# [Master Seminar Paper Title]

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# **Literature Review and Theory**

#### **Party Agenda Setting**

Agendas are seen as a hierarchy of issues (Green-Pedersen and Mortensen 2010, 260). Relevant actors, including political parties, influence these issues, but must also pay attention to them. Actors put issues on their agenda that are salient to the public (Sides 2006, 407). Defining and influencing agendas is important because it determines what politics is about. It is therefore a way of exercising political power (Edwards and Wood 1999, 327; Schattschneider 1975, 68).

One way of putting issues on the agenda is to raise them in parliamentary bills. These bills are introduced by, e.g., political parties, who aim to influence the "party system agenda". This is a model that describes how political parties set the agenda in the context of issue competition (Green-Pedersen and Mortensen 2010, 257). In this model, the ongoing debate between political parties influences the "party system agenda" (Green-Pedersen and Mortensen 2010, 260). This debate takes many forms, one of which is the proposal of new bills (Green-Pedersen and Mortensen 2010, 266).

Parties respond to each other's agendas as part of this "party system agenda" (Spoon et al. 2014, 374). On the one hand, parties emphasise issues that are to their advantage. However, parties also have to respond to all salient issues in the "party system agenda" at all times (Green-Pedersen and Mortensen 2010, 261), even if they are potentially damaging.

Parties with similar ideologies tend to be more responsive to each other than parties with less similar ideologies. This phenomenon, called the "party bloc effect" (Adams and Somer-Topcu 2009, 842; Green-Pedersen and Mortensen 2015, 760), is due to the ideological proximity between parties within the same bloc.

This proximity allows parties to attract voters from other, ideologically closer parties. An example of this "poaching" is provided by Spoon et al. (2014, 375), who shows that when left-wing parties highlight issues typically dominated by green parties (in short, "green issues"), these left-wing parties can reap potential electoral benefits. In the specific context of Swiss politics, there are two further reasons why left-wing parties would want to highlight "green issues".

First, "green issues" have become more salient in Switzerland over the past twenty years. Lüth and Schaffer (2022, 171) show that the electoral importance of energy and environmental issues among Swiss voters has increased between 2002 and 2022. This increase in salience is driven by voters (Lüth and Schaffer 2022, 184), thus political parties need to respond to this development and put "green issues" on their agenda.

Second, I argue that the Swiss Social Democrats (German "Sozialdemokratische Partei der Schweiz", SP) perceive the Swiss Green Party (German "Grüne Schweiz", GPS) as an electoral

threat. Both parties are ideologically close, i.e., in the same "party bloc" as described above. The GPS has increased its share of votes in the Swiss National Council from 7.43% in 2003 to 13.24% in 2019, while the SP has decreased its share from 23.33% to 16.84% over the same period. According to Spoon et al. (2014, 366), a mainstream party like the SP is more likely to engage with issues owned by niche parties if these niche parties, such as the GPS, are perceived as an electoral threat. We can therefore expect the SP to counter this threat by addressing "green issues" with the aim of attracting GPS voters.

Following this line of argument, I argue that parties place issues on the "party system agenda" by proposing parliamentary bills that, first, touch on issues that are salient to the public and, second, are advantageous to the parties themselves.

According to Spoon et al. (2014, 375), left-wing parties introduce bills that touch upon "green topics" in order to gain an electoral advantage. The SP therefore emphasises "green issues" in an effort to win over GPS voters. The SP does this by proposing parliamentary bills that are similar in content to GPS bills. This leads to my hypothesis:

**H1**: An increase in the public salience of environmental issues leads to an increase in the content similarity between SP and GPS parliamentary bills on "green issues".

### **Calculating Document Similarity using Word Embeddings**

In order to test the hypothesis, it is necessary to measure the content similarity between parliamentary bills. This leads into the realm of natural language processing, short NLP, and approaches that use text as data (Rodriguez and Spirling 2022). In NLP terms, how can the semantic similarity between documents, in particular parliamentary bills, be calculated (Ali et al. 2018, 907)?

The "Word Mover's Distance" is a method proposed by Wang and Dong (2020, 4) for measuring the semantic distance between documents. This technique applies the concept of text representation in semantic space as a means of measuring similarity. The underlying principle is to represent a text as a point in a multidimensional semantic space (Jurafsky and Martin 2009, 109). In this space, texts that are semantically similar are positioned closer to each other than texts that are dissimilar. Consequently, the distance between two texts in this space can be used to make a statement about their semantic similarity.

In order to place text in this semantic space, the meaning of a text must be converted into embeddings. These embeddings are learned representations of word meanings (Jurafsky and Martin 2009, 97). In short, these representations are computed using the probability of a word appearing near another word in the same text (Jurafsky and Martin 2009, 122). The representations take the form of vectors (Jurafsky and Martin 2009, 109), which are simply a list of numbers (Jurafsky and Martin 2009, 111) that represent the location of a text in semantic space.

Embeddings are good at recognising synonyms, e.g. showing that the words "car" and "automobile" have a high semantic similarity (Jurafsky and Martin 2009, 121). For this reason, it makes sense to use embeddings to measure the similarity between documents, in this case parliamentary bills. In political science, embeddings have also been used to measure the positions of candidates (Case 2023, 11) and party ideology (Rheault and Cochrane 2020, 29). They are thus a tried and tested technique for analysing political texts. Finally, this principle of embedding single words can be extended to whole documents, where a document represents a point in the semantic space instead of a single word (Le and Mikolov 2014).

To sum up, in order to measure the similarity between two parliamentary bills, I will place them in semantic space. The more similar the bills are, the smaller the distance between them in semantic space. The next section explains the technical details of this approach.

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