

Measuring Political Preferences: Ratings for Members of the Swiss National Council

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1. Introduction

The measurement of political preferences is important not only for the participants in the political process, but also for social scientists interested in empirical tests of hypotheses on the behavior of political actors.

A standard measure of political preferences is *party affiliation*. But in the case of Switzerland, party affiliation is not always a reliable indicator of political preferences because party loyalty tends to be rather low. Party affiliation of members in parliament and in the executive also exhibits only minimal fluctuations over time so that the comparative statics condition for empirical tests is violated. And because of the existence of a multiparty system it is difficult to locate the political parties in the policy space.

One alternative² to get more reliable measures of (changes in) legislators' preferences that allow for an assessment of intra-party differences is to use some *ratings* based on roll-call votes of the individual legislators. So far such ratings do not exist for Swiss legislators. This paper intends to fill that gap.

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² Another alternative consists in constructing some measures based on the legislators' interest-group affiliations. The official lists of interest-group affiliation ("Register der Interessenbindungen") that exist since 1985 may serve as the basic data source. See Lüthi, Meyer et al. (1991: section 1) for attempts in this direction.

The paper is organized as follows: Section 2 summarizes the problems associated with party affiliation as a measure of political preferences in order to underline the need for alternative measures. Section 3 elaborates on the scientific and practical usefulness of ratings. Section 4 discusses the basic ingredient required for the construction of ratings, the roll-call votes in the National Council. Section 5 describes the technique of translating roll-call votes into ratings. Section 6 presents an example of how the resulting ratings can be tabled. Section 7 carefully describes their limitations. Section 8 offers some concluding remarks.

2. The Problems Associated with Party Affiliation as a Measure of Political Preferences

If party affiliation is used as a measure of political preferences, it is (implicitly) assumed that all members of a political party share the same political preferences and exhibit the same voting behavior. In the case of Switzerland three major problems are involved with this measure.

First, party affiliation is not always a reliable indicator of political preferences of Swiss legislators, because *party loyalty* is rather low. (Aubert 1987: 229; Lehner 1985: 119; Steiner 1982: 321) Evidence on intra-party differences is provided by Vasella (1956), Lüthi, Meyer et al. (1991), and Hohl (1996).

Vasella (1956) analyzes the discipline of the fractions in the National Council using all 108 roll-call votes cast in the period from 1920 to 1953.³ He finds that the amount of loyalty differs considerably across the fractions. Members of the social democratic fraction (SP) clearly show the highest amount of loyalty. The fraction of

³ Fractions include all members of the same party from both chambers of the legislature. To form a fraction, at least five legislators have to join in one of the two chambers. Membership in fractions

the Swiss people's party (SVP) - formerly the "Bauern-, Gewerbe- und Bürgerfraktion" - is also quite homogeneous, but less so than the social democrats. Still less loyalty can be observed for the christian democrats (CVP). The most heterogeneous fraction is formed by the radical democrats (FDP). In several cases their votes are even splitted almost equally. Overall, loyalty seems to decrease over time.

Lüthi, Meyer et al. (1991) and Hohl (1996) calculate the Rice-Index for the parties represented in the National Council.⁴ The Rice-Index is the difference between the percentage of the majority and the percentage of the minority of a party in a vote. Values are in the closed interval between 0 and 100. A value of 0 indicates that a party is equally divided in a vote. A value of 100 results if all party members vote the same position. Both studies find that members of the SVP and the SP show more party loyalty than members of the FDP and especially members of the CVP. Second, party affiliation shows rather little *variation* in the Swiss legislature. If, for instance, all parties of the National Council are grouped into a block of left and right wing parties (following the classification in Fuchs 1992: 18), the ratio of the left wing parties to the whole legislative body shows only little variation: it is 0.335 in 1971, 0.365 in 1975, 0.34 in 1979, 0.325 in 1983, 0.33 in 1987 and 1991, and 0.36 in 1995. Party composition of the legislative committees is also very stable. (See e.g. Jeitziner 1996: 40 on the economics committee, the finance committee, and the finance delegation.) The lack of variation in party affiliation is a major obstacle for empirical tests. If party affiliation is used as an independent variable, the comparative statics condition is violated so that it becomes difficult to measure any influence from this variable.

is important since only members of fractions can get appointments to committees.

⁴ Lüthi, Meyer et al. (1991) cover the time period from 1971 to 1989. Hohl's (1996) analysis

Third, the existence of *several political parties* raises the problem of locating them in the policy space. Steiner (1982: 323) for instance cites the "endless debates without clear results over where to locate, for example, the National Action or the Independents." There is widespread uncertainty and disagreement about which parties are how close together and which others are how far apart in the policy space.

Given these difficulties, alternative measures of political preferences are needed. These measures should be more reliable, allow for an assessment of intra-party differences, exhibit more variation, and avoid the problems involved with the existence of several parties. Ratings may satisfy these requirements.

3. On the Usefulness of Ratings

Ratings serve "to provide an idea of a legislator's general ideology and the degree to which the legislator represents different groups' interests." (Barone and Ujifusa 1989: xiv) As a quantitative measure of political preferences they may be of interest for social scientists doing empirical research work and for the participants in the political process.

3.1. Applications in Empirical Research

3.1.1. Ratings as a Key to Analyze the Legislature

Ratings can be of scientific interest in themselves. They can be used as a key to analyze the legislature:

- The individual ratings can be *aggregated* for groups of the Council (fractions, political parties, committees) to get one single measure for the political preference of that body. Of course, the implied assumption of equal weights might be problematic. The distributions of the ratings for political parties for instance can be compared and changes thereof can be analyzed. The standard deviations can be used as a measure for intra-party differences.
- The ratings may serve to analyze the *structure* of the legislature. Especially for research related to the committee system the ratings can be a valuable data source. One prominent question is whether committees are composed of preference outliers. (See e.g. Benson 1981; Krehbiel 1990; Shepsle 1978.)
- Another possibility is to analyze the *distribution* of political preferences on a left-right spectrum. This can be performed by plotting frequency distributions for annual ratings, or for ratings covering legislative periods. To get an impression of the development of legislative preferences over time the sequence of these plots can be compared. Figures 1 to 3 display the distributions of the legislative preferences of the members of the National Council - as measured by the ratings - for the three legislative periods since 1984. The plots are based on the individual ratings,

calculated over the 40 roll-call votes of each legislative period, using the procedure for rating 2 (see section 5.5.) The plots for the legislative periods from 1975 to 1979 and 1980 to 1983 are not displayed. Since they are based on only 10 roll calls each, they are not directly comparable. If it can be assumed that legislative preferences reflect - at least to some extent - voter preferences, the distribution and development of the latter can be measured.

