

Computational Discourse in a Role-Playing Game Podcast

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Abstract: Tabletop role-playing games are a discourse-rich environment in which participants are frequently confronted with narrative and computational problems. By observing documented gameplay of a tabletop role-playing game (*Edge of the Empire*) and coding the discourse, we observe computational discourse being used to address narrative and mechanical problems. The contribution of this work is in presenting evidence of and examining the role of computational discourse in an under-explored environment.

Introduction

Computational literacy has been posited as one of the primary new literacies of the 21st century - it has the potential to afford students new perspectives, new agencies, and new opportunities for professions (diSessa, 2001). A core element of diSessa's computational literacy work is the concept of social computational literacy, or *computational discourse*. Recent work in games (Berland and Lee, 2011) has found evidence of complex computational discourse in the naturalistic talk around board games.

Role-playing games (RPGs), combining elements of board games and improvisational storytelling, provide high-discourse problem-solving scenarios. Within a framework of game mechanics, participants collaboratively construct a narrative. The mechanics of these systems create environments in which participants must assess situations and solve problems within the constraints of rules. Many situations in RPGs are resolved with role-play, where participants collaboratively act out or narrate events in the game to progress the story. These narrative situations – that is, situations grounded in the narrative of the game rather than in the game's mechanical rules – often require assessment and problem solving even though they are not dependent on the rules of the game system. In this work, we examine a recorded session of a RPG and examine naturalistic computational discourse. We hypothesize that computational discourse may be used to assess and solve both narrative and mechanical problems. The contribution of this work is in presenting evidence of and examining the role of computational discourse in podcasts and the use of podcasts as a source of interesting data for the learning sciences.

Methods

We collected the data from a recorded session of the CAMPAIGN Podcast (Kuhl, 2014), where four players used the Edge of the Empire game system (Fantasy Flight Games, 2013) published by Fantasy Flight Games to create a narrative in a Star Wars setting. We chose the earliest possible "normal gameplay" episode (Episode 3, 66min, Kuhl, 2014), as the expectation was that the participants might take a couple sessions to get settled into the new campaign. This group was chosen because: it is one of the most popular RPG podcasts; they explicitly focus on improvisation and storytelling; and the group consists entirely of expert roleplayers who are professional improvisers. Comedian Kat Kuhl is the gamemaster (GM). The GM has the most narrative control; she facilitates and arbitrates the game. Each other player controls one protagonist and (as a result) has less overall narrative control.

We used a coding scheme developed by Berland and Lee (2011) to observe computational discourse in collaborative strategic board games. As per their coding scheme, the first author coded for *conditional logic*, *algorithm building*, *debugging*, *simulation*, and *distributed computation*. *Conditional logic* is the use of "if-then-else" and involves thinking globally about consequences of a specific statement. *Algorithm building* is creating reusable instructions for current situations and future unknown situations. *Debugging* is identifying and resolving problems when something is not functioning. *Simulation* involves modeling future events based on logic. *Distributed computation* occurs when multiple participants contribute information that leads to a result which would not have occurred without the shared contributions. Coding categories were not mutually exclusive, so some events were coded for multiple categories. No events of algorithm building occurred; we are not sure why.

Observed speech events are categorized as either *mechanical* or *narrative*. *Mechanical events* are coded speech events in which the discourse concerns the discrete rules and mechanics of the game system. *Narrative events* are those events in which the discourse concerns the story or narrative aspects of the game.

Finding computational discourse being used to assess and solve narrative situations (in addition to the mechanical) will support the hypothesis that computational discourse can emerge in narrative situations.

Findings

Using the coding scheme described above, we observed instances of the four computational discourse codes in both mechanical and narrative events (see Table 1 below, full data available upon request). Some events are coded as both mechanical and narrative. In these situations, the dialogue was typically narrative, but there was a clear mechanical element of the game influencing the discourse. Table 2 contains examples of coded events.

Table 1: Coded events

	Conditional Logic	Debugging	Simulation	Distributed Computation
Mechanical	5	4	1	3
Narrative	11	11	23	18
Both M+N	2	1	3	4
Total	18	16	27	25

Table 2: Examples of mechanical and narrative events

	Discourse	Code(s)	Explanation
Mechanical	“If you got a good roll, it would be like two solid hours work.”	Conditional logic	Resolution is determined by game rules, in this case by rolling dice.
Narrative	“We can wait for her to come back. See if we can start a dialogue. Or we can get the hell off of this planet.”	Simulation	There are no rules in the game system which determine how this will play out.
Both M+N	“Look, their ship’s a scout. Ours has firepower.” “Worst comes to worst, we can take them out.”	Simulation, distributed computation	Players assess narrative elements but know that the ships likely have different rules and likely consider that.

One noteworthy event occurred when a player rolled dice to attempt an action; the player failed according to the rules, but the GM decided that this failure was ‘wrong’ for the story (“you should get it; you’re just spending time”) and so ‘debugged’ the situation by overruling the game mechanics in favor of the narrative.

Conclusions and limitations

The observed instances of computational discourse occurred in both mechanical and narrative situations. This supports the expectation that narrative problem solving can use the same discourse tools as computational problems. Although the collected data contains a substantially higher number of narrative codes than mechanical codes, this does not necessarily indicate that such discourse is more useful for narrative situations. It may be representative of this specific session. We predict another session with either more combat or more skill challenges would show a higher number of mechanical events.

This case study looks at a single session of a single gaming group with a specific game system. It is not intended to generalize - it is a proof by example of the existence of a meaningful mechanical/narrative spectrum in computational talk and the utility of understanding computational talk through podcasts. Future studies will look more closely at the evolution of computational discourse in a group over time.

References

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