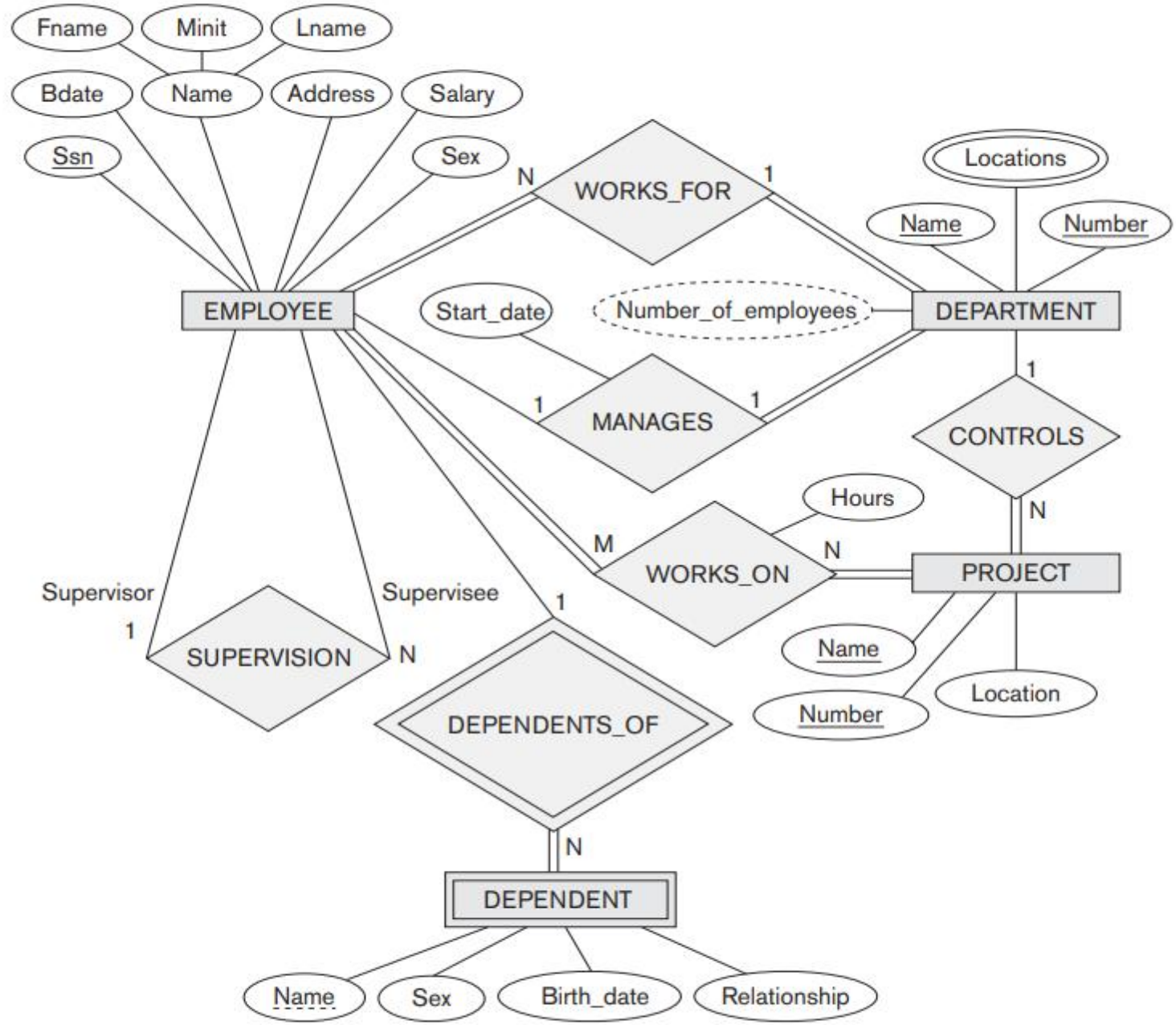
Figure 9.1
The ER conceptual schema diagram for the COMPANY database.



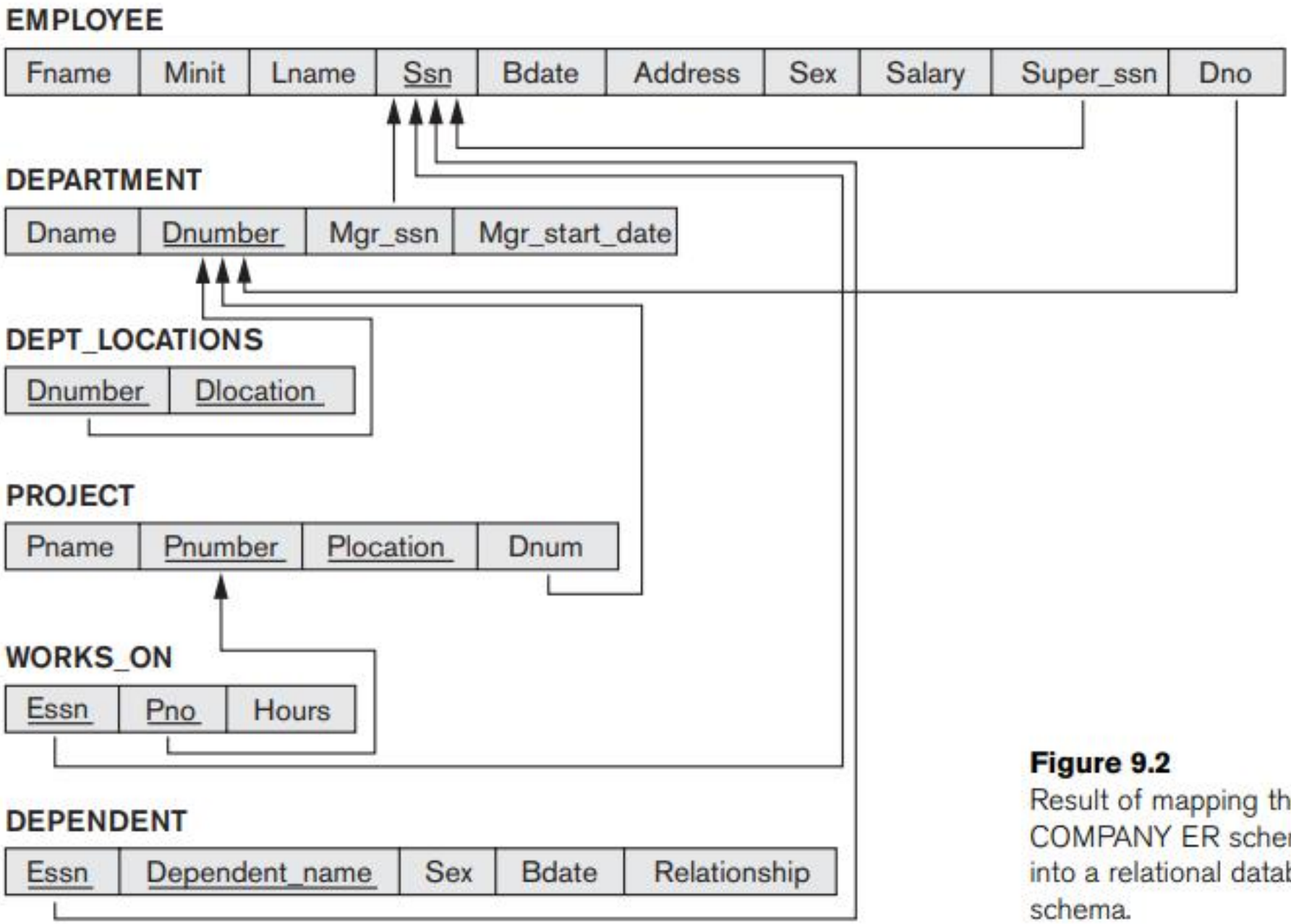


Figure 9.2
Result of mapping the COMPANY ER schema into a relational database schema.

