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# The Economics of

## Committee Assignment.

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<u>Abstract</u>: This paper presents a model that shows how congressmen must conciliate their need to satisfy the interest groups that fund them or the constituents that vote for them, while being pressured by their leaders to show party loyalty with their votes at the passing of a piece of legislature, a goal which is generally in conflict with the former one. Before that, the paper goes over the details of the political system in the United States, including the unfortunate facts of American real-politics relating Election Law and Campaign Finance.

<sup>&</sup>lt;sup>1</sup> I would like to thank Daniel Huynh and Nishant Makhija for their referee reports on a draft of this paper. Only minor modifications were made to the body of the paper following their recommendations for improvement. However, an Appendix was added to elaborate on section 10. Special thanks go to Dr. Edward J. Lopez, who – during the spring of 2012- was my professor both for a "Workshop in Policy Analysis" and a "Seminar in Law and Economics" at SJSU. This paper was written as a project assignment for the former class but in a topic studied in the latter one. Ironically, when I asked him at the beginning of the semester if one would benefit from taking both of his classes jointly, he responded that that was something up to the student.

#### The Economics of Committee Assignment.

#### 1. Introduction

In the following paper, I will make an overview about the different aspects and components of the United States' political system, having as the target reader someone who is unfamiliar with American politics. Thus, I will start introducing political parties, the two cameras in congress and their organization. As the title of the paper implies though, I will make particular emphasis in the mechanics of committee assignment, the negative impact of interest groups influencing policy making and the incentives they generate on congressmen, who at the same time are pressured by their leaders to show party loyalty in order to obtain or keep the committees of their preference. Finally, I will present a simple model trying to depict how these two forces operate.

#### 2. Political Parties.

Anthony Downs defined political parties as teams of men and women seeking to control the governing apparatus by gaining office in duly constituted elections [1]. Political party competition in the United States is –since the early 1800s- a battle mainly between Democrats and Republicans for the control of public offices. That is, despite the existence of other minor parties (such as the Libertarians, the Socialists and the Greens), America has always been a two-party system [2]. Paradoxically, it is through this battle for power and domain that they provide us choice and with it, true democracy [3].

Kay Lawson describes political parties as linkage institutions between citizens and policy-makers [4], as all candidates for public offices -above the local level at least- must gain the endorsement of one of these two political parties for them to have a real chance to get elected. Since the early twentieth century, candidates must first win internal –or primary– elections to win their nomination. The importance of this endorsement lies on the fact that political parties "run" (as in "coordinate" and "raise funds for") the campaigns. Moreover, political parties in the United States have explicit ideologies: sets of clear and defined opinions on several topics, such as abortion and the size of government. These ideologies allow voters to make a pre-conception of the nominated candidates' standings.

Political parties are said to be giants with three heads [5]: (i) the *party-in-the-electorate*, which comprehends the part of the general public that identifies itself as more sympathetic with one party over the other; (ii) the *party-as-an-organization*, which includes the state delegates, county chairpersons, precinct leaders, and all other non-seasonal staff; and (iii) the *party-in-government*, which consists of the party's elected officials such as the President, congressmen, governors and all other public office-holders.

Among these three "heads" of political parties, it is the third one I will focus on in this paper, specifically on congressmen.

#### 3. Congressmen

There are 535 members in the U.S. Congress – generally called "congressmen"- divided into two cameras: the Senate –with 100 members called "senators", two from each of the fifty states- and the House of Representatives –with the remaining 435 members, called "representatives", whose distribution is proportional to the states' relative population at the most recent census, and allocated using the Huntington-Hill rounding method [6]-. At the time of this writing, Congress is in its 112<sup>th</sup> edition.

The Constitution requires senators to be at least 30 years old and U.S. citizens for at least 9 years; while for representatives, the requirements are that they are at least 25 years old and U.S. citizens for at least 7 years. These constraints are rarely active however, as the average age in the 105<sup>th</sup> Congress was 58 years for senators and 52 years for representatives [7]. More binding is the fact that a congressman must be a resident of the state from which he or she is elected.

Senators are elected every six years, while representatives' term of office is of only two. As in any Democratic Republic, U.S. citizens vote for the congressmen of their choice every such periods so that they decide for them regularly during these intervals: If general elections were carried out for every single bill, economic activity would be interrupted so often it would be inefficient. Hence, congressmen are meant to represent the American people in a daily basis, not in anyone's particular interests (aka "descriptive" representation"), but toward their overall constituents' well-being (aka "substantive" representation").

