Engaging Citizens with Televised Election Debates through Online Interactive Replays

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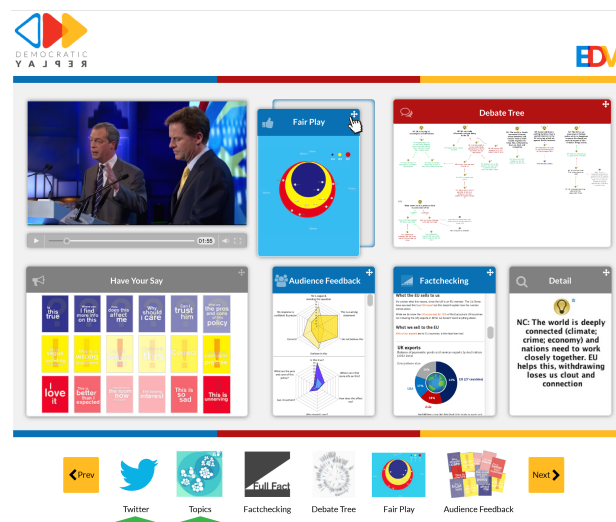Milton Keynes MK7 6AA, UK
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Figure 1: Mockup of Democratic Replay: an online interactive election debate replay. Copyright of debate still owned by the BBC.

Abstract

In this paper we tackle the crisis of political trust and public engagement with politics by investigating new methods and tools to watch and take part in televised political debates. The paper presents relevant research at the intersection of citizenship, technologies and government/democracy, and describes the motivation, requirements and design of Democratic Replay (Figure 1), an online interactive video replay platform that offers a persistent, customisable digital space for: (a) members of the public to express their views as they watch online videos of political events; and (b) enabling for a richer collective understanding of what goes on in these complex media events.

Author Keywords

Online Video; Interactive Visualisations; Televised Election Debates; eDemocracy; Instant Audience Feedback

ACM Classification Keywords

H.5.3 [Information interfaces and presentation (e.g., HCI)]: Group and Organization Interfaces.

General Terms

Online Video, Visualisations, Democracy, Politics, Engagement

Introduction

The Internet and mobile computing devices are changing how viewers experience political media events like televised election debates [1, 18]. Streams of complementary information originating from mainstream media and other viewers are now available. We present research to address four challenges: (a) the lack of organisation between information streams and media events, which can confuse viewers; (b) the low levels of engagement with politics, which creates a divide between citizens and candidates; (c) a need for citizens to communicate their views in meaningful ways knowing that these views are heard; and (d) the inherent complexity of in-depth analyses of these events, which makes interpretation difficult to most viewers.

Televised General Election debates were first introduced in the UK in 2010, were greatly appreciated by the public, and energised first-time voters [3]. With negotiations underway for 2015 Election debates, we envisage a future in which these events are enriched by a range of information channels that, brought together coherently in an online debate replay with advanced analytics and visualisations, would turn viewing into a rich learning experience.

Four Requirements for Online Interactive Election Debate Replays

Our work sits at the crossroads of research in television and the Internet, political communication, collective intelligence, and hypermedia. We identify four high-level requirements for online interactive debate replays related to these areas.

Television and the Internet
Information technologies and social media are turning TV consumption into a participatory experience often involving thousands of viewers [1, 12]. Programme-specific apps can organise and deliver enhancements, both inbound by

channelling streams of information from the Internet to the viewers [13], and outbound by giving viewers access to comment channels and social media [1, 12], or to special-purpose audience feedback tools [10]. Still, these changes present new challenges. Secondary information streams introduce distractions [15] and can prevent viewers from focusing on contents [12, 13]. New media can alienate individuals and social groups who are not 'tech-savvy', e.g. those not involved in social media [6]. This leads us to the first requirement for online interactive replays:

Requirement 1. The technology has to be non-intrusive and accessible to as wide a range of citizens as possible. This calls for a free and open platform in which access to contents is not limited by fees, memberships or proprietary licenses: e.g. an open data, open source web application, independent of device-specific technologies and existing social media platforms. Information channels must be non-trivial, relevant and synchronised with the video [13].

