From Hunt the Wumpus to EverQuest:

Introduction to Quest Theory

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Abstract. The paper will explore how the landscape types and the quest types are used in various games, how they structure the gameplay, how they act as bones for the game-content (graphics, dialogue, sound) and how they sometimes form the base on which a story is imposed and related to the player. The question then becomes, how does the quest structure influence the story structure? How do the limitations of the quest combinations limit the kinds of story that are possible? How rich can the imposed story be, without breaking the gameplay? Are landscape and quest-structure the dominant factors in quest game design, to which the story-ambitions must defer? The main thesis of the paper is that if we understand the powerful but simple structure - the grammar - of quests (how they work, how they are used) we can understand both the limits and the potential of these kinds of games.

1. Introduction

This paper will lay out the foundations of a theory of quests in computer games. Quests are a basic, dominant ingredient in a number of types of games in virtual environments, from the early adventure games to today's massive multiplayers, and by understanding their functions and importance for game design and game aesthetics we can contribute to many of the current debates in game studies, such as the question of genres and typologies, the question of narrativity in games and cross media productions, and the crucial issue of playability and replayability.

This work builds on efforts by Tronstad [8], Tosca [7] and Aarseth [1]. Previous attempts at describing quests and their importance for computer games have fallen short of defining the concept, except for Tosca:

> A quest, as we said earlier, brings some or all the storytelling elements (characters, plot, causality, world) together with the interaction, so that we can define it as the array of soft rules that describe what the player has to do in a particular storytelling situation. ([7], section 4.2)

However, Tosca's definition relies on too many unnecessary elements (characters, plot, storytelling, "soft rules") to be generally applicable. E.g., in a labyrinth game such as Gregory Yob's *Hunt the Wumpus* (1972), what are the "soft rules" and the storytelling situation? In this paper, I propose two definitions of quest games. A quest game can be defined as

a game with a concrete and attainable goal, which supercedes performance or the accumulation of points. Such goals can be nested (hierarchic), concurrent, or serial, or a combination of the above.

Or, minimally, as

a game which depends on mere movement from position A to position B.

The minimal definition should not be seen as descriptively exhaustive; most games framed by it would also have a number of additional elements and features, such as characters, dialogue, setting, music, a semiotic universe, etc. But they would involve the necessity of moving from A to B, in a way that games like chess, *Tetris*, football, multiplayer *Starcraft*, and *Quake Arena*, or quest games such as *Morrowind* and *EverQuest,* do not. (While some other non-quest game types, e.g. racing games, also do depend on movement from A to B, in these cases mere movement is not sufficient to win.) Hence, not all games containing quests are framed by the minimal definition (only by the first definition above); such is its weakness. But the specificity of the minimal definition overlaps nicely with the set of games that are usually seen as "narrative," i.e. games that contain a storyline, e.g. a fixed sequence of predetermined events that cannot be circumlocuted through gameplay. There seems to be few, if any "narrative" games that do not also conform to the "A to B" formula, so until proven wrong by example, I will assume that "narrative" games and "A to B" games are the same, at least for the purposes of this paper.

2. The basic quest types and combinations

Since, content-wise, quests can appear in innumerable variations (e.g. go to X, ask for object Y, take it to place Z), it is on the grammatical level that we must look for structure and design principles. Evidently, quest games come in many forms and shapes - just compare *Doom3* to *Pikmin2* - but underneath their colorful and varied appearance there is a very simple variation of skeletal patterns, consisting of a few elemental figures.

Fig. 1. Time, place, and objective, the three basic quest types.

There are three basic quest types: 1) Place-oriented, 2) time-oriented and 3) objective-oriented. These can then be combined in various ways, to form complex and elaborate games where quests are weaved, mixed, parallelized and sequentialized.

Place-oriented quests are the simplest type, where the player typically has to move the avatar from a starting position in the game world to a target position (cf. definition two above). Games of this type include *Doom* and *MYST* (both 1993) and *Adventure* (1976). Such games may also typically include puzzles that require the player to manipulate objects found along the way, but in its most basic form the place-oriented quest is a labyrinth, where the players simply have to find their way.

Time-oriented quests may seem rare in pure form, but they do exist, usually as part of a larger game. A typical example is found more than once in games like *Call of Duty* (2003), where sometimes the only quest-task is to stay alive for a fixed number of minutes. I distinctly remember a railway station level in *Call of Duty: United Offensive* (2004), where I (or rather my avatar) spent the last minute and a half of the time-quest lying still, hidden between the train and the platform, with enemies all around, who were unable to find me and kill me before my reinforcements, finally, arrived.

