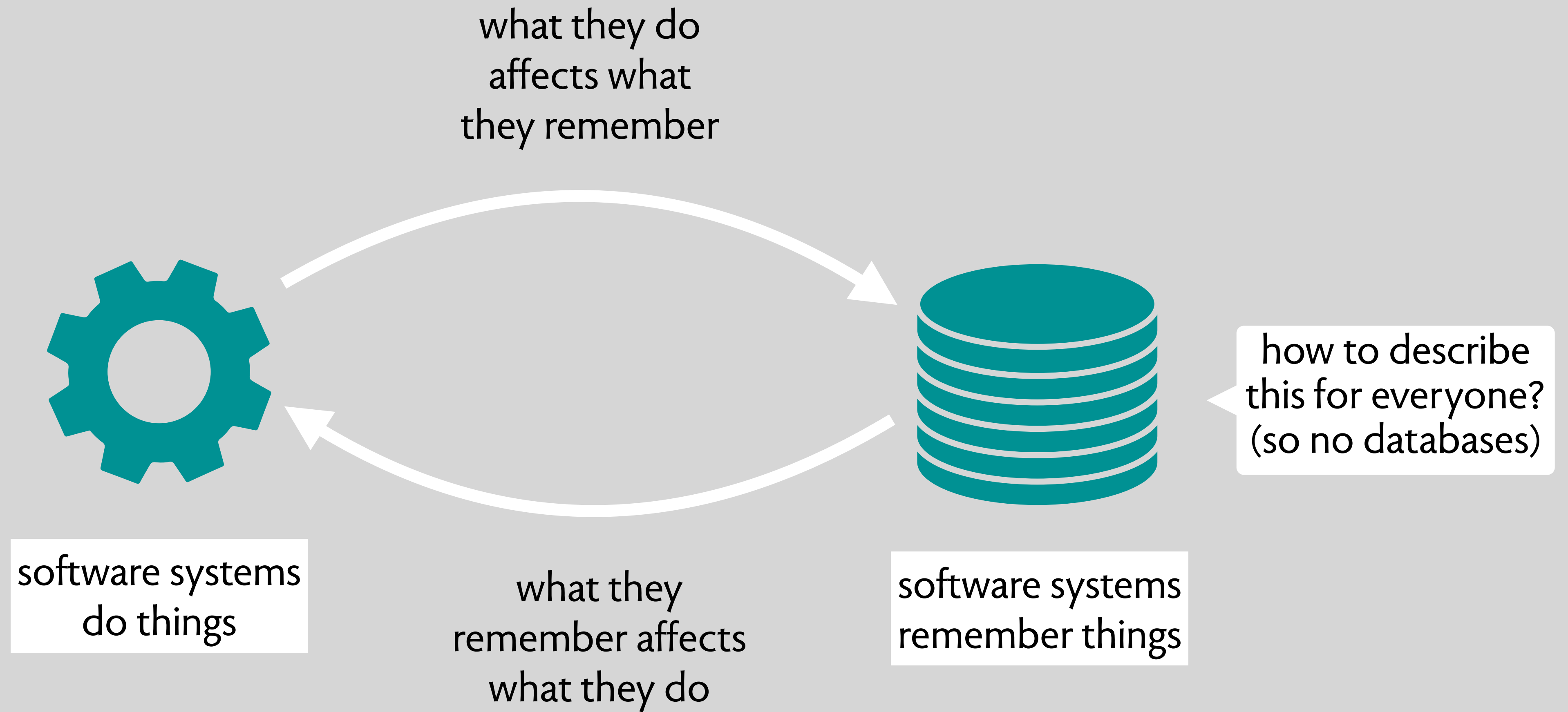


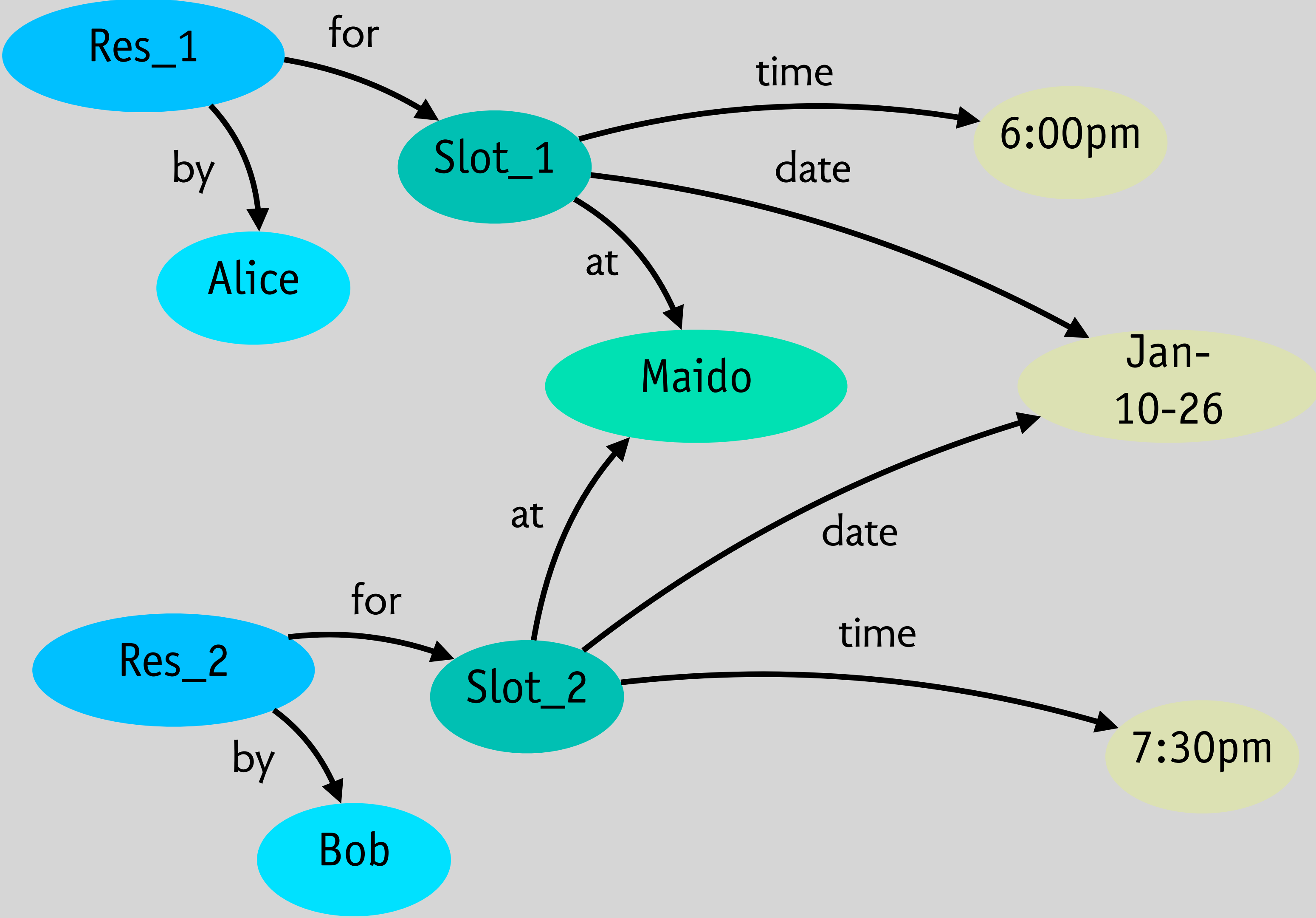
# modeling **state**

Daniel Jackson

