Lijphart goes regional: Different patterns of consensus in Swiss democracies

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This article addresses the relationships among the main political institutions of the two dozen cantonal democracies which constitute the Swiss federal state. By replicating Lijphart's analysis in the Swiss subnational context, the article seeks to explain the relationships of the political-institutional variables in the Swiss cantons. The main finding of the article is that in contrast to international comparisons, the cantons cannot be classified along the continuum of majoritarian and consensus democracies. However, the Swiss cantonal democracies practice clearly distinguishable forms of power sharing. Based on a factor analysis and a cluster analysis, it is possible to distinguish a two-dimensional pattern of cantonal democracies and five groups of cantons. Although there are a number of different procedures to achieve political stability through division of power in the cantons, the different characteristics of power sharing can, essentially – and with reference to Switzerland's central institutions – perfectly well be situated on a single axis; namely, on that between pronounced direct citizen involvement and broadly supported government coalitions.

The 26 cantons which comprise the Swiss federal state are remarkable for their extensive competences as well as for the considerable differences in their sizes and resources. Switzerland is thus, at the same time, both a prime and an extreme example of a federal state (Elazar 1994: 252; Lijphart 1999: 38). The two dozen cantons with their different political systems, socio-economic structures and political legacies constitute an extraordinary research laboratory within a small space, providing ideal conditions for comparative political analyses. Astonishingly, to this day, this resource has scarcely been used.[1] While there is a significant amount of cross-national research about the relations and causes of political institutions, little systematic work has been done at the sub-national level. The aim of the present article is to help fill this research gap, and to use comparative methodology to explain the interdependence of political institutions in the

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Swiss cantons. The article's central question is as follows: how can the different embodiments of political-institutional arrangements in the Swiss cantons be explained?

When comparing the 26 cantons – which can primarily be characterised in terms of the more or less pronounced vertical and horizontal power sharing mechanisms of Swiss politics, such as the broadly supported government coalition, the developed direct democracy and the extensive local autonomy – particular attention is due to the institutional barriers of majority rule (Kriesi 1998; Linder 1994, 1999; Neidhart 1970; Steiner 1974, 2002). Thus, a guiding influence on the present article has been Lijphart's ground-breaking work (1984, 1999) on the systematic comparison of majoritarian and consensus democracies, in which the author empirically carves out the most important dimensions of both types of democracy.

The present article takes advantage of Swiss federalism and centres on the following two aims:

- Taking as our point of departure the political-institutional common ground and differences between the Swiss cantons, we aim to carve out the most important basic dimensions of cantonal democracies at the root of the political institutions' specific characteristics.
- On the basis of these political-institutional dimensions, we finally aim to distinguish various clusters of cantons corresponding to certain prototypes of democracies. Of particular interest is the extent to which the cantons differ from each other and can be typologised in respect of their institutional barriers to majority rule.

Theoretical Approach and Research Design

In view of the consociational and direct democratic character of the Swiss member states (Vatter 2002), the choice of cantonal institutions to be examined concerns the distinguishing features best established in comparative research (see for instance Colomer 1996; Huber *et al.* 1993; Kaiser 1998; Lijphart 1984, 1999; Rothstein 1996). Based on the criticism of classic institutionalism which claims that the latter restricts itself to formal legal institutions and inadequately covers the breadth of variation of institutional arrangements in real democratic systems, thus leading to an under-specification of the most important types of democracy, the following analysis is based on Lijphart's (1999) well-known typology of democracies that has established itself successfully in comparative politics. When Lijphart performs factor analysis on the constitutional features and electoral outcomes of 36 different democracies, two dimensions emerge. The first of these Lijphart calls the executive-parties (or joint-power) dimensions, and is loaded by the degree of electoral disproportionality, the effective number of parties, the frequency of one-party government, the average cabinet length and the interest group system. The second dimension, called by Lijphart the

federal-unitary (or divided-power) dimension, is loaded by bicameralism, federalism, judicial review, constitutional rigidity and central bank independence. According to Taagepera (2003: 14), Lijphart's two dimensions emerge as very different in kind. They differ in the nature of indices used, the existence of logical models to connect the indices, and, 'most important for practicing politicians, the number of entry points for institutional design. Broadly speaking, the joint-power dimension is based on output indices (not subject to institutional design), while the federal-unitary dimension is based on input indices (subject to such design)'. Following recent theoretical thought on new political institutionalism, our analytical concept centres not only on the classic 'rules-in-form' (or 'institutional inputs'), but equally on the 'rules-in-use' (or 'institutional outputs') which have crystallised over time (Rothstein 1996; Sproule-Jones 1993; Taagepera 2003). Hence, in accordance with Lijphart's terminology (1999: 3), the 'institutional rules and practices' of the cantonal democracies lie at the heart of our research interest.[2]

The advantage of our research design is that by comparing different political systems on a subnational level, a central problem of international comparative research is avoided. Comparisons of nation states must take account of specific political forms and regulations as well of particular institutional contexts. In contrast, it is potentially less difficult to create *ceteris paribus* conditions for a systematic comparison of cantonal systems. Since the Swiss cantons are units within the same national political framework, they have many characteristics in common that can be treated as constants. Nevertheless, the range of variation of the political-institutional variables is often as great or even greater than what occurs in comparative studies at the national level. Thus, the systematic comparison of Swiss cantons has the advantage of meeting the requirements of the most-similar systems research designs (Przeworski and Teune 1970). In addition, the focus on the Swiss cantons seems to be justified because these are entities with far-reaching powers in a highly decentralised federation (Linder 1999). Another advantage is that the cantons are 26 in number, which provides a sufficient number of cases for a statistical analysis (Lijphart 2002). Moreover, the 26 cantons provide an excellent opportunity to test the impact of direct democracy, which represents a unique institutional arrangement for Switzerland.

The research is based upon a cross-sectional analysis of the relationships and determinants of political institutions in the Swiss cantons between 1980 and 2000. Initially, we use a factor analysis to enquire into the most important dimensions underlying political institutions in the cantons. Based on a cluster analysis, the following section develops a typology of cantonal democracies which aims to represent the common ground and differences between the cantons. Finally, a graphic representation of a two-dimensional matrix of the cantons ('democratic map') further and more precisely renders the Swiss member states' political-institutional characteristics.

