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OEC, Platz der Göttinger Sieben 3
Room 0.169
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Prof. Dr. Wolf Jürgen Schünemann, Hildesheim
Echo chambers and polarisation in the German federal election 2017
Interactive Graph Visualization and Intersubjectivity:
Exploring the Parliamentary Discourse of the AfD

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Collocation graphs, i.e. visual representations of the cooccurrences in a corpus, are a common and attractive tool to sell the prospect of the digital humanities. But there are doubts, whether these graph visualisations are really a good instrument to achieve research findings that are agreeable on terms of intersubjectivity. If the corpus is sufficiently large, more cooccurrences will be statistically significant than can be reasonably visualized. So how can the complexity of the graph be reduced. And what do the nodes and edges that are displayed actually mean?

One approach that has been suggested (and implemented in the R package CorporaCoCo, Hennessey et al. 2017) is to filter cooccurrences by way of difference tests. A second approach is to use three-dimensional graph representations to visually reduce complexity. In the scenario I will present, these ideas are combined and supplemented with an environment to annotate and successively filter complex graphs by inspecting concordances for edges and nodes, so that a simplified, annotated graph is the result of an interactive exploration of a discourse using co-occurrence graphs. While the suggested workflow implements the ideas of “close” and “distant” reading (Franco Moretti), the unique contribution is a solution how working with co-occurrence graph can meet the standards of intersubjectivity.

The implementation I present is the R package “gradget” (short for graph annotation widget). The data I will use are corpora of Germany’s regional parliaments, and my analytical focus will be on the speeches given by members of the AfD (“Alternative für Deutschland”). By exploring the parliamentary discourse of this new populist actor in German politics, I hope to make a substantial contribution in addition to the methodological idea I will shar
Introducing MMDA: An interactive toolkit for CDA

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Corpus-based discourse analysis (CDA) is a popular and highly successful technique for the investigation of socio-political research questions (see e.g. Baker 2006; McEnery et al. 2015). The CDA procedure starts from collocation analyses for selected subcorpora and/or keyword analyses of suitable (sub-)corpora. Collocates (or keywords) are then grouped into categories that are supposed to reflect discursive positions, i.e. attitudes towards the topic. These interpretations are verified and refined by careful inspection of the corresponding KWIC concordances. Given the wide-spread use of CDA and recent advances in computational linguistic techniques, it is surprising that researchers still have to rely on general-purpose corpus tools such as CQPweb (Hardie 2012). There is no dedicated software solution that combines the necessary steps of CDA into a single consistent and efficient working environment. As a result, the CDA workflow remains unidirectional: the researcher carries out one or more collocation analyses with fixed parameters (such as association measure and span size) and a pre-defined topic node; concordances for salient collocates are viewed in the corpus tool; then the lists of collocates are exported to a text editor or similar program where they can be grouped into discursive positions. Even though the CDA procedure builds on a manual categorization of lexical items, there is no clear pre-determined classification scheme; hence CDA has not been benefitted from the recent development of powerful end-to-end classifiers based on deep learning techniques.

In our contribution, we present an interactive software toolkit called MMDA (for “mixedmethods discourse analysis”), which enables the user to carry out multiple collocation analyses in parallel and which visualizes the results in an intuitive way. The user can try out different parameter settings in real time, which provides a more comprehensive understanding of the semantic space of the discourse. From a Digital
Humanities perspective, our approach can be understood as an attempt to blend “close” and “distant” reading techniques. Our visualization is a two-dimensional semantically structured map of the discourse, based on word embeddings (cf. Mikolov et al. 2018), which we created for the respective linguistic registers. The MMDA toolkit represents a first step towards a more sophisticated CDA methodology, in which the manual categorization procedure is operationalized in terms of so-called discoursemes, groups of related collocates that form building blocks of discursive positions. Furthermore, our toolkit supports the interactive exploration of second-order collocates, i.e. co-occurrences of discoursemes in the context of the selected topic node. We demonstrate the usefulness of our toolkit with two use cases: the Bavarian parliamentary elections (Landtagswahlen) of 2018 and the discourse around the topic austerity. Since both case studies are part of a larger research agenda aimed at understanding political discourse in the transnational algorithmic public sphere (cf. Heinrich et al. 2018), we analyze newspaper texts as well as Twitter corpora. The MMDA approach, combined with the triangulation of discourseme semantics via second-order collocates, allows us e.g. to analyze the interplay of ideologies against the backdrop of topics such as migration or austerity. Last but not least, we also demonstrate how the removal of noise (social bots and duplicate tweets, cf. Schäfer et al. 2017) impacts the collocational profiles.
Public participation in infrastructure planning: What do citizens say? And who listens to them?

