

# On the Evolution of Games\*

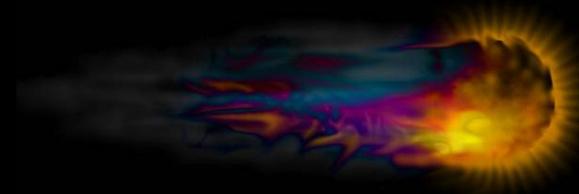
Katrin Becker, PhD

\*not so much a presentation of results as an Invitation

# overview

New(?) lens through which to examine games

- More questions than answers...



# History vs Evolution

## History

- event-driven, broad scope, contextual
- interested in all aspects of the past

## Evolution

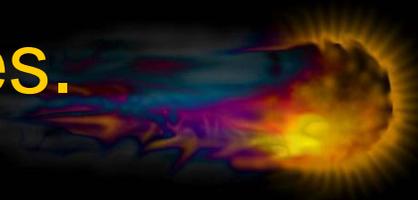
- data-driven, narrow scope, highly threaded
- specifically interested in **change**



# Change

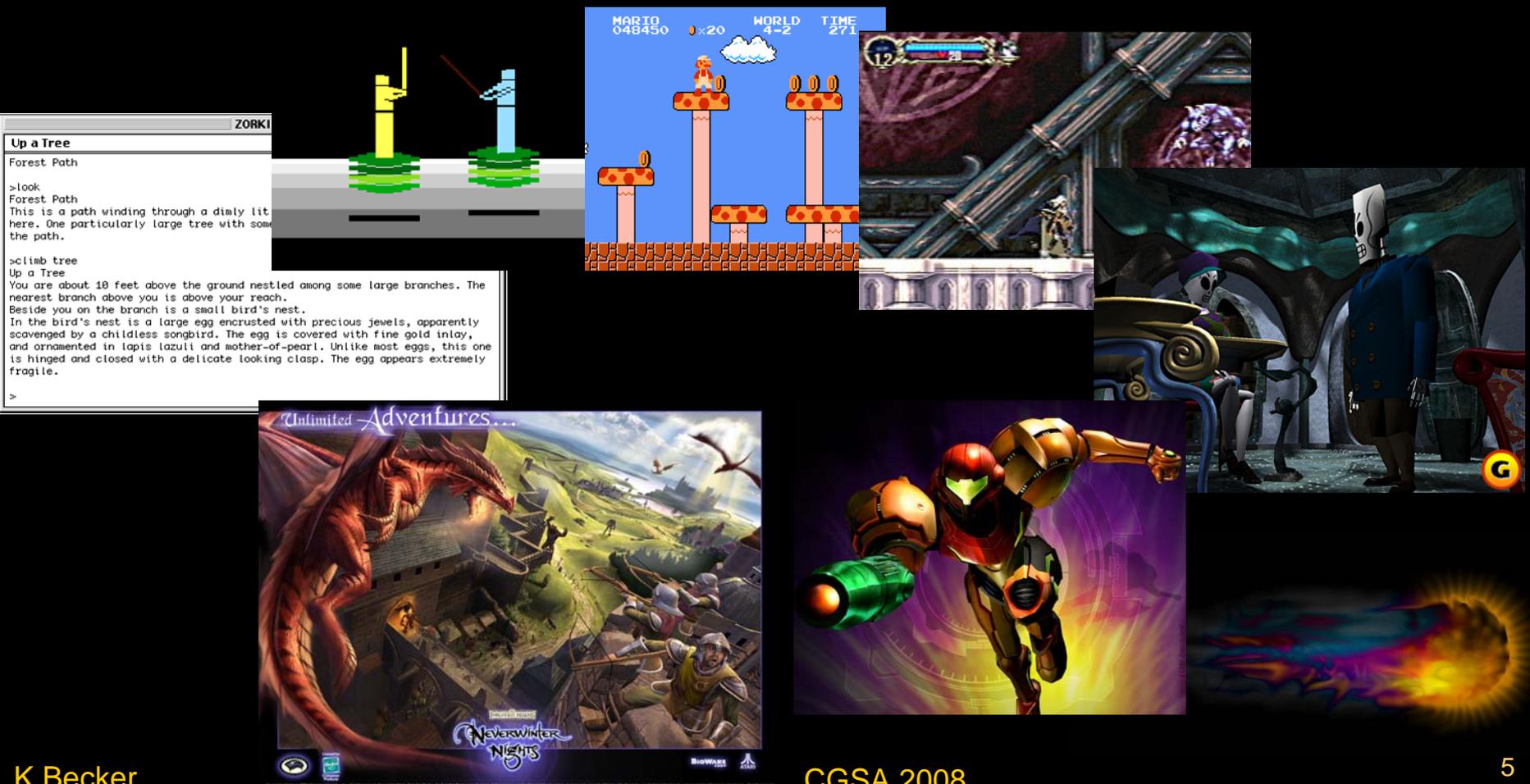
What changes over time?

