Election Debate Visualisation

Rhetoric and the Rules of the Game

edv-project.net

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It is often hard to tell whether a politician is answering a question. Citizens have expressed concerns about feeling manipulated and confused when politicians adopt these communication strategies. We are developing technologies that can help debate-viewers to scrutinise leaders' rhetorical moves and spot instances in which they break 'the rules of the game'.

The rules of the game in election debates

After extensive negotiations, the three main UK political parties and the broadcasters agreed on 76 rules for the prime ministerial debates that took place in 2010: http://bit.ly/2010Debates. The following examples show how the rules specified participants' roles and obligations in the debates:

36. Members of the audience will ask their questions. The moderator will ask the leaders to respond. The moderator may read email questions.
37. All questions will be addressed to and answered by all three leaders.
38. The audience members will be restricted to asking the selected questions.
46. Each leader will make an opening statement on the theme of the debate lasting for 1 minute. After the three opening statements the moderator will take the first question on the agreed theme. There will be closing statements of 1 minute 30 seconds from all three leaders at the end of the 90 minutes.
47. Each leader will have 1 minute to answer the question.
48. Each leader will then have 1 minute to respond to the answers.
49. The moderator may then open the discussion to free debate between the leaders for up to 4 minutes on merit.

Role of the moderator
58. To moderate the programme
59. To keep the leaders to the agreed time limits
62. To seek factual clarification where necessary
63. It is not the moderator's role to criticise or comment on the leaders' answers
64. The candidates accept the authority of the moderator to referee the rules on stage and ensure a free flowing, fair debate conducted within the agreed rules.

The EDV project is designing ways in which the actions of the debating party leaders can be measured against these rules, as well as others emerging from social

consensus (e.g. politeness rules regarding interruptions, overlapped speech and tone of voice) or from common practices in political rhetoric (such as mudslinging, unsubstantiated claims and strategies of evasion). A key aim of the project is to expose any violations of these rules so that viewers can evaluate them.

Breaking the rules
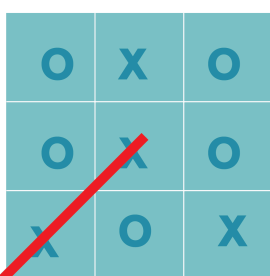
When two or more people engage in a conversation, they agree, often implicitly, to follow a series of rules that we call a 'dialogue game'. Some of these rules might have been laid out explicitly, as in courtroom interactions and election debates, others might have emerged by consensus from a community of language users and take the form of 'common politeness'. These rules preserve the dynamics of the conversation and, when followed, lead to more efficient interactions.

One way of thinking about dialogue games is as imposing 'discourse obligations' on participants. Discourse obligations are conversational actions that speakers are expected to perform at specific points in the conversation. They depend on the roles of the participants and on what has happened earlier in the dialogue. For instance, once a member of the audience posed a question in the 2010 Election Debates, all three leaders were obliged to answer it (Rule 37). Audience members were obliged to only ask previously selected questions (Rule 38). After 1 minute - answering a question, a leader was obliged to stop speaking (Rule 47) and if they didn't the moderator was obliged to interrupt him (Rule 59).

When speakers break the rules – or discourse obligations - they violate the agreement they had with the other participants, hindering communication, often in pursuit of egoistic goals. These instances are referred to as 'non-cooperative features'.