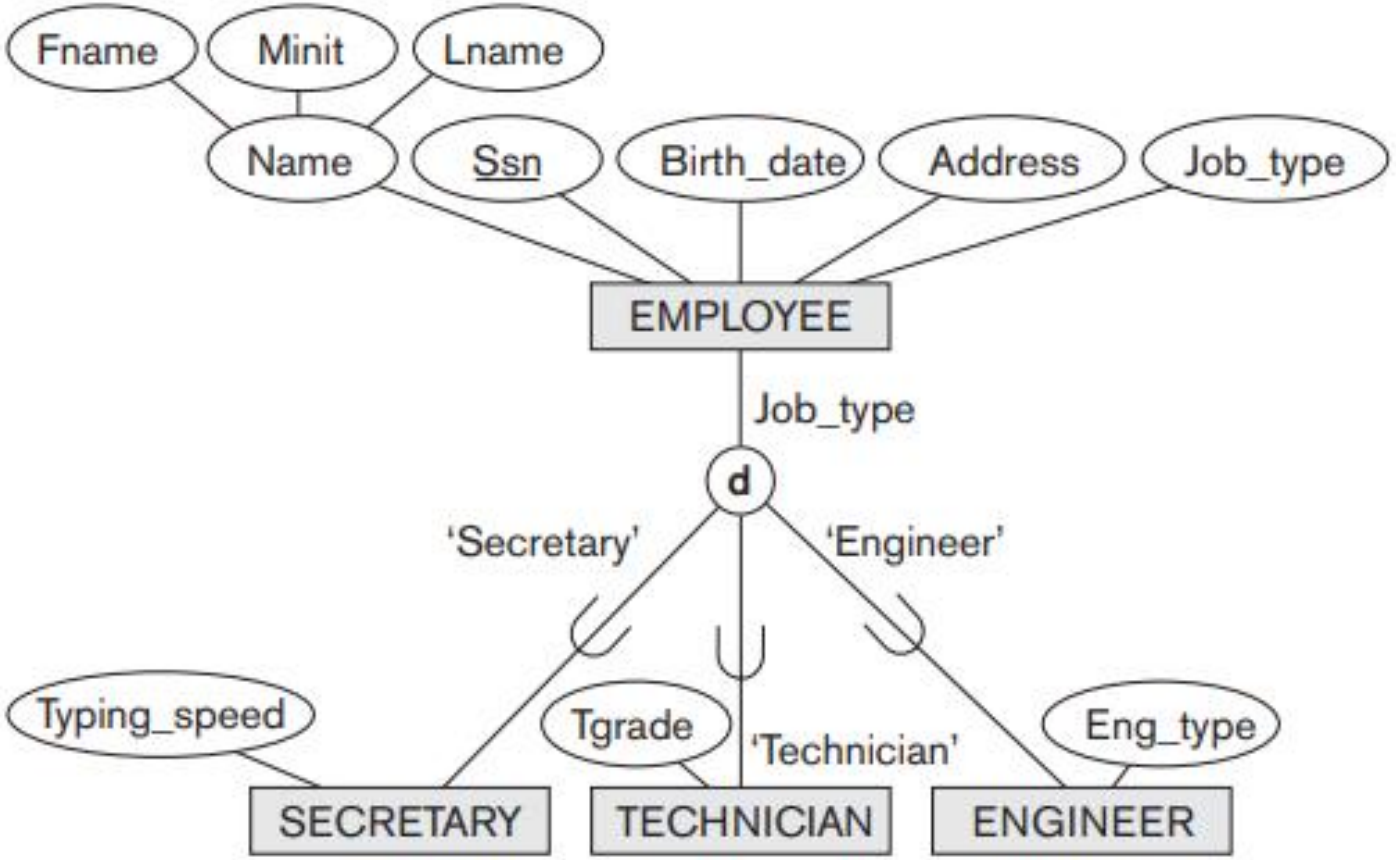


Figure 8.4
EER diagram notation for an attribute-defined specialization on Job_type.

[6]Such an attribute is called a *discriminator* in UML terminology.