- Genres and their definitions.
- What's on the screen during play:
  - Graphics
  - H.U.D.
- Game play.
- Narratives.
- And, of course, technical advances.



# Evolution

## Examination of change across time....



Welcome to now..



# What can we Learn?

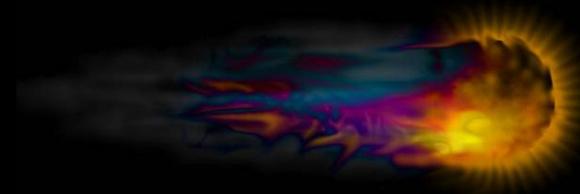
How a behaviour (or other aspect) may have evolved from similar behaviours in other games can provide some insights into elements of designs that are successful.



# How do we proceed?

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Examine game(s) from one  
or more perspectives to  
look at....



# How do we proceed?

Look at: Descent

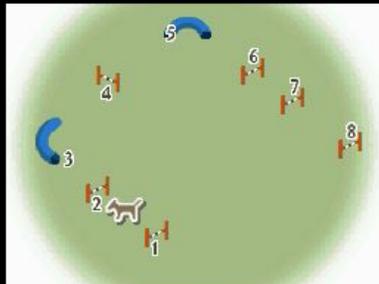
- *affinity* (similarity) : common descent



# How do we proceed?

## Look at: Environmental adaptations

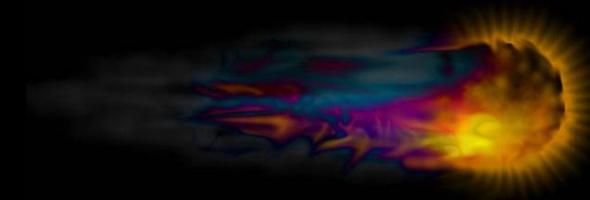
- **convergent evolution** : different species / same behaviour, possibly due to similar external forces



# How do we proceed?

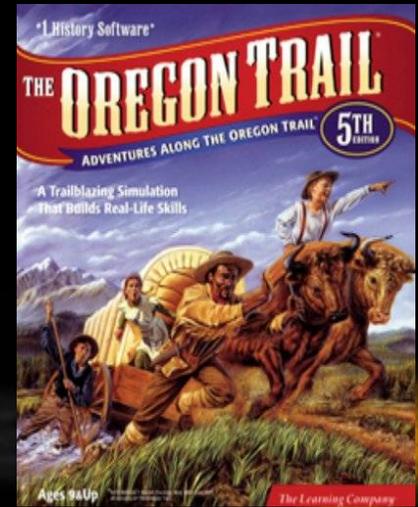
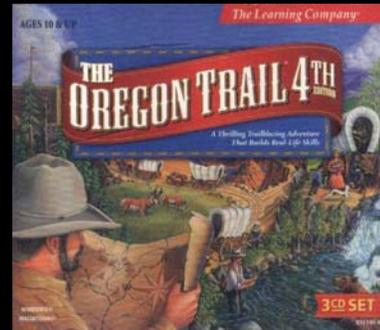
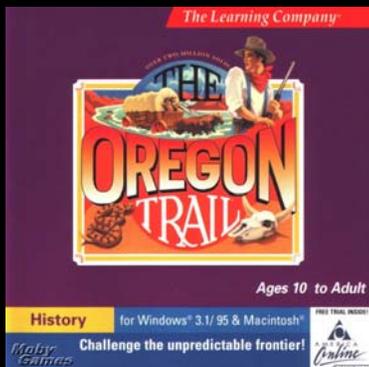
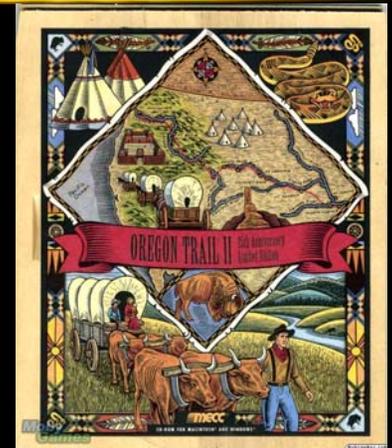
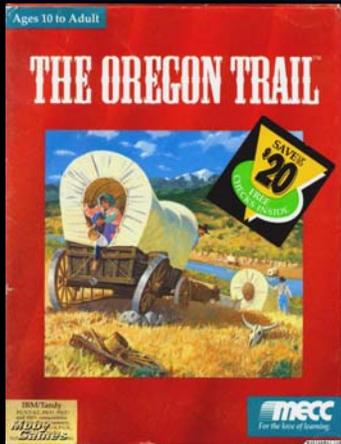
Look at:

