—at the restaurant

friend told me
この間other day
食べたate
教えてもらったtold me
料理はfood
おいしかったwas delicious
（at）the restaurant
The food was delicious. On another day, a friend told me.
Structure type 3: Sentences are trees

Thinking in terms of trees when the going gets tough:

(19) 異なった学説もしくは思想を持つ者たちが、一つの一致点に到達し、もしくは一定の政策を全体の決定として承認するためには、国家もしくは団体の意思を分裂させることが討論の目的であるのではなく、よりよき一致を目ざせばその討論であり批判であることを認識し、討論・批判の精神および方法についての思想的ならびに技術的訓練を積まねばならない。

（矢内原忠雄著「言論自由の思想的根拠」より）
SUMMARY

Rendering invisible patterns visible through linguistic research promises (a) theoretical insights into the nature of the Japanese language, (b) practical benefits such as focusing the attention of the language learners on:

• Paying attention to the hidden slots that have to be filled with EVERY verb and predicate and understanding how those slot patterns change with different verb forms.

• Noticing the interaction between what is already known and what is new or unknown in Japanese discourse, and letting markers such as WA and GA be a guide to that.

• Thinking in terms of up and down, not just left to right, as sentences become more complex.
ご清聴ありがとうございました。

Thank you for your kind attention!