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Measures of Topic Centrality for Online Political Engagement

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Abstract

The advent of social media has enabled political parties to engage with the broader populous in new and unforeseen ways – and the ability to bypass the traditional mediating forces of mass media allows for an unfiltered promotion of policy, ideology and party stances. Social networks, formed via social media like Twitter, are inherently relational and thus lend themselves well to being represented as graphs. The uses of graphs can help measure how political elites promote different categories of messages, and how the electorate engage along various axes. This article proposes two novel measures of topic centrality, which measure how central messages of various topics were to a party leader's core voting group, or to the broader discourse. Statistically significant variations in topic centrality are shown in the 2019 Canadian Federal Election.

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1 Introduction

The way information is distributed and received has changed significantly over the past decade. As Cogburn and Espinoza-Vasquez argue, Barrack Obama's 2008 presidential campaign was a watershed moment in social media campaigning – and in the subsequent

decade, from Macron to Brexit to the Five Star Movement, social media has played an increasing role in how politics is conducted (3). The same holds true for Canada, between 2013 and 2018 the share of Canadian federal media expenditure spent on digital advertising rose from 27% to 65%, a 140% increase, making the study of new media critical from a social science perspective (1).

1.1 Social Media and Political Communication

While it is clear that technology is changing how information is received, and thus also changing how politics is conducted, it may not be clear the role of Canadian politics in this context. However, Canada's political system is a fertile environment to test the importance of political messaging, because relative to most liberal democracies, the system is dominated by party politicians. As Carty put it:

> *No obvious simple geographic reality, no common linguistic or religious homogeneity, no common revolutionary experience or unique historical moment animated [Canada] or gave it life. Canada was created when a coalition of party politicians deemed it to be in their interest to do so, and it has been continuously grown, reshaped and defended by its politicians.(2)*

Thus, it is not surprising that Canada's electoral system encourages electoral pragmatism – and developed large, "big tent" parties that are among the most organizationally weak and decentralized of established democracies (2). This system defines political parties as brokers of the often conflicting, weakly integrated electorate — as opposed to mobilizers of distinct communities, articulating claims rooted in their pre-existing interests. In this way, parties act as the principal instruments of national accommodation, rather than democratic division (2).

1.2 Eigenvector Centrality

2 Methods

2.1 Data

2.2 Topic Modeling

2.3 Topic Centrality

2.3.1 Total Network Topic Centrality

2.3.2 Party Leader Topic Centrality

3 Results

3.1 Topic Saliency

3.2 Total Network Topic Centrality

3.3 Party Leader Topic Centrality

4 Discussion

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