Although congressmen are supposed to represent the U.S. population, its composition is far from representative: Most congressmen are Protestant or Catholic white males with Law and Business as their previous occupation [7]. These two lines of work are common among congressmen because they provide the motivation and the high income necessary to fund their campaigns, despite the financial support gathered by their Political Action Committees (PACs).

#### 4. Organization and Turnover.

The decision of having a bicameral legislature was made in the summer of 1787 at the Constitutional Convention in Philadelphia, by delegates of the then thirteen states, as a way to conciliate two opposing schemes: the smaller states called for equal representation in Congress (aka the "New Jersey Plan", led by William Paterson), while the larger states called for proportional representation according to their

share of the American population (aka the "Virginia Plan", led by Edmund Randolph). In what is now known as the "Connecticut Compromise", Roger Sherman and William Johnson resolved this conflict by splitting the Congress into two cameras: one –the Senate– to please the smaller states, while the other camera –the House of Representatives- to satisfy the larger ones, as explained at the beginning of the previous section.

At the end of their office's term, congressmen can decide whether to run for re-election or to retire voluntarily, thus creating an "open seat" if they choose to do the second. Also, a significant increase in a state's population relative to the other states leads to forced open seats in the House of Representatives. Whenever there is an open seat, all candidates running for that position are equally considered "contenders".

However, elections for public offices are normally between "incumbent" and "challenger" candidates, where the firsts are the ones who currently hold those offices and want to get re-elected, and the seconds are the ones who plan to take away those seats from the firsts. The latter rarely happens though, as the turnover rate is historically quite low: Less than 15% at the Senate since 1958 [8]. This turnover rate is even lower in the House of Representatives, which is characterized by having shorter terms of office and its power more centralized in their leaders, who in turn are appointed more in the basis of seniority.

#### 5. <u>Elections.</u>

As implied at the end of the previous section, the incumbent normally wins when he goes for reelection. One reason of this is that while challengers are usually unknown to the voters, incumbents have
already showed them what they can do in office, by claiming credit of the services done in his
constituents' district and boasting about his policymaking record, such as all the committees and subcommittees they have formed part of. Thus, heavy advertisement is made by them during the electoral
period to keep their list of deeds fresh in the constituents' minds at the time of voting.

Political advertisement is very expensive for any candidate, but incumbents have –as part of their job benefits- the advantage of Franklin privileges (free use of the mail system) and travel allowances to visit their constituents. Moreover, both senators and representatives currently (2011-2012) enjoy an annual salary of \$174,000, which is even higher for the majority and minority party leaders (\$194,000) and the Speaker of the House (\$223,500) [9]. This economic advantage allows the incumbents to spend during their campaigns more money in average than challengers do (\$645,000 vs. \$247,000 for the House and \$4,156,000 vs. \$2,530,000 for the Senate at the 1996 congressional elections [10]), despite the savings the firsts get from the above-mentioned job benefits.

Although spending the most money in a campaign is no guarantee of victory, they are highly correlated historically speaking. Some argue that congressional elections are becoming too expensive (\$1.01 billion in 2000 [11]) in the sense that part of the resources could have been spent in a more socially productive way [12]. However, good proposals to reduce the amounts of spending are still to come as –for instance- posing a limit to the number of re-elections to increase the turnover ratio [13] can actually be detrimental considering that -for an open seat in the House- the amount spent by contenders in average (\$603,000 in 1996 [10]) is much higher than the mean of what an incumbent and a challenger spend (\$446,000), besides being considered unconstitutional by the Supreme Court in 1995 [14].

#### 6. Committee Classification.

The Speaker of the House –currently John Boehner (Rep.)- is the second in line to succeed the President (after the Vice-president) and not only it is the best paid position in all congress, it is also the most important one: Besides presiding over the House when it is in session, the Speaker plays a major role both in constructing the committee assignments and in controlling which bills get assigned to each of these. Then, the House Rules Committee –with the leaders Eric Cantor (Rep., May.) and Nancy Pelosi (Dem., min.) and whips Kevin McCarthy (Rep., May.) and Steny Hoyer (Dem., min.)- reviews and schedules the bills coming from the committees before they go to the full House. [15]

Most of the actual work in Congress happens in the committees, which regularly hold hearings to investigate problems of national relevance and, on occasion, scrutinize possible misdeeds at the executive branch. According to Edwards et. al.: "Most of all, [committees] control the congressional agenda and guide legislation from its introduction to its send-off to the president for his signature." [2]

