

Double Proportionality for the European Parliament: The Tandem System



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Abstract The tandem system proposes a double proportional electoral system for the European Parliament. It offers a forum for europarties to contest an election with power, visibility and influence. The tandem system proceeds in three steps. The first step apportioned all parliamentary seats among europarties by aggregating the electorate's votes at Union level. Thus, with regard to the division of the Union's citizens by political persuasion, the tandem system obeys the One Person–One Vote principle. The second step, disaggregation of the unionwide apportionment, allots the seats by Member State and Europarty in a way safeguarding the seat contingents of the Member States. Thus, with regard to the Union's layout by Member State, the tandem system respects the principle of degressive representation. The third step assigns the seats of a party in a Member State to domestic candidates by means of the same provisions that Member States have been employing in the past, thus complying with the Union's principle of subsidiarity.

1 Introduction

The elections to the ninth European Parliament (EP) took place during 23–26 May 2019. The EP constitutes a single political body, yet it is customary to use the plural “elections” when talking about electing a EP. As a matter of fact, the event decomposes into a patchwork of twenty-seven separate elections, one per Member State. Lack of uniformity is a hallmark of EP elections. The diffuse appearance of the electoral event has been lamented before and after previous EP elections and is again moaned in assessments of the 2019 elections (Hrbek, 2019; Kaeding et al., 2019; Oelbermann et al., 2019).

The current status has its roots in the past. The Electoral Act was conceived in 1976, amended in 2002 and 2018, and is again on the agenda of the incumbent

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parliament.¹ As soon as the 1976 Electoral Act had to pass practical tests its deficiencies came to light. Quite a few proposals for amendment were tabled during past legislative periods, see Anastassopoulos (2002), Duff (2011), pp. 32–51 and Costa and Jouvenat (2016).

The 2002 amendment achieved some progress. It decreed that in each Member State members of the EP shall be elected on the basis of proportional representation. The term “proportionality” addresses a specific group of stakeholders, political parties. Parties are institutions mediating between the many voters and the few representatives. The term “proportional representation” stipulates that the number of seats allotted to a party ought to be proportional to the number of votes cast for this party. Back in 2002, EP elections were conducted as an ensemble of separate elections per Member States. The parties relevant in those days were the domestic parties of the Member States.

The involvement of domestic parties naturally inspired visions to launch corresponding political institutions at Union level. An initial regulation, on “political parties at European level” in 2003 was superseded by a subsequent regulation on “European political parties” in 2014. The topic is again on the agenda of the incumbent EP.²

Originally a political party at European level was taken to be an association of like-minded domestic parties from the Member States, as indicated by the alternate designation as a “European party family”. Hopes were raised that eventually a Union polity would evolve as soon as European party families would mutate into ‘true’ europarties. A ‘true’ europarty would set a proper political agenda at Union level, reconnect with the Union’s citizens, and contest EP elections by shaping the electoral campaign (Bardi, 2005; Leinen & Pescher, 2014; Hecke, 2018).

It is rather sensible for the AFCO committee to review the Electoral Act and the Regulation on European political parties in parallel. The true functioning of europarties is a supposition underlying all proposals for enhanced uniformity when electing the EP (Farrell & Scully, 2005; Hix & Hagemann, 2009; Oelbermann & Pukelsheim, 2011).

Here we boldly assume that europarties are properly operating, strive for political power, and aim to play a vital role at European elections. Our focus is on the intricacy of design of the electoral procedure. The tandem system, a double proportional system, takes into account two dimensions each of which reflects the representation of the Union’s citizens in the EP. One dimension is the electorate’s political division by partisan vote, the other, the electorate’s geographical division by Member State, see Duff et al. (2015), Pukelsheim (2017), Sect. 14 and Costa & Jouvenat (2021).

¹ Official Journal of the European Union (OJ) L 278 (8.10.1976) 1–11; OJ L 283 (21.10.2002) 1–4; OJ L 178 (16.7.2018) 1–3; Dossier AFCO 2020/2220(INL), rapporteur Domènec Ruiz Devesa (ES-S&D). – A consolidated version of the 2002 Act is in Duff (2011), pp. 9–14—The 2018 Act is still pending; see Cicchi (2021).