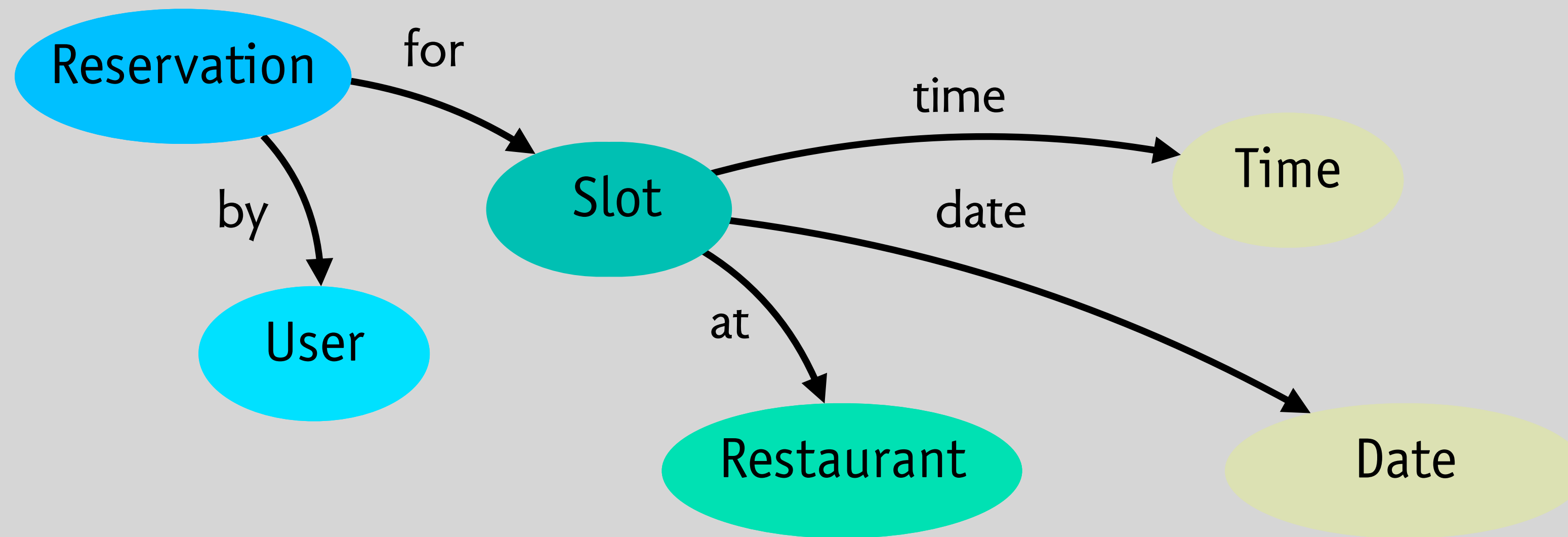
# behavior = actions + states



# one state of a restaurant