

Towards a Critical Technical Practice of Narrative Intelligence

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Narrative Intelligence

Ability of machines to

- understand, generate, and use stories and narratives.

Encompasses a wide range of tasks

- recognizing plot structures
- identifying characters and their relationships
- understanding causality and motivation
- generating coherent and believable narratives.

Critical Technical Practice

Critical Theory

- Approach to [social philosophy](#)
- Focuses on society and culture
- Reveal, critique and challenge [power structures](#)

Critical Technical Practice cont.

- Critical theory-based approach
- Proposed by Phil Agre
- Design and development of technology
- Emphasizes critical reflection on
 1. Values
 2. assumptions,
 3. and implications

Critical Technical Practice cont.

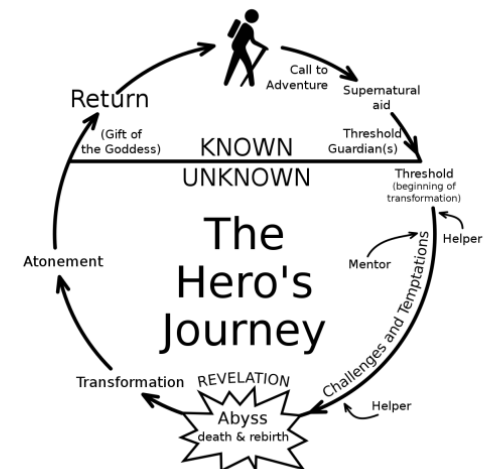
CTP consists of :

- Identifying the core metaphors of the field;
- Noticing what, when working within those metaphors, remains marginalized;
- Inverting the dominant metaphors to bring the margin to the center.

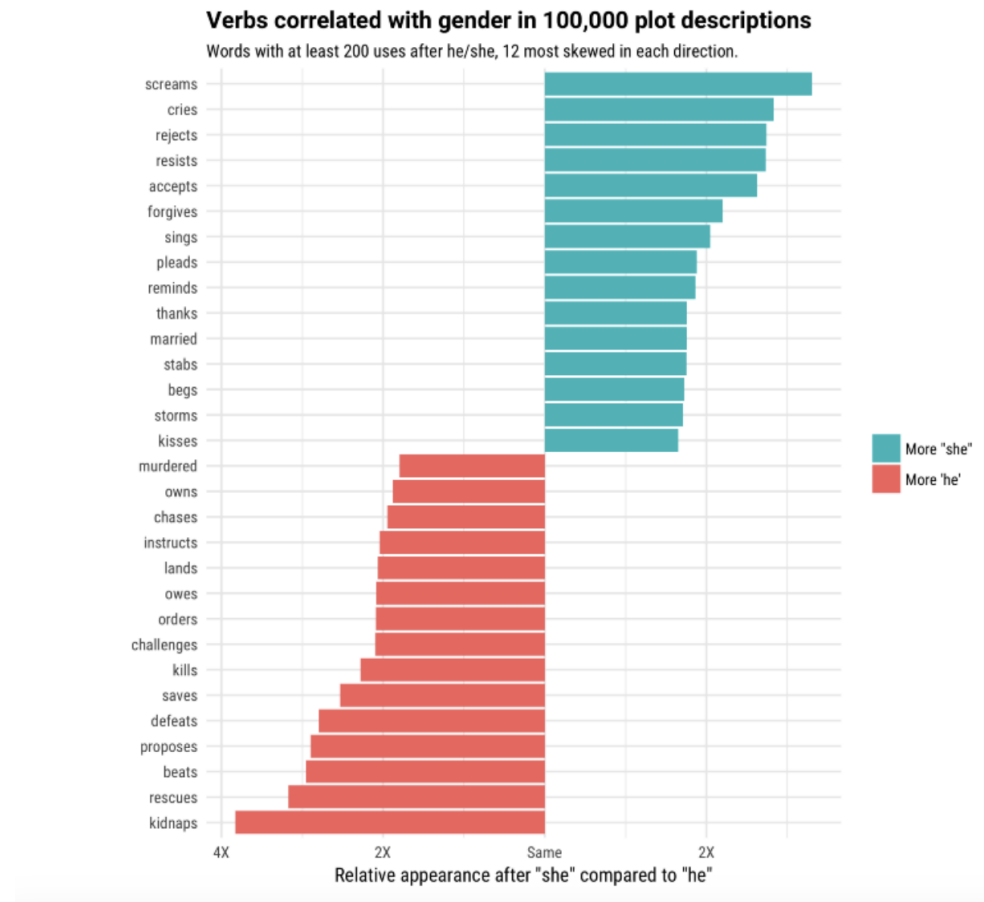
Narrative Intelligence Impose and Reflect Systems of Power

The Hero's Journey and Other Story Patterns

- Joseph Campbell : "The Hero with a Thousand Faces."
- Describes adventure of a hero in world mythology and storytelling.
- Embeds culturally relative assumptions
 1. gender as binary,
 2. social functionalism,
 3. and male as primary/default.



