

Assembling the Puzzle: Five Tech Pieces for Education – Day 2

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Transformation

Redefinition

*Tech allows for the creation of new tasks,
previously inconceivable*

Modification

Tech allows for significant task redesign






Augmentation

*Tech acts as a direct tool substitute, with
functional improvement*

Substitution

*Tech acts as a direct tool substitute, with no
functional change*

Enhancement

Social	Mobility	Visualization	Storytelling	Gaming
200,000 years	70,000 years	40,000 years	17,000 years	8,000 years
				

Session 3: Mobility and Digital Storytelling

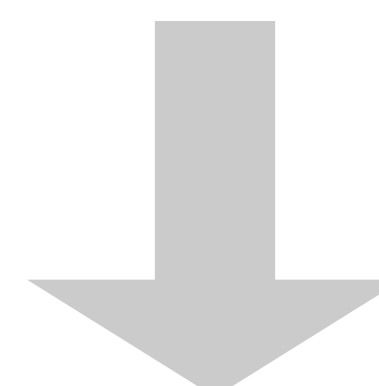
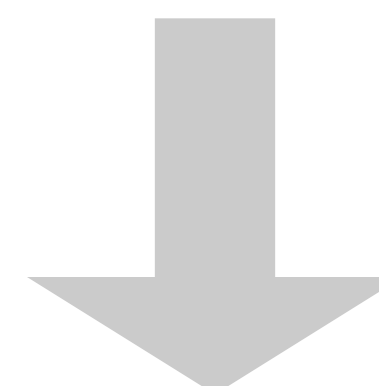
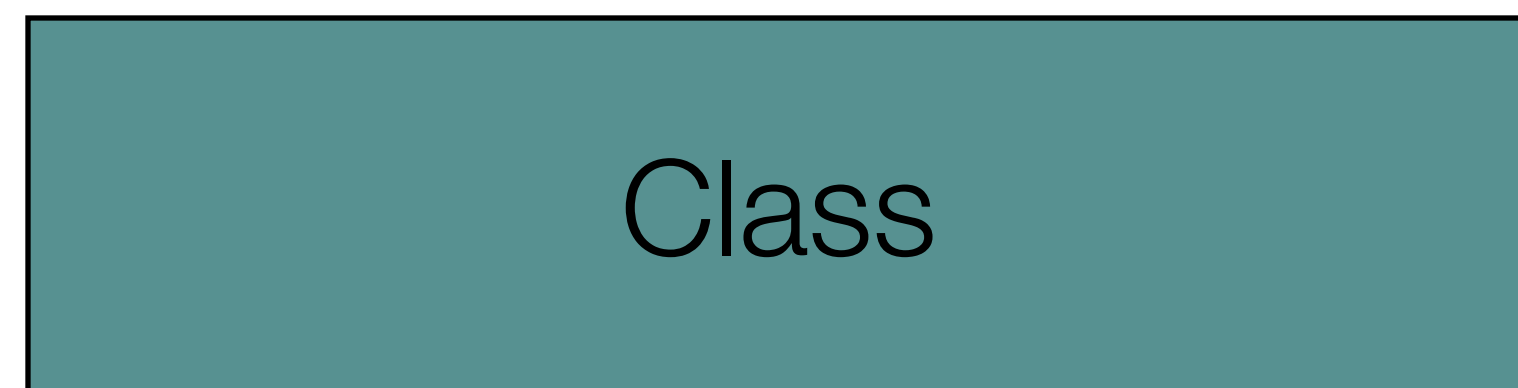




