Computational Modeling of Narrative Texts, Films and Games

Course 2 - Characters and agents

Rémi Ronfard, March 2016

Outline

1. Characters in story understanding
2. Examples in texts, films and games
3. Characters in story generation

Marie-Laure Ryan's Story Definition

1. Story takes place in a world populated with individuated agents (characters) and objects. (Spatial dimension).

2. This world must undergo not fully predictable changes of state that are caused by non-habitual physical events: either accidents ('happenings') or deliberate actions by intelligent agents. (Temporal dimension).

3. In addition to being linked to physical states by causal relations, the physical events must be associated with mental states and events (goals, plans, emotions). This network of connections gives events coherence, motivation, closure, and intelligibility and turns them into a plot. (Logical, mental and formal dimension)

Can a computer understand stories ?

- Mani : NarrativeML

- Eric Muller : Discrete Event Calculus and Common Sense (lesson 3)

- Graesser : QUEST (lesson 4)

- Mark Finlayson (MIT) : Sheherazade

- David Elson (Columbia University) : Sheherazade

Can a computer understand stories ?

- A written story is made of propositions (PropBank)

- Can be annotated with NarrativeML

- Can be translated to Discourse representation theory (DRT) or Discrete Event Calculus (DEC)

- Can be used to answer questions

FrameNet vs. PropBank

FRAMENET ANNOTATION:

[Buyer Chuck] *bought* [Goods a car] [Seller from Jerry] [Payment for $1000].

[Seller Jerry] *sold* [Goods a car] [Buyer to Chuck] [Payment for $1000].

PROPBANK ANNOTATION:

[Arg0 Chuck] *bought* [Arg1 a car] [Arg2 from Jerry] [Arg3 for $1000].

[Arg0 Jerry] *sold* [Arg1 a car] [Arg2 to Chuck] [Arg3 for $1000].

FrameNet vs. PropBank

PropBank		FrameNet
buy	*sell*	COMMERCE
Arg0: buyer	Arg0: seller	Buyer
Arg1: thing bought	Arg1: thing sold	Seller
Arg2: seller	Arg2: buyer	Payment
Arg3: price paid	Arg3: price paid	Goods
Arg4: benefactive	Arg4: benefactive	Rate/Unit

FrameNet vs. PropBank

Frameset **edge.01** "move slightly"
  Arg0: causer of motion   Arg3: start point
  Arg1: thing in motion   Arg4: end point
  Arg2: distance moved   Arg5: direction
Ex: [$_{Arg0}$ Revenue] *edged* [$_{Arg5}$ up] [$_{Arg2-EXT}$ 3.4%] [$_{Arg4}$ to $904 million] [$_{Arg3}$ from $874 million] [$_{ArgM-TMP}$ in last year's third quarter]. (wsj_1210)

LOC: location	CAU: cause
EXT: extent	TMP: time
DIS: discourse connectives	PNC: purpose
ADV: general-purpose	MNR: manner
NEG: negation marker	DIR: direction
MOD: modal verb	

Characters in NarrativeML (1)

- NARRATOR

  - name,form,exist,accessibleto,order (ACHRONY, ANALEPSIS, CHRONICLE, PROLEPSIS, RETROGRADE, SYLLEPSIS, ZIGZAG),distance (NARRATED, INDIRECT, FREE_INDIRECT, REPORTED, IRECT, IMMEDIATE), perspective (NON-FOCALIZED, INTERNALLY_FOCALIZED, EXTERNALLY_FOCALIZED)

- PLACE

  - name,form,exist,accessibleto

- CHARACTER

  - name,form,attributes,exist,accessibleto

Characters in NarrativeML (2)

- EVENT

  - type,exist,goal,duration

- GOAL

  - id, parent, leaf, type

- EVALUATION

  - event, character, audience, polarity (POSITIVE, NEGATIVE, NEUTRAL)

Characters in The fox and the crow

- The fox

  - plan

  - attributes

  - actions

  - goals

  - evaluations

- The crow

  - plan

  - attributes

  - actions

  - goals

  - evaluations

The fox and the crow (Aesop)

A crow has found a piece of cheese and retired to a branch to eat it.

A fox, wanting it for himself, flatters the crow, calling it beautiful and wondering whether its voice is as sweet to match.

When it lets out a caw, the cheese falls and is devoured by the fox.

Characters, objects and places

A crow has found a piece of cheese and retired to a branch to eat it.

A fox, wanting it for himself, flatters the crow, calling it beautiful and wondering whether its voice is as sweet to match.

When it lets out a caw, the cheese falls and is devoured by the fox.

1. CROW
2. CHEESE
3. BRANCH
4. FOX

Events and actions

A crow has found a piece of cheese and retired to a branch to eat it.

A fox, wanting it for himself, flatters the crow, calling it beautiful and wondering whether its voice is as sweet to match.

When it lets out a caw, the cheese falls and is devoured by the fox.

1. FIND
2. RETIRE
3. FLATTER
4. ASK
5. CAW
6. FALL
7. DEVOUR

Goals and intentions

A crow has found a piece of cheese and retired to a branch to eat it.

A fox, wanting it for himself, flatters the crow, calling it beautiful and wondering whether its voice is as sweet to match.

When it lets out a caw, the cheese falls and is devoured by the fox.

1. EAT CHEESE
2. GET CHEESE
3. RELEASE CHEESE
4. OPEN BEAK
5. GIVE LESSON

Mindreading

- Understand character's goals and actions in terms of their beliefs, desires and intentions

- Using different cues

  - words in in written stories

  - images in comics

  - motion and sound in film

  - interaction in games

Belief-Desire-Intention Model

Characters as intentional agents

Stories as plans executed by multiple agents

Understood in terms of their beliefs, desires and intentions

Bratman, M. 1987. Intention, Plans, and Practical Reason. Cambridge, MA: Harvard University Press.

Beliefs

- Beliefs represent the informational state of the agent, in other words its beliefs about the world (including itself and other agents).

- Beliefs can also include inference rules, allowing forward chaining to lead to new beliefs.

- Using the term belief rather than knowledge recognizes that what an agent believes may not necessarily be true (and in fact may change in the future).