The third basic type is the objective-oriented quest, where the task is to achieve a concrete result, such as an object that must be taken by force from a non-player character (NPC). This object may not be in the same place, but could be moving freely in the game world. Typical examples can be found in *Hunt the Wumpus,* or in the *Heroes of Might and Magic* series, where an enemy hero might possess a magical item (a powerup) which, when acquired, defines the winning condition of the level.

In a recent empirical study of 80 "significant games of 2003" Jeffery Brand and Scott Knight [2] found that 73% of the games were place-oriented, 43% were time-oriented, and 83% were objective-oriented. They also found a strong correlation between place-oriented (topological) rules and "embedded narrative," which tells us that "narrative" games can usually and more sensibly be identified as place-/A-to-B-oriented quest games.

The three basic quest types can be combined, and in four fundamental ways. The combinations are
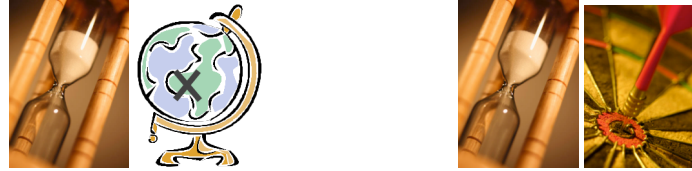
Fig. 2. 4) Time&Place ("get there before…")   5) Time&Objective ("Get it before…),

Fig. 3. 6) Place & Objective ("Get there and…") , 7) Time&Place&Objective ("Get there before … and …").

In addition, games can combine, nest and serialize these seven types, resulting in rich and highly complex quest worlds, where the player feels free to decide what to do next, and can solve the quests in many orders. Typical games of this kind are *Fable* (2004), *Knights of the Old Republic* (2003), *EverQuest* (1999-) and *World of Warcraft* (2004-).

If we compare quest structures in a number of games, it can clearly be shown how they form the backbone of the gameplay:

- *Half-Life*: Serial quest; place and (occasionally) objective-oriented
- *Halo*: Serial quest; place and (occasionally) time-oriented
- *Knights of the Old Republic*: Nested and concurrent quests; place and objective-oriented
- *Morrowind*: Concurrent quests; place and objective-oriented
- *GTA3*: Serial and nested quests; place, time and objective-oriented
- *EverQuest*: Concurrent quests; place, time and objective-oriented

3. The quest game landscape

The complementary, equally important structure is of course the game landscape. Quest and space are intrinsically linked: Level design in quest games is structured by the types of quests the game uses, and vice versa. There are three basic quest game landscapes:

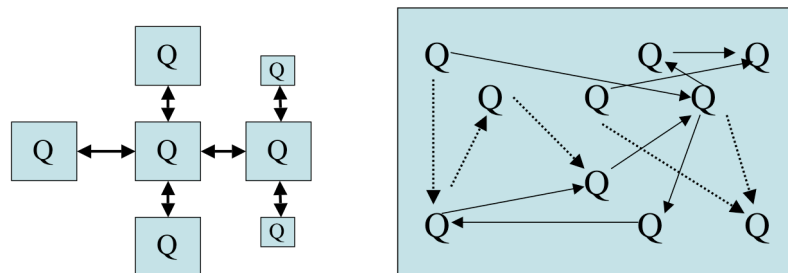**Fig. 4.** the linear corridor (e.g. *Half-Life*),

Fig. 5. the semi-open, often star-shaped hub (e.g. *Knights of the Old Republic)* and the open landscape (e.g. *Morrowind*).

Moreover, games that might appear open-landscaped, such as the 2D strategy series *Heroes of Might and Magic* or the *Warcraft* series, will often feature maps/landscapes that consist of a uni- or multi-cursal labyrinth or hub, where mountain ranges, oceans or impenetrable forests form natural boundaries of the game labyrinth.

Fig. 6. Heroes of Might and Magic: Armageddon's blade. A multicursal labyrinth, where the hero can move through open glades only.

4. Storylines vs Gameworlds

Ever since the first literary article on adventure games [6], and the first dissertation [3], questions have been raised about the relationship between narratives and games. Though these questions have been formulated in many ways and from many needs and perspectives (e.g. technical, utopian, critical, and pragmatic), little progress has been made in these two decades. This lack can be explained by 1) little or no awareness of previous work and of work in parallel disciplines; 2) little progress in the evolution of the game systems themselves, and 3) a lack of theoretical engagement with the fundamental concepts (story, game, interactive, narrative, fiction) and their implications for the empirical basis, especially in the more utopian/technical/pragmatic contributions. While a more thorough investigation resulting in a clearer notion of these concepts, their limitations and their relevance might not have been enough to solve the fundamental issue, it might have resulted in a better set of concepts, that could have modeled and explained the relationships between games and stories where the first generation of terms (e.g. "interactive fiction") clearly failed.