Intimacy



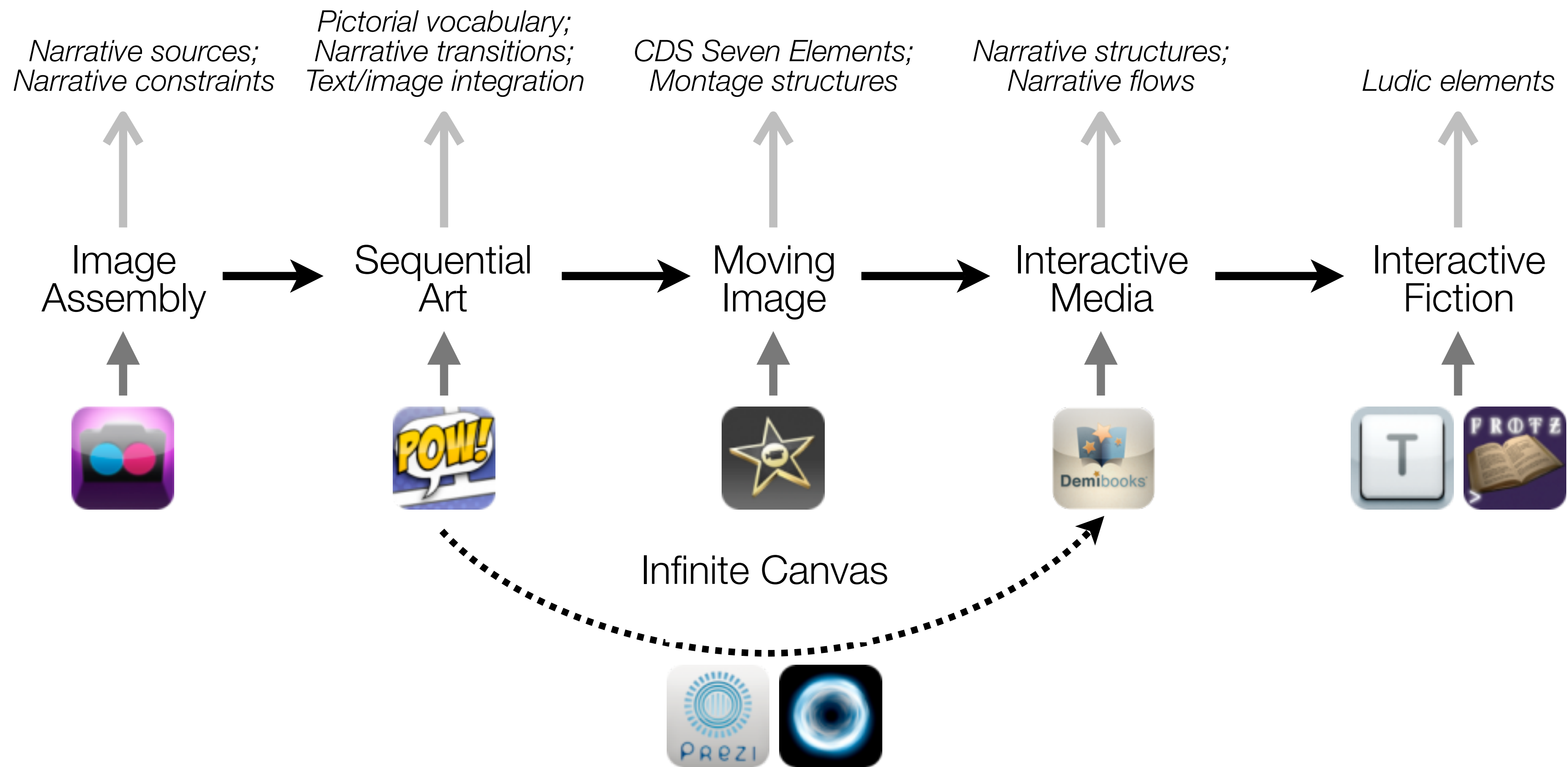
Embeddedness

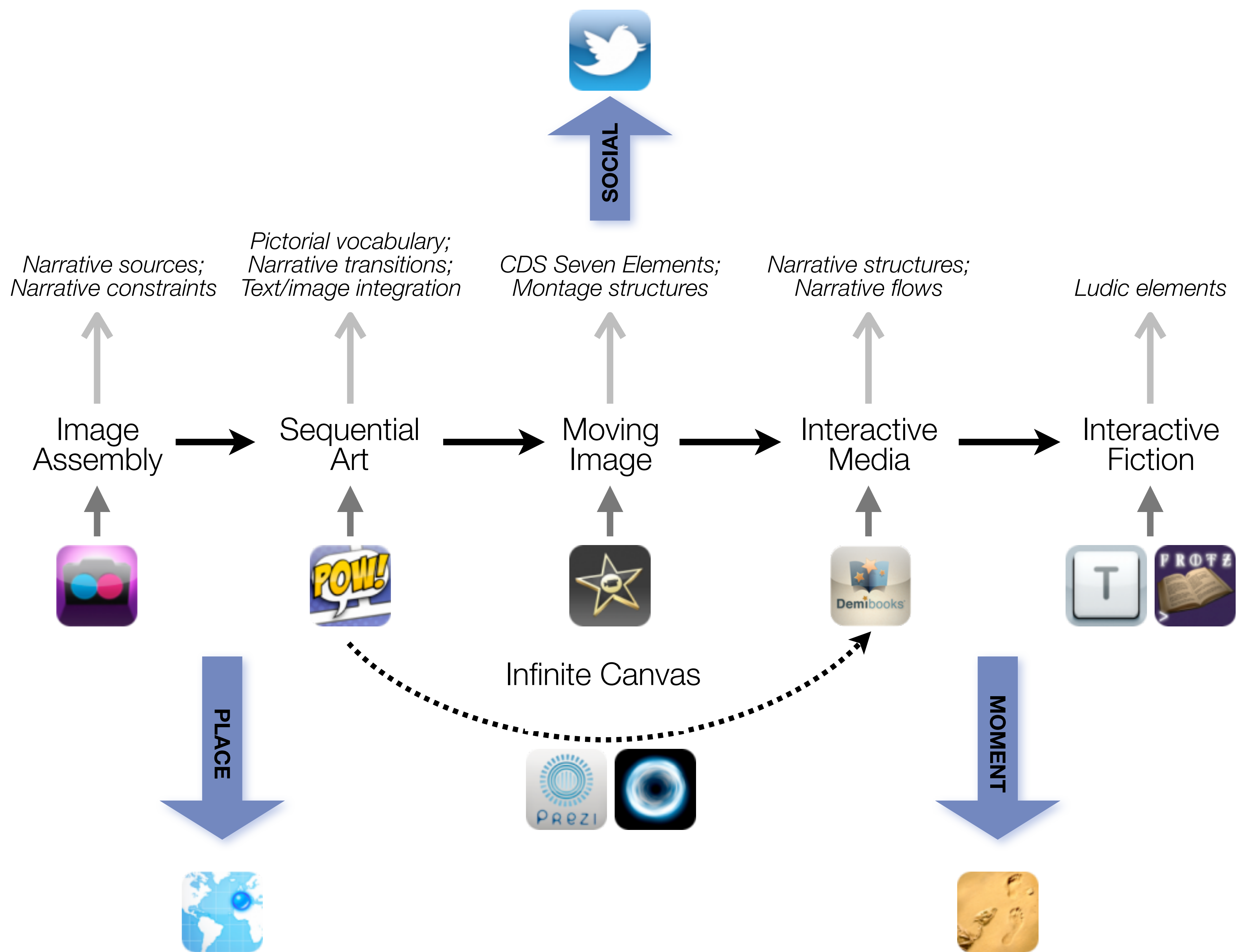


The SAMR Ladder: Questions and Transitions

- **Substitution:**
 - What will I gain by replacing the older technology with the new technology?
- **Substitution to Augmentation:**
 - Have I added a feature to the task process that could not be done with the older technology at a fundamental level?
 - How does this feature contribute to my design?
- **Augmentation to Modification:**
 - How is the original task being modified?
 - Does this modification depend upon the new technology?
 - How does this modification contribute to my design?
- **Modification to Redefinition:**
 - What is the new task?
 - Will it replace or supplement older tasks?
 - How is it uniquely made possible by the new technology?
 - How does it contribute to my design?

Digital Storytelling







741.5
COMICS PRESENTS

five card Nancy

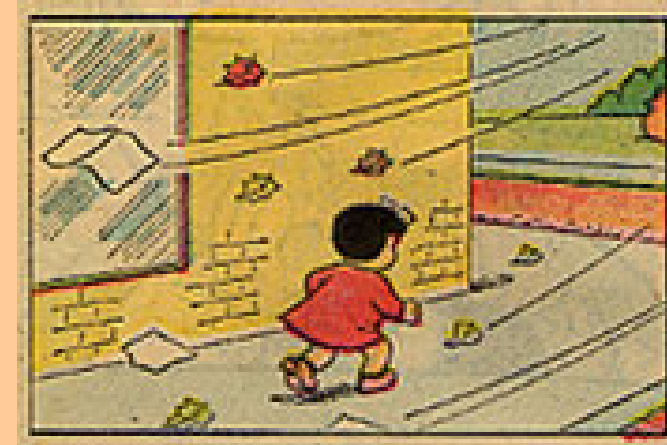


INTRODUCTION

The Game

There are no panels in the sequence yet.

Click on a panel to add it to the sequence:



THE GAME

HALL OF FAME

- [Draw new panels](#)
- [Reset the sequence](#)
- [Mail this sequence to a friend](#)
- [Five-Card Nancy message board](#)

Card game concept © 2004 Scott McCloud · script © 2004 Dave "The Knave" White
Nancy is © 2004 United Feature Syndicate (used without permission). Last updated 12/01/04.

Five Card Flickr Story



[Home](#) [Gallery of Stories](#) [Play a Round](#) [Show Stories](#) [Random Story](#) [Source Code](#)

Are you ready to play Five Card flickr?

As of Jun 12 2012, 04:44:48 am EDT there have been [6448 Five Card Flickr Stories](#) created from the pool of [3967 flickr photos tagged with "5cardflickr"](#)