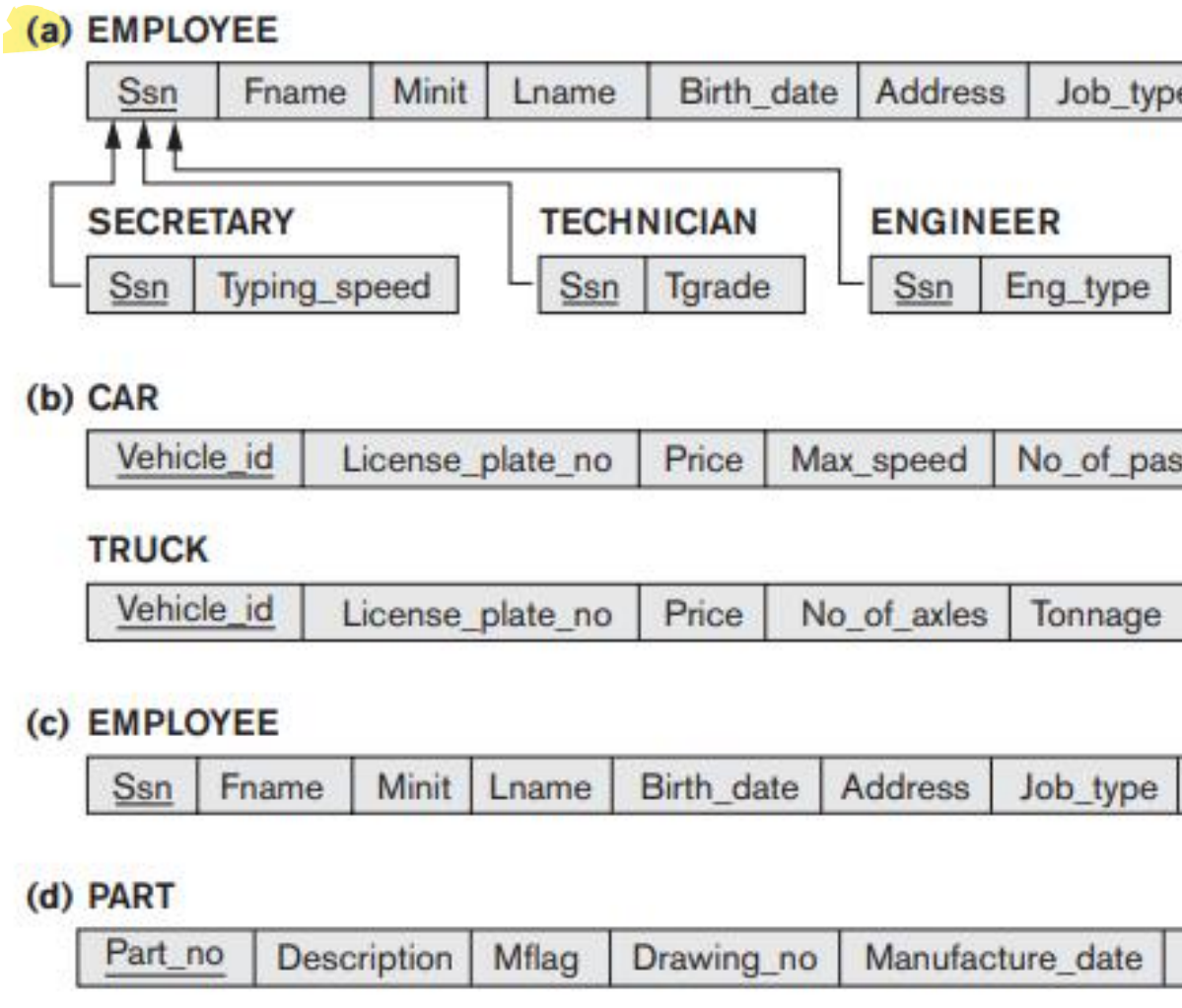


Figure 9.5
Options for mapping specialization or generalization. (a) Mapping the EER schema in Figure 8.4 using option 8A. (b) Mapping the EER schema in Figure 8.3(b) using option 8B. (c) Mapping the EER schema in Figure 8.4 using option 8C. (d) Mapping Figure 8.5 using option 8D with Boolean type fields Mflag and Pflag.

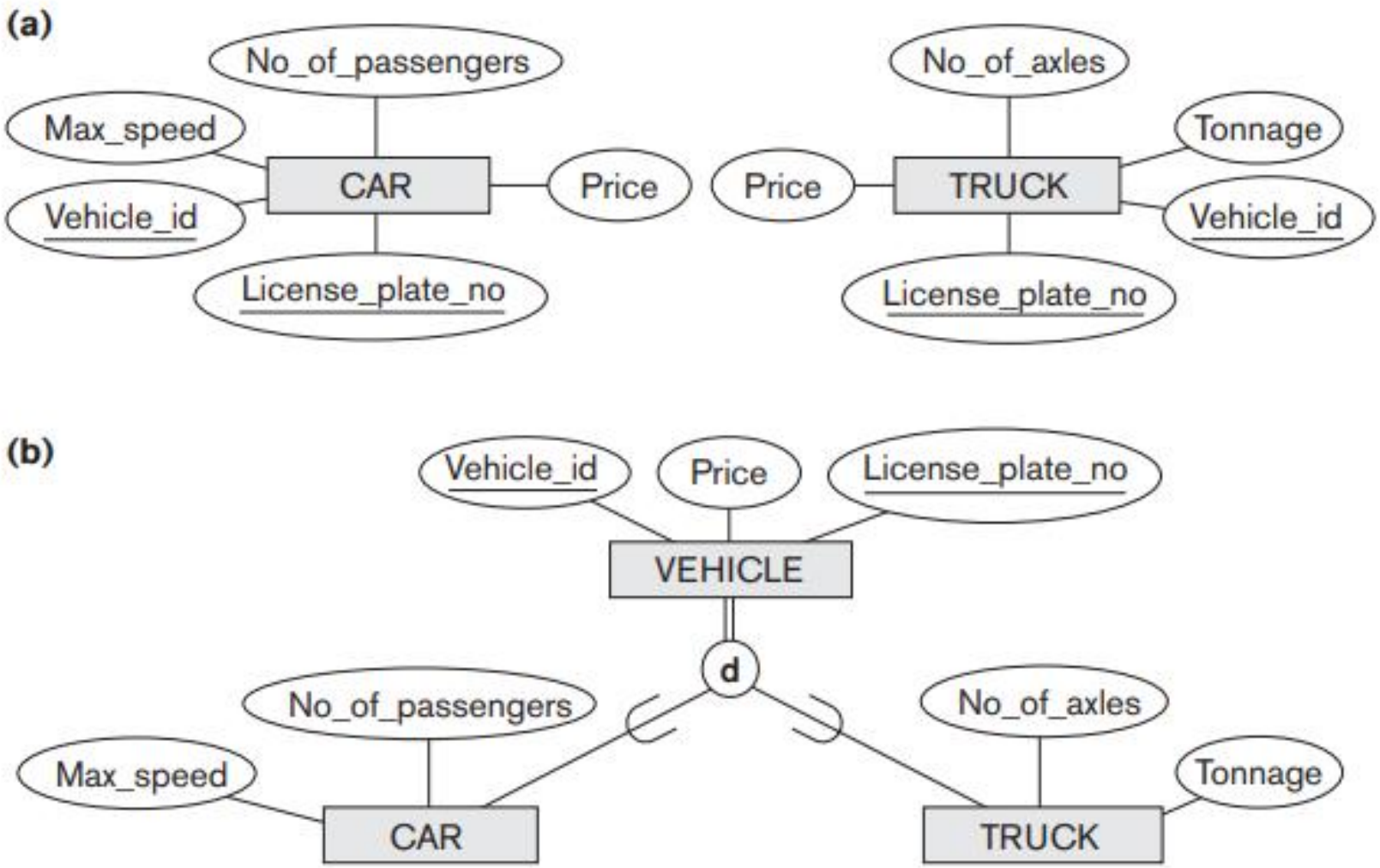


Figure 8.3
Generalization. (a) Two entity types, CAR and TRUCK. (b) Generalizing CAR and TRUCK into the superclass VEHICLE.

