THE POLITICAL ECONOMICS OF ATTENTION

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1 Introduction

From a political economy perspective, a well-informed citizenry is key to holding elected politicians accountable. With information about the actions and decisions of those in power, citizens can either sanction them for wrongdoing or reward them for good political work. Moreover, a well-informed electorate can contribute to better political representation by selecting "good" politicians who competently and honestly consider the constituents' preferences.

In today's flood of information, however, facts that are actually known and important for the political process, are at risk of getting lost in the general information noise. Hence, it is a matter of attention whether certain facts become relevant for voters' evaluations of particular policies or politicians and thus become relevant for politicians' behavior.

Attention refers to a set of mechanisms individuals use to select and process (relevant) information. As attention spans are limited, not all available information is considered when people make decisions. Or in economic terms, the selection process involves costs, and selection is made among various competing items of information that are potentially relevant to the individual (for general overviews in economics, see Caplin, 2016, Festré and Garrouste, 2015 or Hefti and Heinke, 2015). Consequently, people are only partially informed, not because of a lack of information but because the information is not processed. Accordingly, not all available information becomes behaviorally relevant. In general, there is always a gulf between the potentially accessible information and the information based on which an individual makes decisions.

Essentially, the selective processing of information may be more or less under the control of the individual. In models of goal-directed attention, individuals control and optimally allocate their limited resources for information processing. This is the perspective in the literature on rational inattention (for a review, see Maćkowiak et al., 2022). In models of stimulus-driven attention, this control is limited. That reasoning in the tradition of Herbert Simon's bounded rationality is modeled in research at the intersection between economics and psychology on behavioral inattention (for a review, see Gabaix, 2019).

In this perspective, people develop strategies to deal with the information flow and adopt a boundedly rational allocation of their processing capacity. They follow heuristics that may or may no longer be productive (or functional) to pursue private goals. The salience of information largely induces stimulus-driven attention. Under this condition, actors with diverging interests may try to exploit individuals' limitations with particular attention strategies.

What now determines which (political) information receives attention from citizens in the political process and which does not? Unlike when private decisions are involved, few people actively search for political information, for example, to learn about their local representative. Rather, people take up political information as a by-product of consuming political news or processing it for important private (investment) decisions. Consequently, coverage of political information in the news media generally becomes an important indicator of whether something will attract the attention of citizens. This view underlies the idea of the media as the fourth power. However, to what extent can we expect the news media to fulfill their control function in today's digital world? With modern information technology, traditional news media are far from being the only relevant information sources, creating entirely new dynamics. Among the new digital sources, social media is becoming increasingly important (for Europe, see European Commission, 2022 and for the U.S. Pew Research Center, 2021). This partially disintermediated provision of information is virtually unlimited and nominally close to free.

Given this abundance of political information from a myriad of platforms, it is obvious that the selection of competing information that attracts people's attention takes an important role. Catchy and sensational headlines designed by attention merchants might crowd out valuable political information – with far-reaching consequences. On the one hand, it provides governments and the public administration with more leeway to make unpopular decisions that go against the interests of constituents. On the other hand, it gives other interests, such as well-funded lobby groups, the opportunity to influence politics in their favor.

It is, therefore, straight-forward to ask about the incentives media providers face when it comes to editorial decisions regarding political coverage. What structural factors drive news coverage of the political process? What happens to political coverage in the short term when other newsworthy material is available? How does increased competition from the new digital media affect political reporting in traditional media? And importantly, is there evidence of an attention-driven response in the behavior of politicians? This article aims to review and discuss various aspects of this

- what we might call - political economics of attention.¹ The main focus is on summarizing and discussing related empirical research and placing it in a general context, which in turn can serve as a starting point for further research and scholarly debate.²

2 Attention and the electoral process

In his economic theory of democracy, Downs (1957) emphasizes the incentives of voters to process political information. He predicted that voters would remain rationally ignorant. From the perspective of each individual, the likelihood of casting the decisive vote is very small. Accordingly, the scarce capacities for selecting and processing information are primarily devoted to decision-making in the private realm, not to political information.