Figure 1: Frequency Distribution of Rating for 1984 - 1987

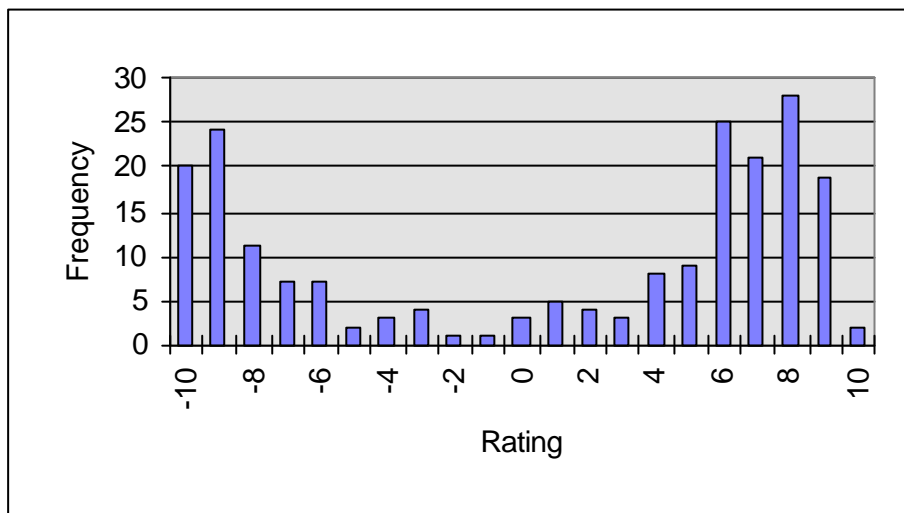


Figure 2: Frequency Distribution of Rating for 1988 - 1991

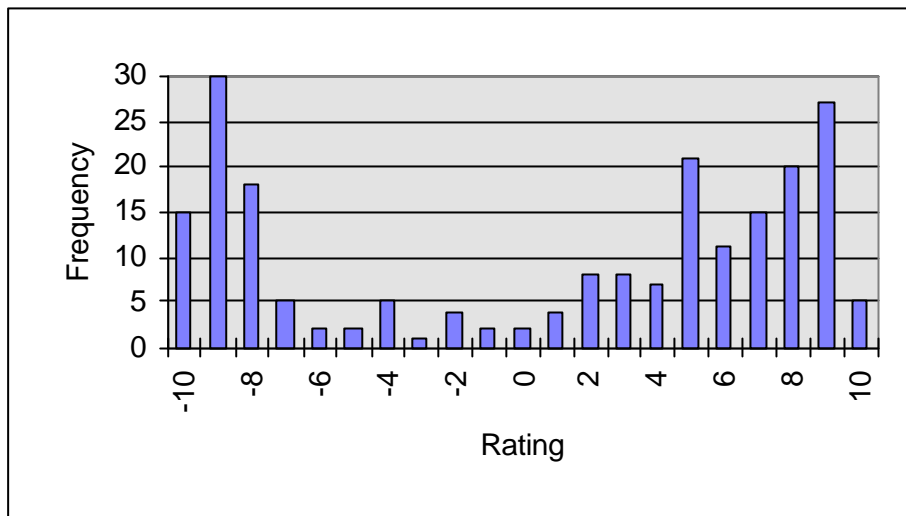
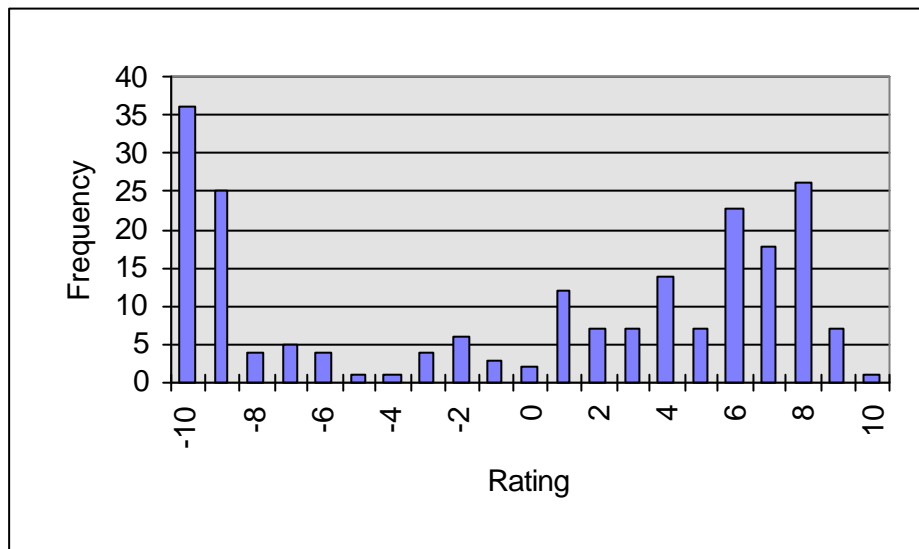


Figure 3: Frequency Distribution of Rating for 1992 - 1995



3.1.2. Using Ratings for Hypothesis Testing

Interpreted as measures of legislators' preferences the ratings can be used as quantitative variables in empirical tests of hypotheses that involve legislative (political) preferences. To illustrate these applications two examples are outlined subsequently.

a) Ideology versus Self-Interest

Do elected representatives vote strictly in terms of constituents' interests? Or does ideology affect their voting behavior, in the sense that personal value judgements are exercised? There exists a considerable debate on this in the Public Choice literature.⁵

The concept of ideology as it is utilized in this literature starts from the principal-agent relationship between voters and legislators. Legislators in their role as agents may either be effectively controlled by their principals, or they may enjoy discretion because of ineffective monitoring.

In the case of *effective monitoring* the legislators' behavior will simply reflect the voters' interests. Though voters are normally assumed to be privately interested, it cannot be excluded that they are also publicly interested. Publicly interested behavior of legislators which is due to catering to the voters' demand is not considered as ideology in Public Choice. In empirical research the voters' private *and* public interests have to be filtered out from the agent's behavior.

Because of imperfect information and rational ignorance *discretion* may frequently be available to actions in political markets. (Rowley 1992: 100) Any slack in the principal-agent relationship allows for discretionary consumption by the agent. The legislator can use the discretion to pursue economic or nonideological goals. Or he can rationally promote altruistic-ideological, self-defined notions of the 'public interest'. Only the latter constitutes ideological shirking by the legislator.

Hence, ideology occurs if there exists a principal-agent relationship where the agent (legislator) enjoys discretion and where he uses this discretion to pursue the 'public interest'.

Pure ideology is the manifestation of public interest and altruism in the political sector. (See Kalt and Zupan 1984: 281.) Just as tastes as well as opportunities affect ordinary consumption decisions, a legislator's ideology will affect his voting behavior. (Nelson and Silberberg 1987: 16)

To *test* for the presence of pure ideology in the legislature the following statistical model is postulated (Peltzman 1984: 181):

$$Y = DX + CI + \text{error term}$$

The probability Y that a legislator will vote 'yes' on a particular issue is a function of an 'economic interest' X and its ideology I . D and C are the parameters to be estimated.

Since neither X nor I is directly observable, the following regression is estimated to determine how much of the variation in Y can be explained by 'interest' and how much by 'ideology':

$$y = d\mathbf{M} + cR$$

y is a dummy variable that equals 1 if the legislator votes 'yes' and equals 0 if he votes 'no' on a particular issue.⁶ \mathbf{M} is a vector of economic and ideological characteristics related to constituents' demand for votes. It contains all the economic and ideological interests of those individuals and groups in the constituency who have a stake in the particular issue. R is some crude ideology measure for the legislator. Usually, legislative ratings such as the ADA (Americans

⁵ See e.g. the contributions in volume 76 of the Public Choice journal issued in 1993.

⁶ Since the dependent variable (voting 'yes' or 'no') is a qualitative variable logit estimation

for Democratic Action) rating, the LCV (League of Conservation Voters) rating, or the COPE (Committee on Political Education) rating are chosen to measure R. (Kau and Rubin 1979: 369)

R is an impure measure of a legislator's ideology, since it may also reflect apparent ideology that is in fact proxying for constituents' interests. The residualization technique is used to get a 'pure' measure of ideology. (Kau and Rubin 1979: 370) The crude ideology measure R is regressed on a list of economic variables to split measured ideology into that part that can be explained by constituent characteristics and the remaining legislator-specific residual component. The residual is then interpreted as a 'pure' measure of ideology and is substituted into the above model (in place of R) to see whether it has any explanatory power.

The main problem is the one of left-out variables: what looks like legislator ideology may simply reflect left-out economic or ideological interests. By further fishing for relevant economic variables, reflecting 'constituent interests', the importance of the residual or ideology variable may be further reduced. (Peltzman 1984 and 1985) Therefore, it is still an unresolved issue whether a significant coefficient for an ideology variable indicates 'ideological shirking' by legislators. (Nelson and Silberberg 1987: 15)

Further complications arise if the possibility of interstate lobbying and logrolling is taken into account (Kalt and Zupan 1984: 288-289), or if a legislator's vote has to be interpreted as a signal of party loyalty (Crain 1990). Logrolling can be tested for by using conditional logit estimates, where votes are treated as a function of each other. (Kau and Rubin 1979)

b) 'Old' versus 'New' Theory of Bureaucracy

The question whether government agencies are independent of or controlled by their principals is the subject of the controversy between 'old' and 'new' theory of bureaucracy. The 'old' theory of bureaucracy argues that legislators lack incentives to monitor and influence agency policy so that government agencies operate independently of the legislature. This view has been challenged by the theory of legislative control - which is also referred to as the 'new' theory of bureaucracy here. (Weingast and Moran 1983) Building on principal-agent models this theory argues that principals are able to control their agents effectively. To determine which model is superior quantitative evidence is needed.

