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Abstract

Party systems can be split along a democratic-authoritarian dimension in which some parties commit to democracy while others are decidedly more authoritarian. This democracy-autocracy party system (DAPS) dimension differs from other common scales that primarily capture policy differences rather than regime preferences. To apprehend this dimension of political division, we introduce a new empirical framework. Building on existing data on parties' ideology, we provide a new measurement that defines to what extent a party system is more democratic or authoritarian. This measurement allows us to track the development of the democratic-authoritarian dimension across time between 1970-2019 and space, covering 174 countries for 3,151 election-years. We implement well-established content, convergent, and discriminant validity tests to confirm the reliability of our measurement, along with an empirical application of DAPS's influence on autocratization and democratization.

Keywords: Democracy, Autocracy, Political Parties, Party System, Measurement
Introduction

Party systems are a vital connector between political parties and the political system they are embedded in. As such, rather than individual parties, party systems often have consequences affecting entire political systems. Previous literature has, for instance, identified party-system characteristics as important in determining voting behavior (Dalton, 2008), regime stability in both, democracies and autocracies (Hicken and Kuhonta, 2015; Mainwaring, Scully, et al., 1995), polarization in society (Lupu, 2015; Bischof and Wagner, 2019), and decentralization (Riedl and Dickovick, 2014).

The literature presents a number of dimensions that define and structure political competition at the party-system level (Sartori, 1976), including ideological (Mair, 1997; Jolly et al., 2022; Dalton, 2008), cultural (Abou-Chadi and Wagner, 2020; Dassonneville, Hooghe, and Marks, 2023), and ethnic (Posner, 2004; Vogt et al., 2015; Cederman, Wimmer, and Min, 2010) cleavages. Particularly the tension between government and opposition can also result in polarizing party systems, which the literature has predominantly identified around ideological dimensions: left-right economic and libertarian-traditional (GAL-TAN) divides (Mair, 1997; Dalton, 2008; Reiljan, 2020).

Yet, in a number of countries and often for many years, political competition is primarily structured around the question of regime type, i.e., whether a country ought to be democratic or autocratic (e.g., Mainwaring and Pérez-Liñán, 2013; Selçuk and Hekimci, 2020). Disagreements between government and opposition on regime preferences can change the nature of the party system, crucial to advance or resist regime changes in either direction (Mainwaring, Scully, et al., 1995; Ong, 2022a; Medzihorsky and Lindberg, 2023). Nonetheless, this key dimension of political competition at the party-system level is not captured by existing measures and therefore remains an unexplored area in the study of party systems and polarization.

We suggest that a key dimension of every party system is found along authoritarian and democratic preferences that tilt it in favor or against democratic values. We refer to this as the democracy-autocracy party-system dimension (DAPS), and we define it as the prevalence of authoritarian and democratic stances across political parties within a given party system. DAPS ranges between 0 and 1, where lower values are associated with more authoritarian party systems and higher values with more democratic party systems, and it extends across party systems and regimes from party-based autocracies (Geddes, Wright, and Frantz, 2014) to multi-party liberal democracies.

The contributions of the paper are threefold. First, we build upon classical work to introduce a hitherto neglected dimension of party systems (Sartori, 1976). The DAPS has not only been neglected
but it is also increasingly significant given the current global trends of autocratization (e.g., Bermeo, 2016; Lührmann and Lindberg, 2019; Wiebrecht et al., 2023). In many autocratizing countries, traditional cleavages around economic ideologies and/or cultural divides have become overshadowed by conflicts around the political system as such (McCoy, Rahman, and Somer, 2018; McCoy and Somer, 2019; Selçuk and Hekimci, 2020).

Second, although individual political parties’ ideological profiles have been measured and studied widely, party-system level concepts are rare. The DAPS index is created building on the Varieties of Party Identity and Organization (V-Party) dataset (Lindberg et al., 2022; Pemstein et al., 2018) but focuses on the party systems rather than individual parties. Our measure adds to prior efforts in measuring ideological (e.g., left-right or GAL-TAN) party system polarization (Dalton, 2008; Reiljan, 2020) and will allow scholars to link party systems with national-level outcomes. Moreover, DAPS has unprecedented global coverage at the party-system level (174 countries from 1970-2019) and goes beyond existing datasets on party systems, such as the Database on Political Institutions (DPI) and Comparative Study of Electoral Systems (CSES).

Third, we corroborate the validity of the DAPS measure following Adcock and Collier’s (2001) framework. We highlight content validity by showing that our measure of the DAPS corresponds well to regime types, political systems, and alternative weighting measures. We also demonstrate convergent validity by testing its relationship with related measures such as political polarization, power-sharing among social groups, elites’ democratic norms, and levels of party institutionalization. We further provide evidence for discriminant validity by showing that our measure does not capture other measures of political systems such as the left-right dimension. Finally, we show how the DAPS index explains episodes of democratization with higher precision than only focusing on parties in the government coalition while having similar strength in predicting episodes of autocratization (Medzhihorsky and Lindberg, 2023; Bermeo, 2016; Riedl et al., 2020).

DAPS provides a new tool to understand party competition across the globe and its consequences for political institutions and broader society, and we highlight at least four implications and possible applications. First, it may help future research understand when and why mobilization for democracy, as well as autocracy, takes place. Second, and related to mobilization, the DAPS may also give insights into the occurrence of violence and conflict in societies. Third, current debates around voters’ susceptibility to vote for anti-democratic parties (e.g., Svolik, 2019) may also benefit from taking a broader perspective and incorporating party-system factors such as DAPS into their analysis.
Finally, given that parties and party systems are responsible for implementing policies, our measure may also have explanatory power in understanding divergent policy outcomes across countries and regimes.

