The climate of debate: How institutional factors shape legislative discourses on climate change. A comparative framing perspective.

Legislative actors and their institutional settings constitute some of the central antecedents of the media's coverage of political issues, not least since they lie at the very heart of the democratic law-making process. Yet, although theories central to the field of political communication have long documented the orientation of the media towards elite policy actors (e.g. Bennett, 1990), we know little about the contexts in which they are embedded. This is particularly the case for those stages that represent the day-to-day dealings in plenary debates, committee meetings, hearings, etc.—in other words, the *courant normal* of politics—which make up the bulk of the policymaking process but mostly lie outside the brief peaks of political contest that occur during elections and popular referenda.

This lack of scholarly attention is not specific to communication research as a discipline, as the contributions of political science have remained equally scant. Political scientists, particularly those working in one of the various fields of neo-institutionalism, have long emphasised the role of institutional configurations and their informal rules in the political process (Steinmo & Thelen, 1992; Weaver & Rockman, 1993). At the same time, even those working within one of the more recently developed sub-disciplines—labelled "discursive institutionalism" (see the overview in V. A. Schmidt, 2008), which gives precedence to the discursive moment and its explanatory power in the law-making process—have only rarely examined one of the most immediate variables of interest, namely the structures of legislative discourses (see, e.g., V. A. Schmidt, 2002).

The present article ties in with the research interests of these two academic fields but extends them in important ways. Located at the nexus between communication research and political science, the study foregrounds parliament as the central institutional locus of

deliberation in democracies and examines how institutional configurations of the political system affect the discursive structure of political debates in legislative bodies. Since their actors occupy a central position both in the policymaking process and the public sphere, shedding light on their discursive interactions allows us to establish more clearly how institutions and discourses are related and thereby gain a better understanding of one of the major preconditions of media coverage. As we are interested in the effects that institutions have on discourses, the study employs a comparative perspective juxtaposing legislative discourses on the issue of climate change across four countries—Switzerland, Germany, the UK and the US—during the *courant normal* of day-to-day politics.

Conceptually, the study is guided by two main assumptions. First, we posit that the configuration of political institutions in a country affects both the degree of contestation with which an issue is debated by legislative actors and the inclusion of non-political actors. Second, the degree of contestation and the actor diversity, in turn, have an effect on how salient the issue is and how broad the range of perspectives is in terms of the actors' frames.

The contributions of the article are threefold. From the perspective of both communication research and political science, it highlights the importance of relating legislative discourses to the institutional configurations in which they are embedded. It examines the resulting differences in the context of climate change, an issue that has received extensive scholarly attention in terms of how it is covered by the media (see, e.g., Boykoff, 2007; Grundmann & Scott, 2014; Painter & Ashe, 2012), but where research on how it is processed in political institutions remains scarce (Fisher, Waggle, & Leifeld, 2012). Second, and related to this, such a shift in the research focus is all the more warranted, since the media tend to "index" their political coverage to the positions, arguments and perspectives presented by political actors (Bennett, 1990). Finally, the article contributes to the current research on

polarisation in political institutions (Layman, Carsey, & Horowitz, 2006), as it shows how formal configurations affect the degree of contestation in legislatures.

The article proceeds as follows: the next section introduces Lijphart's (2012) distinction between consensus and majoritarian democracies as the theoretical framework, which allows us to examine the differences between legislative discourses with regard to the analytical dimensions of polarisation, issue salience, and actor and frame diversity outlined above. The methodology section specifies the country and issue selection, introduces the framing approach the study employs to analyse the legislative discourses and develops the measures used to test the hypotheses. The empirical section presents the results of the analysis, the implications of which are discussed in the concluding section, which also addresses the limitations of the study and sketches areas of future research.

1. Theory

Legislative discourses are not independent of the institutional arrangements in which they are embedded (V. A. Schmidt, 2008), and this article examines how the discourses of legislative actors are affected by the institutional design.[1] One of the main distinctions we can make in terms of how political systems are organised is that between what comparative political science has termed "consociational" or "consensus" democracy on the one hand and "majoritarian" systems on the other (Lijphart, 1977, 2012; Steiner, 1974). The difference between the two can be seen in the fact that consensus democracies have a more accommodating character, they integrate different interests and actor groups, seek to formally

1 Social movement scholars examining those constellations that allow civil society actors to influence the political process have proposed frameworks such as the "political opportunity structure" (Kriesi, 2004). Although their research interest is a different one, since it focuses on non-institutional actors and the circumstances under which they can have a voice in the political process, they still highlight the importance of political institutions. Indeed, Kriesi (2004) turns to Lijphart's classification to distinguish the degree to which political institutions are accessible to civil society actors. By putting the institutional discourses and their context at the centre of the analysis, the present study thus complements the work in the area of social movements.

include possible veto players at early stages in the policymaking process and strive to find common ground or at least a compromise that is acceptable to all.