New Media and Live Political Events
The same holds for citizen engagement with political media events [3, 18, 19]. Online media open the possibility of more direct political representation [5], especially among young people [19]. The challenges of making events accessible, engaging and informative also hold [6], coupled with common impediments of democratic participation: e.g. failures in civic education, apathy, and a disconnect between citizens and politicians [21]. Coleman identifies requirements on televised debates for democratic citizenship: 'being informed. . . ; being free to participate. . . ; feeling engaged in the processes that affect their lives. . . ; and experiencing a subjective belief that they have at least some chance of making a difference in the world' [6, p. 10]. We aim to address these, specifically:

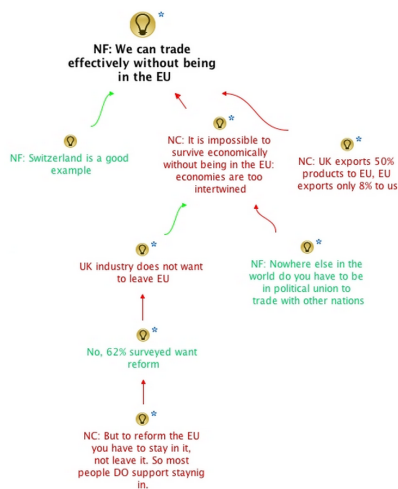*Requirement 2. The technology has to increase citizen*

Figure 2: A partial issue map for a debate between Nick Clegg and Nigel Farage on EU-UK relations (BBC, 2 April 2014), showing the issues under discussion (black), connected with claims supporting (green) or challenging (red) the issue or one another.
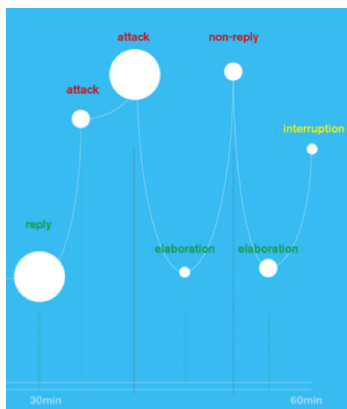

Figure 3: Visualising rule compliance in political debates.

engagement in political debates. It must address the reasons for disengagement: e.g. lack of trust in politicians' communication strategies [3], difficulties in understanding and evaluating political arguments [17], feelings that policies do not relate to citizens' lives [3, 6, 7]. This calls for a 'slowing down' of the debates, letting viewers play them at their own pace, with synchronised visualisations of in-depth analyses and non-trivial knowledge curation.

Citizen Participation and Collective Intelligence
In the 2010 debates, broadcasters polled undecided voters with 'the worm': a line going up and down when viewers respectively liked or disliked what candidates said. The method has been criticised due to small viewer samples [16] and because it can affect independent judgement if shown during broadcasts [9]. Twitter sentiment analysis has been used to map the changing mood of tweets during political media events [1, 18]. But uncovering the reasons why Twitter users feel positive or negative is difficult and researchers have challenged the soundness of inferences drawn form social media data [22]. De Liddo et al. [10] propose a method to engage the audience in televised election debates by eliciting aware, rich and meaningful feedback through a set of statements on coloured flashcards. The method builds on *contested collective intelligence* [11], capturing people's interpretations to support deep reflection and understanding. Still, it does not scale: reactions are captured with paper flashcards that must be physically delivered to viewers and require onerous manual annotation. Thus, we aim to address the following:

Requirement 3. The technology has to provide effective means for viewers to participate in the debate experience. This involves digital participatory channels for citizens to express their views as they watch the event, ensuring that the views are attended to [7]. We developed visualisations

of audience feedback analytics that are shown back to viewers or used later as assessments of the candidates' performances and of the debate as a media event [10].

Hypervideo for Enhanced Televised Debates
By analogy with hypertext, hypervideo refers to video that can be navigated non-linearly via timed links. Technologies for deploying hypervideo on the Web include Popcorn.js[1] and the HTML5 video tag[2]. They allow for video replay manipulations and functional links with hypermedia annotations. Tools for dynamic, interactive visualisation of hypervideo annotations include Advene [2] and Compendium [24], although they are desktop applications with no support for delivery of visualisations on the Web. Further, the potential of web hypervideo tools, such as WebCHM [23] and Popcorn.js, to deliver interactive hypervideo visualisations is yet to be explored. These shortcomings lead us to the final:

Requirement 4. Complementary information has to be presented in ways that are consistent, non-intrusive and accessible. This involves developing techniques for turning annotations into meaningful visualisations, coupling hypervideo technologies like Popcorn.js, with dynamic data visualisation libraries like D3.js[3].

