Continuity of Expectation

User Experience in Game Sequels

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– User Experience in Game Sequels

Abstract
This study asks the question; "How can playing a series of games be considered a continuous experience, rather than isolated experiences?". By asking this question, this study aims to enable game design evaluation from a new perspective, using HCI tools and theories. There is a qualitative study of a sequel game, interviewing players from a GameFlow perspective. Answers are compared to reveal differences based on their experience with previous games in the series. This is done to see if looking at game design through new perspectives opens up for new context-based design opportunities. Design opportunities are analysed from an activity theory perspective, to not only uncover issues, but also explain them. By doing so, this study shows that it is possible to consider a sequel to a game a continuous experience, and that taking this into account during game design opens up for new opportunities.

Keywords: Game design, sequel, continuity, user expectation

1. Introduction

1.1 Background
"The book was better than the movie". This is a common cultural sentiment that can be heard by fans that have been disappointed in movie adaptations. This thesis, however, is not about movie adaptations, but this idea still rings true in other types of media.

Let’s explain this a bit further. In the case of a fan being disappointed with a movie, we have to take a few things into consideration. They have previous experience of the story being told. They’ve read the book. This gives them certain expectations of what they will experience in the feature film. They go into the movie theatre with different expectations than those who have no previous experience. For people experiencing the story for the first time, they have no such expectations. The experience between the two groups will be different. This is the thought that spawned the idea of the continuity perspective, which is the basis for this thesis. The person who’s read the book sees the movie as an ongoing experience, continuing from their book onto the silver screen, while a newcomer is just starting the experience. The continuity perspective is the idea that previous experiences and iterations can have a great impact on the experience of sequels and iterations.

This thesis is based on the research of previously published “Introduktion till Kontinuitetsperspektivet” (Wikman 2014), where the concept of a continuity perspective in game design analysis was presented. The original thesis gave indicative results that it was possible to analyse game design from this perspective, and give indicative results of issues (and positive improvements) in designs from one game to the sequel. In this thesis, this concept is tested and further expanded from a user experience perspective. Sequels in game design are commonplace, and by analysing two games (an original and a sequel) from a continuity perspective (experienced players), and a non-continuity perspective (inexperienced players), test in just what ways discrepancies between the two games can
influence the experience of users who have played both, or just one. Can this perspective open up for new design opportunities?

There has been research bridging the fields of HCI and game design previously, such as Jørgensen (2004) and Christensen et al (2003). Jørgensen explains that there have been several initiatives by researchers to bring HCI techniques into game design and game evaluation. An example is the case of the Playtest group, who employs game developers, psychologists and HCI specialists in order to do qualitative and quantitative testing of game design. This study is an attempt to bridge the combination of HCI and game design by looking at combining previous research into new ways to discover and explain design opportunities.

1.2 Purpose

The purpose of this study is to determine in what way playing an original game changes the user experience in the sequel. Determining whether or not playing the original game before a sequel makes a difference at all (and in what way these differences can be detected and analysed) to provide game designers with tools to make informed decisions when creating game sequels. Previous work on the continuity perspective used game design basics to see in what way discrepancies can be detected, this thesis looks at a wider perspective and analyses user experiences, and in what way they differ between experienced players (players of the original and the sequel) and inexperienced players (who've only played the sequel). Previous research has given indicative results and called for further testing. Whereas the previous thesis mainly used collected sources from online game critics to determine the accuracy of it's qualitative analysis, this paper uses original collected data gathered from interviews from experienced and inexperienced players and comparing them. This will yield more reliable results and further suggest whether or not the continuity perspective is a valid analytic tool in game design. If it is possible to gain new insights and design opportunities by looking at sequel game design from the perspective of a continuous experience, it will add a meaningful tool for game designers in the future.

As such, our research question is as follows:

*How can playing a series of games be considered a continuous experience, rather than isolated experiences?*

There are many possible follow-up questions to this research question. Does this perspective open up for new design opportunities? Is a qualitative study a useful way to uncover continuity issues? Why do some players experience problems in continuity, while others do not?

There is little to no prevalent research done on game design in relation to game sequels and their effects on the user. This paper aims to bridge the gap between current game design research and the industry practice of creating series of games. By looking at the differences in experiences between experienced and inexperienced players we can see what differs in their experience, explain those differences through related research, and propose in what ways those differences can be interpreted and predicted through research and methods usually related to the HCI field.
In this paper, we suggest that players experience games differently depending on their previous experiences and their entry point into a series. With this perspective, a second game in a series is not a new entry point, but a transition into a new, fresh experience that builds upon expectations and previous experiences. A player does not “reset” upon starting a new game, but brings their experience and expectations from previous titles with them, which changes their expectations and experience of the sequel game. Using this suggested continuity perspective, we propose that there might be additional game design opportunities when looking at the creation of a sequel game from a continuity point of view. Additional game design opportunities allows the possibility of improved gameplay and less frustration for users, but also less need for designers to look at continuity problems that could arise later on.

