The Pedagogy of Commercial Games

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This session examines successful commercial games to connect the designs of these games with known learning and instructional design theories.

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Pedagogy & Games

How I got here…

- Learning how to design and create programs
- Teaching how to design and create programs
- Teaching how to create games (already designed)
- Thinking about how to design games
- Thinking about how to design and create educational games.

….. How to *teach* how to design and create educational games

"The invention of new methods
that are adequate to the new ways
in which problems are posed
requires far more than a simple modification
of previously accepted methods."

Vygotsky

New Ways to Pose Problems?

- Complex
- Ill-structured
- Interconnected
- Different perspectives
- Emergent
- Affective
- Value laden

Digital Games = New Method

New Ways to View Learning

- Constructivism
- Constructionism
- Envactivism
- Activity Theory
- Situated Cognition

Digital Games

More than a simple modification of previously accepted methods…

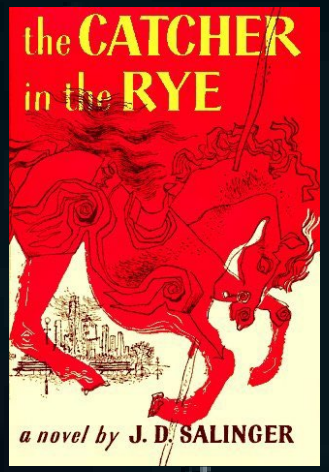
Now what?

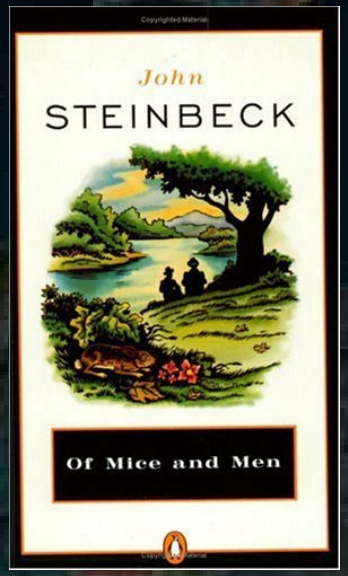
Look at HOW…

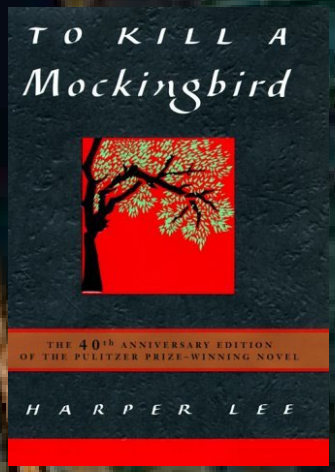
Look at exemplars:

1. “Old Media”
2. New Media

Why are these such good teachers?







How Do Games Teach?

To find out how games *should* teach, first look at how games *do* teach.

Place in familiar context:
Learning & Instructional Theories

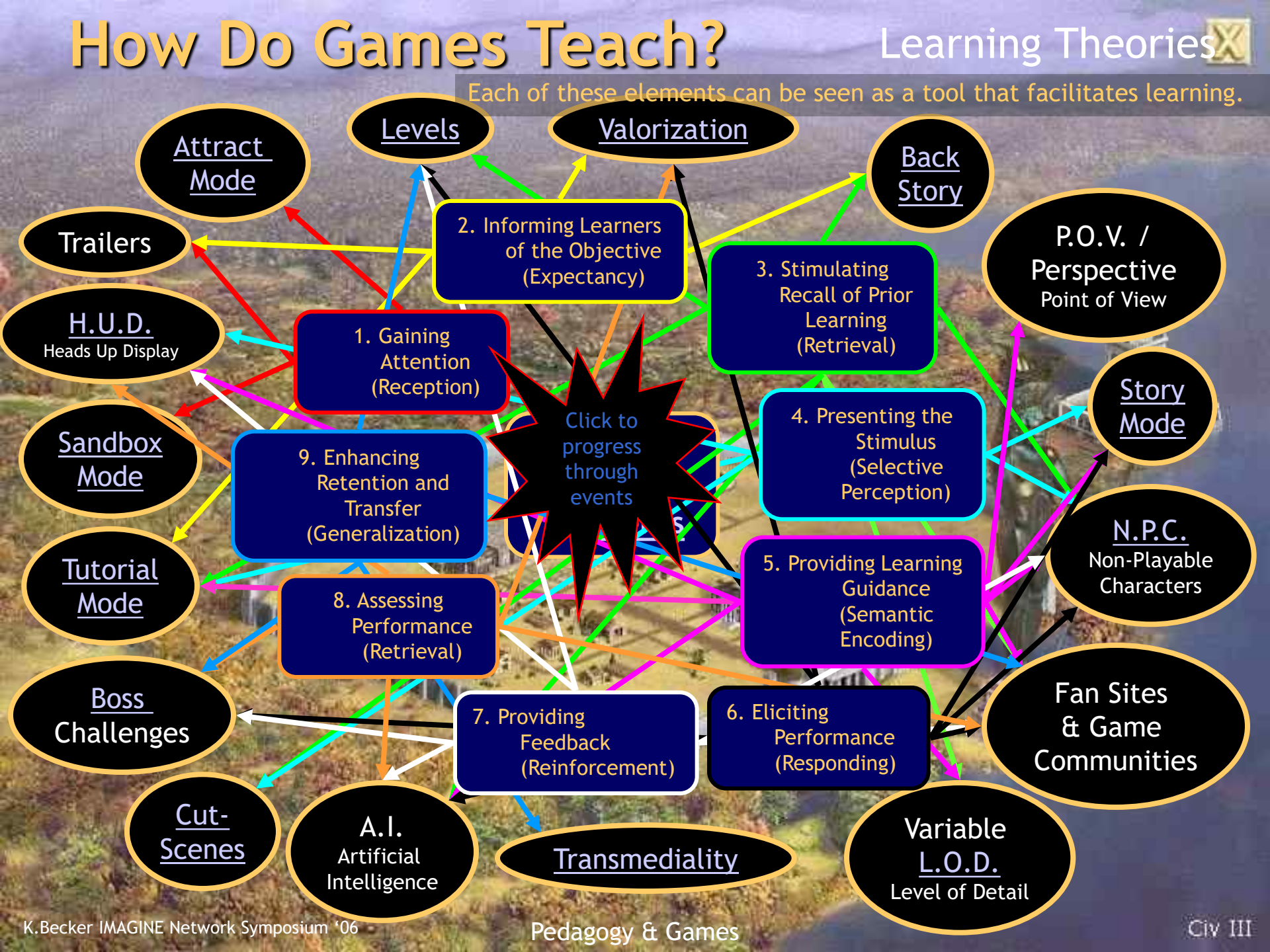
Find contact points.