Table 1 shows the political institutions which we will consider in depth. Taking Table 1 as our point of departure, we will now briefly introduce the variables used for the empirical analysis.[3] In view of the cantons' direct democratic character, we pay special attention to the institutions of direct democracy. In contrast to Lijphart (1984, 1999) and Barry (1975), direct democracy is to be regarded neither as a fundamentally foreign element in majoritarian and consensus democracies (Lijphart 1984: 31), nor as the 'the antithesis of "amicable agreement"' and power sharing (Barry 1975: 485). The crucial factor is rather *the specific form* of direct democracy (Vatter 2000). Due to the exclusive initiation right of the government majority and the validity of the simple majority as decision rule, plebiscites and mandatory referendums may be brought into correspondence with the basic function of traditional Westminster democracies. Popular initiatives and optional referendums, meanwhile, are located at the opposite pole. These are effective minority instruments which enable parts of the population to enforce popular votes which can go against the governmental and parliamentary majorities and can be considered as typical minority

TABLE 1
INSTITUTIONS, VARIABLES, MEASUREMENT AND DATA SOURCES

Institution	Variable	Measurement	Source
Concentration of executive power 1	Size of the cantonal government coalition	Total share of votes of the government parties	APS, own calculations
Concentration of executive power 2	Entry chance into the cantonal government	Number of cabinet seats in the cantonal government	Lutz and Strohmann 1998, own calcul.
Electoral system	Effective threshold at cantonal parliamentary elections	Average district magnitude and legal thresholds	Lutz and Strohmann 1998, own calcul.
Party system	Effective number of legislative parties	Rae's (1967) index of fragmentation of the party system	FSO, Vatter 2003
Direct democracy 1	Institutions of direct democracy	Additive index of direct democracy (formal access)	Stutzer 1999
Direct democracy 2	Use of direct democracy	Number of optional referendums and initiatives	APS, own calculations
Decentralisation 1	Degree of institutional decentralisation	Stock of local units (municipalities)	FSO
Decentralisation 2	Degree of fiscal centralisation	Tax revenue of the canton as a percentage of the total tax revenue of the canton and the municipalities	FFA, own calculations

Notes: APS: Année Politique Suisse: various volumes; FFA: Federal Finance Administration: various volumes; FSO: Swiss Federal Statistical Office: various volumes.

rights of consensus democracies (for a further discussion see Jung 1996; Vatter 2000). Therefore, we included popular initiatives and optional referendums as typical power sharing elements in our framework.

Concentration of Executive Power 1

All cantonal executives are multi-party coalitions and oversized cabinets in the sense of consensus democracies. For this reason, it is possible only in very limited terms to differentiate between different cabinet types. Yet cantonal governments vary considerably regarding the degree to which different political groups are integrated in the executive ('oversized coalition'; level of concordance), a fact which finds its expression in the coalition government's varying electorate strength.[4] As a first indicator of concentration of executive power, we thus use the government parties' share of the electorate as a percentage between 1980 and 2000.[5]

Concentration of Executive Power 2

The differing number of distributable cabinet seats serves as a second proxy indicator for the concentration of executive power. During the research period, this number varies between five and nine among the cantons, and can thus be regarded as a measure for the differing entry chances of smaller parties into the executive (Felder 1993).

Electoral System

Simple plurality rule, proportional representation and mixed procedures can all be found in the cantons at parliamentary elections (Lutz and Strohmann 1998: 80).[6] Possible indicators are thus either a disproportionality index (Loosemore-Hanby Index), which specifies the voter–seat difference, or the 'effective threshold', which renders the minimum proportion of electorate votes necessary in order to obtain a seat in the cantonal parliament. Both indicators correlate strongly among each other ($r = 0.62^{**}$). For the empirical analysis, we use the indicator for the level of the effective threshold, which – unlike the disproportionality index – can also be calculated for those cantons using the plurality system. The values used give us the arithmetic mean of the cantonal elections between 1980 and 2000.

Party System

One of the most widely used indicators for this is the effective number of parties in the parliaments. Both, the Rae index and the Laakso–Taagepera index take into account the number as well as the strength of the legislative parties (Laakso and Taagepera 1979; Rae 1967). The Laakso–Taagepera

index provides the average for, as a rule, the last five cantonal elections between 1980 and 2000 (Vatter 2003).

Direct Democracy 1

The differing degree of development of the direct democratic institutions in the cantons is evident in the different obstacles to the use of popular initiative (particularly constitutional and legal initiatives) and optional referendum (particularly legal and financial referenda). The main differences exist in the number of signatures required, proportionally to the voting population, for a popular initiative or an optional referendum to take place; in the period of time available for the collection of signatures; and in the level of expense for the submission of an optional finance referendum. Based on Trechsel and Serdült's (1999) extensive data, Stutzer (1999) has calculated an additive index on a scale of one to six, representing the formal means of access to the institutions of direct democracy in the cantons for the period 1970 to 1996. For the following calculations, we adopt the average values of Stutzer's (1999: viii) direct democracy index. For the three cantons missing in Stutzer's (1999) investigation (GL, OW, NW), some of which still had popular assemblies during the research period, we calculate an index value as per Stutzer's (1999: 4ff.) operationalisation based on the data supplied by Moser (1985) and Lutz and Strohmann (1998).

Direct Democracy 2

The indicator for the use of direct democracy is constituted by the number of optional referenda and popular initiatives per canton which were submitted to the voting population during the research period.[7] The data is based on the *Année Politique Suisse* and the databank of cantonal referenda in the Department for Political Science of the University of Bern.[8]

Decentralisation 1 and 2

The degree of decentralisation or centralisation is measured firstly through the stock of local units (municipalities), and secondly through the tax revenue of the cantons as a percentage of the total tax revenue of the cantons and the municipalities, analogously to Lijphart (1984: 178).[9] In each case, we use the arithmetical mean for the years 1980, 1990 and 2000.

