

SPECIFYING RELATIONSHIPS BETWEEN VARIABLES

Below are the nineteen "ordinary language" statements that you have seen before (in Problem Set #3A), plus two new ones (#20 and #21). Each asserts, at least implicitly, that there is an empirical *relationship* (or *association*, *correlation*, or *covariance*) between two variables. You have previously identified the two variables in each sentence and the units of analysis to which they pertain (PS #3A). You have also suggested how to measure several of the variables (PS #4). Now you are asked to distinguish between the *independent* and *dependent* variables (though it should be noted that, in several sentences, it is not entirely apparent from the language which is which) and, *where appropriate*, to indicate whether the asserted relationship can be characterized as *positive* or *negative* in *direction*. Please use this general diagramming format:

(INDEPENDENT VARIABLE) $\xrightarrow{\text{"+" or "-"}}$ (DEPENDENT VARIABLE)

1. Junior members of Congress are less pragmatic than their senior colleagues.
2. Education tends to undermine religious faith.
3. Capital punishment deters murder.
4. Competitive elections make members of Congress more responsive to their constituents.
5. High approval ratings boost a President's re-election performance.
6. Hard studying makes for good grades.
7. Close elections stimulate voting turnout.
8. When times are bad, incumbent candidates are punished in elections.
9. Early to bed and early to rise makes a man healthy, wealthy, and wise.
10. An apple a day keeps the doctor away.
11. If you want to get ahead, stay in school.
12. Leftist governments bring about more inflation than conservative governments.
13. The more interested people are in politics, the more likely they are to vote.
14. Liberals generally vote Democratic and conservatives generally vote Republican.
15. Dissatisfaction with the state of the economy leads people to vote against the incumbent party.
16. A majoritarian electoral system generally results in two parties, while a proportional electoral systems generally produces a multiplicity of parties. ["Duverger's Law"]
17. Party identification in the electorate has weakened over the last generation.
18. Increasing the size of a legislature reduces its lawmaking effectiveness.
19. Term limits reduce legislative effectiveness.
20. Margin of sampling error is inversely related to sample size.
21. Tall fathers produce tall sons.