



ITESCO

United Nations Educational, Scientific

and Cultural Organization



SMR.1676 - 19

8th Workshop on Non-Linear Dynamics and Earthquake Prediction

3 - 15 October, 2005

Socio - Economic Predictions Part II

Vladimir I. Keilis-Borok Russian Academy of Sciences International Inst. of Earthquake Prediction Theory and Matematical Geophysics Warshavskoye Sh. 79. Kor2 117556 Moscow Russian Federation

and

Institutute of Geophysics and Planetary Physics & Department of Earth and Space Sciences University of California, Los Angeles, 405 Hilgard Ave., ICPP, Los Angles, CA 90095-1567 USA

These are preliminary lecture notes, intended only for distribution to participants

PREDICTION OF THE OUTCOME OF AMERICAN ELECTIONS (PRESIDENTIAL AND MIDTERM SENATORIAL)

* An electorate: a hierarchical system of interacting voting blocks.

* *Traditional concept:* elections are trials by battle.

- Strategy of a candidate is to attract maximum number of voting blocks while antagonizing a minimum number of other blocks.
 Outcome depends on tactics, sensations, etc.
- Doubts: 10⁸ 10⁷ of voters can't be so easily manipulated.
- Alternative concept:
 - Outcome depends on characteristics of society as a whole in the pre-election year.
 - Similarity: the same prediction rule applies year by year and (for senatorial elections) state by state.
 - Electoral choice: incumbent or challenging party, not Republican or Democratic.

	PRESIDENTIAL ELECTIONS
Pre - ele a questi re-elect	ection situation is described at the lowest (binary) level of resolution, as the answers to ionnaire. The 13 questions are formulated in such a way, that the answer <i>YES</i> favors the ion of the incumbent party. Prediction indicates the winner of <i>popular</i> vote.
Key 1:	(Party Mandate): After the midterm elections, the incumbent party holds more seats in the U.S. House of Representatives than it did after the previous midterm elections.
Key 2:	(Contest): There is no serious contest for the incumbent-party nomination.
Key 3:	(Incumbency): The incumbent-party candidate is the sitting president.
Key 4:	(Third party): There is no significant third-party or independent campaign.
Key 5:	(Short-term economy): The economy is not in recession during the election campaign.
Key 6:	(Long-term economy): Real per-capita economic growth during the term equals or exceeds mean growth during the previous two terms.
Key 7:	(Policy change): The incumbent administration effects major changes in national policy.
Key 8:	(Social unrest): There is no sustained social unrest during the term.
Key 9:	(Scandal): The incumbent administration is untainted by major scandal.
Key 10:	(Foreign/military failure): The incumbent administration suffers no major failure in foreign or military affairs.
Key 11:	(Foreign/military success): The incumbent administration achieves a major success in foreign or military affairs.
Key 12:	(Incumbent charisma): The incumbent-party candidate is charismatic or a national hero.
Key 13:	(Challenger charisma): The challenging-party candidate is not charismatic or a national hero.



DIVISION OF PRESIDENTIAL ELECTIONS (1860 - 1980) by the number of answers "NO" to the questionnaire (the Hamming's distance D from the kernel).

	0	1	2	3	4	5	6	7	8	9								
Predictions						2000*												
(published months in advance)			1984	1988	2004	1996	1992											
				1964					1980									
				1928					1976									
				1916					1968									
Learning				1908					1952									
			1944	1900	1972				1932									
		1956	1940	1872	1924	1948	1912	1884	1920	1960								
	1904	1936	1868	1864	1880	1888*	1892	1860	1896	1876*								
1904 years when incumbent won popular vote																		
1892 years when challenger won popular vote										years when challenger won popular vote								
* years when popular vote was reversed by electoral vote																		
Learning suggests the If five or fewer answers answers are <i>NO</i> , the ch	recog are <i>l</i> alleng	initio VO, th ging	n rule le inc party	e: umbe wins	ent pa	arty wi	ns; i	fsix	or m	ore								

MID-TERM SENATORIAL ELECTIONS

Pre-election situation is described at the lowest (binary) level of resolution, as the answers to a questionnaire. The questions are formulated in such a way, that the answers *YES* favor the re-election of the incumbent party. When four or fewer answers are *NO*, the incumbent party wins. When five or more answers are *NO*, the challenging party wins.

- Key 1: (Incumbency): The incumbent-party candidate is the sitting senator.
- Key 2: (Stature): The incumbent-party candidate is a major national figure.
- Key 3: (Contest): There is no serious contest for the incumbent-party nomination (the nominee wins at least two-thirds of the vote cast in the first primary).
- Key 4: (Party Mandate): The incumbent party won the seat with 60% or more of the vote in the previous election.
- Key 5: (Support): The incumbent-party candidate outspends the challenger by 10% or more.
- Key 6: (Obscurity): The challenging-party candidate is not a major national figure or a past or present governor or member of Congress.
- Key 7: (Opposition): The incumbent party is not the party of the president.
- Key 8: (Contest): There is no serious contest for the challenging-party nomination (the nominee gains a majority of the votes cast in the first primary and beats the second-place finisher at least two to one).



WHAT DID WE LEARN?

The meaning of the questions, included in the questionnaires, may be much broader than is suggested by their literal interpretation, capturing considerable information about the pre-election situation. For example, financial contributions in case of Senate not only provide the resources required for an effective campaign, but may also constitute a poll in which the preference are weighed by money attached.

Collective behavior. The finding that aggregate-level parameters can reliably anticipate the outcome of both presidential and senatorial elections points to a collective behavior that transcend the division of voters into interest and attitudinal groups - traditionally the focal point of electoral study. This finding shows that electoral behavior in the United States is highly integrated not only for the nation as a whole but also within the diverse American states.

Similarity. For each election year, in all states the outcomes of elections follows the same rules, no matter by how much the play of each game may change. Contrary to widespread beliefs the outcome of election does not depend directly on the ideologies candidates, the partisan division of the state's electorate into Republicans and Democrats, the issues raised in campaigns, the past tendency of states to reject or reelect incumbent parties, and campaign strategy and tactics.

A presidential election is determined by collective, integrated estimation of performance of incumbent administration during the previous four years. In case of senatorial elections the electorate has more diffused expectations of performance and puts more importance to political experience and status than in the case of presidential elections.

Senate incumbents unlike presidential ones do not suffer from a bad economy or benefit from a good one. (May be, rather than punishing the party holding a Senate seat for hard times, the voters may instead regard the incumbent party as a safe port in a storm).