The EDV team is implementing a method that automatically detects non-cooperative features in annotated political debates, generating markers that indicate every time a rule is being broken and the nature of the violation. At the end of the dialogue, these markers are aggregated into normalised scores, revealing the extent to which each speaker has conformed to the rules of the game. These are numbers between 0 and 1 that we call 'degrees of cooperation'.
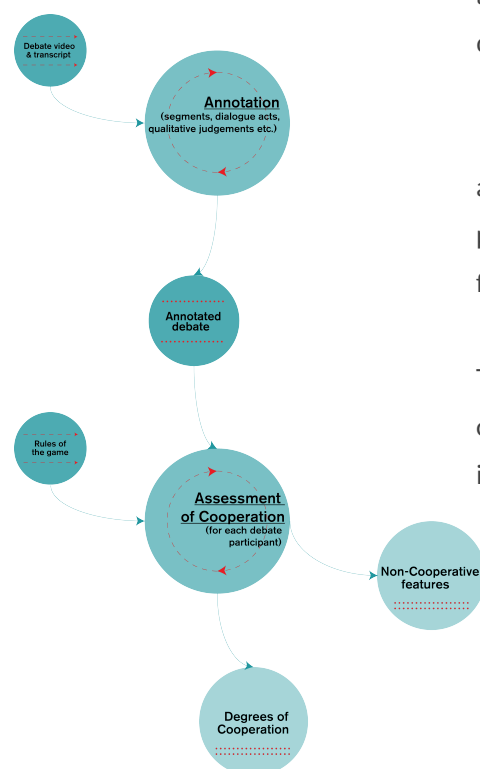
We hypothesise that making these outputs available to debate viewers will help them scrutinize the leaders rhetorical moves and detect instances in which they break the rules, thereby exposing potentially confusing communication strategies.

From speech & video to computer-friendly codes

One way of using computers to analyse the behaviour of human speakers in events like political debates is by annotating their actions. This means that interesting sections of what happens are systematically labelled according to predefined categories. These categories are chosen so that annotated actions can be reliably contrasted with the rules of the game. For example, in a televised election debate we would be interested in knowing whether the leaders are meaningfully responding to the questions asked by the audience, or whether they are delivering unrelated 'soundbites', attacking their opponents or only responding to the easier parts of a question.
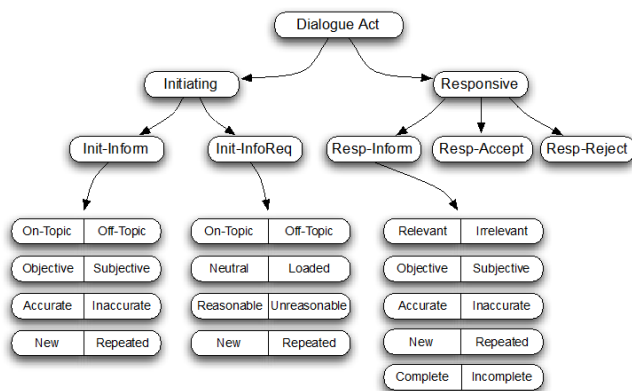
Annotations are made manually with support from special-purpose tools and they happen in two stages. In the first stage, the annotator selects specific segments of the video or transcript based on their linguistic functions – e.g. greetings, questions, answers, general statements, requests, instructions, interruptions, etc. In the second stage, these segments are classified according to a set of qualitative judgements – e.g. relevance, topicality, accuracy, neutrality, etc.
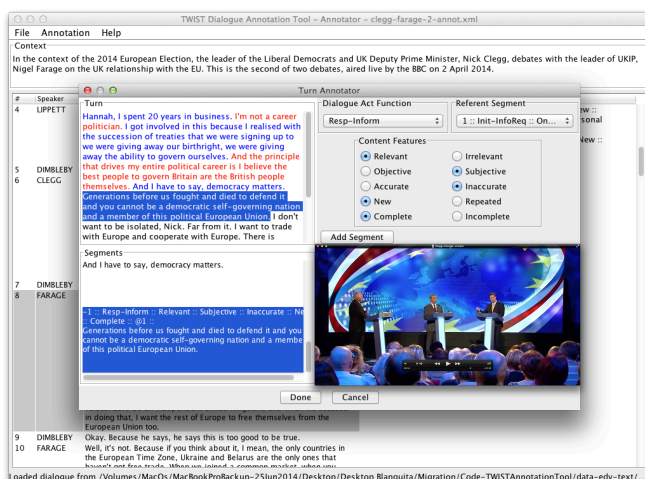
Computer tools are employed to help in the segmentation and annotation of debate transcripts and videos. These annotations, time-linked to the debate, are then exported in formats that can be automatically analysed with respect to the rules of the game. Comparing what the annotations tell us about the actual behaviour of the leaders with the rules that state how they ought to behave can expose communication strategies aimed at manipulating or confusing the audience. A typical example is when politicians say something vaguely related to the theme of a question without actually giving a meaningful answer.