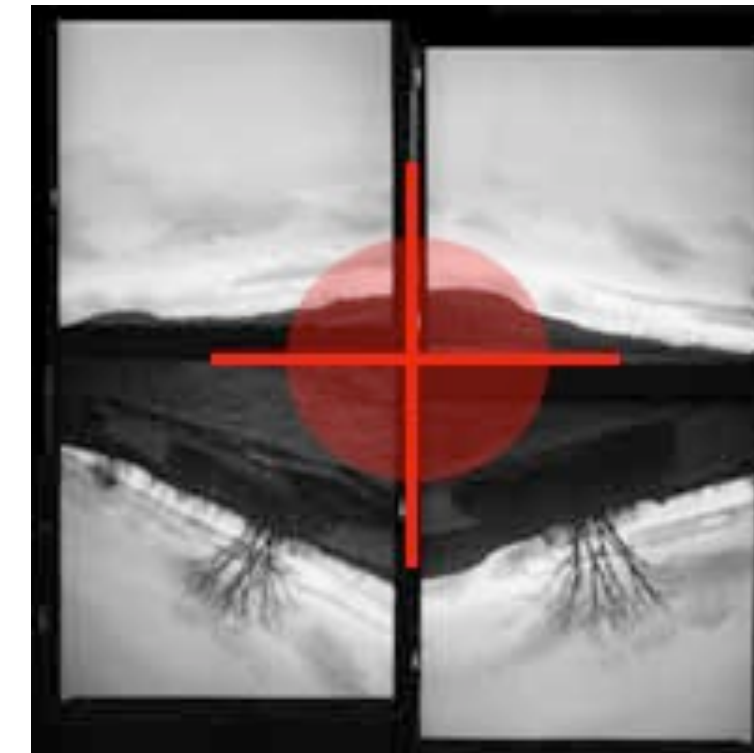
Pick an image to add it to your story



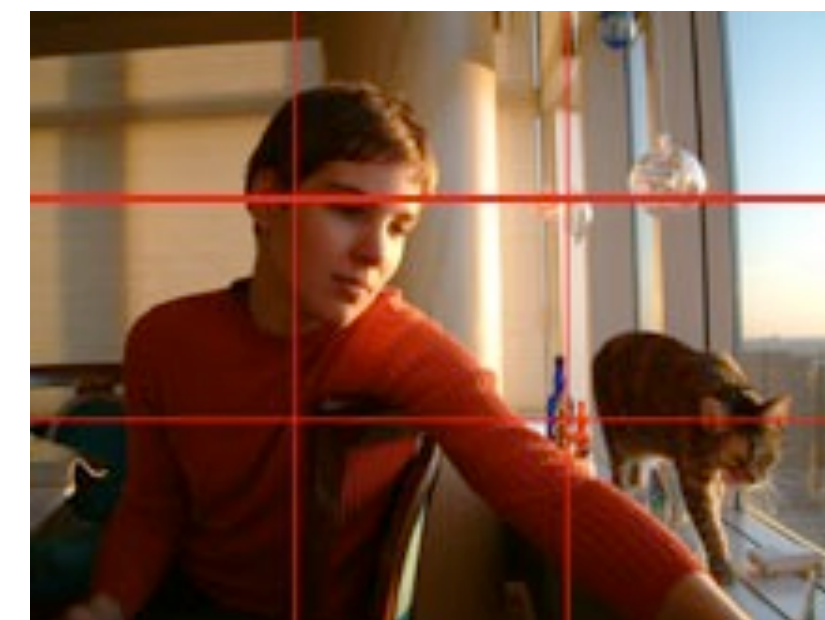
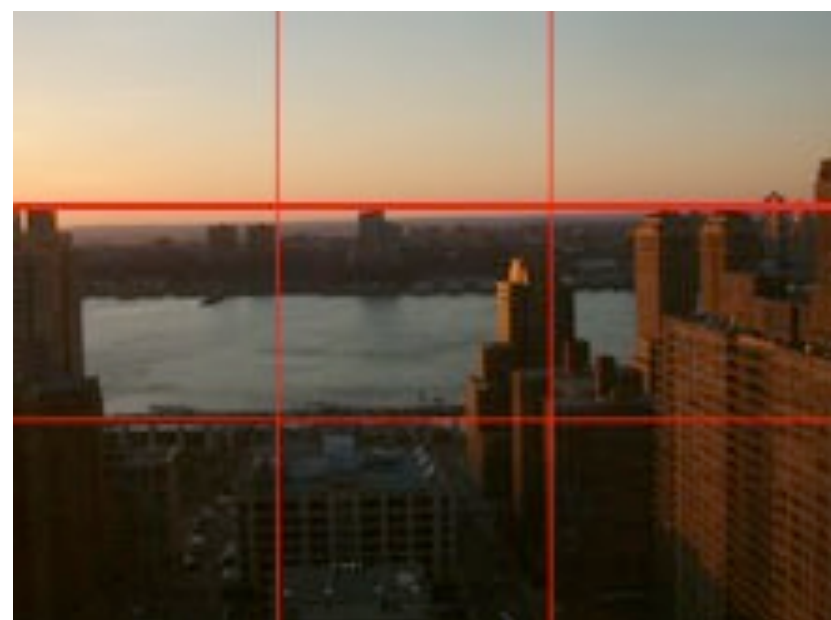
flickr photo credits: (1) [bionicteaching](#) | (2) [Serenae](#) | (3) [Serenae](#) | (4) [Serenae](#) | (5) [Serenae](#) |

Meaning and the Camera Frame

The Power of the Center(s)



The Rule of Thirds



Lines of Direction



Leading the Action



Common Shots

- Big Close-Up



- Close-Up



- Medium Shot



- Long Shot

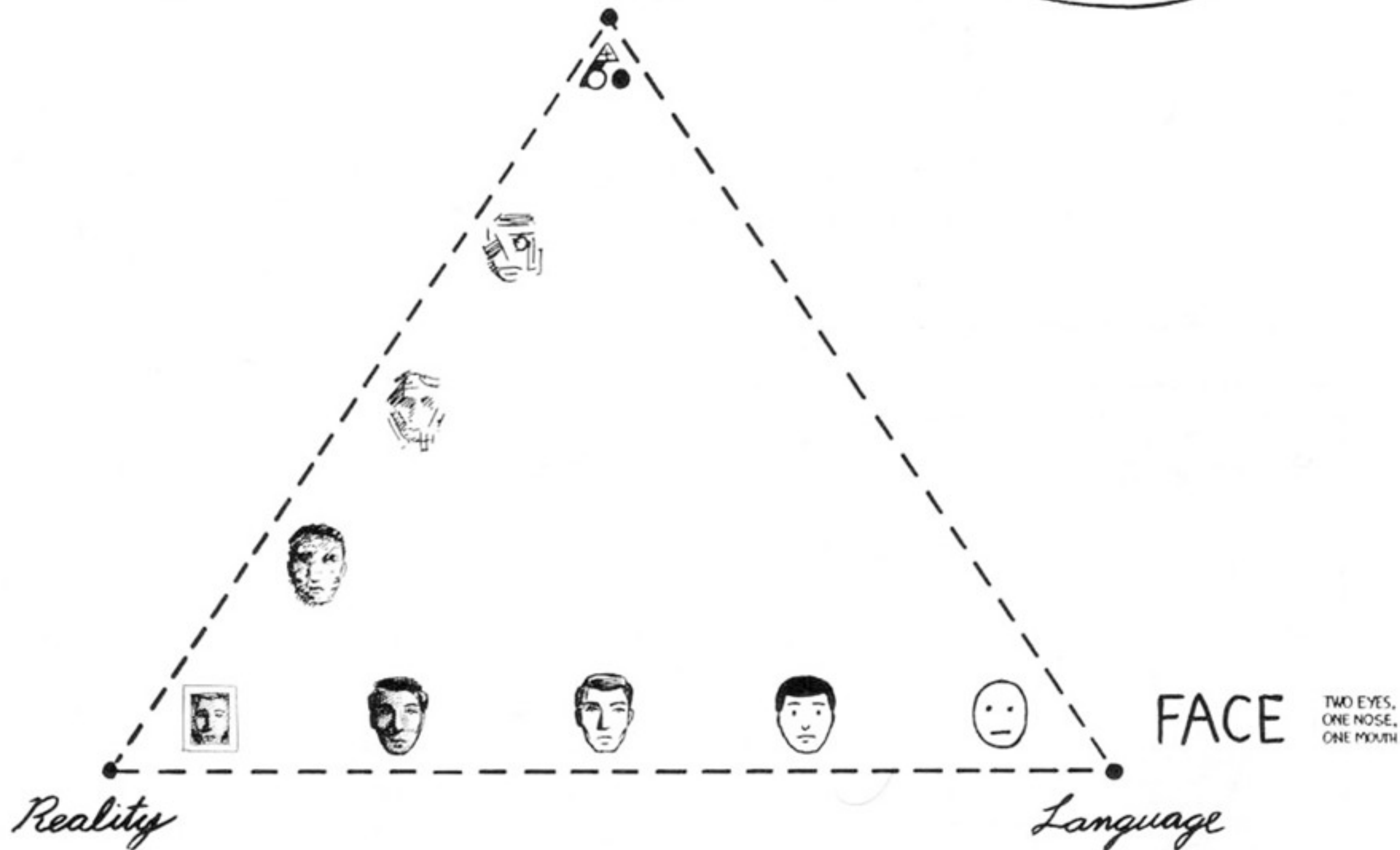


Scott McCloud: Two Frameworks

THIS IS
THE REALM OF THE
ART **OBJECT**, THE
PICTURE PLANE, WHERE
SHAPES, LINES AND
COLORS CAN BE
THEMSELVES AND
NOT PRETEND
OTHERWISE.