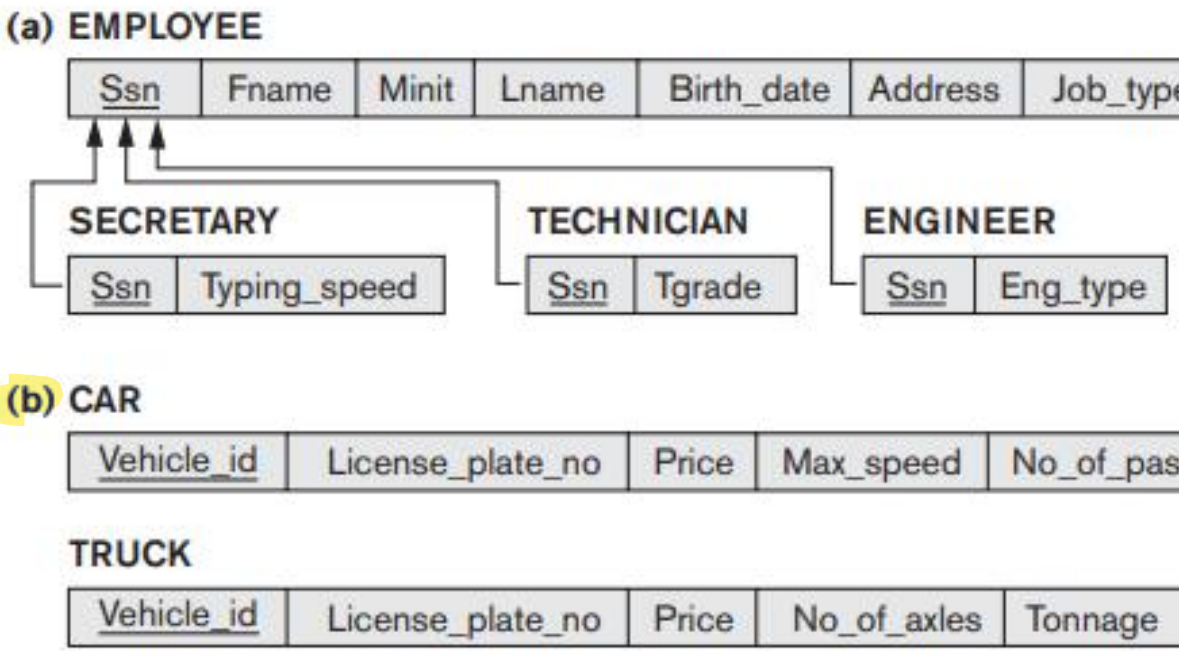
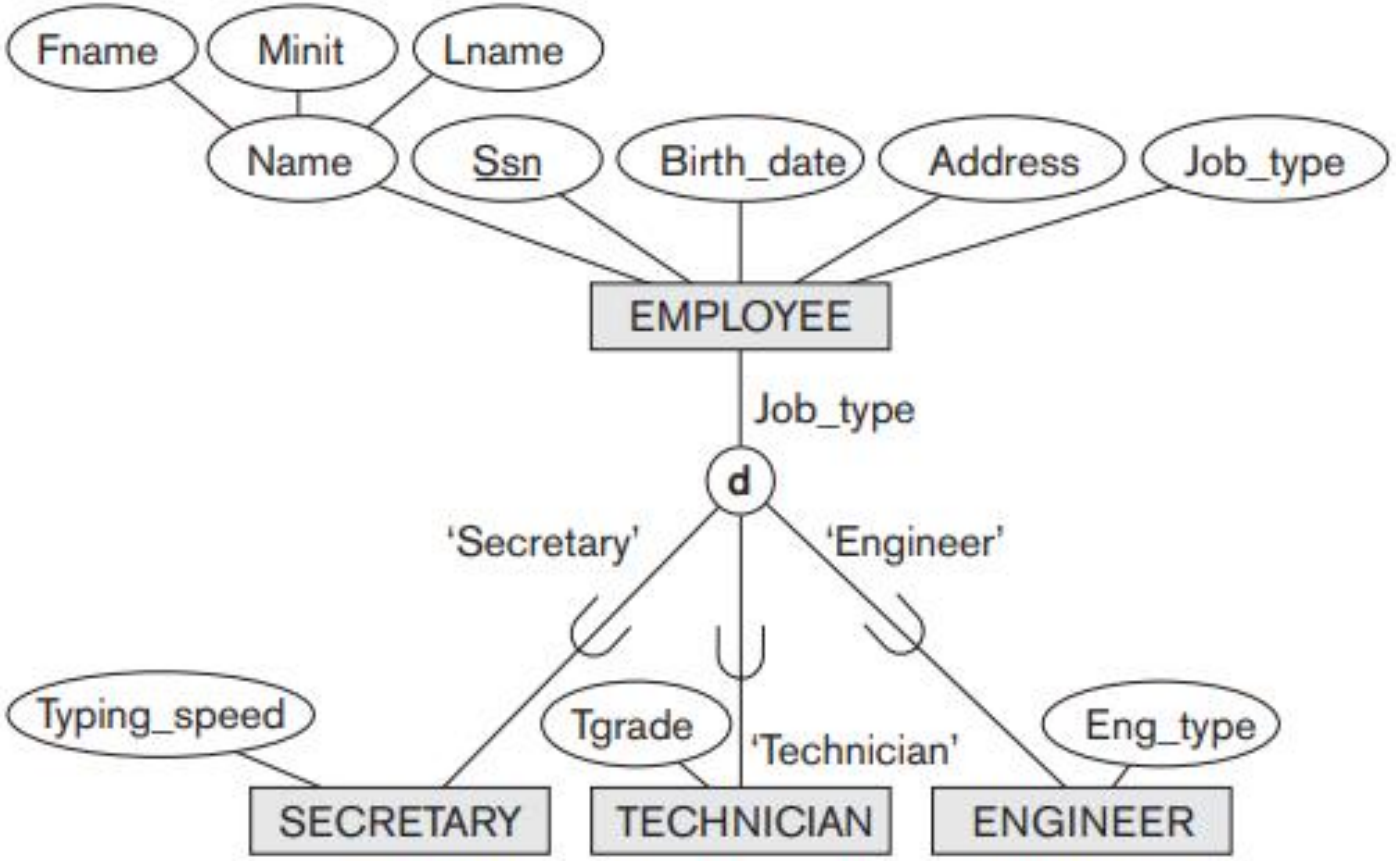


Figure 9.5
Options for mapping specialization or generalization. (a) Mapping the EER schema in Figure 8.4 using option 8A. (b) Mapping the EER schema in Figure 8.3(b) using option 8B. (c) Mapping the EER schema in Figure 8.4 using option 8C. (d) Mapping Figure 8.5 using option 8D with Boolean type fields Mflag and Pflag.

For Single relation - one type attribute

Figure 8.4
EER diagram notation for an attribute-defined specialization on Job_type.



[6]Such an attribute is called a *discriminator* in UML terminology.