² OJ L 297 (15.11.2003) 1–4; OJ L 317 (4.11.2014) 1–27; Dossier AFCO 2021/2018(INI), co-rapporteur Charles Goerens (LU-Renew) and Rainer Wieland (DE-PPE).

As for the representation by Member State, Article 14(2) TEU³ demands that “representation of citizens shall be degressively proportional”. That is, representation of citizenries may deviate from strict proportionality in the direction of degressivity. In view of this specification the term “double proportionality” sounds inappropriate.

We opt for a specific label, “tandem system”.

Our paper is organized as follows. Section 2 reviews the success of double proportional electoral systems in Swiss Cantons. Section 3 describes the prospective use of double proportionality for the EP in form of the tandem system. The system is illustrated using the data of the 2019 elections in Sect. 4. Section 5 concludes the paper with some general considerations.

2 Double Proportionality in Swiss Cantons

Elections for the EP share a typical characteristic with elections for Swiss canton parliaments in that the electoral region is subdivided into several electoral districts and that this subdivision is considered constitutive. The European Union is subdivided into Member States. For a canton, the subdivision is into communities such as townships, counties or villages.

Cantonal communities differ by population figures. Theoretically, a community with a population too small to form a district may merge with its neighbors in order to assemble a district of reasonable size. People gain little, though, when communities are located in valleys disassociated from each other by mountain massifs of thousands of meters in altitude as in Valais or Grisons. More generally, there may exist historical, federalistic, cultural, linguistic, or religious reasons calling for preservation of communities when subdividing a canton.

When a canton is subdivided into electoral districts, the districts’ seat contingents are allocated well ahead of polling day so that people know how many representatives they will elect in their district. The allocation is determined in proportion to population figures. A small community may command no more than one or two seats.

Traditionally, the election is evaluated in each district separately. A separate evaluation may cause severe legal problems when a cantonal constitution decrees that the election must follow the principles of proportional representation. Proportionality is hardly possible when there is no more than two seats to fill. Parties finishing third or yet less successful will not gain a seat. The votes of their supporters turn ineffective because the two seats are dealt out between the two major parties. Such situations violate the electoral principle of equality.

³ OJ C 326 (26.10.2012) 13–45.—For the determination of the Member States’ seat contingents see Pukelsheim and Grimmett (2018).—Note also that the Qualified Majority Voting system in the Council, while technically disjoint from the apportionment of seats in the EP, constitutes another representational issue that is highly sensitive on the political level.

This is where a double proportional electoral system comes to the rescue. Double proportionality aggregates the votes of the entire electorate at canton level. Then it apports all seats of the parliament to parties in proportion to canton wide vote sums. It becomes irrelevant whether votes are cast in a small, medium, or large community. All votes are treated equally, in accord with the *One Person–One Vote* principle.

The new element added by double proportionality is the allotment of seats by community and party. This new step allots the parties' cantonwide seats to districts in such a way that every district ends up with its preordained seat contingent. In this way double proportionality warrants equality of votes across the whole canton, while at the same time it verifies the subdivision of the canton into several districts of different size.

The world premiere of double proportionality took place in 2006 in the canton of Zurich. Since then, more cantons adopted a double proportional system: Schaffhausen 2008, Aargau 2009, Zug 2014, Nidwalden 2014, Schwyz 2016, Valais 2017, Uri 2020, Grisons 2021. In some cantons the amendment of the electoral law had to be approved by a popular referendum. Acceptance was overwhelming, despite of blustering polemics of sullen politicians who interpreted the quest for electoral equality to be an attack on cantonal sovereignty, see Pukelsheim and Grimmer (2011), Senti (2013), and Pukelsheim (2017), Sect. 14.5.

The exigencies of electoral equality are settled by the Bundesgericht (Swiss Federal Court) in Lausanne, based on the Swiss constitution together with the canton constitution. The Court repeatedly pointed out that seat contingents when too small would become unacceptable in cantons whose constitution demands proportionality. An infringement of constitutionally warranted equality would be even less acceptable since double proportionality provides a solution which does justice to the constitutional demands without ifs and buts, see Bundesgericht (2010)—The Court refers to double proportionality with the tag “Doppelter Pukelsheim”.