By asking this research question, and looking at game design from this point of view, we are able to see if changing the perspective opens up new design opportunities, and in what ways acknowledging the context of a game (in this case, sequels) can influence the design process.

1.3 Game Design and HCI

There has long been an established connection between game design and HCI, beginning with Malone (1982). The first and foremost use of HCI in game design have traditionally been the implementation of improved user interfaces and improving usability. As Jørgensen (2004) explains, introducing iterative design and evaluation techniques to game design has brought forth new ideas and intuitive accessibility for players. This paper adds to this notion, by looking to provide further tools for game designers to use in order to uncover more design opportunities by introducing the concept of continuity, and ways to uncover issues relating to continuity.

Jørgensen, K (2013) recently published another book on the subject, specifically looking at interfaces in games through an HCI perspective. Gregersen & Grodak (2008) also used HCI techniques (specifically the concept of embodiment) to apply to a study of full-body interfaces. Ducheneaut (2004) has also conducted a series of studies of social interaction within multiplayer games, exploring various concepts of the social side of online gaming. Nardi et al. (2007) performs a similar study of social gaming, looking at multiplayer games from a social context. These are examples of using both HCI and game design in new ways.
In this study, we follow the same pattern, using activity theory to explain and evaluate user experience in a game design context. While not looking specifically at interfaces or social gaming, these studies show how various aspects of gaming can be studied from an HCI context.

1.4 Definitions

1.4.1 Continuity
Merriam-Webster (2016) describes continuity as;

“Something that is the same or similar in two or more things and provides a connection between them”

By this definition, continuity needs two objects with a connection in-between. In this study, game sequels are the specific point of interest (the original, the sequel, and the inherent connection between the two), seeing as the connection is noticeable and acknowledged by both developer and audience. However, one could also argue that two games from the same genre have a continuity, the genre being the connection. One could argue that two games of the same platform or console has a connection. No matter the argument, game sequels were a preferred subject to study, as the connection between the two objects are clearer and more favorable for an in-depth analysis.

1.4.2 Experienced and Inexperienced Players
To better understand the user group and categorize interview subjects, a user model based on Kobsa (1993) was adapted. By better defining players in a hierarchical manner, stereotypes and subgroups, it is possible to get a better overview of capabilities and expectations. By using this model, we get a clearer view of which players to interview, and how their experiences differ.

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<thead>
<tr>
<th>Sequel Game</th>
<th>Inexperienced Player</th>
<th>Experienced Player</th>
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<tr>
<td>Original Game</td>
<td>Inexperienced Player</td>
<td>Experienced Player</td>
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_Figure 1.2 - Experienced and Original Players_

In figure 1.2 we can see an overall overview of a model concerning players in relation to two games - an original and a sequel. Using a standard of 6 hours of total gameplay, we argue that this is sufficient time to get a decent overview of a computer game. A less than complex game might need less than 6 hours in order to be understood fully, but we make the assumption that the game we analyse is somewhat complex as to not take simplicity for granted.
Figure 1.3 - Experienced Players
Figure 1.3 shows the necessary qualifications to classify as an “experienced player”. This is a player who has played the original game (“actual play” time), and the sequel, both for a minimum of 6 hours each (12 hours total). This is the group of players identified as capable of following a continuity perspective, as they can connect the experience from the original game and compare it to that of the sequel.

Figure 1.4 - Inexperienced Players
Figure 1.4 highlights the qualities of the defined “inexperienced player”. This is a player who has 6 hours or less of experience with the original game, but a significant amount of time invested in the sequel (>6 hours). This group of players is less capable of making an informed comparison from a continuity perspective. Players who are inexperienced in both the original and the sequel are classified as “non-players”. Players who are experienced in the original, yet inexperienced in the sequel, are classified as “original players”.

1.4.3 Original and Sequel Game
An “original” game does not necessarily mean the first in a series. In the context of this study, the “original” refers to the game that is before the “sequel” in terms of release date. In this paper, “spiritual successors” are not classified as sequels, as the inherent connection is not as widely accepted or anticipated as that of a standard sequel. The original game, and it’s sequel, are two instances of a series of games. Other games that have been released previously, while possibly relevant, are disregarded in terms of analysis, as the most current “original” game is more recent, and the experience that comes with it is more recent than potential predecessors.
1.4.4 Game Terms
There are a few game terms that could feature in this paper, especially during the presentation of results. Here is a quick rundown of the most prevalent terms:

- **RNG** = Random Number Generation.
- **EU/EW** = Enemy Unknown/Enemy Within. The name of the original game used as a reference.
- **Vanilla** = Unmodified game.
- **Iron Man** = Game mode that does not allow players to save and load at will, forcing players to keep playing despite mistakes.

2. Related Research

2.1 Research topics
The related research that’s been selected as the most relevant for this study has been picked out based on relevance to design theory, game design and HCI. While trying to find the most recent relevant articles and books, there are plenty of timeless theories that still need to be referenced. Flow theory, for example, is not a recent theory in itself, but new models based on this theory have been made in the past 10 years. So while not following any strict criteria as to what previous research is most important, there has been an overall conscious effort to make more recent studies more prominent in this study. Most articles have been found using popular academic search engines, or by word-of-mouth from established academics.