The Two Main Dimensions of Cantonal Democracies

The first question now presents itself whether – analogously to comparative studies on the national level – relationships can likewise be observed between the most important political institutions in the cantonal democracies. The appropriate method of underlying a set of variables with an

ordering structure is a factor analysis which allows individual variables, by virtue of their correlations, to be classified into independent groups. This statistical procedure allows us to tease out one or several dimensions underlying the different variables (Bortz 1999: 495ff; Lijphart 1999: 245).[10]

Table 2 shows the results of the factor analysis with the eight variables.[11] The period of investigation is the years 1980 to 2000, the units examined are the 24 cantons excluding the two Appenzell half-cantons.[12] The values specified for each variable indicate the factor loadings, which can be interpreted as correlation coefficients between the variable and the first or the second factor.

The central outcome of the factor analysis is the emergence of two largely unrelated factors, each of which encompasses a group of variables.[13] With one or two exceptions, both groups of variables exhibit high factor loadings within, as well as low loadings outside their own group, although this generally applies slightly less to the variables of the second factor. The strongest variable in the first factor dimension is the effective number of parties, which correlates almost completely with the first factor, followed by the electoral strength of the government parties and the number of optional referenda and initiatives. The degree of financial centralisation stands in a somewhat less, but still comparatively strong relation to the first factor. All in all, the first factor explains around 40 per cent of the total variance.

In the second dimension, the stock of local units and the possibilities of legal access to the institutions of direct democracy prove to be the strongest features, followed by the level of thresholds at cantonal parliament elections, which incidentally also stand in a negative relationship to the first factor loading. The number of cantonal government seats can only barely be assigned to the second factor. On the one hand, the second variable for concentration of executive power clearly correlates more strongly with the second factor dimension, but on the other hand, it reveals altogether the weakest results of the eight political-institutional variables.[14]

TABLE 2
FACTOR ANALYSIS WITH EIGHT POLITICAL-INSTITUTIONAL VARIABLES
FROM 24 CANTONAL DEMOCRACIES FOR THE PERIOD FROM
1980 TO 2000

Variable	Factor I	Factor II
Government parties' share of the electorate	−0.80	0.24
Effective number of legislative parties	0.90	−0.18
Number of initiatives and optional referenda	0.83	−0.02
Proportion of cantonal to local tax revenue	0.76	0.21
Number of cabinet seats	0.02	0.36
Threshold at parliamentary elections	−0.34	0.52
Stock of local units (municipalities)	−0.02	−0.77
Access to the institutions of direct democracy	−0.12	0.78

The contribution of the second factor to the explanation of the total variance is of 25 per cent.[15]

What interpretations does this result allow? Initially, one is struck by the high degree of accordance with the two basic dimensions of political institution elucidated above, as distinguished by exponents of modern institution research (Rothstein 1996; Taagepera 2003). Thus, the variables of the first factor dimension correspond exclusively to the informal regulating techniques and organisations which have developed over time ('rules-in-use'), while the second factor concerns specified constitutional and legal rules ('rules-in-form'). From this it follows that the legally specified political institutions on the one hand (e.g. institutional openness of direct democracy) and the observable government types, party systems and direct democratic practices on the other are, although not entirely independent of each other, in fact largely discrete dimensions of cantonal democracies.[16]

While the distinction between 'institutional rules and practices' made in recent democracy research also holds true empirically in the cantonal democracies, we can further observe strong interdependencies between the individual features within the two basic dimensions. This applies particularly to the variables of the first factor dimension. Thus the individual characteristics of democratic rule, such as the electoral strength of the government parties, number of political parties, use of direct democracy and real (financial) autonomy at the local level, correlate in a close reciprocal relationship and function, as a whole, as an intricate 'checks and balances' system of mutual power. The negative sign of the executive variable indicates that where government parties hold a low share of the electorate, i.e. where integration of the various political and social groups into the executive is relatively weak, as well as where there exist additionally centralised power relations, political counterforces in the shape of other forces – in terms of a large number of parties in parliament and a multitude of initiatives and referenda, both submitted and coming to the vote – operate against the power of the cantonal government. As barriers for the restraint of the executive, these institutions take on functions of veto points which can delay or prevent political decisions, and thus constitute, to a considerable degree, the cantonal executive's and administration's context of action.

The reciprocal relationships between the political institutions in the second factor dimension are generally a little less pronounced. All the same, it is noticeable that a large degree of openness in accessing the instruments of direct democracy is in line with high effective thresholds at cantonal parliament elections and with a low number of municipalities, and vice versa. Thus, more difficult access to the representative legislative bodies, as well as a low degree of self-determination, tends to be compensated by simple access to popular rights. Moreover – even if in weakened form – the executive variable stands in an inverse proportion to the legislative variable: in places where, on account of the higher number of distributable cabinet

seats, smaller parties have a greater chance of negotiating the leap into the cantonal executive, the entry threshold into the cantonal parliament is higher than average, and the vertical power variable points to comparatively centralised structures. Conversely, where there are high executive barriers and potent thresholds to the launching of initiatives and optional referenda, low barriers for entry into the cantonal parliament and a higher number of local units can be found.[17]

A Typology of the Cantonal Democracies

Based on the two dimensions of political institutions, we now aim, as a next step, to carve out the systematic similarities between the two dozen Swiss cantons. Do different, clearly distinguishable types of cantonal democracies exist, and if so which political-institutional attributes distinguish them from each other? The most important procedure for the formation of groups is cluster analysis (Wagschal 1999: 246), which we will employ in this section. Our cluster analysis aims to detect similarities between the cantons based on the shared characteristics of their political institutions, so that, on the one hand, the cantons can be classified into groups with characteristics as similar as possible, and, on the other hand, we can form groups with as few correspondences as possible.

