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CONCEPTUAL DEPENDENCY : LAB 10

TASK: Write the Conceptual Dependency for following statements

a. John gives Mary a book
b. John gave Mary the book yesterday

CONCEPTUAL DEPENDENCY Definition: It is used to represent the knowledge obtained from natural language input.
There are five primitives for Physical Actions:
1. INGEST: to take something inside an animate object.
2. EXPEL: to take something from inside an animate object and force it out.
3. GRASP: to physically grasp an object
4. MOVE: to move a body part
5. PROPEL: to apply a force to

Other Primitive Actions
State Changes (physical and abstract transfers)
PTRANS: to change the location of a physical object.
ATRANS: to change an abstract relationship of a physical object.

Mental Acts
MTRANS: to transfer information mentally.
MBUILD: to create or combine thoughts.

Instruments for other ACTs
SPEAK: to produce a sound.
ATTEND: to direct a sense organ or focus an organ towards a stimulus.

Conceptual Categories
PP (picture producer): physical object. Actors must be an animate PP, or a natural force.
ACT: One of eleven primitive actions.
LOC: Location.
T: Time.
AA (action aider): modifications of features of an ACT.
PA: attributes of an object, of the form STATE (VALUE).

Representations

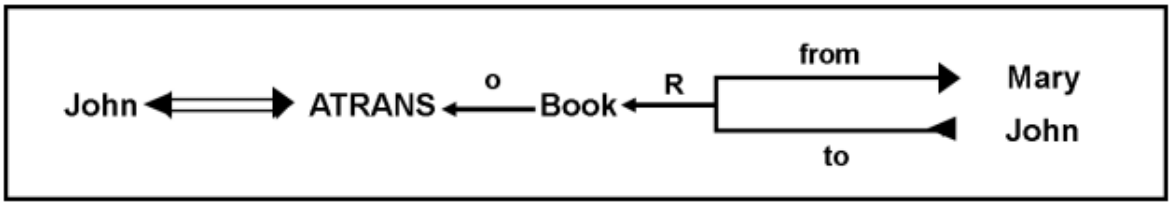
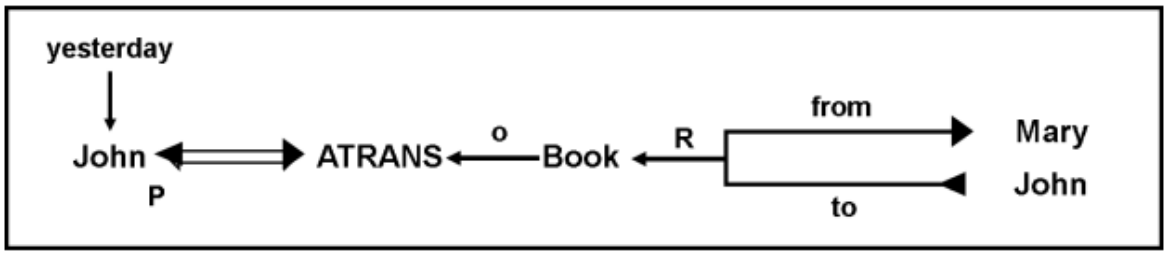
Arrows indicate the direction of dependency. Letters above indicate certain relationships:

a. o – object
b. R- recipient-donor
c. I – instrument
d. D- destination

Double arrows (<=>) indicate two-way links between the actor (PP) and action (ACT).
The actions are built from the set of primitive acts. These can be modified by tense etc.

a. P – past
b. f – future
c. t – transition
d. - start transition
e. - finished transition
f. k - continuing
g. ? - interrogative
h. / - negative
i. delta – timeless
j. c – conditional
k. The absence of any modifier implies the present tense.

STATEMENT: John gives Mary a book



STATEMENT 2: John gave Mary the book yesterday.