*The
Picture Plane*

BELOW ME,
THE AREA DESCRIBED
BY THESE 3 VERTICES--
"REALITY," LANGUAGE AND
THE PICTURE PLANE --
REPRESENTS THE TOTAL
PICTORIAL VOCABULARY
OF COMICS OR OF ANY
OF THE VISUAL
ARTS.



FIRST, WE HAVE THE **WORD SPECIFIC** COMBINATIONS, WHERE PICTURES **ILLUSTRATE**, BUT DON'T SIGNIFICANTLY ADD TO A LARGELY COMPLETE TEXT.



WE STUMBLED BACK TO THE APARTMENT SHORTLY BEFORE DAWN, VOMITTING EVERY 20 YARDS.

JUDY GAVE ME HER KEYS AND SMILED.



THE UNITED STATES CONSTITUTION WAS ADOPTED BY THE SECOND CONTINENTAL CONGRESS IN 1787 AND PUT INTO EFFECT IN 1789.



ANOTHER TYPE IS THE **ADDITIVE** COMBINATION WHERE WORDS **AMPLIFY** OR **ELABORATE** ON AN IMAGE OR VICE VERSA.



MY HEAD FEELS LIKE A **SMASHED PUMPKIN!**



HOW D'YA LIKE MY **NEW THREADS**, BABE?



IS THIS THE SAME **JUPITER** OF MY YOUTH?



PERHAPS THE MOST COMMON TYPE OF WORD/PICTURE COMBINATION IS THE **INTER-DEPENDENT**, WHERE WORDS AND PICTURES GO **HAND IN HAND** TO CONVEY AN IDEA THAT NEITHER COULD CONVEY **ALONE**.



MEANWHILE...

DID ANYONE **SEE** YOU?



THIS IS ALL I NEED TO **STOP** HIM!



I ASK YOU, DOES THIS GUY LOOK LIKE A **C.E.O.** TO YOU??



"AND JUST **GUESS** WHO DROVE UP IN BOB'S TRUCK AN HOUR LATER!"



"AFTER COLLEGE, I PURSUED A CAREER IN **HIGH FINANCE**."



HE'S LYING.



THEN THERE ARE **PICTURE SPECIFIC** COMBINATIONS WHERE WORDS DO LITTLE MORE THAN ADD A **SOUNDTRACK** TO A VISUALLY TOLD SEQUENCE.



HE **DID** IT!



IN **PARALLEL** COMBINATIONS, WORDS AND PICTURES SEEM TO FOLLOW VERY DIFFERENT COURSES--WITHOUT **INTERSECTING**.



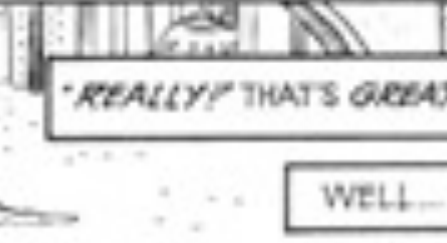
"TALKED TO **BILL YETI**"



"**SALLY** DID **WHY?**"



"THE **TEST RESULTS** CAME BACK. ALL **NEGATIVE**."



"**REALLY?**" THAT'S GREAT!"

WELL...



AND, OF COURSE, **DUO-SPECIFIC** PANELS IN WHICH BOTH WORDS AND PICTURES SEND ESSENTIALLY THE **SAME** MESSAGE.



GRIM-FACED, GEORGE LIFTED HIS LOLLYPOP.



BUT THE CAPTAIN'S MIGHTY **BLOW** **MISSSES** ITS INTENDED TARGET!

BLAST! HE **DODGED** MY PUNCH AND I STRUCK THIS **BRICK WALL!**



HA! I **DODGED** YOU!



I FEEL SO **SAD!**

...THOUGHT AMY.

STILL ANOTHER OPTION IS THE **MONTAGE** WHERE WORDS ARE TREATED AS INTEGRAL PARTS OF THE PICTURE.



INTERDEPENDENT COMBINATIONS AREN'T ALWAYS AN **EQUAL BALANCE** THOUGH AND MAY FALL **ANYWHERE** ON A SCALE BETWEEN TYPES ONE AND TWO.



GENERALLY SPEAKING, THE MORE IS SAID WITH **WORDS**, THE MORE THE PICTURES CAN BE FREED TO GO **EXPLORING** AND **VICE VERSA**.



Resources

Digital Storytelling

- Ruben R. Puentedura, “Digital Storytelling: An Alternative Instructional Approach”. *2008 NMC Summer Conference Proceedings*. (2008) Online at: <http://www.nmc.org/pdf/2008-Puentedura.pdf>
- Ruben R. Puentedura, “The Infinite Canvas Reloaded: Digital Storytelling, Webcomics, and Web 2.0”. *2009 NMC Summer Conference Proceedings*. (2010) Online at: <http://wp.nmc.org/proceedings2009/papers/infinite-canvas/>
- Ruben R. Puentedura, “Mapping the Digital Storytelling Domain: Notes for a Future Cartography”. *2010 NMC Symposium on New Media and Learning*. (2010) Online at: <http://www.youtube.com/watch?v=7XRS-45wKWk>
- Bryan Alexander, *The New Digital Storytelling: Creating Narratives with New Media*. Praeger (2011) Resources online at: <http://newdigitalstorytelling.net/>

The Lively Sketchbook

- Ruben R. Puentedura, “Drawing On The Lively Sketchbook”. *Connect@NMC Talks*. (2010) Online at: <http://archive.nmc.org/connect/2010/april/16>
- Ruben R. Puentedura, “The Lively Sketchbook”. (2010) Online at: http://www.hippasus.com/rrpweblog/archives/2010_01.html

The Curiosity Amplifier

- John Seely Brown, “A New Culture of Learning”. NMC Summer Conference, Closing Keynote. (2010) Online at: <http://archive.nmc.org/2010-summer-conference/jsb-keynote-video>

Intro Toolkit

- Dave White (after Scott McCloud), *Five-Card Nancy*. (2004) Online at: <http://www.7415comics.com/nancy/index.html>
- Alan Levine, *Five-Card Flickr*. (2011) Online at: <http://5card.cogdogblog.com/index.php>
- Marietta Kesting, *Digital Storytelling - Basic Thoughts about Visual Composition*. (2004) Online at: <http://hippasus.com/resources/viscomp/index.html>

Sequential Art

- Scott McCloud, *Understanding Comics*. New York: HarperCollins. (1993)

Photo Credits

- *iPad in Subway*: Takashi M
- *YouTube + iPad + Hanalei = Happiness*: Wayan Vota
- *Parcours-jeu multimedia : Les métiers du musée*: Jean-Pierre Dalbéra

Session 4: Educational Gaming

Formal Definition of **Play** (Salen & Zimmerman)

“Play is free movement within a more rigid structure.”

Vygotsky on Learning

- Zone of Proximal Development (ZPD):
 - Gap between:
 - what a learner can accomplish independently (the Zone of Current Development, ZCD)
 - what they can accomplish with assistance from a “more knowledgeable other” (MKO)
- “...*what a child can do with assistance today she will be able to do by herself tomorrow.*”
- This is an iterative process:
 - The ZCD and ZPD change over time;
 - Independent practice is required to close the loop.