Gagné
Reigeluth
Kolb / Keirsey / Gregorc / Felder

How Do Games Teach?

Learning Theories

Each of these elements can be seen as a tool that facilitates learning.



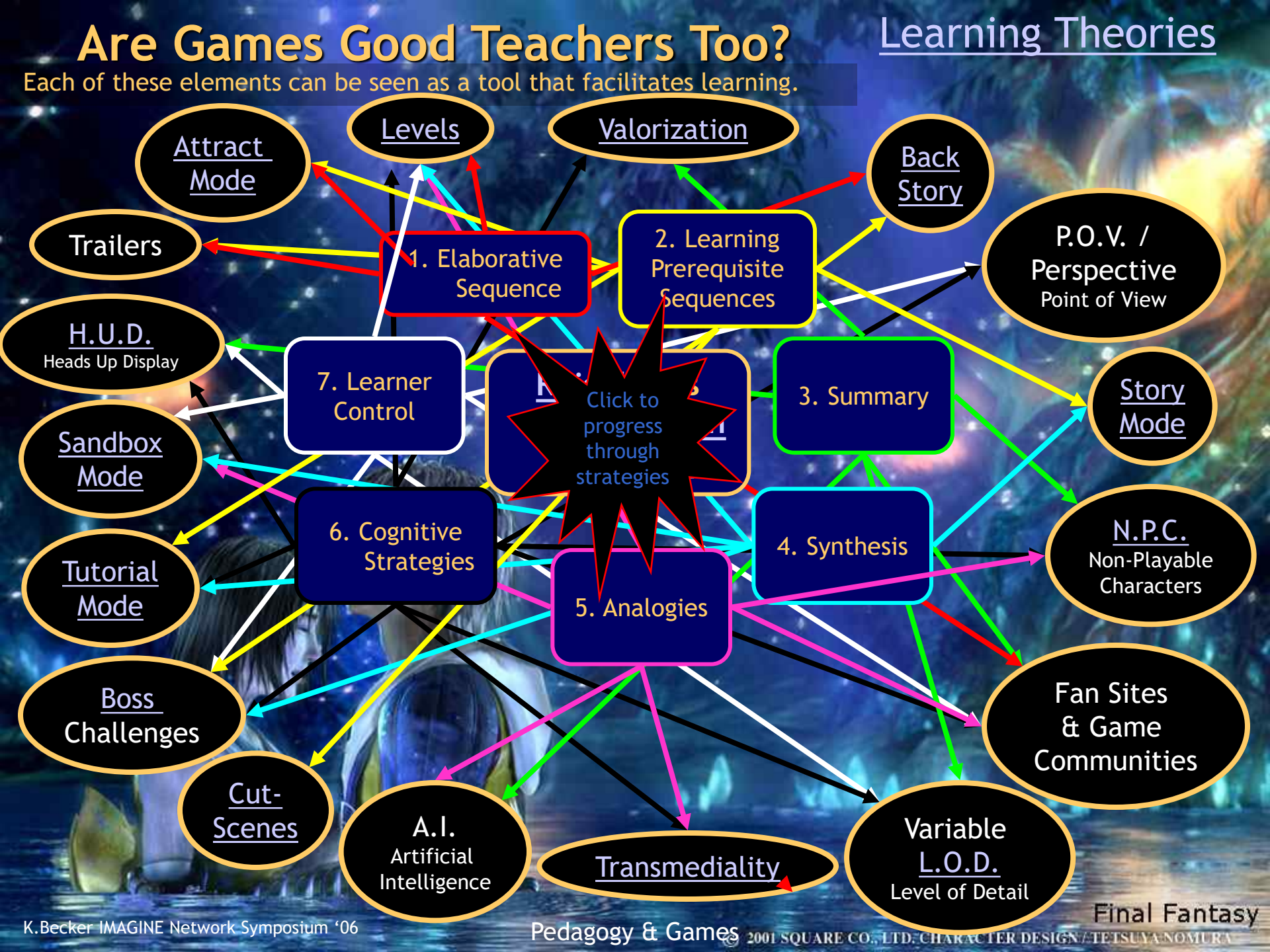
Are Games Good Teachers Too?