Committees are divided in four classifications: (1) *Standing* committees are the most common and permanent ones. Each may be divided into several sub-committees, but their membership must come entirely from the same Congress' camera. Congressmen usually belong to more than one committee and sub-committee, with the average senator participating in more of these than the average representative. (2) *Joint* committees have their membership drawn from both Congress' cameras to deal with a few policy areas (see next section). (3) *Conference* committees also have a mixed composition but they are temporal, as they only deal with similar bills issued by the equivalent standing committees at the House and at the Senate; thus, they are meant to conciliate the bills' differences and forge a compromised one. Finally, (4) *Select* or *Special* committees are -in theory at least- only extraordinarily appointed for a very specific purpose, such as investigate the occasional wrongdoing of another officeholder (e.g. the Watergate case).

#### 7. Committee Lists.

The Senate currently has four *Select* committees: (i) On Indian Affairs, (ii) On Ethics, (iii) On Intelligence, and (iv) On Aging. The 112<sup>th</sup> Congress also has four *Joint* committees: (i) On Printing, (ii) On the Library, (iii) On Taxation, and (iv) the Economic committee. [16]

Regarding the *Standing* committees, the House has twenty-one right now (number of sub-committees next): (i) Agriculture-6, (ii) Appropriations-12, (iii) Armed Services-9, (iv) Budget-0, (v) Education and Workforce-4, (vi) Energy and Commerce-6, (vii) Ethics-0, (viii) Financial Services-6, (ix) Foreign Affairs-7, (x) Homeland Security-6, (xii) House Administration-2, (xii) Judiciary-5, (13) Natural Resources-5, (xiv) Oversight and Government Reform-7, (xv) Rules-2, (xvi) Science, Space and Technology-5, (xvii) Small Business-5, (xviii) Transportation and Infrastructure-6, (xix) Veteran's Affairs-4, (xx) Ways and Means-6, and (xxi) Intelligence<sup>2</sup>-3 [17]. Hence, the number of sub-committees in the House goes from 0 to 12, with a mean of 5.05, a median of 5 and a standard deviation of 2.7.

The Senate, on its side, has sixteen *Standing* committees whose topics commonly overlap with some of the House's (thus leading to the occasional creation of temporal *Conference* committees). These are: (i) Agriculture, Nutrition, and Forestry-5; (ii) Appropriations-12; (iii) Armed Services-6; (iv) Banking, Housing and Urban Affairs-5; (v) Budget-0; (vi) Commerce, Science and Transportation-7; (vii) Energy and Natural Resources-4; (viii) Environment and Public Works-7; (ix) Finance-6; (x) Foreign Relations-7; (xi) Health, Education, Labor, and Pensions-3; (xii) Homeland Security and Governmental Affairs-5; (xiii) Judiciary-6; (xiv) Rules and Administration-0; (xv) Small Business and Entrepreneurship-0; and (xvi) Veteran's Affairs-0 [17]. Hence, the number of sub-committees in the Senate also goes from 0 to 12, but with a mean of 4.56, a median of 5 and a standard deviation of 3.22.

It should be noted that the majority leaders prefer the minority party not to have the chairman position or the majority in any committee or sub-committee, being the proportions at most equal.

#### 8. Federalism and Congress.

The National Endowment for the Humanities (NEH) raised the question of "How do Congressional committees reflects some of the fundamental principles of federalism?" [18]. Federalism is a system of somewhat equally shared power between different levels of government, unlike "unitary-ism" -where the

<sup>&</sup>lt;sup>2</sup> Technically, this is not a Standing committee but a "Permanent Select" one.

national governments are very strong and little power lies in the hand of its components- or "confederate-ism", which is exactly the other way around<sup>3</sup>.

Congressmen, for instance, are elected as representatives of their states, not of the entire nation. Thus, they must balance their responsibilities with their constituents and with the nation as a whole. By pulling the strings of politics towards their constituents' wellbeing, federalism not only decentralizes American *politics* but also its *policies* [2]. However, this has also led to the derailment of campaign finance, which some deem as "a legal but corrupt system that is holding back America" [20].

