

DO NEW WORDS PROPAGATE LIKE MEMES? AN INTERNET USAGE-BASED TWO-STAGE MODEL OF THE LIFE CYCLE OF NEOLOGISMS

Menghan Jiang¹ Kathleen Ahrens²

Xiangying Shen³ Sophia Yat Mei Lee² Chu-Ren Huang²

¹Shenzhen MSU-BIT University, Shenzhen


²The Hong Kong Polytechnic University, Hong Kong

³Southern University of Science and Technology, Shenzhen

ABSTRACT

Neologisms reflect new ideas or new concepts in our life and play an important role in cultural transmission and the vitality of human language. The explosion of neologisms, especially in the past two decades, can also be ascribed to the popularity and accessibility of digital content and social media. In this paper, we focus on the issue of how neologisms arise by looking at the trajectory of developments in terms of their usage over time, i.e., their life cycle. By studying neologisms *in vivo*, instead of as *fait accompli*, we hope to better understand the nature of neologisms and to enable better prediction and earlier inclusion of neologisms. To achieve this goal, we examine the memetic model for the life cycle of neologisms and compare it with a recently studied epidemic model. We present a longitudinal modeling of the development of neologisms based on internet

Acknowledgments We are grateful to the journal editors and the anonymous reviewers for their detailed reviews and valuable suggestions, which helped to improve the manuscript. This work is supported by 广东省普通高校青年创新人才类项目“基于互联网用户数据的流行语发展周期量化研究” (2022WQNCX073).

Chu-Ren Huang (黄居仁; corresponding author) [churen.huang@polyu.edu.hk]; The Hong Kong Polytechnic University, Hung Hom, Hong Kong, China.  <https://orcid.org/0000-0002-8526-5520>

流行语是模因吗？基于互联网用户数据的流行语 发展周期量化模型

蒋梦晗¹ 安可思² 沈翔瀛³

李逸薇² 黄居仁²

¹深圳北理莫斯科大学

²香港理工大学

³南方科技大学

摘要

流行语反映了我们生活中新思想或新观念的引入，并在文化传播和人类语言的发展中发挥着重要作用。特别是在过去的二十年里，互联网的发展和社交媒体的普及为流行语的爆炸式增长提供了土壤。在本文中，我们通过考察关注流行语如何随时间变化（即流行语的生命周期）而考察流行语是如何产生以及发展的。通过将流行语比拟为生命体的发展，而不是理解为语言中的既成事实，我们希望能够更好地了解流行语实质的传播模式，从而能够更好地预测流行语的发展。为了实现这一目标，我们基于模因模型研究了流行语的生命周期，并将其与最近研究的流行病模型进行了比较。我们选取了 2008–2016 年间 90 个最具影响力的汉语流行语，并根据谷歌趋势展现的互联网实际使用情况数据，为新词的发展趋势做了纵向建模。我们的研究验证了模因模型可以在其周期的早期（即上升阶段）可靠地描述和预测新词的生命周期，但无法预测其发展的拐点以及整个生命周期。我们因此得出结论，模拟词汇的传播需要两个模型：初始阶段的模因模型和后期阶段（尤其是拐点处）的流行病模型。运用这种两阶段/两模型的方法，有助于在发展初期识别流行语为潜在的新词汇。这是因为模因模型在数学形式上更简单，有利于编写适用于流行语发展初期阶段的过滤程序。

关键词

语言模型 模因模型 病毒模型 流行语