**Simulation Game Research**

**Emergent GamePlay**

[**https://www.gamasutra.com/blogs/TynanSylvester/20130602/193462/The\_Simulation\_Dream.php**](https://www.gamasutra.com/blogs/TynanSylvester/20130602/193462/The_Simulation_Dream.php)

**Minimilistic Design**

Gavin Koh created a minimalistic simulation game called Nurture. In this game the player takes a place of a god, and must breed and feed Globs. Instead of allowing players to directly manipulate the Globs, instead the player could manipulate the colour of the tile underneath the Glob to control their direction of travel. All interaction in this game is with the tiles and not the creatures. The game is also constrained to a single screen, and when giving birth the Glob in question would die and spawn 3 new Globs.

The game was a success, with positive player feedback and further iterations to improve on the x-axis movement and add a z-axis movement system.

[**https://www.gamasutra.com/blogs/GavinKoh/20130515/192247/Can\_a\_minimalistic\_simulation\_game\_be\_any\_fun.php**](https://www.gamasutra.com/blogs/GavinKoh/20130515/192247/Can_a_minimalistic_simulation_game_be_any_fun.php)

**Limiting Scope**

Life simulations often limit their scope by forcing the player to focus on a single individual or family to care for. Some examples of this can be found here:

<http://gameslikefinder.com/games-like-the-sims/>

This method allows for more details interaction, rather than focusing on complexity of the systems.

Other games use cards to provide resources and feedback, allowing for strategy to mix with chance. Cards provide a low-cost asset solution and can feel farmilliar to players, making it easier to pick up the game and play it.

<https://www.gamasutra.com/blogs/MichailKatkoff/20160224/266403/Clash_Royale__Deconstructing_Supercells_Next_Billion_Dollar_Game.php>

<http://www.makeuseof.com/tag/indie-city-base-builders-try-now/>

City builders also limit themselves by allowing the player not build smaller settlements with more depth, rather than big expansive settlements.

The game Rebuild on Kongregate has made its development easier by having no individual NPCs visible, and having players take over buildings to gather supplies. The game also only has 2 resources to manage: population size and food. It runs on a turn system – using a single day as a turn and the zombies (antagonists) only attack at night. The attack is decided with a random dice roll based on the players defence stat in comparison with the zombie attack stat.

Oxygen not included asks players to help a team of individuals survive in space. It is a challenging, gritty and hilarious survival sim from developers Klei. Instead of going for many complex systems they decided to have a few inter-related systems that served multiple functions.

<https://www.gamasutra.com/view/news/299278/Layering_challenges_in_Kleis_survival_sim_Oxygen_Not_Included.php>

<https://www.gamasutra.com/view/news/299592/Behind_the_design_of_hit_sim_game_Oxygen_Not_Included.php>

The Sims follows a similar premise, whilst on the surface seems to be a complex mesh of AI systems – in fact the players are limited to what they can do. Players control one household (of up to 10 Sims) and must manage these Sims needs, jobs and social lives. But the interactions are limited by the strength of that relationship, and by a static number of options. Most of the fun and narrative of the Sims comes from emergent narrative – i.e. the players willingness to empathise and buy into this world that they are controlling.

<http://www.escapistmagazine.com/articles/view/features/galleryoftheday/14923-8-of-the-Best-God-Games-Ever-Made>

<https://www.gamasutra.com/view/news/212604/Citybound_One_mans_attempt_to_build_a_better_SimCity.php>

<https://www.gamasutra.com/view/feature/172835/how_do_you_put_the_sim_in_simcity.php>

<https://www.gamasutra.com/view/news/172742/The_politics_of_SimCity.php>

Peter Molyneux and his team created Black and White in the early 2000s, which is often hailed as the best God game of all time. In this game the player can interact with buildings to bring up statistics and information about the systems running in the background, can click on NPCs and drop them in a location to kill them, praise them or assign them a role. The player can also interact with some object in the game (e.g. picking up rocks and throwing them). But once again, the “God” part of the game is limited. Players can either become a benevolent or cruel God, but all of the Gods power comes from subjects “worshiping” at designated locations. This generates power needed to cast miracles, all the player has to do is balance the subjects food , sleep and health for them to worship. Miracles themselves include providing food or wood, healing and providing shields to protect an area. These can only be performed within an area of influence, and over time these actions loose their impact on the subjects. One interesting mechanic was a in-game create that the player can interact with. The creature grows as the game progresses, and has individual strengths and weaknesses. The creature can perform tasks, is taught what and when to eat, it can fight enemies or villagers. This game would clearly be an over scope for our purposes – but some lessons could be taken. For example:

* Skippable and tailored tutorial sections.
* An avatar that acts as an intermediate intractable for the player.
* Systems that change the subjects behaviour depending on the players actions.

<https://www.gamasutra.com/view/news/303055/Video_Peter_Molyneux_walks_through_the_making_of_Black__White.php>

Pandemic is another god/simulation game in which the player is presented with a 2D map that they must manage to kill all humans. This could be flipped so instead of being the virus you control where you’re people travel to avoid the virus whilst still balancing their needs.

**Summary**

In summary if the group decides to proceed with a simulation game it must follow to the following criteria to avoid over scoping-

* Take care of a small number of people, rather than an entire city.
* Limit the amount of systems in place that the player must balance, but keep them interconnected for depth.
* Constrain to a single screen.
* A consideration of making this a table top game, with potential use of AR to “bring it to life”.
* Limit player interactions, too add impact to decisions as they play out while the player helplessly watches but also to keep code breakage to a minimum.
* Display information through pop-up UI, and have the system running mostly in the background as in Rebuild.