Questions and Answers in Parliamentary Discussions: Form and Functions

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Abstract: The study is aimed to develop the Estonian parliamentary corpus. The existing morphologically analyzed corpus includes verbatim records of sessions held in the Parliament of Estonia in 1995-2001. An important task of the Parliament is the passing of acts and resolutions. Every reading of a bill starts with a speech of a minister and/or of a member of the responsible leading committee. Then members of the Parliament can ask questions which will be answered by the presenter. The paper concentrates on the questions and answers that have been annotated in the corpus according to a custom-made dialogue act annotation scheme as well as the ISO standard. For comparison, questions and answers when reading a bill in the UK Parliament are considered. Different forms of questions and answers with different functions are prevailing in both parliaments. The main function of questions in the Parliament of Estonia is to get information. On the contrary, in the UK Parliament the questions mainly are used to present arguments for or against the bill. The main function of answers is to provide information in the Parliament of Estonia but agreement or disagreement with arguments in the UK Parliament. Our further aim is the automatic analysis of Estonian political texts and comparison with political discourse in other parliaments.

1 INTRODUCTION

Parliament data is a useful and practical source of material for linguistic, political, sociological, historical etc. research with its influential language and content for the social and political domain. At present, parliamentary sessions in many countries of the world are well documented with transcripts, audio and video recordings available online. The CLARIN ERIC infrastructure offers access to 26 parliamentary corpora in different languages (Parliamentary corpora, 2021). Creating, curating and maintaining political corpora is becoming an ever more involved task. Such corpora must be easy to browse and search for linguists, social scientists, digital humanists and the general public.

In the first part of the paper, we examine discussions on legislation in the Parliament of Estonia – Riigikogu. Our study is based on verbatim records of the sittings. A morphologically annotated corpus is formed that includes the records from 1995 to 2001 (in total, 13 million tokens), both for download and on-line searching (Koondkorpus: Riigikogu, 2021).

Since 2020, the Riigikogu is using a new system to prepare verbatim reports of its sittings. The new solution is based on speech recognition technology worked out in Tallinn University of Technology. The new system records the debates as sound files, which the speech recognition software then transcribes. After this, human editors revise the text, which is finally published on the Riigikogu website (Riigikogu, 2021).

In a previous study (Koit, 2021) we were looking for arguments presented by the members of the Parliament (MPs) in negotiations when proceeding a bill in the Riigikogu. The current paper investigates the discussions taking place before negotiation – questions asked by MPs about the bill and the answers of the government representatives. We are looking for form and functions of questions and answers, using a part of the parliamentary corpus where dialogue acts (DAs) are annotated. We are annotating both DAs and arguments in our corpus with the aim to make it available the automatic analysis of political discourse in Estonian. In the second part of the paper, as a case study, we compare our parliamentary discussions with the discussions in the UK Parliament.

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The remainder of the paper is structured as follows. Section 2 describes related work. In Section 3, we examine a randomly chosen discussion in the Riigikogu by using the verbatim records of three sittings. We consider questions asked and answered in discussions. In Section 4, by using a selected record, we consider questions and answers in British House of Commons when proceeding a bill. In Section 5, we discuss the similarities and differences between form and functions of asked and answered questions in both parliaments. Our further aim is to make it possible to automatically analyze Estonian parliamentary discourse and characterize the MPs participating in discussions by their questions, answers and presented arguments as well as the comparison with other parliaments. Section 6 draws conclusions and figures out future work.

2 RELATED WORK

There are many initiatives on creation and annotation of parliamentary corpora. Different tools are available for the corpora that are used for various investigations.

Eide (2020) introduces the Swedish parliamentary debates annotated with linguistic information and augmented with semantic links, in order to make the data easier to use and process – in particular for language technology research, but also for political science and other fields with an interest in parliamentary data.

Steingrímsson et al. (2020) introduce the Icelandic Corpus of Parliamentary Proceedings. The corpus has been automatically part-of-speech tagged and lemmatized. It is annotated with extensive metadata about the speeches, speakers and political parties, including speech topic, whether the speaker is in the government coalition or opposition, age and gender of speaker at the time of delivery, references to sound and video recordings and more.