However, political information is also taken up as a by-product of consuming political news or when processing it for important private (investment) decisions. Moreover, instrumental and expressive motives may spur information processing when someone holds extreme political preferences and the stakes are perceived as high. Matějka and Tabellini (2021) integrate this aspect of selective attention into a probabilistic voting model. In response, candidates cater to the more attentive voters when defining their policy platform. Consequently, proponents of divisive issues gain influence relative to more moderate voters.

Particularly in the run-up to elections, political candidates take up a whole range of different strategies to get voters' attention and themselves known (see, e.g., Gerstlé and Nai, 2019). They consider that voters can only partly control their attention and react to stimuli that either affect their support of a particular candidate/issue or their propensity to participate. For example, DellaVigna and Kaplan (2007) examine the entry of the conservative Fox News Channel into the U.S. cable TV market and document a positive effect on voters' likelihood to vote for the Republican presidential candidate (see also, e.g., Galasso et al., 2022, or DellaVigna and Gentzkow, 2010 for a review of the literature on persuasion).

In theories on political business cycles, the incumbent government manipulates the economy before elections. Thus, the aspect of attention is integrated by the assumption of myopic voters who are particularly concerned with the state of the economy in the months leading up to elections (see Frey and Benz, 2003 for a review). Moreover, attention is devoted not only to to more recent (economic) developments, for which the incumbent government is held responsible but also to more newsworthy ones. In a recent study for U.S. state-level politics, Garz and Martin (2021) show that when the state level rate of unemployment increases *and* crosses a round-number, unemployment features disproportionally more in the news than when no milestone is crossed. Keeping the actual economic conditions statistically constant, a bad milestone thereby systematically reduces the electoral support of the incumbent U.S. governors.

¹This literature does, in part, refer to different terms for what we here call 'media attention' or 'attention'. Among these, 'visibility' or 'salience' are the terms most often used.

²Many related issues are not covered, this refers in particular to political actors' strategies related to the spread of misinformation and conspiracy theories, the tapping into identities, or the surveillance and micro targeting of voters (for a popular account, see Zuboff, 2019, and for an overview, see Hendricks and Vestergaard, 2019).

3 Attention and politicians' behavior

Politicians react to attention and try to affect attention when pursuing their interests in the political process more broadly. They are not (and cannot be) bound to a political program and thus have substantial discretion while in office. Information about the behavior of politicians and the decisions they make while in office is of immense importance in distinguishing those in power who behave in accordance with the interests of the electorate from those who do not. Attention to this information is key to the functioning of the accountability mechanism in a democracy (see Besley and Burgess, 2002 for theoretical considerations regarding media coverage of politics and accountability). Politicians are expected to react to attention with compliance with procedural rules and by putting effort into the fulfillment of official tasks. However, they are also expected to affect attention when their private interests conflict with the ones of their constituency. They will try to avoid publicity or obfuscate a potentially interested audience.

Conflicts between constituent interests and a politician's private interests can arise from links to special interest groups that provide the politician with campaign funds (or other benefits), from party interests that oppose those of the electorate, or from politician's ideological and private *economic* interests (due to his or her financial and human capital). The three factors are the main driving forces used in political agency models to study politician behavior. Kau et al. (1982) emphasize the conflict between the preferences of constituents and special interest donors. In this theoretical framework, there are two ways for the politician to increase his or her re-election chances: he or she can either support policies in favor of voters' preferences and thereby gain direct electoral support. However, he or she can also cater to special interests that contribute to the electoral campaign and thus try to secure electoral support indirectly. The trade-off is not easy to strike when special interest donors, as well as the voters, follow representatives' political decisions. Yet, it becomes a rather 'easy case' when voters are not watching (but agents of special interest groups keep tracking representatives' behavior). As a general hypothesis for the behavior of politicians, rent-seeking activities are thus predicted to be more pronounced if (i) politicians face little (media) attention to what they are doing or (ii) manage to move exchanges with special interest groups to fora with less attention (see, e.g., Culpepper, 2010 on 'quiet politics').