The President's signing of a major piece of legislation into law is just the ceremony that celebrates the culmination of the legislative process. The real action takes place in the congressional committees; there is where America's public policies are truly decided. Special interest groups are very well aware of this, and so it is a much open secret indeed the fact that they start giving generous "donations" to the members of the committee whose jurisdiction is of their concern. [21]

Congressmen are aware of the fact that there are some interest groups more powerful than others, and so some lawmakers –the ones more worried about making profit than doing some good policy making-will compete to obtain the positions at the most *lucrative* committees to obtain the largest "contributions" from the wealthiest interest groups. Hence, corrupt congressmen are tempted to pass not the laws that are to the best interest of the nation as a whole or even to their constituents, but to the interest groups that *bribe* them (because "donate" and "contribute" are but euphemisms).

#### 9. The Economics of Committee Assignment.

Besides solving the problem of excessive spending on electoral campaigns, limiting re-election has also been proposed as a solution to the excessive influence of interest groups in policy making; however, this would not solve this problem either, as corrupt congressmen would be tempted to accept their briberies even if there are not planning to get re-elected; that is, dishonest lawmakers would be enticed by interest groups because money is useful for other things besides funding political campaigns. On the contrary, it could be argued that forcing the correct politicians to leave their offices may lead to the incoming of the crooked ones.

Another proposed solution is to limit the amount any single individual can contribute towards the campaign of any particular politician [22]. However, interest groups could easily find many "front men" to make formal donations on their behalf, or simply make the bribery "under the table" and not have it recorded at all.

<sup>&</sup>lt;sup>3</sup> The United States started as a confederation given the primitive transportation and communication system of the time, but confederate governments are still present in systems such as the United Nations and the European Union. A unitary form of government is the most commonly adopted worldwide, with only 11 countries still having federal systems [19].

Leighton and Lopez have argued that the way congressmen compete to obtain the positions at the committees they wish the most (whether for lucrative purposes or not) is by showing "party loyalty" to their leaders, who are the ones who decide their committee allocation. That is, by putting the ideology of their political party before the benefit of their interest groups at the time of voting either in favor or against the passing of a bill, they gain the goodwill of their party leaders, who will take their loyalty into account at the moment of assigning the committee positions [23].

Hence, corrupt lawmakers are at a crossroads whenever the party's ideology is in conflict with the interest group's benefit, which is commonly the case as -since political parties are not for profit while the interest groups are- we can simplify the dishonest congressmen's dilemma as whether to do the right, moral thing (which is line with the political party) or to cast the wrong, immoral vote (which is in line with interest group benefit).

#### 10. The Model.

The reader should not be confused as to think that the corrupt lawmakers' crossroad is of a moral character, that is, they are not deciding whether or not to cast the right vote just for the sake of it, but only if it is *convenient* for them to do so in order to maximize their profit, which comes from the interest group's bribes once they get the positions at the most lucrative committees.

Clearly, the dishonest congressmen's only incentive for party loyalty once assigned to the profitable committees is a future re-assignment to them, with the disincentive for party loyalty being the reduction of the amount received in the form of bribery by the interest group.

The assignment of committees happens every time congress is renewed, which happens every two years (so time will be measured discretely at this rate). For simplicity, let us assume that each committee is charged with a single bill which must be voted on at the end of every congressional period (right before the committees are assigned again) and that the bribe given by the interest group concerned with the bill's outcome happens with the same frequency: once every two years, after the committee assignment has been made, but before the congressman's vote has been casted.

Continuing to simplify the model, let us say that there are only two kinds of bribe: Small  $(S_t)$  and Big  $(B_t)$ . The interest group will initially give the congressman a big bribe to convince him to vote in its benefit, and continue to give him so the next period whenever the congressman has indeed voted in its benefit at the current term. If the congressman deflects and votes in alignment with his party, the interest group will only offer him a small bribe next time.

Finally, let us simplify the model even further by saying that there are only two kinds of probability of being re-assigned: Low  $(L_t)$  and High  $(H_t)$ . The party leader will give the congressman a high

probability of re-assignment at the next period whenever he votes with party loyalty at the current term. Consequently, the party leader will only give the congressman a low probability of re-assignment next time if he deflects from the party to vote in the benefit of his interest group.

Then, from the congressman's point of view, the expected, present value of his inter-temporal profit functions will look like this depending on his strategy:

The sub-index indicates time in years; " $r_t$ " is the interest rate at which the future expected money flows are discounted to the present; and "k" is the number of terms the congressman plans to be in office (i.e. "t = 0, 2, 4, ..., 2k"). Clearly, under this model the decision of which strategy to pick will depend on which profit function yields higher expected, present value, which at the same time depends on the values of the sequences  $\{H_t\}_{t=0}^{2k}, \{L_t\}_{t=0}^{2k}, \{B_t\}_{t=0}^{2k}, \{S_t\}_{t=0}^{2k}, \text{ and even } \{r_t\}_{t=0}^{2k}$ . The Appendix will provide a more detailed illustration of the model.