For the cluster analysis the eight selected political-institutional variables need to be standardised on the basis of their varying units of measurement, since otherwise the variables with large units of measurement would receive an above average weighting. The appropriate procedure for standardisation is known as z-transformation, and has the effect of causing the standardised values of the variables to exhibit a mean value of zero and a standard deviation of one, thus making them directly comparable with each other (Wagschal 1999: 260).[18] The cluster analysis is carried out based on the z-transformed values of the variables. As our measure of distance, we use Euclidean distance.[19] As such, the most widely used hierarchical, agglo-merative procedure is applied. As an algorithm, we choose the complete linkage (furthest neighbour) method, since, unlike the single linkage (nearest neighbour) method, it leads to the formation of small and comparatively homogenous groups, which is one of our aims in the present case.[20]

The dendrogram in Figure 1 graphically represents the clusters of the different unification steps. The cluster analysis carried out points to a homogenous five-cluster solution, something which is also evident in the number of the tree diagram's 'branches'. In a first step, we separate the cantons of Geneva and Basle City from the remaining 22 cantons; second, we split up the latter group, allocating the six cantons Glarus, Uri, Schwyz, Graubünden, Zug, Obwalden and Nidwalden to an independent cluster of their own. In our third step, we divide the middle group of cantons into three further clusters. All in all, it is thus possible to distinguish five different groups of cantons based on the common ground and differences between

FIGURE 1
DENDROGRAM OF THE CANTONS USING EIGHT POLITICAL-INSTITUTIONAL
VARIABLES
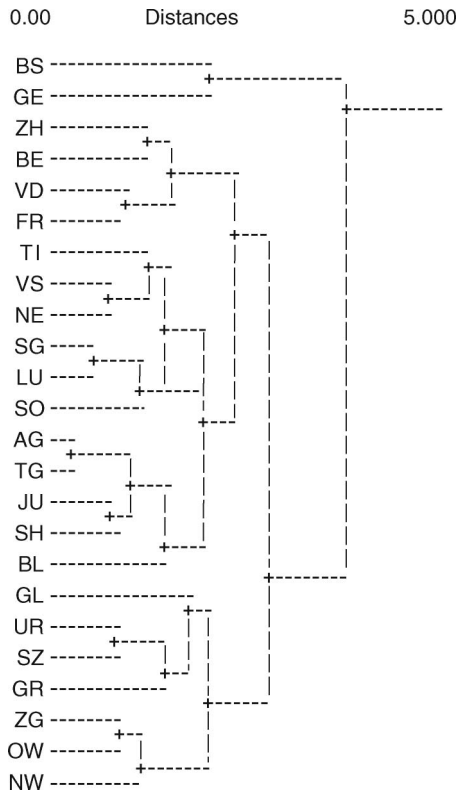
their political institutions.[21] Additionally, we would like to point out that
our cluster analysis was also carried out using the ward procedure[22] and
the average linkage method. In both cases, the results on hand were
confirmed.

Based on the results of the cluster analysis and on the cantons' specific
characteristics of their political institutions, it is possible to distinguish five
groups of cantons. Table 3 presents the different clusters of cantons with
their respective shared political-institutional features. The attributes of the
political-institutional variables convey whether the standardised z-values lie
above or below the arithmetic mean.

The first cluster, referred to in simplified form as a 'direct democratic and
centralised' type of democracy, embraces the two urban cantons of Basle
City and Geneva. These two geographically small, but heavily populated
cantons have much in common in terms of the characteristics of their
political institutions. Within the 'rules-in-use' dimension, they stand out as

TABLE 3
THE FIVE TYPES OF CANTONAL DEMOCRACY

Direct democratic centralised type *BS, GE*	Direct democratic decentralised type *ZH, BE,* VD, FR	Representative-democratic* type *TI, VS, NE, SG,* LU, SO	Formal participative type *AG, TG,* JU, SH, BL	Executive power sharing type *GL, UR, SZ,* GR, ZG, OW, NW
– *many parties*	– *many parties*	– *few parties*	– *many parties*	– *few parties*
– *many initiatives and referenda*	– *many initiatives and referenda*	– *few initiatives and referenda*	– few initiatives and referenda	– *few initiatives and referenda*
– small government coalition	– small government coalition	– large government coalition	– large government coalition	– *large government coalition*
– centralised	– decentralised	– low electoral threshold	– decentralised	– *high number of cabinet seats*
– high number of cabinet seats	– *high number of cabinet seats*	– difficult access to institutions of direct democracy	– *small number of cabinet seats*	– low stock of municipalities
– low stock of municipalities	– *high stock of municipalities*		– low electoral threshold	– *high electoral threshold*
– low electoral threshold			– easy access to institutions of direct democracy	– *easy access to direct democracy*

Notes:
Canton italic type: all quoted parameter values apply to the corresponding canton of this cluster.
Canton normal type: not all quoted parameter values apply to the corresponding canton.
Parameter value italic type: applies to all cantons in this group. Parameter value normal type: does not apply to one canton in this group. Omitted parameter value: does not apply to at least two cantons in this group.

having the highest number of parties and being two of the most intensive users of popular rights among all the cantons, as well as for having the highest level of centralised structures and the lowest share of the electorate held by government parties. Because of their low level of government electoral strength, these two cantons have the 'most majoritarian' character of all Swiss member states. Within the 'rules-in-form' dimension, Basle City and Geneva are characterised by low effective thresholds at cantonal parliamentary elections, by many government mandates and by a low number of municipalities. In relation to the eight political-institutional variables, the two cantons differ only in respect of their access to the institutions of direct democracy: while in Basle City, access barriers to the use of popular rights are low, in Geneva the legal barriers to the launching of initiatives and optional referenda are exceptionally high. All in all, the two city cantons can be characterised as follows: pronounced party competition, intensive use of direct democracy, and centralised political structures.

The *second group* with the four cantons of Zurich, Bern, Vaud and Fribourg is described as a 'direct democratic and decentralised' type. Initially, one is struck by many similarities between these four cantons and the first cluster. Likewise, these cantons – albeit, as a rule, to a slightly lesser degree – display above-average party fragmentation, intensive use of popular rights and comparatively weak electoral representation by the government parties. Nevertheless, at the same time the cantons differ fundamentally from the first cluster in terms of their parameter values in one of the main political institutions: namely, in the form and practice of local autonomy. Unlike the two city cantons of the first group, these cantons boast a large number of small and medium-sized municipalities and, moreover, a high degree of financial self-administration on the municipal level. In summary, the second group of cantons display further parallels such as high geographical proximity (apart from Zurich) and a shared historical past,[23] can be described using the following key words: high party fragmentation, many referenda and a strong (formal and practical) municipal status.

