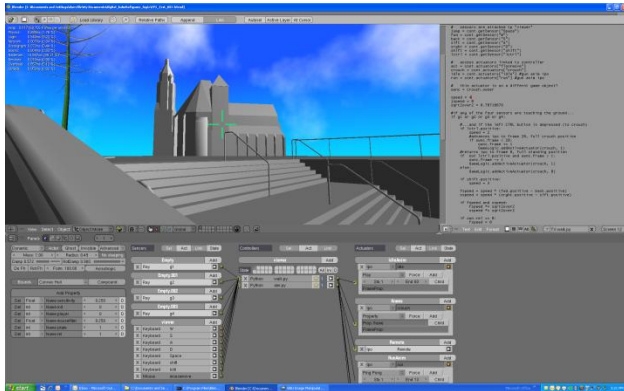


A Digital Game-Based Learning Approach to Developing Situated Cultural Competency



David O. Neville, PhD, MS

Presentation outline

- **Why computer games?**
 - ▣ Affordances
 - ▣ Example of gameplay
- **Digital narrative**
 - ▣ Situated cognition, SLA, game studies
 - ▣ Example of narrative traces
 - ▣ Design rubric
- **The *DigiBahn* Project**
 - ▣ Demo
 - ▣ Tools

Why computer games?



Computer games have unique *affordances* that make them especially useful in culture- and task-based foreign language curricula.

Battlefield 2142



[Screen Capture](#) / [Web Video](#)

Affordances



- Community of learners
- Open-ended exploration
- Goal-based scenario
- Ill-structured, emergent problem space
- Situated cognition
- Transferable mental schemata

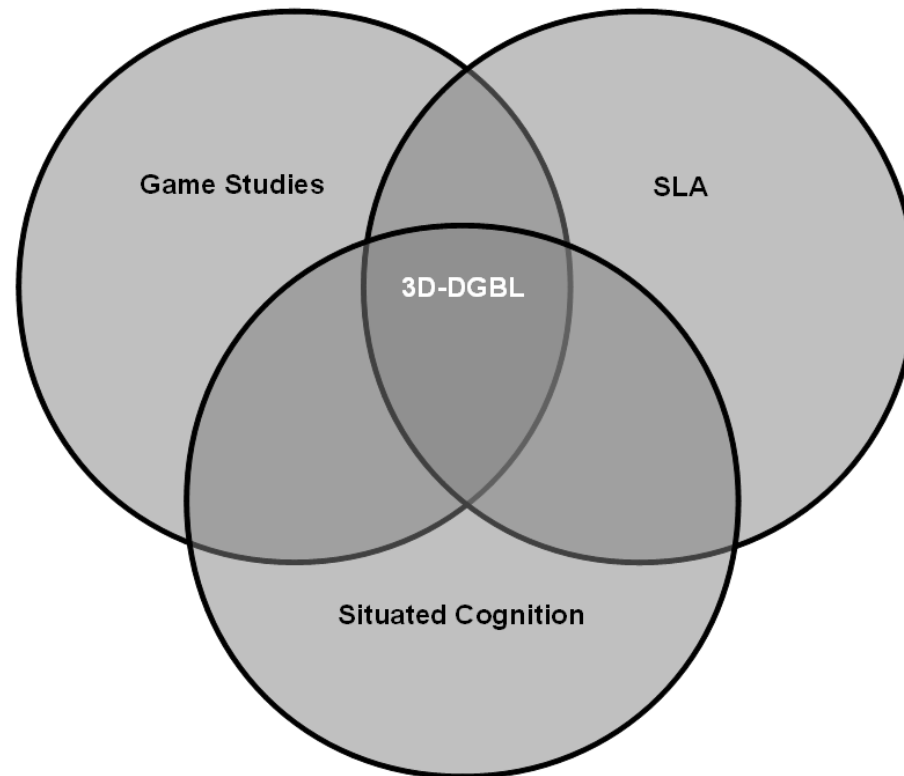
The problem

How does one design for efficient and effective learning in 3D-DGBL environments when **everything** is a potential learning situation, when it is **impossible** to predict which path the learner will take, and when **every** path is a valid course of study? And, finally, how can this type of gameplay be adapted for use in SLA contexts?

Game telling stories



Aligning narrative



Narrative: Situated cognition

Main Points:

Knowledge is actively constructed at the intersection of competing narratives, personal and communal, and is the result of thinking and acting within communities of practice. We apprehend reality via narrative structures.

Key Research:

Bruner (1986, 1990, 1991)

Lave & Wenger (1991)

Narrative: SLA

Main Points:

Narrative functions as a "third place" in and through which an individual can refashion her identity and reexamine the roles she plays within a new community of practice.

Key Research:

Lantolf (2000)

Kramsch (1993, 2000)

Block (2007)

Pavlenko and Lantolf (2000)

Narrative: Game studies

Main Points:

Narrative is revealed in a non-linear and unpredictable fashion, which can be explained only in light of prior game events and the internal thought processes of the player at the moment an action is performed. Narrative is either ***embedded*** or ***emergent***.