Desires

- Desires represent the motivational state of the agent.

- They represent objectives or situations that the agent would like to accomplish or bring about.

- Examples of desires might be: find the best price, go to the party or become rich.

Goals

- A goal is a desire that has been adopted for active pursuit by the agent.

- Usage of the term goals adds the further restriction that the set of active desires must be consistent.

- For example, one should not have concurrent goals to go to a party and to stay at home – even though they could both be desirable.

Intentions

- Intentions represent the deliberative state of the agent – what the agent has chosen to do.

- Intentions are desires to which the agent has to some extent committed.

- In implemented systems, this means the agent has begun executing a plan.

Plans

- Plans are sequences of actions (recipes or knowledge areas) that an agent can perform to achieve one or more of its intentions.

- Plans may include other plans: my plan to go for a drive may include a plan to find my car keys.

- This reflects that in Bratman's model, plans are initially only partially conceived, with details being filled in as they progress.

BDI loop for autonomous agents

- options: option-generator(event-queue)

- selected-options: deliberate(options)

- update-intentions(selected-options)

- execute()

- get-new-external-events()

- drop-unsuccessful-attitudes()

- drop-impossible-attitudes()

Theory of mind

- What I believe, desire and intend

- What I believe others believe, desire and intend

- What the audience believes I believe, desire and intend

- What the audience believes I believe about others, etc.

- Friends, season 5, episode 14 : where everybody finds out (after 2 minutes)

Question-answering in the context of stories

Graesser & Franklin : QUEST Model, 1990

Question-answering in the context of stories

The fox and the crow

A Crow was sitting on a branch of a tree with a piece of cheese in her beak when a Fox observed her and set his wits to work to discover some way of getting the cheese.

Coming and standing under the tree he looked up and said, "What a noble bird I see above me! Her beauty is without equal, the hue of her plumage exquisite. If only her voice is as sweet as her looks are fair, she ought without doubt to be Queen of the Birds. »

The Crow was hugely flattered by this, and just to show the Fox that she could sing she gave a loud caw. Down came the cheese, of course, and the Fox, snatching it up, said, "You have a voice, madam, I see: what you want is wits."

Characters in Little Red Riding Hood

- Red Riding Hood

  - plan

  - attributes

  - actions

  - goals

  - evaluations

- The wolf

  - plan

  - attributes

  - actions

  - goals

  - evaluations

Little Red Riding Hood

- Once upon a time there lived in a certain village a little country girl, the prettiest creature who was ever seen.

- Her mother was excessively fond of her; and her grandmother doted on her still more.

- This good woman had a little red riding hood made for her. It suited the girl so extremely well that everybody called her Little Red Riding Hood.

Little Red Riding Hood

- As she was going through the wood, she met with a wolf, who had a very great mind to eat her up, but he dared not, because of some woodcutters working nearby in the forest.

- He asked her where she was going. The poor child, who did not know that it was dangerous to stay and talk to a wolf, said to him, "I am going to see my grandmother and carry her a cake and a little pot of butter from my mother."

- "Does she live far off?" said the wolf

- "Oh I say," answered Little Red Riding Hood; "it is beyond that mill you see there, at the first house in the village."

- "Well," said the wolf, "and I'll go and see her too. I'll go this way and go you that, and we shall see who will be there first."

Little Red Riding Hood

- The wolf ran as fast as he could, taking the shortest path, and the little girl took a roundabout way, entertaining herself by gathering nuts, running after butterflies, and gathering bouquets of little flowers.

- It was not long before the wolf arrived at the old woman's house. He knocked at the door: tap, tap.

- "Who's there?"

- "Your grandchild, Little Red Riding Hood," replied the wolf, counterfeiting her voice; "who has brought you a cake and a little pot of butter sent you by mother."

- The good grandmother, who was in bed, because she was somewhat ill, cried out, "Pull the bobbin, and the latch will go up."

Little Red Riding Hood

- The wolf pulled the bobbin, and the door opened, and then he immediately fell upon the good woman and ate her up in a moment, for it been more than three days since he had eaten.

- He then shut the door and got into the grandmother's bed, expecting Little Red Riding Hood, who came some time afterwards and knocked at the door: tap, tap.

- "Who's there?"

- Little Red Riding Hood, hearing the big voice of the wolf, was at first afraid; but believing her grandmother had a cold and was hoarse, answered, "It is your grandchild Little Red Riding Hood, who has brought you a cake and a little pot of butter mother sends you."

Little Red Riding Hood

- The wolf cried out to her, softening his voice as much as he could, "Pull the bobbin, and the latch will go up."

- Little Red Riding Hood pulled the bobbin, and the door opened.

- The wolf, seeing her come in, said to her, hiding himself under the bedclothes, "Put the cake and the little pot of butter upon the stool, and come get into bed with me."

Little Red Riding Hood

- Little Red Riding Hood took off her clothes and got into bed. She was greatly amazed to see how her grandmother looked in her nightclothes, and said to her, "Grandmother, what big arms you have! » "All the better to hug you with, my dear."

- "Grandmother, what big legs you have! » "All the better to run with, my child."

- "Grandmother, what big ears you have! » "All the better to hear with, my child."

- "Grandmother, what big eyes you have! » "All the better to see with, my child."

- "Grandmother, what big teeth you have got! » "All the better to eat you up with."

- And, saying these words, this wicked wolf fell upon Little Red Riding Hood, and ate her all up.

Little Red Riding Hood

- Moral: Children, especially attractive, well bred young ladies, should never talk to strangers, for if they should do so, they may well provide dinner for a wolf.

- I say "wolf," but there are various kinds of wolves. There are also those who are charming, quiet, polite, unassuming, complacent, and sweet, who pursue young women at home and in the streets.

- And unfortunately, it is these gentle wolves who are the most dangerous ones of all.

