

## Fox Module 14 Modeling interactions

- Interaction regressors
- Principle of marginality

Read Section 7.3, “Modeling interactions,” on pages 131-132; this is an introduction.

Read Section 7.3.1, “Constructing interaction regressors,” on pages 132-135. Figure 7.9 on page 134 is the male-female illustration from the previous module, with more rigor.

Read Section 7.3.2, “Principle of marginality,” on page 135 and Section 7.3.3, “Interactions with polytomous factors,” on pages 135-136. Figure 7.10 on page 134 is an illustration.

Actuarial work focuses on these interactions.

*Illustration:* Young driver have higher claim frequencies than adult drivers, men have higher claim frequencies than women, and single persons have higher claim frequencies than married persons. These class dimensions interact. Young unmarried male drivers have very high claim frequencies. Adult men are not that different from adult women, and young women are not that different from adult women.