Another example..

Are Games Good Teachers Too?

Each of these elements can be seen as a tool that facilitates learning.

Learning Theories



How Do Games Teach?

Learning Styles

- Kolb / Keirsey

How Do Games Teach?

Learning Styles

Idealist

Kolb's "Races"

Keirse

"Race

Accomodator

Photo: Legend of Zelda www.free-computer-wallpapers.com

Converger

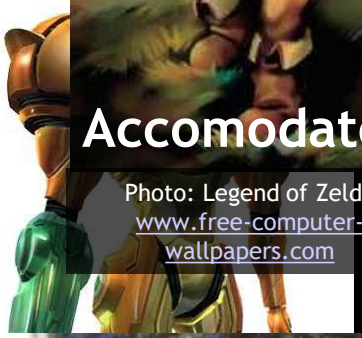
Photo: Halo 2 www.free-computer-wallpapers.com

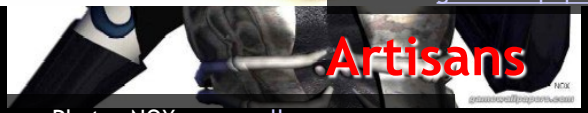
Assimilator

Photo: gamewallpapers.com

alrea

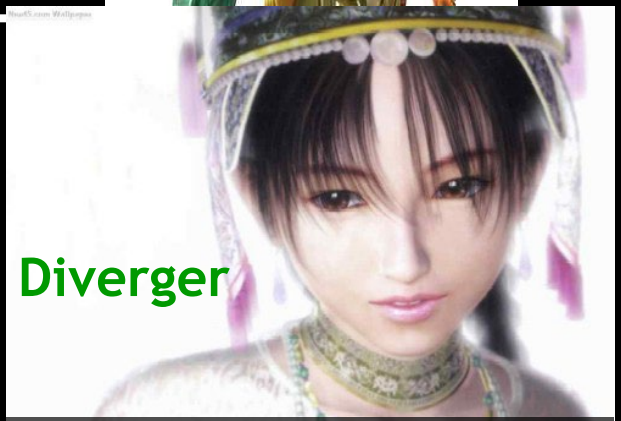
vario





Artisans

Photo: NOX gamewallpapers.com



Diverger

Photo: Shenmue http://www.boolsite.net

How Do Games Teach? Learning Styles

- Gregorc

How Do Games Teach? Learning Styles

- Concrete-Sequential: Super Monkeyball

Screenshot: mobygames.com

Gregorc's System of Learning

Syberia http://www.boolsite.net

Screenshot: mobygames.com

Screenshot: mobygames.com

How Do Games Teach?

Learning Styles

- Felder

How Do Games Teach?

Learning Styles

Felder's Index of Learning Styles

(doing)

acts, processes)

eeing, picturing)

d

Felder's Index o

nin

versus

Reflective (thinking)

Verbal (hearing, reading, saying)

versus

Sequential (step-wise)

Roller Coaster Tycoon

Global (leaps, random)

Psychonauts

Screenshot: gamespot.com

How Do Games Teach?

Learning Styles

Most successful games ALREADY allow players to approach from the perspective of various styles.

What other media lets us do that?

Next Steps

Knowing ***why*** a game is good is not the same as knowing ***how*** to make a game good, but it is a necessary first step.

OUTCOMES *(moving towards…)*:

- Clear evidence that existing designs of commercial games *already* embody sound pedagogy, as found in established learning theory, even if that connection was neither conscious, nor deliberate on the part of the designers.
- An understanding of how digital games can be used as instructional technology informed by learning theory.
- A theory/theories of the kinds of learning best served through this technology.
- A synthesis of core requirements for instructional design relevant to games.

Next Steps

Instructional Games Design will require a thorough grounding in *BOTH* Instructional Design *AND* Games Design.

Merrill's First Principles
(applied to instructional game design - core requirements?):

1. Engagement - Solving realistic (real-life) problems
2. Activation - Start Where the player/learner is.
3. Demonstration - Show them what we want them to learn - don't just tell them.
4. Application - New knowledge must be applied to solve problems.
5. Integration - Motivate to apply what was learned