Election Theory

Preference Schedule: a ranking of preferences for an individual or group

Plurality: receiving the most votes

Majority: receiving more than half of the votes

Runoff: When no majority, voting is recalculated using only the top two choices.

Sequential Runoff: When no majority, voting is recalculated after removing the lowest choice. This is repeated until a majority is reached.
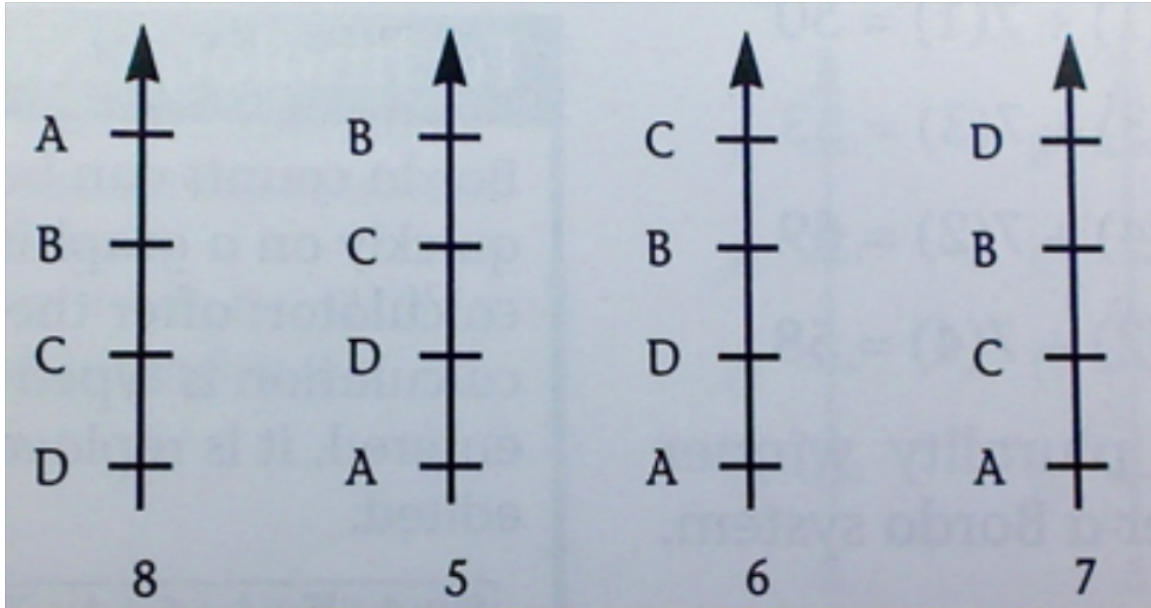
Election Theory, cont.

Borda Count: Ranked choices are given values from highest to lowest which are then totaled.

Pairwise voting: comparing two choices at a time

Condorcet Method: Using ranked choices, compare choices pairwise to get a unanimous winner.

Approval Voting: voting for all (as many or as few) the choices that you approve of
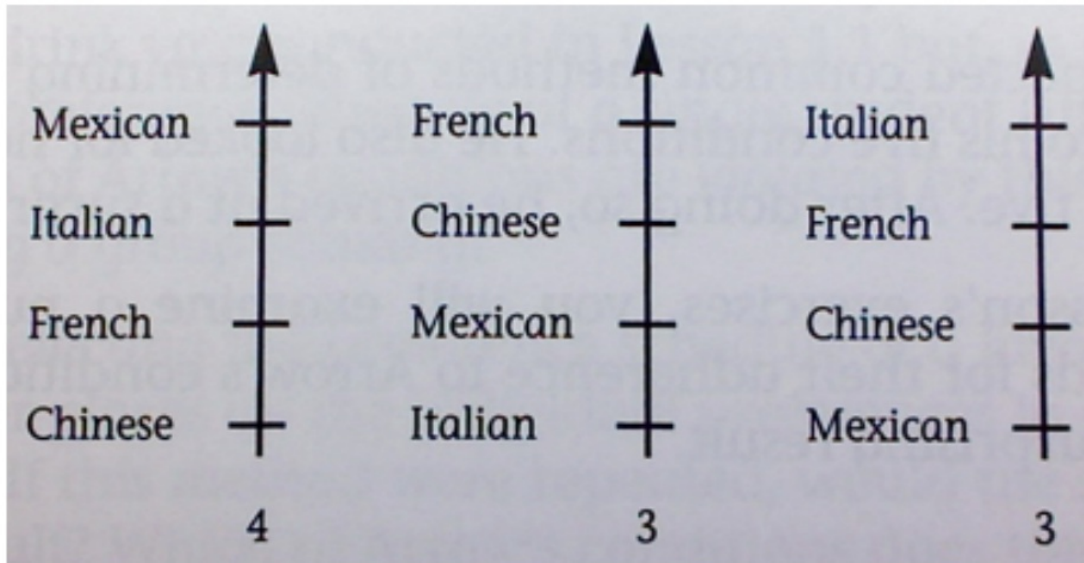
A	B	C	D
B	C	B	B
C	D	D	C
D	A	A	A
8	5	6	7