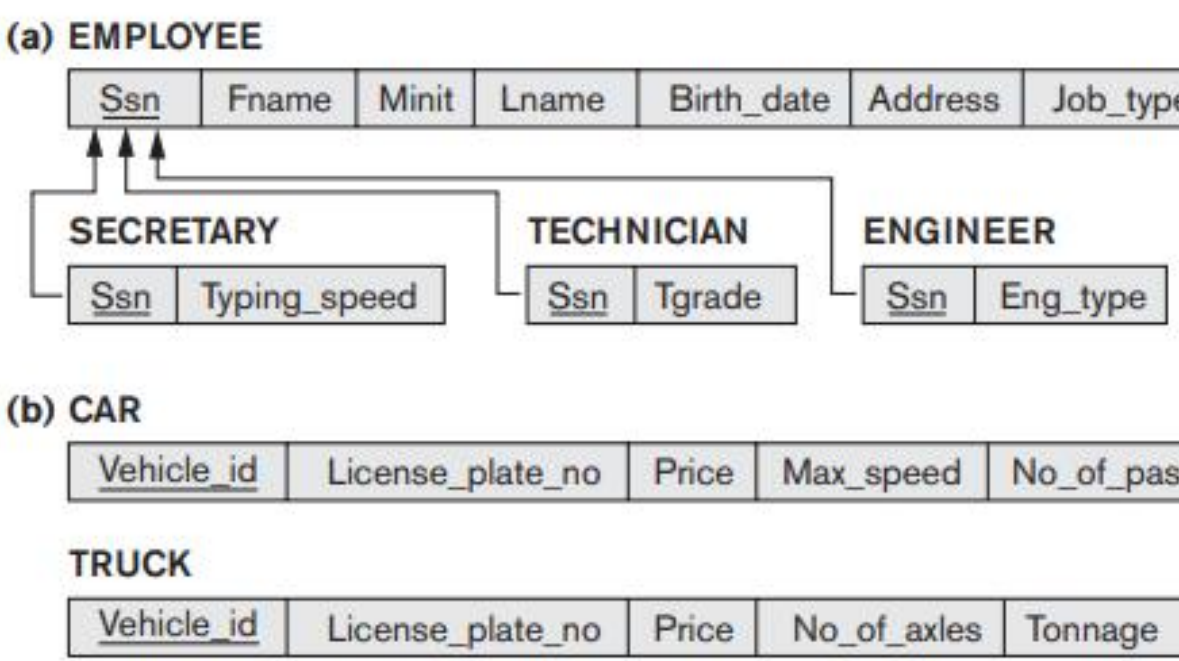


Figure 9.5
Options for mapping specialization or generalization. (a) Mapping the EER schema in Figure 8.4 using option 8A. (b) Mapping the EER schema in Figure 8.3(b) using option 8B. (c) Mapping the EER schema in Figure 8.4 using option 8C. (d) Mapping Figure 8.5 using option 8D with Boolean type fields Mflag and Pflag.

Single Relation - Multiple type attributes

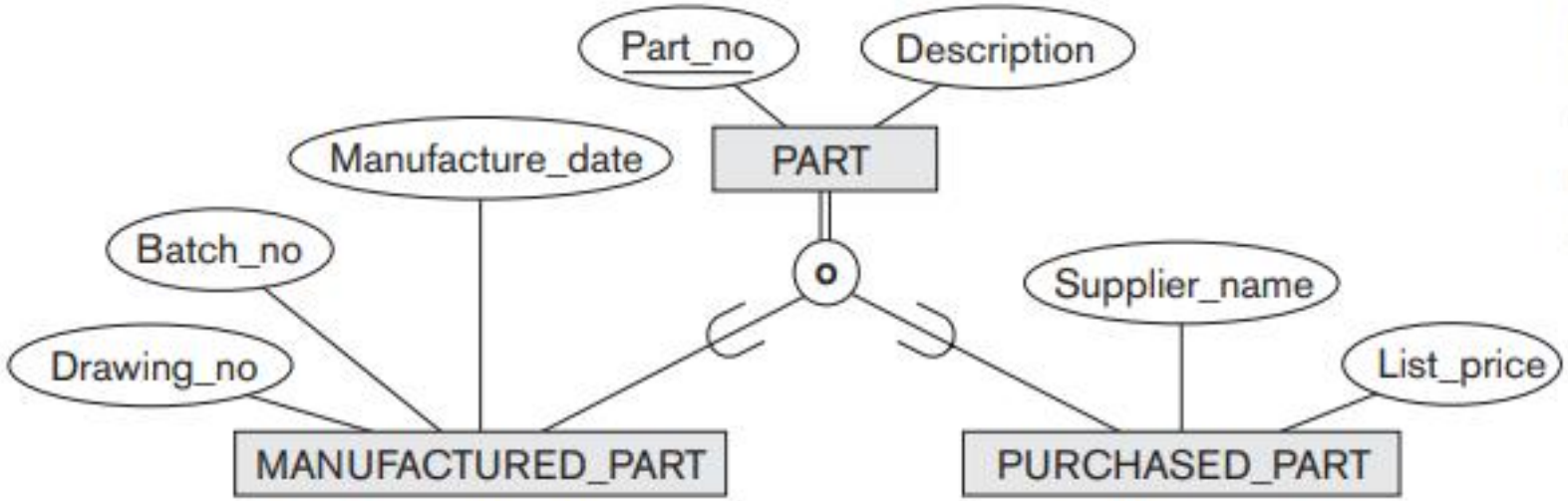


Figure 8.5
EER diagram notation for an overlapping (nondisjoint) specialization.

[7]The notation of using single or double lines is similar to that for partial or total participation of an entity type in a relationship type, as described in Chapter 7.

