

# Target Semantic Representations

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1. John eats  
 $\exists e.(Eat(e) \wedge Eater(e, John))$
2. a student eats  
 $\exists e \exists x.(Eat(e) \wedge Eater(e, x) \wedge Student(x))$
3. all students eat  
 $\forall x(Student(x) --> \exists e.(Eat(e) \wedge Eater(e, x)))$
4. John eats a sandwich  
 $\exists e \exists x.(Eat(e) \wedge Eater(e, John) \wedge Sandwich(x) \wedge Eaten(e, x))$
5. all students eat or drink  
 $\forall x(Student(x) --> \exists e.((Eat(e) \wedge Eater(e, x)) | (Drink(e) \wedge Drinker(e, x))))$
6. John drinks a soda or eats a sandwich  
 $(\exists e1 \exists x.(Drink(e1) \wedge Drinker(e1, John) \wedge Soda(x) \wedge Drunk(e1, x))) | (\exists e2 \exists y.(Eat(e2) \wedge Eater(e2, John) \wedge Sandwich(y) \wedge Eaten(e2, y)))$
7. John or Mary eats  
 $\exists e.(Eat(e) \wedge (Eater(e, John) | Eater(e, Mary)))$
8. a student writes an essay or eats  
 $\exists x.(Student(x) \wedge ((\exists e1.(Eat(e1) \wedge Eater(e1, x))) | (\exists e2 \exists y.(Write(e2) \wedge Writer(e2, x) \wedge Essay(y) \wedge Written(e2, y)))))$
9. every student eats a sandwich or drinks a soda  
 $\forall x(Student(x) --> (\exists e1 \exists y.(Eat(e1) \wedge Eater(e1, x) \wedge Sandwich(y) \wedge Eaten(e1, y)) | \exists e2 \exists z.(Drink(e2) \wedge Drinker(e2, x) \wedge Soda(z) \wedge Drank(e2, z))))$
10. John eats every sandwich  
 $\forall x(Sandwich(x) --> \exists e.(Eat(e) \wedge Eater(e, John) \wedge Eaten(e, x)))$
11. John eats every sandwich or bagel  
 $\forall x((Sandwich(x) | Bagel(x)) --> \exists e.(Eat(e) \wedge Eater(e, John) \wedge Eaten(e, x)))$
12. nobody eats a bagel  
 $\exists e \exists x \exists y.(Eat(e) \wedge Eater(e, x) \wedge Bagel(y) \wedge Eaten(e, y))$

13. a person does not eat

$$\exists x.(Person(x) \wedge \exists e.(Eat(e) \wedge Eater(e, x)))$$

14. Jack does not eat or drink

$$(\exists e1.(Eat(e1) \wedge Eater(e1, Jack)) \mid \exists e2.(Drink(e2) \wedge Drinker(e2, Jack)))$$

15. no student eats a bagel

$$\forall x(Student(x) \rightarrow \exists e \exists y.(Eat(e) \wedge Eater(e, x) \wedge Bagel(y) \wedge Eaten(e, y)))$$