Activist model of political party growth

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H I G H L I G H T S

- Political party growth modelled with differential equations.
- Political party growth explained by role of activists as "infectious" agents.
- Activists have dual role on party growth and party quality.
- UK political parties not heading for extinction, despite previous decline.
- Epidemiological explanation of recurrent growth and decline of political parties.

A R T I C L E   I N F O

A B S T R A C T

The membership of British political parties has a direct influence on their political effectiveness. This paper applies the mathematics of epidemiology to the analysis of the growth and decline of such memberships. The party members are divided into activists and inactive members, where all activists influence the quality of party recruitment, but only a subset of activists recruit and thus govern numerical growth. The activists recruit for only a limited period, which acts as a restriction on further party growth. This Limited Activist model is applied to post-war and recent memberships of the Labour, Scottish National and Conservative parties. The model reproduces data trends, and relates realistically to historical narratives. It is concluded that the political parties analysed are not in danger of extinction but experience repeated periods of growth and decline in membership, albeit at lower numbers than in the past.

1. Introduction

Political parties play a vital role in the governance of countries. They provide the personnel out of which national and local leaders emerge, a legitimate political identity for those in government, and an arena in which policy can be formed. Even when not in power, parties can provide checks and balances by providing an opposition, both in democratic forums and outside. As such there is keen interest in their growth and decline.

Many theories of political party growth consider the relationship between its membership size and its growth. One of the earliest such theories was Michels' "Iron Law of Oligarchy" which states that any form of organisation will eventually develop an oligarchy as it grows to the point where real democracy becomes difficult [1]. The reasons given for this oligarchy are that a large complex organisation requires a specialist bureaucracy in order to make efficient day to day decisions, thus inevitably removing the rank and file members from the centre of power. Michels applied this theory, originally published in 1915, to the growing socialist parties of Europe, showing that they evolved into oligarchies as did earlier conservative

parties, despite all their ideals. This has clear implications for the growth of a party as the membership suffers diminishing ability to become involved in decision making, rendering membership less attractive.

Tan [2] hypothesised that there would be a direct effect of increasing party size on member participation and growth due to free riding, that is becoming inactive, as proposed by Olson [3], as well as there being an indirect effect due to increasing complexity, as put forward by Michels [1]. Using data on 23 political parties [4], Tan argued that although party size can directly reduce participation, the indirect effect through increasing complexity can positively influence the participation of members, thus contradicting that aspect of Michel's law. Although the debate as to the effect of party size on participation is still not resolved (e.g. [5–7]) it is clear that there is a potential limit to the size of a political party related to its ability to keep members active. This suggests the importance of activists in the growth of the party.

The importance of activists in the interests of a political party has been emphasised by Seyd and Whiteley [5], noting their role in fund raising, political legitimacy, and as a source of voters, campaigners and potential candidates for parties. However they argue that party decline is due to choice rather than the structural reasons of Tan [2] and Michels [1]. They further claim that a party chooses to restrict the supply of activists as they can also be a hindrance to the party leadership's freedom of action. The reduction in the benefits for party membership, and the restriction of activists, is thus deemed to be one of the causes of the decline. In this case party growth comes from the often brief periods during which a party requires activists for electoral purposes.

Further support for belief in the importance of the role of activists in party growth is provided by Weldon [6] and Norris [8] who both showed that small parties have a higher degree of activism compared with larger parties due to the lack of funds to support a professional organisational structure. It is thus suggested that larger parties find it harder to grow, as the reduced incentives that can be offered are insufficient to keep activists in the party or to maintain their level of activism.

However a decline in party size does not necessarily increase activism as the party can remain organisationally complex if it lacks the funds to support the change back to a state in which activism could again flourish [9]. By contrast some parties can develop complex structures to make organisation and activity more efficient and effective [2]. These phenomena suggest that activism is a natural feature of the smaller and growing party, but not of the larger and diminishing. However, larger parties are capable of sustaining activism, at least during those periods where activism is not contrary to the oligarchy's aims. In either case, activism is the cause of growth.

It is inevitable in the light of the above that much of the attention on change in party size concentrates on decline [7,9–11], with less attention being given to the mechanisms behind their growth. Discussions on growth generally focus on the reasons *why* parties wish to grow and the incentives provided for such increases in membership [5,6]. There has been less discussion on *how* parties grow but it is clear that activists, those most involved in the life of the party, are key to its growth [8,11].

The question needs to be asked as to how activists recruit new members to the party. Jeffreys [12] points to very specific recruitment campaigns that dramatically increased the membership of the main UK political parties in the immediate post-war period. These campaigns were largely carried out using door-to-door recruitment by the most active members of the parties. Also a deliberate recruitment strategy by the Labour party from 1994 resulted in it temporarily becoming the fastest growing party in Europe [11, p. 24]. These periods of growth could be explained in terms of a word-of-mouth phenomenon driven by party activists.

This paper proposes a word-of-mouth model of political party growth using ideas similar to mathematical epidemiology. The model divides the party into activists and inactive members. Activists are further divided into those who recruit (the "infectious") and those who do not recruit. However non-recruiting activists do contribute to the party by discouraging new members from free riding. Thresholds of growth are computed and the results of the model are compared with historical party data from the UK.

2. Previous models of social diffusion

Word-of-mouth models for social diffusion and organisational growth are not new. Burbeck et al. [13] used an SIR model to investigate the spread of rioting, applying the model to three riots from the 1960s. Similar models with more variables have been applied to riots, public outrage and terrorist groups [14–16].

Other models dealing with the spread of behaviour include language acquisition [17,18], alcohol consumption [19,20], cigarette smoking [21] and psychological/social diseases such as bulimia and obesity [22,23]. Most of these models employ multiple sub-populations with one or more acting as infectious agents and at least one non-infectious. In contrast, the influential Abram–Strogatz model [17] assumes there is no non-infectious category, a specific feature of language acquisition, making it less applicable to the other behaviours modelled.

Additionally epidemiological ideas have been applied to the spread of rumours [24,25], ideologies [26,27] and online networks [28–30]. Bettencourt et al. [31] modelled the spread in the use of Feynman diagrams throughout the scientific community. Their model allowed for some new recruits to the Feynman methodology to be non-infectious, an exposed class, thus allowing for a weaker growth in recruiters compared with all users of the methodology.

None of the above models involve organisational membership as seen in political parties. However models close to these ideas have been used for the spread of religious affiliation. Hayward [32,33] applied SIR type models to church and denominational membership where the infectious church members responsible for recruitment, called "enthusiasts", were a subset of new recruits. The models were applied to a range of religious denominations which could be categorised as