[Notes for Week 3. Suggested background reading: Pfleeger & Pfleeger (4.1, 4.3), Blakley (Chap. 1, Chap. 5), Ferraiolo, Kuhn, Chandramouli (1.2, 1.4)]

*Foundations of Modern Security – Access Control*

History
- No OS; then “executives”; then “monitors”
- The concept of “protection”:
  - Separation (4 types)
  - Controlled sharing (3 types)
- Networking changes the picture in 2 major ways
  - Increases the number of attackers
  - Decreases the number of protection mechanisms

Clarify the scope of the discussions for this course

Protected resources: resources for which policies have been defined
- (Very brief) history of the notion of an AC policy

A major goal in AC research has been to make policy representations more expressive and more efficient
- On the efficiency front, a well-known example is RBAC
Original formal description of RBAC

Efficiency of RBAC

Generalizations of RBAC (for even greater efficiency)
- Example of savings that may be achieved

What else is needed in order for something like RBAC to be successful?
- Introduction to the notion of a Privilege Management Infrastructure / Authorization Architecture