Memory, Reverie Machine: towards a dance of agency in interactive storytelling

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Introduction

Agency is a crucial concept that links an individual to the material world and society around. Different approaches lend themselves to distinctive social and political practices. The "free will" view emphasizes an individual's uncompromised liberty; feminist theorists locate agency in one's resistance of the hegemonic patriarchal status quo; whereas some read Foucault's impersonal discourses [3, 4] as the proof of the absence of individual agency.[1] The wide range of negotiation and struggle between an individual and her socialization practice constitutes an important component of her lived experiences. In many interactive narrative pieces, however, agency is often narrowly understood as a user's freedom to either perform actions or alter the mechanics of narration at will, often followed by an implicit assumption of "the more agency the better."[6] We focus on the computational engagement of dynamic agency, through our text-based computational narrative project *Memory, Reverie Machine* (MRM), to call for more nuanced understanding of agency, both as critical commentary on our post-conflict society and as a novel expressive storytelling mechanism afforded by digital media.

Memory, Reverie Machine

MRM algorithmically generates stories about a robot character Ales, controlled *jointly* by the user and the AI system. The power relation and proportion between user and system agency vary dynamically to highlight a multi-dominance interaction model that is different from the prevailing human-leader-computer-follower hierarchy.[7] It also allows the fluid role-shift between author and spectator, reminiscent of oral storytelling traditions in many Asian cultures. Complicating the traditional dichotomy between "player character" (emphasizing user agency) and autonomous "non-player character" (highlighting system agency), MRM explores themes such as control, resistance, dis/empowerment. It is also in dialogue with e-lit, Interactive Fiction convention and the work of Yoko Ono, Adrian Piper, and Sol LeWitt.
Memory-building is the major means of identity formation in MRM. Instead of seeing actions as the sole manifestation of agency, we deliberately choose computationally generated memories, daydreams and affective dispositions as indicators of system agency.[8, 9] Ales

starts as an avatar with no past, emotion or belief, completely under user's control. As the story progresses, the AI system dynamically retrieves memories triggered by Ales' encounter of different events, objects, and actors, and computes his belief-system and emotional state. If the recollected memories converge to a coherent personality, Ales' system agency increases and he will act autonomously and ignore user's commands contradictory to his belief-system. These memories could also be fragmented, triggering one another and leaving him in a state of confusion and hesitance. The emotional state is used to generate affective descriptions of the world through the computational-cognitive approach to conceptual blending[2, 5].

Conclusion

Influenced by the stream-of-consciousness literature, MRM explores the tension between rigid computational algorithms and fluid human cognitive processes. In summary, MRM foregrounds a dance between user and system agency through the narration of memories, intentions and dispositions. It brings forth novel narrative experiences as well as critical reflections of social and political conditions.

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