

$$5. \forall x ((M_x \wedge C_{xp}) \rightarrow D_x)$$

$$6. \neg \exists x (M_x \wedge C_{xp})$$

7.  $\exists y \forall z$  There exists a female sibling of Jane who has a female daughter.

$$\exists y \forall z (\text{female}(z) \wedge S_{yz} \wedge F_z \wedge C_{yz})$$

$$8. M_p \wedge S_{pe}$$

$$9. \forall x ((M_x \wedge S_{xp}) \rightarrow \neg \exists y (F_y \wedge C_{yx}))$$

10. OR there exists a child of someone who has a child and is the sibling of Jane. An Jane is female.

$$\exists x (\exists y (C_{yx} \wedge S_{xy}) \wedge F_y)$$

OR OR: there exists a child of someone who is the sibling of Jane.

$$\exists x \exists y (\exists z (C_{xzy} \wedge S_{yz}) \wedge F_z)$$

$$11. \forall x (D_x \rightarrow \exists y (M_y \wedge S_{yx} \wedge D_y))$$

$$12. \forall x ((F_x \wedge D_x) \rightarrow \exists y (D_y \wedge C_{xy}))$$