- **David Robertson's analysis of Wikipedia Plot Summaries dataset**

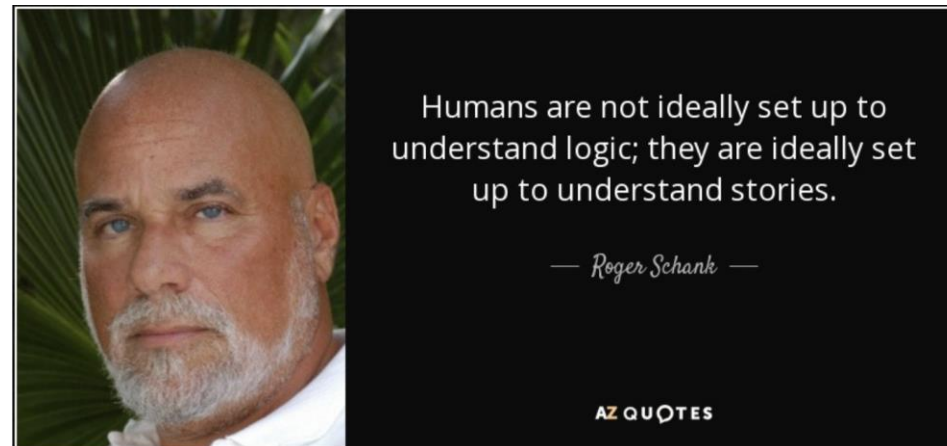


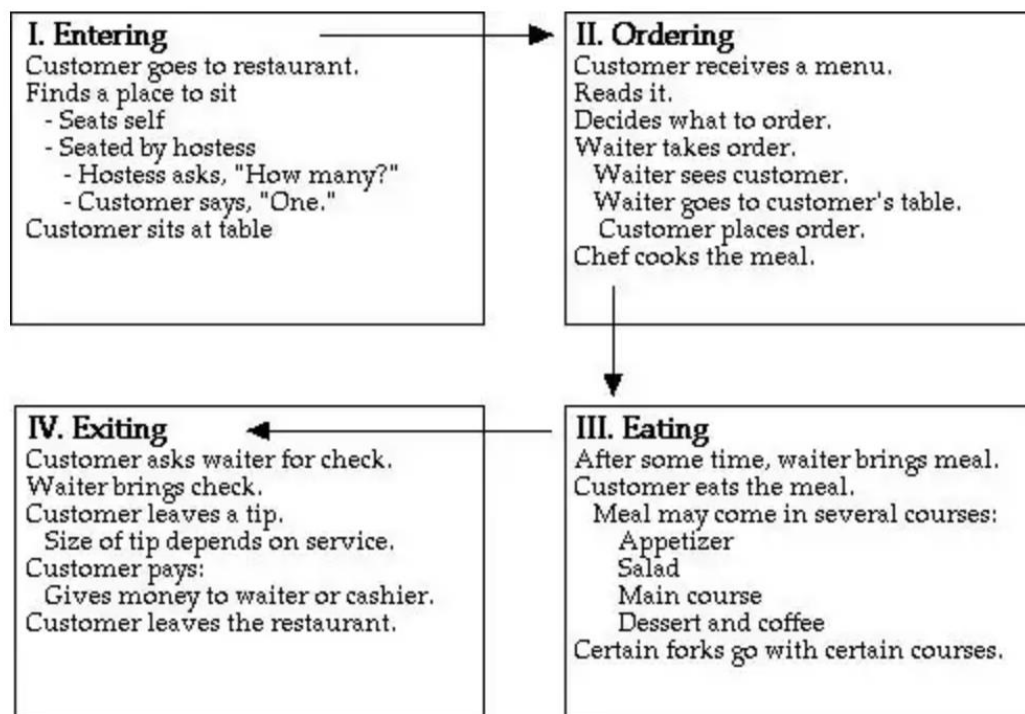
Narrative templates marginalize the following values:

- **Narrative Pluralism**
- **Social Role Autonomy**

Amalgamating Human Authorship

- Example: Roger Schank's social scripts
- Mental representation of a typical sequence of actions and events that occur in a specific social setting.