Simon Fink
University of Göttingen

Public participation is seen as a conditio sine qua non for the successful planning and implementation of large infrastructure projects, such as train stations or power-lines. The common wisdom is that citizens, organizations, and local movements all should contribute their views to the decision-making process. Political science, however, is often confined to qualitative analyses of the rules governing public participation, and cannot elucidate what actually goes on in these consultation procedures. Our project tries to find out how these public participation exercises actually work, that is, who contributes which arguments to the discussion, and how the contributions are then processed. Our case is the demand planning of power-lines in Germany. We introduce our dataset, consisting of all power-lines planned from 2012 to 2017 in Germany, the ~33,000 textual contributions that the public submitted to these plans, the changes applied to the power-line plans, and the final political decisions on the power-lines. Thus, we can tentatively answer the question: Who said what about which power-line, and what happened to the power-line?
Evaluating Interdisciplinary Learning in Critical Digital Political Science

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The social sciences are, as Gary King (2014) observes, “undergoing a dramatic transformation from studying problems to solving them; from making do with a small number of sparse data sets to analyzing increasing quantities of diverse, highly informative data from isolated scholars toiling away on their own to larger scale, collaborative, interdisciplinary, lab-style research teams”. Accordingly, “interdisciplinarity” is an important buzzword in the discussion of the study and teaching of real world problems nowadays, especially when “big data” is concerned. Interdisciplinarity and the use of computational methods in order to analyze a great amount of data can be compared to a language game that has to be learnt and practiced as soon as possible to be able to critically reflect upon and take advantage of the transformation described by King. This talk describes the experiences from an interdisciplinary course, that brings together scholars and students from different disciplines (political science, corpus linguistics, English studies and social geography so far). The special thing about this course is that all participants are working with the same empirical dataset that consists of approximately 18,000 texts from the British Guardian and Daily Telegraph that deal with austerity. The common empirical footing is especially helpful in order to enhance students’ interdisciplinary understanding with regard to the three learning goals of disciplinary grounding, integrative pluralism and critical thinking. It enables the students a) to use corpus linguistic methods to answer discipline relevant questions (e.g. the role of parties in the austerity discourse for political scientists); b) to undertake philosophical reflections about the integration of knowledge from different disciplines by discussing the importance of meta-theoretical foundations (ontology, epistemology and methodology) for empirical research and c) to critically reflect upon the possibilities and limits of interdisciplinarity and the use of digital methods in political science. These three learning goals are evaluated with the help of a mixture of quantitative surveys as well as focus group interviews and on
the basis of the assessment of the students’ term papers by the teacher. The talk will also discuss the preliminary results of the different forms of the evaluation within two classes (spring term 2018 and fall term 2018/19).
Who polluted the debate in the German federal election campaign 2017?

Analysis and automatic detection of hate speech on social media

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Social media are broadly seen as drivers of polarisation and radicalisation. At first glance, this view is much supported by the daily observation of offensive and discriminatory speech towards individuals or groups, so-called hate speech, in online communication and social media. According to current debates, hate speech has considerable detrimental effects on the quality of political discourse. However, as empirical studies show for political online discourse and campaigning, it is only a minority of users frequently commenting on party political posts. Hate speech in particular seems to originate in the activity of a relatively small number of hyperactive users. This observation would be in line with the assumption that we nowadays see new kinds of strategic information operations exerted by either particularly active users that more or less intentionally draw online discourses into an offensive and conflictual direction (so-called trolls) or by supposedly automated activity (so-called social bots).