reservation system



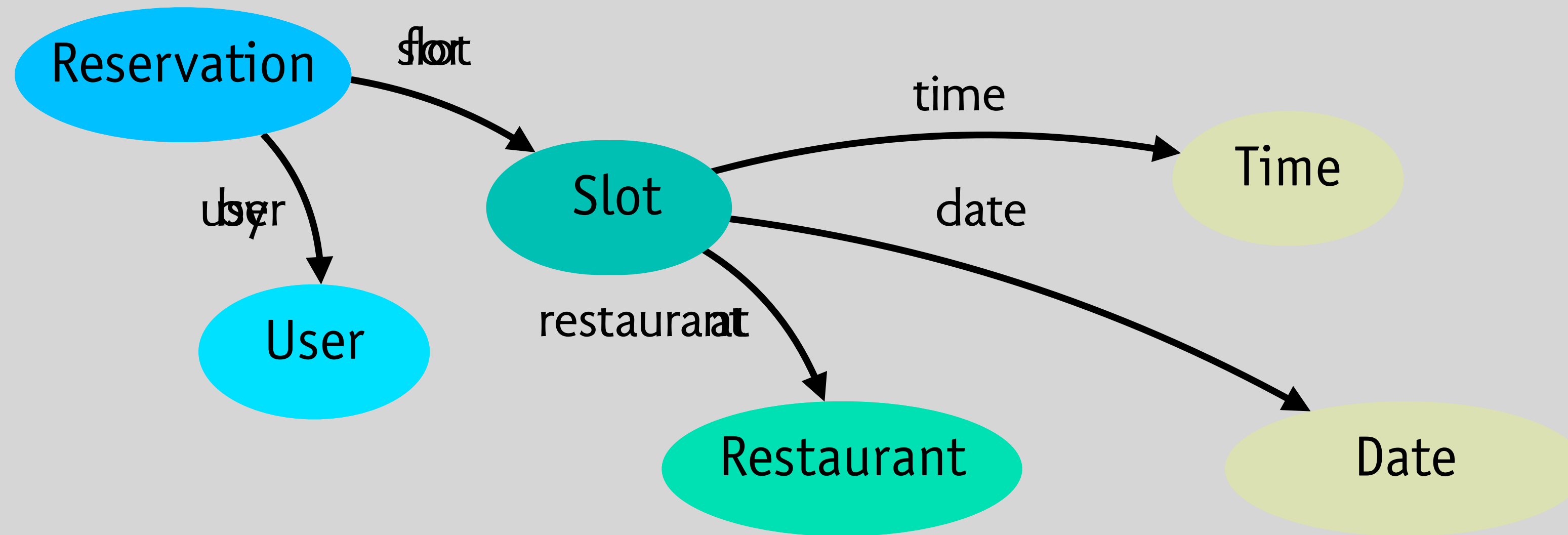
# all states of a restaurant reservation system