3 Double Proportionality for the EP

In order to apply double proportionality to EP elections there needs to be a sensible way of aggregating all votes at Union level. To this end we introduce three categories of political entities. A first category are the European political parties registered with the Authority for European Political Parties and European Political Foundations.⁴ Since conditions for registration are ambitious, it seems appropriate to allow for a second category of party-like entities not (yet) registered with the Authority, euro-movements. A group of domestic parties from two or more Member States qualifies as a euromovement, as does a European political movement such as VOLT. We

⁴ European political parties should not be confounded with political groups in the EP. Political parties cater to the citizenry of the Union, while political groups are institutional units to organize parliamentary business.

use the label “europarties” as a generic term spanning both categories, (registered) European political parties as well as (non-registered) euromovements.

Moreover, domestic parties may choose not to associate with any europarty but to remain solitary. This gives rise to a third category, “stand-alone parties”, comprising domestic parties who contest the EP election just in their home state.

The European political parties assumed relevant at the 2019 elections are the ones listed on the webpage of the Authority for European Political Parties and European Political Foundations:

- ALDE Alliance of Liberals and Democrats for Europe Party
- EPP European People’s Party
- PES Party of European Socialists
- EDP European Democratic Party
- EFA European Free Alliance
- EGP European Green Party
- PEL Party of the European Left
- ECR European Conservatives and Reformists Party
- ECPM European Christian Political Movement
- ID Identité et Démocratie Parti

Domestic parties who cooperate with a European political party usually may choose between joining as a full member, an associate member, or an observer. For our 2019 illustration we restricted attention to full members. Since we failed to retrieve reliable membership rosters of any of the europarties listed, we compiled them ourselves from their webpages and the information in Wikipedia. Most likely, our compilations contain errors or outdated information.

As an example of a non-registered europarty we include into our illustration the European movement VOLT. At the 2019 elections, its German section was the sole section to win a seat. Other VOLT sections failed the domestic electoral threshold, or garnered too few votes to validate a seat, or contested the election with an independent candidate who was not successful.

Votes included into the 2019 example are those cast for domestic parties who pass the pertinent domestic threshold and who obtain at least one seat. The tandem system re-evaluation of the 2019 elections disregards all votes that were cast for dwarf parties, whether they are members of European political parties or not. These limitations are imposed solely for enabling us to use the 2019 data as an example; in actual applications the limitations should be relieved. Vote counts are taken from the study (Oelbermann et al., 2019), disregarding all vote counts which in the study are labeled “Others”.

4 The Tandem System

Our illustration of the tandem system uses the data of the 2019 elections, disregarding the results from the United Kingdom. Even though the seat assignments resulting

from the tandem system turn out to be close to those actually implemented they cannot be taken to indicate a systematic trend of any political significance. Due to the instructive character of the example some hypothetical adjustments are unavoidable.

The tandem system proceeds in three steps.

4.1 Apportionment of Seats at Union Level

The aggregation of votes at Union level provides the base to apportion the 705 EP seats among europarties and stand-alone parties. The apportionment calculations use the divisor method with standard rounding (Sainte-Laguë method). This first step realizes the *One Person–One Vote* principle and secures electoral equality for all voters in the Union.

Table 1 displays a total of 163,374,809 votes that enter into the process of apportioning the 705 EP seats.⁵ Every 231,400 votes justify roughly one seat, i.e., dividing the Union divisor 231,400 into “Votes” yield “Quotients” that are rounded in the standard fashion to obtain the desired “Seats”. The electoral key 231,400 is determined so that the sum of all “Seats” is equal to the number of seats available, 705.

The upper block of Table 1 exhibits the aggregated results for the eleven europarties. They are apportioned a total of 624 seats. These seats need to be disaggregated by Member State and europaarty, disaggregation is carried out in the next step.

The lower block of Table 1 features thirty-four stand-alone parties, i.e., domestic parties who are not a member of any europaarty. They are labeled by the two-letter code⁶ of the Member State where they are active, together with their party acronym. Altogether the stand-alone parties are apportioned a total of 81 seats. This apportionment is definitive, there is no need to subject these seats to any further disaggregation mechanism.