2.2 Traits, interest and user experience
Brusilovsky (1998) argues that the most important aspects to look at when adapting media to the user, is user interest and individual user traits. Both of these are valid adaptation points in both hypermedia and game design (where players are allowed to adapt their own difficulty settings, for example). However, from a continuity perspective, the most important aspect to consider is neither user interest or individual traits, but experience. As user experience is viewed as an ongoing process rather than isolated events from one game to the other, it becomes an increasingly integral aspect. So while individual user traits and interests might be the most relevant in a more universal context, we must acknowledge that we are using a particular perspective that require reprioritizing.

User experience is, largely, “dynamic, context-based and subjective” (Law et al. 2009). As is the nature of game design, with incalculable methods to apply when telling a game narrative or expressing gameplay. Despite the dynamic nature of users, there is still room for consensus among experienced users. When interviewing experienced players, a few assumptions are made:

- The experienced player 
  *enjoyed* the original game on a compositional level
- The experienced player wants to 
  *prolong* the experience initiated by the original game

These are reasonable assumptions to be made. A player who did not enjoy the original game is less likely to play it to completion. As such, they are less inclined to further prolong that experience through a sequel. With this in mind, it is reasonable to assume that
experienced players are a somewhat homogeneous group, as they have the *individual traits* and *interests* required to enjoy the original game. Experienced players may still enjoy differing experiences outside of the narrative of an original and sequel game, but when it comes to that isolated original and sequel it is fair to assume that experienced players will react to the game in an overall similar manner. With this in mind, it is easier to see in what way *user experience* plays a larger role than *individual traits* and *interests* when it comes to applying the continuity perspective for the purpose of evaluation.

### 2.3 Use time and actual play

Fischer (2001) explains a fundamental issue of design, namely that of *design time* and *use time*. While presented as an issue of system design, this also applies to game design in general. *Design time* is described as the allotted time frame in which designers are given room to come up with a system, whereas *use time* is the aftermath, where users are supposed to use the system in question for whatever purpose it serves. Many design methods are meant to bridge these two in a meaningful way, by bringing use time into design time (prototype testing, focus groups, etc) and some to bring design time into use time (post-launch patches, ongoing support). In games, design time is an ongoing process that can continue long after the game has launched. Many major publishers use their major titles as a platform to sell future minor products (“downloadable content”) to their users post-launch, or having users sign up to a monthly fee in order to enjoy their game fully.

An issue that game designers face is the inability to predict issues that occur during *use time*, or during *actual play* (where real paying users are playing their released game). For example, the launch of Diablo 3 (Usher, 2013). The launch was riddled with technical issues, causing many players to be completely unable to play it for lengthy periods of time. This is an example of why it has become common industry practice to provide post-launch services, making users download fixes to bugs and issues long after they bought the initial game. Technical issues aside, there is also the problem of anticipating the *actual play*. When looking at massive multiplayer games with thousands of players, it is close to impossible to simulate what *actual play* will look like. Looking at a game design from a continuity perspective is an attempt to bring issues experienced players would have with *actual play* into design time by looking not just at the game’s features, but looking at them through a user-based context perspective.

While the circumstances of Diablo 3’s launch was largely technical and depended on an increased player base and an inability to predict server load, there were other issues that could have been prevented by looking at the context. For example, Diablo 3 introduced a new type of trading system to allow players to trade items for an in-game currency, a practice common in large massive multiplayer-type games. However, there were two core issues with this implementation. One, the “auction house” system also allowed the option to buy and sell items for real currency. Two, there had never been an “auction house” system in place in the Diablo series. Game designers were convinced this would solve issues that previous games had (illegal in-game trading with real currency, for example), but the plan backlashed. While previous games had (mechanically) been about destroying monsters and gaining better equipment through random chance, the new system encouraged players to hoard in-game currency, to instead buy the best items available from the on-line marketplace. This was a serious breach in mechanical continuity for experienced Diablo-players, as one of the core mechanics of the game had been tilted. More than a year after launch, Diablo 3 game designers made the decision to completely remove the auction house system, admitting their solution to the perceived problem had caused more issues than anticipated (Hight, 2013). From a continuity standpoint, this decision made sense, as the auction house system was a break in mechanical continuity, causing frustration in experienced players who’d anticipated another type of gameplay. Diablo 3’s implementation of the auction house system is an
example of an issue that using a continuity perspective could have detected during design time rather than during use time more than a year post-launch.

In this particular study, we are analysing a game that has been released, so it is already in use time. However, game testing and early evaluation from a continuity perspective would allow game designers to look for potential issues at an earlier stage. Looking at the removal of the auction house from Diablo 3, it is not unrealistic to imagine disappointment from those who’d gotten used to the auction house system, which was suddenly taken away from them. If they had never known about the auction house system in the first place, there wouldn’t be as much disappointment. Making large, sweeping changes during use time causes continuity break (explained in section 2.5) to some degree, and evaluating for these kinds of issues at an early point in development reduces the chance that such measures might be necessary during use time.