Lijphart (2012), whose comparative study of 36 countries is one of the main reference points in the literature, refers to this kind of democracy as the “gentler”, “kinder” type. Switzerland is a prime example of a democracy with such accommodating arrangements, and from the research interest of the present paper we can highlight its most important dimensions: a multi-party system coupled with an oversized cabinet, in which the largest parties share political power; an electoral system based on proportional representation (for the lower house), hence taking into consideration minority views and parties; and neo-corporatist arrangements through which leaders of peak organisations consult with each other and with political representatives, thus integrating them early on in the policymaking process.

This form of democracy is contrasted with majoritarian systems, which in many respects embody the opposite with regard to their institutional constellation. In their purest form, these systems are constituted by two competing parties that vie for absolute majority and a corresponding minimum-winning cabinet; a single legislative chamber; they have, as their name suggests, an electoral system working according to a winner-takes-all mode, thus over-representing the majority; and they incorporate a pluralist idea of representation of interest groups, which act independently from one another, are largely excluded from formal policymaking processes, and compete for access to the political system. Although not corresponding in each and every aspect to the ideal sketched here, the United Kingdom is traditionally taken as representative of the majoritarian system.

For Lijphart, these distinctions are not simply descriptive in nature, but ultimately lead to qualitative differences between the two types, and he strongly argues that consensus democracies make a difference in the sense that they perform better than majoritarian systems on many indicators. From the perspective of the present article, we are not so much interested

in the normative aspect of Lijphart's analysis, but rather in assessing the differences in how the two systems shape legislative discourses. Clearly, if, on the whole, consensus and majoritarian systems differ with respect to social welfare policies, environmental protection, criminal law, etc. (Lijphart, 2012, pp. 274–294), these differences should become apparent in the corresponding legislative deliberations and consultations.

In this context, two institutional mechanisms appear particularly relevant: first, the sharing of power in oversized, multi-party cabinets versus the concentration of power in minimum-winning or single-party cabinets. The effect of this dimension on legislative deliberations is that grand coalitions require the parties forming the government to cooperate and agree on policy positions. Furthermore, grand coalitions moderate the accentuation of differences between parties as they diminish the electoral competition between them (see Steiner, Bächtiger, Spörndli, & Steenbergen, 2004, p. 80). As an overall effect, we should therefore see a greater degree of discursive convergence in consensus democracies than in their majoritarian counterparts. The second dimension of importance concerns the distinction between pluralistic and corporatist systems. Pluralistic systems foreground the concept of a "marketplace of ideas" and correspondingly further the contest of a diversity of perspectives and arguments by interest groups and other non-institutional actors who vie for visibility in the legislative arena. Corporatism, in turn, is marked by greater coordination between actors located outside the legislative arena—interest groups, social movement organisations, scientists, etc. —who are incorporated into the policy formation process, leading to compromise and comprehensive agreements between them. The relative lack of competition and their inclusion in the policymaking process in corporatist systems means that non-institutional actors can be expected to become less visible in the legislative arena than in pluralistic systems. The hypotheses developed below address these differences and thus allow us to test empirically the extent to which institutional configurations affect legislative discourses.

1.1. Hypotheses

The present study is generally based on the idea developed in the field of "discursive institutionalism" which suggests that institutions have an effect on the structures of legislative deliberations: "They define the […] contexts within which repertoires of more or less acceptable (and expectable) ideas and discursive interactions develop" (V. A. Schmidt, 2008, p. 314). Put differently, Schmidt argues that "institutions are therefore internal to the actors" (2008, p. 314) and we can uncover the distinctive impact they exert in the imprints they leave behind in legislative discourses (Kern, 2011; Steiner et al., 2004). Seen from the perspective of Lijphart's classification, we should thus see clear differences in legislative discourses depending on the degree to which the respective institutions correspond more to the consensus or the majoritarian type.

Our first hypothesis addresses the pluralist–corporatist dimension that constitutes one of the core differences between majoritarian and consensus systems. Because of the limited access of non-legislative actors in pluralist/majoritarian systems, and since in this type of democracy policies remain contested from the early stages of agenda setting through to their implementation, non-institutional actors constantly vie for attention of institutional members and visibility in the legislative process (Scruggs, 1999). The opposite is the case for the neo-corporatist/consensus type of democracy, where interest groups, social movement organisations, etc. are integrated and extensively consulted by executive and legislative actors at every stage of the policy process. This divergence in the role and status of non-institutional actors between the two systems results in different expectations regarding their presence in legislative discourses.

Hypothesis 1: The more majoritarian a system, the greater the discursive visibility of non-institutional actors in legislative discourses. By contrast, the more the system embodies aspects of consensus democracy, the lower their visibility.