For instance, if we go back to the first academic use of "interactive fiction", the authors (Niesz and Holland [6]) do not attempt to explain in what way the adventure games they discuss actually are fiction, how the concept of fiction is expanded by their use of it, or how they would re-define it, in light of the new material. Rather than to take this wonderful opportunity to explore the generality and scope of the concepts, the new empirical evidence was forced to fit the pre-conceived semantics of the old concepts. This unfortunate tendency is still evident in recent studies: For instance, in the article "Games and Stories" [9] the authors, strangely, criticize the profoundly successful dungeon game *Diablo* (1996) for failing to comply with the principles of narrative communication. This is just one example among innumerable; they can be easily spotted by either their lack of a clear, empirically grounded definition of the key concepts (story, narrative, fiction, etc), or when new attempts at definitions of narrative are provided, these definitions are usually so broad as to be useless. A good test is to see whether the definitions also will include obviously non-narrative phenomena and activities such as, say, elevators, meals, or shopping. One such term is "emergent narratives" negatively defined by Henry Jenkins [5] as "not pre-structured or pre-programmed, taking shape through the game play, yet they are not as unstructured, chaotic, and frustrating as life itself". Jenkins does not offer a definition that allows us to positively discriminate between emergent narratives and "life itself" – or between "life itself" and any part of "life itself" that may appear structured, un-chaotic and un-frustrating.

The current state of affairs (i.e. the "ludology-narratology" war) has been lamented many times (see Frasca [4]) and this is not the place to rehash that meta-debate. Instead, it is time to examine and perhaps explain the apparent dichotomy or (as also claimed) synergy between games and stories. To do so, we must first return to the roots of computer games and "interactive fiction". The first modern computer game was no doubt *SpaceWar!* (Russell et al. 1961-2). It was a space combat simulation, a fight between two player-controlled spaceships where the laws of gravity and the players' ingenuity determined the outcome. *SpaceWar!* is a simulation, a set of automatic rules represented on a graphics screen. While the game was inspired by

science fiction, it was pure action, and could produce an infinite variety of slightly different game events. *SpaceWar!* was the start of the action/arcade genre, that today contains a rich diversity of games which let the player move through simulated space.

An equally important root was *Dungeons and Dragons* (D&D) by Gary Gygax and Dave Arneson (1974), the pen-and paper game which simulated fantasy combat through a system later known as the D20 rules, named after the 20-sided dice used to produce random results in the game. *D&D* was a set of rules, inspired by tactical war games, which would let a game master lead a team of adventurers through a medieval-fantasy landscape. Games could last for months, and players nurtured their characters and co-produced the unfolding of an improvised fantasy narrative through their interaction with the game master's prepared landscape and schemes.

The D&D system has been immensely influential across many game genres, from singleplayer games such as Richard Garriott's *Ultima* Series, *Rogue/Nethack,* strategy games such as *Heroes of Might and Magic*, the original *Multi-User Dungeon* (Bartle and Trubshaw 1979), and newer games like *Baldur's Gate, Morrowind* and *Knights of the Old Republic*, not to mention MUD-style "massively" multiplayer games like *Ultima Online* and *EverQuest*. The elegant, easily implementable simulation of monsters, heroes, skills, spells and weapons has proved a powerful base for computer game development for more than two decades.

But while "interactive storytelling" as a collaborative effort between game master and players is an important aspect of many D&D sessions, the computer games based on the D20 rules are less creative than human authors, as they lack the human intelligence needed to create or co-create a story in real time. Instead, they rely on other tricks to present successive events in a story-like order.

Another origin game was Crowther and Woods' *Adventure* (1976), which started as a cave simulation, based on William Crowther's exploration of Colossal Cave in Kentucky. Donald Woods turned the cave simulation into a puzzle-solving and treasure hunting game, which in turn inspired the very popular genre of textual adventure games, later known as "interactive fiction." Unlike the creators of *MUD*, *Rogue*, *Ultima* etc; Woods was not familiar with the *D&D* system, and, perhaps for that reason, produced a game which was much simpler in terms of simulation and rules, and whose main gameplay elements were the labyrinth and the verb-object puzzle. While the textual adventure game died commercially in the late 80s, the basic linear labyrinth structure survives in the graphical puzzle and action adventure games such as *MYST*, *Half-Life*, *Max Payne*, *Halo* and numerous others.

