Fabula Generation with BCDI Characters and Narrative Tension

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1   Thesis Abstract

In this thesis, we looked at the influence of narrative tension on the generation of qualitative stories. After a literature review, we decided to go for a three-tier architecture based on the theory of Bal [1]. This three-tier architecture allows us to split the task of creating a story into three parts, namely a Fabula (What is told), a Sjuzhet (How it is told) and a Rendering (How it is presented).

Huybrecht [2] focussed on the Rendering system, and this thesis focuses on Fabula Generation System. To generate a good Fabula the readers have to believe that all actions are possible within the story world. For this reason, using the Belief-Characteristics-Desire-Intention (BCDI) characters introduced by Viaene [8] is a good start for the Fabula Generation System. This model gives characters their private beliefs, characteristics, desires and intentions, which should result in believable actions.

The beliefs are related to what a character thinks is true or false. The character can have beliefs about four different parts of the system, which enable different types of stories. The first belief is about facts of the world state. `belief(locationOf(knife,kitchen),tom,1)` is an example of Tom believing with complete certainty that the knife is located in the kitchen. The second kind of belief is about the actions a character can perform. `belief(hurt_unarmed,tom,1)` is a showcase of how tom believes that the action schema of hurting someone while unarmed will lead to their death while it will only injure them. A character can also have a belief about what another character believes. They allow the characters to have reasoning about the state of mind of other characters. `belief(belief(locationOf(knife,kitchen),tom,1),alice,1)` shows that Alice believes that Tom believes that the knife is in the kitchen. The last kind of belief is about the characteristics of a character. They make it possible that characters can plan around how others might react.

The characteristics are a new addition by Viaene [8]. We extended the original definition resulting in four types of characteristics. The first kind is the characteristics that Viaene [8] introduced, which are renamed to desire-characteristics. These characteristics will produce desires based on the beliefs a character has. The first new characteristic type is the belief-characteristics. They influence how

characters perceive actions and how strongly they hold the resulting beliefs. The derivation-characteristics can generate new beliefs from currently held beliefs. The planning-characteristics are evaluation criteria to evaluate the different plans for achieving their desires.

The desires of a character show their goals. Swartjes and Theune [6] introduce four kinds of desire. These desires are the attain-desire, leave-desire, maintain-desire and avoid-desire, which show a state of the world the characters want to attain, leave, maintain or avoid.

To achieve their desires a character will need to create a plan. The desires create goals, which we call intentions, to use in the plans. The plan will result in all possible actions.

With the BCDI model, the characters can create individual plans. To create a story the plans are merged. The narrative tension of a story is a good measure of how we could merge them. Roberts and Zweig [4] say "Unless there is doubt, there is no tension, and unless there is tension, there is no interest". The creation of doubt is not exclusively linked to the Fabula and is present in all aspects of a story. In the Fabula, we create it through the introduction of conflicts. Nikolajeva [3] identifies four kinds of conflicts called person-against-person, person-against-nature, person-against-self and person-against-society. Person-against-person is defined using four conflict types. Short-term conflicts (STC) occur when there are conflicting actions and mid-term conflicts (MTC) with conflicting intentions. Conflicting desires are called Long-term conflicts (LTC). When two characters have conflicting characteristics, we call it an eternal conflict (EC). When a character's action conflicts with a natural happening, it is a person-against-nature conflict. A character can have an STC, MTC, LTC or EC with themselves, which is a person-against-self conflict. And if the character breaks any societal rules, it is a person-against-society conflict.

The conflict level can now be measured and used to shape the tension curve of a story. The Fabulator system decides which character can perform their actions and whether the action has the desired effect. Currently, the Fabulator chooses one action to be performed but ideally, it would select from all possible actions a set of actions to be performed.

After generating a set of four stories, we concluded that there was no significant difference between a good tension curve and a random action selection. There was a trend towards liking the good tension curve more. However, a bad tension curve resulted in the quality of the stories being perceived as worse. We could also conclude that the other parts of the system with a Sjuzhet Generation system and Rendering system are crucial to how a story is perceived. A simple template and no selection results in the stories reading like a mathematical equation. Having a system that makes them linear would give us less mental load to understand the stories. A system to create text using more complex methods also adds value to the story.

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