### **Conceptual Dependency**

- ATRANS abstract transfer (give)
- PTRANS physical transfer (move)
- PROPEL application of force (push)
- MTRANS mental transfer ( tell
- MBUILD construct new information
- SPEAK utter a sound (say)
- ATTEND focus on a stimulus (watch)
- MOVE move a body part (kick)
- GRASP grasp an object (clutch)
- INGEST ingest something (eat, inject)
- EXPEL expel something (spit)

### **Primitive Things**

- PP Real world objects (people, things)
- ACT Real world actions (eat, give)
- PA Attributes of objects (size, health)
- AA Attributes of actions
- T Times
- LOC Locations

#### Connections

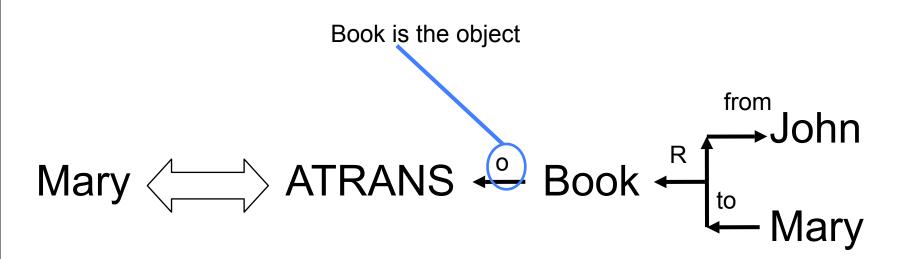


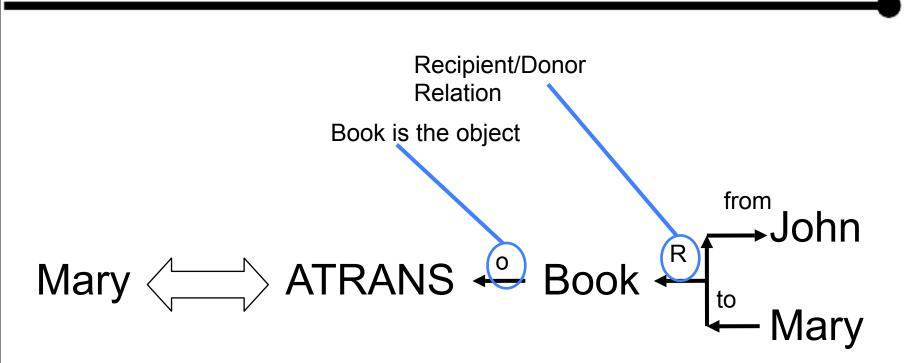


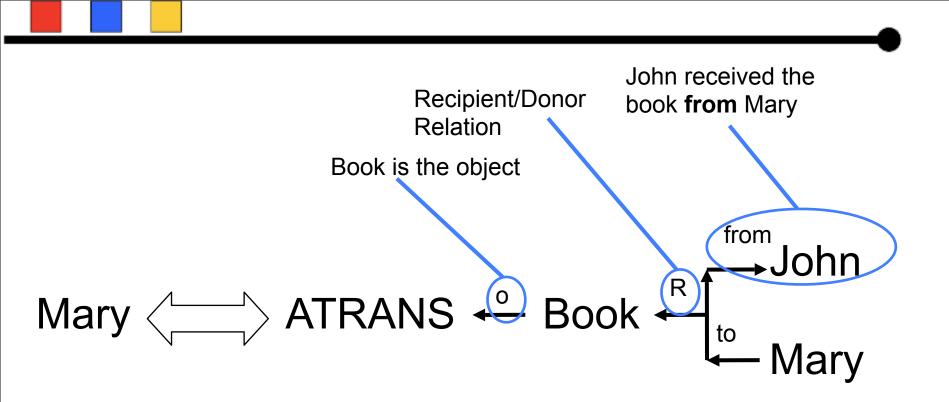
#### - conditionals

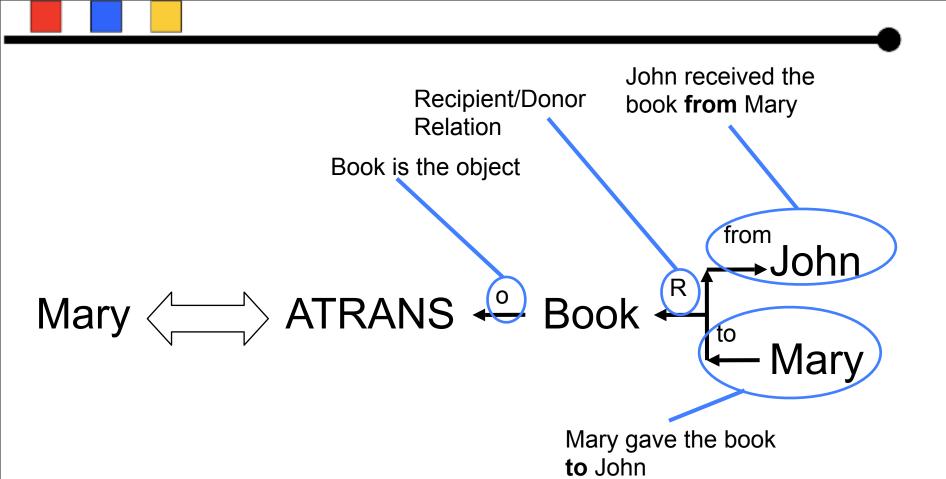
#### Mary gives John the book.

Mary 
$$\xrightarrow{} ATRANS \stackrel{\circ}{\leftarrow} Book \stackrel{R}{\leftarrow} _{to} Mary$$

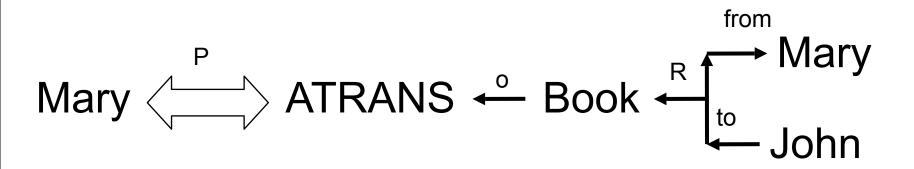


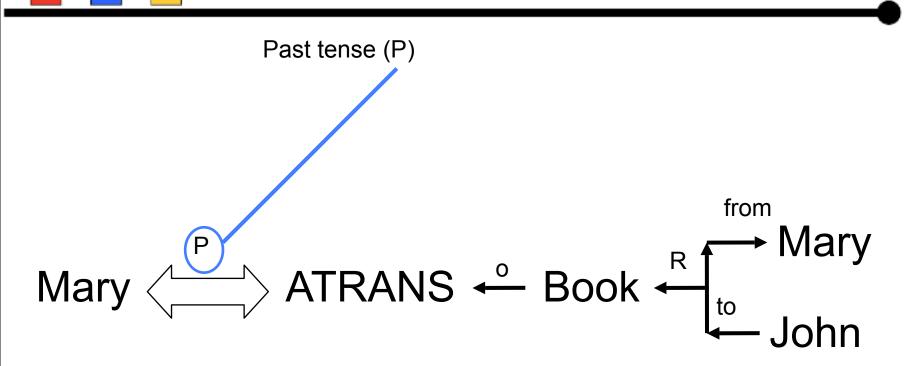






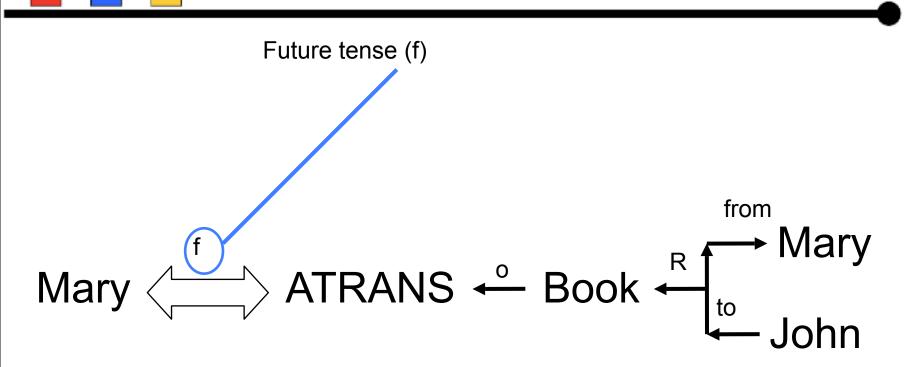
### Mary gave John the book.