The Democracy-Autocracy Dimension in Party Systems

Party systems are multidimensional spaces characterized by a number of conflicts and cleavages, which may explain a wide range of political phenomena, such as citizens’ voting behavior, parties’ appeal to voters, parties’ internal organization strategies, and political systems’ polarization challenges (Lipset and Rokkan, 1967; Mair, 1997; Jolly et al., 2022; Dalton, 2008; Cheeseman and Ford, 2007; Coakley, 2008; Abou-Chadi and Wagner, 2020; Dassonneville, Hooghe, and Marks, 2023; Casal Bétoa and Enyedi, 2016). Yet, these existing measures are primarily rooted in parties’ policy orientation, while their preferences for certain regime types remain widely unaccounted for. Sartori (1976) briefly discussed leaders’ “authoritarian traits” as opposed to democratic traits. Similarly, Lipset and Rokkan (1967) mentioned the potential of parties forming authoritarian procedural preferences contrary to the pro-democratic system. However, such a democratic-autocratic dimension has never been developed as a party-system characteristic nor empirically demonstrated.

Nonetheless, political competition between parties also has a latent trait structured around the division between democratic and authoritarian forces: some parties are committed to democracy and pluralist values while others dismiss them. Parties and candidates may challenge political opponents on issues beyond different policy stances, such as over divergent preferences for regime characteristics. The wider the differences in regime preferences between parties, the more the party system will be affected. The party system is a key political space interposed between parties’ policy preferences through which they obtain citizens’ votes and their effective ability to change the regime.

Democratic and autocratic forces are typically expected both in democracies and (electoral) autocracies, such as anti-pluralist parties in democracies (Medzihorsky and Lindberg, 2023) and democratic opposition parties in electoral autocracies (Howard and Roessler, 2006). In both regimes, this dimension is different from the traditional left-right cleavage. Pro-democratic as well as anti-democratic parties can be associated with left or right ideologies, but some also lack strong ideological priors (e.g., Five Star Movement in Italy; ANO in the Czech Republic; PAP in Singapore; UMNO in Malaysia). Therefore, as laid out in Sartori’s (1976, pp. 297-300) conceptual model, the DAPS is a
complement to other party-system dimensions (i.e., left-right, ethnic, and beliefs) and together they allow for multidimensional modeling of party systems.

Already Mainwaring and Pérez-Liñán (2013) stressed the importance of ‘normative preferences for democracy’ of national political elites as a source of democratic regime stability in Latin America. Recent studies suggest that ‘democracy cleavages’ — differences over conceptions of democracy beyond conventional socioeconomic cleavages — are potential drivers of autocratization (Somer and McCoy, 2018), for instance in the cases of Turkey (Selçuk and Hekimci, 2020) and Venezuela (García-Guadilla and Mallen, 2019). This points to the growing importance of accurately measuring the extent to which a party system is democratic or authoritarian on a global scale.

Figure 1. Construction of the Democratic-Autocratic Party Systems (DAPS)

Figure 1 presents the mechanism that links political parties’ anti-pluralist attitudes with the party system. In every country where elections are held, there are political parties with more pluralist attitudes than others. One or more parties form a government while the other(s) take seats in the opposition aisle of the legislative chamber. Hence, to the inherent power imbalance between government and opposition, we must account for the possible imbalance between more democratic or authoritarian regime preferences. As a result, the divergence of the governing coalition’s regime preferences from the overall party system is central to defining the extent to which a party system is democratic or authoritarian, which we explain in three different ways.

First, where this divergence is minimal, both government and opposition are respectful of democratic values and committed to a more democratic regime. This means that, regardless of their institu-
tional position in the executive, the coalition government is pluralistic, allows opposition parties, and shares with their opponents a decisive democratic regime preference. Hence, in such party systems, political parties can disagree on policies, and a diverse set of ideologies are safeguarded, yet none (or a very limited minority) of parties within the party system disagree on the democratic regime typology. As a result, these party systems are highly democratic.

Second, when opposition is severely marginalized by a dominant and overwhelmingly anti-pluralist incumbent, this leads to authoritarian party systems. As previous research shows (Magaloni, 2006), a great imbalance between an overpowering incumbent vis-a-vis weak opposition parties results in hegemonic party systems. Hence, there is a very low acceptance of different regime preferences (i.e., more democratic). At the extreme, we find party-based autocracies where opposition parties are de jure disbanded, the ruling party imposes an absolute authoritarian presence in the legislative chamber and legally does not allow for alternative political preferences. Hence, these party systems do not have any commitment to pluralism, crucial for democratic regimes, resulting in closed autocracies.

Third, the DAPS can also be placed between these two extremes. In many countries, party systems have government or opposition parties whose regime preferences are different, which can result in mixed regime preferences within the party system. These differences in regime preferences can take place (i) within the governing coalition, (ii) between parties in the opposition, and (iii) a sharp division between government and opposition. These differences could heighten divisions and potentially polarize the party system, whose results can be as dramatic as a regime change.

Measuring the Democracy-Autocracy Dimension

To capture the DAPS, we create a new measurement drawing from the V-Party dataset. V-Party is the largest resource on political parties available: it covers 3,151 elections across 178 countries from 1970 to 2019 and measures 3,467 political parties (Lindberg et al., 2022; Pemstein et al., 2018). To estimate DAPS, we use the following equation:

\[
\text{DAPS}_{PS} = \frac{\sum_{p=1}^{N} w_{opt} \times \text{API}_{opt} }{\sum_{p=1}^{N} (\text{API}_{gpt} \times w_{gpt}) + \sum_{p=1}^{N} (\text{API}_{opt} \times w_{opt})}
\]
Where subscript $PS$ represents the party system, while $gp$ represents parties in the governing coalition, $op$ represents parties in the opposition, $t$ is the time at the election-year, and $ws$ the weight for each party’s seat share within the lower house ($v2paseatshare$), while $API$ is the anti-pluralist index ($v2xpa_antiplural$). In creating Equation 1, we follow three main steps leveraging on (i) antpluralistic index by Medzhihorsky and Lindberg (2023), (ii) party-system level as a whole, and (iii) the two fundamental party-system actors of government and opposition.

