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3.2 AI for Romantic comedies

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3.2.1 Introduction and Work Process

Both romance and comedy are integral parts of human culture, yet despite the breadth of AI research into games and creativity, little work has been done to explore these themes in the context of games. In AI research, the best examples are games that deal with ‘social physics’ or human relationships, such as *Prom Week* [4] or *Façade* [3], where both romantic and comedic themes are hinted at. In the games industry, while romance is a key feature in many games (such as *The Sims*), it is often reduced to static linear narratives, while comedy is notoriously difficult to achieve in games and is often achieved unintentionally [2].

In this workgroup, we aimed to explore the possibility that these two things are connected. Due to a lack of AI research into topics such as romance and comedy, there are fewer systems and techniques available to support the exploration of these themes in game design. Our workgroup aimed to explore the potential for AI research in these areas, to think about the open questions and pitfalls ahead, and to collaboratively sketch out some ideas for work that we could act as inspiring examples for future AI research projects. The group began with a short presentation, including a series of tweets from @NightlingBug on Twitter, who made an observation that playing a game such as *Stardew Valley* from the perspective of a character competing for the player’s attention would be an interesting idea.

We began with an open discussion of the topic, encouraging perspectives from everyone present, covering both existing examples of technology and games, as well as concerns, questions, and ideas that arose as we thought about the topic. All of the topics that came out of this discussion were interesting and thought-provoking, but a few ideas stood out as something the groups were particularly excited to take forward during the day. The first was the idea of connecting existing AI narrative techniques, such as the Nemesis system in *Shadow of Mordor* [7] to large-group dynamics like the romantic NPCs in *Stardew Valley*. The second idea was to think about how information flow is often crucial in romantic stories, both within

the fiction and between the reader and the author. The third was to investigate unusual concepts such as discomfort, embarrassment, or “cringe” as a component of a narrative or social AI system. The workgroup split into three subgroups to explore these ideas separately, before reconvening at the end of the day.

3.2.2 Nemesis Island

The first group proposed an AI-driven spectator sport based on popular reality TV franchises such as *Love Island*. In their prototype, a network of AI agents compete both for the romantic attentions of other AI agents, and the real-world attention of people viewing the game on livestream services, such as Twitch. As a third role, a director can be introduced, whose task it is to steer the narrative by setting hidden internal goals for each agent. Agents respond to the internal social network of the game, the pursuit of their internal goals, as well as their meta-level understanding of the show they are in, intentionally creating drama or showing off to create interest in the audience, in the hope that they will survive rounds of voting and elimination.

3.2.3 JANE (Judicious Artificial Narrator Experience)

The second group proposed a game inspired by Jane Austen’s use of free indirect discourse [1], where the author disseminates information to the reader that could be biased by a particular viewpoint, or actual narrative fact [6]. In this approach, the reader always only has partial (and potentially misleading) information on the characters, and they about each other – which leads to both romantic and comedic situations. The setting for this game could be based on shows such as *Bridgerton* or *Gossip Girl*. The player takes the role of a pseudonymous gossip columnist, who must explore and learn about high society by attending events, engaging in gossip, and dealing favours. The columns written by the player impact the knowledge and social simulation of AI socialites, which in turn changes the situations the player finds themselves in. This creates a kind of participatory take on social simulations like *Bad News* [5], with the added complication of allowing the player to engage in high society themselves, potentially manipulating the social scene to help them achieve their personal goals.

3.2.4 #CringeFestival

The third group considered the role of embarrassment and negative emotions in romantic comedies. One issue that came up in our initial discussions was understanding the role of the player in such games. As the audience for a romantic comedy, we have a distance between us and the actions of the characters (“cringe” is defined as experiencing embarrassment on behalf of someone else). If the player is participating as a character then they might feel closer to the negative experience. This group explored the idea of games in which the player acts as an external force, either trying to set up artificially embarrassing moments for AI agents, or acting to save and rescue AI agents from embarrassing situations to gain catharsis.

3.2.5 Conclusion and Outcomes

Our group discussions have yielded a number of new directions to explore, both in terms of prototyping new systems, as well as exploring the affordances and applications of existing technology. We are hoping to pursue some of these ideas a little further and write the results up, and to continue to maintain the working group as an ongoing collaboration.

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3.3 Pokegen

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The generation of art assets plays a huge part in game development, costing both time and money. We explored how the process of generating game art can be supported using recent advances in generative art.

Machine learning models such as Dall-E 2 [1] and Imagen [2] have demonstrated powerful art generation capabilities. Starting from text prompts, they are able to combine concepts, attributes, and styles to generate artworks of generally high quality. Nevertheless, their usage is restricted and similar projects such as ruDall-E [4] and Mini-Dalle-E [3] do not produce results at the same level of detail, i.e. generating blurry images, struggling to include concepts that are not well represented in the training data, and sometimes creating stock image overlays (c.f. Figure 3). This often results in prompt engineering, a process in which the user adapts the text prompt to guide the black box model to produce the desired outcome [8]. Due to the black-box nature of deep learning models, this process can yield unstable results and is therefore hard to control, making it inefficient and unreliable for creating game assets.

Therefore, we have envisaged several pipelines that may support designers and artists during game development. Starting from possible inputs such as a designer’s textual descriptions of the required game asset, some image ideas, sketches, or even expected game mechanics, we have multiple ways to approach the problem of game asset generation. Simple text and image search models may guide the artistic exploration process and spawn new ideas.