The two root structures (unicursal labyrinth and D20) are still present in modern games, and typically, they do not overlap. D20 games tend to be more open-landscaped and open-ended, while linear games (*Half-Life 2, Halo*) do not make use of D20 rules.

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┌──────────────┐   ┌──────────────┐        ┌──────────────┐
│  Physical    │   │  Landscape   │        │   Avatar     │
│ Simulation:  │   │ simulation:  │        │ simulation   │
│  Spacewar!   │   │ Collossal Cave│       │  D&D (1974)  │
│    (1961)    │   │ Adventure (1976)│      │ (pen&paper)  │
└──────────────┘   └──────────────┘        └──────────────┘
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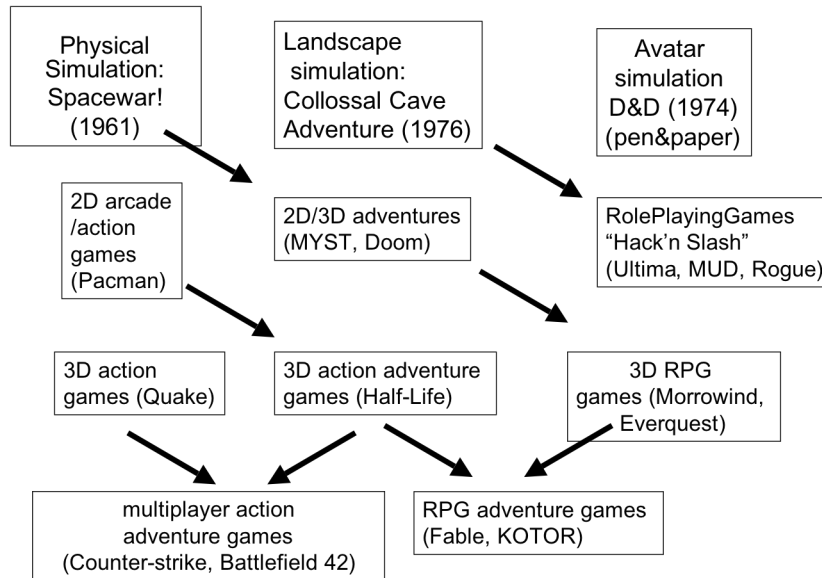
Fig. 7. The three origins of modern computer games, with cross-strain influences.

Are unicursal adventure games a form of narrative, while D20 games are too open for that term to make sense? Is it possible to draw a narratological demarcation line between these two genres? In almost all "new media" theory, we find a basic pair of opposites: text/hypertext; linear/nonlinear; fiction/hyperfiction; static/interactive; progression/emergence; representation/simulation; narrative/database. If this sounds familiar, it may be because the rhetoric is not at all far from the literary structuralists' distinction between *closed* and *open* (Eco), or *lisible* and *scriptible* (Barthes).

But as examples such as *Final Fantasy*, *The Legend of Zelda*, and *Grand Theft Auto* (incidentally, all series) or even *Ludo* show us, the dichotomy is far from absolute. There can be no robust demarcation between simulation games and "narrative" (quest) games. While *Half-Life* and *Halo* do not use D20, there is no reason why they couldn't. And it is easy to imagine a *Grand Theft Auto*, which, *Matrix Reloaded*-style, solely takes place on a unicursal motorway. So perhaps the solution is to use the term "story-game hybrid"?

The problem with *terms* like story, fiction, and game is that they, unlike the phenomena they give name to, do not exist in the real world. Our use of them will always remain pragmatic, no matter how carefully we define them. A better approach than to fight over the meaning of words like "narrative" might therefore be to temporarily remove the problem-word from our analysis, and instead try to come up with a finer set of terms and models that can describe the differences between so-called stories, games, and game-story hybrids.

What is called for, in other words, is a work-specific analysis, a close look at the individual specimen to identify similarities and differences from other specimens.

What is common for all computer games with virtual environments is that they are based on a simulation, a dynamic model/rule set. Also, like board games, they take place in a virtual space, where the player moves the pieces/avatars and manipulates

the objects in the game environment according to the rules. In addition, there may be times when the player can do nothing, because the game system refuses or even terminates player control. Without these conditions, there can be no game; however, a closed sequence of events (a story) could easily be presented by the same system. In other words, there is no real dichotomy between a story and a computer game system; the production of story is merely a constraint of the system's user. A game engine can be used to present animated sequences, but, on the other hand, a story cannot be used to play games (although it can tell us how it is done). The relationship between games and stories is a hierarchical one: game engines are also potential story-producing devices, but not vice versa. So the game system is the more basic, fundamental, encompassing structure; the story is merely one of its possible uses. This becomes clear in the opening sequences of *Half-Life* and *Half-Life 2*, where the user-avatar is free to move inside a train car, listening to a voice-over, but nothing the user does has any effect on the avatar's situation. Later, towards the end of *Half-Life 2*, the avatar is enclosed in a transportation device inside the enemy complex, and the player can only watch as the avatar is transported through the building. There is space, but no room to move, only to be moved around in.