a set of Reservations with  
a for Slot  
a by User

a set of Slots with  
a time Time  
a date Date  
an at Restaurant

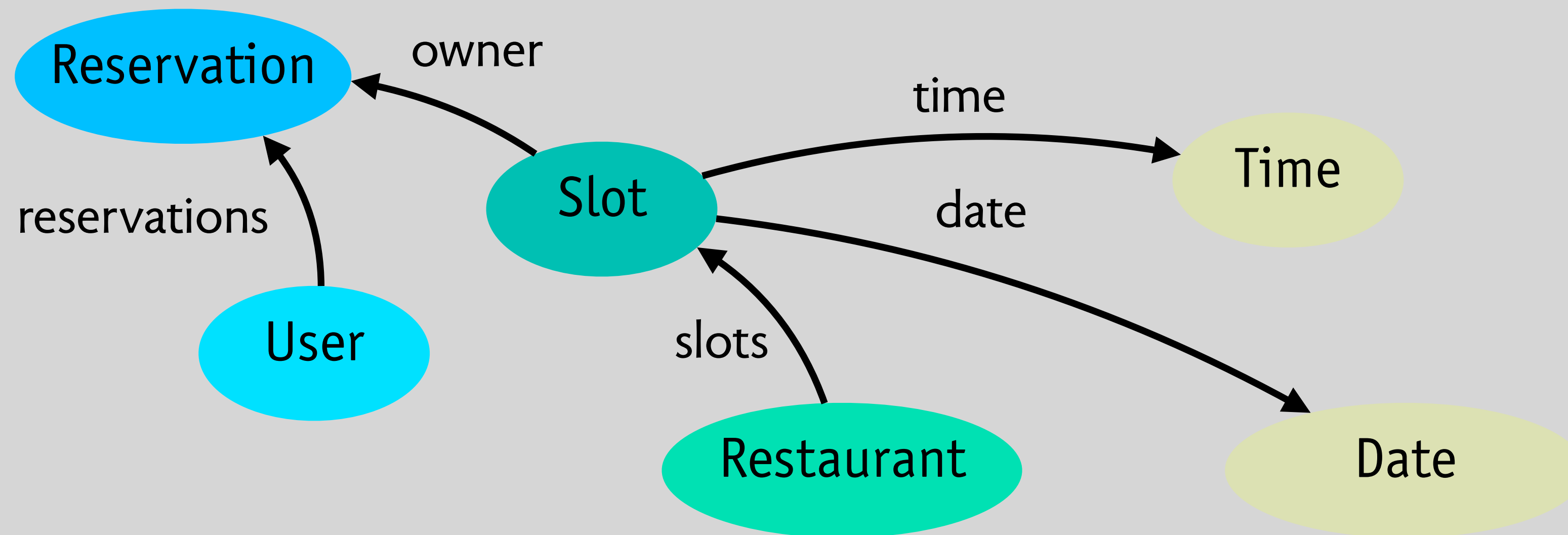
# implicit relation names



a set of Reservations with  
a slot Slot  
a user User

a set of Slots with  
a Time  
a Date  
a Restaurant

# do the arrow directions matter?



a set of Users with  
a set of Reservations

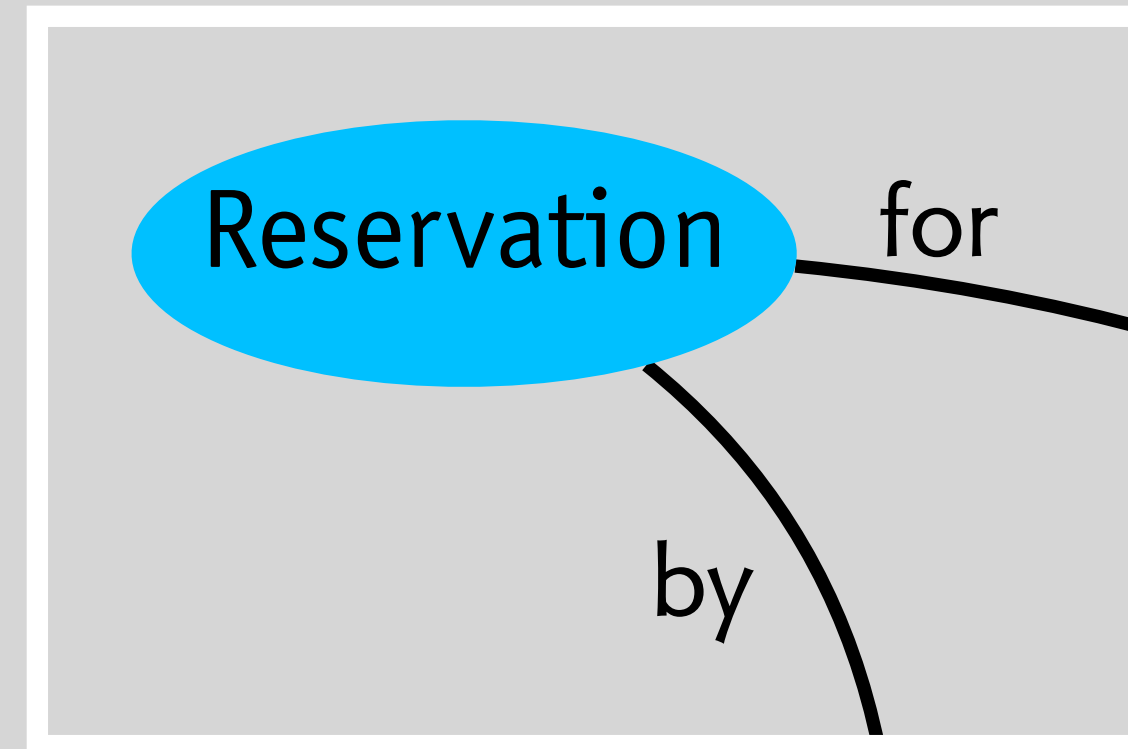
a set of Restaurants with  
a set of Slots