Our second hypothesis examines the integrative effect of consensus democracies in terms of how their institutional designs promote the common ground between legislative actors from different—often oppositional—parties and camps. This is mainly the result of oversized, multi-party cabinets and the concomitant need to compromise and cooperate as well as the diminished importance of competition in elections (Steiner et al., 2004, p. 80), which means that discourses between the governing parties can never be too distant from one another (van de Wardt, 2013, pp. 5–7). Being associated more strongly with a deliberative idea of democracy (Habermas, 1996; Steiner et al., 2004) because of their greater inclusiveness and the "spirit of accommodation" (Lijphart, 1968) they promote, consensus systems should produce discourses that converge towards a common ground (Ferree, Gamson, Gerhards, & Rucht, 2002). Majoritarian systems, by contrast, exhibit the opposite characteristics: here, minimum-winning or single-party cabinets demonstrate a sharp distinction between the government and an opposition that tries to oust the incumbent party at the elections, further accentuating the differences (van de Wardt, 2013). These mechanisms are expected to have an effect on both the diversity of the legislative discourse and the degree of contentiousness with which it is debated.

Hypothesis 2a: The more majoritarian a system, the greater the diversity of positions uttered in legislative discourses. Conversely, the more consensual a system, the more uniform the legislative discourse.

Hypothesis 2b: The more majoritarian a system, the greater the degree of polarisation of legislative discourses. In turn, the more consensual the system, the lower the degree of polarisation.

Our final hypothesis combines the two institutional dimensions assumed to exert an effect on legislative discourses. Both the prevailing pluralism in majoritarian democracies—where interest groups and other non-institutional actors compete for attention and recognition by the political system—and the fact that in these systems political parties tend to emphasise their differences, should lead to an overall greater intensity of political debates and higher visibility of the issue than in consensus democracies. In the latter, with the accommodating configurations of the institutions, which integrate non-institutional actors throughout the policymaking process and promote cooperation between political parties, the divide that separates the camps on an issue is smaller and the institutional debate can therefore be expected to be less prominent on the political agenda.

Hypothesis 3: The more majoritarian a system, the higher the salience of contentious issues on the political agenda. In opposition to this, the more consensual a system, the lower the salience of contentious issues on the political agenda.

2. Methods

2.1. Case Selection: Countries

We have chosen four countries that occupy opposing extremes on the dimensions outlined above (pluralism/neo-corporatism and single-party cabinets/oversized cabinets) to examine the relationship between institutional configurations and legislative discourses. Of the four countries, both the US and, even more so, the UK concentrate political power in minimum-winning or single-party cabinets and accordingly reach some of the highest mean values in Lijphart's index of executive power concentration (Lijphart, 2012, pp. 79–104). Adopting values between zero (greatest dispersion) to one hundred (greatest concentration), the UK has an average value of 96.9 and the US of 81.2 on Lijphart's index that measures the amount of time the countries have been ruled by either minimum-winning or single-party cabinets. Germany and Switzerland represent the contrasting cases, with Germany reaching a

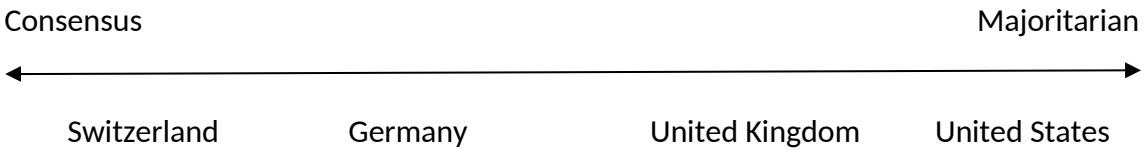
mean value of 36.2 and Switzerland of 4.1. The latter, in particular, is a prime example of a power-sharing executive with its tradition of oversized cabinets that, until recently, included the largest political parties.

In line with the distinction between power-sharing and power-concentrating executives, the four countries also adopt opposing extremes on the pluralism–corporatism axis (Lijphart, 2012, pp. 158–173). Countries that concentrate power in the executive tend to be more on the pluralist side, marked by fierce competition between independent interest groups vying for attention and political influence, and indeed, the US and the UK are third and fourth in Lijphart's classification of 36 democracies, achieving scores of 3.31 (US) and 3.38 (UK) of a theoretical maximum of 4 (see Lijphart, 2012, pp. 158–173 for a detailed description of the construction of the index). Conversely, Germany and, above all, Switzerland are closer to the neo-corporatist pole: reaching values of 1.38 (D) and 1.00 (CH), these countries are characterised by national peak associations that are integrated throughout the policymaking process, coordinating their affairs among each other and displaying a general orientation towards compromise

With our hypotheses in mind, we can thus expect that climate change is most contested and most salient in the political discourse of the UK, whereas the Swiss consensus system should lead to the opposite effect and result in the lowest degrees of polarisation and salience. The United States and Germany are located in between, with the US leaning towards the UK, and Germany closer to Switzerland.

Figure 1

Switzerland, Germany, the UK and the US according to Lijphart's classification of democracies



2.2. Issue selection: Climate change

We take climate change as an issue to investigate how the institutional settings influence the political discourse: due to its global nature and the fact that it is dealt with in supranational political institutions such as the United Nations Framework Convention on Climate Change and its annual conferences, climate change occupies a position on the national political agenda of the countries selected.