2.4 Game Design and Flow Perspective

Previous research into using the continuity perspective to predict and explain user reactions have been made from a game design perspective, mainly based on the works of Calleja (2011) and Salen and Zimmerman (2004). Using this perspective, four main aspects of game design were identified and tested; a technical, mechanical, dramatical and esthetic aspect. Each aspect greatly influences the experience of the game as a whole. However, these aspects are also very generalized. Within the confines of the mechanical aspect of the game lies the game itself - a category difficult to sum up without breaking it down into more detailed pieces. What is actually being tested is the user experience. How does the user experience the transition from one game to the other, in comparison to those that’ve never played the original in the first place?

With this in mind, there is other literature to consider. Csikszentmihalyi (1990) brings up the subject of Flow theory, and the discussion of optimal experience. Flow theory discusses the psychology behind optimal enjoyment of an activity, and presents noticeable criteria for when one has achieved a state of flow - as well as what may move a user in and out of a state of flow. There are mainly eight flow experiences to consider, according to Csikszentmihalyi:

(1) a task that can be completed;
(2) the ability to concentrate on the task;
(3) that concentration is possible because the task has clear goals;
(4) that concentration is possible because the task provides immediate feedback;
(5) the ability to exercise a sense of control over actions;
(6) a deep but effortless involvement that removes awareness of the frustrations of everyday life;
(7) concern for self disappears, but sense of self emerges stronger afterwards; and
(8) the sense of the duration of time is altered.

Each of these elements can be translated into a flow theory adapted for game analysis, according to Sweetser (2005) and Chen (2007). Sweetser also suggests a model called the “GameFlow” model for interpreting flow from a player perspective, specifically, in relation to video games. The GameFlow model has been adapted by game design researchers to get a better understanding of user experience in games. The model is adaptable enough to cover a wide range of games. It originally covers classic console and computer games but has since been adapted to pervasive games (Jegers 2007) and music-based exercise games (Bronner et al. 2013). By looking at the various elements of flow theory and applying it to games,
Sweetser adapted the model to better be applied to game theory. Using the elements of *concentration, challenge, player skills, control, clear goals, feedback, immersion* and *social interaction*, the GameFlow model analyses the user experience from a player perspective rather than a design perspective. Looking at what the continuity perspective is focused on measuring (player reaction and experience), it is appropriate to base an analysis of continuity on a player perspective (GameFlow) rather than a strict game design perspective. While the aspects of the mechanical, technical, esthetic and dramatical can still be found, and applied, it is more appropriate to use the GameFlow theory as a point of measurement during data gathering.

![Image](image.png)

**Figure 2.1 - The Flow Zone Factors (Chen 2007)**

### 2.5 Continuity Break and User Expectation

For a player who does not follow a continuity perspective, there is no such thing as an immediate continuity break. The experience of playing the game is more isolated, and compared only to other concepts broadly. Any game can follow a continuity perspective, only some closer than others. For example, when playing a strategy game, the player can still compare the experience to that of previous strategy games, and games who break away from the established strategy game formula can still cause frustration - but also innovation. It is, however, in sequels where the continuity perspective becomes the most prevalent.

Fabricatore, Nussbaum and Rosas (2002) presents a model for qualitative design and analysis for action-based video games. This model shows that there are certain expectations from the players in order to meet expectations and preference. While there is no equivalent model for each genre of games, it still goes to show that there is a *base level of expectation* from players, even if a game has no sequel. In non-sequel games, there are other expectations. For example, players do not expect the storyline to pick up where a previous game left off, or follow the exact same game mechanics. There might still be similar functions, and some mechanical continuity. The up-arrow might still mean “jump”, while the left and right arrow still correspond to moving left and right. These are implicit interactions.

In sequels, however, there are more implicit expectations than in non-sequel games. One might expect the same dramatrical tone, esthetic style and gameplay mechanics (albeit slightly expanded to keep the player interested), for example. These implicit expectations are not as prevalent in non-sequel games, as the point of comparison becomes a genre as a whole, rather than a specific point of reference. Hence why this thesis is focused on analysing the experience of players within a sequel context, rather than isolated original games.
Figure 2.2 shows an example of how players with different backgrounds come into a game experience with different expectations. A player who has not played any previous articles in a game series can only draw upon experiences of the genre as a whole, while players who have played previous games in a series have another set of expectations to draw experience from.

Continuity break occurs when the expectations of a player, based on previous experiences, are mismatched. The basics of activity theory, as explained by Kaptelinin, V., & Nardi, B. A. (2006), goes a long way in explaining the process of continuity break, and the reasons why it might or might not be well-received by returning players.

Figure 2.3 - Kaptelinin, V., & Nardi, B. A. (2006) describes the hierarchy of activity.