In the first step, the DAPS index builds on V-Party’s Anti-Pluralism Index (API) which is an aggregated measurement of parties’ commitment to political pluralism, respect of political opponents, defense of minority rights, and rejection of political violence. API ranges from 0 (highly pluralistic) to 1 (highly anti-pluralistic) (Medzhihorsky and Lindberg, 2023), and captures the extent to which a party is committed to the core elements of democratic standards (Linz, 1978). It is worth emphasizing that this conceptualization of pluralism goes to the heart of parties’ stance toward democracy as a political system and is distinct from policy stances, e.g., whether they are conservative or liberal.

In the second step, we create a denominator that represents the party system as a whole. As parties’ influence on the political system changes according to their electoral performances, we weigh the anti-pluralism levels by parties’ seat shares in parliament, for both government and opposition parties. We weigh our measure by parties’ seat shares in parliament to account for potential malapportionment and gerrymandering, which can unbalance parties’ effective influence on the party system, especially in less democratic regimes.

In the third step, we group anti-pluralist attitudes based on the government support variable that measures whether a party belongs to the governing coalition or opposition. Political parties can have substantial influence on the executive even if their electoral performance is relatively weak and they are considered “challenger” or “outsider” parties (McDonnell and Newell, 2011; Zulianello, 2020; Vries and Hobolt, 2020). Though two-party systems such as the United States do not have coalition governments, multiparty systems frequently impose winning parties to form a coalition composed of “senior,” “junior,” and optionally smaller parties supporting the government without having institutional appointments. There could be party systems where heavily anti-democratic parties with a modest electoral performance support a more moderate conservative governing party only on specific bills without having institutional roles. There could also be other governing coalitions where senior

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1Here referring to free and fair elections with multiple parties, freedom of speech, media, assembly, and association.
parties are more anti-democratic than their junior allies, which would expose the government to more anti-democratic policy drives.

We place as numerator the average of opposition parties’ API weighted by their seat share as this approach allows us to give DAPS a direction from 0 to 1 where lower levels are associated with more authoritarian party systems and higher levels with more democratic ones. Before computing DAPS, we rescale values for the opposition and the government to a base 0 to 1, where 1 represents high levels of pluralism and 0 anti-pluralistic stances. This is a necessary passage to ensure that both groups range within the same scale and are comparable with other prominent cross-national measurements (e.g., V-Dem, Polity V, Freedom House).

To summarize, DAPS is the empirical result of (i) the anti-pluralist position of each political party \( p \) in the party system \( PS \), (ii) creating the anti-pluralist average by group (government and opposition), (iii) weighting political parties by their seat shares, and finally, (iv) computing the anti-pluralistic stances on the overall party system.\(^2\) As a result, we have a continuous variable for the country-election years, ranging from 0 to 1, with values closer to 0 corresponding to more authoritarian party systems, and values closer to 1 translating into party systems being more democratic.

Instead of only weighting government and opposition according to their seat shares we also undertake different procedures to ensure our approach’s soundness and aim at (i) preventing potentially overpowering parties that are not in a favorable position to tilt the party system’s democratic levels and (ii) incorporating complex intra-government dynamics within the DAPS index. Accounting for potential differences between junior and senior coalition partners, we keep the “senior” parties in the government weighted constant at 1 for their API score and assign a weight of 0.5 to junior coalition parties’ API. This approach may be particularly useful in multi-party systems.

Similarly, some multi-party systems have parties supporting the government without having official institutional roles. This is frequently the case with minority governments (e.g., Sweden) and broad coalitions (e.g., Italy). Though these parties are vital for a government to last (Sartori, 1976), they are also the least committed to “senior” government parties’ regime preferences and most likely the first parties to leave the coalition. To overcome this second possible issue, we keep a very conservative weight of 0.1 to prevent inflating their possible anti-pluralist stances. Nevertheless, the computed

\(^2\)To maximize our sample, we define as absolute authoritarian party systems (i.e., DAPS = 0) those that do not allow any opposition party to run for elections, which we define as those opposition groups having missing values.
values are very similar to the ones generated when only weighing by seat shares (see Figure 3 in the Appendix).

Though this weighting scheme is grounded on previous literature on intra-government mechanisms (Sartori, 1976; Casal Bétoa and Enyedi, 2016; Zulianello, 2020), the precise weights are also arbitrary. For this reason, in the Appendix we also provide two further weighting schemes. In the first adjustment, we increase the weight for junior parties from 0.5 to 0.9, almost closing the gap with senior parties. Second, we increase the weight for parties providing external support to 0.3. None of these alternative weighting schemes yield substantial changes from our main approach of weighting only on the seat share (see Figures 4 to 8 in the Appendix). In some cases, however, these weighted measures severely overpower external supporters and/or government-leading parties so that we recommend using DAPS instead.

Along the DAPS index ($v2xps_{demaut}$), we also provide the two sub-component variables presented in Equation 1 related to government ($v2xps_{demautgov}$) and opposition ($v2xps_{demautopp}$) democratic levels, which has three main implications. First, we increase the transparency of DAPS, allowing sub-components to be scrutinized independently and together with the DAPS index. Second, we believe that this can foster further research on party systems by providing specific measures of democratic levels for government and opposition. Recent literature focuses on specific actors in party systems, such as the opposition’s resistance to regime change or democratizing efforts (e.g., Gamboa, 2022; Ong, 2022a; Selçuk and Hekimci, 2020) and incumbent governmental parties’ attempts to change regimes (e.g., Bermeo, 2016; Medzhorsky and Lindberg, 2023). Third, these two sub-components have the potential to further explore the government’s and opposition’s regime attitudes separately, connecting them with research streams such as citizens’ voting behaviors (Graham and Svolik, 2020; Laebens and Öztürk, 2021) and inter-party coalition and coordination challenges (Arriola, 2013; Wahman, 2013; Howard and Roessler, 2006), among others.
Validation

We follow Adcock and Collier’s (2001) framework in validating the new DAPS measure of party systems. First, we focus on content validation that seeks to test whether our measurement corresponds to our above conceptualization through three main tests.