Furthermore, in contrast to the strong scientific consensus (Anderegg, Prall, Harold, & Schneider, 2010; Oreskes, 2004) on climate change that underpins the research into its development and the anthropogenic contribution to it, as a political issue it is riddled with lines of conflict that lead to debates about its causes, the general seriousness of it, the feasibility of proposed adaptive or mitigating measures, etc. In other words, climate change as a political issue offers room for contention that should become visible to different degrees in legislative discourses. Finally, from the viewpoint of Lijphart's classification of democratic systems, environmental policies represent an area where differences between consensus and majoritarian democracies come particularly to the fore (Wiarda, 1997).

2.2.1. Climate change and the structure of public discourse. Although research on climate change as a political issue indeed suggests differences between countries according to their system type, the studies in the area have so far only examined the media and their coverage (see, e.g., A. Schmidt, Ivanova, & Schäfer, 2013). Comparative investigations into legislative discourses are virtually non-existent, which warrants all the more the approach taken in the present article. To our mind, the only existing research on legislative discourses of climate change is Fisher, Waggle and Leifeld's (2012) single case study of hearings of the US Congress. Their work reveals a higher degree of agreement between the political actors on

the science of climate change than is reported by the media. At the same time, however, there remains a deep divide with regard to the kind of policy that is most apt to reduce carbon dioxide emissions without affecting the country's economic performance too strongly.

Apart from this specific study, the existing comparative work reveals some general points about the structure of the issue, which can inform the present analysis. Specifically, research into climate change coverage has contributed to generating a more detailed understanding of the actors in the field and their positions. One of the major insights we can glean from their reading is that the basic political structure of the field is given by the opposition between climate advocates, who perceive the consequences of climate change and the anthropogenic contribution to it as a problem, and climate sceptics, who question these points to various degrees (Boykoff, 2007; Grundmann, 2007; Kaiser & Rhomberg, 2015). The alliance structure underlying both camps is rather diversified and includes political actors, non-governmental organisations, enterprises, interest groups, think tanks, bloggers, etc. (Grundmann & Scott, 2014; Sharman, 2014). Importantly, and in addition to this, Rahmstorf's (2004) critical reading of climate sceptical contributions to the debate shows that they far from constitute a homogeneous group. Confirmed in a comparative study by Painter and Ashe (2012), we can distinguish three different types of climate scepticism according to which aspect they call into question: trend sceptics doubt the generally acknowledged trajectory of global warming; attribution sceptics, in turn, reject the degree to which climate change is ascribed to human behaviour; and impact sceptics emphasise possible benefits arising from global warming while often opposing binding regulations. These distinctions will play an important role in developing the content analytical instrument and in the analysis of our corpus of legislative discourses.

2.3. Measures and method of data analysis

2.3.1. Quantitative content analysis. To answer our research question and analyse the discussion about climate change within politics, we conducted a quantitative content analysis. Our sample period was one year from 1 June 2012 to 31 May 2013.

To get a comprehensive picture of the legislative debate, we included all parliamentary documents as well as all publicly available documents of relevant committees of both parliamentary houses dealing with climate change for each country (see Appendix A). A document was included in the sample if one of the search terms "climate change" or "global warming" (for the German documents: "Klimawandel" or "globale Erwärmung") was mentioned somewhere in the document. Within the Swiss political system some debates are held in French and their transcripts were indexed using the corresponding search terms "changement climatique" or "réchauffement climatique".

The coding took place on two levels: first, several formal variables (country, date, type of document) were coded at the document level. Then the coders identified all actors in a document expressing an opinion towards climate change. An actor might be a politician directly quoted in a document or it might be an external source capable of expressing his/her opinion. At the actor level (the second level of the coding), several variables about the actor type and the content of the actors' statements were coded as follows. These actor–frame sequences were the unit of analysis (Germany N=116; Switzerland N=21; United Kingdom N=1333; USA N=1058).

Actor type. All actors were coded according to their actor type (political actor, socio-economic actor, civil society organisations/NGOs, scientists/experts, journalists/media, individual citizens).

Frame elements. Following Entman (1993), we define frames as interpretation packages consisting of different elements (see also Matthes & Kohring, 2008). In our coding logic, a frame is always linked to an actor (=speaker) who uses it in a specific discourse.

Thus, in order to explore which frames were used in the political debate about climate change, we coded for each actor: (1) the actor's problem definitions of climate change (beliefs or denials that climate change is occurring, opinions that climate change is a problem or not, and perspectives on climate change), (2) their causal interpretations of climate change (i.e. human or natural causes), (3) any positive or negative consequences of global warming, and (4) the actor's recommended remedies for mitigating climate change or adapting to possible consequences.

The coding was completed by six trained coders. The reliability for the variables at the actor-argument level was Krippendorff's Alpha = .75 (see Appendix B for detailed reliability scores).