In this paper, we apply tools of hate speech detection to different sub-sets of a major Facebook corpus, in order to learn more about the sources of hate speech in political online discourse. Can we trace back hate speech to certain user groups? The complete dataset consists of 2.9 mio. comments users made on the public Facebook pages of major German parties and their leading candidates in the period between 29/1/2017 and 24/9/2017. For hate speech detection, we use a dictionary approach, based on a dictionary composed of elements from the German Twitter embeddings and manually added elements (2852 words in sum). We developed a fine-grained annotation scheme, including intensity and type of offensive speech. The presentation will focus on this current study as work in progress.

In addition, we will present more general methodological reflections and developments in the field of hate speech detection, including machine learning approaches. We recur to a number of smaller projects wherein we have applied
qualitative and quantitative tools to different sets of online communication data reflecting specific communication environments such as right-wing populism and misogyny, in order to detect offensive speech.
Between Skylla and Charybdis:  
Trade-Offs between the Need for Generic Tools and the Need for Hermeneutic Sensitivity in the Digital Humanities

Cathleen Kantner  
University of Stuttgart

Corpus-linguistic analyses currently experience a veritable boom in the Social Sciences. However, quickly counting large amounts of words in bigger and bigger corpora does not yet constitute interesting, useful, or even excellent Social Science. This presentation starts with a short introduction into the specific features of the Social Sciences and their research objects. It will be shown that empirical research in the Social Sciences is always theory-based and highly individualistic. Social Scientists want to learn from text about societal context and reconstruct meaning along the lines of complex theoretical concepts, which are often difficult to operationalize validly.

(1) The (more or less explicitly) theory-driven and individual approach results in Trade-Offs between the need for generic DH tools on the one hand and flexible tools and work flows which allow for extended phases of hermeneutic understanding (often researchers speak of qualitative coding, close reading or manual annotation) on the other hand. It will be shortly illustrated how we navigated between these rocks in our interdisciplinary cooperation so far. (2) Finally, this will be illustrated with reference to our research on multiple collective identities in transnational political communication.

(3) It will be concluded that it is possible to solve these problems, however, hermeneutically sensitive uses of computer-linguistic methods will take much more time, work and creativity than what is commonly expected. The process of reflectively appropriating big-data methods in the Social Sciences has only just begun.
The 2018 IGGSA Shared Task on Offensive Language Identification

Josef Ruppenhofer
University of Mannheim

I will report on a Shared Task on the Identification of Offensive Language that was organized by Michael Wiegand, Melanie Siegel and me under the auspices of the GSCL working group on sentiment analysis in 2018. Within the computational linguistics / NLP community, most research on offensive language (and overlapping / related topics such as hate speech, cyber-bullying, aming etc) has been and continues to be conducted on English. Our task was the _rst one that used German data. We attracted a set of 20 participating teams, which is a record for Shared Tasks on German. Most but not all teams were from German-speaking countries. In this talk, I will _rst present the decisions behind the design and structure of the shared task. One key issue that needed to be addressed was the sampling strategy: a natural sample of the Twitter data we used would have yielded far too few instances for annotation and NLP experiments. Given that the organizers also served as the annotators, more or less in their offenduty hours, another way of sampling had to be found. It needed to be more focused but should still not introduce artefacts that would allow machine learning systems easy hits without learning something about offensive language in a way that generalizes. I will contrast our way of sampling with the strategies used by other related research. The second key challenge was the creation of the annotation guidelines: which categories were to be distinguished and what criteria / guidance was to be given so that labels could be applied that represented the phenomena we were after and which could be reliably annotated. In the end we used 4 _ne-grained labels, namely fAbuse, Insult, Profanity, Otherg. Systems trained on and predicted these labels in the _ne-grained variant of the task. In a binary variant of the task, the _rst three labels of the _ne-grained task were mapped to the label Offensive, while the Other label was retained as such. In the second part, I will discuss our impressions/insights regarding what can and cannot be concluded from the systems’ results that were achieved in the 2018 task. This discussion will address, on the one hand, the NLP systems’ architectures and, on the other hand, the linguistic phenomena that systems could or could not handle. Regarding the _rst aspect, one central take-
away was that, at least at this point and given the available data, the increasingly prevalent neural systems can still be matched or beat by `classic' feature-dependent machine learning systems. Regarding the second point, systems had difficulties with the less frequent classes in the _ne-grained task, as was to be expected. Beyond that, I will discuss di_erences in performance along subtler dimensions, such as explicitness of the o_ensive content. Finally, I will report on our ongoing work towards a second iteration of the Shared Task.
Neural networks at hate speech and offensive language detection with a focus on linguistic features

