

# **The appearance and duration of media effects on citizens' emotional states during the German federal elections 2021**

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One key idea of the social sciences is investigating the (causal) effect of one variable on another. Implicitly, scholars often assume these effects to appear immediately. However, this might be a simplistic idea – effects can be dynamic and follow a particular development over time. For example, in communication science it was shown that media effects usually appear in immediate, delayed, or cumulative patterns over time. Once established, they vanish quickly, decrease over time, or show a continuous impact.

While literature in statistical modeling presented many approaches that accurately link two variables over time and dynamically assess effects from one variable on another, approaches discussing how to identify specific patterns in the appearance and duration of such effects are rare. Recently, however, a methodological approach was presented that allows to identify patterns in the development of effects over time building on well-established statistical models (i.e. the random intercept cross-lagged panel model) and traditions of time-series analysis. The idea is to successively add lagged predictors to the model until an effect appears and then to continue the process until the effect disappears allowing to identify effect patterns.

The aim of this paper is to apply this framework in order to identify dynamic media effects of negative political information on citizens' emotional states. In particular, we use data from a mobile experience sampling study conducted during the four weeks before the German federal elections in 2021 and a corresponding media content analysis (N=247). Based on this data, we identify and compare several effects patterns and show how the RI-CLPM can be extended to investigate the relationship between negative political information and emotions. Further, we discuss the relevance of the approach for other fields in social science