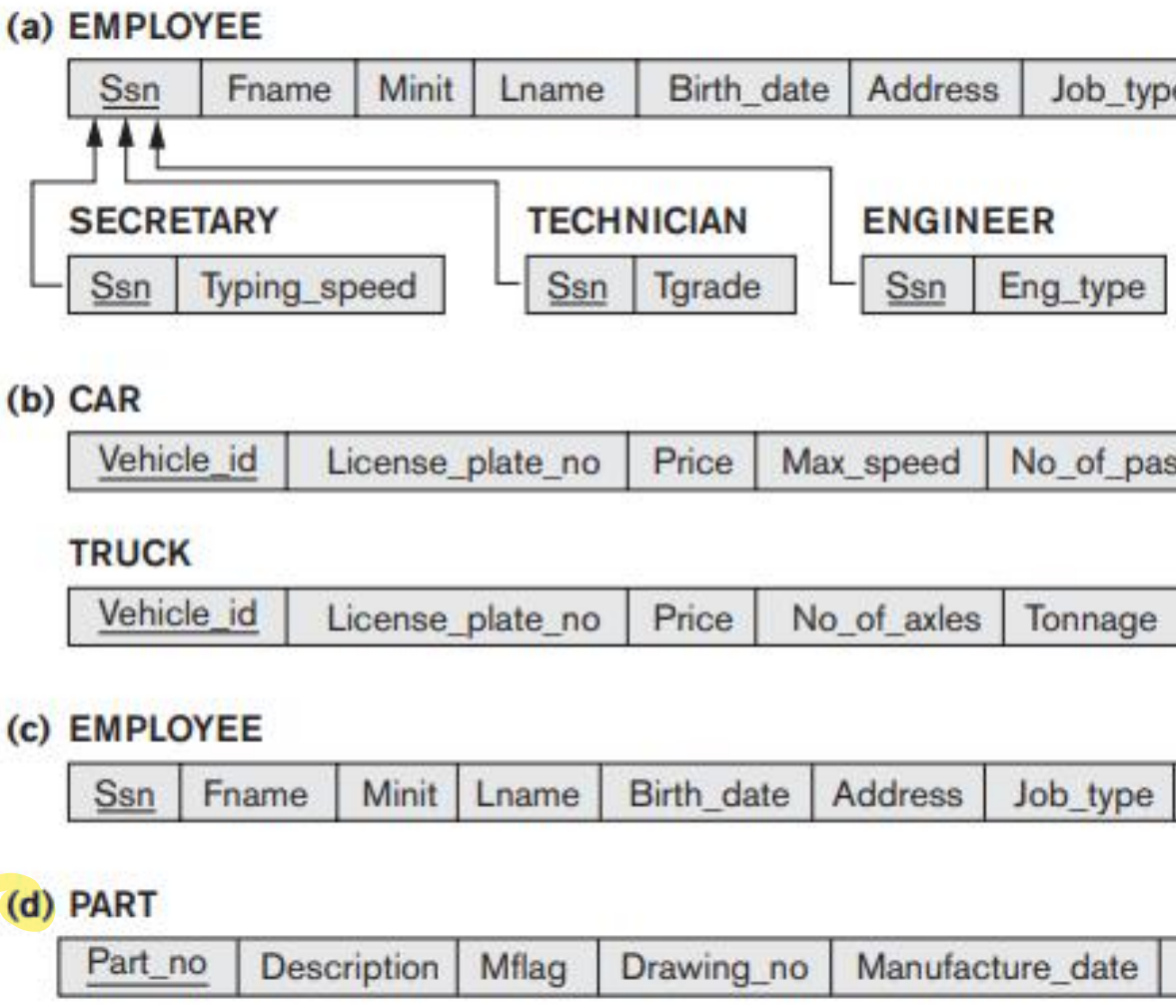
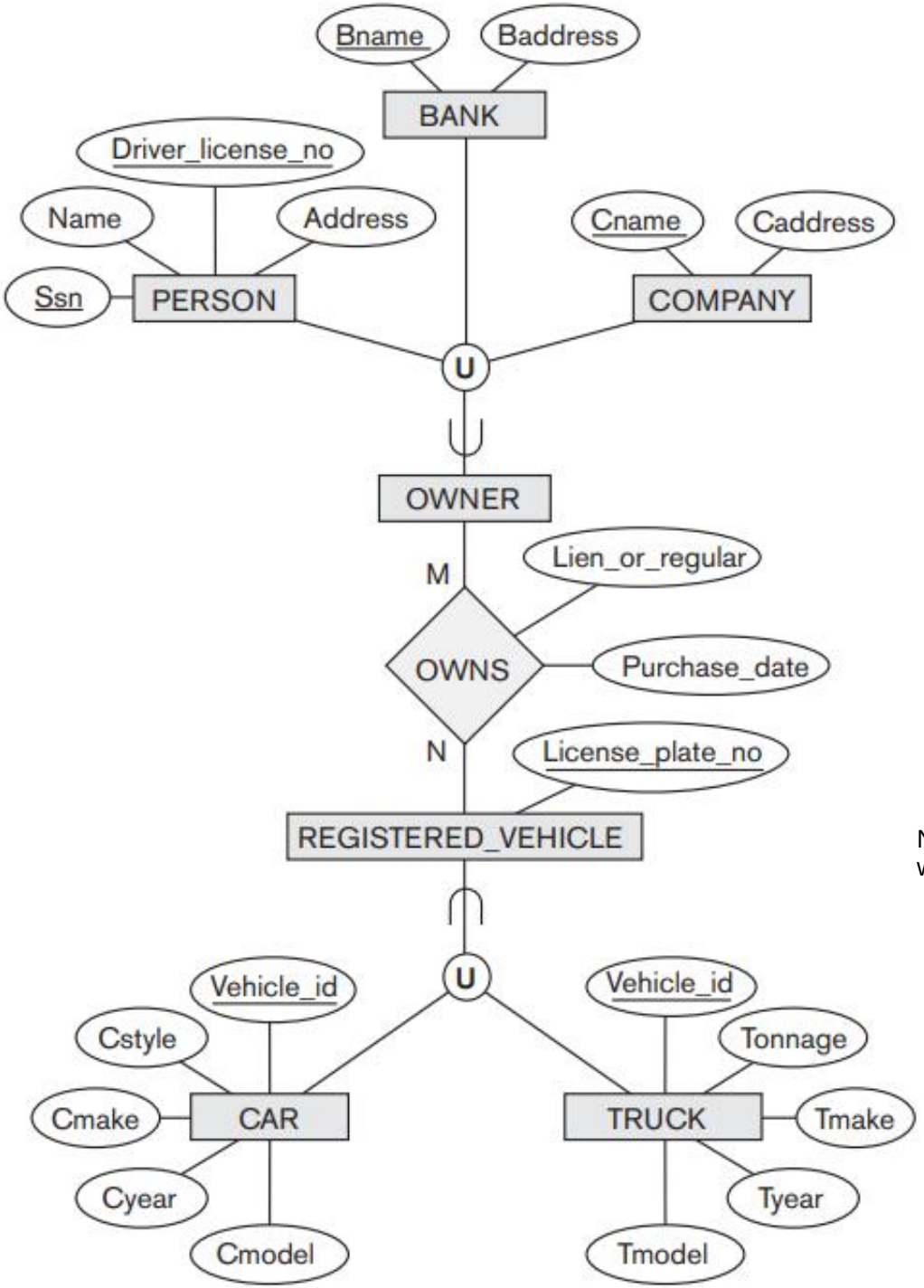


Figure 9.5
Options for mapping specialization or generalization. (a) Mapping the EER schema in Figure 8.4 using option 8A. (b) Mapping the EER schema in Figure 8.3(b) using option 8B. (c) Mapping the EER schema in Figure 8.4 using option 8C. (d) Mapping Figure 8.5 using option 8D with Boolean type fields Mflag and Pflag.