Johannes Schäfer
University of Hildesheim

The detection of hate speech and offensive language in social media microposts is a complex problem where even humans struggle to find definitions of objective and clear boundaries. This talk focuses on methodological aspects and evaluates different models on German Twitter data which frequently contains political messages. The methods follow an approach aiming for an empirical solution using neural networks as these can learn highly inter-dependent features for complex tasks on given data. Word embeddings are used to model text segments where linguistic information is integrated to improve meaning representations. I present the current state of my work, discussing the performance of different neural network architectures (LSTM and CNN) with extensions using various types of linguistic features (part-of-speech tags, morphological: compounding). Future plans are outlined where the focus will lie on more fine-grained linguistic features such as the morphological analysis of words considering affixes (flexion and derivation) as well as possibilities for integrating metadata features on top of word embeddings directly.
We present a study on the phenomena of polarisation and radicalisation in social media. We tested the echo chamber hypothesis for explaining these prominently discussed features of current political communication. For our empirical investigation, we draw on a sample of 2.9 million posts and comments from public Facebook profiles of German political parties and respective leading candidates. The data was collected during the federal election campaign in 2017 and thus encompasses a phase of heightened political debate. In order to identify potential echo chambers we built on selective exposure theory and therefore focused on practices of information sharing. Specifically, we investigated the sharing of links (URLs) and tried to identify whether users of different party pages were referring to different (more reassuring) sources. Focusing on polarisation we employed different corpus linguistic tools for e.g. cluster and keyword analyses in order to identify differences in respective discourses. While being tentative, our findings suggest that there is no echo chamber in political communication on Facebook in Germany. Instead of distinct sets of different sources, we found that users refer to more or less the same leading media outlets. We found only few sources that could be clearly identified as being partisan. With regard to polarisation, we found that there is a clear distinction regarding the tonality of discourse on the different profiles. Uncivil language featured very prominently on the profile of the new German right-wing populist party (AfD).
Practices of Commenting in Digital Public Spheres

Michael Corsten
University of Hildesheim

One of the most discussed differences between analogous and digital communication is the distinction between face-to-face-communication, one-to-many-communication and many-to-many-communication. If we deal with forms of mass communication the difference between the older and mostly analogous one-to-many-communication (in the press, radio or on TV) and many-to-many-audiences on the digital platforms is highly instructive.

In the line with this conceptual difference we have dealt with a special sort of print media communication in the net: Commentary sections of the online editions of established print media. In Germany such commentary sections are very common, e.g. in print editions of reputable newspapers like “Die Zeit”, “Die Welt”, or “Der Spiegel”. In US-American or British they seem to be rare. Actually, you can find such an online commentary section e.g. for the “Washington Post”.