Characters in The Wizard of Oz

- Dorothy
  - plan
  - attributes
  - actions
  - goals
  - evaluations

- Scarecrow
  - plan
  - attributes
  - actions
  - goals
  - evaluations

Characters in The wizard of Oz

- Tinman

  - plan

  - attributes

  - actions

  - goals

  - evaluations

- Lion

  - plan

  - attributes

  - actions

  - goals

  - evaluations

Characters in The wizard of Oz

- Wicked Witch
  - plan
  - attributes
  - actions
  - goals
  - evaluations

- Glinda
  - plan
  - attributes
  - actions
  - goals
  - evaluations

Characters in Star Wars

Characters in Pulp Fiction

- Jules

  - plan

  - attributes

  - actions

  - goals

  - evaluations

- Vincent

  - plan

  - attributes

  - actions

  - goals

  - evaluations

Characters in Pulp Fiction

- Mia

  - plan

  - attributes

  - actions

  - goals

  - evaluations

- Marcellus

  - plan

  - attributes

  - actions

  - goals

  - evaluations

Characters in Pulp Fiction

- Honey Bunny

  - plan

  - attributes

  - actions

  - goals

  - evaluations

- Pumpkin

  - plan

  - attributes

  - actions

  - goals

  - evaluations

Characters in Pulp Fiction

- Fabienne
  - plan
  - attributes
  - actions
  - goals
  - evaluations

- Butch
  - plan
  - attributes
  - actions
  - goals
  - evaluations

Characters in Friends

Rachel

The baby of the gang, spoiled, naive Rachel enters the series in the first episode in her wedding dress, running away from her own big day. She moves in with Monica, gets a menial job serving coffee, soon learns a little bit more about grownup life and ends up dating Ross off and on (and off and on and off and on and...).

Monica

The much-needed Team Mom of the gang, Monica can be somewhat neurotic and obsessive, but puts it all to good use in her job as a chef and keeping the gang fed. She was fat in high school, which is still a source of shame for her and struggles with her parents Parental Favoritism of Ross. She eventually falls in love with Chandler and the two build the stable relationship of the show.

Phoebe

- Phoebe is the group's Cloudcuckoolander who has a bit of a dark past: her father walked out on her mother, her mother died, she was adopted, her adopted mother died, and she spent some time on the street before finding a stable job (as a masseuse) and roommate (Monica), before eventually moving in with her grandmother. She plays the guitar (badly) and sings (badly) at Central Perk, and exhibits traits of The Pollyanna.

Joey

- The Casanova of the gang, a laid-back Italian womanizer, Joey is Chandler's best friend and roommate, and often the group's comic relief. He tries to make a living as an actor. Later seasons turned him into a ditz.

Chandler

- The group's Deadpan Snarker. Not much is known about his work, most likely because it only seems to involve data entry and accounting. His dad runs an all-male burlesque called "Viva Las Gaygas". His mom is a world-famous erotic romance novelist. Neither fact sits well with him; both fuel his neuroses. He eventually falls in love with Monica, and they build a rare stable relationship within the gang.

Ross

- The nerd of the group, Ross is a Hollywood Dateless paleontologist whose wife left him when she realized she was gay. She also turned out to be pregnant, and Ross tries his best to be a good dad to his son Ben. He loves Rachel, but you knew that already, right?

Unagi

Friends tropes (tvtropes.com)

- Cloudcuckoolander: A character with their head in the clouds. They are strangely oblivious to things that everyone else takes for granted.

- Team Mom: In an ensemble show, especially of the fighting kind, there needs to be someone to hold this Ragtag Bunch of Misfits together before they kill each other or wander off into the woods like so many Player Characters. Almost always a female, Team Mom basically acts as the mother figure for everyone else in the group, regardless of age or family relations.

- Hollywood dateless : This trope is a reference to those Sitcom characters who are constantly referred to as being totally inept with their preferred sex and never scoring, when we've seen them with more beautiful people on their arm than most people have ever met, and are sometimes quite attractive themselves.

- Deadpan snarker: A character given to gnomic, sarcastic, sometimes bitter, occasionally whimsical asides. They can vary wildly from rare, funny one-liners to complete obnoxiousness.

Characters in Schnitzler's Reigen (La Ronde)

- THE WHORE

- THE SOLDIER

- THE PARLOR MAID

- THE YOUNG GENTLEMAN

- THE YOUNG WIFE

- THE HUSBAND

- THE LITTLE MISS

- THE POET

- THE ACTRESS

- THE COUNT

Scenes in Schnitzler's Reigen (La Ronde)

- 1 The Whore and the Soldier
- 2 The Soldier and the Parlor Maid
- 3 The Parlor Maid and the Young Gentleman
- 4 The Young Gentleman and the Young Wife
- 5 The Young Wife and the Husband

- 6 The Husband and the Little Miss
- 7 The Little Miss and the Poet
- 8 The Poet and the Actress
- 9 The Actress and the Count
- 10 The Count and the Whore

The Actress and the Count

- ACTRESS: It's you, Count!

- COUNT: Your good mother gave me permission, or of course I wouldn't

- ACTRESS: Please come right in.

- COUNT: I kiss your hand. A thousand pardons-coming straight in from the street-you know, I can't see a thing. Yes . . . here we are. (near the bed) I kiss your hand.

- ACTRESS: Sit down, my dear Count.

- COUNT: Your mother said you weren't very well, Fräulein. Nothing too serious, I hope?

- ACTRESS: Nothing serious? I was dying!

- COUNT: Oh dear me! Not really?

- ACTRESS: In any case it's very kind of you to . . . trouble to call.

- COUNT: Not at all, Fräulein.

The Actress and the Count (2)

- ACTRESS (turning her eyes toward a Large basket of flowers, which stands on a small table by the window): There they are!

- COUNT: Last night you were positively strewn with flowers and garlands!

- ACTRESS: I left them all in my dressing room. Your basket was the only thing I brought home.

- COUNT (kisses her hand): You're very kind.

- (The Actress suddenly takes his hand and kisses it.)

- COUNT: Fräulein!

- ACTRESS: Don't be afraid, Count. It commits you to nothing!

- COUNT: You're a strange creature . . . a puzzle, one might almost say.

The Actress and the Count (3)

- ACTRESS: Fräulein Birken is . . . easier to solve?