Vygotsky on Play and Learning

“...play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself.”

Formal Definition of **Game** (Salen & Zimmerman)

“A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.”

Learning from Games (Gee)

Active Learning

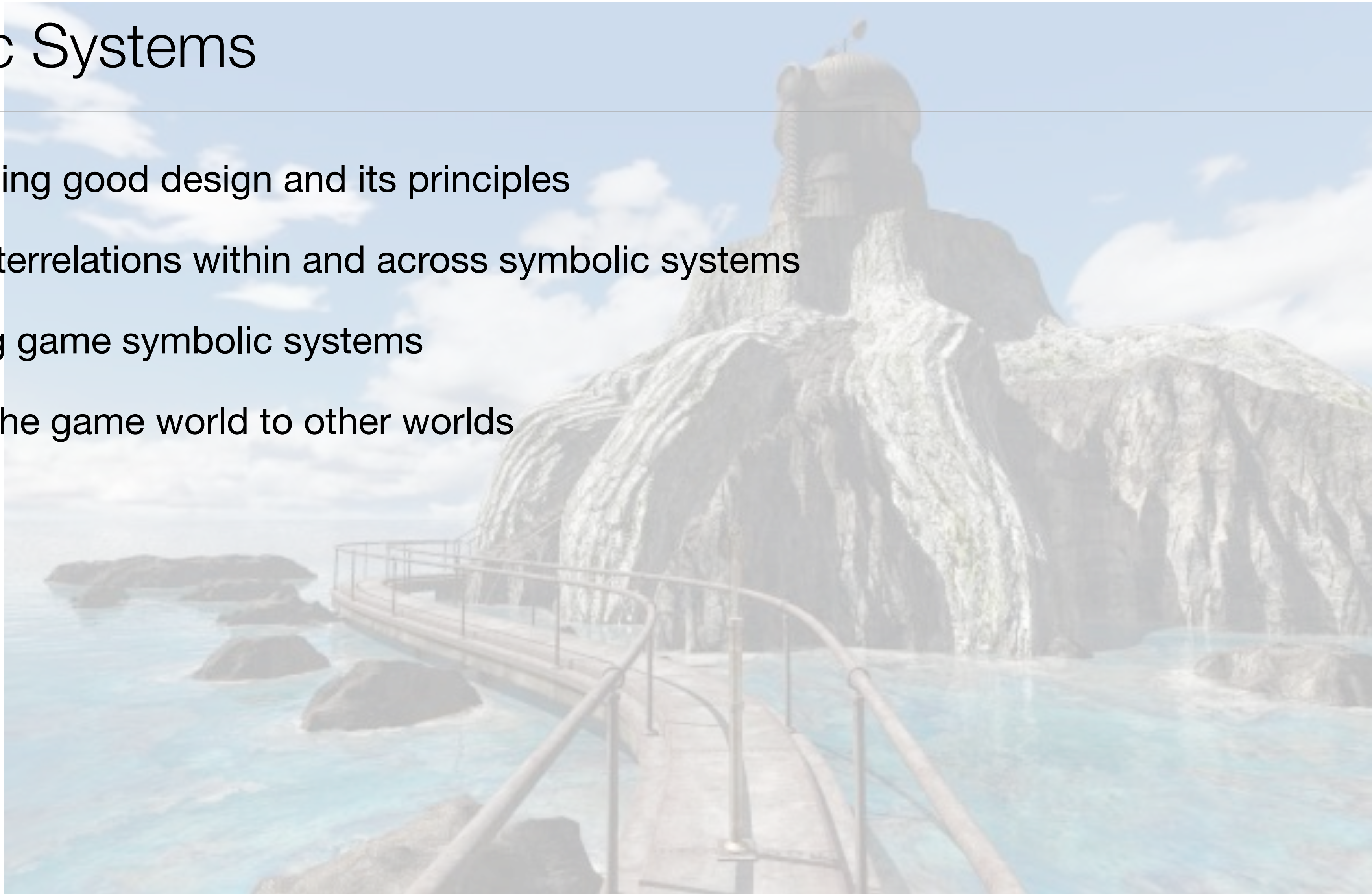
Gamers Learn From:

1. Doing and reflecting critically



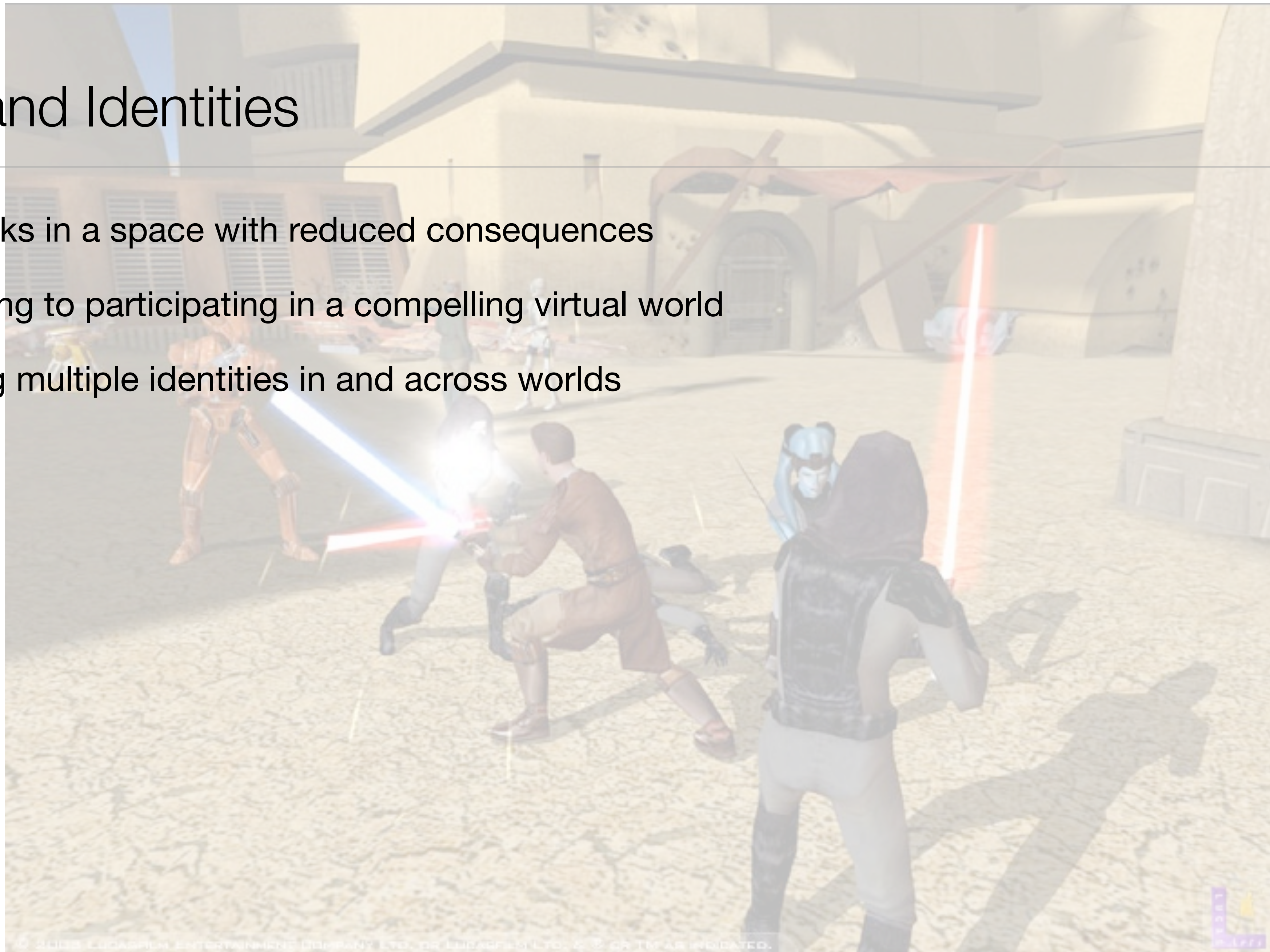
Symbolic Systems

2. Appreciating good design and its principles
3. Seeing interrelations within and across symbolic systems
4. Mastering game symbolic systems
5. Relating the game world to other worlds