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The EDV team is bringing together insights from political communication and computational linguistics in order to design the tools and coding scheme for effectively annotating and analysing the leaders' performances in election debates.

Visualising non-cooperation

The development of creative and insightful data visualizations that explore the potential of the Democratic Replay website (see EDV Project Briefing 2014.02) and add value to the debate viewing experience is a key challenge for the EDV project. Communication design plays a crucial part in exploring how the method - both in terms of non-cooperative features and of the aggregated scores - might be transformed into an accessible and legible visual experience that remains engaging for the viewer through the elegance of its appearance.

Possibilities are beginning to be explored. Initial visualisations have been produced as conceptualised responses to the data generated by the analysis of non-cooperation. These will be further developed and tested through user research and co-design processes, leading to a process of evaluation through further user engagement. The image on the left revisits a mockup of the replay website first discussed in EDV Project Briefing 2014.02 under new design considerations, in particular the development of a coherent and consistent illustrative and typographic language applied across the range of contents being displayed through the platform. As was the case in the original mockup, viewers see events occurring in real-time as the video of the debate progresses. Designed as a patterned and meaningful flow of events, this illustrates the potential for such visualisations to respond to the debate's content, updating key data as events take place. Enlarged is an example visualisation of Clegg's failure to answer a question. His overall cooperation score decreases to '0.6' after the failed reply, a movement highlighted through the change of score and a dual visual indication of this action (the dashed lines around both the direction of the score change and of the score itself).