For example, in a case study, Matter and Stutzer (2019) show that politicians' positions on two bills debated by the U.S. Congress on how to deal with copyright issues on the Internet can be well predicted by the interests of their campaign donors as long as the two bills were secondary policy issues below the radar of public attention. However, once an unexpected orchestrated online protest by various actors made the bills highly salient primary policy issues, many politicians changed their stance on the subject.

4 The specific role of news media

In the political realm, the news media are the most important channel for determining which information from the universe of available information will achieve a minimum level of salience by being included in news coverage. Press coverage is thus a key external stimulus affecting which information is processed by citizens (Strömberg et al., 2015).

Various studies show that more or less media attention devoted to politics – both in terms of media exposure in general as well as of short-term fluctuations in political coverage – affects politicians' behavior.

4.1 Reaction to general shifts in political coverage

Besley and Burgess (2002) empirically examine the fundamental relationship between political coverage and government behavior in the context of disaster relief in India. They show that in states with higher newspaper circulation, governments are more responsive to shocks in food production and offer financial support and food aid. Similarly, Strömberg (2004) documents that U.S. counties with better radio coverage received more aid money under the federal government's New Deal program in the 1930s. For the U.S. as well, Snyder and Strömberg (2010) examine whether local press coverage in a constituency influences politicians' behavior. Variation in politicians' exposure to local press coverage is identified by electoral districts that are more or less congruent with local newspaper markets. They find that U.S. representatives who receive more coverage are more likely to take roll call votes against the party position, are more likely to witness before congressional hearings, and direct more federal funds to their districts. In complementary work, Balles et al. (2022c) examine whether local TV coverage is related to politicians' responsiveness to the preferences of their politically active constituents. U.S. representatives exposed to smaller TV markets (covering fewer districts) are found to receive more coverage in local stations' news shows. However, TV coverage only increases alignment with constituency preferences if representatives are exposed to some minimal level of electoral competition. The evidence found thus suggests that TV coverage and political competition complement each other (and are no substitutes) when it comes to improving the representation of voter interests.

Regarding the driving mechanisms behind these results, Snyder and Strömberg (2010) and Balles et al. (2022c) provide evidence that voters exposed to more coverage of their local representatives are also more knowledgeable about them. Ferraz and Finan (2008) examine whether better-informed voters are also more likely to punish their politicians for wrongdoing. In the context of Brazilian mayors, they find evidence that voters in cities with better radio coverage are more likely to vote against corruption-ridden incumbents than in cities not well covered by radio stations. Taken together, the findings of this literature strongly suggest that actively reporting media increase the ability of citizens to hold their elected politicians accountable.

Independently of the general conditions in the media market with outlets devoting more or less coverage to politics, there are fluctuations in people's attention to various aspects of their environment that create incentives for self-interested actors.

4.2 Exploitation of anticipated attention shifts

Some attention-grabbing events, for example in sports, happen with notice. The corresponding distraction of many media consumers can be exploited by forward-looking rational agents in the pursuit of their goals, i.e., politicians and government officials are expected to respond to likely shifts in attention in the future. They get an incentive to include this in the timing of those decisions that they would like to go unnoticed (as the decisions would likely generate

negative publicity otherwise). For instance, Durante and Zhuravskaya (2018) show that Israeli armed forces plan attacks on Palestinians depending on major sporting or political events occurring in the U.S. Their findings are, therefore, consistent with the view that Israeli military leaders want to avoid unfavorable coverage in the U.S. news. Similarly, Djourelova and Durante (2021) document that controversial executive orders signed by the U.S. president (which are likely to face opposition in Congress) are more likely to be signed in advance of predictable events that may crowd out news on executive orders.