The major refutable comparative statics prediction of the legislative control model is that as preferences of the relevant legislative oversight committee(s) change, agency behavior will change, too. The main difficulty with an empirical test of this hypothesis is the measurement of political preferences and changes thereof.

It is exactly here where ratings can be employed as independent variables. Agency behavior is explained with (changes in) political preferences - as measured by (changes in) the ratings - and some more control variables that depend on the specific agency under investigation.

Empirical tests of the 'new' theory of bureaucracy employing such ratings are performed for instance by Weingast and Moran (1983), Moe (1985), Grier (1991), Rowley and Thorbecke (1993), and Vachris (1996).

Jeitziner (1996) tests the legislative control model for the Swiss legislature. Using the ratings developed for members of the National Council, it is analyzed whether

the whole chamber or specialized legislative committees thereof exert any influence on Swiss monetary policy.

3.2. Information for the Participants in the Political Process

Ratings can be a valuable source of information for the participants in the political process. In the U.S. this was also the original motivation for lobby groups to construct them.

As a summary statistic on a legislator's voting behavior ratings can perform the following functions:

- They provide an additional piece of information to *voters*, which may enable them to make more informed choices among politicians. Of course, this argument holds only for those legislators running for reelection.
- *Legislators* themselves are informed about their own location in the political spectrum relative to their competitors. This may help them to define their political platforms.
- For *political parties* (especially their leadership) it may become easier to monitor the behavior of their members. This enhances the possibility to foster party loyalty, since those members who are loyal to the party leadership can be remunerated while those who are not (or less) loyal are sanctioned. Remunerations and sanctions can take the form of committee assignments. (See e.g. Crain 1990 on this.)

The party leadership can also perform an overall assessment of the homogeneity of party members (or members of fractions), homogeneity

being a determinant of a party's political weight, again relative to the competing parties.

For these purposes political parties may prefer to construct their own ratings, where the party's ideal position serves as a benchmark.

- *Lobby groups* may direct their support in terms of votes and money more specifically to those legislators furthering their interests. For this purpose, ratings based on a left-right dimension may not be appropriate. Instead, more specialized ratings, such as environmental, foreign policy, social policy and so on ratings need to be developed. As with political parties, lobby groups can establish their own specialized ratings.

It can be argued that the political control of legislators by voters and interest groups increases and that survival as a legislator may become more difficult. This may depend on the location in the policy space, however. For those legislators located at the extremes the opposite effect may occur, since the ratings can be used to highlight their distinct political attitude.

Overall, the increased transparency tends to stiffen the competition in the political market. Whether this also enhances its efficiency remains a controversial issue. If an analogy to capital markets is valid, gains in efficiency can be expected, in the sense that transfers on the political market are made at lower costs.

4. Roll-Call Votes in the National Council: The Basic Ingredient for the Construction of Ratings

Ratings are constructed on the basis of the legislators' individual voting behavior. The precondition is to know how legislators vote on specific issues. Hence, the construction of ratings depends on the availability of roll-call votes.⁷

In the National Council (Council of States) a roll-call vote ("Abstimmung unter Namensaufruf") will only take place if 30 (10) members request so in written form.

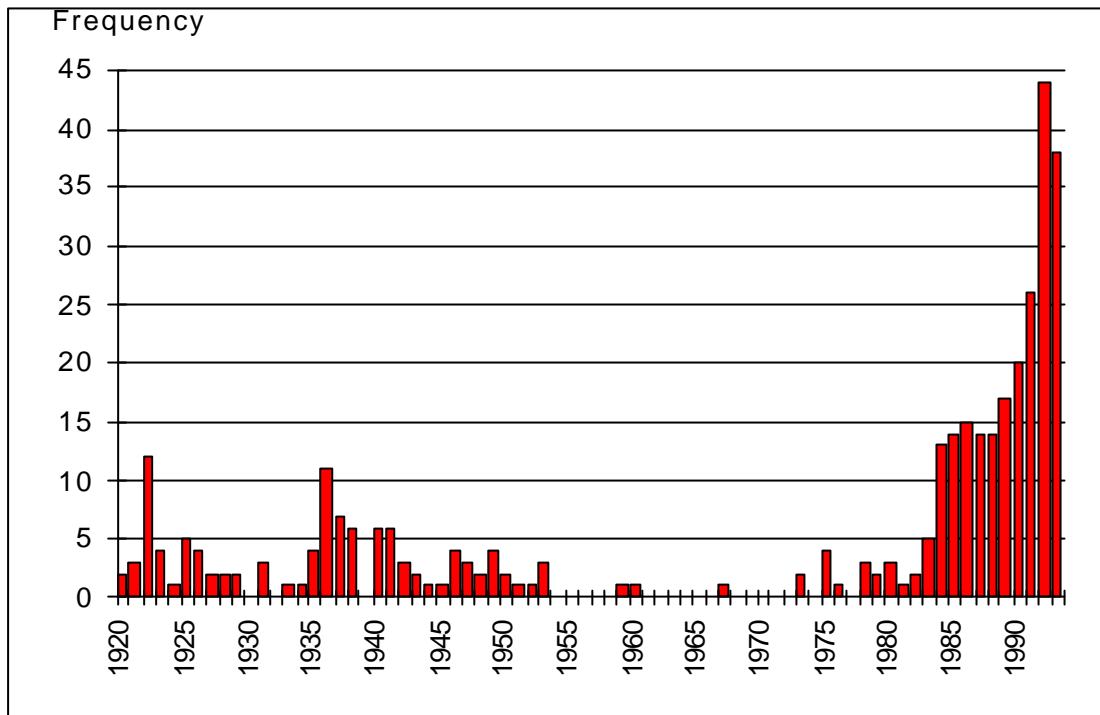
In the Council of States, this virtually never happens, making a construction of ratings for members of this body not viable. Therefore, this section is restricted to the discussion of roll-call votes in the National Council. (See also Vasella 1956: 54-60; Lüthi, Meyer et al. 1991: section 2.)

Figure 4 depicts the *number* of roll-call votes in the National Council that took place between 1920 and 1993.⁸

⁷ A roll-call vote is a vote by a legislature in which the roll of all members of the body is called, or in which the vote of each member is recorded electronically.

⁸ All roll-call votes assessed from 1920 to 1993 are numbered, yielding a total of 344 votes. The first roll-call vote in this list is from February 10, 1920. Votes that took place before this date are not considered. Votes after 1993 are no longer numbered because they are too numerous and not directly comparable.

Figure 4: Roll-Call Votes from 1920 to 1993*



* Legislative periods are from beginning of December to beginning of December.

As figure 4 shows, the number of roll-call votes *fluctuates* over time. Before the eighties only few roll-call votes were requested. Major exceptions are 1922 and 1936 with 12 and 11 votes recorded. Only 3 roll calls took place between 1954 and 1973. Their number starts to increase in the early seventies. A sharp rise can be observed after 1983 with a newly elected legislature in action. Lüthi, Meyer et al. (1991: 58) offer two explanations for this development. In Fall 1983 environmental lobby groups demonstrated that (and how) a legislator's voting behavior can be used in electoral campaigns. And in 1984, after their official candidate failed to be elected to the Federal Council, the social democrats announced that they would request roll-call votes more frequently.