In contrast to the other clusters, the *third group* with the six cantons of Ticino, Valais, Neuchâtel, St. Gallen, Lucerne and Solothurn corresponds to a 'representative-democratic' type. The political-institutional practice of this cluster, with its three Latin cantons[24] and three medium-sized German-Swiss cantons, is characterised on the one hand by low party fragmentation and a below-average use of popular initiatives and optional referenda, as well as on the other hand by its strong integration of political and social groups into government. In terms of the formal embodiment of political institutions, the entry threshold for small groups into cantonal legislature is strikingly low, while at the same time the formal barriers to the use of direct democracy are unusually high. In summary, the third group of cantons can be characterised as follows: comparatively weak status of direct democracy

in legal and in practical terms, easy access to the representative bodies, and broadly supported government coalitions.

The *fourth group*, which is described as a 'formal participative' type, encompasses the cantons of Aargau, Thurgau, Jura, Schaffhausen and Basle Country. A specific feature of these five cantons – all of which, except Schaffhausen, are formerly dependent, subordinate territories which only at the beginning of the nineteenth century became cantons with equal rights in the Confederation – is the large degree of openness in their definition of the right to vote. Thus, this group is characterised by low effective thresholds at cantonal parliamentary elections as well as by easy access to the institutions of direct democracy. Nonetheless, this open access to democratic civil liberties finds expression only in a large number of parties, not in a lively use of popular rights. Finally, a further shared feature of this cluster is the low number of cabinet seats and the comparatively low level of electoral support of government parties. The key words for the fourth group are as follows: fully developed civil liberties at elections and ballots, strong party competition and small government coalition.

The *fifth group*, described in simplified form as an 'executive power sharing' type, encompasses the cantons of Glarus, Uri, Schwyz, Graubünden, Zug, Obwalden and Nidwalden. The majority of this group's members are small central and eastern Swiss cantons historically structured around agriculture and trade, with a strong popular assembly tradition. A particularity shared by cantons in this cluster is the prevalent easy access to the institutions of direct democracy and to the executive. Oddly, however, popular rights (initiatives, optional referenda) are only rarely in fact made use of in the cantons where the popular assembly was abolished in the course of the twentieth century. Thus, direct democracy in these cantons evidently holds a symbolic, rather than a practical significance in the regulation of political conflict. Party competition and fragmentation are similarly weakly developed in these cantons; generally only two- and three-party systems exist, which is related, among other things, to the high electoral thresholds at parliamentary elections. At the same time, this group is characterised by low thresholds to attainment of a government mandate. Thus, one is struck on the formal-legal level by the large number of government seats, and by the very strong integration of the electorate into the government parties. The most important key words to describe the fifth group are therefore its fully developed, but at the same time little used popular rights, a weak degree of party competition, and extensively supported and broad-based government coalitions.

On the basis of the common features of the five groups of cantons, it is thus possible typically to isolate various prototypes of democratic rule. Although the cantons' political systems are essentially consensus democracies with – in international terms – an extremely highly developed level of direct democracy, it is nevertheless very much possible to pinpoint considerable differences between the Swiss member states. The typology

we have presented shows that the groups of cantons differ from each other particularly strongly in terms of their formal and informal political institutions. This can be vividly illustrated using the two extreme examples of Basle City and Nidwalden. While easy access to, and highly intensive use of, optional referenda and popular initiatives give the direct democratic character in Basle City's political system an especial significance, the consensus elements – with polarised party competition, a low degree of municipal autonomy and a comparatively weakly supported government in terms of its share of the electorate – play a rather subordinate role. A different placement of emphasis can be found nowadays in the canton of Nidwalden. In spite of a popular assembly tradition, the actual use of popular rights in this canton's current political practice plays no more than a subordinate role, while the canton's outstanding features are the large number of government members and a broadly electorate-supported government coalition. All in all, the *executive power sharing* component dominates here.

Unlike in international comparisons, the cantons cannot, obviously, be classified along the continuum of majoritarian and consensus democracies. Notwithstanding all the differences, the cantons are all semi-direct consensus democracies. However, to date scarcely any attention has been paid to the fact that the cantonal democracies practice clearly distinguishable forms of power sharing. Thus, in the course of the decades, the cantons' political actors have developed different strategies and mechanisms for the regulation of political conflicts, for mutual authority control and for reciprocal power balancing. The typology expounded above gives us more precise information on this matter. However, although a number of different procedures exist in the cantons to achieve political stability through 'division of power', the different characteristics of power sharing can, essentially – and with reference to Switzerland's central institutions – perfectly well be situated on a single axis; namely, on that between pronounced direct democracy and broad-based government coalitions. Thus, we are not dealing with a continuum from majoritarian to consensus democracy, but with one which varies between two basic forms of power sharing. While on the one hand the emphasis in the first (Basle City, Geneva) and second (particularly Zurich, Bern, Vaud) cantonal clusters is on simple access to and the great practical significance of direct democracy, thus allowing the cantons in these two groups to be described as representatives of the 'citizen power sharing' type, on the other hand the fifth (Nidwalden, Obwalden, Uri, Schwyz, Glarus, Graubünden) and, to an extent, third (Ticino, Valais, Neuchâtel, St. Gallen, Lucerne and Solothurn) cantonal clusters emphasise integrating the political elite into the executive as widely as possible, giving less weight to a pronounced, direct participation on the part of the people. As such, the latter clusters can be described as an 'elite power sharing' prototype. Finally, the fourth (Aargau, Thurgau, Jura, Schaffhausen, Basle Country) cantonal cluster[25] is a mixed

type, in which neither direct democracy nor broad government coalition take the lead on a formal or practical level, a fact which is best attributed to the generally weak status of the cantonal parliaments.