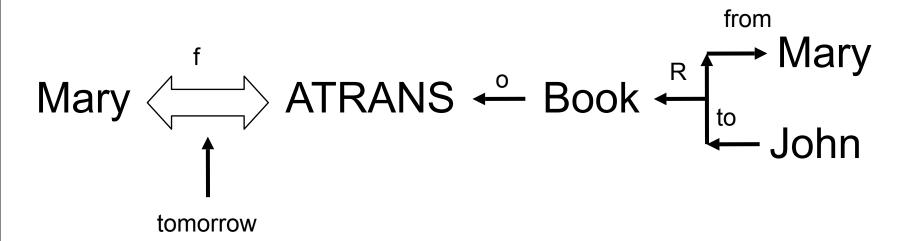


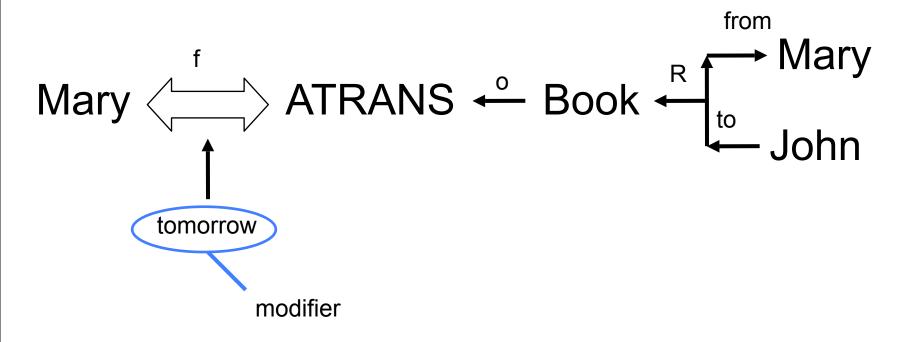
### Mary will give John the book.

$$\operatorname{Mary} \stackrel{f}{\longleftarrow} \operatorname{ATRANS} \stackrel{\circ}{\longleftarrow} \operatorname{Book} \stackrel{R}{\longleftarrow} \underset{to}{\overset{to}{\longleftarrow}} \operatorname{John}$$

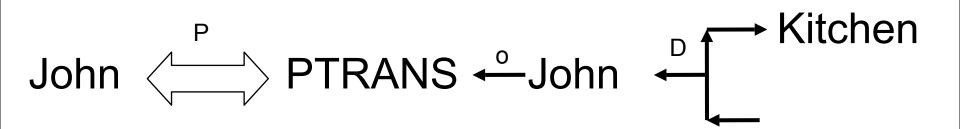


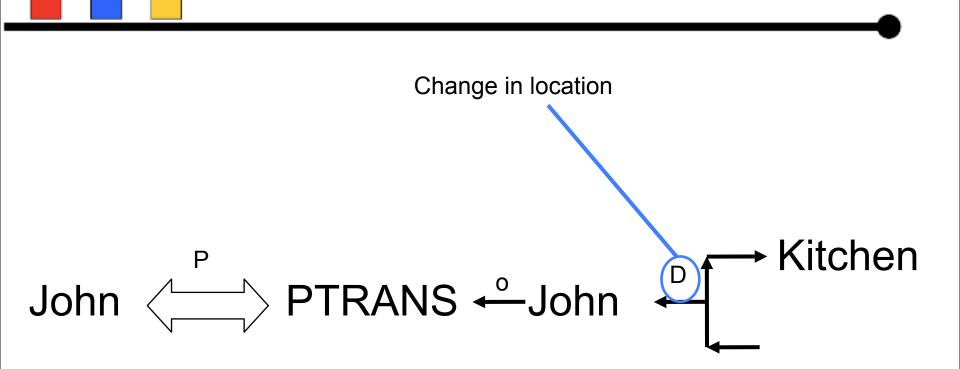
# Mary will give John the book tomorrow.