a set of Reservations with  
a for Slot  
**a by User**

a set of Slots with  
a Time  
a Date  
an owner Reservation

# decomposing the model

## Reserving



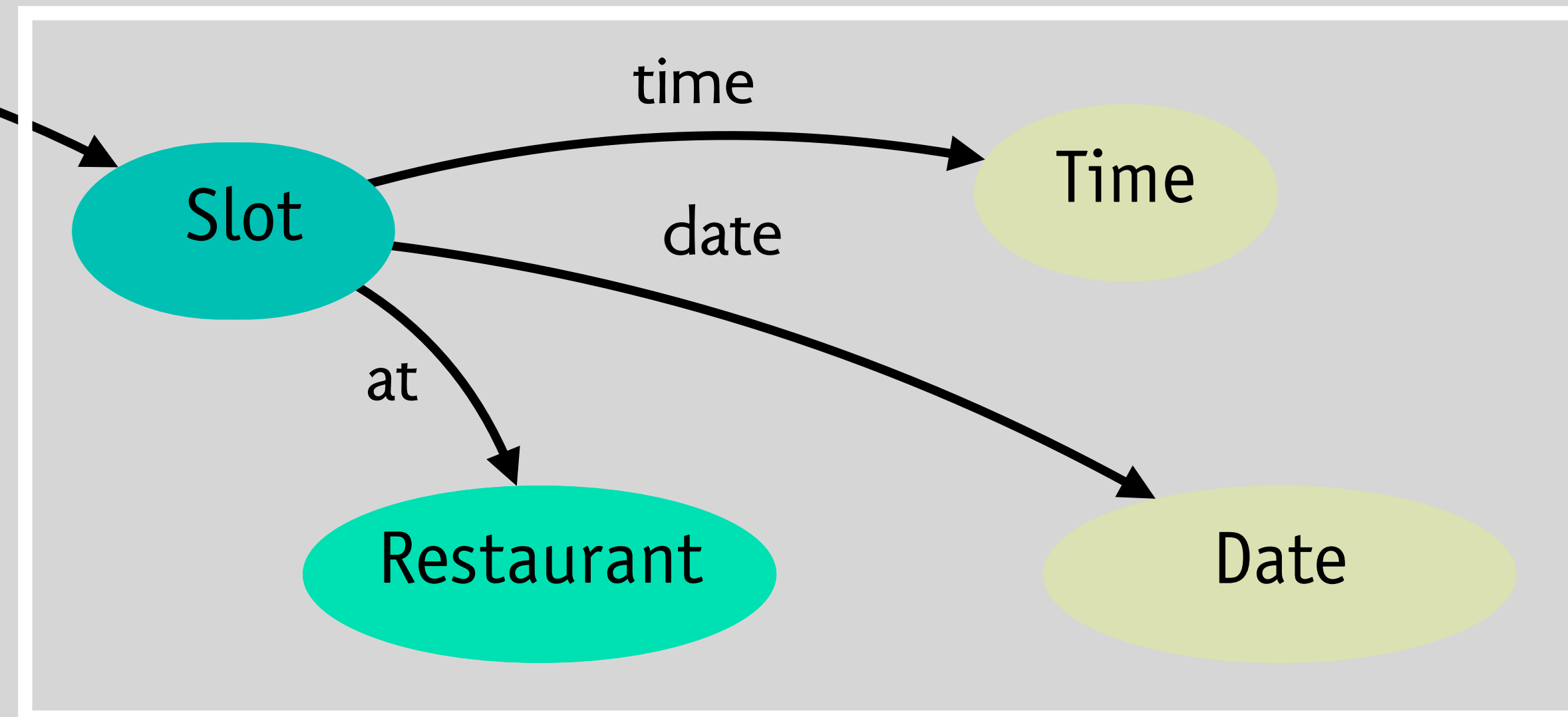
## UserAuth



### concept Reserving

a set of Reservations with  