A Democratic Map of the Swiss Cantons

All in all, the cluster analysis affords us profounder insights into the different types of cantonal democracy and conveys much information concerning the latter's most important characteristics. However, the cluster analysis does not yet enlighten us as to the exact location of each canton in relation to the other cantons on the two mutually independent political-institutional dimensions. Moreover, we can make only limited statements regarding the homogeneity of the individual clusters. A suitable procedure in order precisely to answer these as yet open questions is to represent graphically the two basic political-institutional dimensions in a two-dimensional map of democracy, as Lijphart (1999: 248) has already done. However, for one thing this requires once again to z-transform the factor values of the variables in order to make them comparable with each other, and for another we need to assign both factor dimensions to the same continuum. The above-mentioned distinction between two 'power sharing' types, which on the formal-legal as well as on the informal-practical dimension move typically between pronounced direct democracy and broad-supported government coalition, creates ideal conditions for the drawing-up of a two-dimensional matrix ('democratic map') of the cantons. The two dimensions can now be combined via an additive index value which can be entered on the political-institutional coordinates system.

Figure 2 represents the cantons' locations on a democratic map, along with the two mutually independent basic institutional types. The dimensions of institutional practice ('rules-in-use') are located on the abscissa, the legally established institutions ('rules-in-form') on the ordinate. Both axes vary between strongly direct democratic (positive values) and strongly executive power sharing (negative values).[26] Thus, high positive values correspond to the direct democratic prototype, negative values to the government coalition prototype. The figure shows that on the vertical axis, all the cantons are situated within two-and-a-half standard deviations of each other, while on the horizontal axis – due to Basle City's high values – they differ by up to three standard deviations. Hence, the cantons vary more strongly on the informal than on the formal dimension of political institutions.

What further insights does the political-institutional matrix of the cantons provide? In line with the results of the cluster analysis, the cantons of each group lie close together, although the different clusters differ in terms of homogeneity. While the cantons in groups three to five are relatively united, clusters one and two prove to be comparatively heterogeneous. Thus the

FIGURE 2
A DEMOCRATIC MAP OF THE CANTONS
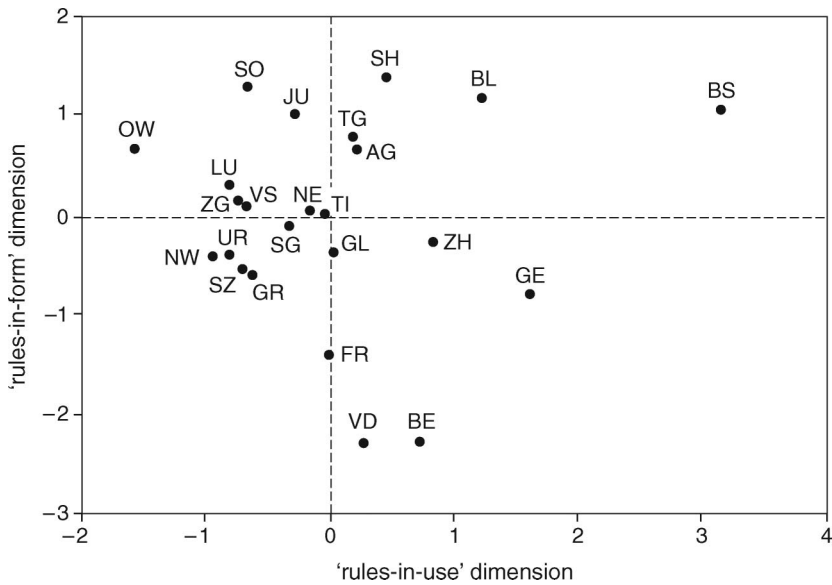
cantons of Zurich, Bern, Vaud and Fribourg hold similarly high index values on the abscissa, while the two large cantons of Bern and Zurich, in particular, are on the same level. Yet some of the cantons of the second cluster show considerable differences on the formal dimension; thus, the canton of Zurich is characterised by a greater simplicity of access to the right to vote than Bern. Geneva and Basle City, the two representatives of the first cluster differ to an even greater extent than the cantons of the second cluster. As is to be expected, the canton Basle City corresponds to the prototype characterised by strongly developed formal and informal rules of direct democracy, by low electoral thresholds and many parties, by centralised structures and a government coalition with only weak electorate support, while the canton of Geneva – although on the 'rules-in-use' dimension it likewise displays strong direct democratic features – corresponds less to this prototype on the formal dimension. At the same time, within this dimension the neighbouring canton of Basle Country is almost identical to the canton of Basle City.

While the canton of Basle City can thus be unequivocally identified as a 'direct democratic' prototype, there is no perfect example of the 'executive power sharing' case in the left-hand lower corner. This fact once again underlines the importance of direct democracy in the Swiss cantons, at least on the formal level. On the practical level – with a standard deviation of one – the small central Swiss rural cantons of Obwalden and Nidwalden, and to a slightly lesser degree Zug, Uri, Schwyz and Graubünden, represent

the antipode to Basle City. However, this applies only in very limited terms to the formal-legal dimension, since no high barriers need to be surmounted in these cantons prior to using initiatives and optional referenda. All in all, the role of the 'executive power sharing' pole is – on account of its strong negative value on the informal level – best played by the canton of Nidwalden.

The map now furthermore clearly reveals two mixed types along the two dimensions: in the right-hand lower corner the canton of Bern, notable on the one hand for its highly developed direct democratic practice, its high party fragmentation and a rather small government coalition, and on the other hand for higher-than-average electoral thresholds and a large number of municipalities and government seats. The antithesis in the top left-hand corner is the canton of Solothurn. This canton is characterised by a comparatively low use of popular initiatives and optional referenda, by weak party fragmentation and, at the same time, easy access to the right to vote as well as a broadly supported governing coalition.

Finally, the question arises which canton best corresponds to the Swiss average. The canton Aargau, long the epitome of the average Swiss canton, once again comes fairly close to the Swiss mean value in the present diagram. However, the arithmetical position in the centre is occupied not by a canton at Switzerland's heart, but by a border canton which, although moreover it belongs to a small minority, was equally moulded by the two largest language groups in Switzerland: the Italian-speaking canton of Ticino.

