

We are to translate QL expressions into natural English, using the following interpretation:

The domain of discourse is people

'm' stands for Socrates

'n' stands for Plato

'F' means ... *is wise*,

'G' means ... *is a philosopher*

'L' means ... *loves ...*,

We will proceed via stilted translations as a half-way house:

- 1      $(Fn \supset \exists x Fx)$ 
  - ⇒ If Plato is wise then there is someone  $x$  such that  $x$  is wise
  - ⇒ If Plato is wise then someone is wise.
  
- 2      $\exists y(Gy \wedge Fy)$ 
  - ⇒ There is someone  $y$  such that  $y$  is a philosopher and  $y$  is wise
  - ⇒ Some philosopher is wise
  
- 3      $\exists x(Gx \wedge Lmx)$ 
  - ⇒ There is someone  $x$  such that  $x$  is a philosopher and Socrates loves  $x$
  - ⇒ Socrates loves some philosopher
  
- 4      $\forall x(Gx \wedge Lmx)$ 
  - ⇒ Everyone  $x$  such that  $x$  is a philosopher and Socrates loves  $x$
  - ⇒ Everyone is a philosopher loved by Socrates
  
- 5      $\forall x(Gx \supset Lmx)$ 
  - ⇒ Everyone  $x$  such that, if  $x$  is a philosopher, then Socrates loves  $x$
  - ⇒ Everyone who is a philosopher is loved by Socrates
  - ⇒ Socrates loves every philosopher
  
- 6      $\exists x \neg(Fx \wedge Lxn)$ 
  - ⇒ Someone  $x$  is such that it isn't the case that  $x$  is wise and  $x$  loves Plato
  - ⇒ Someone isn't a wise lover of Plato
  
- 7      $\neg \exists x(Fx \wedge Lxn)$ 
  - ⇒ It isn't the case that there is someone  $x$  such that  $x$  is wise and  $x$  loves Plato
  - ⇒ No-one  $x$  is such  $x$  is wise and  $x$  loves Plato
  - ⇒ No-one wise loves Plato
  
- 8      $(Fn \wedge \forall x Lxn)$ 
  - ⇒ Plato is wise and everyone  $x$  is such that  $x$  loves Plato
  - ⇒ Plato is wise and everyone loves him
  
- 9      $\exists y(Fy \wedge \forall x Lxy)$ 
  - this says of someone what (8) says of Plato*
  - ⇒ There is someone wise such that everyone loves him
  - ⇒ There is someone wise who is loved by everyone
  
- 10     $\forall z(Lzm \equiv Lnz)$ 
  - ⇒ Everyone  $z$  is such that  $z$  loves Socrates if and only if Plato loves  $z$
  - ⇒ Plato loves all and only those who loves Socrates

- 11  $(Gn \supset \exists z Lnz)$   
 $\Rightarrow$  If Plato is a philosopher then he loves someone
- 12  $(Gn \supset \exists z (Lnz \wedge Fz))$   
 $\Rightarrow$  If Plato is a philosopher then he loves someone who is wise
- 13  $\forall y (Gy \supset \exists z (Ly z \wedge Fz))$   
*this says of everyone what (12) says of Plato*  
 $\Rightarrow$  Everyone is such that, if s/he is a philosopher, then s/he loves someone who is wise  
 $\Rightarrow$  Every philosopher loves someone wise.
- 14  $\exists z (Fz \wedge \forall y (Gy \supset Lyz))$   
 $\Rightarrow$  There is someone  $z$  such that  $z$  is wise and everyone  $y$  is such that, if  $y$  is a philosopher, then  $y$  loves  $z$   
 $\Rightarrow$  There is someone  $z$  such that  $z$  is wise and every philosopher loves  $z$   
 $\Rightarrow$  There is someone wise whom every philosopher loves