Coole et al. (2020) compile a linguistically annotated and semantically tagged version of the Hansard corpus from 1803 up to the present day. They describe the toolchain for tokenization, part-of-speech tagging and semantic annotations.

Kerkvliet et al. (2020) train a state of the art name identity tagger (spaCy) to recognize political actors in Dutch parliamentary proceedings. Besides proper nouns of persons and political parties, the tagger can recognize quite complex definite descriptions referring to cabinet ministers, ministries, and parliamentary committees.

Navarretta and Hansen (2020) consider differences in the word use of Danish parties, and investigate how these differences can be used to automatically identify the party of politicians from their speeches. The analysis shows that the party of the politicians can be distinguished in nearly 60% of the cases, even if they debate about the same subjects and often use the same terminology.

Hofmann et al. (2020) present a case study comparing the lexical similarities and differences between parties within and across two corpora of Austrian German – a diachronic media corpus and a corpus of parliamentary records. The results show that changes observed in these measures can be related to political events during that time.

Voloshchuk and Usyk (2019) study the linguistic pragmatic features – semantic organization, composition, and stylistic register of political speeches. Each political speech has its specific communicative goal, intention, and audience. The persuasiveness as the lingual pragmatic category in the political speeches has been analyzed. Verbalization creates a communicative portrait of a speaker and his own individual style.

Petukhova et al. (2015) study plenary sessions in the UK Youth Parliament and apply the information state update machinery to tracking and understanding the argumentative behaviour of participants in a parliamentary debate in order to predict its outcome. A parliamentary debate is a communication process in which participants argue for or against a motion. First, segmentation has been performed together with dialogue act annotations into functional segments according to guidelines provided in ISO standard (2012). To each segment a communicative function has been assigned in one or more of the nine ISO dimensions; An artificial agent could play different roles in a debate, e.g. the role of one of the debaters or their seconders by supporting or attacking certain arguments. In the study, the agent plays the role of concluder, whose task is to understand the arguments of all the debaters and to conclude the debate by stating the opinion of the majority. Its performance is compared with a human concluder.

Chojnicka (2013) examines the use and functions of questions in Latvian and Polish parliamentary debates from the perspective of comparative pragmatics. The research is based on a corpus of 200 utterances taken from transcripts of Latvian and Polish parliaments’ sittings. It uses the typology of questions in interaction developed by Ilie (1999) – reaction requests, expository questions, token information questions, suggestion questions, evaluative/accusatory questions, and rhetorical
questions. These question types form a continuum in terms of two features: assertiveness and interactivity. Reaction requests are the least assertive (they do not contain a thesis and do demand response) and the most interactive (the response must come from another speaker). The differences in the frequency and functions of questions reflect different degrees of interactivity of a debate. The discourse of Polish parliamentary debates is more interactional than Latvian. Another conclusion is that Latvian parliament allows for more acute criticism and judgement than Polish.

Bara et al. (2007) compare two approaches, one semi-automated (Hamlet) and the other fully automated (Alceste), when analysing debate from the UK House of Commons on a private member’s bill on abortion in 1966. The authors conclude that both techniques have produced results pertinent to the study of deliberation set within a parliamentary context and that each of them has particular strengths.

3 QUESTIONS AND ANSWERS IN THE PARLIAMENT OF ESTONIA

In this section, we examine discussions in the Riigikogu based on verbatim records of the sittings. We consider the questions of the MPs and the answers provided by the representatives of the government.

3.1 Empirical Material

Our empirical material is formed by the verbatim records of the Parliament of Estonia – Riigikogu. The records (in Estonian) are accessible on the Web (cf. Riigikogu, 2021). An important task of the Riigikogu is the passing of acts and resolutions. Acts are the result of work in multiple stages. The first stage of legislation involves the drafting of a bill. During the second stage, the bill is initiated in the Riigikogu. The Riigikogu conducts proceedings on bills at three readings. The proceeding of a bill is managed by the relevant leading committee – one of the eleven standing committees. Passed acts are proclaimed by the President of the Republic.