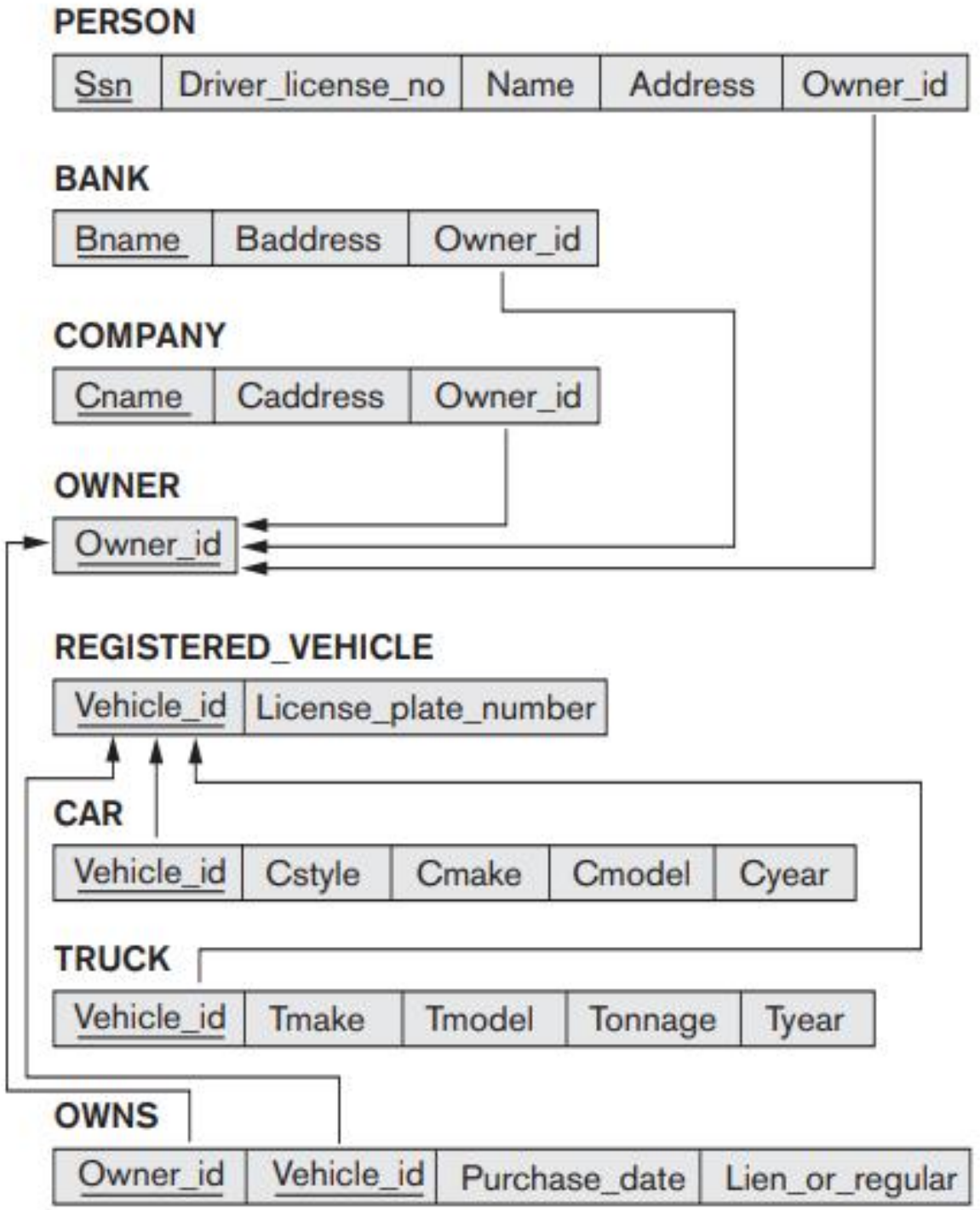
Representation of union with multiple Parent classes with different primary keys



Note that REGISTERED_VEHICLE does not have parents with different primary keys.

Figure 8.8
Two categories (union types): OWNER and REGISTERED_VEHICLE.

Figure 9.7
Mapping the EER categories (union types) in Figure 8.8 to relations.



No need for surrogate key for CAR and TRUCK because they have the same primary key.

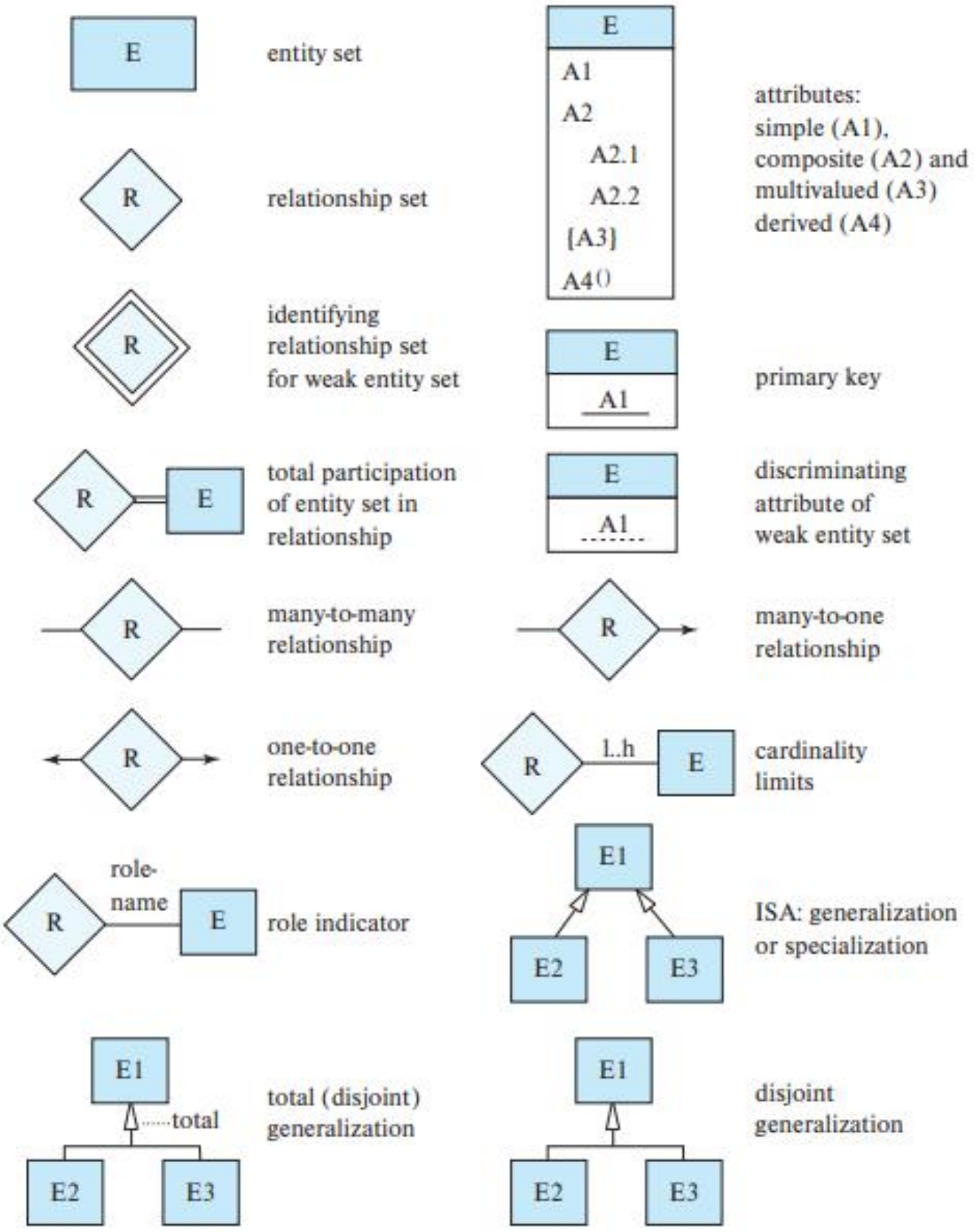


Figure 6.26 Symbols used in the E-R notation.