In the first test of content validity shown in Figure 2, we relate our measure of DAPS to the Electoral Democracy Index (EDI) by Coppedge et al. (2023a). Naturally, in liberal democracies, most political parties and candidates have no preference for undermining the political system as such. Therefore, parties’ individual scores on the anti-pluralism index should, in most cases, be lower, and consequently, party systems’ DAPS will correspond to higher democratic party systems (closer to 1). Figure 2 confirms this expectation showing the high density (i.e., lighter colors) around higher levels of DAPS and higher levels of V-Dem’s EDI (Coppedge et al., 2023a; Coppedge et al., 2023b; Coppedge et al., 2023c). As it is possible to notice from Figure 2, even in liberal democracies there are some party systems that have higher scores on the DAPS dimension than others, which is highlighted by lighter colors on the DAPS index between 0.7 and 0.9 and scores on the highest percentile of EDI.

An example to explain this result of the DAPS index for liberal democracies is Italy. In Italy, extreme anti-pluralist parties already existed in the 1970s (i.e., the neo-fascist Italian Social Movement, MSI, party scoring around 0.80 on API), and thus, low scores on our DAPS index emerged in 1994. One of the primary reasons is the advent of Berlusconi’s Forza Italia (FI) and his governmental alliance with extremist and post-fascist political parties, such as Northern League and National Alliance respectively, allowing them into executive positions (Ignazi, 2005) and worsening DAPS scores. Other examples in which liberal democracies score (relatively) low on our DAPS measure are, for instance, Austria when the Freedom Party entered the government and the United States when the Republicans won the 2016 elections.

Figure 2 also shows a shaded area in the DAPS’ third to sixth percentile that is spread across EDI levels. This highlights that both, democratic as well as authoritarian regimes can have party systems that are relatively authoritarian. These can for instance be found in countries experiencing

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3According to their guideline, we are able to perform content, convergent, and divergent validity tests. However, we are not able to perform construct validity. This is mainly due to a very limited number of studies at the party-system level associated with measures similar to DAPS and their time and country coverage.

4The League is a successor party of the Northern League, while the National Alliance was a successor party of the MSI. In the 2021 elections, the government’s leading party Brothers of Italy is one of the successor parties of the National Alliance.
democratic backsliding in which the ruling parties are anti-pluralist and a decline in their EDI levels may follow (Bermeo, 2016; Diamond, 2015; Lührmann and Lindberg, 2019).

Figure 2. Density Plot – DAPS Index across Electoral Democracy Index

At the other end of the scope, in autocracies, the government is generally more authoritarian than the opposition, but scores are less densely concentrated than among liberal democracies. In Figure 2, we include authoritarian regimes that hold elections and allow an opposition, while Figure 1 in the Appendix also shows the relationship between DAPS and EDI when including closed autocracies that disbanded formal opposition parties. The bottom-left corner of Figure 2 shows how DAPS index scores between the second and third percentile have a high correlation with similar levels of EDI. This higher overlap with EDI at lower levels of DAPS is mainly driven by the limited freedoms opposition parties have in running against hegemonic incumbents and competing in free and fair elections, which results in severely undermining alternative regime preferences (e.g., democratic). We also provide an alternative measurement using DAPS index distribution by regime types according to the Regimes of the World measure (Lührmann, Lindberg, and Tannenberg, 2017) (Figure 2 in Appendix), which
shows how the DAPS is concentrated around 1 in liberal democracies, while it has more variation in electoral democracies and drops towards 0 in autocracies.

After assessing the content validity against EDI, we delve deeper into four regime typologies to show the DAPS development across time within specific party systems. In Figure 3, we present the change in the DAPS over time in four representative cases: (i) Canada as a liberal democracy, (ii) Mexico as a previously democratizing country, (iii) India as an autocratizing country, and (iv) Malaysia as an autocracy with a hegemonic ruling party.

Figure 3. Democratic-Autocratic Party System (DAPS) in 4 Cases
For stable democracies like Canada, the party system maintains very high standards of commitment to democratic values. This resonates with an agreement at the party-system level on regime typology. The Canadian multi-party system features a wide set of policy preferences and political ideologies. As a result, alternation in government maintains high democratic standards without opening possible cycles for the alternation in power between political coalitions with contrasting regime preferences.

For democratizing countries like Mexico, the impact of the Institutional Revolutionary Party (PRI) is clearly visible between 1970-2000. For a long time, DAPS was low due to the hegemonic authoritarian government that allowed opposition only formally (Magaloni, 2006). During the late 1980s and 1990s, DAPS gradually increased due to PRI’s internal reforms that led to a progressive decrease in anti-pluralism (Langston, 2017), a decline in seat share, and the emergence of other pluralist political parties within the party system (Levitsky et al., 2016). This led to a first, smaller, move upward in DAPS, which ultimately increased significantly with the 2000 elections as Figure 3 shows. With the PRI in opposition to the government led by the democratic National Action Party (PAN) and a smaller number of seats in parliament, the DAPS index increased from around 0.10 in 1985 to over 0.80 in 2000.

The case of autocratizing India shows the sharp decline of the Indian party system from more democratic to more authoritarian. The increasingly different regime preferences between the Indian National Congress (INC) and the Bharatiya Janata Party (BJP) are highlighted by the troughs and peaks in Figure 3. More recently, the DAPS decreased since 2014 because Modi’s BJP not only became more anti-pluralist over the years but also it increased its size in parliament, at the expense of opposition parties. The BJP’s historical anti-pluralist stances became an effective leverage to appeal to voters, especially in social contexts with high fractionalization of other cleavages, such as ethnic and religious (Chhibber and Verma, 2018; Chhibber and Verma, 2019; Harriss, 2015).