Roll-call votes are often requested for particularly important and controversial issues. Their basic purpose is to increase the *transparency* of the legislative process in parliament and in the public. (See e.g. Seeger 1915: 93; Lüthi, Meyer et al. 1991: section 2.) In parliament roll-call votes may serve to discipline the members of the own fraction, identify the position of the opponent, or put a general pressure on the whole body. (Vasella 1956: 59) The public (voters, media) is informed about the legislators' attitude in specific questions. This may rise the voters' interest in political processes in general. In principal-agent terminology, the principal (voter) will find it easier to control its agent (the legislator). This is likely to increase pressure on legislators to vote the interests of their clientele. More generally, the legislators' interest in the political process in the sense of a feeling of responsibility is also assumed to rise. (Seeger 1915: 94) This may result for instance in a decline of absences from the debates.

Politicians and researchers do not unanimously welcome this increase in transparency. It is argued that this kind of information offers the opportunity for *abuse*: legislators can be pressured to vote in a specific way. (Vasella 1956: 59) This implies that they would vote differently without that pressure. The question is whether politicians should be able to decide freely from political pressures exercised by their principals, their party leadership, and their competitors. Article 91 of the Federal Constitution clearly stipulates that members of parliament shall vote without instructions. Usually, it is not contested that voters should be able to know how their representatives voted. However, the possibility for the party leadership and members of the same fraction to monitor the individual voting behavior meets some criticism. (See e.g. Vasella 1956.) Resistance against an increase in transparency associated with roll-call votes is regularly justified with the argument that competitors may abuse this information as a political weapon. One

possibility is that political opponents pick out single votes during the electoral campaigns. Another possibility is that political parties attempt to request roll-call votes especially for issues where their own members form a more or less homogeneous block, while their opponents do not reach agreement. This offers the homogeneous party an opportunity to demonstrate to voters how diverse (and inconsistent) interests are with the political opponents. (See e.g. Lüthi, Meyer et al. 1991: 61-62 on the role of the SP.)

Since roll-call votes are requested rather for particularly important and controversial issues, already their frequency can yield valuable information. If there is a consensus, there won't be any roll-call votes. But in times of dissens, their number will increase. Therefore, we expect more roll-call votes during difficult times. (Lüthi, Meyer et al. 1991: 58) Figure 4 supports this general argument. During the fifties and sixties, a period with economic growth and prosperity, only very few roll-call votes took place. When the economic (and political) situation gets more difficult, conflicts are more pronounced, and roll-call votes can be observed more frequently. Roll-call votes can be considered as an *indicator* of the severity of conflict (in the legislature).

In a third attempt and 14 years after the idea was first introduced in the National Council the installation of an *electronic voting system* was finally approved and it was installed in 1994. (See Amtliches Bulletin 1992: 2042 for an overview of the history of the electronic voting system.) With this system in operation not only those votes that are requested by at least 30 legislators are recorded and published, but also "Gesamtabstimmungen", "Schlussabstimmungen" (final votes), and "Abstimmungen über die Dringlichkeit" (votes on the urgency of bills). This led to a dramatic increase in the number of recorded votes. In 1994, 294 roll-call votes took place, and in 1995 168 are counted (excluding the last session in Fall). The

frequencies for 1994 and 1995 are not included in figure 4 not just because they are too large, but also because they are not directly comparable to the previous years. This number of roll-call votes represents a much better data source and opens up interesting opportunities for empirical research.

Despite the rather small number of roll-call votes available and the high frequency of absences these votes can be used to construct ratings for members of the National Council for the period after 1975. This is explained in the next section.

5. Translating Roll-Call Votes into Ratings

In the U.S. - where politicians are also observed to show rather low party loyalty - various lobby groups publish ratings on a regular basis.⁹ Probably the best known rating is published by the Americans for Democratic Action (ADA), a liberal lobby group founded in 1947. Each year ADA selects 20 votes which it thinks display sharply the liberal or conservative stance of a legislator. The 20 votes can include all policy areas relevant to the lobbying interests of ADA. They may be final or procedural votes. The selected votes are then converted into ratings. For each vote ADA determines whether a 'yes' or a 'no' vote is in favor of its position. The voting record of each individual legislator is analyzed and points are distributed. If the legislator voted what in ADA's judgement was the correct vote, he gets a plus (+), which is worth 5 points. If the legislator voted 'incorrectly', he gets a minus (-) and thus 0 points. Absence is interpreted as a vote *against* the interests of ADA and is counted as a minus. The same treatment is applied to 'not voting' (abstention). All points are then summed over the 20 votes. The resulting sum is

⁹ The ratings constructed by ten lobby groups are compiled in 'The Almanac of American Politics'. See Barone and Ujifusa (1989).

called the *liberal quotient*. A legislator can achieve a maximum of 100 points, which is identical to the political position preferred by ADA. In ADA's judgement he is a perfect liberal. A legislator can get a minimum of 0 points, if he always votes against ADA's liberal position. A liberal quotient of 0 indicates the most conservative position.¹⁰

The ratings developed for members of the Swiss National Council follow to some extent the technique employed by ADA. Particularities of the Swiss data - especially the smaller number of roll-call votes and the high frequency of absences - require some differences in the procedure.

5.1. Choice of the Political Dimension

For the construction of the ratings for Swiss legislators the traditional *left-right dimension* is chosen for the following reasons:

- The ratings are not established from the perspective of one special interest group (with the intention to use the ratings as a political weapon afterwards). They are developed for scientific purposes.
- The left-right dimension is encompassing in the sense that most other political dimensions can be reduced to it. This is of special importance, since the small number of roll-call votes (especially before 1994) does not allow for a more specialized distinction of policy areas.
- The left-right dimension can be made operational relatively easy in the present context, because of widespread agreement about characteristics of the political left and right. (See e.g. Fuchs 1992: 18.)

¹⁰ This paragraph benefited from the helpful explanations offered by John Scull, staff member of ADA.

- In Swiss politics the party space is actually reduced to the left-right continuum in most cases. (See e.g. Sciarini 1994.)

Of course, working with the traditional left-right dimension also has its drawbacks.

(See e.g. Kleinewefers 1992: 109-111.)

5.2. Determining the Number of Roll-Call Votes to be Selected for Each Rating

The construction of a rating in general and the number of votes to be selected for each rating in particular are constrained by the availability of roll-call votes. Given the distribution of these votes over time (see figure 4) ratings are viable for the period after 1975, if each rating is constructed on the basis of ten votes.

For the period between 1975 and 1983 only a small number of roll calls is available, forcing the construction of one rating for the whole four-year legislative periods. To achieve the minimum number of ten votes for the legislative period from 1975 to 1979 the four roll-call votes that took place in 1975 - before the 1975 elections - are also employed. This implies that no rating can be constructed for freshmen of 1975 because the number of votes for which they are eligible is insufficient. This weakens the informational content of this first rating.

Beginning with 1984, at least ten roll-call votes are available for each legislative year. Therefore, a rating can be constructed for every single year.

After the introduction of the electronic voting system in 1994 the frequency of roll-call votes sharply increases. This offers the opportunity to expand the number of votes to be selected for each rating in order to augment the precision and reliability of this measure. To conserve consistency and to allow for a comparison ten roll-call votes are selected for the two remaining years (1994 and 1995).

5.3. Selecting Ten Roll-Call Votes for Each Period

For each (legislative) period ten roll-call votes are selected. For the legislative period from 1975 to 1979 all 10 observed votes have to be chosen. But the remaining periods offer the opportunity to choose among votes. For these periods every single roll-call vote is screened and ten votes are selected, whereby the following criteria are employed (if applicable):

- Votes with *low numbers of absences and abstentions* are preferred, because they yield the highest amount of information. Especially absences should be avoided, since they do not yield any information on political preferences (at least with respect to the left-right dimension employed here.) Abstentions do reveal preferences. The legislator does not agree with the position of his fraction. But he decides not to vote against it.¹¹ Abstention is a milder form of opposition against the own fraction. (Vasella 1956: 57) It does not allow for an assignment to the political left *or* right.
- The *contents* of the votes are accounted for such that a broad spectrum of policy issues is covered and the left-right dimension can be applied.
- The *outcome* of the roll calls also serves as a criterion. To distinguish legislators on the extremes from those in the political middle, not only votes with a sharp division into left and right are chosen, but also votes where these differences are less pronounced. It is these votes where party loyalty is likely to be low, so that intra-party differences can be measured.