Spontaneous 'mutations'



# How do we proceed?

Look at:  
Selective Pressure



# Perspectives

- Games Generally
- Specific Genres
  - Shooters, RPGs, etc.
- Game Elements
  - H.U.D.s, graphics, interaction
- Franchises
  - Mario , Pokémon , The Sims , Final Fantasy , Grand Theft Auto , Madden NFL , Tetris , FIFA , The Legend of Zelda , Tom Clancy
- Numbered Games
  - *GTA*



# Evolution Basics

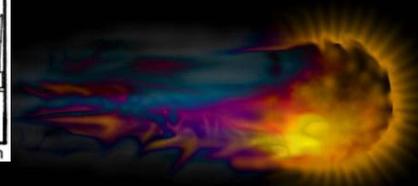
1. If all the individuals of a species reproduced successfully, the population of that species would increase uncontrollably.
2. Populations tend to remain about the same size from year to year.
3. Environmental resources are limited.
4. No two individuals in a given species are exactly alike.
5. Much of this variation in a population can be passed on to offspring.



# Evolution Basics

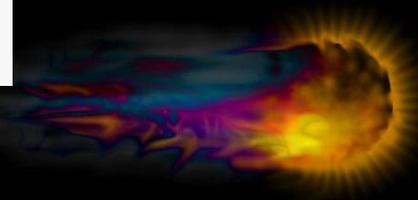
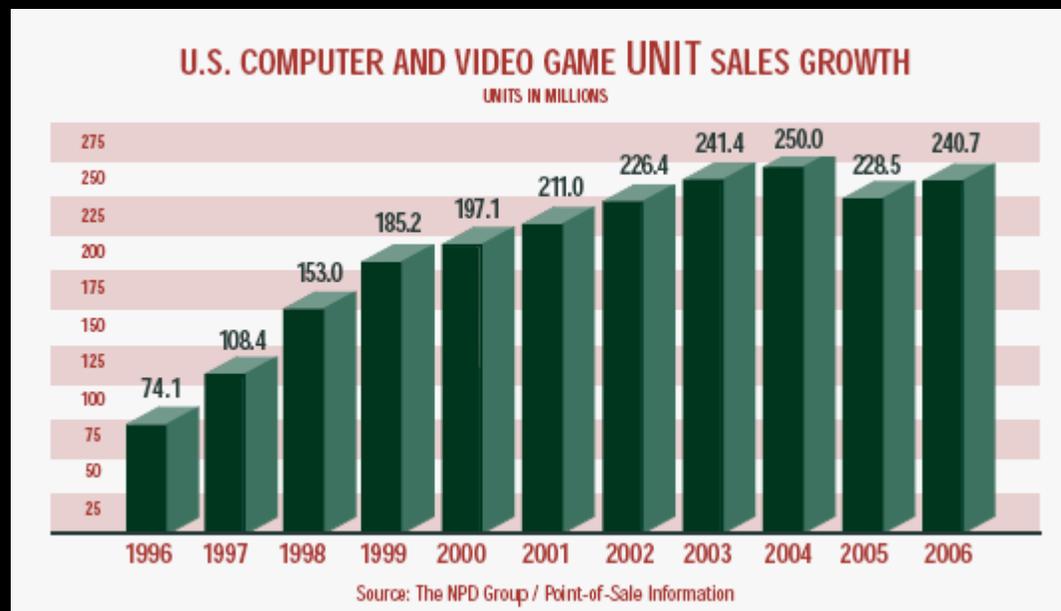
1. If all the individuals of a species reproduced *successfully*, the population of that species would increase uncontrollably.

