

## Chapter 2.10

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- 1 This is the Herbrand problem I did in class.
  - The Herbrand universe for  $L$  is just  $A = \{c, R\}$ .
  - Possible Herbrand structure:  $S = \{\{c\}, \{R^A(t_1) = R(t_1)\}, \{c^A = c\}\}$ .
  - Given the set  $S = \{R(c), \exists x \neg R(x)\}$  show that it has no Herbrand model. Well, since it only has one individual, there is only one individual to provide for the  $\exists x \neg R(x)$ . That would give us  $S = \{R(c), \neg R(c)\}$ , which obviously has no model.