

- Games have a major legitimacy problem. Cultural ghetto. [Slide: line in the sand]
 - *La Lecon* (1951) by Eugene Ionesco
 - *Lolita* (1955) by Vladimir Nabokov
 - *Taos, NM* (1947) by Henri Cartier-Bresson
 - *Blue Velvet* (1986) by David Lynch
 - *Guernica* (1937) by Picasso
 - *Model of the Monument to the Third International* (1920) by Vladimir Tatlin
 - *Sgt. Pepper's Lonely Hearts Club Band* (1967) by The Beatles
 - *Shadow of the Colossus* (2005) by Fumito Ueda
 - *The Legend of Zelda* (1986) by Shigeru Miyamoto
 - *Metal Gear Solid 2* (2001) by Hideo Kojima
- How do we advance the medium? For a while, aping film seemed to be promising. [Slide: MGS in the limit]
- Dead end of aping film becoming more obvious (MGS4 had 6+ hours of cut scenes—perhaps more hours of cut scenes than gameplay).
- Some mainstream games have dropped cut scenes entirely, and they're clearly the better for it. [Slide: BioShock]

- Still stuck with the idea of an authored narrative. Pockets of interactivity woven into an on-rails experience.
- All other mediums are each expressive in their own unique ways—none wannabe any other medium. [Slide: back to slide 1] Mainstream games wannabe films very badly. [Slide: return to BioShock slide] “Just like a movie, where you play the main character.”
- Hurts—not helps—games’ legitimacy problem.
- How can games grow into a unique artistic medium?

- Major advancements have been made recently: game mechanics as a direct vehicle for artistic expression (goodbye cut scenes and linear narratives; no more aping films) [Slide: example games]
 - *Honorarium* (2008) by Ian Bogost
 - *Braid* (2008) by Jonathan Blow
 - *The Marriage* (2007) by Rod Humble
 - *Akrasia* (2008) by GAMBIT
 - *I wish I were the Moon* (2008) by Daniel Benmergui
- Each of these games could only exist as a game. Artistic expression would not have been better served by a film.
- So... we've done it!? Games are art in a unique way!
- But why are they still below the red line? We're not there yet.
- One guy has done more to advance the medium than anyone else. [Slide: Ebert]
- My own "Ebert Challenge": we need to show Ebert an artgame that will make him eat his hat.

- What game would you show Ebert? (List some)
- Wise colleague said he'd show Ebert Go. [Slide: go board]
- Profoundly deep gameplay from shockingly-simple rule-set.
- Return to it throughout life and find something new (property of great art, no?)
- So we know we need to make art through gameplay, and if it's great art, then that gameplay can never be exhausted... Go-deep gameplay a requirement for art games?
- But infinite replayability almost unheard of for video games.
- Art games [Slide: back to example art games]
Can return to many of these for a lifetime of *interpretation*, but not interesting gameplay.
- Infinite replayability is actually quite common... for board games. Chess, Checkers,

Othello, plus hundreds of modern German designs (Settlers of Catan, El Grande, Tigris and Euphrates).

- So what do these games have that video games don't? Multiple players.
- Up until about 30 years ago the phrase “single player game” was almost meaningless.
- “Game” by many definitions, requires multiple players. Game theory doesn't even consider single-player games.
- Very few examples of non-video single-player games [Slide: card solitaire] [Slide: peg solitaire]
- By most defs., Peg Solitaire is a puzzle, not a game.
- Feels game-like because solution is too long to memorize (even after winning, playing again is challenging).

- Card solitaire is a puzzle with randomized initial conditions (and incomplete information).
- Randomization is fascinating (exploits a flaw in the human mind) [Slide: roulette]
- Early arcade games used another trick to make games interesting for a single player: reflex challenges [Slide: Pac-Man] Like juggling more and more balls.
- So we have three techniques to make single-player games: long, multi-step puzzles, randomization, and reflex challenges. Combine these together, and you get.... [Slide: Tetris]
- As an optimization problem with full knowledge of the future piece queue, Tetris is NP-hard (true solution nearly impossible to find, let alone memorize)
- Add to that randomization and incomplete information, plus a gradual speed-up, and you

have one of the most addicting single-player games ever.

- But there's something unsatisfying about that approach. We certainly wouldn't think of showing Ebert *Tetris* as an artgame example (nor would we show him *Roulette*).
- We aim higher. Narrative is another ingredient that is added (cut scenes and linear stories that I bashed before).
- Modern video game design wisdom: give player interesting choices. *BioShock* and *Deus Ex*.
- If one choice optimal, players quickly gravitate toward that choice.
- If no choice is optimal, then all choices are equal, and the player's choice doesn't matter.
- In either case, the choice is not fundamentally interesting.

- Layer on mechanics? [Slide: Gravitation] (failure, for both art and non-art games)
- Go is very simple but even simpler multiplayer games like the Prisoner's Dilemma, are deeply interesting.
- Multiplayer is like fertile soil in which a system of mechanics can blossom into its full, emergent potential. Rules are like DNA and the space of gameplay is the resulting organism. Without multiplayer, even complex, layered systems of mechanics become stunted and can't blossom.
- We might think the interest lies in the human factor: matching wits against another mind (or against a close friend).
- What about AI? AI vs. human **is** multiplayer. Even AI vs. AI can allow deep gameplay to blossom. Thus, human interest is not the key.

- So what is the key? The fundamentally interesting choice at the heart of all games: “If I do this and she does that and then I do this....” on and on, down the rabbit hole that is each branch of the game tree.
- Where did the single player trend come from in the first place? Tech limitations of early game systems (non-networked)
- “Multiplayer” is the current big thing for video games [Slide: Halo]
- But we’ve built multiplayer as a feature on top of our single-player game models (multiplayer reflex challenges).
- we’ve come full circle, but missed the starting mark.
- Single-player games tend to involve continuous mechanics, whereas discrete mechanics seem to hold the most promise for gameplay depth. Perhaps that’s part of the problem.

- Though multiplayer RTS games, like *Starcraft* and *Age of Empires* seem to hold near-infinite interest. Starcraft is 10 years old and still played by millions around the world.
- So continuous mechanics can be deep, but it's a much harder nut to crack.
- Regardless, all games that are somewhat interesting from an artistic standpoint are single-player [Slide: back to artgames] BioShock intentionally avoided multi-player because of its artistic aspirations.
- That's the model that we have of an "art experience" [Slide: back to line in the sand] Fundamentally single-reader/viewer.
- All this leads to some very interesting questions, and I'll close my talk with them.
- Are we painting ourselves into the single-player corner?
- Are we unwittingly cording ourselves off in

the shallow end of the gameplay pool?

- Are we missing what is in fact unique about our medium (the only medium that requires multiple participants to consume a work)?
- What would a multiplayer artgame be like?
- Is deep emergent gameplay compatible with authored artistic expression?
- What happens when an emergent property of the gameplay is discordant with the artist's intentions?