—Adapted from R.C. Shank and R.P. Abelson, *Scripts, Plans, Goals, and Understanding*. Erlbaum, 1977.

(Image Source: Scripts, Plans, Goals, and Understanding. R.C. Shank and R.P. Abelson)

- The Scheherazade project, “Learning to Tell Stories about Social Situations” Li et al. (2012a)

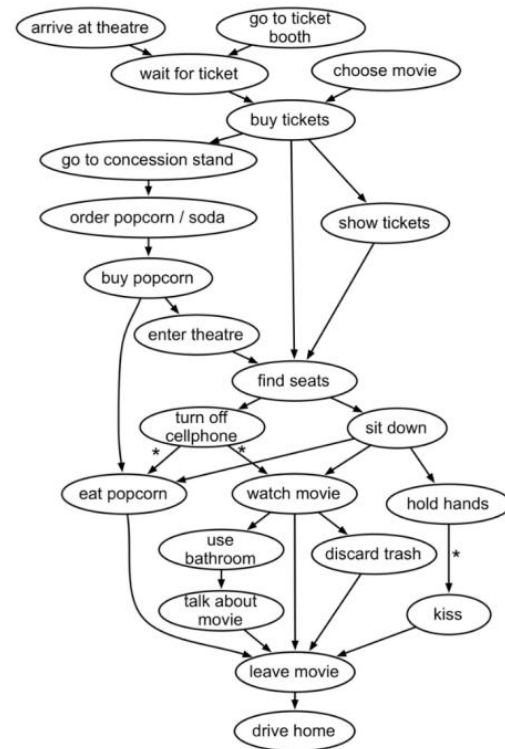


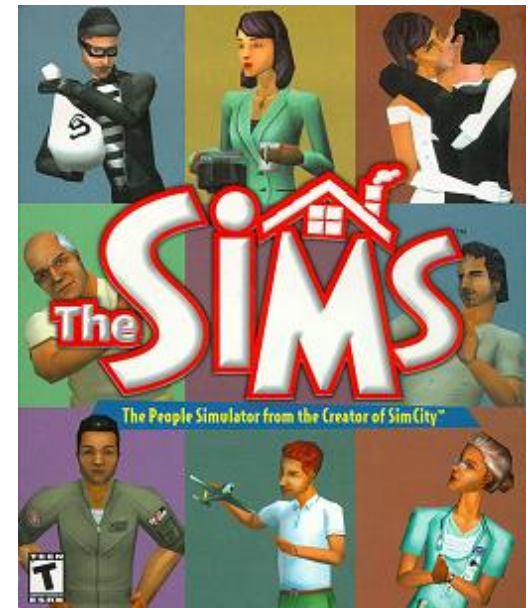
Figure 3: A learned plot graph for the “movie date” scenario from Li et al. (2012a)’s narrative crowdsourcing project.

The amalgamation of human authorship into statistical models marginalizes:

- **Underrepresented Storytellers**
- **Authorial Voice**

Social Believability

- Social simulation: the use of AI to simulate story characters.
- Social simulation systems represent characters as
 1. instances of a common data structure,
 2. consistent and systemic rules for interaction



- Simulated societies embeds sociological theories chosen by the programmer.
- Folk sociological theories: theories based on intuition rather than research