¹¹ The individual motives for abstentions cannot be accounted for in the construction of the ratings.

To this end, votes are selected such that the following proportions result: Two to three votes where legislators on the extreme right (left) oppose the rest and four to six votes where the left and right are more equally divided. These proportions are not always viable, because the extreme left opposes the rest of the Council more frequently.

5.4. Determining the Left and Right Positions for Each Vote

For each of the ten votes selected it is determined how a typical member of the political left and right should have voted. To solve this problem, the following two (complementary) procedures are employed:

First, it is analyzed how a legislator situated on the left (right) of the political spectrum *should* have voted, given the attributes that are typically associated with the platforms of left (right) parties. Information on the political platforms of the parties is retrieved from Fuchs (1992) and Gabriel (1993).

Second, it is verified how the majority of legislators that are assumed to be situated on the left (right) of the political spectrum *actually* voted. For this purpose the voting results for the four largest parties are analyzed. Members of the SP usually vote quite homogeneously. In about three quarters of the votes selected they form a fairly homogeneous opposition to the members of the three 'bourgeois' parties (FDP, CVP, and SVP). Hence, for most votes selected, the voting behavior of the majority of the SP indicates the left position, while the mostly opposing voting behavior of members of the FDP and especially the SVP indicates the right position.

5.5. Assigning Points to Individual Votes

To convert the votes into ratings, the voting record of each individual legislator is analyzed and points are distributed as follows:

- If the legislator votes the *left* position, he gets a minus.
- If he votes the *right* position, he gets a plus.
- If he *abstains*, he gets a 0.

Since abstentions cannot be used to assign a legislator to the left or right of a political spectrum, a value of 0 is distributed to locate him at the political middle.

- The main difficulty is caused by *absences*. Two different treatments that lead to two types of ratings are proposed.
 - *Rating 1* applies the same treatment to abstentions and absences, i.e. absence is counted as a 0. This procedure is open to criticism, since absences and abstentions are not really identical problems. To address this difficulty, rating 1 is accompanied with the total number of absences. Rating 1 should always be interpreted *together* with the number of absences.
 - *Rating 2* simply drops these votes, because absences do not help to locate legislators in the political left-right dimension. Rating 2 has the advantage that absences are directly accounted for in the measure. The problem is that the rating may be based on a small number of remaining votes. This may lead to a serious bias.

5.6. Aggregating the Points to a Rating

To get *rating 1* the points are aggregated as follows:

- (i) Calculate the percentage of times that the legislator voted the left position and multiply this result by -1.
- (ii) Calculate the percentage of times that the legislator voted the right position.
- (iii) Take the sum of these two percentages (divided by ten) as the rating.

Summing all pluses and minuses yields the same result.

Rating 2 is calculated analogously, but after all absences are dropped.

In both cases a legislator can get a minimum of -10 points and a maximum of +10 points. A legislator with a score of -10 is a 'perfect left'. A rating of +10 indicates the most 'conservative' position. A score of 0 locates a legislator in the political middle and so on. The resulting rating is a quantitative measure of a legislator's political preference and can be used in addition or as an alternative to his party affiliation.

6. Example: Ratings for 1994

Table 1 illustrates how the ratings can be listed. (A compilation of roll-call votes and resulting ratings for all 476 members of the National Council assessed for the period from 1975 to 1995 is available from the authors upon request.) In table 1 the legislators are filed in alphabetical order. Legislators who enter or leave the Council during the period under consideration may not be eligible for the rating

because of an insufficient number of roll-call votes.¹² Since they are not included, less than the total of 200 legislators may appear on the list. Legislators who chair the Council are indicated with "President". No rating is constructed for them, since the chairman does not vote, except for a draw. For each legislator, party affiliation, his voting record for the ten roll-call votes, and the resulting ratings are listed.

The table is accompanied by a short description of the ten roll-call votes selected. This includes the primary data source ("Amtliches Bulletin"), as well as the issue of the "Neue Zürcher Zeitung" (NZZ) which publishes a short summary of the debates on the following day. This summary facilitates access to each vote. For the four largest parties it is indicated how many members voted for and against. Complementary to the political platforms of the parties and the comment in the NZZ this information is used to determine whether a 'yes'- or a 'no'-vote corresponds with the left (right) position. It is also stated whether the 'extreme' left (right) opposes the rest, or whether votes are more equally divided. The votes of the four parties listed do not add up to the total voting results, since the smaller parties are not filed.

¹² For this reason the following legislators do not appear on the list for the 1994 rating: Bugnon, Cornaz, Daepp-Heiniger, Gardiol, Ostermann, Rebeaud, Schmid Samuel, Schweingruber, Weyeneth, Wyss Paul and Zölch-Balmer.

Table 1: Ratings for 1994

Rating 1994				Roll-Call Votes										Rating 1		Rating 2
				A	B	C	D	E	F	G	H	I	J	position	absence	
1	Aguet	Pierre	SP	-	-	-	-	-	-	+	-	-	-	-8	0	-8.0
2	Allenspach	Heinz	FDP	+	+	+	A	+	+	+	+	+	+	9	1	10.0
3	Aregger	Manfred	FDP	+	+	+	+	+	+	+	+	+	+	10	0	10.0
4	Aubry	Geneviève	FDP	+	+	-	+	+	A	+	0	-	A	3	2	3.8
5	Bär	Rosmarie	GPS	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
6	Baumann	Ruedi	GPS	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
7	Baumberger	Peter	CVP	+	+	+	+	+	-	+	-	-	+	4	0	4.0
8	Bäumlin	Ursula	SP	-	-	-	-	-	-	-	-	0	-	-9	0	-9.0
9	Béguelin	Michel	SP	-	A	A	-	-	-	-	-	-	-	-8	2	-10.0
10	Berger	Jean-P.	SVP	+	+	+	+	+	A	A	A	A	A	5	5	10.0
11	Bezzola	Duri	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
12	Binder	Max	SVP	+	+	A	+	+	+	+	-	+	+	7	1	7.8
13	Bircher	Peter	CVP	-	+	+	-	+	-	+	-	-	+	0	0	0.0
14	Bischof	Hardi	SD	-	+	+	-	+	A	+	-	+	0	2	1	2.2
15	Blatter	Ueli	CVP	+	+	+	+	+	A	A	A	A	A	5	5	10.0
16	Blocher	Chr.	SVP	+	+	+	+	+	+	+	+	+	+	10	0	10.0
17	Bodenmann	Peter	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
18	Bonny	Jean-P.	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
19	Borel	François	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
20	Borer	Roland	FP	+	+	+	+	+	+	+	-	-	+	6	0	6.0
21	Borradori	Marco	DP	-	+	+	-	+	+	+	-	-	+	2	0	2.0
22	Bortoluzzi	Toni	SVP	+	+	+	+	+	A	+	-	-	+	5	1	5.6
23	Brügger	Cyrell	SP	-	-	-	-	-	-	A	A	A	A	-6	4	-10.0
24	Brunner	Christiane	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
25	Bühler	Simeon	SVP	+	+	+	+	-	-	+	-	-	+	2	0	2.0
26	Bühlmann	Cécile	GPS	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
27	Bührer	Gerold	FDP	+	+	+	-	A	+	A	A	A	A	3	5	6.0
28	Bundi	Martin	SP	-	-	-	-	A	-	-	-	-	-	-9	1	-10.0
29	Bürgi	Jakob	CVP	+	+	+	-	+	-	+	-	+	+	4	0	4.0
30	Caccia	Fulvio	CVP	A	+	-	-	+	-	+	-	-	+	-1	1	-1.1
31	Camponovo	Geo	FDP	-	+	+	+	+	+	+	-	-	+	4	0	4.0
32	Carobbio	Werner	PSA	-	-	-	-	-	A	A	A	A	A	-5	5	-10.0
33	Caspar-Hutter	Elisabeth	SP	-	-	-	-	-	-	-	-	+	A	-7	1	-7.8
34	Cavadini	Adriano	FDP	+	A	-	-	+	A	A	A	A	A	0	6	0.0
35	Chevallaz	Olivier	FDP	+	-	+	+	+	+	+	-	-	+	4	0	4.0
36	Cincera	Ernst	FDP	+	+	+	-	+	+	+	+	-	+	6	0	6.0
37	Columberg	Dumeni	CVP	-	+	+	-	+	-	+	-	-	+	0	0	0.0
38	Comby	Bernard	FDP	+	+	A	-	+	-	+	-	-	+	1	1	1.1
39	Couchepin	Pascal	FDP	+	+	-	-	-	+	A	A	A	A	0	4	0.0
40	Danuser	Menga	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
41	Darbellay	Vital	CVP	+	+	-	A	A	A	+	-	-	+	1	3	1.4
42	David	Eugen	CVP	-	A	-	-	-	-	+	-	-	+	-5	1	-5.6
43	de Dardel	Jean-Nils	SP	-	-	-	-	-	A	-	-	-	-	-9	1	-10.0
44	Deiss	Joseph	CVP	+	+	+	+	+	-	+	-	-	+	4	0	4.0
45	Dettling	Toni	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
46	Diener	Verena	GPS	-	-	-	-	-	-	0	-	-	-	-9	0	-9.0
47	Dormann	Rosm.	CVP	-	-	-	-	-	-	+	-	+	+	-4	0	-4.0
48	Dreher	Mich.	FP	+	+	+	+	+	+	+	-	+	-	6	0	6.0
49	Ducret	Domin.	CVP	A	+	-	+	+	+	+	-	-	+	3	1	3.3
50	Dünki	Max	EVP	-	-	-	-	-	+	+	-	-	-	-6	0	-6.0