Key Research :

Juul (2001)

Kücklich (2003)

Salen and Zimmerman (2004)

Thomas and Brown (2009)

Possible solution?

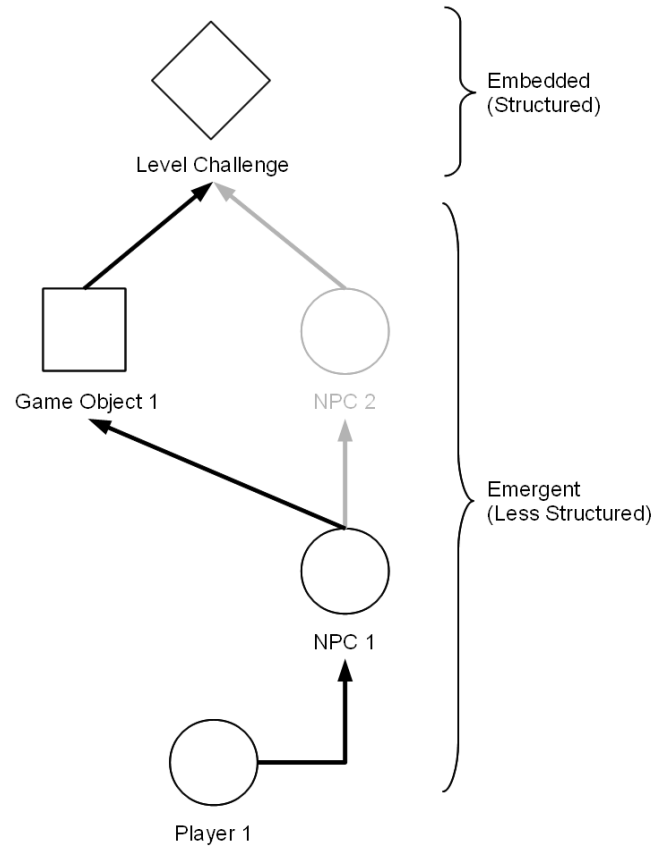
Computer games tell stories and generate narrative structures. These structures can be adapted to:

1. Teach situated cultural and linguistic knowledge;
2. Combine action with learning;
3. Integrate the learner into communities of practice; and
4. Allow the learner to explore questions of identity.