Democratic Replay
In order to meet these requirements, Democratic Replay uses in-depth analyses which are made freely and openly available online as synchronised, dynamic and interactive visualisations. We currently focus four analyses: 1. argumentation visualisation, 2. debate rule compliance, 3. instant audience feedback, and 4. factchecking.

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[1]http://popcornjs.org/
[2]http://www.w3schools.com/html/html5_video.asp
[3]http://d3js.org/

Figure 4: Deck of flashcards for eliciting instant audience feedback to televised election debates.
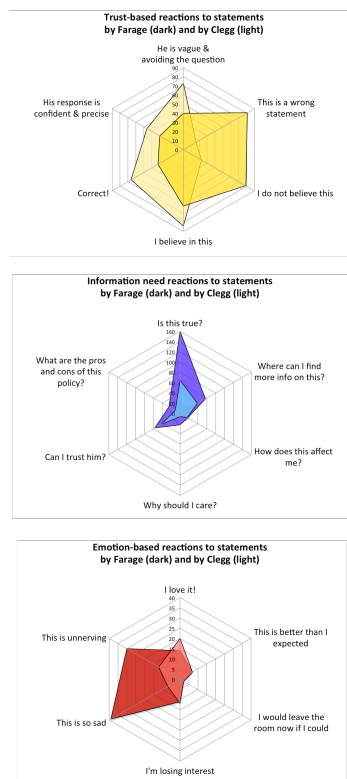

Figure 5: Spider diagrams visualising audience responses to a debate between Nick Clegg and Nigel Farage on EU-UK relations (BBC, 2 April 2014).

Computer Supported Argumentation Visualisation (CSAV)
Political issues are often inherently complex, resulting in arguments that are beyond the grasp of many citizens. This causes citizens to feel excluded from the event and leads to disengagement. CSAV helps to make sense of complex arguments using information technologies [4]. Argument maps make crucial elements of arguments visually explicit: e.g. 'showing' how the candidates are addressing key issues, the claims they make, whether they offer evidence for these claims, and how their arguments relate to each other. We use Issue and Dialogue Mapping as techniques [8] and Compendium [24] as a tool to build and visualise arguments (see Figure 2 for a partial debate issue map). Dialogue Mapping captures verbal exchanges in real-time and was used to map the 2010 UK Election debates[4].

Debate Rule Compliance Assessment
Candidates in election debates agree on a series of implicit and explicit rules: e.g. they are expected to answer questions, stay on topic, respect turns and avoid personal attacks[5]. When they break the rules, e.g. avoiding questions or attacking each other, they violate this agreement, hindering communication in pursuit of egoistic goals. Following Plüss [20], we automatically analyse manually-annotated debate transcripts, yielding markers when rules are broken. These markers are visualised on a timeline (see Figure 3) and aggregated into scores that show the extent to which a debater complied with the rules. Candidates' actions can thus be measured against the rules agreed by broadcasters and the parties, or against the citizens' democratic expectations. We hypothesise that exposing violations will help viewers to scrutinise politicians' rhetoric and detect manipulative communication strategies.

Instant Audience Feedback
Democratic Replay incorporates visualisations of the feedback method proposed by De Liddo et al. [10], which consists of 18 statement cards (see Figure 4) in three dimensions: information need (blue), trust (yellow) and emotion (red). During the live broadcast of the 2015 UK Election debates, 400 citizens will use Democratic Reflection: a web application which allows them to select reaction statements as they watch the debate. Choices, linked to user identifiers and timestamps, will be recorded as hypervideo annotations and visualised, giving a rich understanding of the audience's reactions to the debaters' performances (see the spider diagrams on Figure 5 for an example and [10] for details).