The hierarchy of activity can be looked at from a perspective of games. If we use chess as an example, it could look like this;

- The motive of the game is to beat your opponent. The activity is the game itself as a whole. You can take various conscious actions to further your goals (outmaneuvering your opponent, setting up a lure, etc). The operations of the game are moving the individual pieces to indicate your movement, and the conditions of doing so are the rules of the game.

Automatization and de-automatization can occur within a game system. If a game suddenly removes an option you’ve taken for granted half-way through the narrative, you are forced to re-think your strategy, making operations into an actions. This can be done in a meaningful way, and is not necessarily a continuity break. A continuity break can occur within several ways within the connection between the original and sequel. The most noticeable continuity breaks can occur within several contexts;

- Change in motive (end-goal of the game)
- Change in goals (ways to reach the end-goal)
- Change in conditions (operation and action conditions)
- Change in action (available actions)
- De-automatization of operations (Operation to Action)
- Automatization of actions (Action to Operation)

Each category has the potential for a continuity break, but a break only occurs when there is a discrepancy of expectation. For example, if there is a logical explanation or situation leading up to an automatization or de-automatization of an action, that is iteration, rather than a continuity break. Continuity break occurs when the change is discrepant from the expectation of the player. We’re taking a closer look at each category and providing a few examples.

2.5.1 Change in Motives
Changing a game’s motive (the conditions for winning the game) can have a serious impact on the way a game is played. An example would be the Shadowrun game released in 2007. While all previous Shadowrun video games had been action role-playing games, the game released in 2007 under the same name had a completely different motive compared to previous games. Whereas previous games had the player interacting with a narrative in a single-player campaign setting, the new game was a multiplayer-only challenge game based around short rounds. The motive changed from overcoming a system and single-player campaign into overcoming human opponents. While players who enjoyed that type of gameplay were met with a product they expected and appreciated, players of the previous Shadowrun games experienced continuity break.

Figure 2.4 - A user of Metacritic (2016) experiences continuity break in motive. The game is played by defeating human opponents in a series of matches rather than experiencing a single-player narrative.
2.5.2 Change in Goals
While changing the motive of a game can seriously alter the way a game is played, so can the change in goals. Looking at ice hockey, for example, the motive is to defeat the opposing team. You do so by scoring goals during an allotted timeframe. If instead the goal was changed to the first one scoring a goal winning the match, the dynamics of the game changes completely, forcing different tactics. In ice hockey, this is done when the game goes into overtime, during something called “sudden death”. If the entire game was to be played in this way, the first one who scores wins, that would be a serious change in goals, causing a continuity break for those expecting a regular game of ice hockey.

2.5.3 Change in Conditions
Speed chess is a good example of a change in conditions of a game. By adding the rule that a move must be made within a certain timeframe, it changes the conditions of play. It adds the rule, the condition, that a player must act within a certain timeframe. This rule, by itself, forces players into making quick decisions. It also enables new strategies, as strategies and traps that could previously have been easy to detect are now a more viable option. By changing the conditions of actions, the game is completely transformed as a whole.

Now, this was an example of how change can bring new meaning to a game, but let’s consider a different scenario. If the chess player is unaware that the game about to be played is speed chess, rather than the original ruleset, there will be a continuity break, as it forces the game to be played wildly different than expected.

2.5.4 Change in Action
A change in available actions is not always the equivalent of a continuity break. In fact, in many games, it is an inherent feature. Your character might be upgraded to get new available actions, for example. In many games, the available actions change over time. Still, this could cause a continuity break. If the available actions change in an unmotivated way, where players expected a certain action to be available, it can cause a continuity break.

An example of continuity break because of change in action can be found when looking at the Elder Scrolls games. During the transition from a fourth installment (“Oblivion”) to the fifth (“Skyrim”), one of the features called “Spellcrafting” was removed. Previously, this allowed players to create custom spells for their characters to use in overcoming various obstacles in the game, and it was a feature that had been prominent in several of the previous iterations of the series. However, it was removed in the fifth installment, albeit motivated (Nelson, 2011). Nevertheless, players who expected this feature, like in previous games, were sorely disappointed.

2.5.5 Automatization
In many games, automatization can be a way to simplify difficult actions, or to remove the need for tedious micromanagement. In a strategy game where one has a hundred units to command, it can be useful with an automatization feature that effectively eliminates what is essentially a time-wasting mechanic. The problem with automatization can come from a
sudden lack of control. In games where a player is expecting to have certain control over an action, only to have it forcefully running as an automated uncontrollable process can cause a continuity break.

2.5.6 De-Automatization
The same way automatization can cause continuity break by forcefully removing control, the opposite can also cause a similar effect. Expecting a player to take control of a previously automated action can turn something unconscious into something tedious and forcefully conscious. However, de-automatization can also occur by changing an element of a game until it is no longer recognizable. If you move your character within a game by clicking with a mouse, and then change it to instead have you move using a keyboard, the player has to re-learn something they had previously done unconsciously. However, if this transition can be done with ease, and for good reason, the chances are lower that the player will experience continuity break. De-automatization almost always occurs in one game to another to some degree, as very few games are so similar that all buttons and controls are in the same place. Hence, de-automatization is a common occurrence, but not necessarily the most common reason for continuity break.