2.3.2. Identification of frames. To identify the frames used in the political debate about climate change in the different countries, a hierarchical cluster analysis was used. As we found that only 21 actors in Switzerland voiced their opinion on climate change during our sample period, we excluded these cases from frame detection and ran the cluster analysis only on the actor–frame sequences from the German, British and US political debates. The key advantage of including all three countries in the same analysis, instead of running three different analyses, is that the results can be compared directly.

The single frame elements were combined into frames using different steps. First, we excluded any variables that occurred less than one per cent in all three countries (Matthes & Kohring, 2008); in the end, 47 variables were included in the cluster analysis. Second, we computed a hierarchical cluster analysis using the single-linkage algorithm in order to identify any outliers. As no outliers could be identified, all actor–frame sequences were included in the analysis. We then ran a hierarchical cluster analysis using the Ward algorithm and the Euclidian distance measure for binary data to identify the actual frames. Using the elbow

criterion (i.e. the increase of the error square sum), a three-cluster solution seemed to best fit our data. However, this solution turned out to be insufficiently differentiated and we thus decided to use a four cluster solution, whose frames are distinct from each other and can be interpreted in a straightforward way. Examining the shape of the means of the cluster-forming variables (tested with an ANOVA; p-value < .05), we found that four variables did not significantly differ between the four clusters and they were thus excluded from the analysis. The four frames identified through this procedure address different aspects of the climate change debate: the first frame represents the position of the Intergovernmental Panel on Climate Change (IPCC), the second frame emphasises the negative consequences of climate change, the third frame outlines a minimal consensus that could realistically be achieved by the involved parties, and the fourth articulates trend and attribution sceptical positions (Rahmstorf, 2004) with regard to the occurrence and causes of climate change.

Frame 1: "Position of the IPCC" (USA: 22%, UK: 54%, D: 49%). The first frame represents the main arguments of the IPCC: it explains that climate change is occurring, and that it is problematic. The perspective on the problem is climate protection. The frame mentions anthropogenic contributions as causes of climate change and emphasises the importance of mitigation measures to lessen global warming and to soften possible negative consequences. These measures addressed include binding policy rules as well as voluntary agreements.

Frame 2: "Negative consequences of climate change" (USA: 41%, UK: 15%, D: 25%). Similar to the first frame, the second frame also states that climate change occurs, and it acknowledges that global warming involves several problems. The perspective on climate change taken within this frame is that of possible negative consequences. Correspondingly,

the frame highlights various negative impacts of global warming: deglaciation, the increase of extreme weather events and natural disasters, sea-level rises and coastal/island flooding, and the shortage of water for drinking and agriculture. On a more general level, the frame also highlights the negative consequences for the ecosystem (e.g. damage to ecological systems, decrease of vegetation zones, the expulsion of species), the economy (e.g. damage to infrastructure and buildings, crop failure), or society (e.g. poverty, damage to health, dissemination of diseases). Additionally, measures to adapt to these negative consequences are supported (e.g. the construction of higher dykes as a protection against floods). The frame also includes a general call for action.

Frame 3: "Voluntary adaptation to climate change" (USA: 19%, UK: 21%, D: 22%). The third frame also mentions that climate change occurs. However, in contrast to the first two frames, it states that climate change causes some problems but that global warming is not problematic. The specific views taken by this frame on climate change are the causes of climate change, possible adaptation to its consequences, financial aspects (i.e. costs caused by climate change) and the role of politics. Furthermore, adaptation measures are supported without proposing far-reaching mitigation measures. These should be realised via funding, subsidies or other financial incentives.

This interpretative pattern can be used either by climate advocates or by climate sceptics: on the one hand, this frame can be interpreted as the minimum level of consensus which could be realistically achieved by the involved countries. On the other hand, it can be used to argue against the necessity of binding regulations, which in turn is related to impact scepticism (Rahmstorf, 2004). This second interpretation is supported by the data analysis, as this third frame merges with the fourth, purely sceptical, frame.

Frame 4: "Trend/attribution scepticism" (USA: 18%, UK: 11%, D: 3%). The fourth frame is purely sceptical. First, it includes the opinion that climate change is not occurring, or at least that it is not possible to prove whether or not climate change is occurring. This form of scepticism is labelled "trend scepticism" by Rahmstorf (2004). The perspective on climate change focuses either on technologies or is very general in the sense that no specific aspect is highlighted. Concomitant with this general denial of climate change is the view that anthropogenic contributions are not clear, that natural causes are responsible for the phenomenon (a position named "attribution scepticism" by Rahmstorf, 2004) or that climate change is a conspiracy theory or merely a hoax. The fourth frame also denies that rising temperatures or extreme weather events are a consequence of climate change, or it describes any correlation between them as being unclear. Furthermore, it mentions deglaciation as a consequence (without assessment).