#### 11. Conclusions.

The model depicted in section 10 depicts the crossroad a congressman faces whenever the way his political party is asking him to vote is inconsistent with what is beneficial to the interest group that is funding him. It is intended to illustrate the case of a corrupt lawmaker as it was assumed that political parties are non-profit institutions concerned with the nation's welfare while the interest groups are greedy institutions whose only concern is their own well-being. Hence, party loyalty in this sense means casting the correct vote, while deflection implies voting the immoral way.

However, the model can be applied to illustrate the dilemma of an honest congressman as well, if we assume that instead of looking to maximize the profit from the interest group's bribes, he tries to maximize the benefit of his constituents (which he incorporates as his own) or the number of their votes at the next election (to remain in office), while the political party leaders are the ones being bribed by the interest groups. Thus, party loyalty in this sense would mean casting the incorrect vote while deflection would imply voting the moral way.

Nevertheless, both the corrupt and the honest congressman needs from the leader's favor to continue at the committee they want —whether to continue receiving the interest group's bribes or to continue providing benefits to his constituents-, and they need to show some party loyalty to win their leader's goodwill, which is opposite to their goals. Therefore, the resulting strategy they decide results from an optimization problem, which depends on the sequences of the outcomes at each period and their respective probabilities.

#### References:

- [1] Downs, Anthony. An Economic Theory of Democracy. New York: Harper & Row, 1957.
- [2] Edwards, George C. et. al. <u>Government in America. People, Politics and Policy.</u> (8<sup>th</sup> Ed.) New York: Addison Wesley Longman, 1998.
- [3] E. E. Schattschneider. Party Government. New York: Farrar and Rineheart, 1942.
- [4] Lawson, Kay (editor). <u>Political Parties and Linkage: A Comparative Perspective</u>. New Haven, CT: Yale University Press, 1980.
- [5] Beck, Paul A. and Frank J. Sorauf. <u>Party Politics in America.</u> (7<sup>th</sup> Ed.) New York: Harper Collins, 1992.
- [6] Tannenbaum, Peter. Excursions in Modern Mathematics. (5<sup>th</sup> Ed.) Upper Saddle River, NJ: Pearson Education, 2004.
- [7] Congressional Quarterly Weekly Report, January 4th, 1997.
- [8] Ornstein, Norman J.; Thomas E. Mann; and Michael J. Malbin. <u>Vital Statistics on Congress, 1995-1996.</u> Washington, DC: Congressional Quarterly Press, 1996.
- [9] Longley, Robert. <u>Salaries and Benefits of U.S. Congress Members</u>. Available on http://usgovinfo.about.com/od/uscongress/a/congresspay.htm
- [10] Federal Election Commission. <u>Campaign Finance Reports and Data</u>. Available on http://www.fec.gov/disclosure.shtml
- [11] Lopez, Edward J. "Campaign Finance 1". Finance Encyclopedia of Public Choice. Kluwer Academic Publishers, 2003.
- [12] Goldenberg, Edie N. and Michael W. Traugott. <u>Campaigning for Congress</u>. Washington, DC: Congressional Quarterly Press, 1984.
- [13] Benjamin, Gerald and Michael J. Malbin (editors). <u>Limiting Legislative Terms</u>. Washington, DC: Congressional Quarterly Press, 1992.
- [14] Cornell University Law School. Legal Information Institute. U.S. Term Limits, Inc. v. Thornton. Available at http://www.law.cornell.edu/supct/html/93-1456.ZS.html
- [15] United States House of Representatives. <u>Committees</u>. Available at http://www.house.gov/committees/
- [16] United States Senate. Committees. Available at
- http://www.senate.gov/pagelayout/committees/d\_three\_sections\_with\_teasers/committees\_home.htm
- [17] Congress Merge. <u>Congressional Committees and Subcommittees</u>. Available at http://www.congressmerge.com/onlinedb/cgi-bin/committee list.cgi?site=congressmerge
- [18] EDSITEment! Congressional Committees and the Legislative Process. Available at

http://www.edsitement.neh.gov/lesson-plan/congressional-committees-and-legislative-process#sect-activities [19] Central Intelligence Agency. <u>The World Factbook, 1994-95</u>. Washington, DC: Brassey's. 1994. [20] Edsall, Thomas B. "Putting Political Reform Right Into the Pockets of the Nation's Voters." *The New York Times*, 12/14/11. Available at http://www.nytimes.com/2011/12/15/books/republic-lost-campaign-finance-reform-book-review.html?pagewanted=all