- COUNT: Oh, little Birken is no puzzle. Though . . . I know her only superficially.

- ACTRESS: Indeed?

- COUNT: Oh, believe me. But you are a problem. And I've always longed for one. As a matter of fact, last night I realized what a great pleasure I'd been missing. You see, it was the first time I've seen you act.

- ACTRESS: Is that true?

- COUNT: Oh, yes. You see, Fräulein, it's a big problem with the theater. I'm used to dining late. By the time I get there, the best part of the play is over, isn't it?

- ACTRESS: You'll have to dine earlier from now on.

- COUNT: I'd thought of that. Or of not dining at all. There's not much pleasure in it, is there-dining?

The Actress and the Count (4)

- ACTRESS: What do you still find pleasure in, young fogey?

- COUNT: I sometimes ask myself. But I'm no fogey. There must be another reason.

- ACTRESS: You think so?

- COUNT: Yes. For instance, Lulu always says I'm a philosopher. What he means is: I think too much.

- ACTRESS: Lulu?

- COUNT: Friend of mine.

- ACTRESS: He's right . . . it is a misfortune, all that thinking.

- COUNT: I've time on my hands, that's why I think. You see, Fräulein, when they transferred me to Vienna, I thought it would be

- better. It'd be amusing, stimulating, the city. But it's really much the same here as up there.

- ACTRESS: And where is "up there"?

- COUNT: Well, down there, Fräulein, in Hungary. The small towns I used to be stationed in.

The Actress and the Count (5)

- ACTRESS: What were you doing in Hungary?

- COUNT: I'm telling you, dear lady-the army.

- ACTRESS: But why did you stay so long in Hungary?

- COUNT: It happened, that's all.

- ACTRESS: Enough to drive anyone mad, I should think!

- COUNT: Oh, I don't know. In a way you have more to do there than here. You know, Fräulein, training recruits, exercising horses . . . and the surroundings aren't as bad as people say. It's really rather lovely, the big plain there. Such a sunset! It's a pity I'm not a painter. I often thought I'd paint one, if I were a painter. We had a man in our regiment, young Splany, and he could do it. Why I tell you this boring stuff I don't know, Fräulein.

- ACTRESS: Please, Count! I'm highly amused.

- COUNT: You know, Fräulein, it's so easy to talk to you. Lulu told me it would be. It's a thing one doesn't often meet.

- ACTRESS: In Hungary!

- COUNT: Or in Vienna! People are the same everywhere. Where there are more, it gets overcrowded but that's the only differ-ence. Tell me, Fräulein, do you like people, really?

- ACTRESS: Like them? I hate them! I don't want to see them. I never do see them. I'm always alone. This house is deserted!

The Actress and the Count (6)

- COUNT: Just as I imagined: you're a misanthropist. It's bound to happen with artists. Moving in that more exalted sphere

- Well, it's all right for you, at least you know why you're alive.

- ACTRESS: Who told you that? I haven't the remotest idea why I'm alive!

- COUNT: Not really, Fräulein . . . famous . . . celebrated

- ACTRESS: Is that-happiness?

- COUNT: Happiness? Happiness doesn't exist. None of the things people chatter about really exist. . . . Love, for instance. It's the same with love.

- ACTRESS: You may be right there.

- COUNT: Enjoyment . . . intoxication . . . there's nothing wrong with them, they're real. I enjoy something, all right, and I know I enjoy it. Or I'm intoxicated, all right. That's real too. And when it's over, it's over, that's all.

- ACTRESS (grandly): It's over!

Characters in Rashomon

The samurai

His wife

The bandit

The bandit's story

Tajōmaru, a notorious brigand, claims that he tricked the samurai to step off the mountain trail with him and look at a cache of ancient swords he discovered. In the grove he tied the samurai to a tree, then brought the samurai's wife there. She initially tried to defend herself with a dagger, but was eventually "seduced" by the bandit. The woman, filled with shame, then begged him to duel to the death with her husband, to save her from the guilt and shame of having two men know her dishonor.

Tajōmaru honorably set the samurai free and dueled with him. In Tajōmaru's recollection they fought skillfully and fiercely, but in the end Tajōmaru was the victor and the woman ran away. At the end of the story to the court, he is asked about an expensive dagger owned by the samurai's wife: he says that, in the confusion, he forgot all about it, and that it was foolish of him to leave behind such a valuable object.

The wife's story

- The samurai's wife says that Tajōmaru left after raping her. She begged her husband to forgive her, but he simply looked at her coldly.

- She then freed him and begged him to kill her so that she would be at peace. He continued to stare at her with a look of loathing.

- His expression disturbed her so much that she fainted with dagger in hand.

- She awoke to find her husband dead with the dagger in his chest. She attempted to kill herself, but failed in all her efforts.

The dead samurai's story

- The samurai claims that Tajōmaru, after raping his wife, asked her to travel with him. She accepted and asked Tajōmaru to kill her husband so that she would not feel the guilt of belonging to two men. Tajōmaru, shocked by this request, grabbed her, and gave the samurai a choice of letting the woman go or killing her.

- "For these words alone," the dead samurai recounted, "I was ready to pardon his crime." The woman fled, and Tajōmaru, after attempting to recapture her, gave up and set the samurai free. The samurai then killed himself with his wife's dagger. Later, somebody removed the dagger from his chest.

The woodcutter's story

- Tajōmaru begged the samurai's wife to marry him, but the woman instead freed her husband. The husband was initially unwilling to fight Tajōmaru, saying he would not risk his life for a spoiled woman, but the woman then criticized both him and Tajōmaru, saying they were not real men and that a real man would fight for a woman's love.

- They began a duel that was much more pitiful than Tajōmaru's account had made it sound, and Tajōmaru ultimately won through a stroke of luck. After some hesitation he killed the samurai, who begged for his life on the ground, and the woman fled in horror. Tajōmaru could not catch her, but took the samurai's sword and left the scene limping.

Interactive stories : first-person games

- Games experienced from a single point of view

- Since they utilize storytelling conventions of narrative, character, and theme -- can they be seen as examples of electronic literature?