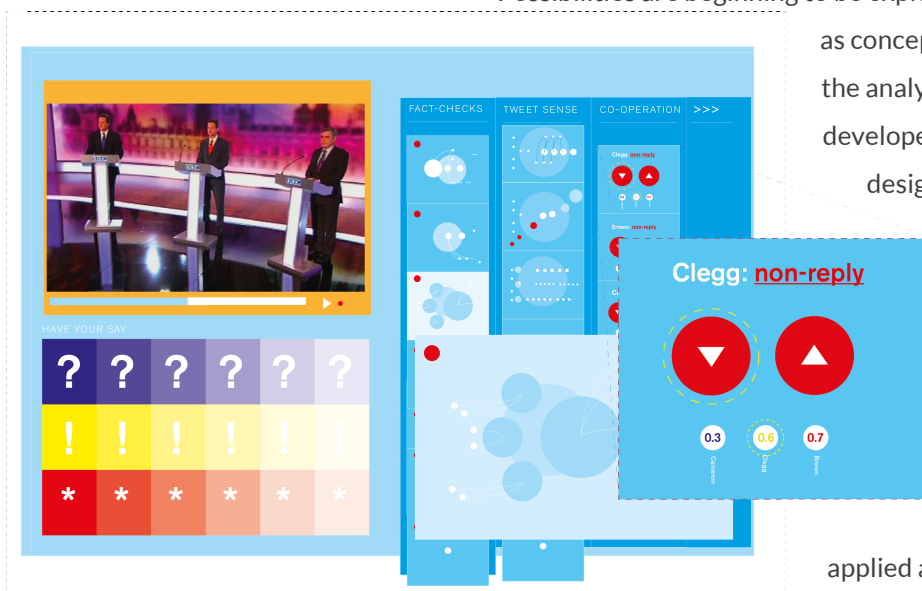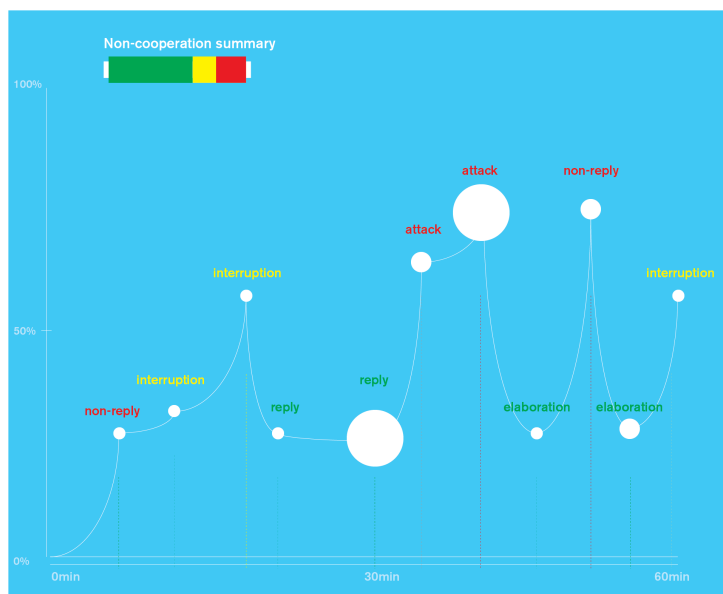
The development of a language of real-time visualisations allows marking moments in the debates where good or bad moves occur. This image shows the instances in which one of the leaders follows or breaks the rules, mapped to points in time relative to the duration of the debate. Arranged as a landscape of interconnected points on the debate's timeline, each move is noted and marked temporally, where diameter denotes micro-duration of the move itself. The colour of the associated labels is used to indicate compliance with the rules (green), or the severity of the violations when the rules are broken (yellow and red). Such visualisations can be used to cross-compare each leader's performance, where all three sets of behaviours would be layered upon each other.
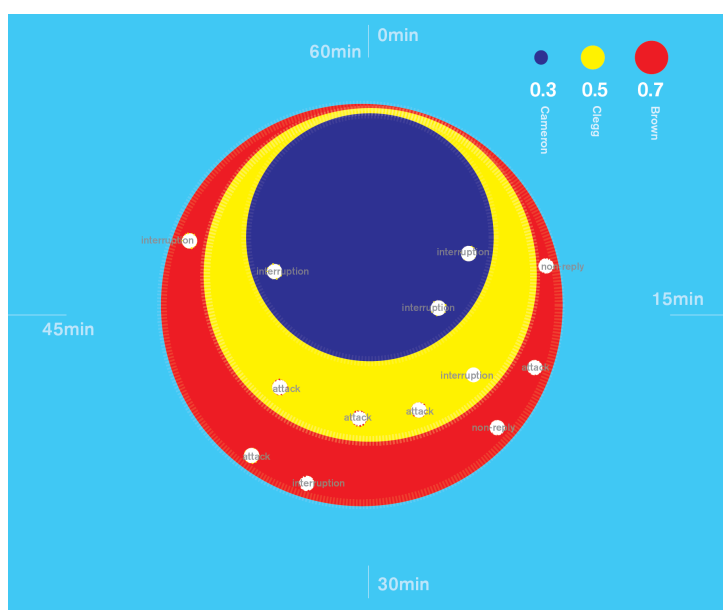
The third image illustrates a summarized aggregate of non-cooperation for all three leaders appearing at key moments and their performance reflected in the number of such events around the timeline of the debate. Here, the potential for visual communication can be employed to enhance the dynamic stories of the data and visually note any violation of the rules of the game. For instance, the selection of an instance would allow the viewer to see that moment in more detail, with the recording of the debate and the annotated text of what was said appearing. Such shifts between macro- and micro-levels of visualisation allow for deeper and richer readings of particular moments within the debate. This is a feature we will implement in other visualisations throughout the project (see EDV Project Briefing 2014.05).

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