3. Results

3.1. Salience of climate change in the legislative debate

To answer our research question with regard to how institutional configurations affect the structure of the political debate in legislative bodies, we first take a look at the salience of climate change in the political debate in each country. We expect that the higher degree of contentiousness in majoritarian systems compared to consensual systems leads to a higher salience of issues on the political agenda in majoritarian settings compared to their consensual counterparts (H3).

Table 1 displays the number of actors voicing their opinion about climate change in the political debate in each country. The results clearly support our hypothesis: being the strongest majoritarian system, the UK shows the highest visibility, followed closely by the

US. In contrast to this, the debate is hardly visible in Germany and Switzerland, where the issue registers almost no institutional resonance, above all, in the latter.

Table 1

Salience of the discussion about climate change within the legislative discourse

Country	Number of actor–frame sequences
US	1,058
UK	1,333
D	116
CH	21

Note. Absolute number of actor–frame sequences in each country.

3.2. Type of speakers in the legislative discourse about climate change

The institutional setting may also influence the type of actors able to raise their voice in legislative debates: whereas in corporatist countries access to the political system is limited to a few large interest groups with institutionalised access, pluralist systems work differently. In those systems, a plurality of interest groups, institutional representatives and single citizens struggle for influence. These interest groups, institutional representatives and citizens speak up in the political process either by writing letters and statements that are read out in committee meetings or by serving as witnesses in hearings. Hypothesis 1 therefore expects that non-political actors are more prominent in the legislative debates of pluralist countries compared to their corporatist counterparts.

Table 2 confirms this hypothesis. Although in all countries political actors dominate the legislative debate, this dominance is clearly weaker in pluralist countries. A closer look reveals that mainly scientific actors and experts, followed by civil society organisations and socio-economic actors, have access to the political arena. This variety of actors can also be observed in the UK—although, contrary to our expectation, to a lesser degree (19% non-political actors). Conversely, non-political actors are almost invisible in the legislative debates

in Germany and Switzerland, the two in our sample. Our findings thus attest to the main difference between consensus and majoritarian democracies, but they equally reveal inconsistencies within these categories, as the expected order of the countries is partly reversed.

Table 2

Distribution of actor types within the legislative debate on climate change (%)

Actor type	US	UK	D	CH
Political actors	65	81	96	95
Socio-economic actors	5	8	-	5
Civil society organisations	7	5	-	-
Scientific actors/experts	18	6	4	-
Media/journalists	3	1	-	-
Single citizens	3	1	-	-

Note. 1'058 (US), 1'333 (UK), 116 (D), 21 (CH) actors. Cramer's V=.16, p<.001.

3.3. Diversity and polarisation of positions in the legislative discourse

Finally, hypotheses 2a and 2b address the degree of diversity and polarisation in the legislative discourse in different institutional arrangements. Hypothesis 2a assumes that majoritarian democracies show a greater diversity of positions compared to consensus democracies. In our study, we measured the positions concerning climate change with a framing analysis, though due to low case numbers, we had to exclude Switzerland (see above). Table 3 shows that the used frames in the US debate about climate change are more diverse and the proportions distributed more equally between the different positions than in the other countries. To better compare the distributions in the different countries, we calculated the Herfindahl Index of concentration. In our case, with four distinct frames, this index varies between .25 and 1. A value of .25 indicates that all four frames are expressed to an equal degree, whereas a value of 1 indicates that the distribution is highly concentrated.

The results of the Herfindahl Index support hypothesis 2a on a general level: we find a greater diversity of positions in the majoritarian countries, most prominently in the US, than in the consensus democracy of Germany. However, in contrast to our expectations, the frame diversity is stronger in the US than in the UK, although the UK more strongly resembles the ideal of a majoritarian democracy.

Table 3

Distribution of frames on climate change in the different countries (%)

Frame	USA	UK	D
IPCC position	22	54	49
Negative consequences	41	15	25
Voluntary adaptation	19	21	22
Trend/attribution scepticism	18	11	3
Herfindahl Index of concentration (Min=1/N=.25; Max=1)	*.29*	*.37*	*.44*

Note. 1'058, 1'333, and 116 actors in the USA, the UK, and D, respectively. Cramer's V=.26, p<.001.

A closer look at the positions voiced in these legislative debates allows us to judge whether majoritarian democracies not only show a greater diversity of positions, but also if this goes hand in hand with a greater degree of polarisation compared to consensus democracies (H2b). Polarisation occurs to the degree that legislative discourses embody contrasting and extreme positions. In the present case we can speak of a polarised debate if (a) both climate advocates and sceptical voices are present to an equal extent, and if (b) within the two camps the more extreme positions dominate.

