## Dunaway, Johanna & Searles, Kathleen (2023). *News and Democratic Citizens in the Mobile Era*. Oxford University Press, 192 pp., ISBN: 978-01-90-92-249-8

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News and Democratic Citizens in the Mobile Era is a work situated in the field of studies that results from the intersection between communication, sociology, political science and psychology. The aim of the book is to examine the consequences of the proliferation of mobile devices (DMs) on citizens' ability for political learning through news consumption. Johanna Dunaway (Syracuse Univ. & Institute for Democracy, Journalism & Citizenship) has published a great deal of work in the field of political communication; specifically on the impact of the media on democracy. Kathleen Searles (Louisiana State Univ.) has carried out a research in the field of political psychology and more specifically on the effects of media exposure on political activity.

In organic terms, the book consists of nine chapters, of which the first two are theoretical discussions and the following six are guided by empirical production and demonstration. In the ninth chapter, the authors discuss the data and present assertions for future research.

The first chapter begins by defining two fundamental premises: the idea that the dissemination of DMs enables greater access to information on the Internet; the second advocates the idea that DMs are not a social leveller. The hypothetical question asks to what extent access to DMs might not strengthen social capital.

The authors intend to contribute to the study of how technology structures access to information. To this end, they define three theoretical challenges to the study of media effects: 1) confusion between accesses to information vs. exposure to information; 2) confusion between exposures to information vs. attention to information; 3) excessive concentration on persuasion and attitudes vs. less on learning.

The theoretical problem articulates pre- and postexposure: "a new environment, characterised by the proliferation of platforms and DMs for the dissemination of political information, calls for a more nuanced view of how communication technologies condition the structure of information (the mechanics of information delivery and presentation) and affect media attention and political learning" (p. 15).

The first chapter argues that the impact of technologies must be based on the distinction between physical and cognitive access to information, which can expand or restrict physical and cognitive access to information. A

strong psychological dimension emerges from the theoretical discussion, which is rare in a work on communication sciences.

Physical access to information involves considering "(...) the technological infrastructure, the structure of market offers and the means by which information can be consumed - it defines the structure of individuals' opportunities with regard to the information they will find (...)" (p. 15). In other words, we could say that we are seeing an increase in choice and a reduction in the economic costs of access to information.

The second chapter begins with the affirmation that different technologies mould the presentation and delivery of information, affecting the individual's ability to process it. Greater physical access to information does not imply more informed citizens. Physical access to information is defined in the following terms: "when individuals or groups have physical access to information, it means that they are given the opportunity for exposure" (p. 21). Moreover, there is a fundamental conceptual distinction: "the main idea here is the significant difference between having the opportunity to be exposed to information (which has to do with physical access to information) and the motivation and ability to attend to and process that information (which has to do with cognitive access)" (p. 21).

They define message structure as: "(...) characteristics related to the provision and presentation of information (...)", namely the size of screens, the editing of videos and other aspects that have an impact on information consumption. This leads to the conceptual distinction between information structure and information content. The effects of exposure occur through changes in the visualisation structure.

Two assumptions of the model: information technologies mould media effects because they impose physical and cognitive limits on information; effects operate preand post-exposure. The author's postulate: "(...) that communication technologies mould media effects because they dictate the limits of physical and cognitive access to information" (p. 72). The second postulate is based on the idea that effects act in the pre- and post-exposure phases.

A distinction should be made between physical and cognitive access to information. Cognitive access is un-

derstood as: "(...) communication technologies affect cognitive access when they affect individuals' ability to attend to and process information after exposure" (p. 21). Components of cognitive access: attention; arousal; motivation; effort

The distinction between physical and cognitive access in mobile communication has a triple relevance: DMs expand physical access to information but diminish cognitive access; it provides a perspective on other technological changes in communication; conceptual and theoretical parity with the historical path on media effects and information processing. These distinctive axes do not call into question the chronic inequality in the distribution of resources that condition access to information.

The aim of the third chapter is to see whether news consumption on DMs replaces or complements information consumption from other technologies, namely the computer. In this way, the different technologies "(...) alter the cost of searching for information and the balance between breadth and depth of exposure" (p. 45). Communication technologies condition the search for information. Most online news consumers have minimal involvement with news content. This increases the information gap between those who access exclusively on DM and those who do so on broadband, exacerbating social, economic, and geographical inequalities that already exist upstream.

The authors conclude that "(...) although many more people access news sites via smartphones, these visits tend to be significantly shorter than visits via computers" (p. 100).

