



U.S.E. Research Institute
Working Paper Series 20-05

Flattening the Curve is Flattening the Complexity of Covid-19

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November 2020

Abstract

Since the publication of the article 'Flattening the curve' in *The Economist*, in February 2020, political leaders worldwide used this expression to legitimize the introduction of social distancing measures in fighting Covid-19. Actually, this expression represents a complex combination of three components: the shape of the epidemic curve, social distancing measures and the reproduction number R_0 . Each component has its own history, each with a different history of control. Presenting the control of the epidemic as flattening the curve is in fact flattening this underlying natural-social complexity.

The curve that needs to be flattened is presented as a bell-shaped curve, implicitly suggesting that the pathogen's spread is subject only to natural laws. The R value, however, is, fundamentally, a metric of how a pathogen behaves within a social context, its numerical value is affected by sociopolitical influences. The jagged and erratic empirical curve of Covid-19 illustrates this, since the virus has most likely infected only a small portion of the total susceptible population, yet its shape has changed drastically. This changing shape is largely due to sociopolitical factors that include shifting formal laws and policies, shifting individual behaviors and a variety of shifting social norms and practices. This not only makes the course of Covid-19 curve erratic but also unpredictable.