To test the hypothesis, we first have to arrange the frames on a continuum spanning climate advocate and sceptical positions. The first two frames "position of the IPCC" and "negative consequences of climate change" both express climate advocate opinions, but they differ significantly in the articulated need for action. Whereas the IPCC frame emphasises the

necessity to mitigate climate change and calls for binding policy regulations, the negative consequences frame only incorporates measures of adaptation. On the other side of the political spectrum, the "trend/attribution scepticism" frame represents a prototypical sceptical position that calls into question both the occurrence of climate change and the anthropogenic contribution. The "voluntary adaptation to climate change" frame, in turn, is more ambivalent, though the analysis has shown that it is related more closely to the sceptical side. Based on these characterisations the extreme advocate position is represented by the IPCC frame, followed by the more moderate frame that emphasises the negative consequences of climate change. Similarly, on the sceptical side, the voluntary adaptation to climate change is a more measured position than the trend/attribution sceptical stance.

With regard to the first criterion (the presence of both positions), Table 3 shows that the US displays the strongest degree of polarisation, followed by the UK and Germany. In the US, 63% of the contributions to the legislative discourse are expressed by climate advocates and 37% by sceptics. In Germany, the ratio is 75% (advocates) to 25% (sceptics), whereas the UK is located in between. The table presents a more mixed picture, however, once we turn to the second criterion, the presence of extreme sceptical and advocate positions: as the results show, trend and attribution scepticism is most visible in the US (18%), followed by the UK (11%) and Germany (3%).[2] At the other end of the spectrum, the IPCC frame accounts for 22% of the legislative discourse in the US, compared to 54% in the UK and 49% in Germany.

The debates thus not only differ in the extent to which they are polarised, but also in the direction of polarisation. Yet with regard to this latter aspect the divide is not so much between majoritarian and consensus democracies, but between the US and the European countries. The US and the UK are more polarised than Germany in terms of the overall discursive presence of the two camps—criterion (a)—which is in line with our hypothesis.

2 Interestingly, it is non-political actors that more forcefully push the sceptical side in the US compared to the political actors themselves. In contrast, in the UK, non-political actors disproportionally support the IPCC frame. For detailed results, see Table C.1 in Appendix C.

Contrary to our assumptions, however, it is the UK and Germany whose discourses are skewed towards the extremes, though above all in terms of the climate advocate side of the debate. The US exhibit the opposite pattern, as of the three countries their legislative deliberations display the strongest drive towards the sceptical extreme; this position is much less visible in the UK and next to inexistent in the German debate.[3]

On the whole, the results of the analysis partly confirm hypothesis H2b. With respect to the first criterion they show that legislative discourses in majoritarian democracies represent both sides of the debate more evenly than those in consensus systems, though the expected order between the US and the UK is reversed. The second criterion reveals a more complex relationship between institutional configurations and parliamentary debates, which to some extent contradicts the assumptions: while the UK and Germany are polarised towards the advocate extreme, the US displays a trend in the opposite direction. Moreover, the latter shows a more balanced form of polarisation between the extremes, though overall on a lower level than Germany and the UK.

4. Discussion

4.1. Summary and theoretical implications

The aim of our study was to analyse how different institutional configurations affect the structure of political debates. In our hypotheses, we assumed that the differences between majoritarian and consensus democracies have an influence on the visibility of non-political actors within legislative discourses, the diversity and the degree of polarisation of the expressed positions, and, related to this, the general salience of the issue on the political agenda.

3 Indeed, trend/attribution scepticism in Germany is a methodological artefact due to the fact that the cluster analysis was conducted across three countries. If we conduct a separate frame analysis for the German discourse alone, the extreme sceptical frame disappears.

The results broadly support our assumptions on all three dimensions and thus confirm the postulated relationship between legislative settings and their discursive properties; although, within the two main categories, the countries also contradicted some of the expectations. Generally, the majoritarian systems in the US and UK enable a greater number of non-political actors—scientists, civil society actors, socio-economic actors—to express their position directly or indirectly in the debates than can do so in the consensus democracies of Germany or Switzerland. In the latter, discourses are elite-centred and exclude other, non-institutional, actors.

Related to this, majoritarian systems in general tend to display a higher degree of polarisation than consensus democracies, though there are also significant exceptions. In line with this finding, the positions articulated in the majoritarian systems of the UK and the US are also more diverse, resulting primarily from the high(er) salience of sceptical arguments expressed in their legislative debates. These mechanisms finally lead to the issue having the highest degree of salience in the US, followed by the UK, Germany and Switzerland. These results also illustrate that institutional configurations lead to "epistemological hierarchies" (O'Neill, Hulme, Turnpenny, & Screen, 2010), as the single frames are pronounced to different degrees within and across the four legislative bodies. As a general mechanism, institutional discourses move certain aspects further into the foreground and thus make certain policies more obvious choices than others.

It is interesting to note in this context that the discourse of climate advocates displays an additional line of contrast between the European countries and the US: whereas in the UK and Germany the position of the IPCC, which also includes the demand for obligatory policy rules, dominates the political debate, climate advocates in the US emphasise the negative consequences of climate change and highlight the measures required to adapt to them. A possible explanation for this finding could be seen in the nature of the US climate change

debate, which is generally marked by a strong presence of sceptical voices, representing a broadly based, well-organised countermovement reaching far beyond the legislative arena (McCright & Dunlap, 2011). As a consequence of the sceptics' foothold in the debate, climate advocates have abandoned the call for fundamental reactions to climate change, which we still see being voiced in the UK.