The readings have a predetermined structure. First, the representatives of the government and the leading committee make their presentations about the bill and/or its amendments. After every presentation, MPs can ask questions which will be answered by the presenter. Then negotiation follows where arguments for and against the bill and its amendments are given. The 2nd and the 3rd readings in addition include voting on amendments and final voting, respectively.

For this paper, dialogue acts, incl. questions and answers, are annotated in a part of the records belonging to the corpus that includes records from 1995-2001.

3.2 Dialogue Act Typology

An ISO standard is established for annotating DAs in texts (Bunt et al., 2020; ISO, 2012). However, we are also (together with the standard) using a custom-made typology worked out for annotating Estonian spoken dialogues (Hennoste et al., 2008). The typology is influenced by the conversation analysis (CA). According to CA, some DAs form adjacency pairs (APs) where producing the first pair part makes the second one relevant (e.g. a question requires an answer). There are two general principles in CA (Hutchby and Wooffitt, 1998):

1) DAs that form APs (e.g. question and answer) must be distinguished from non-AP acts (e.g. feedback)
2) DAs are divided into two groups: information acts and conversation managing acts. The last group can be divided into:
   a) fluent conversation managing acts, and
   b) acts for solving communication problems (repair acts).

This study concentrates on questions and answers (AP acts). In our typology, questions are determined as the utterances that have a specific form in Estonian: questioning words, a specific word order and/or intonation. There are the following types of questions in the typology:

- questions that expect giving information – wh-question and open yes/no question (both types can be annotated as setQuestion in ISO standard)
- questions that expect agreement/refusal – closed yes/no question (propositionalQuestion in ISO) and question that offers answer (checkQuestion in ISO)
- questions that expect the choice of an alternative – alternative question (choiceQuestion in ISO).

Open and closed yes/no questions have similar form in Estonian but they expect different reactions from the partner. A closed yes/no question expects the answer yes or no while open yes/no question expects giving more information, e.g. by asking the question Is there a bus that departs after 8? customer intends to know the departure times of buses. Both closed yes/no question and question offering answer are questions that expect yes/no answers.
difference lies in the presuppositions of the speaker. Asking a question that offers answer the speaker has an explicit opinion, hypothesis, and (s)he is expecting confirmation by the partner. No such presupposition exists in the case of a closed yes/no question.

In addition, there is also a non-AP question in our typology – rhetorical question – as well as there are non-AP information acts (e.g. explication, specification, etc.). Rhetorical questions occur in longer reports of the government representatives and they do not expect any answer from another person. However, we do not consider non-AP acts in the present study.

Table 1: Question and answer DAs in two typologies1.

<table>
<thead>
<tr>
<th>CA-based (our)</th>
<th>ISO standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First pair parts of APs</strong></td>
<td></td>
</tr>
<tr>
<td>QUF: closed Y/N question</td>
<td>Information seeking</td>
</tr>
<tr>
<td>QUF: open Y/N question</td>
<td>functions</td>
</tr>
<tr>
<td>QYF: alternative question</td>
<td>propositionalQuestion</td>
</tr>
<tr>
<td>QUS: wh-question</td>
<td>setQuestion</td>
</tr>
<tr>
<td>QUS: offering answer</td>
<td>choiceQuestion</td>
</tr>
<tr>
<td>QUS: other</td>
<td>checkQuestion</td>
</tr>
<tr>
<td><strong>Second pair parts of APs</strong></td>
<td></td>
</tr>
<tr>
<td>QUS: yes</td>
<td>Information providing</td>
</tr>
<tr>
<td>QUS: no</td>
<td>functions</td>
</tr>
<tr>
<td>QUS: agreeing no</td>
<td>confirm</td>
</tr>
<tr>
<td>QUS: other Y/N answer</td>
<td>agreement</td>
</tr>
<tr>
<td>QUS: alternative: one</td>
<td>disagreement</td>
</tr>
<tr>
<td>QUS: alternative: both</td>
<td>agreement</td>
</tr>
<tr>
<td>QUS: alternative: third choice</td>
<td>answer</td>
</tr>
<tr>
<td>QUS: alternative: negative</td>
<td>correction</td>
</tr>
<tr>
<td>QUS: alternative: other</td>
<td>correction</td>
</tr>
<tr>
<td>QUS: giving information</td>
<td>answer</td>
</tr>
<tr>
<td>QUS: missing information</td>
<td>answer</td>
</tr>
<tr>
<td>QUS: refusal</td>
<td>answer</td>
</tr>
<tr>
<td>QUS: postponement</td>
<td>answer</td>
</tr>
<tr>
<td>QUS: alternate</td>
<td>answer</td>
</tr>
<tr>
<td>QUS: other</td>
<td>answer</td>
</tr>
</tbody>
</table>