Conclusions

Taking international research into account, the following conclusions can be summarised from our comparison of political institutions in Swiss cantonal democracies:

1. When Lijphart performs factor analysis on the constitutional features and electoral outcomes of 36 different democracies, two dimensions emerge. The first of these Lijphart calls the executive-parties (or joint-power) dimensions, the second dimension is called by Lijphart the federal-unitary (or divided-power) dimension. According to Taagepera (2003: 14), Lijphart's two dimensions differ in particular as to the number of entry points for institutional design: the joint-power dimension is based on output indices (not subject to institutional design), while the federal-unitary dimension is based on input indices (subject to institutional design). Strikingly, the central outcome of the factor analysis of the cantonal political institutions is the emergence of two largely unrelated factors, each of which differ in the way Taagepera distinguished the two dimensions of Lijphart. The first dimension corresponds exclusively to the unwritten rules ('institutional output')

which have developed over time and offers no entry point for direct institutional design, while the second factor concerns specified constitutional rules ('institutional input') which are subject to institutional design. It seems that the legally specified political institutions such as electoral rules on the one hand and the observable government types, party systems and direct democratic practices on the other are, although not entirely independent of each other, in fact largely discrete dimensions. Hence, institutional design may be more difficult than sometimes assumed.

2. Our empirical results can, apart from their concordance with the two basic dimensions of political institutions according to Taagepera (2003) and Rothstein (1996), best be reconciled with Kaiser's (1998) concept of multidimensional veto-point democracy and Crepaz' (2001) distinction between competitive and collective veto points. Kaiser (1998) distinguishes different dimensions of veto points and refers, in international comparison, particularly to the compensatory relation of political-institutional veto points to the containment of majority rule.[27] The outcomes of the factor analysis indicate that by the same token compensatory effects between the political institutions – in the sense of a continued striving towards power balance – play an outstanding role in the cantonal democracies. In this sense, we agree with Kaiser's (1998) critique of Huber *et al.* (1993) and Schmidt's (1999) one-dimensional frameworks of counter-majoritarian institutions or McGann's (2004) critique of Tsebelis' (2002) one-dimensional veto points approach.[28] In the present case, it seems similarly unwise simply to count up the institutional veto points, since this would cause the different characteristic dimensions of power sharing and the specific interaction of institutions in the cantonal democracies practically to disappear. Theoretically as well as empirically, it rather seems more useful to allow for the variety and the functional equivalence of political-institutional arrangements in the cantons by differentiating between at least two different dimensions of political institutions. Taking into account these different dimensions provides us with a more complex, but also altogether more realistic picture of the diversity of cantonal democracies.

3. Finally, the empirical analysis shows that the cantonal democracies are marked by an extraordinary power fragmentation, something which finds expression in the political actors' many horizontal and vertical veto points. The findings also confirm that the cantons dispose of a wide field of experimentation of different power sharing techniques, and that they know how to use them. The development of popular rights in the cantons has admittedly led to the formation of negotiation democracies (Vatter 2002). However, within this pattern, it is possible to locate different characteristic forms with varying points of emphasis. In this way, through time, sometimes differing conflict regulation techniques

have developed in the cantons for the handling of societal disputes. While in the case of the executive power sharing prototype with an encompassing government coalition, the informal search for a broadly supported compromise within the political elite begins as early as possible, in the case of the direct democratic power sharing prototype, due importance needs to be accorded to the public articulation of minority interests, the prevention of majority decisions and the obligation to negotiate, as well as where applicable to external mobilisation at the end of the decision-making process. Following the terminology of recent empirical democracy research (Birchfeld and Crepaz 1998; Crepaz 2001; Kaiser 1997, 1998), the cantons thus differ from each other mainly in terms of the importance they give to counter-majoritarian institutions during the different stages of the policy process. Thus in one case, typically, consensual veto points will determine the power sharing of players' actions, so primarily fostering incentives for the use of elitist and integrative strategies. In another case, the political actors' behaviour will be more strongly influenced by direct democratic and legislative veto points, which tend to have a rather competitive effect. Obviously, these two different types of veto points correspond closely to Birchfeld and Crepaz's (1998) concepts of collective and competitive veto points (see also Crepaz 2001). The two authors claim to overcome the contradiction between the theory of consensual democracy and veto player theory and provide a theoretical justification for the two dimensions of consensus democracy generated by Lijphart (1999) in the sense that the first dimension (executive-parties) is identical with 'collective veto points', whereas in the second dimension (federal-unitary) there are 'competitive veto points'. On the one hand, a high score on collective veto points results when different parties share power within a single body (e.g. government), on the other hand, constitutional features such as decentralisation and direct democracy create competitive veto points by allowing agents controlling different bodies to prevent policies being enacted. Birchfeld and Crepaz (1998) argue that the two types of veto points work in quite different ways. That is exactly what we have found in the Swiss cantonal democracies.

Notes

1. Exceptions are e.g. Armingeon *et al.* 2004; Freitag 2000; Ladner 2004; Vatter 2003.
2. As Table 1 shows, these are both formal institutions (electoral system, legal institutions of direct democracy) and informal features of political systems (degree of government coalition, party system, use of direct democracy).
3. International comparisons generally also include the following distinctions, which are of no meaningful use in a subnational analysis of the Swiss cantons: presidential vs. parliamentary system, executive dominance (measured as cabinet life), capacity for constitutional amendment, single-chamber vs. two-chamber system, unitary vs. federal

system and corporatism-pluralism. Most of these variables can be taken as a constant without any variation at the subnational (cantonal) level. However, as an alternative to the unitary–federalism distinction we take into account the 'centralisation–decentralisation dimension' within the cantons. The analysis does not include an additional listing of the number of relevant social cleavages in the cantons. On the one hand, it seems questionable whether this variable belongs to institutional structure in a narrower sense; on the other hand there exists a close connection between cleavage structures and party systems, 'so that this feature does not actually contain any additional information regarding a political system's institutional regime' (Kaiser 1998: 527). Lijphart (1999: xi), too, has been adopting this point of view.

4. Similarly, Crepaz (1996: 93) takes the size of the governing coalition (popular cabinet support) to reflect the extent to which different political and social groups are integrated in the executive (grand coalition).

5. In those cantons among the 24 examined in which the majority of parliament is elected using first-past-the-post (GR, UR, ZG), the values are based on the proportion of seats held in the cantonal parliament.

6. Since all cantonal executives, with two exceptions (Ticino, Zug), are elected using the first-past-the-post system in a single constituency (Lutz and Strohmann 1998: 29), the degree of disproportionality of the electoral system *of government* is not a suitable indicator.