If unfavorable coverage is already in the pipeline, one attractive way for politicians to avoid it is by intentionally provoking some form of agitation with a focus on other unrelated issues. This is especially tempting in the age of social media since "news" can be produced and disseminated relatively cheaply by anyone. Related to then-President Trump's heavy use of Twitter, the work of Lewandowsky et al. (2020) documents that increased media coverage of the Mueller investigation (on potential Russian interference in the 2016 presidential elections in coordination with Trump) in critical media outlets is immediately followed by an increased frequency of Twitter posts by Trump on unrelated topics, after which a decline in critical coverage is observed.

An extreme example of seeking attention, not to distract from unfavorable coverage but precisely with the intent of obtaining coverage, is in the context of international terrorist attacks. Analyzing coverage of international terror in the New York Times, Jetter (2017) finds that more coverage of a particular event significantly increases the likelihood of further attacks.

4.3 Ex-post response to attention shocks

In the case of unpredicted shock events that draw attention away from politics, there is scope for political actors to make different decisions than usual. As their behavior will likely receive less attention in the news media, they are also less likely to be punished due to unfavorable coverage. In their study of the U.S. government's disaster relief payments to countries affected by natural disasters, Eisensee and Strömberg (2007) examine whether the granting of funds depends on whether the disaster is covered in the national TV evening news. For identification, the authors exploit the fact that other newsworthy material sometimes happens to be available at the time of natural disasters, which is why some disasters go unreported purely by chance. Based on their new and innovative strategy, they find evidence that the provision of aid money is positively related to the coverage of the disaster on TV.

The study by Balles et al. (2022b) demonstrates that at times of high news pressure generated by exogenous shocks such as natural disasters or school shootings, politicians of the U.S. Congress are less likely to represent the preferences of their active constituents when these are in conflict with the preferences of special interest groups contributing to the politicians' campaigns. Their finding is thus consistent with the view that, during phases of low media attention to politics, politicians behave opportunistically, and well-organized and financially strong interest groups have an advantage in having their (contra-constituency) preferences taken into account in the political process. Garz and Sörensen (2017) use a corresponding measure of news pressure in the German context to show that politicians involved in a scandal are more likely to resign after their immunity is lifted, the more media attention their case receives.

5 Institutional determinants of attention stimuli to politics

While the availability of political information is not sufficient for representatives' responsible behavior, it is an important precondition. In many countries, restrictions on the freedom of the press are still an important reason that prevents relevant facts about government and administrative actions from receiving the necessary attention (see, e.g., Leeson, 2008). In these places, TV and other media are often captured by the state, inhibiting them from functioning as a fourth power and a further democratic check. In other places, citizens and journalists still have no access to official documents that would increase transparency about government behavior without compromising its proper functioning (see Cordis and Warren, 2014 on freedom of information acts). Currently, various movements engage towards greater transparency of government. These are typically organizations around civic tech, open government, and e-government (see, e.g., Gilman, 2017; Yoshida and Thammetar, 2021).

One example of how transparency about government action can be achieved is through regular audits, the results of which are made available to the public. In the context of local politics in Brazil and Mexico, the studies by Ferraz and Finan (2008) and Larreguy et al. (2020) document the effectiveness of municipal audits in increasing government accountability. They show that audits before elections are associated with a lower percentage of votes received by local politicians involved in misconduct. However, this is only the case when local media are present. These results are thus consistent with the premise that citizens use facts from local media about the performance of their local government to hold them accountable. Moreover, these results also highlight that transparency is not much use without appropriate media providers to disseminate political information.

Besides the simple lack of political news providers (see, for example, Abernathy, 2018 on the decline of local newspapers in the US), media providers may have little economic incentives to cover politics. This aspect is particularly critical for the coverage of local politics. The studies by Schaffner and Sellers (2003), Snyder and Strömberg (2010), and Balles et al. (2022c) show that local newspapers and television stations report more about a particular member of the U.S. Congress, the more congruent their media market area is with the member's district. This is due to the fact that in large media markets, it is relatively unattractive to report on local politics related to a particular constituency since such news is relevant to only a fraction of the readership or audience.