In autocracies with a hegemonic ruling party like Malaysia, the DAPS index is low as these regimes allow formal opposition parties but their chances of victory are not balanced with the incumbent’s chances. The United Malays National Organisation (UMNO) party has been in power between 1957 and 2018. Figure 3 shows the almost flat DAPS score that is expected for these regimes. However, during the 2010s, the fragmented opposition formed the Alliance of Hope upholding democratic regime preferences (Gandhi and Ong, 2019; Ong, 2022b), which led to historic victories in 2018 and

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5PRI was uninterruptedly in power since 1929, yet our measure ranges between 1970 and 2019.
2022 as Figure 3 shows and significant subsequent improvements in democratic levels (Wiebrecht et al., 2023). Figures 4-7 in Appendix present other existing cases, showing the DAPS measure between 1970-2019 in different contexts.6

In a second content validation effort, we test whether governmental parties’ institutional roles have a relevant influence on DAPS. To this end, Figures 4-7 in the Appendix present each country between 1970-2019 with DAPS along with the other three weighting approaches presented above on governing coalition’s institutional roles. Figure 3 also presents the relationship between DAPS and weighted parties in the government by institutional role. DAPS holds across all these figures, strengthening our main approach of composing the index.

Third, we explore whether DAPS is systematically driven by the government’s anti-pluralistic stances. Figure 9 in Appendix shows a three-dimensional plot where DAPS (v2xps_demaut) follows a natural interaction between parties in the opposition (v2xps_demautopp) and in the government (v2xps_demautgov). This approach ensures that DAPS captures an explicit party system-level variable and it does not only systematically overlaps with antipluralistic stances by parties holding executive positions.

Fourth, we acknowledge that in some studies, especially in Western Europe, party system-level indicators tend to be measured with vote-share weights instead of seat shares (e.g., Dalton, 2008; Reiljan, 2020). We recompute Equation 1 changing the weight from seat to vote share and compare these two. As Figure 10 in the Appendix shows, there is no major difference between the two measures. This narrow difference is primarily explained by by our strategy to group parties in government and opposition, which reduces possible noises created by party systems with a high number of political parties.

The final content validation is related to the forms of government and electoral systems that we expect to be unrelated to the DAPS index. We first rely on Cheibub et al.’s (2007) data on presidential and parliamentary systems to test for possible differences. We show that the DAPS is not systematically different between different forms of government, namely parliamentary and presidential systems (Figure 11 in Appendix). We also check for electoral systems and Figure 12 in Appendix shows that there are no systematic differences in DAPS across majoritarian, proportional, and mixed electoral systems, which further strengthens its content validity.

6From our sample, we drop Kuwait, Switzerland, Belarus, and Bahrain as their party systems do not perfectly comply with our theorizing of party systems’ dimension of democracy and autocracy, for an overview on their peculiarity see Kraetzschmar, Cavatorta, and Storm (2018) and Bochsler, Mueller, and Bernauer (2016).
Next, we evaluate the convergent validity of the DAPS measure, i.e., the extent to which it coheres with existing measures of closely related concepts. There are four measurements of varying similarity to our DAPS: political polarization, power distributed by social group variables, both from the V-Dem dataset (Coppedge et al., 2023a), Mainwaring and Pérez-Liñán’s (2013) normative preference for democracy, and the party institutionalization index (Bizzarro et al., 2018).

Figure 4 shows the relationships between the DAPS index and the four convergent measures. Panel A in Figure 4 compares the DAPS with V-Dem’s political polarization indicator measuring to what extent societies are polarized.\footnote{The value ranges from -4 (not polarized) to 4 (extremely polarized).} We expect the DAPS index to be correlated with levels of political polarization since questions of regime type tend to be particularly polarizing compared to,
for instance, left-right ideological differences (Somer and McCoy, 2018). We find that high levels of political polarization are, on average, associated with lower DAPS levels across the globe.

Second, Panel B in Figure 4 shows the correlation between the DAPS and the V-Dem’s power distributed by social group variable measuring the extent to which power is monopolized or equally distributed across social groups differentiated within a country by caste, ethnicity, language, race, region, or religion. We expect convergence between these two measures as power distribution across social groups is essential for a democratic party system to exist. Following previous literature on the close relationship between democratic values and pluralism (Dahl, 2008; Sigman and Lindberg, 2019), we expect a high convergence between more equal access to power across social groups and higher levels of the DAPS index. In other words, more democratic party systems are expected to distribute power more equally across different social groups. Panel B confirms this expectation. Figure 13 in Appendix reproduces the same relationship for DAPS using Marquardt (2021) “Identity-based exclusion” measure, which is the latent variable that aggregates the V–Dem and Ethnic Power Relations Project’s inclusion variables (Vogt et al., 2015), and find similar results. We also highlight how this relationship is particularly pronounced when DAPS is extremely low, which can also be linked to previous literature’s findings on government-led violence against other social groups deprived of access to power (Cederman, Wimmer, and Min, 2010).

Third, Mainwaring and Pérez-Liñán (2013)’s concept of normative preference for democracy is similar to the DAPS index but limited to Latin America and to national elites only. Where Mainwaring and Pérez-Liñán (2013) identify strong preferences for democracy in Latin America, we find similar results with higher DAPS levels (Panel C). Although we find a significant relationship, it is smoother than expected, which may be due to the limited sample along with the limited weight that Mainwaring and Pérez-Liñán give to elites depending on their roles within the political system.

Fourth, V-Dem’s party institutionalization index primarily refers to the level and depth of the organization of political parties, their links to civil society, cadres of party activists, party supporters within the electorate, coherence of party platforms and ideologies, and party-line voting among representatives within the legislature. Following Bizzarro et al. (2018) here we expect that more democratic party systems also tend to be more institutionalized. Panel D shows a strong positive correlation between our measure and that of party institutionalization.

---

8 The value ranges from -4 (power is monopolized) to 4 (all social groups have equal political power).
9 This measure ranges from -4, when national elites are explicitly committed to some form of dictatorship, to 4, when national elites show a consistent and strong normative preference for democracy.
10 The value ranges from 0 to 1 with higher values denoting a more institutionalized party system.
We also perform discriminant validation tests on the well-established left-right ideological dimension at the party-system level (Adcock and Collier, 2001), which we do not expect to be correlated with the DAPS index. Figure 5 shows the left-right dimension measured by three different data sources: CHES (Panel A) from Jolly et al. (2022),

Dalton (2008) (Panel B), and the Database of Political Institutions (DPI) (Panel C-D) from Scartascini, Cruz, and Keefer (2018). The results consistently indicate that there is no relationship between left-right ideology and the DAPS.