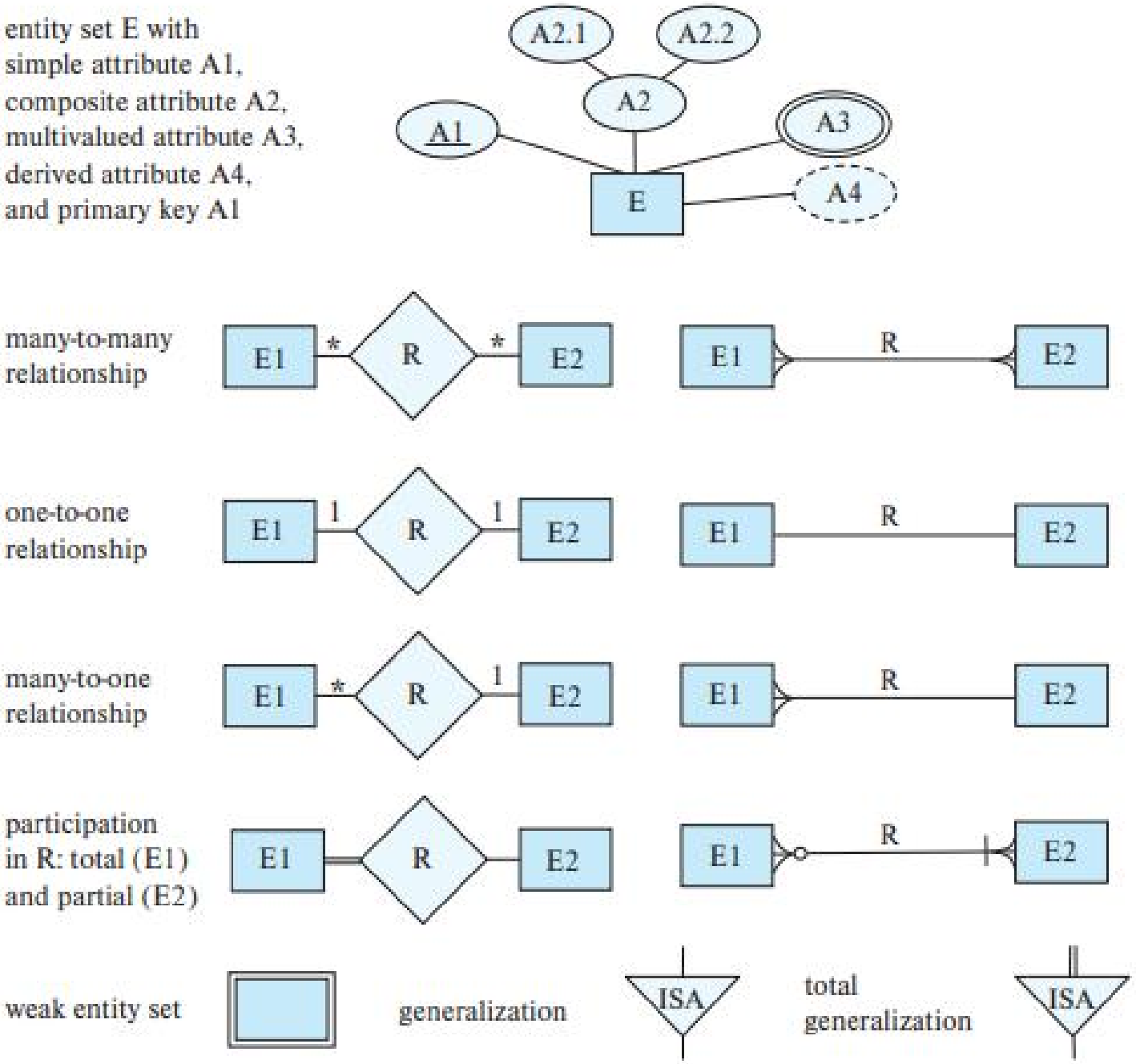


Figure 6.27 Alternative E-R notations.

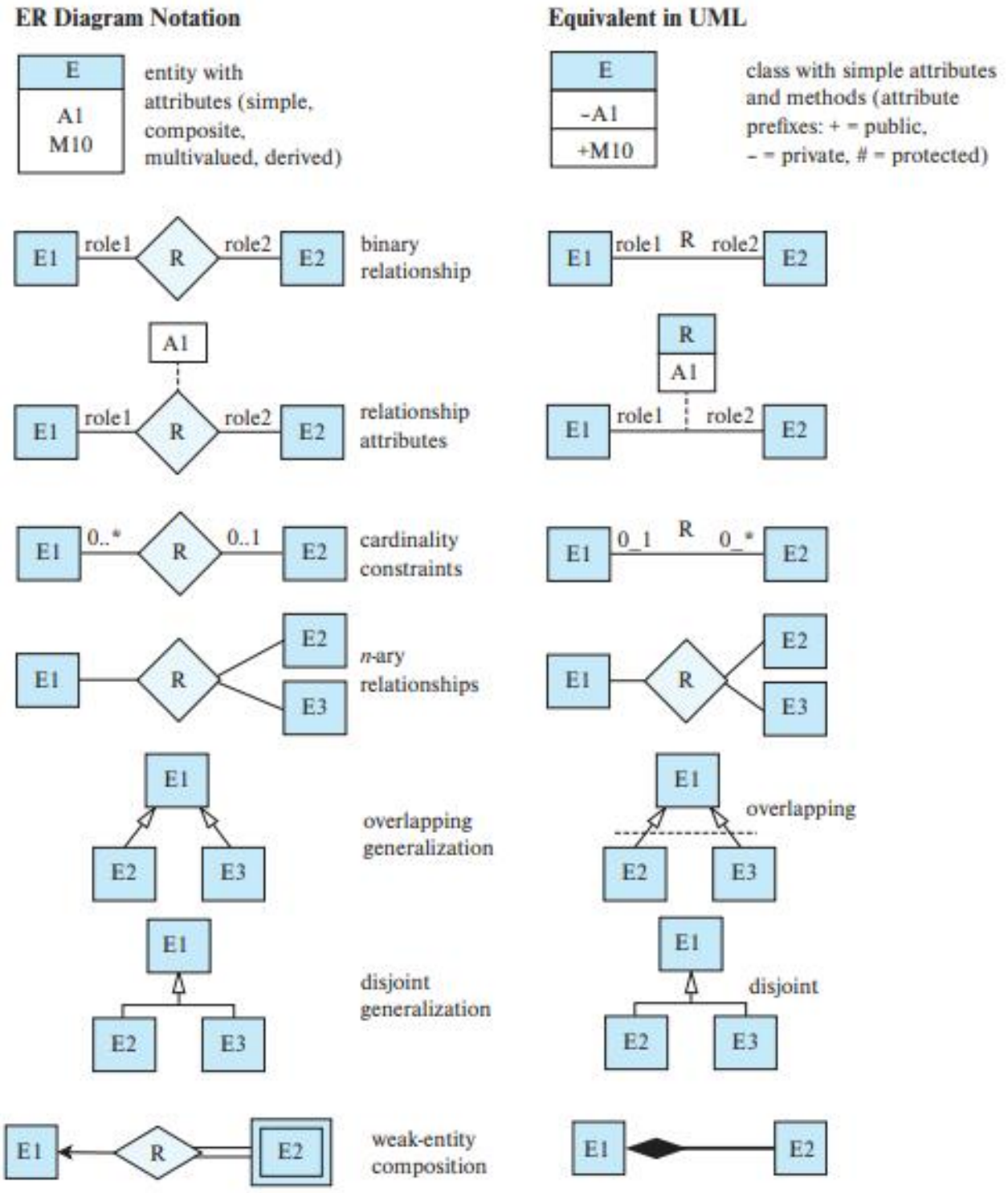


Figure 6.28 Symbols used in the UML class diagram notation.