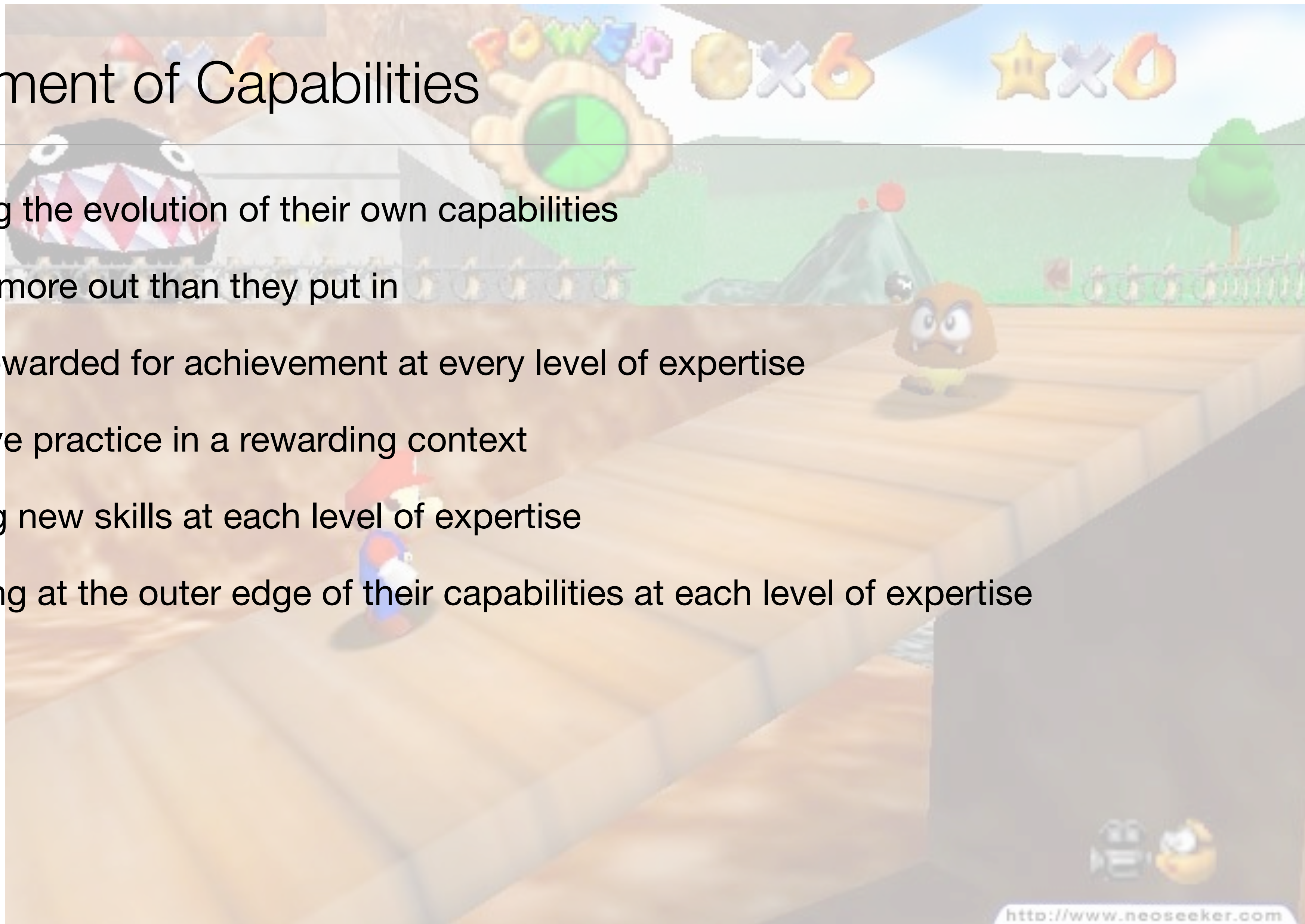
Worlds and Identities

- 6. Taking risks in a space with reduced consequences
- 7. Committing to participating in a compelling virtual world
- 8. Assuming multiple identities in and across worlds