We adapt Equation 1 to CHES’ left-right measurement as follows:

\[
\text{LRGEN}_{PS} = \frac{\sum_{p=1}^{N} \text{ws}_{opt} \times \text{LRGEN}_{opt}}{\sum_{p=1}^{N} (\text{LRGEN}_{gpt} \times \text{ws}_{gpt}) + \sum_{p=1}^{N} (\text{LRGEN}_{opt} \times \text{ws}_{opt})}
\]

(2)
Summary on Existing Related Measures

Table 1 provides a summary of existing measures widely used to assess topics related to political divisions and polarization. We divide them into three main levels – party, national, and party-system – to map frequently used units of analyses and possible limitations. We then present existing measures as either convergent or divergent measures following our validity tests on the DAPS index.

While most measures focus on single political parties, such as the CHES and V-Party, or national units of analysis, such as the DPI, V-Dem, and Mainwaring and Pérez-Liñán (2013), we find a limited exploration of party-system levels and measurement development. Dalton (2008) was the first to introduce a measure of the party system polarization based on the CSES survey limited to 29 mostly European countries. Table 1 demonstrates that the existing measurements are generally shorthanded to capture political division at the party system level. The introduction of the DAPS index opens up the opportunity to extend research on democratic stability, political polarization, ideology, and conflict.

As Table 2 shows, in terms of coverage, most measures have limited application either in terms of time or region. Most studies on party system polarization, for instance, focus predominantly on Europe (e.g., Dalton, 2008; Jolly et al., 2022). With the DAPS index, we provide the first party-system level measurement capturing the division in regime preferences at the global level that allows testing already existing and new hypotheses.

Table 1. Convergent and Divergent Measures to DAPS by Party-, National-, and Party-System Levels

<table>
<thead>
<tr>
<th>Party Level</th>
<th>Convergent Measures</th>
<th>Divergent Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Level</td>
<td>Political Polarisation (V-Dem), Political Power by Social Groups (V-Dem), Party Institutionalization Index (V-Dem), &amp; Commitment to Democracy (Mainwaring and Pérez-Liñán, 2013)</td>
<td>Left-Right (DPI)</td>
</tr>
<tr>
<td>Party-System Level</td>
<td>None</td>
<td>Left-Right Polarisation (Dalton, 2008)</td>
</tr>
</tbody>
</table>
Table 2. Regional and Time-Series Coverage across Datasets

<table>
<thead>
<tr>
<th>Dataset</th>
<th>V-Dem</th>
<th>V-Dem</th>
<th>V-Dem</th>
<th>CHES</th>
<th>DPI</th>
<th>CSES</th>
<th>DDLA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>DAPS</td>
<td>Political Polarization</td>
<td>Political Power by Social Group Index</td>
<td>Party Institutionalization Index</td>
<td>Left-Right</td>
<td>Left-Center-Right</td>
<td>Left-Right Polarization</td>
</tr>
<tr>
<td>Region</td>
<td>Global</td>
<td>Global</td>
<td>Global</td>
<td>Global</td>
<td>Europe*</td>
<td>Global</td>
<td>29 Democracies</td>
</tr>
</tbody>
</table>

* CHES also covers the Latin American region but is limited to one round of surveys in 2020/2021.

Empirical Application

Party systems are essential connectors between political parties’ regime preferences and the effective action to change the country’s regime. When focusing on the relationship between political parties and democratization episodes, the literature primarily focuses on authoritarian elite-led democratization (Riedl et al., 2020; Slater and Wong, 2013; Albertus and Menaldo, 2018), where incumbent elites purposefully change their regime preferences to secure survival and powerful roles during democratization episodes. Others have also highlighted the fundamental role of opposition parties as driving forces whose democratic regime preferences can lead to a democratization episode (Ong, 2022b; Gandhi and Ong, 2019; Wahman, 2013). These two arguments can coexist within a party system, where the overall party-system level of commitment to a more democratic regime should be higher to allow democratization to take place. For these reasons, we expect that the DAPS would be higher at the time of a democratization episode, and we formulate the last two hypotheses as follow:

**H1:** Higher levels of DAPS are associated with democratization episodes.

**H2:** DAPS index is associated with democratization episodes with higher precision than considering only governmental parties’ anti-pluralism levels.

In discussing sources of autocratization, the literature shows the effective role anti-pluralist political parties have to possibly expose their countries to episodes of autocratization (Medzhorsky and Lindberg, 2023; Graham and Svolik, 2020), while others highlight the predominant role of the executive driving it (Bermeo, 2016; Lührmann and Lindberg, 2019) and opposition resisting it (Gamboa, 2022; Wiebrecht et al., 2023). Building on these streams of literature, we focus on the party-system level as a more precise predictor of autocratization episodes as the DAPS index accounts for (i) every party in the lower legislative body, (ii) models the role of governing parties, and (iii) measures the distance between government and overall party system regarding the commitment to democracy. Hence, DAPS is able to capture previous literature’s expectations on anti-pluralist parties’ role in autocratization.
as well as moving further steps in grasping the relative role political parties have depending on their institutional role (i.e., government and opposition) without discarding any critical actors within party systems. We formulate the first two hypotheses as:

**H3**: Lower levels of DAPS are associated with autocratization episodes.

**H4**: DAPS index is associated with autocratization episodes with higher precision than considering only governmental parties’ anti-pluralism levels.

