

Multi Theoretical Framework for Mob Modeling

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Abstract

Various aspects of mobs, both positive and negative, have been explored across social sciences. Recently, the emergence of mobs, especially through social media, has gained attention. We believe social science theories can enhance our understanding of how mobs are planned and executed, especially using event-based social media. We apply five theories, traditionally used for in-person events, to mob creation and success via event-based social media (EBSM). While some computer science research has systematized EBSM, few have incorporated theoretical frameworks, apart from game theory (Collins and Etemadidavan, 2022). Our study employs a range of social science theories, mainly from criminology and sociology, to better predict the outcomes of mob events through EBSM platforms.

Theory Selection

The theories were chosen broadly to represent various aspects of mob creation and enactment, including the appeal of the event itself (diffusion of innovation theory), the individual factors of potential joiners (Lifestyle-Routine Activity Theory and Low-Self Control Theory) and the various logistics of both mob creation and enactment (Environmental Design Theory).

Environmental Design Theory

While CPTED has been almost entirely tested in real-world settings, the theoretical perspective focuses on event logistics rather than the social aspects of mobs.

Factor/Concept	Operationalization
<i>Surveillance</i>	The surveillance guardian capable (police, act against mobbers)
<i>Proximity</i>	The amount of access control the individual has
<i>Ownership</i>	ownership of the mob location or territorial enforcement
<i>LA Support</i>	the mob is advertised in multiple places
<i>Maintenance and Management</i>	the number of mob moderators or the existence of such individuals.

Lifestyle-Routine Activities Theory

We focus on "motivated participants" instead of offenders and incorporate attractiveness and proximity as factors contributing to the event's "suitable target."

Factor/Concept	Operationalization
<i>Exposure</i>	How long mobbers exposed to mob objectives?
<i>Motivation</i>	Motivation relative to interest.
<i>Surveillance</i>	Is there a guardian capable to act against mobbers?
<i>Attractiveness</i>	The importance or attractiveness of a mob to mobbers.
<i>Proximity</i>	The amount of access control the individual has

