

Chapter 7

The Fear of Ebola: A Tale of Two Cities in China

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Abstract Emerging social issues have often led to rumors breeding and propagation in social media in China. Public health-related rumors will harm social stability, and such noise negatively affects the quality of disease outbreak detection and prediction. In this chapter, we use the diffusion of Ebola rumors in social media networks as a case study. The topic of rumors is identified based on latent Dirichlet allocation method, and the diffusion process is explored using the space-time methods. By comparing Ebola rumors in the two cities, the chapter explores the relationship between the spread of rumors, user factors, and contents. The results show that: (1) rumors have a self-verification process; (2) rumors have strong aggregation characteristics, and similar rumors in different regions at the same period of time will lead to a synergistic effect; (3) non-authenticated users are more inclined to believe the rumors, while the official users play a major role in stopping rumors as they pay more attention to the fact; (4) the spread and elimination of rumors largely depend on the users who have more followers and friends; and (5) the topics of rumors are closely related to the local event.

Keywords Ebola • Rumor • LDA • Social media • China

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