4.2 Allotment of Seats by Member State and Europaarty

The synchronizing potential of the tandem system comes to light in the allotment of seats by Member State and europaarty. Since the 81 seats of the stand-alone parties are final, they are subtracted from the states’ seat contingents. The reduced contingents provide a total of 624 seats to be allotted to europarties.

The task then is to merge two dimensions that are interacting: the layout by Member State, and the division by europarties:

⁵ “Votes” are divided by the Union divisor 231,400 to obtain “Quotients”, then “Quotients” are rounded to yield “Seats”. The divisor is determined so that the sum of all “Seats” is equal to the number of seats available, 705.

⁶ Interinstitutional Style Guide (February 2022), Sect. 7.1.1.

Table 1 Apportionment of 705 seats at Union level

EP2019-Aggregation	Votes	Quotient	Seats
<i>Eleven europarties, totalling 624 seats</i>			
EPP	39,338,118	170.0	170
PES	32,347,309	139.8	140
ALDE	18,656,812	80.6	81
ID	16,182,413	69.9	70
EGP	14,835,208	64.1	64
ECR	11,329,360	49.0	49
PEL	6,261,560	27.1	27
EFA	2,195,733	9.49	9
EDP	2,023,884	8.7	9
ECPM	741,034	3.2	3
VOLT	416,171	1.8	2
<i>Thirty-four stand-alone parties, totalling 81 seats</i>			
IT-M5S	4,569,089	19.7	20
DE-AfD	4,104,453	17.7	18
FR-LFI	1,428,548	6.2	6
ES-JUNTS	1,018,435	4.4	4
DE-DIE PARTEI	899,079	3.9	4
PL-WIOSNA	826,975	3.6	4
HU-DK	557,081	2.4	2
DE-TIERSCHUTZ	542,226	2.3	2
DE-ÖDP	369,869	1.6	2
BE-2PTB	355,883	1.54	2
CZ-PIRATI	330,844	1.4	1
EL-KKE	302,603	1.3	1
DK-DF	296,978	1.3	1
SE-V	282,300	1.2	1
EL-XA	275,734	1.2	1
FI-PS	253,176	1.1	1
DE-PIRATEN	243,302	1.1	1
EL-EL	236,347	1.0	1
NL-PvdD	220,938	1.0	1
HU-JOBBIK	220,184	1.0	1
NL-50+	215,199	0.9	1
IE-SF	196,001	0.8	1
NL-PVV	194,178	0.8	1
CZ-KSCM	164,624	0.7	1
LT-LVZS	158,190	0.7	1
IE-I4C	124,085	0.54	1
SK-KLSNS	118,995	0.51	1
LT-DP	113,243	0.49	0
IE-2indep	85,034	0.4	0
HR-MK	84,765	0.4	0
LT-AMT	82,005	0.4	0
CY-AKEL	77,241	0.3	0
HR-ZZ	60,847	0.3	0
CY-DIKO	38,756	0.2	0
Sum (Union divisor)	163,374,809	(231,400)	705

