CREDIBLE SCIENCE, INFLUENTIAL SCIENCE? A COMPUTATIONAL STUDY ON THE INFLUENCE AND CREDIBILITY OF PUBLIC SCIENTIFIC RESEARCH AGENCIES IN PUBLIC HEALTH IN CANADA

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This article aims to examine the influence of public scientific research agencies (PSRAs) on public policy formulation in Canada and Quebec, using as case studies the Public Health Agency of Canada (PHAC), the Institut national de santé publique du Québec (INSPQ), and the World Health Organization (WHO). In a context where public issues such as climate change and epidemics are particularly complex, these agencies play a key role in producing scientific evidence that can inform political decisions and public discourse. This study proposes to measure this influence by analyzing three types of relationships: (1) the indirect influence of PSRAs through public debate via the media; (2) their direct influence in parliamentary debates; and (3) their tangible influence, manifesting in the adoption of legislative texts. The main hypothesis is that the influence of PSRAs on public policy is linked to the credibility they enjoy, which depends on three main factors: the affective and political context (including uncertainty and polarization), the type of evidence produced (its level of robustness and disciplinary origins), and the domain of expertise related to the issue addressed. If PSRAs enjoy high credibility with the media and political decision-makers, they are more likely to influence policy development. To test this hypothesis, the study employs a mixed-methods approach, combining natural language processing and machine learning to analyze two textual databases: one comprising all media articles published in Canada on these organizations, and the other containing transcripts of federal and provincial legislative processes in Quebec. This study seeks to develop a unified theory of the factors influencing experts in democratic contexts while integrating the essential role of the media as intermediaries between science and politics. It thereby contributes to understanding the science-policy interface and improving decision-making by providing a reproducible analytical framework for evaluating the influence of PSRAs on public policy.

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