New Media as Story, Performance, and Game

Interactive stories : second-person games

- In these games and playable media it is "you" who plays the roles, "you" for whom the story is being told

  - Dungeons & Dragons and other RPGs

  - Choose Your Own Adventure books and games

  - Kim Newman's novel Life's Lottery

SECOND PERSON

Role-Playing and Story in Games and Playable Media

Interactive stories : third-person games

- Games experienced from multiple points of view (unchartered)

- The ever-expanding capacities of computing offer new narrative possibilities for virtual worlds with intricately developed storyline, many characters, and multiple settings

Authoring and Exploring
Vast Narratives

Game examples : Far Cry 4

- Hidden in the towering Himalayas lies a country steeped in tradition and violence. You are Ajay Ghale, returning to the country of your birth, the lush forests and harsh snow capped summits of Kyrat, to fulfill your mother's dying wish of spreading her ashes.

- This vast and unpredictable country offers visitors opportunity and danger. You quickly find yourself caught up in a rebellion to overthrow the oppressive regime of Pagan Min, a figure known as much for his sense of style and charisma as for his cruelty and naked brutality.

- Navigating the treacherous landscape, you find your fate increasingly determined by the choices you make because in Kyrat, every second is a story.

Game examples : Heavy Rain

- The hunt is on for the Origami Killer, named after his calling card of leaving folded paper shapes on victims. Four characters, each with their own motives, take part in a desperate attempt to stop the killer from claiming a new victim.

- You assume the role of multiple characters, with very different backgrounds, motivations and skills, in a world shaped by Bending Storylines - a dynamic narrative design where your actions and decisions will shape your story.

Game examples : The last of us

- 20 years after a pandemic has radically changed known civilization, infected humans run wild and survivors are killing each other for food, weapons; whatever they can get their hands on.

- Joel, a violent survivor, is hired to smuggle a 14 year-old girl, Ellie, out of an oppressive military quarantine zone, but what starts as a small job soon transforms into a brutal journey across the U. S.

Game examples : Beyond Two Souls

- Live the life of Jodie Holmes, a young woman who possesses extraordinary powers through a psychic link to an invisible entity.

- Experience the most striking moments of Jodie's life as your actions and decisions determine her fate.

- As she traverses the globe, Jodie will face incredible challenges against a backdrop of emotionally-charged events never before seen in a video game.

Game examples : Remember Me

- Neo-Paris. 2084. Personal memories can now be digitized, bought, sold and traded. The last remnants of privacy and intimacy have been swept away in what appears to be a logical progression of the explosive growth of social networks at the beginning of the 21st century.

- The citizens themselves have accepted this surveillance society in exchange for the comfort only smart technology can provide. This memory economy gives immense power over society to just a handful of people.

- Remember Me is a 3rd person action adventure where players take on the role of Nilin, a former elite memory hunter with the ability to break into people's minds and steal or even alter their memories.

- The authorities, fearful of her knowledge and capabilities have arrested Nilin and wiped her memory clean. After her escape from prison, Nilin sets out on a mission to recover her identity, helped by her last and only friend. This search for her past leads to her being hunted by the very people that created this surveillance society.

Characters and story generation

- Minstrel

- Tale Spin

- Universe

- Versu

- Facade

- Nothing for dinner

Price and Stern: Madlibs (1958)

A Fable

Once upon a time there was a very curious girl who was always sticking her nose into everybody's _____ (plural noun). She kept company with a/an _____ (adjective) man named Dave, who was always buying her _____ (adjective) presents...

John Meehan : Talespin (1976)

- The Metanovel: Writing Stories by Computer, 1976

THE COMPUTER MUSEUM REPORT

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SMART MACHINES
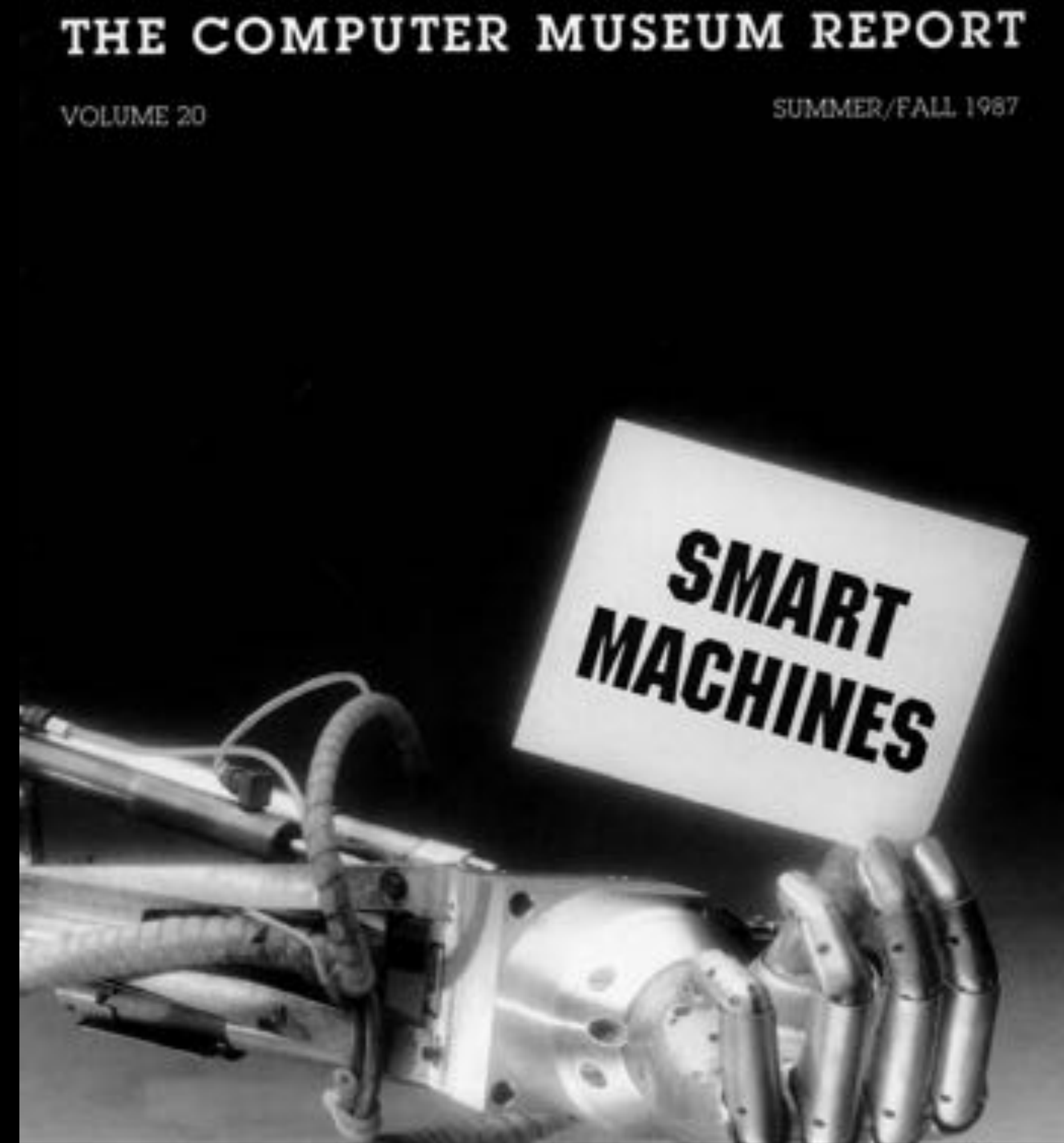
Michael Lebowitz : Universe (1983)