Table 2 Allotment of seats by Member State and europarty—part 1

EP2019	624	EPP	170	PES	140	ALDE	81	ID	70	EGP	64
AT	19	1,305,956	6	903,151	5	319,024	1	650,114	4	532,193	3
BE	19	849,976	2	1,085,159	3	1,148,705	3	811,169	3	1,011,563	4
BG	17	725,678	8	474,160	5	323,510	3				
CY	6	81,539	4	29,715	2						
CZ	19	447,943	5	502,343	6	216,718	4				
DE	69	10,794,042	21	5,916,882	13	2,028,594	4	7,677,071	21		
DK	13	170,544	1	592,645	3	926,132	5	364,895	3		
EE	7	34,188	1	77,375	2	134,959	3	42,265	1		
EL	18	1,873,137	8	436,726	2						
ES	55	4,510,193	11	7,359,617	20	2,726,642	7				
FI	13	380,460	3	267,603	3	363,439	3	292,892	3		
FR	73	1,920,407	7	1,403,170	6	5,079,015	17	5,286,939	28	3,055,023	15
HR	12	244,076	5	200,976	5	55,829	1				
HU	18	1,824,220	14	229,551	2	344,512	2				
IE	11	496,459	5	52,753	1	277,705	3	190,755	2		
IT	56	2,493,858	6	6,107,545	16	9,175,208	30				
LT	10	248,736	4	200,105	4	83,083	1				
LU	6	264,665	2	152,900	1	268,910	1	237,215	2		
LV	8	124,193	2	82,604	2	58,763	1				
MT	6	58,699	2	124,441	4						
NL	26	669,555	4	1,045,274	6	1,194,792	6	599,283	4		
PL	48	4,009,958	17	1,239,977	6						
PT	21	930,191	6	1,104,694	8	396,060	4				
RO	33	3,447,949	13	2,040,765	9	2,028,236	7				
SE	20	1,056,626	5	974,589	6	619,060	3	478,258	3		
SI	8	180,155	4	89,936	2	74,431	2				
SK	13	194,715	4	154,996	4	99,128	2				
Party div.		1.098		1		1.165		0.77		0.818	

- Within a Member State, the sum of the seats must meet the state’s reduced seat contingent.
- Within a europarty, the sum of the seats must exhaust their due seats at the Union level.

Tables 2 and 3 resolve the task by using the double proportional variant of the divisor method with standard rounding.⁷ Double proportionality employs two sets of electoral keys, state divisors and party divisors. Once these are published, the vote count which has been recorded in state S for party P is divided by the state divisor for state S and by the party divisor for party P. The resulting quotient is rounded to the nearest whole number to yield the seat number sought, i.e., the number of seats allotted to europarty P in state S.

⁷ The votes are divided by two divisors, the associated “State divisor” and the associated “Party divisor”, and then rounded to “Seats”. Row-sums match the states’ seat contingents, and column-sums meet the parties’ apportionments at Union level.

Table 3 Allotment of seats by Member State and europarty—part 2

(cont.)	ECR	49	PEL	27	EFA	9	EDP	9	ECPM	3	VOLT	2	State div.
AT													200,000
BE					954,048	4					20,385	0	330,000
BG	143,830	1									3,500	0	88,000
CY													18,000
CZ	344,885	4											76,000
DE			2,056,049	6			806,703	3	273,828	0	249,098	1	457,500
DK			151,903	1									170,000
EE													40,000
EL			1,343,595	8									210,000
ES	1,388,681	3	2,258,857	8	1,212,139	4	633,265	2			32,432	0	360,000
FI			126,063	1									106,000
FR													249,400
HR									91,546	1			44,000
HU													120,000
IE													94,000
IT	1,726,189	4											392,000
LT	69,347	1											54,000
LU											4,606	0	160,000
LV	77,591	2			29,546	1							46,000
MT													30,000
NL	602,507	3							375,660	2	106,004	1	170,000
PL	6,192,780	25											221,000
PT			325,093	3									134,000
RO							583,916	4					235,000
SE	636,877	3									146	0	176,000
SI													40,000
SK	146,673	3											40,000
Party div.	1.1031		0.8		0.8		0.705		1.44		1		

Small scale illustrations can be found in Balinski (2004), Chap. 7 or in Pukelsheim (2017), Chap. 14. Calculation of state divisors and party divisors is cumbersome and needs a computer program, see Pukelsheim (2017), Chap. 15. On the positive side, once the divisors are obtained and published, everybody can verify the seat numbers via simple divisions and a rounding operation.

As an example, the Austrian contingent of nineteen seats is allotted as follows. EPP garners 1,305,956 votes. The Austrian divisor is 200,000, the EPP divisor is 1.098. This leads to the quotient $1,305,956 / (200,000 \times 1.098) = 5.9$, justifying six seats for the Austrian EPP-member ÖVP. The other successful europarties are allotted five, one, four, and three seats, which are handed over to their respective domestic parties.

In this way the allotment by Member State and europarty guarantees that every Member State receives its due number of seats and so does every europarty.