2.6 Metacontinuity
Wikman (2014) also explains another level of continuity - metacontinuity. In this paper, this level has been excluded from any analysis as it has proved difficult to reasonably define. Metacontinuity is experience regarding events happening around the game itself. For example, if a particular developer is known for releasing free DLC (“downloadable content”), it would be regarded as suspicious by some players if that practice suddenly stopped in an unexplained manner. If a particular developer is known for releasing unpatched games with technical issues, that practice might make players wait a significant time before considering a purchase. The actions of the developer of a game is not to be underestimated, and there are indicative results that metacontinuity could possibly be a significant contributor to a player’s overall experience. As it is difficult to define the boundaries and limitations of metacontinuity, it will be excluded from analysis in this paper.

2.7 Summary
Looking at the potential for related research subjects, the field is enormous. Since we are looking at both general design theory, game design and HCI, all large fields in themselves, there needs to be a selection process. When looking at a study that uses several fields, the possible number of relevant articles are numerous.

The need for this study comes not from a lack of a particular field. There are studies in design theory, game design and HCI separately, but there are few studies that look at fields from the perspective of the other. This is a study which comes from an HCI background, looking at a particular part of game design that hasn’t been widely documented - sequels, and the design thereof. While there are studies on various types of experience (McCarthy & Wright, 2004), user experience is the most important for this particular study. So while there are studies on the issues of experience and game design in general, there is still a need for a specialized study - especially on the case of sequel design, a common industry practice. While there are studies on experience, there are no studies on this particular consideration of experience. The context of sequel design, specifically, is lacking, and baselessly assuming that this context is irrelevant is unscientific.
The methodology this study is based on comes from the understanding of game design as well as HCI, and uses common data-gathering methods that are employed in both fields.

3. Method

3.1 Overview
To see in what ways experience in previous games have an impact on the experience of players, we needed to test user experience within a game sequel setting. Using the GameFlow model as a frame of questioning, semi-structured asynchronous interviews were settled as the data-gathering method. Bernhaupt, R (2010) mentions that interviews, and in particular semi-structured interviews, are a tested and successful method in gathering user experience feedback from participants in several stages of game development. As we needed to ask players of a game series that have already been released, it was only appropriate to use a method that has a higher success rate in testing user experience. The results were then compared to the framework presented in the related research and analysed from a perspective of continuity and user experience.

3.2 Participants
A total of 18 participants volunteered to be part of the study after an open request. All participants identified as male gendered. Participants were aged between 16 to 45 (26 being the median). When asked about their experience in the two chosen games, 15 out of 18 had played both, whereas 3 had only played the sequel. Out of those who’d played both games, most had played more than 80 hours, and the average gameplay experience for all participants in the sequel surpassed 45 hours.

<table>
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<th>Identifier</th>
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Table 3.2 - Participant data table.

3.3 Semi-structured asynchronous interviews
To answer the research question posed; How can playing a series of games be considered a continuous experience, rather than isolated experiences? For this purpose, the continuity perspective is used. By making an analysis of a current game series, according to the framework presented, and comparing the analysis to answers from a series of experienced and inexperienced players, we get a comparable result. We can compare the result of the analysis to the result of the interviews to look for overlap. If positive or negative continuity
breaks correlates with the interview answers, that’s an indicator that the continuity analysis could be used to detect discrepancies and predict reactions in experienced players. Showing discrepancies in experiences between experienced and inexperienced players is a way to show that playing both original and sequel brings a different experience of the sequel, compared to those who only played the sequel.

A series of semi-structured interviews are made with both experienced and inexperienced players, complemented by an analysis of the answers from an activity theory perspective. Bryman (2012) brings up several good points as to why a open-question semi-structured interviews should be considered, as well as the disadvantages. For example, there might be misunderstandings when interpreting results. It is easier to understand a “yes” and “no” in comparison to an explanation. However, the advantages outweigh the disadvantages in this case. Open-question, semi-structured interviews have a larger window of variation that allows participants greater leeway in their answers. To make the results as clear as possible, while still giving participants room to explain their thought process, the semi-structured interview is a more appropriate method to employ. Lindlof and Taylor (2002) explains that semi-structured interviews, while leaving room for participants to answer, also has a lower “dross rate” (amount of unusable data) compared to open-ended interviews, and allows for variations in questions, while keeping a focus on the topics at hand.

The semi-structured interviews were made via asynchronous e-mail to participants. E-mail interviews eliminate a series of obstacles that ordinary interviews are unable to (Meho, 2006). There are, however, also a number of challenges involved. E-mail interviews are limited to individuals with access to the internet and a familiarity with online communication methods. However, as the participants have the requirement of minimum of several hours of active gameplay, they are assumed to have access to the internet, or at the very least a computer. Accepting these limitations, there are a series of perks to e-mail interviews. It eliminates travel cost, transcription time and allows access to participants who prefer online communication. Participants who are unwilling or unable to perform a physical interview might be more open to e-mail correspondence. It also alleviates some of the pressure of giving an “appropriate” answer, by giving participants the time they need to come up with an answer that satisfies them, at their own pace.