In a research project granted by the German Research Foundation we analyzed in a interpretative design comments on single articles on topics that were debated by a greater number of readers. On the surface such comments and debates are often characterizes by aggressive and discriminative forms of speech. Our research aim was the question if we can also observed strict forms of many-to-many-debates being established in communicative networks of readers who were first started in commenting an article. Methodically we used analytical tools of ethno-semantics (Goodenough, Hymes, Spradley) and communicative genre analysis (Luckmann, Günthner/Knoblauch). Therefore, our overall question was if such forms of online commenting could be attributed and analyzed as a specific communicative genre of many-to-many-communication in the world wide web, by proving their internal relations (intrinsic codes), external conditions (social context, technical requirements), and modes of situational mediation (patterns of relating communicative contributions).

At least, this will be illustrated by the case analysis of 432 comments to the article “schlecht, schlechter, Geschlecht” by Harald Martenstein (“Die Zeit”).

(The contribution will be partly in German, especially the interpretive par
Augmented Deliberative Democracy (ADD-up):
Enhancing Large-scale Public Arbitrations in Real Time

Valentin Gold
University of Göttingen

The aim of the ADD-up project is to build a computerized support system for face-to-face public deliberations. The system is intended to run in parallel to a debate, taking as input a live stenographic feed and processing it utterance by utterance based on a statistical and linguistic model of deliberative communication. It then provides participants with an augmented view of the ongoing debate via large analytical displays. To this end, the ADD-up project combines recent advances in computational linguistics and visual analytics. In this talk, I focus on the recent progress towards visualizing deliberative public debates. In particular, I open the black-box of conversation dynamics by applying computational text-analyses to extract various dimensions of deliberation automatically. In a second step, I detect sequences of high and low deliberative quality within the course of a debate. Finally, I conclude with presenting the perspectives for delivering effective visual interventions based on those sequences.
Discourses on solidarity in times of crisis
Analysing and explaining the understanding of solidarity
in contexts of migration

Marianne Kneuer and Ulrich Heid
University of Hildesheim

We present SOLDISK, an interdisciplinary three-year project of four research groups that is about to start at the University of Hildesheim. It continues the expertise of political science (M. Kneuer, H. Schammann), sociology (M. Corsten) and computational linguistics (U. Heid) to address discourses on solidarity in Germany in the context of the migration of Romanians and Bulgarians to big cities in 2012 to 2014 and that of the so-called “refugee cities” of 2014 to 2016. Our basic theoretical assumption is that ideas on social and political principles like solidarity or justice or the common good are reflected in communication (Münkler/Fischer 2001; Münkler/Bluhm 2002); since central notions of politics can both be defined and also transformed in communicative processes, we intend to capture the understanding of solidarity in citizens and politicians by means of an analytical reconstruction of their discursive actions and decisions. We will examine discourses on three levels:

- A macro-level, where the discourses of state and political actors are analysed, such as those of the government, the chancellor or members of the parliament;
- A meso-level dealing with social actors such as unions, religious communities and civil society groups;
- A micro-level, where the online as well as the offline communication between citizens and between citizens and politicians is analysed.

We intend to identify the understanding of solidarity in these groups, as well as possible tendencies towards solidarization, desolidarization or towards a pluralization of solidarity concepts; we also expect to find arguments used to motivate such developments, e.g. based on economic arguments, on notions of identity or security.
We collect texts from individual and community actors from the three levels from the period 2012 to 2016. We adopt a mixed-methods approach where a detailed analysis of individual texts and a computational linguistic analysis of larger quantities of texts interact; a first step will be to identify contexts that can be interpreted as indicators of a given understanding of solidarity, of solidarization or desolidarization; alongside, we search for textual correlates of the motivation given by certain actors for changes in their solidarity concepts.

To understand possible shifts over time, all texts will be demonstrated with metadata on authors, actor groups, medium and date of publication, so that the discourses can be correlated with events from the analysed period. Indicators in the above sense may be lexical, but also at the level of discourse construction; thus, a range of computational linguistic techniques will be employed to identify such indicators, for example the extraction of key terms and phrases, sentiment analysis, or the identification of argument patterns.