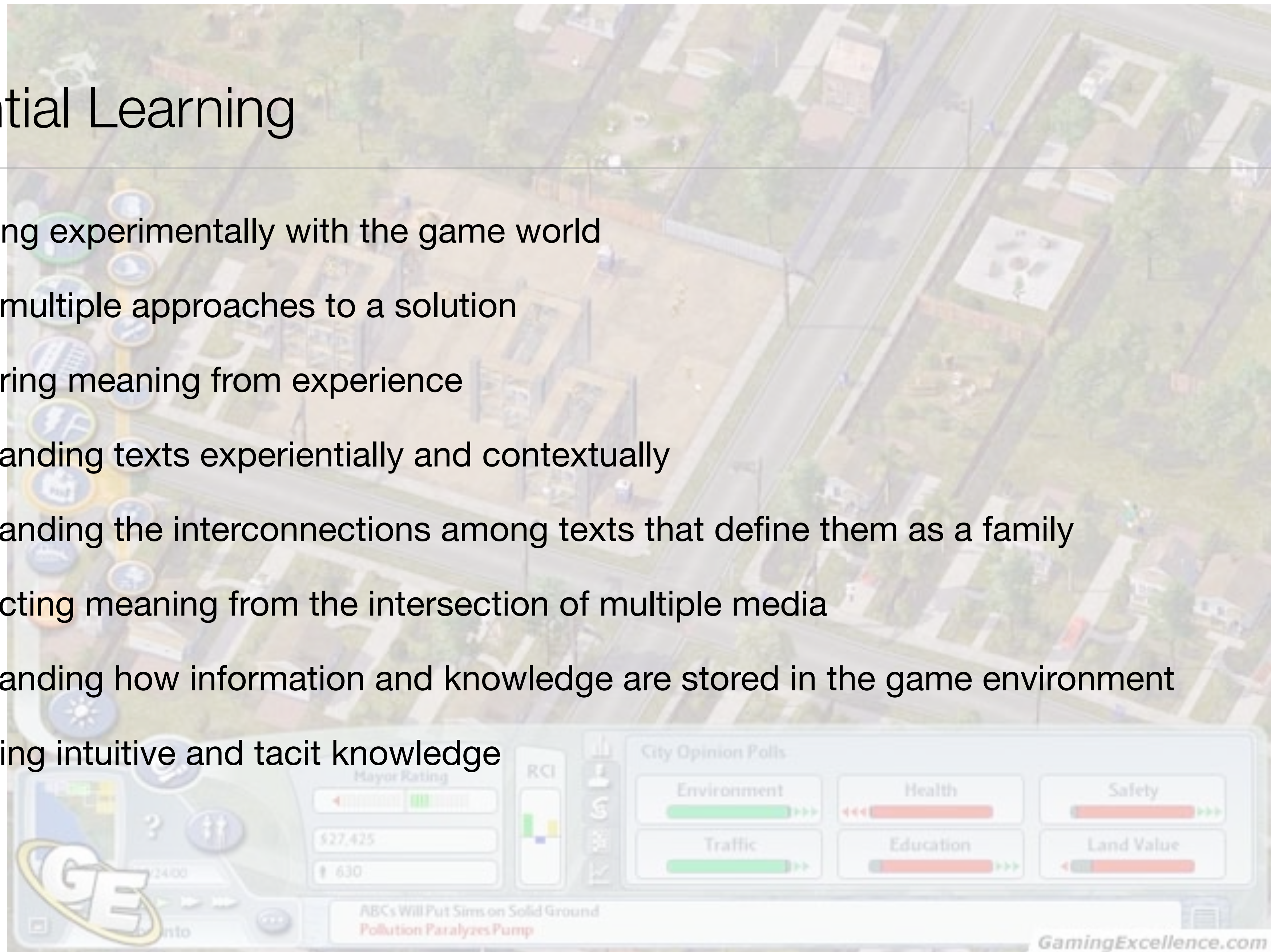
Development of Capabilities

- 9. Observing the evolution of their own capabilities
- 10. Getting more out than they put in
- 11. Being rewarded for achievement at every level of expertise
- 12. Extensive practice in a rewarding context
- 13. Learning new skills at each level of expertise
- 14. Operating at the outer edge of their capabilities at each level of expertise



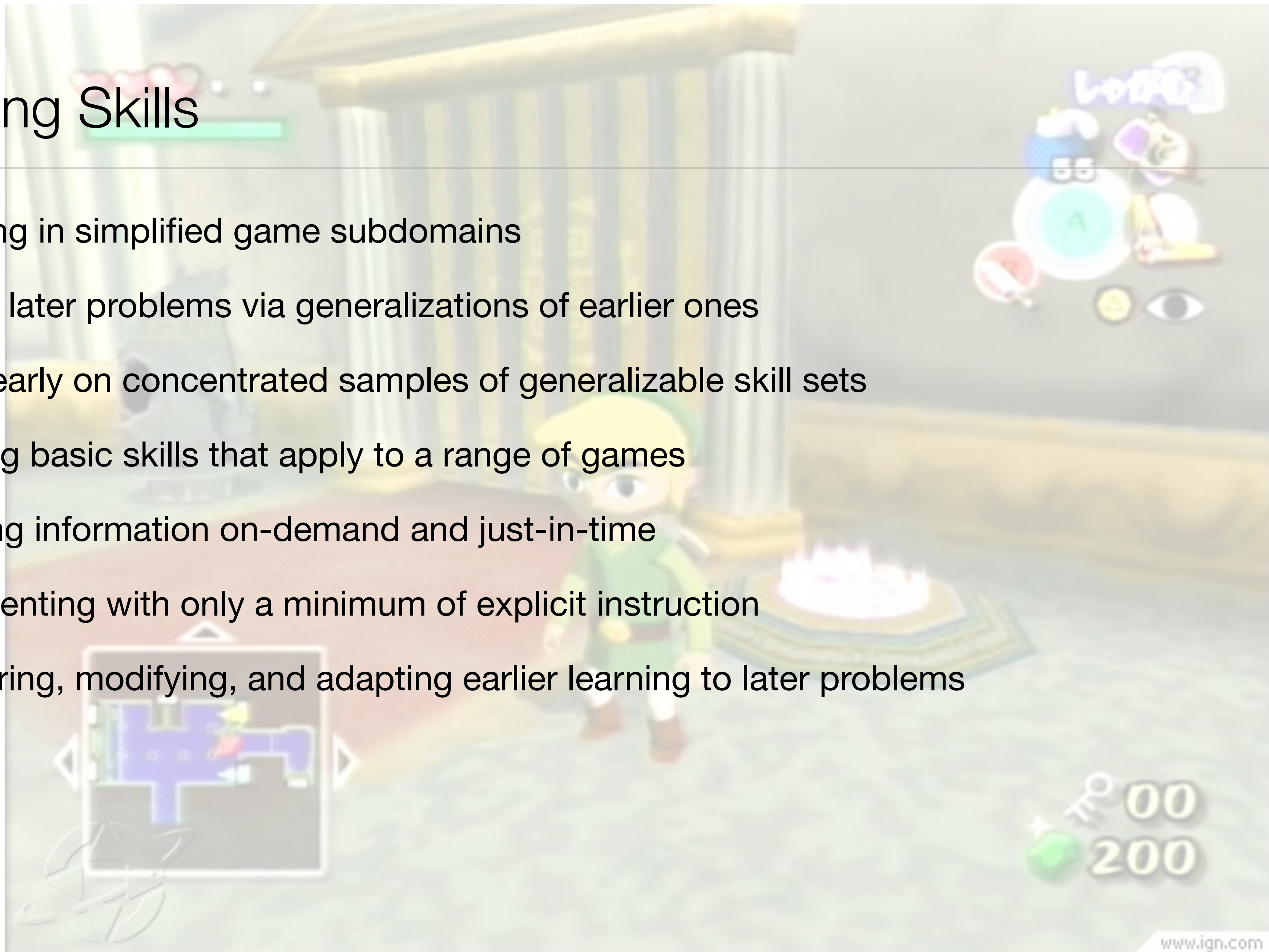
Experiential Learning

15. Interacting experimentally with the game world
16. Finding multiple approaches to a solution
17. Discovering meaning from experience
18. Understanding texts experientially and contextually
19. Understanding the interconnections among texts that define them as a family
20. Constructing meaning from the intersection of multiple media
21. Understanding how information and knowledge are stored in the game environment
22. Leveraging intuitive and tacit knowledge