- Lebowitz, Michael. "Creating Characters in a Story-Telling Universe." Poetics 13: (1984) 171–194.

- Lebowitz, Michael. "Story-telling as planning and learning." Poetics 14: (1985) 483–502.

- Lebowitz, Michael. "Planning Stories." In Proceedings of the Ninth Annual Conference of the Cognitive Science Society, Seattle WA. 1987, 234–242.

Name: LIZ CHANDLER (LIZ)
Marriages:
  DON CRAIG [DON] [&MF1] [1980]
  TONY DIMERA [TONY] [&MF3]

IPRS:
  HUSBAND-WIFE TONY DIMERA [TONY] $0/-8//8/8//6/-6//7/-3$
  EX-SPOUSES   DON CRAIG [DON] $-5/-5//4/4//0/0//4/4$

Stereotypes: ACTOR KNOCKOUT SOCIALITE PARTY-GOER
Trait modifiers: (SEX F) (AGE YA) (WEALTH 3) (PROMISCUITY-3)
               (INTELLIGENCE 3)

Overall description:

WEALTH	8
PROMISCUITY	3
COMPETENCE	NIL
NICENESS	0
SELF-CONF	6
GUILE	7
NAIVETE	7
MOODINESS	6
PHYS-ATT	7
INTELLIGENCE	7
GOALS	(FIND-HAPPINESS BECOME-FAMOUS MEET-FAMOUS-PEOPLE)
AGE	YA
SEX	F

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PLOT FRAGMENT: forced-marriage
CHARACTERS: ?him ?her ?husband ?parent
CONSTRAINTS: (has-husband ?her)        (the husband character)
             (has-parent ?husband)  (the parent character)
             ( < (trait-value ?parent 'niceness) -5)
             (female-adult ?her)
             (male-adult ?him)
GOALS: (churn ?him ?her) (prevent them from being happy)
SUBGOALS: (do-threaten ?parent ?her "forget it") (threaten ?her)
          (dump-lover ?her ?him)        (have ?her dump ?him)
          (worry-about ?him)            (have someone worry about ?him)
          (together * ?him)             (get ?him involved with someone else)
          (eliminate ?parent)           (get rid of ?parent (breaking threat))
          (do-divorce ?husband ?her)    (end the unhappy marriage)
          (or (churn ?him ?her)         (either keep churning or)
              (together ?her ?him))     (try and get ?her and ?him back together)
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Universe storytelling algorithm

PICK A GOAL, WITH NO MISSING PRE-CONDITIONS

PICK A PLOT FRAGMENT FOR THAT GOAL, ACHIEVING EXTRA GOALS, IF POSSIBLE

'EXECUTE' THE PLAN, INCLUDING ADDING NEW GOALS TO THE GOAL GRAPH AND 'TELLING'
(PRODUCING OUTPUT), IF APPROPRIATE

Author's goals

MAINTAIN-ROMANTIC-TENSION (MTR):
  in-love (A, B)
  available (A)
  not available (B)
WHERE
  not available (A) if and only if married (A, X) or engaged (A, X) for some X

Scott Turner: Minstrel (1992)

- A model of the author as a problem solver

- Author's goals : theme, consistency, drama, and presentation

- Solved with case-based reasoning (CBR)

Minstrel story structure

Story Schema	
Slots	Meaning
Introduction-Scenes	Introductory scenes which appear at the beginning of the story.
Body	The main body of the story, i.e., scenes that illustrate the theme of the story.
Denouement-Scenes	Denouement scenes which appear at the end of the story.

Author-level story representation

Slots	Meaning
Value	Whether this theme is positive or negative advice.
Decision	The decision the planner of the theme makes.
Consequence	The consequence of the Decision.
Connection	How the Consequence is connected to the Decision.
Planner	The planner who made the Decision.
Active Goals	The planner's active goals at the time of the Decision.
Current Goal	The planner's current goal at the time of the Decision.
Current Plan	The planner's current plan at the time of the Decision.
World Facts	Any important facts about the world at the time of the Decision.

Theme Schema

Minstrel character goals

Class	Goal Type	Description
S-Goal	S-Hunger	Satisfy one's hunger.
D-Goal	D-Control	Control something.
	D-Loc	Change location.
	Destroy	Destroy some object or person.
	Scare	Cause fear in someone.
A-Goal	A-Status	Achieve status in society.
	A-Love	Find romantic love.
	A-Affection	Find brotherly affection.
C-Goal	C-Health	Health crisis.
Meta Goals	Favor	Do a favor for someone.
	Anti-Favor	Cause the failure of someone's goals.
	Retract	Retract a goal from being active.
	Deception	Cause someone to be deceived about something.