4.3 *Assignment of Seats to Candidates*

The tandem system concludes with the assignment of seats to candidates. Simply, domestic provisions of a Member State are applied as in the past. Thus the tandem system perpetuates the kind of accountability that Union citizens and representatives are accustomed to. Since domestic provisions differ and since the tandem system respects these differences, every Member State must be reviewed on its own. The twenty-seven reviews decompose into three classes, see Leinen and Pukelsheim (2021).

The first class embraces thirteen Member States where every europarty is in a one-to-one correspondence with a unique domestic member party. The seats allotted to europarties are handed over to the corresponding domestic parties without further ado.

The second class consists of eleven Member States where one of the europarties is in a one-to-many correspondence with its domestic member parties. For every europarty with several member parties, its seats are parceled out proportionally to the votes its members tallied.

The third class assembles three Member States which are special because of establishing multiple constituencies (Belgium and Ireland), or because of using single transferable vote schemes (Ireland and Malta). Slight adjustments accommodate these special cases.

5 Conclusion

There remains the crucial task of raising citizens' awareness that what is at stake is their representation at Union level. Expedient operational procedures, such as the tandem system, are necessary but not sufficient to reach this aim. The mediators for conveying this message are political parties, domestic parties as well as europarties. They ought to be offered incentives to act in concert and to spread the logic of cooperative synergies, see Leinen and Pukelsheim (2022).

The tandem system aligns citizens and Member States in a synchronized (i.e., *tandem*) way. Conceptually, it amends the current Electoral Act in various directions:

- The tandem system achieves electoral equality among all citizens of the Union by aggregating votes at Union level rather than performing separate evaluations per Member State.
- The unionwide alignments are arranged in a manner safeguarding the composition of the EP, i.e., the allocation of the seats of the EP between the Member States.
- Member States retain many domestic provisions, such as ballot structure, vote pattern, and rules to assign the seats of a domestic party to this party's candidates.
- The tandem system promotes a unionwide view of EP elections by involving europarties through political power, public visibility, and coordinating influence.

- The tandem system offers a forum for europarties to promote their Spitzenkandidaten and their lead personnel for staffing political offices in the new legislative period.

The tandem system summarizes an EP election across the entire European Union in exhibits such as Tables 1, 2, and 3. The complexity of the tables mirrors the complexity of the Union. The synoptic view of the tandem system furnishes a more informative and less disorienting electoral portrait of the Union than the patchwork of segmented elections as in the past. Of course other options to achieve more uniformity in the European Electoral Act should also be considered, such as Müller (2022).

Finally we note that the tandem system resolves a long-standing friction of primary law. It ends the controversy whether degressive representation of the Member States is at odds with electoral equality of the Union's citizens. The tandem system aligns the two goals without any conflict. It safeguards degressivity, yet it also implements the *One Person–One Vote* principle for all voters in the Union irrespective of their Member State provenance.

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Advances in Collective Decision Making

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*To Stefan Napel
on the occasion of his 50th birthday.*



Preface

Collective decisions affect our economic, political, and social lives almost daily. They are not only important in large-scale elections, but also in small groups such as management boards, government cabinets, panels of judges, expert committees, job hiring committees, and multinational organizations. Applications range widely, from analyzing the complicated institutional rules employed by the European Union to the responsibility-based distribution of cartel damages or the design of webpage rankings.

Over the past 20 years, Stefan Napel has helped to improve our understanding of the interdisciplinary links of collective decision-making. He has published more than 50 papers, many of them in leading academic journals. His keen mind and pursuit of new knowledge have been an inspiration for all of us. But most of all, we are pleased that over the years he has become more than a co-author and an academic teacher: We are proud to call him our friend. His 50th birthday provides a perfect opportunity to review recent contributions to the long history of collective decision-making research, to highlight the interdisciplinary aspect of the discipline, and to look ahead to its promising future by pointing to unanswered questions that can only be resolved through collaborative efforts. This intention is also summarized by the volume's subtitle *Interdisciplinary Perspectives for the 21st Century*: a comprehensive look at current research by economists, mathematicians, computer scientists, philosophers, and political scientists on the design and implications of collective decisions.

Bayreuth, Germany
Aarhus, Denmark
Bayreuth, Germany
July 2022

Sascha Kurz
Nicola Maaser
Alexander Mayer

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