### Basic Conceptual Dependency Relations

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTs</td>
<td>actions</td>
</tr>
<tr>
<td>PPs</td>
<td>objects (picture producers)</td>
</tr>
<tr>
<td>AAs</td>
<td>modifiers of actions (action aiders)</td>
</tr>
<tr>
<td>PAs</td>
<td>modifiers of objects (picture aiders)</td>
</tr>
</tbody>
</table>

- **PP → ACT**: indicates that an actor acts.
- **PP → PA**: indicates that an object has a certain attribute.
- **ACT₁ → PP**: indicates the object of an action.
- **ACT₂ → PP**: indicates the recipient and the donor of an object within an action.
- **ACT₃ → PP**: indicates the direction of an object within an action.
- **ACT₄ → PP**: indicates the instrumental conceptualization for an action.
- **X ↠ Y**: indicates that conceptualization X caused conceptualization Y.

When written with a C this form denotes that X COULD cause Y.

- **PP → PA₂**: indicates a state change of an object.
- **PA₁ → PP**: indicates that PP2 is either PART OF or the POSSESSOR OF PP1.

### Additional Notation

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>←</td>
<td>indicates the direction of dependency</td>
</tr>
<tr>
<td>↔</td>
<td>indicates the agent-verb relationship</td>
</tr>
<tr>
<td>p</td>
<td>indicates past tense</td>
</tr>
<tr>
<td>INGEST</td>
<td>is a primitive act of the theory</td>
</tr>
<tr>
<td>O</td>
<td>object relation</td>
</tr>
<tr>
<td>D</td>
<td>indicates the direction of the object in the action</td>
</tr>
</tbody>
</table>

- **p**: past
- **f**: future
- **t**: transition
- **k**: continuing
- **tₛ**: start transition
- **?**: interrogative
- **tₖ**: finish transition
- **c**: conditional
- **/**: negative
- **nil**: present
- **delta?**: timeless
The Primitive Actions

- ATRANS: transfer a relationship (give)
- PTRANS: transfer physical location of an object (go)
- PROPEL: apply physical force to an object (push)
- MOVE: move body part by owner (kick)
- GRASP: grab an object by an actor (grasp)
- INGEST: ingest an object by an animal (eat)
- EXPEL: expel from an animal's body (cry)
- MTRANS: transfer mental information (tell)
- MBUILD: mentally make new information (decide)
- CONC: conceptualize or think about an idea (think)
- SPEAK: produce sound (say)
- ATTEND: focus sense organ (listen)

Two Example Sentences

1. John $\rightarrow$ *PROPEL* $\rightarrow$ O Ball

2. John $\leftarrow$ *INGEST* $\rightarrow$ O Egg

3. D $\rightarrow$ *INSIDE* $\leftarrow$ John
   *MOUTH* $\leftarrow$ John

4. John $\leftarrow$ *DO*

5. Mary $\leftrightarrow$ *ATRANS* $\rightarrow$ O Book
   R $\rightarrow$ Bill
   Mary
Group Work

• Diagram the sentence:
  John took a plane to New York.

• Diagram the sentence:
  John wondered who ate the cheese.
Group Work

- Write a “shopping” script
  - What are the major activities
  - Once you have listed the major activities, a subgroup will be asked to detail the steps in each activity