Discourses in consensus democracies tend to gravitate towards the common ground, though perhaps coming at the price of oppressing significant differences between the positions. Climate change, in this respect, is an issue where from a normative viewpoint the exclusion of the sceptical minority position can be seen as less detrimental as they hold a scientifically unqualified position. In other policy areas, however, the status of minorities in the legislative process might pose more of a problem, above all when the debate centres on moral questions such as, for instance, abortion legislation. Here, consensus and integration might well be considered synonymous with a hegemonic political order that inhibits social change and suppresses the voices of those affected, thus leading to a disconnect between the formal institutional arena and the informal public sphere. Majoritarian systems, in turn, allow for, and indeed appear to further, the articulation of political differences. The downside here is to be seen in the fact that instead of leading to convergence, these configurations consolidate and emphasise political conflict, thus, in effect, foreclosing the actors from establishing a common ground between them. The possible detrimental consequences in this case consists not so much in a "vertical" split between institutional politics and the public as in cementing a "horizontal" division between two opposing positions that runs through legislative bodies and society alike. Some of the research on the polarisation of the US Congress and the American public seems to suggest such a development (Abramowitz & Saunders, 2008; Layman et al., 2006), and in terms of legislative discourses, climate change has been shown to be particularly divisive (Guber, 2013). At the same time, institutional configurations do not prescribe social change, and since they are connected to society in various, complex ways,

their inner workings are equally shaped by the dynamics and forces residing in the informal public sphere.

4.2. Limitations and future research

While our study has been able to document the systematic differences in legislative discourses between consensus and majoritarian democracies, it has done so with a sample limited to four countries and one issue, and covering only one year of parliamentary debates. Therefore, the approach should be extended in further studies to investigate if our results can be replicated in other settings with longer periods of analysis. Moreover, the high degree of polarisation of the debate in the US might not be the sole product of the institutional setting. Thus, the inclusion of other issues and additional countries could help to shed light on how strongly the institutional design affects the discursive structure. With regard to climate change, its transnational dimension, such as the UN's climate change conferences, should be more explicitly integrated into the analytical model as it can be reasonably assumed to influence the structure of legislative discourses. Finally, linking the analysis of institutional discourses to the coverage of climate change in the media would contribute to uncovering the dynamics at play between the formal and the informal public sphere.

The framing approach used in our study has allowed us to analyse positions expressed by the actors in an inductive way and to detect the underlying discursive patterns. At the same time, this has resulted in extracting frames in isolation from one another, although the contest of (opposing) frames is precisely what drives political debates and the "give and take" of reasons. In further studies, the interaction between frames should be examined more closely—above all, since strategic framing is likely to involve forms of frame adaptation, reframing, etc. as the debate develops.

Appendix A: Included political documents for each country

A.1 Parliamentary documents: our sample includes all plenary protocols (including annexes) of both parliamentary houses at the national level.

- Bundestag and Bundesrat (Germany)
- Nationalrat and Ständerat (Switzerland)
- House of Commons and House of Lords (UK)
- House of Representatives and Senate (USA)
- Weekly Address of the President (USA)

A.2 Committees: for each country we selected the committees mainly dealing with climate change.

Germany:

- Bundestag: Ausschuss für Umwelt, Naturschutz, Bau und Reaktorsicherheit
- Bundesrat: The documents of the committee of the Bundesrat are not publicly available and thus do not form part of our sample.

USA:

- Senate: Committee on Energy and Natural Resources
- House of Representatives: Committee on Energy and Commerce

CH:

- Nationalrat (UREK-N): Kommission für Umwelt, Raumplanung und Energie
- Ständerat (UREK-S): Kommission für Umwelt, Raumplanung und Energie

UK:

- House of Commons: Energy and Climate Change Committee
- House of Lords: There is no suitable committee dealing with climate change.

Appendix B: Detailed reliability scores for the used variables

Agreement concerning the identification of the three most important actors (MIAs): 77%

Table B.1

Reliability scores of variables coded on the actor-argument level

Variable	Krippendorff's Alpha
Group the actor belongs to	.82
Occurrence of climate change	.69
Climate change seen as a problem	.75
Perspective on climate change	.70
Causes of climate change	.75

Consequences of climate change	.76
Treatments	.76

Note. N=30 commonly identified MIAs; each coder was compared separately to a master coding

Appendix C

Table C.1

Distribution of frames in the US and UK according to actor types

Frame	USA		UK	
	pol. actors	*other actors*	*pol. actors*	*other actors*
IPCC position	24	17	52	62
Negative consequences	47	30	15	14
Voluntary adaptation	15	26	23	14
Trend/attribution scepticism	14	26	10	11
N	*691*	*367*	*1073*	*260*

Note. USA: Cramer's V=.23, p<.001; UK: Cramer's V=.10, p<.01

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