

USING NARRATIVES TO FACILITATE PUBLIC ACCEPTANCE OF POLICIES THROUGH AGENT-BASED SIMULATIONS

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ABSTRACT

In this paper, we introduce a conceptual framework of policy communication that is propelled by narratives generated via agent-based simulations. The framework demonstrates that public acceptance of policies is contingent upon the interplay between generated narratives and the stakeholders who receive them. Moreover, it illustrates a model that employs narratives to facilitate public acceptance of policies through agent-based simulations. Drawing on the proposed framework, we identify the following three challenges encountered in policy communication that is driven by narratives generated through agent-based simulations: developing a methodology of narrative design and visualization, identifying factors that influence public acceptance of policies, and providing the assurance of accountability as justified narratives.

1 INTRODUCTION AND MOTIVATION

In the field of policy communication, scholars have asserted that using storytellers' narratives can enhance stakeholders' imagination by rendering a public policy more approachable and verisimilar. Furthermore, the narratives can foster communal engagement and engender a climate of mutual comprehension through the authentic contemplation of others' perspectives by the audience (Kawabata et al. 2018). As potent as narratives may be, they are not without peril. The use of contrived fictional narratives solely for the convenience of the storyteller fails to align with the principles of healthy policy communication, even if it leads to public acceptance of policies.

One promising solution for addressing these concerns entails employing agent-based simulations to generate narratives. Badham et al. (2021) engage in simulation practices to address user concerns and inquiries by generating narratives derived from justified models. Goto (2023) posits that the agent-based model is a verifiable narrative generator and proposes that narrative-driven communication derived from agent-based simulations can foster public acceptance of policies by encouraging individuals to express empathy toward others occupying diverse perspectives and transcend one's own perspective based on the two key dimensions: emotion and logic.

2 PROPOSED FRAMEWORK

In this paper, we present a conceptual framework elucidating policy communication propelled by narratives generated through agent-based simulations. The primary objective of this framework is to illustrate a model that employs narratives to facilitate public acceptance of policies through agent-based simulation. In addition, it aims to identify prospective research areas to enhance the efficacy of its methodology.

Figure 1 illustrates the preliminary framework. The simulation user, acting as the narrator, engages in communication with the policy stakeholder, who serves as the audience, through the usage of a narrative generator, namely an agent-based simulator. This occurs in the following manner:

- i) Collect and input preferences,

- ii) Narratives are generated from the agent-based simulator, and the user tells the story to the stakeholders, and
- iii) The stakeholders attentively receive the stories and may modify their perspectives.

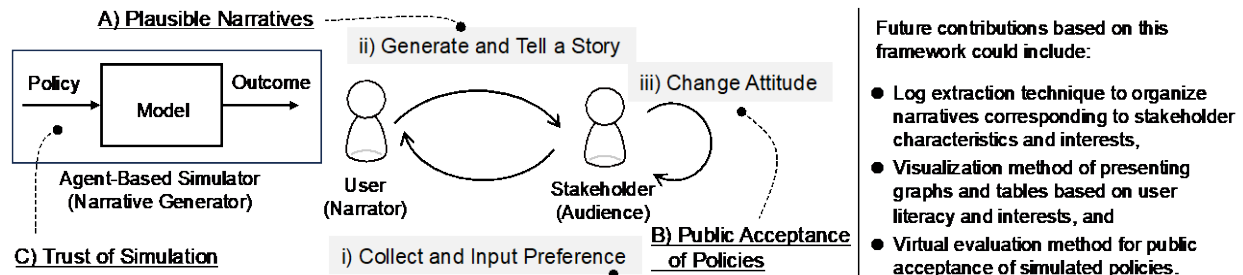


Figure 1: Framework of policy communication using narratives generated through agent-based simulations.

From this framework, we can discern at least three crucial areas of research:

- A) *Persuasive Narratives*. How can we generate compelling narratives generated from the simulations? Furthermore, how can we effectively visualize and convey these narratives to the stakeholders? The narrative policy framework (Jones and McBeth 2010), organizing the content and structure of the narratives within the public policy, and visualization methods that consider users' understanding (Burns et al. 2020) are valuable resources.
- B) *Public Acceptance of Policies*. What factors influence the stakeholders' attitude shifts and their policy acceptance? Individuals perceive and engage differently with the story world (Kuijpers et al. 2014), and their understanding and perceived interests in focal policy issues can impact their levels of acceptance of the policy.
- C) *Trust of Simulation*. The simulation itself operates as a transparent model, yielding logically consistent outcomes. However, how can it be justified? The validation process is inherently subjective rather than objective, and it involves establishing trust within a social context (Harper et al. 2021).

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