Factchecking
This is the verification of claims against objective evidence [14]. In political debates, factcheckers contrast debaters' claims with publicly available evidence, determining whether they are factually true, false, etc. The UK independent factchecker Full Fact[6] checked in real-time the truthfulness claims in the 2014 Clegg-Farage EU debates[7]. We are currently liaising with them to incorporate their analyses as hypermedia visualisations in Democratic Replay.

Platform Overview and Front End Prototype
Figure 6 shows the ecosystem behind Democratic Replay. *Data Sources* are imported into a *Hypermedia Repository*. *Analytics and Visualisations* of the data are added to the repository as hypermedia annotations, packed with the video on the *Curator Dashboard* and published in *Democratic Replay*. These can also be exported as *Open Data*[8] for reuse and dissemination. Figure 7 shows the front
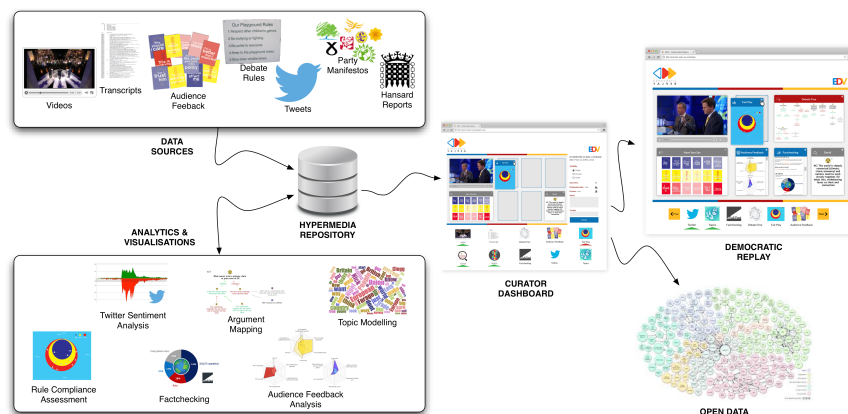
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[4]See a partial video-linked map at http://youtu.be/WPF64UXFER0 and dialogue maps for the first two 2010 debates at http://bit.ly/1DV9ukC.
[5]See the 2010 debate rules at http://bit.ly/2010debaterules.

[6]https://fullfact.org
[7]http://bit.ly/198jfjP
[8]http://opendefinition.org/od/

Figure 6: Overview of the election debate replay platform.

Figure 7: Democratic Replay front-end prototype. Copyright of debate still owned by the BBC.

end prototype, built as a grid of widgets using gridster.js[9] and YouTube's JavaScript Player API[10]. We are building the back end to serve contents to D3.js visualisations.

Conclusions and Future Work

We presented Democratic Replay: an interactive video replay aimed to help citizens engage with televised election debates. We identified high-level requirements from gaps in research in on television and the Internet, political communication, collective intelligence and hypermedia; and described the platform's architectural drawing and four in-depth analyses and interactive visualisations.

We will test Democratic Replay on data from the 2015 UK General Election debates. This includes a robust evaluation around the requirements above to answer questions like: 1. How accessible is the technology for users from different backgrounds and with levels of digital literacy? Where does the platform stand in terms of organisation, usability and functionality? Was it helpful or intrusive? 2. What is the impact on users' engagement with the debate, the election, the politicians and politics in general? 3. How useful is the

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[9] http://gridster.net/
[10] //developers.google.com/youtube/js_api_reference.

instant feedback tool? Are citizens satisfied with the available options? Were there obvious missing statements? Did it change their experience of the debate? Did it empower them? 4. How intuitive, informational, meaningful, and timely were the visualisation? Did they have a positive or negative impact on the viewing experience? Future efforts also include the development of more visualisations (e.g. topical analysis, integration with Twitter sentiment analysis; see Figure 6), and making hypervideo annotations and visualisations available as reusable open data.

Acknowledgements

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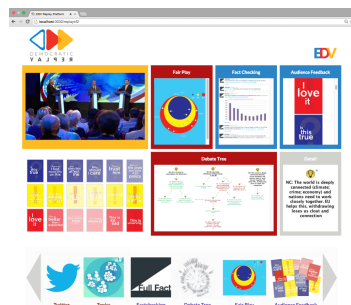
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