By interviewing both experienced and inexperienced players, we can see opinions from a continuity and non-continuity perspective respectively. Data gathering will mainly focus on experienced players. The main focus of the continuity analysis lies on the creation of a sequel, the continuation of the series, and as such an original player doesn’t have the experience to make an informed analysis. The same is true for non-players. Both experienced and inexperienced players (as defined) are both considered to have significant time invested in the sequel. What differs is their background knowledge, where the experienced player has the possibility to view the two games as a continuous experience, while the inexperienced player can’t.

Practically, the asynchronous interviews were performed over a period of just over two weeks. Most correspondents sent their first answer within 48 hours, but in a few cases it took up to five days. How long participants took to go through the questions and produce a significant answer was estimated to 30-45 minutes. Since volunteers applied at irregular times, it added up to a total of just over two weeks of collection time. The dangers of this is that participants might lose interest, or simply give up in sending responses. When asking someone a direct question, you can expect an answer, but using asynchronous interviews, it can take days to get a response, and some participants might not even respond at all. It also places a greater responsibility on the participants in the way that they have to manually input their answers and send them in. However, the greater availability of participants can make up for any eventual dropouts because of these added difficulties.
3.4 Frame of questioning

The participants were asked questions directly related to the GameFlow perspective previously discussed. They were asked about their ability to maintain their concentration on the game, the game’s ability to match and improve their skill, in what ways they experienced control of the game, if there was a clear presentation of goals, in what sense they experienced a sense of progression and immersion, the game’s ability to provide capability of social play and finally an open question about how they perceive that their experience from the original game mattered into the experience of the sequel.

The questions were sent by e-mail once the participants were introduced to the concept of the study and agreed to take part. The questions were formulated as open-ended, and if a participant gave a particularly insightful answer (or a surprisingly short one), a follow-up question was sent in a follow-up e-mail. A few participants gave particularly short answers, as is the case with Participant 16, and did not respond to follow-up questions, which is one of the shortcomings of asynchronous e-mail semi-structured interview methodology. However, considering none of the participants would have been able to attend a person-to-person interview, the inherent shortcomings of the chosen method weren’t insurmountable.

3.5 Frame of reference

As a frame of reference for this study, the game series “X-COM” was used. X-COM is a long-standing strategy game which was revitalized in recent years. As of this study, there was a recent release of X-COM 2, the sequel to the reimagined original (published by Firaxis Games in 2012). This game series was chosen for several reasons. The recent release of the sequel meant that, while some players hadn’t been able to acquaint themselves with the game yet, their experiences and point of comparison was very recent. The community was active and eager to participate, making it easier to find participants with fresh and relevant opinions.

3.6 Ethics

This study has been made following the standard of the ethical science principles of the Swedish Research Council. All participants have been allowed complete anonymity and the study has been made with complete transparency of purpose and method. Identifying factors of participants, such as user names and nationality, have been removed from the final results.

3.7 Restrictions

There are possibilities to further investigate the uses of the continuity perspective, and the extent as to which it can be applied. For example, it has yet to be tested from a large-scale developer standpoint, and it hasn’t been used by actual game designers or in a game design scenario. It hasn’t been tested in an experiment either, as the results would be somewhat unreliable. The continuity perspective becomes the most accurate and obvious when there is a distinct difference in expectation between experienced and inexperienced players, and creating an experiment in a controlled setting would require significant time to be invested by the participants in order to gain conclusive results. Instead, this is applied to a real-world setting, and uses real people and opinions. As such, the results given may not be as reliable as those produced in a lab setting, but the requirements to produce a reliable lab experiment in this context are costly and time consuming for seemingly similar accuracy.
4. Results

4.1 Experiences
These are the experiences of the players interviewed, presented in the order the questions were asked, based on the concept of GameFlow.

4.1.1 Ability to maintain concentration
17 out of 18 players claimed the game was able to keep their attention and concentration. There were no differences in answers between experienced and inexperienced players. The only player (an experienced player) who perceived the game as unable to maintain player concentration motivated that it was because of unnecessary loading times.

4.1.2 Ability to match player skill
When asked whether or not the game was able to match the participant’s skills, and in what ways, there were answers that pointed to a trend in experienced players. Players who’d played the original game were more accustomed to the way the game “used” to play, and had some trouble adapting to the necessary tactics of the second game. Whereas inexperienced players had to learn everything from the ground up, they did not have to “re-learn” the way experienced players did. As quoted from several participants:

“I think my game skills were largely influenced by the experience with previous title. At first I tried to play in the same way as XCOM: EU and soon I started to lose operation after operation.” - Participant 16, 26 years old.

“I had to change my way of progressing through each mission from what I have done in XCOM EU/EW (slow and safe) to a faster pace (in the risk-reward-thinking, I had to take higher risks).” - Participant 5, 32 years old.