Minstrel actions

Act Schema

Slots	Meaning
Type	Identifies the particular sub-type of action.
Actor	Identifies the actor who performs the action.
Object	The thing or person being acted upon.
To	The direction the action is taking.
From	The origin of the action.
At	Where the action occurs.
Status	Whether the actor succeeded in performing the action.

Minstrel action types

Type	Description
ATRANS	Abstract transfer of possession.
ATTEND	Paying attention to something.
GRASP	Take physical possession of an object.
EXPEL	To expel objects from the body.
INGEST	To ingest something into the body.
MBUILD	Thought processes which create conceptualizations.
MTRANS	Transfer of mental information.
MOVE	Movement of a body part.
PROPEL	Application of physical force.
PTRANS	Transfer of physical location.
SPEAK	Vocalization.

Minstrel characters

Type	Description
&KING	The King.
&KNIGHT	A knight of the Round Table.
&PRINCESS	A noble woman of the Court.
&HERMIT	A solitary religious figure, man or woman.
&PEASANT	A lowly serf.

Minstrel goal relations

Name	From	To	Meaning	Example
Subgoal	Goal	Goal	Points from a goal to one of its sub-goals.	A sub-goal of killing a dragon is to be co-located with the dragon.
Subsumes	Goal	Goal	Points from a goal to another goal (usually of another character) that the goal subsumes.	Galahad's goal to do a favor for Jennifer subsumes Jennifer's goal of escaping the dragon.
Plan	Goal	Act	Points from a goal to one or more actions which make up a plan to achieve that goal.	Galahad's plan for killing a dragon is to fight it with a sword.
Intends	Act	State	Points from an act to a new state of the world that the act was intended to cause.	Galahad's fight with the dragon intends the dragon's death.
Unintended	Act	State	Points from an act to a new state of the world that the act caused unintentionally.	Galahad's fight with the dragon has the unintended result of Galahad's injury.
Precond	Act	State	Points from an act to a state of the world that enables the action.	Being co-located with the dragon is a precondition of fighting the dragon.

Minstrel goal relations (continued)

Motivates	State	Goal	Points from a state to a goal motivated by the state.	Jennifer being co-located with the dragon motivates her goal to be elsewhere.
Achieves	State	Goal	Points from a state to a goal achieved by the state.	The death of the dragon achieves Galahad's goal of doing a favor for Jennifer.
Thwarts	State	Goal	Points from a state to a goal thwarted by the state.	Lancelot possessing the magic sword thwarts Galahad's goal of possessing the magic sword.
Supersedes	State	State	Points from a state to a previous state that it supersedes.	Being located in the woods supersedes Galahad's earlier state of being located in the castle.
Reaction	State	State	Points from a state to another state triggered by the first state	Jennifer being dead makes Galahad feel sad.

Richard Evans : Versu (2012)

Characters in versu

- Name: Darth Vader

- "A tall man, whose rather extreme black asthma inhaler causes much comment, Darth frequently gets his long cloak caught in the office elevator doors, but his ability to strangle clients by mental power alone makes his billings department the envy of Madison Avenue."

- Personality: An older, modern man, conscientious, closed, unfriendly, assertive, short-tempered, touchy, violent and combative if provoked.

- Extrait de: Graham Nelson. « Writing for Versu. » iBooks.

Characters in versu

- Concerns: He is concerned with leadership, menace and authority, but not manners or quality as a parent.

- Reputation: By reputation he is menacing but not romantic.

- Back-story : …

- Extrait de: Graham Nelson. « Writing for Versu. » iBooks.