Table 1: Ratings for 1994 (continued)

Rating 1994			Roll-Call Votes										Rating 1		Rating 2	
			A	B	C	D	E	F	G	H	I	J	position	absence		
51	Duvoisin	Pierre	SP	A	-	-	-	A	A	-	-	-	A	-6	4	-10.0
52	Eggenberger	Georges	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
53	Eggly	Jacques	LPS	+	-	-	+	A	+	A	A	A	A	1	5	2.0
54	Engler	Rolf	CVP	-	+	+	-	+	-	+	-	-	+	0	0	0.0
55	Epiney	Simon	CVP	+	+	-	+	+	-	+	-	-	+	2	0	2.0
56	Eymann	Christoph	LPS	+	+	-	-	-	+	+	-	-	+	0	0	0.0
57	Fankhauser	Angeline	SP	-	-	-	-	A	-	-	-	0	-	-8	1	-8.9
58	Fasel	Hugo	CVP	-	-	-	-	-	-	-	-	-	+	-8	0	-8.0
59	Fehr	Lisbeth	SVP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
60	Felten, von	Margrith	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
61	Fischer	T., Häggli	SVP	+	+	+	+	+	+	+	-	+	+	8	0	8.0
62	Fischer	T., Sursee	CVP	+	+	+	-	-	+	+	-	-	+	2	0	2.0
63	Fischer	U., Seeng	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
64	Frey	Claude	FDP	+	+	A	+	+	+	+	-	+	+	7	1	7.8
65	Frey	Walter	SVP	+	+	+	+	+	+	+	+	+	+	10	0	10.0
66	Friderici	Charles	LPS	+	A	-	+	+	+	+	0	-	+	4	1	4.4
67	Fritschi	Oscar	FDP	+	+	+	+	-	+	+	+	0	+	7	0	7.0
68	Früh	Hans-R.	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
69	Giezendanner	Ulrich	FP	+	+	+	+	+	+	+	+	+	+	8	0	8.0
70	Giger	Titus	FDP	+	+	+	A	+	+	+	+	-	+	7	1	7.8
71	Gobet	Alex	CVP	+	+	+	-	+	+	+	-	-	+	4	0	4.0
72	Goll	Christine	SP	-	-	-	-	-	A	-	-	0	-	-8	1	-8.9
73	Gonseth	Ruth	GPS	-	-	-	-	-	A	0	-	-	-	-8	1	-8.9
74	Graber	Rolf	LPS	+	+	-	+	+	+	+	-	-	+	4	0	4.0
75	Grendelmeier	Verena	LdU	-	0	-	-	-	+	+	-	-	-	-5	0	-5.0
76	Gros	Jean-M.	LPS	+	-	-	+	+	+	+	-	-	+	2	0	2.0
77	Gross	Andreas	SP	-	-	-	-	-	-	-	-	0	-	-9	0	-9.0
78	Grossenbacher	Ruth	CVP	-	+	+	-	-	-	+	-	+	+	0	0	0.0
79	Gysin	Hans-R.	FDP	+	+	+	+	-	+	+	+	+	+	8	0	8.0
80	Haering	Barbara	SP	-	-	-	-	-	-	-	-	-	A	-9	1	-10.0
81	Hafner	Rudolf	GPS	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
82	Hafner	Ursula	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
83	Haller	Gret	SP	0	0	0	0	0	0	0	0	0	0	President		
84	Hämmerle	Andrea	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
85	Hari	Fritz	SVP	+	+	A	+	+	+	+	0	-	+	6	1	6.7
86	Heberlein	Trix	FDP	+	+	+	-	+	+	+	+	-	+	6	0	6.0
87	Hegetschweiler	Rolf	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
88	Herczog	Andreas	SP	-	-	-	-	A	-	A	-	-	A	-7	3	-10.0
89	Hess	Otto	SVP	+	+	+	+	+	+	+	-	-	+	6	0	6.0
90	Hess	Peter	CVP	+	+	+	-	+	-	+	-	-	+	2	0	2.0
91	Hildbrand	Franz-J.	CVP	+	+	+	-	+	-	+	-	+	+	4	0	4.0
92	Hollenstein	Pia	GPS	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
93	Hubacher	Helmut	SP	A	-	-	-	-	-	-	-	-	-	-9	1	-10.0
94	Iten	Josef	CVP	+	+	+	+	-	A	+	-	-	+	3	1	3.3
95	Jaeger	Franz	LdU	-	-	-	-	-	+	+	-	-	-	-6	0	-6.0
96	Jäggi	Paul	CVP	-	+	+	-	+	-	+	-	-	+	0	0	0.0
97	Jeanprêtre	Francine	SP	-	-	-	-	-	A	-	-	-	-	-9	1	-10.0
98	Jenni	Peter	FP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
99	Jöri	Werner	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
100	Keller	Anton	CVP	-	+	+	-	+	-	+	-	-	+	0	0	0.0

Table 1: Ratings for 1994 (continued)