a for Slot  
a by User

## Availability



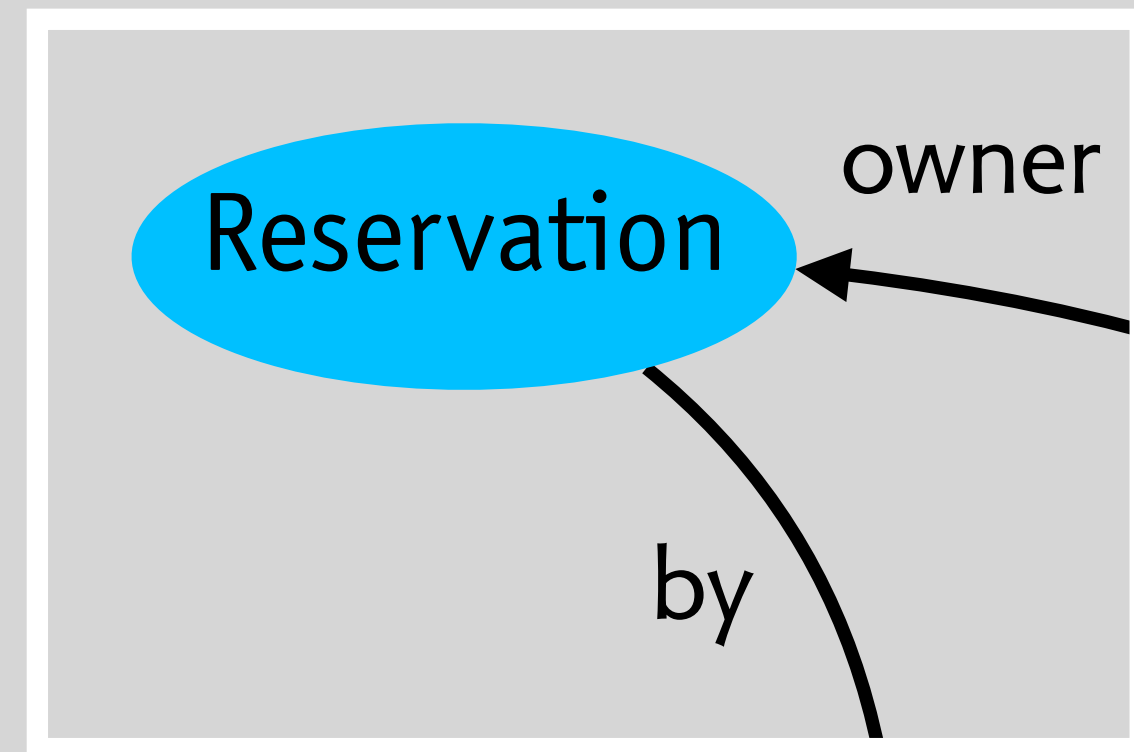
### concept Availability

a set of Slots with  
a time Time  
a date Date  
an at Restaurant

*a surprise*

# what if we flip this?

## Reserving



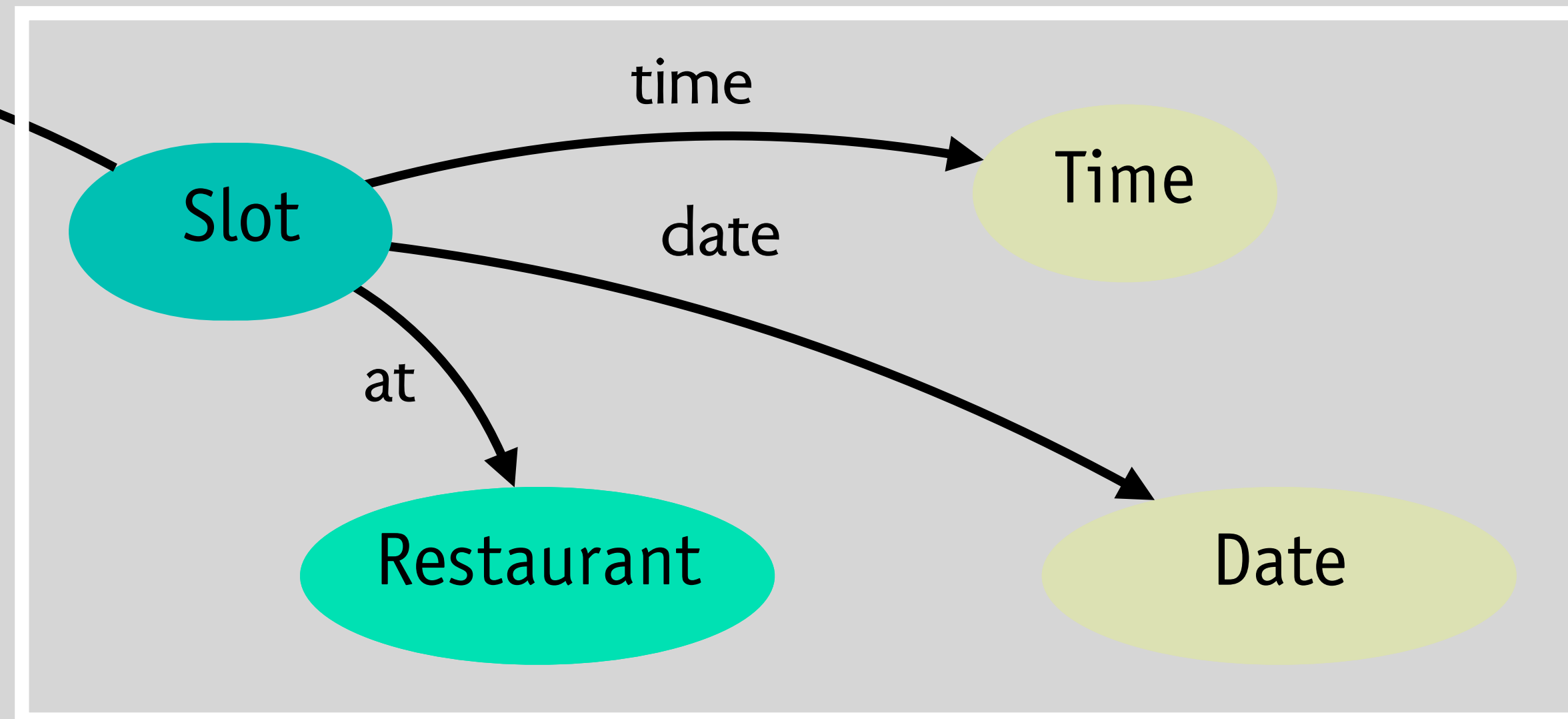
## UserAuth



### concept Reserving

a set of Reservations with  
a by User  
a set of Slots with  
an owner Reservation

## Availability



### concept Availability

a set of Slots with  
a time Time  
a date Date  
an at Restaurant