Hence, we propose that DAPS provides an intuitive unifying measure to assess sources of regime change either as democratization or autocratization episodes, critical for assessing cross-regime dynamics. In empirically testing these hypotheses, we merge the DAPS index with the Episodes of Regime Transformation (ERT) dataset (v.13.0) (Edgell et al., 2023), which provides a complete sample of democratization and autocratization episodes between 1900 and 2022 (Maerz et al., 2023). The ERT builds on (Lührmann and Lindberg, 2019) in defining a regime change (i.e., democratization or autocratization episodes) as periods of substantial and sustained improvement or decline of democratic attributes and uses the EDI from the V-Dem dataset (v.13) (Coppedge et al., 2023a). We set two possible dependent variables capturing whether a country experiences either an onset of or ongoing democratization or autocratization episode at a given election year. To test this relationship, we use the following general equation:

\[
\text{Regime Transition}_e = \beta_0 + \beta_1 \text{DAPS}_e + \beta_2 \text{X}_{e-1} + \delta_e + \eta_e
\]  

Where \(e\) represents election-years and \(\delta_e\) election-years fixed effects. \(\text{Regime Transition}\) is a dummy variable that takes the value 1 if a country experiences a regime change episode at the time of the election \(e\) and 0 otherwise. We draw from the V-Dem dataset (v.13) (Coppedge et al., 2023a) and add a set of covariates lagged by one election-year, \(X_{e-1}\), which is the vector of the following variables: the Average EDI in the Region, their Regime Type (x2regime), the country’s GDP per capita from Bolt and Zanden (2020), whether there are multiparty elections (v2elmulpar) and whether the election losers accept results (v2elaccept), and legislative constraints on the executive (v2xlglegcon).

As regime transition are generally treated as rare event cases (Boese et al., 2021), standard non-linear functions such as probit and logit could reach misleading outcomes (Rainey and McCaskey, 2021). For these reasons, we follow Firth (1993) and implement adjusted binomial response functions
in our models that correct for possible biases arising from the unbalanced sample between the event of study (i.e., regime transition) and the lack thereof (i.e. if elections are not associated with regime transition) (Rainey and McCaskey, 2021; Kosmidis and Firth, 2021). Lastly, to account for only elite/governing coalition regime preferences’ relationship with regime transition, we replace DAPS index in Equation 3 with *parties’ antipluralist attitudes* (v2xpa_antiplural) only on a subset of all political parties belonging to government coalition.

Table 3. DAPS Influence on Democratization and Autocratization Episodes, 1970-2019

<table>
<thead>
<tr>
<th>DV:</th>
<th>Democratization</th>
<th>Autocratization</th>
<th>Democratization</th>
<th>Autocratization</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV:</td>
<td>Party System</td>
<td>Party System</td>
<td>only government</td>
<td>only government</td>
</tr>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td>Model 4</td>
</tr>
<tr>
<td>DAPS</td>
<td>1.024*</td>
<td>-1.290*</td>
<td>-0.993***</td>
<td>1.816***</td>
</tr>
<tr>
<td></td>
<td>(0.410)</td>
<td>(0.518)</td>
<td>(0.212)</td>
<td>(0.295)</td>
</tr>
<tr>
<td>Antipluralist Index</td>
<td></td>
<td>-0.993***</td>
<td>1.816***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.212)</td>
<td>(0.295)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg. EDI Region</td>
<td></td>
<td>-1.391*</td>
<td>-1.253**</td>
<td>-0.023</td>
</tr>
<tr>
<td></td>
<td>(0.567)</td>
<td>(0.766)</td>
<td>(0.386)</td>
<td>(0.558)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td></td>
<td>-0.044***</td>
<td>-0.048***</td>
<td>-0.048***</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.013)</td>
<td>(0.007)</td>
<td>(0.009)</td>
</tr>
<tr>
<td>Legislative Constraints</td>
<td></td>
<td>-0.667</td>
<td>-0.615*</td>
<td>1.001**</td>
</tr>
<tr>
<td></td>
<td>(0.408)</td>
<td>(0.580)</td>
<td>(0.264)</td>
<td>(0.387)</td>
</tr>
<tr>
<td>Acceptance Electoral Outcome</td>
<td></td>
<td>-0.158+</td>
<td>0.414**</td>
<td>-0.157**</td>
</tr>
<tr>
<td></td>
<td>(0.088)</td>
<td>(0.133)</td>
<td>(0.058)</td>
<td>(0.087)</td>
</tr>
<tr>
<td>Multi-party Elections</td>
<td></td>
<td>0.300+</td>
<td>0.316***</td>
<td>0.065</td>
</tr>
<tr>
<td></td>
<td>(0.108)</td>
<td>(0.171)</td>
<td>(0.064)</td>
<td>(0.095)</td>
</tr>
<tr>
<td>(Intercept)</td>
<td></td>
<td>-1.250+</td>
<td>0.176</td>
<td>-0.379</td>
</tr>
<tr>
<td></td>
<td>(0.744)</td>
<td>(0.846)</td>
<td>(0.653)</td>
<td>(0.705)</td>
</tr>
<tr>
<td>Years FEs</td>
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<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
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<td>1120</td>
<td>2840</td>
<td>2840</td>
</tr>
<tr>
<td>AIC</td>
<td>1107.9</td>
<td>671.4</td>
<td>2589.8</td>
<td>1423.2</td>
</tr>
<tr>
<td>BIC</td>
<td>1389.0</td>
<td>952.6</td>
<td>2923.1</td>
<td>1756.5</td>
</tr>
<tr>
<td>Std.Errors</td>
<td>by: Country</td>
<td>by: Country</td>
<td>by: Country</td>
<td>by: Country</td>
</tr>
</tbody>
</table>

*Notes:***, **, * significant at .001, .05, and .01 respectively. All variables but DAPS, Antipluralist Index, and Year FE are lagged by one election-year. For interpretation purposes, DAPS ranges from 0-1, where scores closer to 0 refer to more authoritarian party systems, while antipluralist index ranges from 0-1, where scores closer to 0 refer to more pluralist parties.