7. Due to the fact that formal institutions of direct democracy (number of signatures required, collection deadlines) usually do not influence the effective use of popular initiatives and optional referendums in the cantons (Barankay *et al.* 2003; Trechsel 2000; Vatter 2000), we included the practical use of direct democracy separately.

8. The missing values in the two cantons with assemblies (Obwalden and Glarus) were, after consultation with both state offices, replaced with the values for Nidwalden (for Obwalden) and Graubünden (for Glarus) as approximations.

9. Lijphart (1984) did use a continuous variable to measure decentralisation, the central government's tax share.

10. There exists hardly any methodological research on dimensional-analytical procedures aiming to uncover structures and types with regard to their suitability and specific application to the Swiss cantons. One of the few exceptions is the contribution by Horber and Joye (1979). Here, we follow the latters' methodical proposal of forming canton typologies by first deriving a factor analysis, and second a cluster analysis. Incidentally, this inductive and selective approach accommodates Kaiser's (1998: 537) admonition that, when forming democratic types, one should 'not assume a specific political system as model' and should limit oneself to a catalogue of a few basic institutions.

11. The factor analysis chosen here is a principal component analysis with orthogonal, rotated factor loadings in accordance with the Varimax Criterion. Principal component analysis is the commonest used and most important technique for the determination of factors. Recent applications in respect of the Swiss cantons can be found, for example, in Ladner (2004) and Freitag (2000). In principal component analysis, the coordinate system with the factorising characteristics is rotated so that new axes emerge, successively explaining maximum variance. The orthogonal (right-angled) rotation technique ensures that the factors are independent of each other (reciprocally uncorrelated). Rotation using the Varimax Criterion causes the factors to be rotated in such a way that the variance of the squared loadings per factor is maximised. This process aims to create the best possible structure for the significant factors (Bortz 1999: 495ff.).

12. For the two small Appenzell cantons (AI, AR), there was repeatedly no or insufficient data available regarding the actual characteristics of their political institutions. For this reason they have been excluded from the following analysis.

13. The factor analysis was also carried out using analogous variables (for instance, the disproportionality degree instead of the effective threshold) and with the elimination of individual cantons (for instance without the 'outlier canton' Basle City). Apart from the two decentralisation indicators, the results proved to be sufficiently stable.

14. The variable just reaches the level determined by Pennings *et al.* (2003) as the critical threshold value 0.35, and can therefore be described as a reliable component of the second factor dimension.

15. Around two-thirds of the total variance can thus be explained using the two factors. The incomplete explanation of the variance is connected, among other things, to the fact that principal components analysis registers only those variances which can be predicted using linear relations alone (Bortz 1999: 505).

16. Also recent empirical analyses of the unequal intensity of the use of direct democracy in the cantons confirm that formal institutional barriers (number of signatures required, collection deadlines) hardly influence the effective number of initiatives and referendums in the cantons (Barankay *et al.* 2003; Trechsel 2000; Vatter 2000). More appropriate explanatory factors for the cantonal differences prove to be socio-structural features (population size, degree of urbanisation) and political characteristics (strength of the governing coalition, local autonomy).

17. Due to the high stability of the institutional variables there is no discussion on dynamics over time. In particular, the so-called 'institutional rules in form' have hardly changed over the course of time. At least we can see a (slight) increase in the effective number of legislative parties and the number of referenda and initiatives in almost all cantons between 1980 and 2000.

18. The formula for the calculation of the z-values for the variables can be found, for instance, in Wagschal (1999: 260).

19. Euclidean distance provides the shortest distance between two points. This is one of the most commonly used measures of distance. For the differences between individual distance measurements, see Wagschal (1999: 258ff.).

20. In the complete linkage procedure, maximum distances between feature carriers are used in order to determine the distance matrix. This results in the feature combinations with minimal distances being chosen as clusters. Wagschal (1999: 266) points out that on account of the chain formation and the low degree of homogeneity within groups using the single linkage procedure, the latter is less suitable for social science enquiries than the complete linkage procedure.

21. Interestingly, the present cluster solution largely coincides with that of Horber and Joye (1979: 230f.), who compiled a typology of the cantonal administration structures based on socio-economic (e.g. proportion of first and second economic sector, degree of urbanity, national income) and political-administrative variables (e.g. major parties' shares of the electorate, administration expenditure, size of the public sector). Horber and Joye (1979) distinguish between a cluster of small, rural cantons in central and eastern Switzerland, a group of German-Swiss cantons and the Latin cantons. They, too, assign the two city cantons of Geneva and Basle City to a cluster of their own.

22. Unlike the various linkage procedures which unite the groups with the least distance, the ward procedure unites those objects which least increase the variance within a group, leading to the formation of extremely homogenous clusters.

23. Particular mention is due to the long period of Bern's dominance in Vaud and, to a lesser degree, in Fribourg, as well as to the many contractual alliances in previous centuries between the cities of Bern, Zurich and Fribourg.

24. Even though the Latin cantons are not all in the same group, it is striking that all of five (VD, FR, TI, VS, NE) of the seven non-German-speaking cantons lie side by side in the dendrogram.

25. The third cantonal cluster can, in part, also be allocated to this mixed type.

26. In order to enable us to apply the factors to the 'government coalition – direct democratic' dimensions, we had to adjust the signs of the individual variables (see also Lijphart 1999: 247). Hence, the sign in the first factor dimension for the variable 'electoral strength of government parties' was turned around, as was the sign in the second factor dimension for the variables 'effective threshold', 'stock of municipalities' and 'number of cabinet seats'.

27. Kaiser (1998: 531) tries, above all, to show that in democracies with missing formal barriers to majority rule, compensation of informal processes of the delegation of the authority to act takes place. Empirically, the present results of the Swiss member states examination differ from Kaiser's (1998). In the case of the cantons, there are no compensatory relations between formal rules and informal methods of regulation, but, in each case, within the variables of the 'rules-in-form' and the 'rules-in-use' dimension.

28. Tsebelis' (2002) often-cited veto player theory argues that consensual institutions – whether they be of the collective or competitive variety – increase the number of veto points and thus policy stability.

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