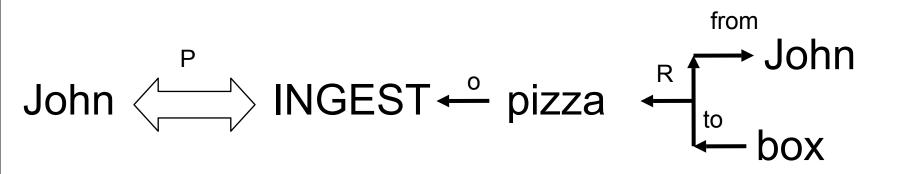
#### John went to the kitchen.



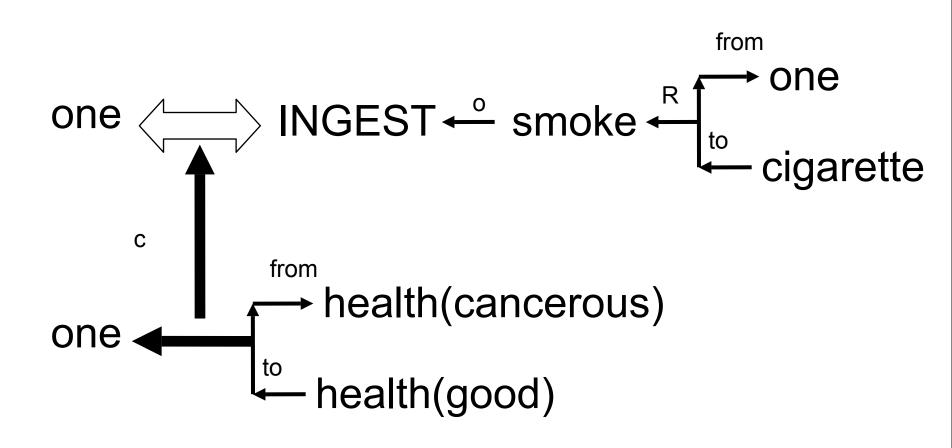


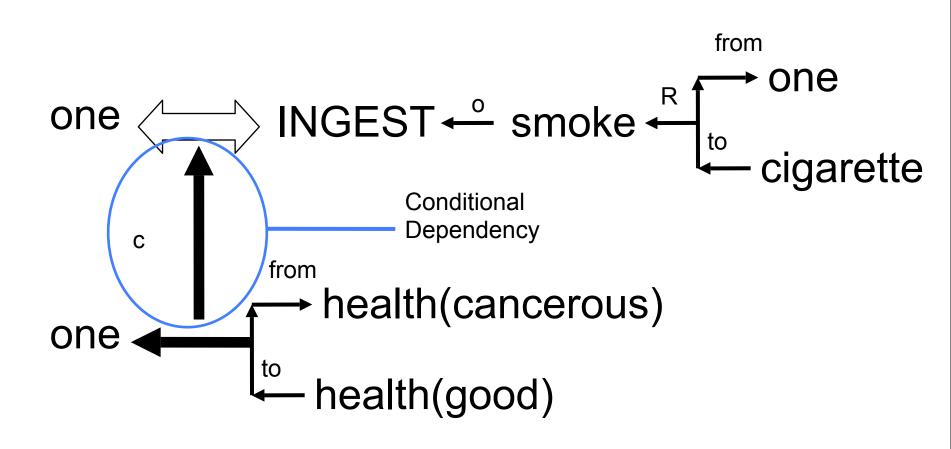
### John ate a pizza.





### Smoking can give you cancer.





#### John threw the book at Mary.

### $John \xrightarrow{P} PROPEL \stackrel{\circ}{\leftarrow} Book \stackrel{D}{\leftarrow} Mary$

# John $\longrightarrow$ MTRANS $\leftarrow$ Punishment $\leftarrow$ Mary

# Mary told Jane that she gave John the book.