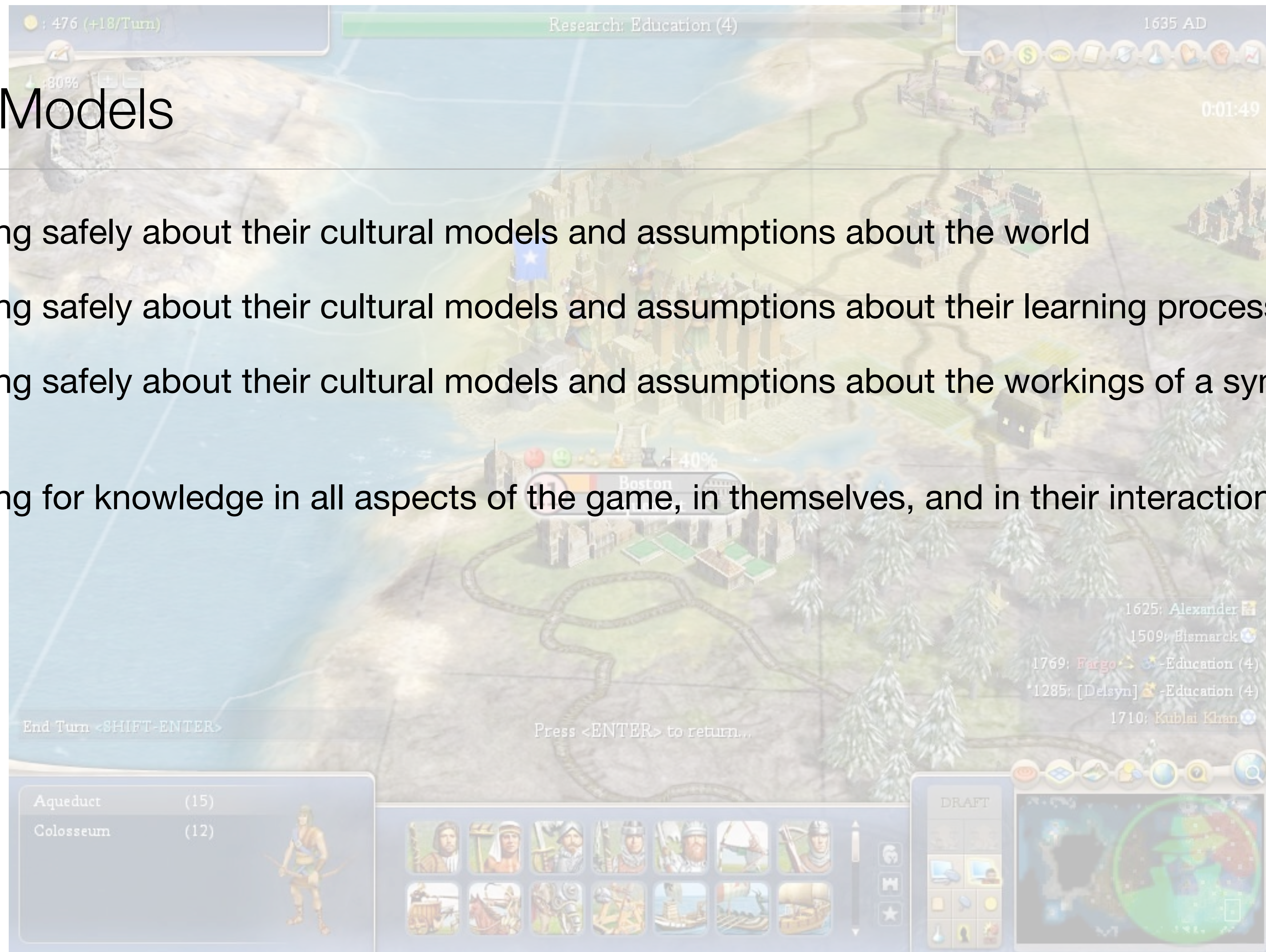
Developing Skills

- 23. Practicing in simplified game subdomains
- 24. Tackling later problems via generalizations of earlier ones
- 25. Seeing early on concentrated samples of generalizable skill sets
- 26. Acquiring basic skills that apply to a range of games
- 27. Receiving information on-demand and just-in-time
- 28. Experimenting with only a minimum of explicit instruction
- 29. Transferring, modifying, and adapting earlier learning to later problems



Cultural Models

- 30. Reflecting safely about their cultural models and assumptions about the world
- 31. Reflecting safely about their cultural models and assumptions about their learning processes
- 32. Reflecting safely about their cultural models and assumptions about the workings of a symbolic domain
- 33. Searching for knowledge in all aspects of the game, in themselves, and in their interaction with the game



Community

- 34. Sharing their knowledge with other players
- 35. Forming a distinct community via shared interests in the gaming world
- 36. Teaching others and modifying the game experience



Resources

Some Definitions

- Salen, K. and E. Zimmerman. *Rules of Play : Game Design Fundamentals*. The MIT Press. (2003)
- Vygotsky, L. *Mind in Society: Development of Higher Psychological Processes*. Harvard University Press. (1978)

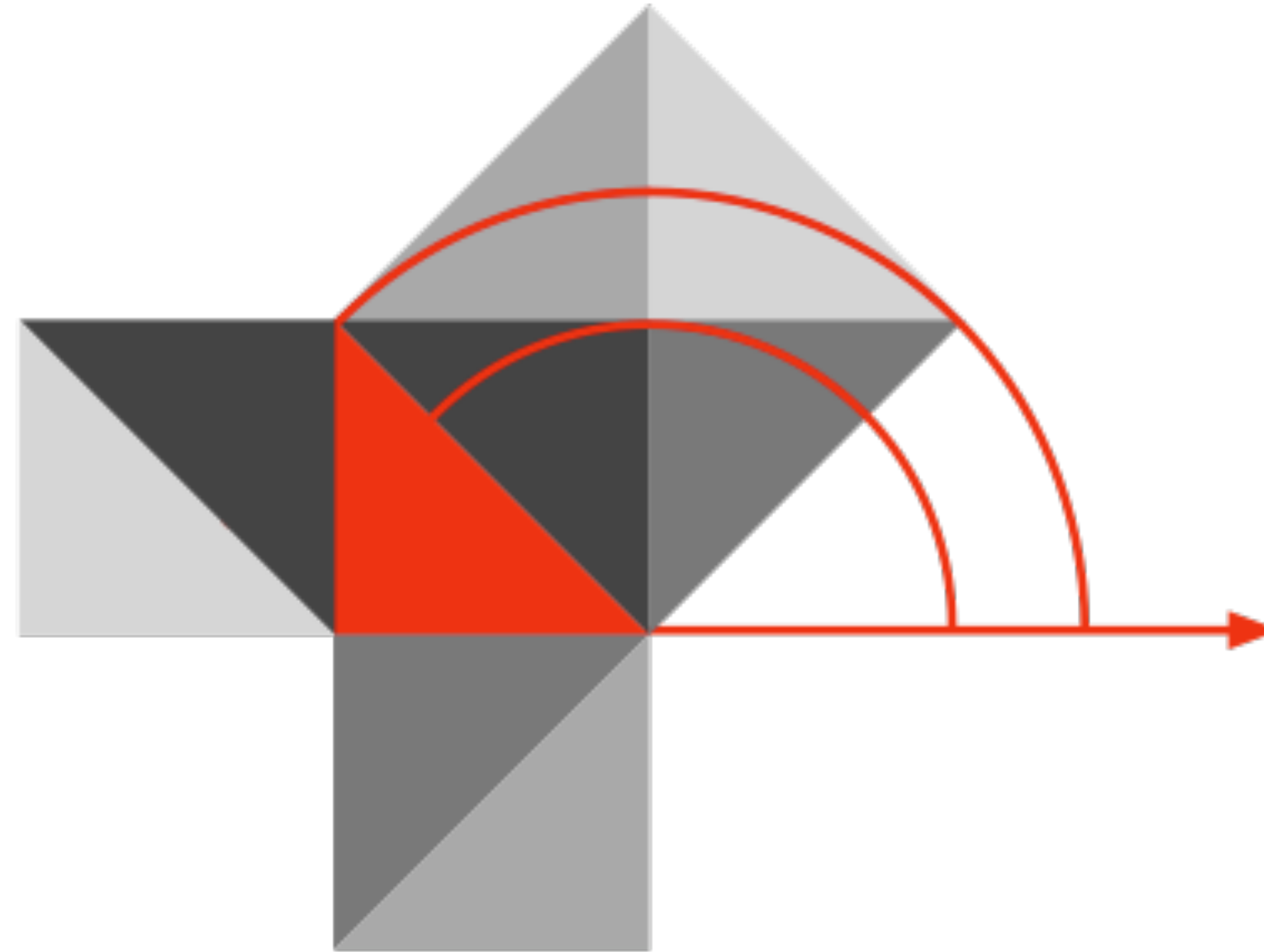
Podcasts and Blog

- Puentedura, R.R. *Game and Learn: An Introduction to Educational Gaming*. (2009) Online at:
<http://www.hippasus.com/rrpweblog/archives/000039.html>
- Puentedura, R.R. *The Educator's Game Machine*. (2010) Online at:
<http://www.hippasus.com/rrpweblog/archives/000050.html>
- Puentedura, R.R. *If You Build It, They (May) Come: Reflections on Educational Games*. (2010) Online at:
<http://www.hippasus.com/rrpweblog/archives/000046.html>

Learning from Games

- Gee, J.P., *What Video Games Have to Teach Us About Learning and Literacy*. Palgrave Macmillan. (2003)
- Prensky, M. “Escape from Planet Jar-Gon Or, What Video Games Have to Teach Academics About Teaching and Writing.” *On The Horizon*, Volume 11, No. 3 (2003)

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