Comparison of the two typologies – on one hand, questions and answers in our typology and on the other hand, information seeking and information providing functions in ISO – is given in Table 1.

Custom-made software (Aller et al., 2014) is being used for semi-automatic annotation of DAs in the verbatim records of the Riigikogu. For every utterance, the computer proposes up to five DA tags by using 10-fold cross-validation and then an expert disambiguates the annotation.

1 In our typology, names of dialogue acts consist of two parts separated by a colon: 1) the first two letters give abbreviation of the name of an act-group, e.g. QU – questions, AI – additional information acts. The third letter is used only for AP acts – the first (F) or the second (S) pair part of an AP act; 2) full name of the act, e.g. QUF: open Y/N question, QUS: giving information, AI: specification.

3.3 Questions Asked and Answered in the Riigikogu

As an example, let us consider proceedings of the bill on sale and consumption of alcohol (in 2001). The transcripts of three sittings consist of 27,768 tokens. In total, eight reports of two ministers (economy and finances) and representatives of the leading committee (economic affairs) have been presented. After every report, MPs can ask questions.

A chairperson gives the floor, e.g. by saying Mr. N; you have the floor. When asking a question an MP always starts with a ritual, e.g. Thank you, Mr. Chair. <Question to the presenter>.

In the following, we give some examples of question-answer APs. Different first and second pair parts of APs are presented in discussions – Example 1 QUF: wh-question and QUS: giving information; Example 2 QUF: open yes-no question and QUS: giving information; Example 3 QUF: closed yes-no question and QUS: no.

ISO tags are added in the examples as well. In ISO standard, there are two matches both to our QUS: yes and QUS: no (Table 1). When annotating, the expert differentiated the answers based on the first pair part of the AP – respectively, confirm or disconfirm if it was a closed yes/no question (propositionalQuestion in ISO standard) and agreement or disagreement if it was a question offering answer (checkQuestion).

(1) Q(uestion of MP): Milliseid muudatusi sellest eelnõust tuleneb eestimaiste jookide valmistajate, näiteks veini- ja ölletootjate õigustes ja kohustustes?

QUF: wh-question | setQuestion

Which changes does this bill involve in rights and obligations of producers of Estonian drinks, e.g. wine and beer producers?

A(nswer of the Presenter): Minu arvates ei kehtesta uus alkoholiseadus mingeid täiendavaid piiranguid kohalikele alkoholitootjatele. <…> QUS: giving information | answer

In my opinion, the new law does not establish any additional restrictions for local producers. <…>

(2) Q: <…> Ōelge, palun, kas selle seaduse alusel oleks ka poliitseil võimalik efektiivsemalt tegelda just niisuguse alkoholi levitamise, hoidmise, joomisega vahelejäänud või vahelejääväte inimeste karistamisega? QUF: open Y/N question | setQuestion

...
Please tell us, according this law, can the police act more effectively when punishing people who distribute, keep or drink alcohol?

A: See seadus kehtestab rangemad sanktsioonid kui varem. <...> QUS: giving information | answer

This law establishes stronger sanctions than before.

(3)

Q: <...> Kas majanduskomisjonis oli juttu, kui palju hakkab olema neid järelevalvet pidavaid ametnikke?

QUF: closed Y/N question | propositionalQuestion

Did the committee of economic affairs discuss the number of officials needed for inspection?

A: <...> Konkreetset numbritest ei olnud juttu ja vaevalt me saame kindlaks määrata, missugune on optimaalne arv. QUS: no | disconfirm

We did not discuss the numbers, the optimal number can hardly be determined.