In the fourth chapter, the authors distinguish between assisted and processed information. Information processing is dictated by automatic and controlled responses to media exposure that are measured through: physiological measures; survey; hair reaction; eye tracking. Operationalisation involves eye tracking, measuring the duration of attention and cognitive effort through pupil dilation. Measuring exposure time to news is based on estimating the average number of minutes per user. To this extent, information consumption in DMs is costly from the point of view of mobilising cognitive resources, shaping the effects of technologies. The consequence of this transformation is the commodification of the content of time and energy. However, the direct beneficiaries of this commodification process, such as the large digital platforms, are not identified.

The aim of the fifth chapter is to analyse how DMs shape attention during news consumption. In other words, to evaluate the ways in which DMs structure attention and learning and how this effect affects citizenship. Thus, consuming news in MDs is costly in terms of attention resources and is a scarce resource. The authors put forward the following hypothesis: "(...) DM users are likely to spend less time reading news content than computer users. Simply put (...) DMs reduce attention to information" (p. 68). Two indicators were defined for operationalisation: number of pages viewed; time spent on pages. The results of experiment 5 suggest that attention to news content and hyperlinks is significantly differrent between computer users and DMs. Eye-tracking for

news attention allows two aspects to be observed: the results suggest that smartphone and tablet users spend less time-consuming news and look at hyperlinks less.

Increased and wider access to information is not synonymous with deeper attention to information. People who consume news on DM pay less attention to them and therefore lower levels of learning compared to computer users.

In the sixth chapter, after considering the potential limitations of eye tracking, the authors postulate the following hypothesis: MD screens limit attention and arousal. They found that small screens tend to reduce arousal throughout the experience, particularly when negative content is considered.

The authors begin the seventh chapter by noting that it is through the media that citizens acquire political knowledge. In this vein, the chapter focuses on the effect of DMs on political learning. As a result, the data suggests that consuming information on DMs is more cognitively demanding than on computers. In other words, DM users report greater cognitive effort by spending less time reading, resulting in less learning compared to computer users. What's more, the empirical evidence produced suggests that information consumption on DMs requires more cognitive resources, i.e. the rate of memorisation is higher among computer users compared to DM users.

In short, it can be concluded that DM users make a greater cognitive effort and that this implies lower levels of political learning on the one hand and lower levels of memorisation on the other. Consuming information requires cognitive resources such as attention, and this consumption in DMs is more costly for citizens. DMs have a negative impact on the recall of information content. The authors argue that information consumption is expensive, and DMs pose challenges to political learning. This demonstration is relevant when considering the potential effects of disinformation.

The aim of the eighth chapter is to demonstrate that computer users spend more time-consuming news than DM users. The authors are adamant that "computer visitors, for example, spend more than twice as much time on news sites as smartphone visitors. The medium through which most audiences are reached seems to limit attention and engagement the most" (p. 96-97). The data obtained, both in the laboratory and through the Comscore, from the use of millions of citizens, suggests that online political news consumers spend less time carrying out these tasks when in DM, compared to computers.

In the ninth chapter, some considerations are made considering the results obtained. In one sentence, the authors conclude: "(...) that engagement and attention to the news are reduced in DMs due to the many cognitive and information-seeking costs that their characteristics impose" (p.104). On a political level, DMs play a dual role: increasing access, but not guaranteeing political learning.

The work under analysis is doubly indispensable in view of its disruptive component, but also as a relevant update to the debate around the social and political impact of DMs in contemporary societies. We categorise it as disruptive in that it uses data analysis methods from

psychology, such as measuring skin conductance when paying attention to the news, which are still a minority in the field of communication sciences, as well as sociology. We also categorise the work as a powerful contribution to updating the debate around new and emerging forms of digital inequality, with widespread implications in the socio-economic and political spheres, conditioning access to political participation. To summarise, we would say:

1º In the strictly political dimension, it is emphasised that the effects of the media are not restricted to persuasion, but also to learning and political attitudes, impacting on the formation of public opinion.

2º The greater cognitive effort and consequent lower attention span of citizens when consuming news in DM is highly relevant in a digital media ecosystem characterised by disinformation. Ultimately, this could be a phenomenon of amplification of the supposed effects of exposure to disinformation. We must therefore consider the basic social and economic conditions that condition citizens' political attitudes, rather than a view that centres solely on exposure to disinformation.

3° The expansion of information consumption in DM implies the devaluation of information and of those who produce it, namely through its precariousness.