[21] OpenSecrets.org <u>Congressional Committes</u>. Available at http://www.opensecrets.org/cmteprofiles/ [22] Lessig, Lawrence. "More Money Can Beat Big Money". *The New York Times*, 11/16/11. Available at http://www.nytimes.com/2011/11/17/opinion/in-campaign-financing-more-money-can-beat-big-money.html [23] Leighton, Wayne A. and Edward J. Lopez. <u>Committee Assignments and the Cost of Party Loyalty</u>. Available at http://www.sjsu.edu/faculty/lopez/research/loyalty.pdf

#### **Appendix**

In the two equations from section 10, the sub-index increases arithmetically at the rate of 2 because such is the year length of the representatives' term, which determines the Congress' number (say 112<sup>th</sup>) and the time to re-assign committee seats.

The interest rate, " $r_t$ " -which is used to discount future cash flows to calculate their present value-, has a sub index that gives it flexibility to vary over time. However, since the interest rate is fairly stable in reality (that is, its variations are not significant), the sequence  $\{r_t\}_{t=0}^{2k}$  can be simplified into a constant sequence equal to just "r" at all periods.

Both equations begin with a "B<sub>0</sub>" term that indicates that the interest group starts offering a big bribe when dealing with new politicians, either assuming that they are corrupt when unknown or –if not- that perhaps their initial big bribe might help "convert" them.

Regarding the other sequences,  $\{L_t\}_{t=0}^{2k}$  and  $\{H_t\}_{t=0}^{2k}$  are the high and low probabilities of congressmen getting re-assigned to their targeted committees by their party leaders depending on the way they have voted previously. Not only these sequences will always have a value between 0 and 1 -as every probability does-, but we should also expect that they will converge *monotonically* to each of these extremes. That is, congressmen who consistently vote showing party loyalty will be assigned *increasingly high* probabilities of getting re-assigned, while those who consistently vote showing party deflection will be assigned *decreasingly low* probabilities. Hence, let us say that " $L_t = 1/\alpha^{t}$ " and " $H_t = 1 - 1/\beta^{t}$ " (for "t = 0, 2, 4... 2k", where " $\alpha$ " and " $\beta$ "  $\in \mathbb{R}^+$ ).

Similarly,  $\{B_i\}_{t=0}^{2k}$ ,  $\{S_i\}_{t=0}^{2k}$ , are the sequences for big and small amounts of bribe congressmen get from the interest groups depending on the way they have voted previously (if in their favor or not, respectively). One could argue that small bribes could increase monotonically over time if the interest group is sort of "testing" the congressmen to see which amount is sufficiently high enough to start buying his vote, but I find this argument unrealistic. Most likely, the interest group will offer *decreasingly small* bribes once they realize that the congressman is honest.

However, the argument extension to the big bribes is not symmetric: One could argue that these will analogously increase monotonically over time if the interest group wants to continuously reward the congressman for voting in its favor, converging to the limiting value that makes bribing still profitable for the interest group, although I find this argument equally unrealistic. Most likely, the interest group will also offer *decreasingly high* bribes once they realize that the congressman is corrupt, sort of "testing" the congressman to see which amount is sufficiently low enough to stop buying his vote. Hence, let us say that " $S_t = A/\lambda^t$ " and " $B_t = A/\gamma + A/\gamma^t$ " (for "t = 0, 2, 4... 2k", where " $\lambda$ " & " $\gamma$ "  $\epsilon$   $\mathbf{R}^+$  as well, and where "A" stands for some amount of money).

Under these (more realistic) additions, corrupt congressmen wanting to optimize their profit function will do so not by having pure strategies (i.e. always voting in the same way) but mixed ones (i.e. alternating their way of voting). More precisely, they will vote in deflection with their political parties until they deem too low the probability of getting re-elected for their targeted committee, which will coincide with the time the amount of rewarding high bribes from their interest groups becomes too low as well. Then, switching to vote in alignment with their political parties will increase *both* the probability of getting re-elected for their targeted committee *and* the amount of rewarding high bribes from their interest groups once they start voting in deflection with their political parties again.

The above conclusion assumes that the time horizon for the converging sequence is not the same as the one the corrupt congressmen plan to stay in office, but gets sort of "reset" every time they alter their strategies, which was not expressly stated in the sub-index of my sequence equations above.