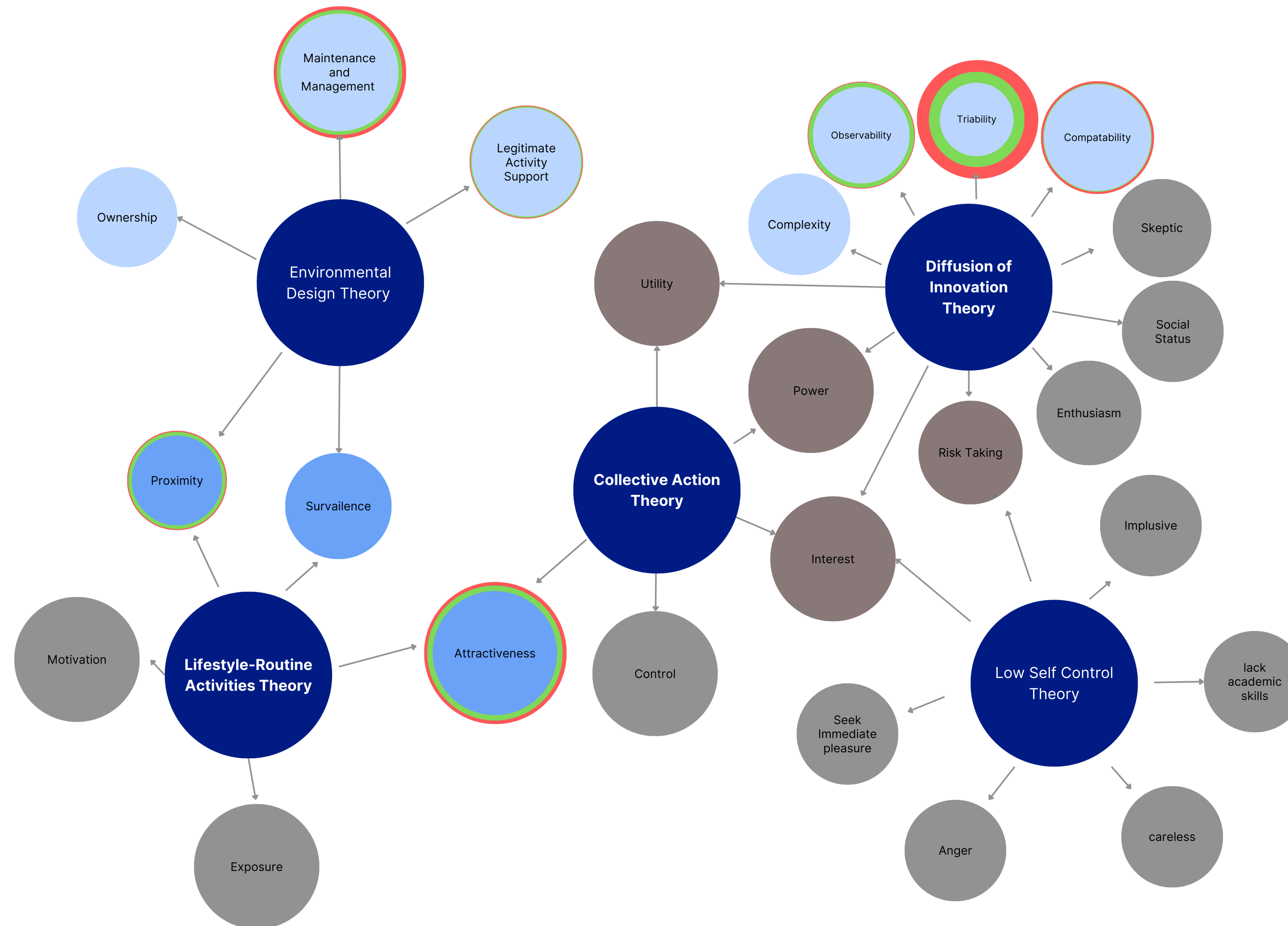


Figure 1: Theoretical Framework Map

Initial Results

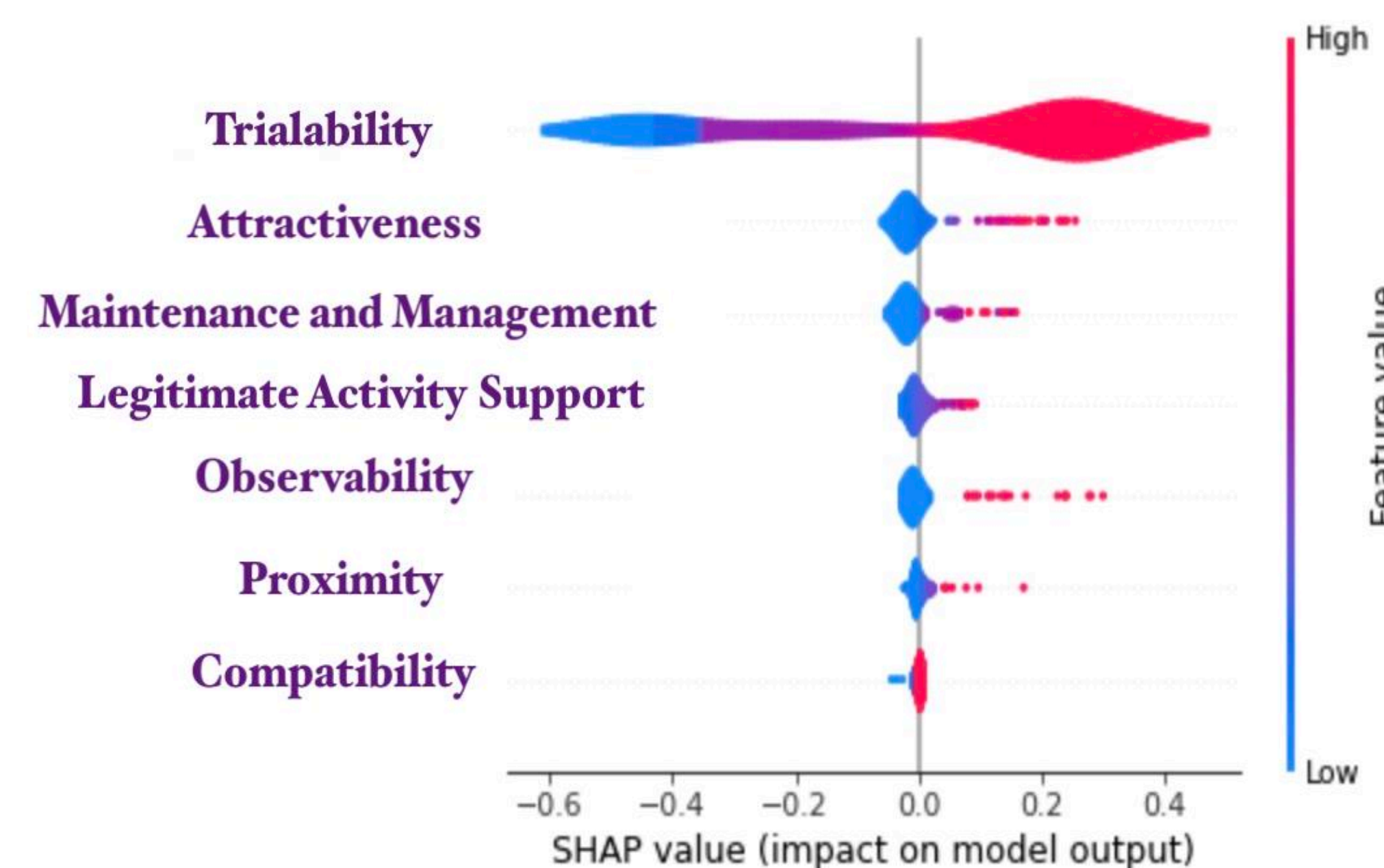


Figure 2: SHAP Value of Event Factors

Contact information and References

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* References are provided on a separate sheet

Collective Action

J.S. Coleman provided 25 mathematical definitions to explain how collective action forms. We modified some of the concepts to explain the mob phenomenon.

Factor/Concept	Operationalization
<i>Utility</i>	the relative advantage a mobber gains by participating
<i>Interest</i>	An individual is self-centered or has a perceived need for innovation
<i>Control</i>	control of an individual on the mob outcome
<i>Power</i>	the individual power in the mob derived from the individual interest and control (leadership status)
<i>Importance</i>	the importance or attractiveness of a mob to individuals

Low Self Control Theory

We operationalize the elements of self-control by measuring the deficit. Without self-reported measures, we used indirect measures.

Factor/Concept	Operationalization
<i>Academic Skills</i>	the individual is not educated
<i>Careless</i>	the mobber is indifferent to the suffering of others
<i>Anger</i>	the mobber has a low tolerance for frustration
<i>Interest</i>	An individual is self-centered or has a perceived need for innovation.
<i>Risk taking</i>	an individual is a risk taker and seek excitement
<i>Impulsive</i>	the mobber act suddenly and spontaneously without thinking about the consequences

Diffusion of Innovation

We do not specify individual categories of innovators. Instead, we identify variables that are most likely to be inherent in innovators and early adopters.

Factor/Concept	Operationalization
<i>Enthusiasm</i>	An enthusiastic personality characteristic
<i>Power</i>	The individual power in the mob derived from the individual interest and control (leadership status)
<i>Skeptic</i>	A mobber inclined to question or doubt the event goal.
<i>Social Status</i>	Does the individual have wealth or social capital?
<i>Interest</i>	An individual is self-centered or has a perceived need for innovation.
<i>Risk Taking</i>	An individual is a risk taker and seek excitement.
<i>Utility</i>	The relative advantage an individual gains
<i>Compatibility</i>	How far a mob physical location is from an individual and how well timing of mob fits within their schedule.
<i>Trialability</i>	Is there a record of successful mobs?
<i>Observability</i>	Is there a report of social change after the mob?
<i>Complexity</i>	How difficult is it to participate in a mob?