Rating 1994			Roll-Call Votes										Rating 1		Rating 2	
			A	B	C	D	E	F	G	H	I	J	position	absence		
101	Keller	Rudolf	SD	-	+	+	A	+	+	+	-	-	+	3	1	3.3
102	Kern	Armin	FP	+	+	+	+	+	+	-	+	-	+	6	0	6.0
103	Kühne	Josef	CVP	+	+	+	-	+	A	+	-	-	+	3	1	3.3
104	Ledergerber	Elmar	SP	-	-	-	-	-	-	-	-	-	A	-9	1	-10.0
105	Leemann	Ursula	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
106	Lepori Bonetti	Mimi	CVP	+	-	-	-	+	-	+	-	-	+	-2	0	-2.0
107	Leu	Josef	CVP	+	+	+	-	-	+	+	-	0	+	3	0	3.0
108	Leuba	Jean-F.	LPS	+	+	-	+	+	+	+	-	0	+	5	0	5.0
109	Leuenberger	Ernst	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
110	Leuenberger	Moritz	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
111	Loeb	François	FDP	+	+	-	-	-	+	+	-	-	+	0	0	0.0
112	Maeder	Herbert	LdU	-	+	-	-	-	-	+	-	-	-	-6	0	-6.0
113	Maitre	Jean-P.	CVP	+	A	A	+	+	A	A	A	A	A	3	7	10.0
114	Mamie	Philippe	FDP	+	-	+	+	+	+	+	-	-	+	4	0	4.0
115	Marti	Werner	SP	-	-	-	-	-	-	A	-	-	-	-9	1	-10.0
116	Maspoli	Flavio	SD	+	+	A	-	+	+	+	-	-	+	3	1	3.3
117	Matthey	Francis	SP	-	-	-	A	-	-	A	A	A	A	-5	5	-10.0
118	Mauch	Rolf	FDP	-	A	A	A	A	+	+	-	+	+	2	4	3.3
119	Mauch	Ursula	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
120	Maurer	Ueli	SVP	+	+	+	+	+	+	+	+	+	+	10	0	10.0
121	Meier	Hans	GPS	-	-	-	-	-	-	-	-	+	-	-8	0	-8.0
122	Meier	Samuel	LdU	-	+	-	-	-	+	A	+	-	-	-3	1	-3.3
123	Meyer	Theo	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
124	Miesch	Christian	FDP	+	+	+	+	-	+	+	+	+	+	8	0	8.0
125	Misteli	Marguerite	GPS	-	-	-	-	-	-	-	-	0	-	-9	0	-9.0
126	Moser	René	FP	+	+	+	+	+	+	+	+	+	-	8	0	8.0
127	Mühlemann	Ernst	FDP	+	+	+	+	+	A	+	+	-	+	7	1	7.8
128	Müller	Reinhard	SVP	+	+	+	+	+	+	+	+	+	-	8	0	8.0
129	Nabholz	Lili	FDP	-	+	-	-	A	A	A	-	-	A	-4	4	-6.7
130	Narbel	Jean-Marc	LPS	+	+	-	+	+	+	+	-	-	+	4	0	4.0
131	Nebiker	Hans-R.	SVP	+	+	-	+	+	+	+	-	-	+	4	0	4.0
132	Neuenschwander	Willy	SVP	+	+	+	+	+	+	+	-	-	+	6	0	6.0
133	Oehler	Edgar	CVP	+	+	+	-	+	-	+	-	-	+	2	0	2.0
134	Perey	André	FDP	+	+	+	+	+	-	+	-	-	+	4	0	4.0
135	Philipona	Jean-N.	FDP	+	+	-	+	+	0	+	-	-	+	3	0	3.0
136	Pidoux	Philippe	FDP	A	A	A	A	A	A	+	-	-	+	0	6	0.0
137	Pini	Massimo	FDP	A	0	A	-	+	-	A	A	A	A	-1	6	-2.5
138	Poncet	Charles	LPS	+	-	-	-	0	+	+	-	+	+	1	0	1.0
139	Raggenbass	Hansueli	CVP	+	+	+	A	+	-	+	-	-	+	3	1	3.3
140	Rechsteiner	Paul	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
141	Reimann	Max.	SVP	+	+	+	+	+	+	+	-	-	+	6	0	6.0
142	Robert	Leni	GPS	-	-	-	-	-	A	-	-	-	-	-9	1	-10.0
143	Rohrbasser	Bernard	SVP	+	+	A	+	+	A	+	-	-	+	4	2	5.0
144	Ruckstuhl	Hans	CVP	+	+	+	+	+	-	+	-	-	A	3	1	3.3
145	Ruf	Markus	SD	-	+	+	-	+	-	A	-	A	+	0	2	0.0
146	Ruffy	Victor	SP	-	-	-	-	-	-	A	A	A	A	-6	4	-10.0
147	Rutishauser	Paul	SVP	+	+	+	+	+	-	+	-	-	+	4	0	4.0
148	Rychen	Albrecht	SVP	A	+	A	A	-	+	+	-	-	+	1	3	1.4
149	Sandoz	Suzette	LPS	+	+	-	+	+	+	+	0	0	+	6	0	6.0
150	Savary	Pierre	FDP	+	-	+	+	+	+	+	-	-	+	4	0	4.0

Table 1: Ratings for 1994 (continued)

Rating 1994				Roll-Call Votes										Rating 1		Rating 2
				A	B	C	D	E	F	G	H	I	J	position	absence	
151	Scherrer	Jürg	FP	+	+	+	+	A	+	+	+	-	+	7	1	7.8
152	Scherrer	Werner	EDU	A	A	+	+	-	+	-	-	+	+	2	2	2.5
153	Scheurer	Rémy	LPS	+	+	-	+	+	+	+	-	-	+	4	0	4.0
154	Schmid	Peter	GPS	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
155	Schmidhalter	Paul	CVP	+	+	+	-	+	-	+	-	-	+	2	0	2.0
156	Schmied	Walter	SVP	+	+	+	+	-	A	+	-	+	+	5	1	5.6
157	Schnider	Theodor	CVP	+	+	+	-	+	-	+	-	-	+	2	0	2.0
158	Schwab	Heinz	SVP	+	+	A	+	+	+	+	0	+	+	8	1	8.9
159	Segmüller	Eva	CVP	-	+	+	-	-	A	+	0	-	+	0	1	0.0
160	Seiler	Hanspeter	SVP	+	A	+	+	+	A	+	0	-	+	5	2	6.3
161	Seiler	Rolf	CVP	-	-	-	-	-	-	+	-	-	0	-7	0	-7.0
162	Sieber	Ernst	LdU	A	-	-	A	-	+	+	-	-	-	-4	2	-5.0
163	Spielmann	Jean	PdA	A	-	-	-	-	-	-	-	-	-	-9	1	-10.0
164	Spoerry	Vreni	FDP	+	A	+	-	-	+	+	A	-	+	2	2	2.5
165	Stalder	Fritz	SD	-	+	+	+	+	+	0	-	-	+	3	0	3.0
166	Stamm	Judith	CVP	-	A	A	-	-	-	+	-	+	+	-2	2	-2.5
167	Stamm	Luzi	FDP	+	+	+	+	-	+	+	+	0	+	7	0	7.0
168	Steffen	Hans	SD	-	A	+	A	+	+	+	-	+	+	4	2	5.0
169	Steiger	Hans	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
170	Steinegger	Franz	FDP	+	+	A	+	+	+	+	+	-	+	7	1	7.8
171	Steinemann	Walter	FP	+	+	+	+	+	+	-	+	-	+	6	0	6.0
172	Steiner	Rudolf	FDP	+	+	+	+	+	+	+	-	+	+	8	0	8.0
173	Strahm	Rudolf	SP	-	-	-	-	0	-	A	A	A	A	-5	4	-8.3
174	Stucky	Georg	FDP	+	A	+	+	-	+	+	+	+	+	7	1	7.8
175	Suter	Marc	FDP	-	+	-	-	-	+	+	-	0	+	-1	0	-1.0
176	Theubet	Gabriel	CVP	+	+	-	-	+	-	+	-	-	+	0	0	0.0
177	Thür	Hanspeter	GPS	-	-	-	-	-	-	A	-	-	-	-9	1	-10.0
178	Tschäppät	Alexander	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
179	Tschopp	Peter	FDP	-	+	-	-	A	+	A	A	A	A	-1	5	-2.0
180	Tschuppert	Karl	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
181	Vetterli	Werner	SVP	+	+	+	+	+	+	+	-	-	+	6	0	6.0
182	Vollmer	Peter	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
183	Wanner	Chr.	FDP	-	+	+	-	0	+	+	-	-	+	1	0	1.0
184	Weder	Hansjörg	LdU	-	-	-	-	-	-	+	-	-	-	-8	0	-8.0
185	Wick	Hugo	CVP	+	+	+	-	-	-	+	-	-	+	0	0	0.0
186	Wiederkehr	Roland	LdU	-	+	-	-	A	A	+	-	-	-	-4	2	-5.0
187	Wittenwiler	Milli	FDP	+	+	+	+	+	+	+	+	-	+	8	0	8.0
188	Wyss	William A.	SVP	+	+	+	+	-	+	+	-	-	+	4	0	4.0
189	Zbinden	Hans	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
190	Ziegler	Jean	SP	A	A	A	-	-	A	-	-	-	-	-6	4	-10.0
191	Zisyadis	Joseph	PdA	-	-	A	A	-	A	-	-	-	A	-6	4	-10.0
192	Züger	Arthur	SP	-	-	-	-	-	-	-	-	-	-	-10	0	-10.0
193	Zwahlen	Jean-C.	CVP	+	A	A	A	A	A	+	-	-	+	1	5	2.0
194	Zwygart	Otto, jun	EVP	-	-	A	-	-	+	+	-	-	-	-5	1	-5.6