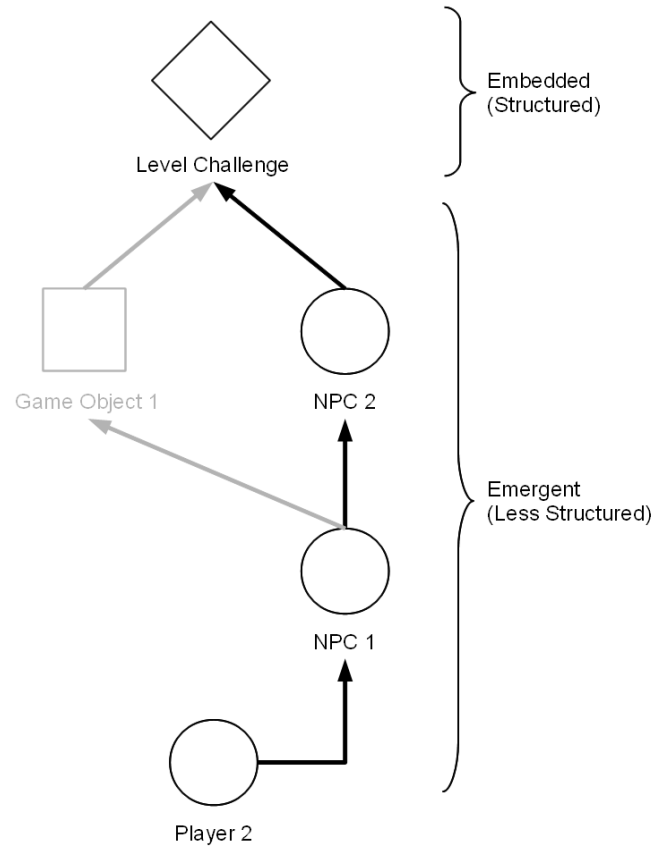
The problem of agency



Narrative traces: Example 1



Narrative traces: Example 2



Granularity of learning objects



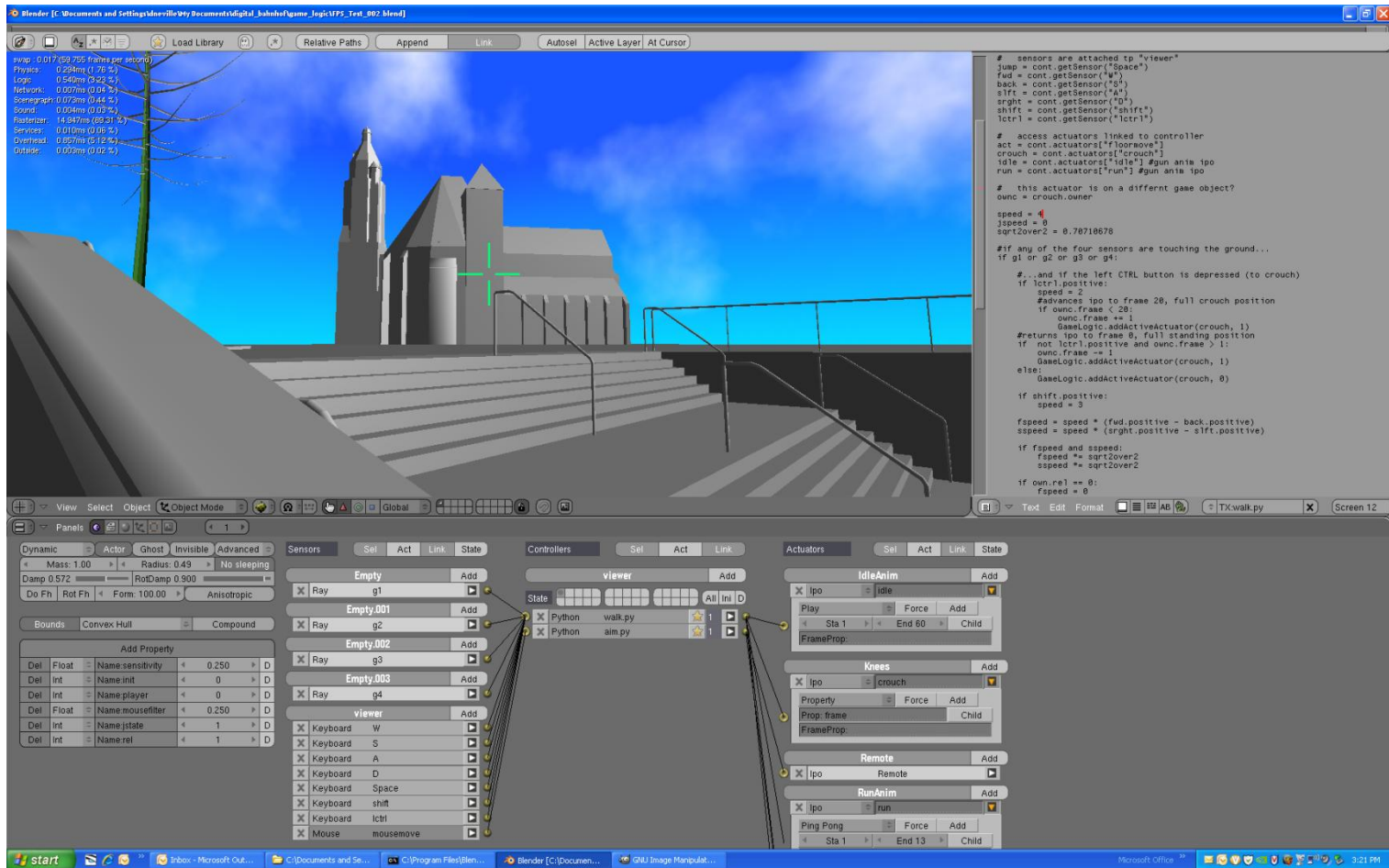
The question



The *DigiBahn* project

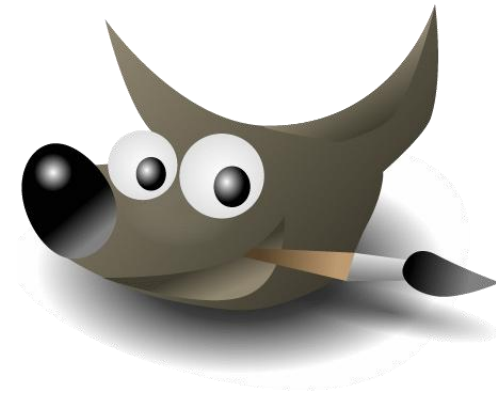
The *DigiBahn* Project is an interdisciplinary software development initiative that will program a 3D digital game-based learning environment for the teaching of the German language, vocabulary, and culture to beginning university students.

The *DigiBahn* project



Tools

- Blender
 - ▣ 3D content creation suite
 - ▣ Built-in game engine
 - ▣ Python programming interface
- GIMP
 - ▣ Photo editor
- Unity
 - ▣ Authoring tool for 3D games
 - ▣ JavaScript, Boo, and C# programming interfaces



Conclusion

Digital game-based learning:

- requires a constant cycle of hypothesis formulation, testing, and revision.
- has great potential for second language acquisition programs.
- must be aligned with the curriculum.

Thank you!

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