The total number of questions asked by 95 MPs is 123. The most frequent question type is wh-question (51 questions, or 41.5%). That is not surprising because this question type expects giving information (Example 1). Open yes/no question (38 questions, or 30.9%) is the other question type which expects giving information (Example 2). As said before, an open yes/no question has similar form as a closed yes/no question in Estonian. When disambiguating annotations, the expert takes into account how the addressee reacts. If (s)he answers only yes or no then the question is annotated as a closed yes/no question. If (s)he gives more information, it is annotated as an open yes/no question. The number of closed yes/no questions (Example 3) is 10 (8.1%). The numbers of both alternative questions and questions offering answer are equal – 12 (9.8%). No questions are annotated as QUF: other. Summing up, more than 70% of questions are asked by MPs in order to get information. About 30% of questions expect a short answer – yes or no or choosing an alternative (Figure 1).

In the analysed records, the number of the second pair parts of question-answer APs is a little bit less than the number of the first pair parts – 120 vs. 123 (Figure 2). It is because two different questions sometimes get one common answer. As expected, the most frequent answer is QUS: giving information – 69 (57.5%). However, some of the wh-questions and open yes/no questions will not be answered by giving information (which is the expected reaction), but the reaction is QUS: refusal (1 case), QUS: missing information (7 cases), or QUS: postponement (15 cases).

Figure 2: Types of responses (number) in the Riigikogu when proceeding the bill on alcohol.

In some cases, the missed information will later be given by another presenter in his report, e.g. by a member of the leading committee if the minister redirected the answer.

4 QUESTIONS AND ANSWERS IN THE UK PARLIAMENT

In this section, we consider a discussion in the UK Parliament in order to compare it with discussions in the Riigikogu. We selected the Tobacco Advertising and Promotion Bill (2001) discussed in the British House of Commons. We analyse the second reading (the verbatim record includes 55,327 tokens) which is the first opportunity for MPs for debate on the bill. The debate is opened by the Secretary of State for Health. The official opposition spokesperson responds with their views on the bill. The debate continues with other opposition parties and backbench MPs giving their opinions. At the end of the debate, the Commons decides whether the Bill
should be given its second reading by voting, meaning it can proceed to the next stage.

In total, 24 presentations both of the members of the government coalition and the opposition are listened in the 2nd reading. After every presentation, MPs ask questions which will be answered by the presenter. It is similar with the discussion in the Riigikogu. We concentrate here on questions and answers that have been annotated in the verbatim record by an expert. Two tag sets are used for annotation that also demonstrate the different types of questions and answers in our CA-based typology.

In the following, there are some examples of different types of asked questions together with given answers – Example 4 checkQuestion and disagreement, Example 5 propositionalQuestion and confirm, Example 6 setQuestion and answer.

(4)
Q: Does the right hon. Gentleman not recognise that the Government’s mismanagement of these issues has led to a huge increase in the supply of smuggled tobacco?
checkQuestion | QUF: offering answer
A: That is not the case. disagreement | QUS: no

(5)
Q: Will the Bill ban brand stretching – by which I mean the use of brand names on items such as clothing and other goods for sale?
propositionalQuestion | QUF: closed Y/N question
A: Yes, it will do that, but there is an important caveat. confirm | QUS: yes

(6)
Q: If a voluntary code is as unworkable as the Secretary of State says, why did it deliver a big reduction in consumption between 1971 and 1996?
setQuestion | QUF: wh-question
A: There are various reasons for the reduction in consumption. That is a long-running trend – not only in this country but in other developed nations. answer | QUS: giving information

The number of questions asked by 61 persons is 73. The number of responses of different types is 122 (Figures 3 and 4). When agreeing or disagreeing with the proposal set up by a check question the answerer always gives also additional information. The most frequent question type (i.e. information seeking function) is checkQuestion (QUF: offering answer in our typology) – 51 (69.9% of all questions). Out of the remaining types, 17 (23.3%) belong to the type setQuestion, three (4.1%) to propositionQuestion and two (2.7%) to choiceQuestion.