Table 3 summarizes the statistical results, which we interpret in three main steps. First, focusing only on democratization episodes in Models 1 and 3, DAPS is positive and significant, indicating that (on average) higher levels of DAPS are associated with higher probability of a democratization episode. This confirms our Hypothesis 1. A unit increase in the DAPS index (change in the lowest to highest scores of the index) results in an increase of the probabilities of democratization episodes during election years by 2.8 times (Model 1). We find a similar relationship to the outcome when
looking at parties within the governmental coalition (Model 3). However, that relationship is relatively weaker than DAPS’ influence on democratization episodes, with an increase of the probabilities of 2.7 times. This confirms Hypothesis 2. One of the primary reasons can be that political parties’ regime preferences frequently move slower than democratization episodes. As DAPS captures the opposition’s capacity and political stance along with parties holding executive offices, higher DAPS can indicate that democratic opposition can increase its strength and not only that parties in the government decrease their anti-democratic preferences.

Second, autocratization episodes in Models 2, and 4 have similar results. Lower levels of DAPS are correlated with higher chances of autocratization with a unit change in DAPS is associated with an increase of probability by 3.6 times. This confirms Hypothesis 3. When focusing on anti-pluralist attitudes of only those in the government (Model 4), we find a strong relationship as well. Government coalitions’ anti-pluralist stances are associated with autocratization episodes with a stronger magnitude than taking the entire party system into consideration (Model 2). A unit change in governmental parties’ anti-pluralistic stances increases autocratization probability by 6 times. The United States offers an example of the challenges a decrease in DAPS can pose to a democratic system. Figure 4 in Appendix shows the US’s evolution of DAPS between 1970 and 2017, which has never reached 0.20 until Trump’s victory over the Republican leadership. The DAPS decreases and brings the US on the verge of 0.25 by 2016, where the Democratic Party’s pluralist stance remains similar, but the Republicans’ anti-pluralism level jumps to over 0.70 (Medzihorsky and Lindberg, 2023). The democratic-authoritarian cleavage in the US is now one of the most heightened grounds (Grumbach, 2022), also overlapping with a recent autocratization episode experienced during the Trump administration (Wiebrecht et al., 2023).

Though Hypothesis 4’s alignment with our expectations seems limited, Model 2’s AIC and BIC reveal a much more precise estimate of autocratization episodes than by only using the antipluralist index for parties in the government, shown in Model 4. Furthermore, we draw a few implications for future studies on regime change using the DAPS index. First, the DAPS index has a stronger power when studying democratization episodes compared to relevant similar measures. This is primarily the result of party systems’ coherent efforts in moving from a more authoritarian to a more democratic regime. Hence, there are rare democratization episodes where incumbents’ defeats are not associated also with their decrease in anti-pluralist stances. When these happen, frequently it prevents democratization. Second, efforts from a few parties in the government are already enough to trigger an episode
of autocratization. This is in line with previous literature on “executive aggrandizement,” while DAPS also shows its impact on the entire party system by moving it towards more authoritarian preferences.

Finally, we also want to highlight some potential empirical applications beyond the study of regime transformations that future work may explore. First, since parties are often mobilizing forces, the DAPS dimension may add a party-system perspective to help us understand when and why mobilization takes place. As such, it can go beyond regime-type characteristics (Hellmeier and Bernhard, 2023). Second, given that questions of regime types can be extremely polarizing, we also expect that the democratic-authoritarian dimension of party systems can provide insight into the occurrence of violence and conflict in societies. Third, current debates around voters’ susceptibility to vote for anti-democratic parties (Svolik, 2019) may also benefit from taking a broader perspective and incorporating party system factors such as our new measure into their analysis. Finally, given that parties and party systems are responsible for implementing policies, our measure may also have explanatory power in understanding divergent policy outcomes across countries and regimes. Here it may also prove worthwhile whether frequent and abrupt changes in the DAPS index have consequences for policymaking and, for instance, also translate into frequent policy changes.

Conclusion

The democracy-autocracy divide (DAPS) is an increasingly important dimension for analyzing party systems. Yet, existing measures primarily focus on left-right, GAL-TAN, or populism, which are more representative of policy positions than parties’ commitment to democratic norms. Moreover, these highly influential measures typically also have a limited regional scope or short time series. With the exception of CSES’ left-right polarization index, none of the existing data sets offer party-system level measures, representing either party or national levels. In this study, we introduced a new, comprehensive measure of the democratic-authoritarian dimension of party systems based on parties’ levels of anti-pluralism, with global coverage from 1970 to 2019. Following Adcock and Collier (2001), we highlighted the index’s content, convergent, and discriminant validity. We also provide an empirical application estimating the relationship between higher levels of the DAPS and regime changes, showing a strong association between both autocratization and democratization episodes. Future research can build on this new measure to test research questions such as, and not limited to: sources of autocratization and democratization at the party-system level, the consequences of DAPS
for interstates or social conflicts, relationships between political institutions (e.g., the parliament and the executive) or elected representatives and voters.
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Appendix to

DEMOCRATIC-AUTOCRATIC PARTY SYSTEMS: A NEW INDEX
Figure 1. DAPS and EDI including closed autocracies
Figure 2. DAPS by Regime Typology

Note: This figure plots the density of the DAPS index by three regime typologies. Each dot is an election-year observation for each country, while the red vertical lines demarcate the 95% confidence interval (CI) for each regime.
Figure 3. Relationship Between DAPS un/weighted by government role

![Graph showing the relationship between DAPS un/weighted by government role with data points for Uruguay, Algeria, Finland, and Norway.]
Figure 4. DAPS Western Europe and North America
Figure 5. DAPS Eastern Europe and Central Asia
Figure 6. DAPS Latin America and Caribbean
Figure 7. DAPS Sub-Saharan Africa
Figure 8. DAPS Asia Pacific
Figure 9. Relationship Between DAPS, Government, and Opposition
Figure 10. DAPS Computed with Seat Share and Vote Share
Figure 11. DAPS and Presidential/Parliamentary Systems from Cheibub et al., 2007
Figure 12. DAPS and Electoral Systems from V-Dem

Note: This figure plots the density of the DAPS index depending on the electoral systems. Each dot is an election-year observation for each country, while the red vertical lines demarcate the 95% confidence interval (CI) for each electoral system.
Figure 13. DAPS and Identity-based Exclusion

$r = 0.19, p = 1.8 \times 10^{-9}$