

Problem Set 1:

Handed out September 7, 2006

Due September 19, 2006

STUDENT ID NUMBER: _____

Please do NOT place any other identifying information on this sheet or on any sheets which you may attach. It would be wise to keep a copy of your answers.

Please show all work necessary to reach your answer. You may attach sheets, typed or handwritten, to this sheet, or write on the back of these sheets.

1) The “**Borda Count**” procedure is described in Dixit and Skeath (2nd Edition, pg. 503), as “an improvement on plurality rule... points are assigned to each alternative on the basis of its position on each voter’s ballot.” This scoring system is much like that used in international track competitions, in some stock proxy voting systems, in baseball Cy Young voting, and in college football rankings. Under the Borda Count, each voter expresses a personal preference over the X alternatives by awarding X points to the first choice, X-1 to the second choice, and so on through the last choice.”

a) Using the preferences below, find the **social preference ranking** among the four alternatives (A, B, C, X) using the Borda Count procedure.

Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 6	Voter 7
A	B	C	A	B	C	A
B	C	X	B	C	X	B
C	X	A	C	X	A	C
X	A	b	X	A	B	X

b) Suppose that alternative X is eliminated, what is the social preference ranking now (again using the Borda Count)?

c) What does the implication of this result for the Borda Count as a mechanism for translating the preferences of rational individuals into a coherent group preference?

2) Consider the strategic games described below. In each case, say how you would classify the game according to the six dimensions described in Dixit and Skeath (chapter 2, section 1, either edition): sequential or simultaneous; whether the game is zero sum; whether the game is repeated; whether there is full information; whether the rules are fixed; and whether cooperative agreements are possible. If you do not have enough information to classify a game in a particular dimension, just circle DK.

- a) Rock-paper-scissors: on the count of three, each player makes the shape of one of the three items with his hand. Rock smashes scissors; scissors cuts paper; paper covers rock.

Sequential	simultaneous	DK
Zero sum	Not zero sum	DK
Repeated	One-shot	DK
Full info	Not full info	DK
Fixed rules	Not fixed	DK
Cooperative	Not Cooperative	DK

- b) Roll call voting: Voters cast their ballots orally as their names are called. If the “yeas” are more than the “nays” than the proposal wins.

Sequential	simultaneous	DK
Zero sum	Not zero sum	DK
Repeated	One-shot	DK
Full info	Not full info	DK
Fixed rules	Not fixed	DK
Cooperative	Not Cooperative	DK

- c) Sealed Bid auction: Bidders seal their bids in envelopes for a bottle of wine. The highest bidder wins the item and pays his or her bid.

Sequential	simultaneous	DK
Zero sum	Not zero sum	DK
Repeated	One-shot	DK
Full info	Not full info	DK
Fixed rules	Not fixed	DK
Cooperative	Not Cooperative	DK

3) Arrow's theorem (Shepsle and Bonchek p. 67) states that there exists no mechanism for translating the preferences of rational individuals into a coherent group preference that simultaneously satisfies the STUPID conditions.

Consider the examples listed below. Name at least one STUPID condition that they violate, if they violate any, and say why.

a) Plurality voting. Consider an election with three or more candidates. Under plurality voting, an individual votes casts a ballot for a single candidate, and the candidate receiving a plurality (the most number) of votes wins the election.

Violates Condition: _____

Explanation:

b) The Hold. In the US Senate, individual Senators are allowed to issue a "hold" on a bill, measure, or nomination. Although the Majority Leader is not bound to follow the Senator's wishes, the informal procedure is that a "hold" stops legislative action on the measure.

Violates Condition: _____

Explanation:

c) Amendment procedure. A bill is proposed to change health care policy. House member A proposes an amendment to the health care bill. The Congress votes on the amendment, which wins. The Congress then votes on the amended bill, which loses.

Violates Condition: _____

Explanation:

4) Using the 2004 American National Election study at sda.berkeley.edu, fill in the blanks:

a) How many respondents were in the survey (what is the "total cases")? _____

b) How many respondents reported their racial or ethnic group as "Black and White"? _____

c) What percentage of respondents in the post election survey said they voted? _____

d) What percentage of respondents thought that the phrase "he provides strong leadership" described George W. Bush "extremely well"? _____

e) What percentage thought "strong leadership" described John Kerry extremely well? _____