The most frequent information providing function is ‘answer’ – 75 (62.5%). After that, disagreement (25, or 20.5%), agreement (18, or 14.8%), confirm (2, or 1.6%), and disconfirm (1, or 0.8%) come. It should be mentioned that five of the ‘answers’ are in our typology annotated as ‘QUS: alternative: one’ or ‘QUS: refusal’ (three and two cases, respectively). In addition, 63 rhetorical questions occur in presentations (non-AP acts in our typology), but we do not consider them here.

5 DISCUSSION

A comparative study of political argumentation in different parliaments as well as in different political cultures and different languages is a challenging research question.

We are analysing questions asked and answered in two parliaments when discussing a bill – the Estonian Riigikogu and the UK Parliament House of Commons. The legislation procedures of the parliaments are quite different. In the Riigikogu, the representatives of government and the leading committee make reports about the bill. Every report will be followed by questions of MPs. No arguments for or against the bill are usually presented during asking and answering questions. Debates take place in a special part of reading – negotiation (s. Subsection 3.1). Differently,
discussions in the UK Parliament are more complicated because the Parliament has two Houses. We consider only one sitting in the House of Commons – the second reading of the bill that provides an opportunity to MPs to debate. Here, when asking and answering questions, also arguments for and against the bill are presented. We compare the different types of questions and answers in two parliaments.

When comparing form and functions of questions and answers of the two analysed proceedings, we can see that different types of questions (and related answers) prevail in both parliaments. In the Riigikogu, the questions are mostly asked for getting information (setQuestion in ISO standard) while question that offers answer (checkQuestion) prevails in the UK Parliament. Here, such questions are often formulated using a specific style (e.g. does he not …), i.e. including negation. Differently from the Riigikogu, 3rd person is used instead of 2nd person, typical expressions are e.g. Does the Secretary of State think..., The hon. Gentleman is wrong. Check questions actually turn out to be arguments for or against the bill (depending on the parties of debaters).

It is different in the Riigikogu – questions and answers do not include arguments. The arguments are presented during negotiations where no questions are asked (excluding rhetorical questions that do not expect answer and procedural questions asked by the chair of the sitting).

Therefore, the main function of questions in the Riigikogu is to get information. The main function of responses is to provide information. In the House of Commons, the main function of questions is to give arguments for or against the bill. The main function of responses is to agree or disagree with the arguments and to provide additional information in order to justify the claims of arguments. The distributions of question and answer types (in percentage) in two compared discussions are presented in Figures 5 and 6, respectively.

6 CONCLUSIONS

Verbatim records of sittings of many parliaments can be accessed online. In this paper, discussions on the bill of alcohol in the Parliament of Estonia are analyzed in order to illustrate the types and functions of questions and answers. For comparison, the 2nd reading of the Tobacco Advertising and Promotion Bill in UK Parliament House of Commons is considered. A custom-made typology, based on the conversation analysis, as well as the ISO standard is used for annotation of dialogue acts. The main types of questions in the Riigikogu are wh-question and open yes-no question (both are annotated as setQuestion in ISO) which both expect getting information. The main type of responses is giving information (answer in ISO standard). The main type of questions in the UK Parliament House of Commons is checkQuestion (a question that offers an answer). Such questions turn out to be arguments. The main response type is agreement or disagreement (followed by providing additional information). When questioning and answering in the House of Commons, arguments for and against the bill are given. Therefore, every report (out of 24) initiates a debate where one participant always is the previous presenter. That is not the case in the Riigikogu. Here every report (out of 8) initiates an information dialogue where similarly, one participant is the previous presenter. Arguments are presented in a special part of discussion – negotiation.

This study is a step towards automatic analysis of Estonian political discussions. The current task is the development of the parliamentary corpus where dialogue acts are annotated. Future work includes the finalization of the annotation process of the dataset, in
order to check the usability of other dialogue acts (directives, opinions, etc.) in recognition of political arguments, and the definition of suitable NLP methods based on the annotated corpus. This also makes it possible automatically to compare the discussions in the Riigikogu with the political discourse in other parliaments.

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