Enter Sturgeon's Law:



# Evolution Basics

2. Populations tend to remain about the same size from year to year.



# Evolution Basics

3. Environmental resources are limited.

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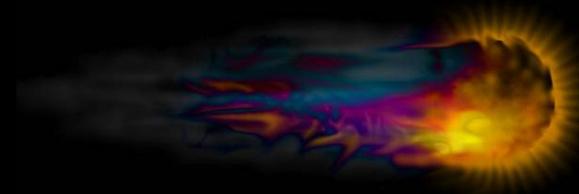
Markets

Consoles

Development Teams

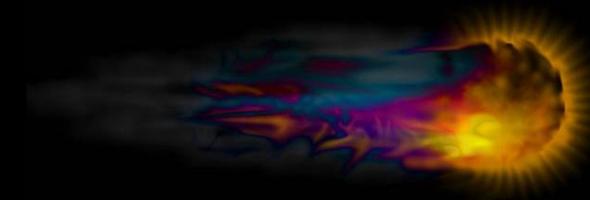
Peripherals

*Imagination?*



# Evolution Basics

4. No two individuals in a given species are exactly alike.

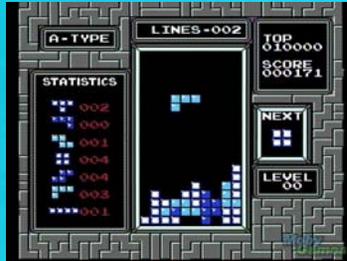


# Evolution Basics

5. Much of this variation in a population can be passed on to 'offspring'.



# Why do some games change very little over time?



# And Others Change a Great Deal?



# Struggle for Existence

- A game's survival has to do with how successful it is at keeping people in the game as well as at doing what it was designed to do:
  - Entertain
  - Learning
  - Persuasion
  - Marketing

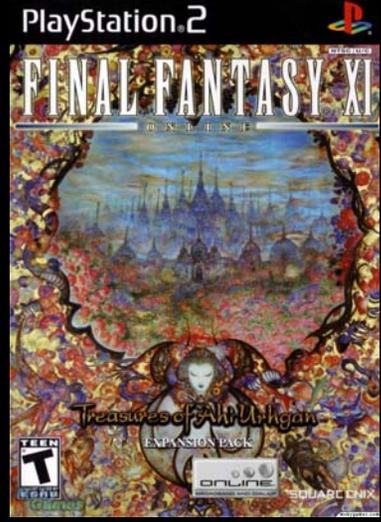
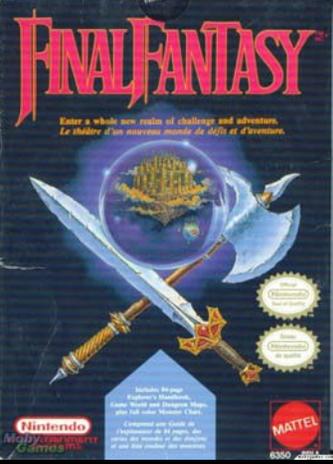


# The Evolution of Final Fantasy

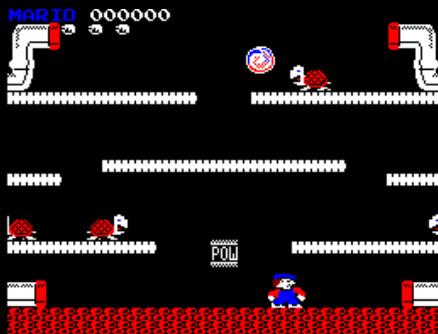
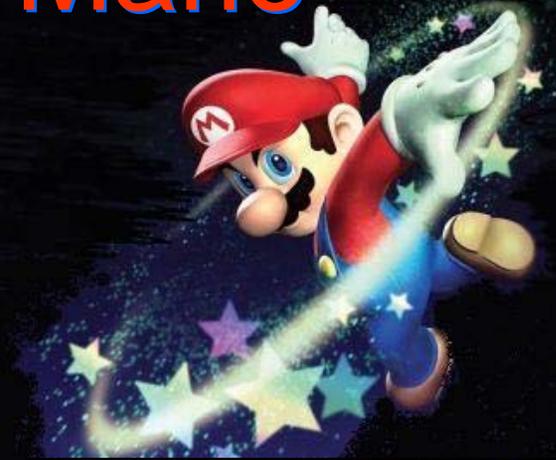


Final Fantasy

© 2001 SQUARE CO., LTD. CHARACTER DESIGN / TETSUYA NOMURA



# The Evolution of Mario



The Lord of the Rings  
Online  
SHADOWS OF ANGMAR

Thanks!



KurBecker

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