On Asymmetric Multiplayer for Learning

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Abstract: This short talk will focus on the value of engineering the interfaces and systems of learning games for the asymmetric distribution of information, control, and more. Games are often viewed as a way around the “one-size-fits-all” classroom, but make similar design choices, ultimately.

Why Asymmetry?

As complex multiplayer games arise due to technological advances and the emergence of a market for expensive, complex board games, designers are creating more and more ways to drive compelling multiplayer gameplay through asymmetry. Asymmetry can manifest itself as asymmetry of information, such as in many-against-one board game designs (*Buffy the Vampire Slayer, The Board Game; Claustrophobia*) or the (never-enforced) rules about card sharing in the collaborative board game *Pandemic*, or the distribution of tasks in the mobile device local co-op screaming game *SpaceTeam*. Asymmetry can also appear as the asymmetric distribution of power, such as in the *Game of Thrones* board game, in fighting games like *Godzilla: Destroy All Monsters Melee*, and in online multiplayer mayhem like *Team Fortress 2.* Asymmetry can also manifest itself in both these ways simultaneously, as in PVE raiding in *World of Warcraft*, where players have unique information and toolsets with which to collaboratively “solve” the problem of giant monsters in dungeons together. Asymmetry is of course also rising to the fore in local co-op multiplayer physical games like Die Gut Fabrik’s *J.S. Joust* and *B.U.T.T.O.N.*, both of which depend mightily on players’ physical prowesses and personalities, neither of which are necessarily apparent at the start of a game between strangers.

In this talk, I will quickly unpack these types of asymmetry possible and relate them to my Masters thesis work on *Sanctuary,* a two-player game for math and science learning. The game is played as a co-located co-op game in which players must solve a mutual problem managing a the economy and ecology of a local park, but they have asymmetric but interdependent tool sets, one deriving from biologist tools and the other from mathematical tools. In any game with emergent gameplay and properties, it can be said that no player has the same experience. Perhaps even without emergence, the mangle of player and game produce a wholly unique experience each time. Still, it is worth considering the possibilities inherent in providing radically dissimilar means of engaging with the same problems and systems from a new point of view. The theory behind this design is that asymmetric roles force players to collaborate and coordinate through language, thus ameliorating a longstanding problem with game-based learning. Too frequently, it can be difficult for players to be reflective about their game play in the moment, not formalizing their strategies and thoughts as they go along. By requiring players to formalize and express their thoughts in language, this should help players emerge from their experience with a more concrete grasp on their work in the game.

This, of course, is just the tip of the iceberg. I plan to leave the audience considering not just issues of coordination, but also of “fairness,” “incompleteness of experience,” and cheating. I will also leave the audience considering adaptability and possible additional engineering costs. Introducing many of these ideas and situations into existing classroom culture may create more problems than it solves. Asymmetry will not be described as a panacea for what ails experiential learning, but as a new path with a myriad of new benefits and challenges.