Character qualities in Versu

trustworthiness

distinction

friendship

leadership

accomplishment

attractiveness

style

manners

propriety

intelligence

confidence

health

sense of fun

virtue

piety

menace

worldliness

sensitivity

faithfulness

romantic appeal

compatibility

authority

presentability

morality

Character relationships in versu

- A is a relative of B

- A is an estranged relative of B

- A is a close relative of B

- A is an acquaintance of B

- A is a friend of B

- A is a close friend of B

- A flirts with B

- A has been rejected by B

- A is a protege of B

- A is the boss of B

- A is an employee of B

- A has rejected B

- A has an understanding with B

- A is engaged to B

- A is married to B

- A is a foe of B

- A is an enemy of B

- A is a mortal enemy of B

- A is a protector of B
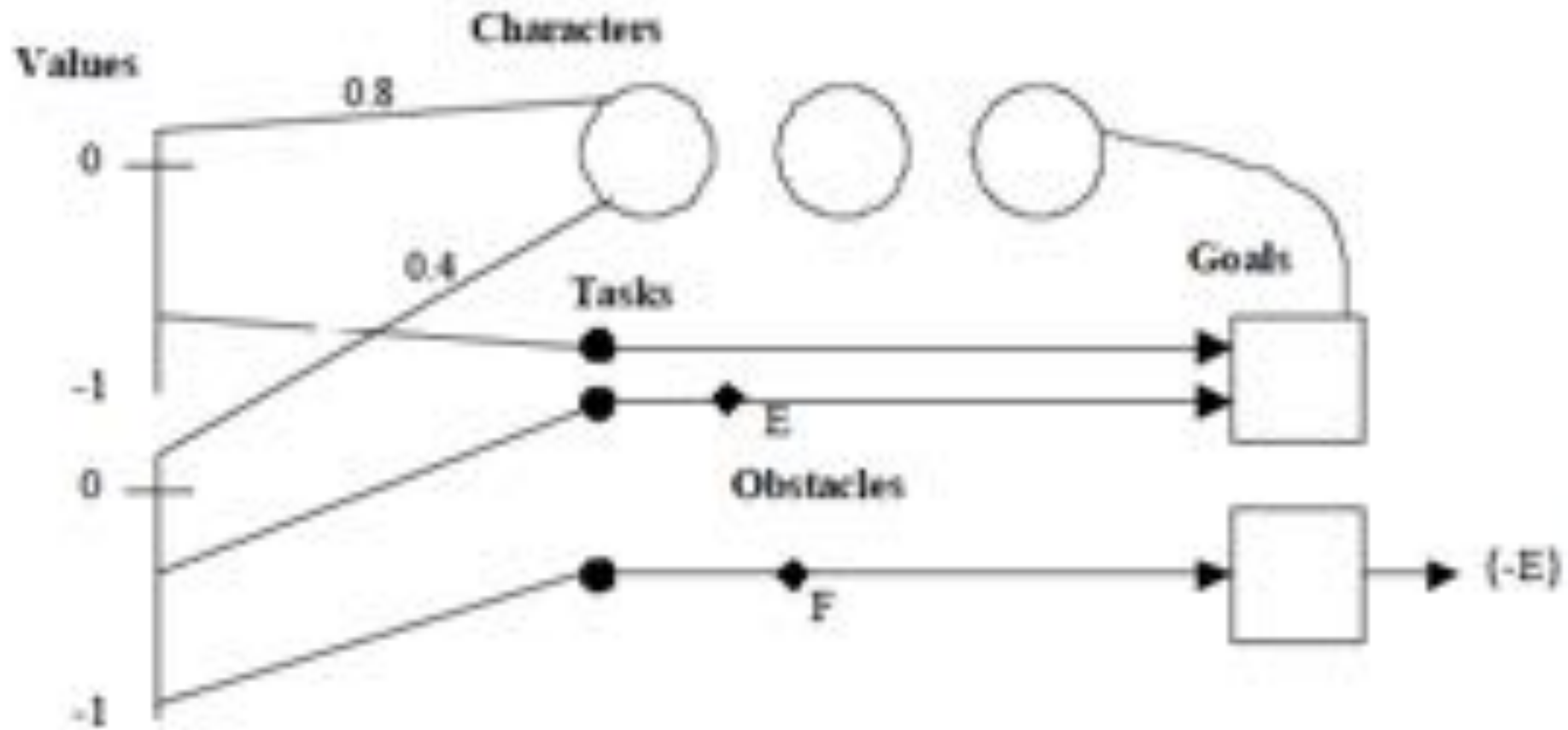
Characters in Facade : Trip and Grace

FACADE by Mateas and Stern

Nicolas Szilas: IDTension (2003-2008)
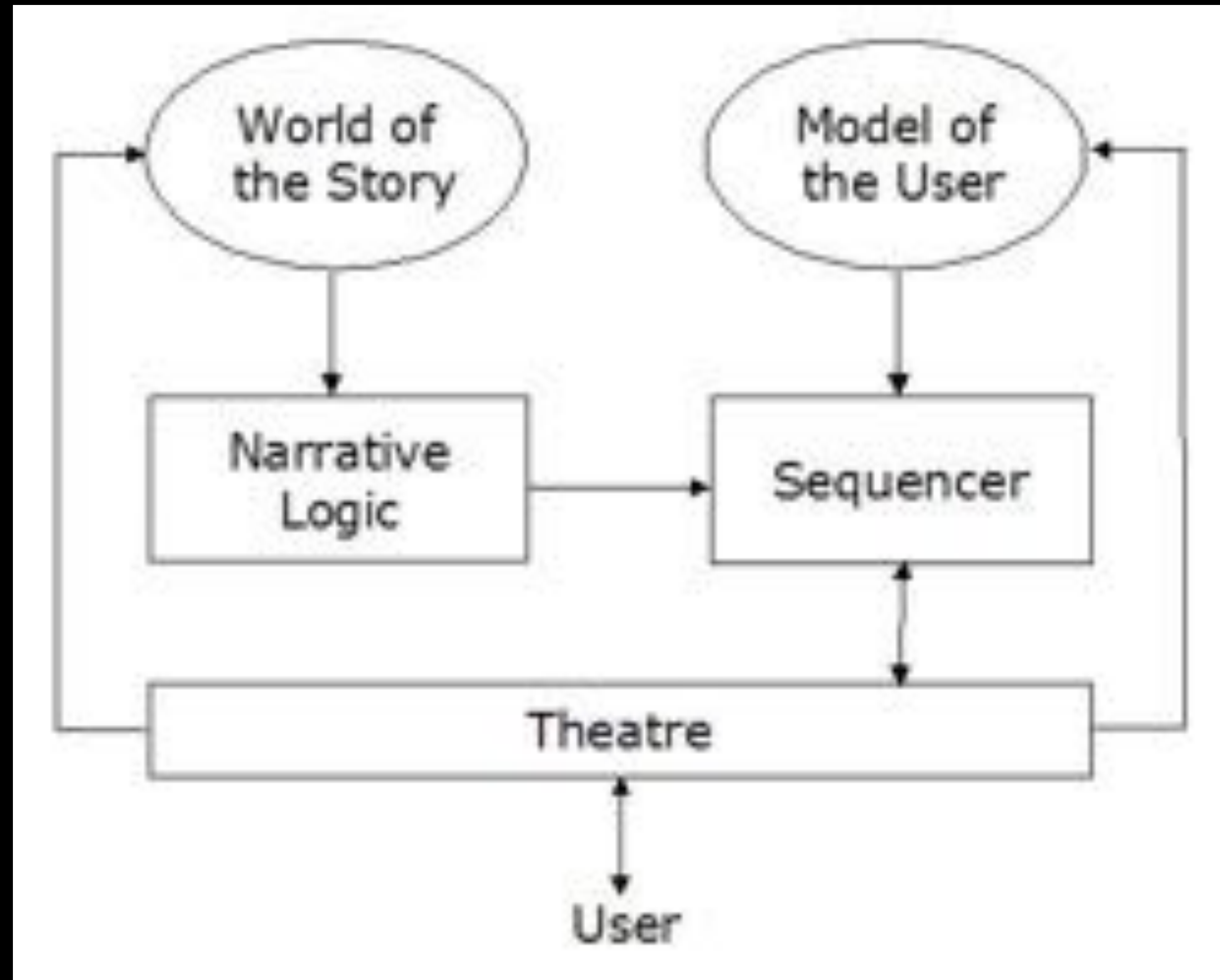
Characters in IDTension

Characters in Nothing for Dinner (2004)

Frank, Lily, Paul

Next week : time and space