Walking Blues
Changes Undersea

A Discussion of Double-Scope
Stories and Computational
Narrative Poetry
“Walking Blues Changes Undersea” is a polypoem (polymorphic poem) that is generated dynamically based upon user input and an author’s composition.

It raises issues regarding entrenched metaphors, double-scope stories, narrative structuring and imagining, and computational approaches to narrative and concept representation.
But what is “generative interactive narrative poetry?”
1 Toward Generative and Interactive Narrative

“Story” is not a well defined technical term.

- Stories are: dynamic interactions of events, actors, and objects (Turner)

- Stories are: sequence of events involving characters. (Jahn)

- 'Events' include both natural and nonnatural happenings. (Jahn)

- Characters get involved by being agents (causing events), victims (patients), or beneficiaries (being affected by events). (Jahn)
1.1 Toward Generative and Interactive Narrative

Narrative is “story” presented via media.

- Discourse Narratology analyzes the stylistic choices that determine the form or realization of a narrative text.

- Story Narratology focuses on the action units that 'emplot' and arrange a stream of events into a trajectory of themes, motives and plot lines.
1.2 Toward Generative and Interactive Narrative

- Cognitive Narratology (if such a thing exists) focuses on underlying cognitive patterns and processes, for example projection of action-stories onto event-stories (the events are actions pattern), how these arise from image schema, blending, etc.

- Computational Narratology (our version) focuses on insights from the cognitive version and computer science approaches to integrating structures in order to implement elements from the discourse version.
1.3 Toward Generative and Interactive Narrative

- Generation is enabled by using an algorithm for conceptual blending (Alloy) to compose axioms describing thematic content on the fly, and the GRIOT system, which can compose narrative clauses according to reconfigurable discourse structures.

- Interaction is incorporated by allowing user input to guide the selection of “conceptual spaces” to be integrated, and the selection of phrases of specific clause types to be configured.
1.4 Toward Generative and Interactive Narrative Writing in GRIOT

Theme Domains & Keywords

- Angels Domain:
  - Keywords: angel, feather, wing, cloud, ...
  - Axioms: (Person: cupid inspires Emotion: desire)
  - (Person: cherub strokes Object: harp)
  ...

- Demons Domain:
  - Keywords: demon, pitchfork, devil, brimstone, ...
  - Axioms: (Person: demon spawns Emotion: fear)
  - (Object: fire burns Person: soul)
  ...

- Europe Domain:
  - Keywords: Europe, Greece, Viking, ...
  - Axioms: (Person: Nordic–beauty inspires Emotion: awe)
  ...

- Africa Domain:
  ...

Phrase Templates

- Opening Phrases:
  - She begins her days (verb-clause)
  - Each morning foes called her (singular-noun)
  ...

- Narrative Phrases:
  - They would call her (singular-noun)
  - or (singular-noun)
  - (singular-noun)

- Evaluative Phrases:
  - grave times indeed
  - she could cry
  ...

- Closing Phrases:
  ...

Narrative Structure

- Opening clause starts:
  - Consists of. <abstract phrase> + <orientation phrase>

- Narrative clause follows:
  - <opening clause>
  - <narrative clause>
  - <evaluative clause>

- Evaluative clause follows:
  <narrative clause>

- Closing clause follows:
  <evaluative clause>
  ...
1.5 Toward Generative and Interactive Narrative

GRIOT Architecture
2 An example

Walking Blues Changes Undersea (excerpt from Lisp Demonstration):

my world was so small and heavy,
rooms for waking, bathing, consuming, sweating, sunning,
devouring, sleeping, and waking
my first movement of the day awaits, I
-> stretch
and encounter fishermen, soft grogginess
a whiff of sea passes through me
reciting a pop song like a mantra while washing, I decide to
-> scrub
daily tidepool quiet cleaning
an Atlantean aroma
...

...
3 Constituents of the Polypoem

- The experience traversing one day. (Life is a Journey)
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- The experience of a sinking environment, the Atlantis story. (Down is Bad)
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A double-scope story...but there is more going on here.
3 Constituents of the Polypoem

- The experience traversing one day. *(Life is a Journey)*
- The experience of a sinking environment, the Atlantis story. *(Down is Bad)*
- Emotional Disposition.
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- Conventional rhetorical structure from Interactive Fiction, conversation, and improvisational storytelling.
3 Constituents of the Polypoem

- The experience traversing one day. *(Life is a Journey)*
- The experience of a sinking environment, the Atlantis story. *(Down is Bad)*
- Emotional Disposition.
- Conventional rhetorical structure from Interactive Fiction, conversational stories, and improvisational storytelling.
- User input structured by the rhetorical structure above.
If you become a fish, I will become a fisherman.

Well then I will become a bird and fly away.

Then I will become a hunter and hunt you.

Then I will become a flowering herb in the wild.

Then I will become water and sprinkle you.

Then I will become a cloud and float away to America.

Then I will become the sea breeze to carry you.

...
5 Conclusions

- Double-scope stories (polypoems) are implemented via structural blending.
- Some elements being integrated are media representations of concepts, and some are components of rhetorical structures.
- Turner’s account of double-scope stories suggests analysis of texts including integration “across levels,” i.e. concepts with structures.
- Narrative discourse does not only arise from these rhetorical structures, however. It also arises from causality, temporal succession, etc., all addressed in blending theory.
Questions for Discussion

- Can we provide a precise account of how “rhetorical structures” such as conversation or types of narrative discourse play a role in blending?

- Can we provide a precise description of how narrative arises from a combination of vital relations, compression, and the integration of narrative structures?

- Can we be more explicit about the mapping between structural blending (integrating sign systems) and conceptual blending?

- Can we distinguish carefully between integrating story elements and integrating stories?
Thanks

- Joseph Goguen for his advisorship, support, collaboration, and ideas.
- Seana Coulson for organizing this meeting, and for conversations about this research and blending theory.
- Gilles Fauconnier for support of this strange application of blending theory and his input over the past few years.
- Rafael Nuñez for support and many conversations as I was his TA, and afterwards.