Level Design Workshop: Rewarding Exploration in 'Deus Ex: Mankind Divided"s Prague City Hub by Clemence Maurer

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Abstract

Exploration is an important part of many games. When adding exploration setups to an existing game world, it is important to consider the related narrative, navigation, challenge and the reward for exploring. Exploration should fit naturally into the virtual world, which is why artificial elements such as magic locks or unoriginal layouts should be avoided. The relevance of exploration and discovery in game design is likely related to their general relevance in human nature.

1 Summary of Talk

Many video games play in virtual worlds that were explicitly created for these games. The exploration of these worlds can be a very fun and rewarding experience, if the game allows it and the designers put enough effort into it. In general, there are 4 main aspects of exploration:

- Narrative
- Navigation
- Challenge
- Reward

When designing exploration setups, it is important to keep these aspects in mind and to find a good point of balance between them.

1.1 Narrative

To formally separate exploration from other narratives, one can define 3 narrative layers. Firstly, there is the main story, which is always in clear sight and encouraged to be played. The majority of a game's budget is usually dedicated to it and most video games cannot be completed without completing the main story. Secondly, there often are optional side missions, which are created to offer the player something more than linearly following the main story. Lastly, there are exploration setups. These usually have little to no impact on the story, but instead try to make the vast virtual world more diverse. Often, only a few developers work on exploration setups and they usually have to be discovered by the player. They are directed at the 1% of the players who aim to completely explore the game's world.

To keep exploration setups interesting, a few principles should be followed. While some standalone explorations are okay, it is generally desirable to link several exploration locations, as this can create a hidden story that can only be experienced by an attentive player. Therefore, explorations should generally be challenging and rewarding. Further, it is better to create small areas which are very densely filled with discoverable content than to create large areas which are sparsely filled. Additionally, the mini-stories which can be discovered in exploration setups should make sense in the given context and enrich the general theme of the game.

1.2 Navigation

Exploration setups are not limited to the discovery of hidden narratives. They can also offer very special rewards such as shortcuts or alternate endings. Therefore, it is important to balance the accessibility of exploration setups. The main challenge here lies in finding the sweet spot between invisibility and over-exposition. On the one hand they should not be completely obvious to the player, as they might be narratively or navigationally distracting and make the world seem artificial. On the other hand, it should not take serious effort to find their beginning - the challenging part should be completing them.

Further, exploration setups should be original, yet still have a visible navigational thread. To keep them original, it is important to avoid magic locks, such as rubble blocking a door. If a player should be restricted to a certain area, it is highly desirable to provide an obvious reason for this, as otherwise the game world will seem unrealistic. To give exploration setups visible navigation, it is important to provide paths which can be seen in advance and still don't seem too coincidental. Additionally, being able to follow these paths should be a question of skill, and not of progression in the game. This means that exploring an area becomes possible as soon as the area is accessible.

2 Overview and Relevance

Besides the view that was presented above, there are also other approaches towards exploration/discovery in game design. Firstly, there are games such as *Minecraft* which offer the player an unrestricted open world, which is procedurally generated when needed. Obviously, such games need a different approach for implementing exploration. It cannot consist of hundreds of small mini-stories or graphical details if the world is limitless. Instead, the algorithm which procedurally generates the world needs to be able to generate explorable structures which can occasionally be discovered.

Secondly, geographical and narrative or content discovery are not the only way to for a player to find something new [3]. Mechanical discovery offers the players new ways of playing the game and completing the associated objectives. Exemplar games are *Dark Souls*, *Path of Exile* or *Star Craft*. An inherent advantage of this type of exploration is that it requires a much smaller budget than geographic discovery. However, it is often difficult to implement mechanical discovery in a balanced way.

3 The Scientific Perspective

Discovery and exploration is an element of life which is not limited to gaming. Other areas of life, such as work, sport and excursion all contain traces of the same element that become visible when closely examined. However, there is currently little pertinent scientific research which relates exploration discovery across these fields. It would be interesting to investigate the relations between this particular attribute of game design and exploration in human nature. A scientific approach for transferring game design elements to other user related domains was suggested by Sebastian Deterding [1]. There have also been investigations of the educational aspects of discovery in games [4] [2].

References

[1] Deterding, S., Sicart, M., Nacke, L., O'Hara, K., and Dixon, D. Gamification. using game-design elements in non-gaming contexts. In *CHI'11 extended abstracts on human factors in computing systems* (2011), ACM, pp. 2425–2428.

[2] Nebel, S., Schneider, S., and Rey, G. D. Mining learning and crafting scientific experiments: a literature review on the use of minecraft in education and research. *Journal of Educational Technology & Society 19*, 2 (2016), 355.

[3] Portnow, J., and Floyd, D. Exploration in games - four ways players discover joy. https://www.youtube.com/watch?v=FE7lDFAcb4Y, 2015. Accessed: 2018-1-30.

[4] Schifter, C., and Cipollone, M. Minecraft as a teaching tool: One case study. In *Society for Information Technology & Teacher Education International Conference* (2013), Association for the Advancement of Computing in Education (AACE), pp. 2951–2955.