Declining advertising revenues in the traditional media industry, largely due to the increasing popularity of digital media, are forcing them more and more to focus on attention-grabbing (soft) news rather than reporting on political content (see Gentzkow and Shapiro, 2008 for a discussion of soft vs. hard (political) news from a welfare perspective). This seems to be especially the case when there is soft news that can easily be made to fit with emotional content and sensational headlines. Examining the U.S. media landscape, Djourelova et al. (2021) show that the introduction of the online platform Craigslist has led local newspapers to lay off news editors and, disproportionately, those responsible for political news stories. This has resulted in a corresponding reduction in political coverage. Consistent with this observation, publicly funded media (which are less dependent on advertising revenues) have been found to provide more political information content than private providers (see, e.g., the study by Esser et al., 2012).

6 Concluding remarks and outlook

Access to information about politics is a central precondition for the working of the democratic process. Yet, the key ingredient to a functioning political accountability mechanism is *attention* to specific political information. In this short review, we summarize the economics of attention in the context of politics, highlighting the economic problems involved when people do not have full control over how they allocate their attention. This, in turn, allowed us to sketch a broader set of strategies political actors can use to pursue their interests and point out institutional determinants of attention stimuli. We back this reasoning with an overview of recent empirical evidence.

Taken together, our review points to some key aspects for further thinking about the political economy of attention. First, as the availability of political information is a necessary but not sufficient precondition for a well-informed citizenry, it is crucial to think about how the institutional setting of media markets affects both information provision and attention to the provided information. Specifically, we need to better understand how problematic or beneficial competition for limited voter and consumer attention is.

Second, the competition for attention will further change with the development of social media as a technology and its use in different domains of life. This is particularly due to the low cost of entry that actors face when they want to supply information (via technology like Twitter). Moreover, social media allow for a fast movement of information in networks. Thereby, machine learning algorithms might be applied to guide the spread and prioritization of certain items of information so that it is not random what items get attention in the end. The latter point has become a typical challenge with targeted online political advertising and algorithmic personalization of information delivery via major web platforms such as search engines (see, e.g., Zhuravskaya et al., 2020 for a review on the political effects of digital media).

Third, there is the related widespread concern that social media platforms and search engines can create 'echo chambers' or 'filter bubbles' in which voters' attention is drawn away from conflicting information and toward information that conforms to pre-existing beliefs and prejudices (Pariser, 2011). We thus need to better understand how consumer and voter attention is 'steered' towards particular contents. Thereby the focus should be on how individuals react to search and news feed moderation (Epstein and Robertson, 2015, Allcott et al., 2020, Levy, 2021), as well as how personal characteristics and behaviors affect the personalized provision of information (Matter et al., 2022).

Fourth, important questions for future research relate to how the public administration plays the attention game. Does public administration communication compete with other information for attention, or is communication limited in order to be heard when something important needs to be disseminated? To what extent is bad news about public administration performance drowned in a flood of announcements?

Fifth, what are the options for citizens and voters to react to the attention strategies of, for example, politicians or the media? So far in the scientific literature, they are attributed a comparatively passive role. How aware are citizens of biases due to the competition for attention? And, how do their reactions affect media reporting in equilibrium?

Sixth, difficult positivist and normative questions finally concern the role of state media and news media under public law in an attention economy. Is agenda choice the means to coordinate attention in a polity so that attention is not diverted to side issues? But who decides what side issues are? And what is an appropriate level of attention? The attention devoted to single issues helps to address them. However, there might also be too much focus on the subject matter and an overreaction in the political process (as sometimes observed after a scandal). The challenge for institutional design is thus to organize state media so that they inform in a way that counteracts the hyper-salience of single issues. Instead, it should contribute to a well-functioning democracy that continuously works on challenges and societal problems to improve people's lot.

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