Constrained space and forced movement, however, is not in itself a narrative device. A unicursal labyrinth, a structure known from antiquity, is not a story, but a trial, a place of testing, a game. However, given its sequential structure, it can easily be ornamented with story-like elements: other characters, causes and effects, descriptive passages in meaningful, orderly sequences. By far the best story-like device is the quest, which provide the purpose that the naked space and mere exploration may lack. The quest gives direction, action, and resolution, a sense of ourselves as participants in the game world. As Tronstad (2001) pointed out, successfully accomplished quests are the stuff stories are made from, but they should not be confused with the stories that can be told about them. Quests force players to experience the game world, to go where they have not gone before, and barely can. The quest is the game designer's main control of the players' agenda, forcing them to perform certain actions that might otherwise not have been chosen, thus reducing the possibility space offered by the game rules and the landscape.

Such enforced spaces and quests may be used to convey information that may pass as stories, but these "stories" are not co-told by the players, only uncovered and observed by them.Not gamer-as-author, but (at best) gamer-as-archaeologist. In most linear corridor games, like *Max Payne*, the player can ignore the information, with no strategic penalty. Unlike *D&D*, there is no *narrative* improvisation on the player side (though there may be gameplay improvisation), and no collaboration or even information exchange bwtween gameplayer and game designer. The only creative possibility for the player is to subvert the system, to play against the designers, to try to sabotage the intentions by exploiting a flaw in the programming of the system. What is created by such actions, however, is not a new "interactive" story, but an exposure of the non-caring simulation system beneath the fragile, easily broken and unconvincing storyline.

Successful productions of this type, whether we call them stories, games or story-game hybrids, must find a balance between the landscape and the path forward. The landscape must disguise its unicursal nature, and the true path must appear as though it was one choice among many. The creative ingenuity of the quest game designers

hinges not on their ability to create story-building elements (believable characters and events) but on their spatial design: how well the path is disguised by the landscape, and discoverable by a balanced amount of player effort. Games like *Half-Life* is an exercise in spatial exploration and discovery, and what makes *Half-Life 2* better than its predecessor is its tighter, better staged levels.

Fig. 8. Half-Life 2 (2004): A single path through the landscape; the mysterious man with suitcase (blowup, right) is merely narrative ornament.

Other games open up the game landscape and create more freedom and choice for their players. One alternative model to the unicursal corridor is the *hub-structure* (or multicursal labyrinth) we find in games like *Knights of the Old Republic* (2004), a game set in the Star Wars universe, where the avatar must progress, D20-like, from apprentice to Jedi, while choosing between the light and dark side of the Force. The game allows the user to move between several planets (level clusters) while solving progressively harder tasks, given by many minor game characters. The player can move at will, revisiting the same places with new objectives. As the avatar becomes stronger, the range and freedom of safe movement grows. Here, too, the object of the game is to discover new areas, which may reveal "story" elements in a carefully orchestrated way.

Finally, we have games with completely open landscapes; where the challenge of navigation is mainly a matter of moving safely, and not of maze-solving. A recent example is *Morrowind (2002)*, where the game consists of one huge, continuous world/level (and some underground "dungeons") and where the avatar may move in any direction, as long as the monsters in our path can be conquered. In *Morrowind*, we may eventually discover story-elements in the form of a "central quest" that one is free to pursue, but given the open landscape, one can play for a very long time doing anything one pleases.

5. Conclusion

Comparing these games shows us that what may resemble narrative structures is actually spatial (A to B) structures, and that the games that may seem most story-like are the most spatially constrained and place-quest oriented. The challenge for game designers who want to create rich, open game worlds and tell interesting stories at the same time, is to move beyond the constraints of unicursal corridors or multicursal hub structures while keeping the player's attention on a storyline. And that is no easy task. But perhaps presenting an interesting landscape with challenging quests is enough? The most original quest games of 2004, such as *Far Cry* and *Fable,* presented shallow characters and utterly traditional gameplay, but their worlds and landscapes were rich and varied.

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