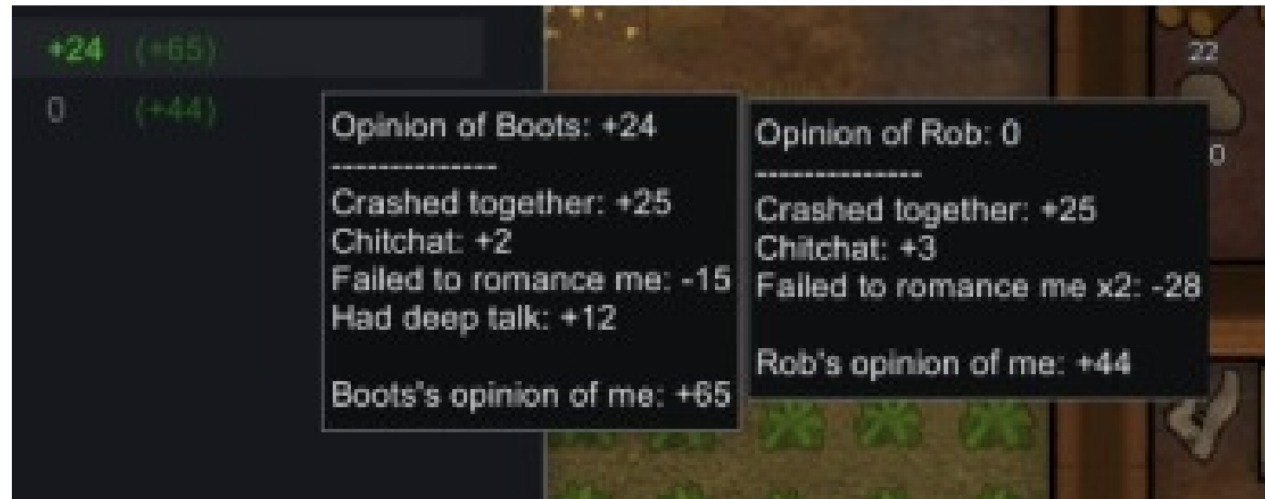


Figure 4: A screenshot of Rimworld's interface depicting characters changing their opinions of one another.

Social believability marginalizes the following values:

- **Non-Normative Representation:** representing non-socially-normative people and their experiences with chafing against norms.
- **Procedural Inquiry:** limiting social simulations to legible systems of expression as a means of interrogating what you can and cannot say within that system.

The Holodeck



- Fictional device from the television franchise [Star Trek](#)
- Uses "holograms" to create a [realistic 3D simulation](#) of a real or imaginary setting.
- Represents the obsession with “immersion”
- Participants can freely interact with the environment, objects and characters.

Immersive fallacy: Misconception of the idea that video game players can reach a state where they forget they are playing a game. Salen and Zimmerman (2004)

The immersive fallacy is the endless pursuit of narrowing the “*aesthetic distance*” between the player and simulation.

The immersive fallacy marginalizes the following three values

- **Double Consciousness:** Subjects hold both the simulated reality and their bodily reality simultaneously in mind maintaining aesthetic distance.
- **Reflection:** create opportunities to infer, interpret and engage in meaning-making with an interactive experience, rather than passively absorbing it.
- **Resistance to Player Whim:** To learn the language and rules of a system that works differently from the reality.

Bringing Marginalized Values to the Center

Why stories are important?

- Help us imagine alternatives
- Help us make sense of our own lives and difficult situations
- Help us see alternative versions of ourselves

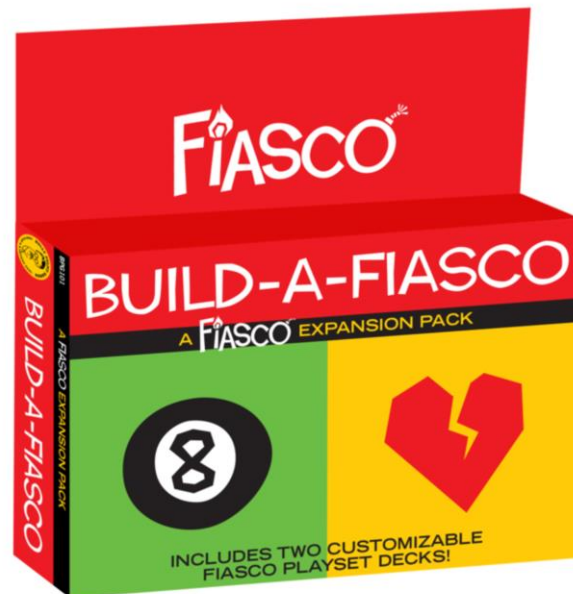
Alternative ideals

Expanding the Canon

- Collaborations with researchers from Africa, Asia, South America, and members of indigenous nations.
- Change approach to pedagogy when we are teaching students from narrative cultures that differ from ours.

Enabling Reflective Co-Creation

- Granting player autonomy without “omnipotence” abilities.
- Requires push-and-pull between player and system



Resisting Legibility in Social Simulation

- Legibility: the power in being able to reduce complex phenomena to a discrete set of interpretable symbols. Scott (1998)
- Conscientious consideration of not to represent something as complex in social simulations (like gender)