Description of Roll-call Votes Selected for the 1994 Rating

No. A	AB Jg. 1993, p. 2089 NZZ, 01.12.1993, p. 25	CVP	FDP	SP	SVP	total	
		1	23	35	0	21	101
	Associations' right of complaint	2	12	6	37	0	86

The majority calls for a more federalist solution for the grievance procedure.
1 = right position; 2 = left position (more equally divided)

No. B	AB Jg. 1994, p. 361 NZZ, 16.03.1994, p. 26	CVP	FDP	SP	SVP	total	
		1	29	34	0	21	111
	Law on health insurance	2	4	4	36	0	71

The minority proposes to accept the resolution of the Council of States with respect to the distribution of additional subsidies that are not claimed by the cantons for a reduction of premiums. 1 = for resolution of the Council of States
1 = right position; 2 = left position (left wing opposes the rest)

No. C	AB Jg. 1994, p. 340 NZZ, 15.03.1994, p. 25	CVP	FDP	SP	SVP	total	
		1	10	9	36	1	91
	Coercive measures in the law concerning foreigners	2	24	28	0	17	86

Shall the judge (= 1) or the police department dealing with aliens (= 2) have the jurisdiction to decide on the detention of foreigners that are forced to leave the country?
1 = left position; 2 = right position (more equally divided)

No. D	AB Jg. 1994, p. 493 NZZ, 18.03.1994, p. 25	CVP	FDP	SP	SVP	total	
		1	26	14	37	0	109
	Equal rights	2	8	26	0	21	76

A more precise formulation of the associations' right of complaint is proposed:
Associations that bring an action against somebody shall first inform the accused and give him the opportunity to explain his position or to remove the discrimination.
1 = left position; 2 = right position (right wing opposes the rest)

No. E	AB Jg. 1994, p. 561 NZZ, 19.03.1994, p. 25	CVP	FDP	SP	SVP	total	
		1	24	28	0	18	95
	Grant pardon for tax evasion	2	11	10	35	4	87

With a "Motion" it is requested to grant pardon for tax evasion.
1 = right position; 2 = left position (more equally divided)

if not indicated otherwise: 1 = accept; 2 = reject

Description of Roll-call Votes Selected for the 1994 Rating (continued)

No. F	AB Jg. 1994, p. 1317	CVP	FDP	SP	SVP	total
	NZZ, 21.09.1994, p. 17	1 4	32	1	15	86
	Put on a brake on expenditures	2 26	5	34	2	84
	A minority proposes not to set a time-limit of 10 years on this instrument which shall restrict public spending. 1 = for proposition of the minority 1 = right position; 2 = left position (more equally divided)					
No. G	AB Jg. 1994, p. 1962	CVP	FDP	SP	SVP	total
	NZZ, 08.10.1994, p. 17	1 34	35	2	21	123
	Extension of old-age and survivors' insurance (AHV) and disability insurance (IV)	2 1	1	32	0	51
	Final vote on the federal decree which rejects the popular initiative "for an extension of AHV and IV". 1 = rejection of the popular initiative 1 = right position; 2 = left position (left wing opposes the rest)					
No. H	AB Jg. 1994, p. 1964	CVP	FDP	SP	SVP	total
	NZZ, 08.10.1994, p. 17	1 34	16	36	14	141
	Health insurance	2 0	20	0	5	34
	Final vote on the prolongation (until end of 1996) of the federal decree which shall prevent premiums for health insurance from rising. 1 = left position; 2 = right position (right wing opposes the rest)					
No. I	AB Jg. 1994, p. 1965	CVP	FDP	SP	SVP	total
	NZZ, 08.10.1994, p. 17	1 29	28	29	15	146
	Majority	2 5	7	2	6	27
	Final vote on the reduction of the limit for attaining one's majority from 20 to 18 years under civil law. 1 = left position; 2 = right position (right wing opposes the rest)					
No. J	AB Jg. 1994, p. 1968	CVP	FDP	SP	SVP	total
	NZZ, 08.10.1994, p. 17	1 33	35	1	21	118
	Popular initiative of the farmers' association	2 0	1	31	0	56
	Final vote on the federal decree which recommends the rejection of the farmers' initiative "for an ecologically desirable and efficient agriculture" and the approval of a new paragraph as counter-proposal. 1 = rejection 1 = right position; 2 = left position (left wing opposes the rest)					

if not indicated otherwise: 1 = accept; 2 = reject

7. Limitations of these Ratings

The ratings developed here cannot be used to evaluate the legislative performance of individual members of the National Council, because they are not established and valued from the perspective of a special interest group. They only serve to *locate* legislators on the left-right dimension. Thus they help to overcome (some of) the problems associated with party affiliation. Still, they have obvious defaults. These defaults follow immediately from the limitations of the data source (the roll-call votes) and the technique employed to construct them.

The main weaknesses of the *data source* are the rather small number of roll-call votes, the numerous cases of absences, and the special nature of roll calls.

- The small number of roll-call votes seriously limits the possibilities of choice among votes. With more votes available, the ratings could be based on a larger sample in order to increase their precision and reliability.
- Interpretation and treatment of absences is difficult and remains controversial.
- Roll-call votes are often requested for particularly important and controversial issues. Only for these issues the cumbersome and time-consuming procedure is chosen.¹³ This is why they may be particularly informative. But they are unlikely to be representative of all votes cast in the legislature. Roll-call votes may introduce a systematic *bias* relative to the overall of votes cast in the legislature.

As to the *technique* used to construct the ratings, the two main difficulties are the choice of the left-right dimension and the selection of roll-call votes.

- The *left-right dimension* may not be appropriate to assess the political position of a legislator. To avoid the difficulties involved with this, more specialized ratings can be developed: environmental ratings, foreign policy ratings, social policy ratings, economic policy ratings, ratings on public spending and so on. After the introduction of the electronic voting system the construction of such more specialized ratings becomes viable, especially if each rating is based on four-year legislative periods.
- The ratings are vulnerable to the *selection* of roll-call votes. One strategy to reduce this dependence on the choice of roll-call votes is to enhance the number of votes being included. One might even argue that it is best to choose all roll-call votes. Another strategy is to compile the voting records of each individual legislator for legislative periods, or even for the whole period during which he was a member of the Council, yielding a lifetime rating. While the minimum number of roll-call votes included remains ten, a lifetime rating can be based on a maximum of 140 roll-call votes for legislators sitting in the National Council for the five legislative periods from 1975 to 1995 that are covered.¹⁴ The problem with the lifetime rating is that it neglects the possibility that a legislator changes its preferences over time, especially across (re)election periods. This problem is accounted for by using ratings for four-year legislative periods. Except for the two legislative periods from 1975 to 1983, where each legislative rating is based on just 10 votes, all subsequent legislative period ratings are based on 40 roll-call votes each. If the procedure proposed for rating

¹³ After the introduction of the electronic voting system in 1994 this argument is no longer valid.

¹⁴ While only 4 national councillors (Hubacher, Jaeger, Nebiker, Oehler) achieve this record, 21 legislators reach 4 legislative periods. Their lifetime rating is based on a maximum number of 130 roll-call votes.

2 is applied, absences are directly accounted for, and the risk of bias as a result of a small number of votes is limited.

8. Conclusions

In the U.S. the construction of ratings is motivated by the interests of lobby groups. The ratings for Swiss legislators presented here are developed for scientific purposes. Nevertheless, they can also represent a valuable source of information for all participants in Swiss politics. The negative aspects of "apostrophizing and classifying legislators" (Amtliches Bulletin 1984: 1914) can be avoided if the ratings are established in a representative manner.

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