Plurality:

Majority:

Runoff:

Sequential Runoff:

Borda:

Condorcet:

Approval:

Pairwise Voting

Mexican	French	Italian
Italian	Chinese	French
French	Mexican	Chinese
Chinese	Italian	Mexican
4	3	3

F **I**	**I** **M**	**M** **C**
3 4	3 4	4 3
3	3	3
3-7	3-7	4-6

C > M > I > F
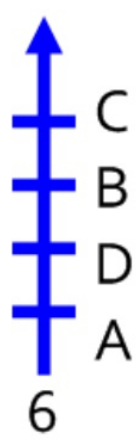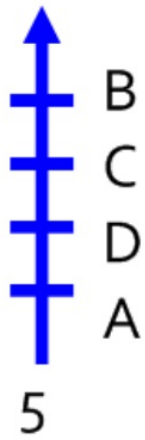
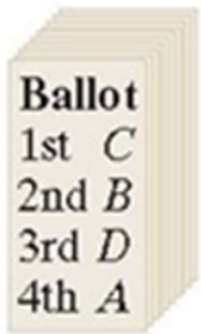| 8	5	6	7
A	B	C	D
B	C	B	B
C	D	D	C
D	A	A	A

Plurality:

Majority:

Runoff:

Sequential Runoff:

Borda:

Condorcet:

Approval:
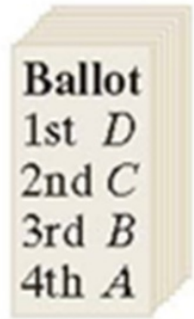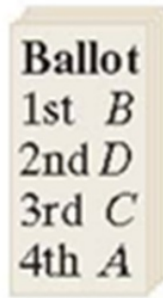
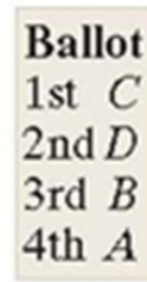| Ballot	Ballot	Ballot	Ballot	Ballot
1st A	1st C	1st D	1st B	1st C
2nd B	2nd B	2nd C	2nd D	2nd D
3rd C	3rd D	3rd B	3rd C	3rd B
4th D	4th A	4th A	4th A	4th A
14	10	8	4	1

Plurality:

A, 14

B, 4

C, 11

D, 8

Majority:

Runoff:

A, 14
C, 11+4+ 8=
23

Sequential Runoff:

A, 14
C, 11
D,
8+4=12+11
23

Borda:

A: 42
B: 28,20,8,12,1
=69
C: 14,30,16,4,3
=67
D:10,24,8,2=44

Condorcet:

AB,14-23

BC, 19-18

CD,

Approval:

Arrow's Conditions
(for fair group ranking)

1. Nondictatorship: one person's vote should not be considered above group's vote.

2. Individual Sovereignty: everyone should be able to rank and indicate ties.

3. Unanimity: if all prefer something, the group should also.

4. Freedom from Irrelevant Alternatives: if a choice is removed, the order should not change.

5. Uniqueness of Group Ranking: the method used should always produce same result with given preferences