Instead of focusing only on a genre, let it be shooters, I approach the TFG as “Methods to playtest a 3D video game level automatically” and then I do case studies and prototypes of genres I choose, maybe only one prototype; the shooter one could be the simplest.

Which genres have levels most suited for automation? That alone could be a chunk of my analysis.

* Shooter
* Beat ‘em Up
* Dungeon Crawler
* ARPG
* Metroidvania
* …

In general, any “Action” game. So the TFG would end up as “Methods to playtest a 3D Action video game level automatically”

*“An* ***action game*** *is a* [*video game genre*](https://en.wikipedia.org/wiki/Video_game_genres) *that emphasizes physical challenges, including hand–eye coordination and reaction-time. The genre includes a large variety of sub-genres, such as* [*fighting games*](https://en.wikipedia.org/wiki/Fighting_game)*,* [*beat 'em ups*](https://en.wikipedia.org/wiki/Beat_%27em_up)*,* [*shooter games*](https://en.wikipedia.org/wiki/Shooter_game) *and* [*platform games*](https://en.wikipedia.org/wiki/Platform_game)*.* [*Multiplayer online battle arena*](https://en.wikipedia.org/wiki/Multiplayer_online_battle_arena) *and some* [*real-time strategy*](https://en.wikipedia.org/wiki/Real-time_strategy) *games are also considered action games.*

*In an action game, the player typically controls a* [*character*](https://en.wikipedia.org/wiki/Character_(arts)) *often in the form of a* [*protagonist*](https://en.wikipedia.org/wiki/Protagonist) *or* [*avatar*](https://en.wikipedia.org/wiki/Avatar_(computing))*. This* [*player character*](https://en.wikipedia.org/wiki/Player_character) *must navigate a* [*level*](https://en.wikipedia.org/wiki/Level_(video_gaming))*, collecting objects, avoiding obstacles, and battling enemies with their natural skills as well as weapons and other tools at their disposal. At the end of a level or group of levels, the player must often defeat a boss enemy that is more challenging and often a major* [*antagonist*](https://en.wikipedia.org/wiki/Antagonist) *in the game's story. Enemy attacks and obstacles deplete the player character's* [*health*](https://en.wikipedia.org/wiki/Health_(gaming)) *and* [*lives*](https://en.wikipedia.org/wiki/1-up)*, and the player receives a* [*game over*](https://en.wikipedia.org/wiki/Game_over) *when they run out of lives.*

*Alternatively, the player gets to the end of the game by finishing a sequence of levels to complete a final goal, and see the* [*credits*](https://en.wikipedia.org/wiki/Closing_credits)*. But some action games, such as early* [*arcade games*](https://en.wikipedia.org/wiki/Arcade_games)*, are unbeatable and have an indefinite number of levels; with the player's only goal being to get as far as they can to maximize their score”*