

The Prom: An Example of Socially-Oriented Gameplay

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Abstract

The Prom, pictured above, is a game where the player manages the social life of a group of high school students and creates the situations from which dramatic, thought provoking or at least funny stories can unfold. The setting of *The Prom* involves a group of alternative high school kids (e.g. Emos, Goths, Geeks, etc.) and their dramatic lives as they prepare for the upcoming school prom. Through creating friendships, making people become enemies, controlling who gets to be in the "in" crowd and much more, the player can shape the social world of the characters. Each character has a distinct personality represented by interests (e.g. what bands they like), needs (e.g. a character may need to demonstrate a certain degree of dominance over others), traits (e.g. being a particularly jealous person), social networks (e.g. to what degree a characters like, are attracted to or respect one another) and social status (e.g. who is dating who).

In each stage of the game, the player attempts to meet a level objective. Level objectives are made up of particular social states (e.g. make it so Edward and Lily are dating). The player's ability to accomplish these is to select what social actions characters pursue in order to create a situation where the objective is possible given the social state. Not all social actions will result in the desired or even favorable outcome to the initiator of the action, as all changes to the social status and social networks depend on the social state of other the characters involved.

As a simple example, imagine that a level's objective is to create the social status that the characters Edward and Lily are dating. It may be the case that Edward wants to ask Lily out, but upon investigation, players can view the social networks and

statuses, the player sees that Lily is not interested in dating him because her link to him in the romance and friend network is very weak. If the player assigned Edward the task to ask Lily to date, Lily is likely to say no. To be able to get Edward and Lily together, the player would first need to raise Lily's opinion of Edward. To do this, the player could assign Edward the social game of "winking" (i.e. slightly raising romance between the characters) with Lily. Assuming Lily accepts the wink as a romantic gesture, the player would then have a better chance of getting the intended result when Edward is told to ask Lily to date.

As alluded to above, not all attempted social actions that the player sets for a character to pursue play out as intended as most of actions depend on the rest of the social space (i.e. Lily wouldn't agree to date Edward if she wasn't attracted to and didn't like him). Because characters have distinct personalities, social statuses and needs, certain social actions are not an option for the player to select as they would be inappropriate considering the character's simulated individuality. Because of this, possible social actions are presented in a ranked list by what it is that the character would be likely to want to pursue. For example, if two people are friends, the "Be friendly to..." game will appear in the list of possible social actions while the "Be mean to..." game would not. In other words, of all the social actions possible, of which there are many, only a limited set will be available to choose from for each character. The challenge for the player is to manipulate the social space such that the conditions are set to allow the possibility of the social state objective of the level.

Changes to social space brought about by player actions have far spreading effects that modify the possibility space of social actions characters can successfully make. Even the unintended effects of a botched social interaction, like Edward being rejected if the player were to have assigned Edward the task of asking Lily to date before winking at her, create a new possibility space that



Figure 1 - An in-game screen capture of *The Prom* featuring a representation of the romantic interest between the characters from the perspective of the selected character, Karen.

may lead to an even more interesting social space and further challenges to overcome to achieve a level's objective.

The social artificial intelligence system *Comme il Faut* [1] drives this gameplay experience by simulating per character needs and traits, social statuses, social networks, social history and most importantly to gameplay, the outcomes and effects of social games. For example, when *CiF* determines Lily's response to being asked to date by Edward, it considers aspects of the social state like what Lily's friends think about Edward, how long they've known each other, Edward's personality traits and much more. By giving player controls to navigate a social, rather than physical, space, *The Prom* is being created to demonstrate how *CiF* and social games can create a practically limitless numbers of possibly compelling stories and gameplay.

CiF is a playable computational model of social interactions designed specifically to allow autonomous characters to play social games [2]. The design goal of *CiF* is to represent and reason over compelling social situations along with the variations of the resultant behavior that arise from different personalities being placed in similar roles. This goal is difficult to achieve with only computer science and software engineering. To address this, *CiF* draws from knowledge from sociology and psychology, and their subfields of micro-sociology and social psychology, as well as from knowledge of authoring and drama. By designing a system with an emphasis on social games, social games themselves were subject to a higher degree of design and refinement.

The emphasis of the system is on social games: multi-character social interactions whose function is to modify the social state existing within and across the participants. In the same way that playable models of physics in combat games do not seek to model real physics, but rather take inspiration from physics to create a compelling experience, our playable model of social games does not seek to accurately model social cognition, but rather takes inspiration from a variety of social and psychological theories to create a model that underwrites compelling, playable experiences.

In conclusion, *The Prom* is a playable prototype of a game play experience with a focus on involving the player in the social aspects of the game world. The artificial intelligence system, *Comme il Faut*, enables this type of social game play while providing an abstraction of patterns of social interactions, known as social games, which serve to ease the burden of authoring complex social interactions with respect to the specific personalities of characters.

References

- [1] McCoy, J., Mateas, M. and Wardrip-Fruin, N.. *Comme il Faut: A System for Simulating Social Games Between Autonomous Characters*. In *Proceedings of the 8th Digital Art and Culture Conference (DAC 2009)*, Irvine, CA, December 12-15, 2009
- [2] McCoy, J. and Mateas, M. *The Computation of Self in Everyday Life: A Dramaturgical Approach for Socially Competent Agents*. In the *Proceedings of the AAAI Intelligent Narrative Technologies 2 Symposium (AAAI-INT2 2009)*, Stanford, March 2009.