Marketing faced with the organizational challenge of AI explainability

Louis Vuarin[*,**] **and Steyer Véronique**[**]

[*]SES I3-CNRS, Telecom Paris

[**]CRG I3-CNRS, Ecole Polytechnique

Abstract

- *Objectives*

The explainability of artificial intelligence is a growing technical and organizational challenge for marketing, which raises ethical, legal and performance issues. To tackle this challenge, an interdisciplinary field – XAI, for eXplainable AI – is currently developing in order to create and diffuse tools with the purpose of understanding AI, but the literature warns about the difficulties of deploying them in practice.

- *Methodology*

This article draws on two case studies: two companies (one European and one American) which are leaders in the development of optimization solutions for online advertising.

- *Results*

Our results show that while the need to strengthen an organization's abilities to explain AI is well recognized in a long term view, two problems may limit the development of these abilities in the short term: (1) the crystallization of indicators and frames of reference for calculation (notably AI learning and evaluation datasets) associated with performance monitoring and (2) the confusion between measuring the predictive performance of AI models and that of the performance of the marketing system as a whole.

- *Managerial implications*

We discuss these impediments, particularly given the speed at which XAI could become standardized in marketing. These results warn of a possible disconnection between marketers' practice and certain strategic dimensions of the profession. We put forward several suggestions for solving this, notably the recognition and identification of new XAI expertise in marketing and the creation of dedicated indicators for XAI.

- *Originality*

This study proactively investigates one of the central issues of AI for marketing, which may impede its development. It opens up new perspectives on the managerial dimension of XAI and suggests considering the emergence of new expertise within marketing which would put marketers back in the center of the decision-making process.

- *Keywords:* eXplainable Artificial Intelligence (XAI); Artificial Intelligence in Marketing; Online Advertising; Consumer-generated text processing.

To contact the authors: louis.vuarin@telecom-paris.fr ; veronique.steyer@polytechnique.edu