“At first I had some difficulty as I found it surprisingly hard. Being a veteran player of both Vanilla EU/EW and Long War I thought wouldn’t have too much trouble with the standard "Veteran" difficulty but the prevalence of turn timers and the game’s push towards an aggressive playstyle (something anathema to the turtling style of play prevalent in the previous XCOM) proved to be an enjoyable challenge.” - Participant 10, 17 years old.

4.1.3 Ability to improve player skill
The participants were asked whether or not they experienced their skills improving during the course of playing. While participants had somewhat similar experiences, experienced players and inexperienced players had different issues, and different skills to improve. While inexperienced players had to adapt to the system as a whole from the ground up, experienced players had to re-learn skills they’d previously adapted.

“It was very interesting for me to note that I develop my skills with completely new mechanics from XCOM2 like Concealment and Hacking much, much faster than getting rid of old habits from XCOM EU that were not new, just a bit different, in XCOM2.” - Participant 9, 28 years old.
“There is a huge gap between my XCOM EU/EW experience and XCOM2. My start was sloppy in XCOM2, and I got punished for it. I still got the feel that the more I played, the more I got good at it.” - Participant 2, 22 years old.

Inexperienced players, on the other hand, reported issues such as getting used to flanking systems and cover-to-cover strategic movement.

4.1.4 Level of control
Participants were asked to describe if they felt they had any level of control over the game, and in what way. There were mixed answers from all participants, with no particular trend. The game is based on random number generation (RNG) and percentages of success in actions, making many outcomes seemingly random and unpredictable. Part of overcoming the game is creating situations where odds are stacked in your favor. Both experienced and inexperienced players found the RNG system to be fair, but unpredictable, making them feel less in control. However, the experience was similar for all players, no matter the experience.

4.1.5 Presentation of goals
When asked if participants experienced a clear presentation of the game’s goals, the participants unanimously agreed that the goals were presented clearly. Users agree that the game presents its goals clearly both in terms of visibility and drama.

4.1.6 Sense of progression
When asked in what ways players felt like they experienced progression in the game, users agreed that it was able to provide a sense of progression. The game evolved within set parameters while still providing new challenges at regular intervals to keep a steady sensation of flow for a majority of participants.

4.1.7 Sense of immersion
When asked in what ways players experienced a sense of immersion with the game, there were various results. The overall consensus was that yes, the game was able to keep it’s players immersed, some more than others. Many players reported experiencing a severe loss of time and spatial awareness, and others reported a strong sense of emotional attachment.

“i definitely get emotionally involved. when i lost my favorite sniper recently, my girlfriend was picking on me saying that it looked like i was going to cry. honestly, i think i was close...” - Participant 3, 40 years old.

“I spent maybe 5 hours (Likely more) making characters after my friends and others I like. And to see them getting picked off left and right made me sad inside that I messed up.” - Participant 4, 21 years old.

“Even though they don't have any personality beyond their pre-programmed animations and the voice packs and appearance you assign to them, by virtue of an almost procedural kind of storytelling you grow invested in each of these emotionless mannequin soldiers.” - Participant 10, 17 years old.
Experienced and inexperienced players alike reported similar experiences of immersion. A few experienced players reported not being as emotionally invested in the game as others.

### 4.1.8 Capability of social play

When asking whether or not the game was able to provide a sufficient platform for social play, there were mixed answers. Most players reported not being interested in any form of social play within the confines of the game, stating that the game was supposed to be a very personal experience rather than a shared one. When asked about multiplayer options, most players weren’t interested. A select few reported that they were either dissatisfied with the availability of multiplayer games or dissatisfied with the improvements of the multiplayer section compared to the first game.

“*I do not play this game socially yet. It is not a matter of social gaming, I do play such games. But, as stated above, I believe this game to be a very personal experience through the immersion of the main campaign, and this is a feeling I do not look forward to trade with multiplayer gaming.*” - Participant 6, 28 years old.

“*There is a multi-player option but I find that far less appealing than the single player campaign.*” - Participant 12, 34 years old.

### 4.1.9 Game comparison

In the final category of questions, participants were asked to compare the two games and how the first game impacted their experience in the second. The majority of participants reported that their good experience with the first game was what drove them to play the second, and that the second expanded on their experience from their first game.

“*[...] if i hadn't played (and loved) EU, i never would have played this one.*” - Participant 3, 40 years old.

“*XCOM 2 feels like the just continuation of EU. It managed to carry over the feel of EU but it is its own game at the same time, and that I believe is what matters most. I would have never tried XCOM 2*” - Participant 6, 28 years old.

“*There aren’t enough differences to provide a fundamentally new experience but it does improve and build on more than enough to keep it interesting and playable.*” - Participant 10, 17 years old.

Participants reported the second game as feeling like a “continuation” of the first game, rather than feeling like a completely new game. However, there were negative comparisons as well, based completely on previous experiences compared to new ones. For example, the jet interception mechanic of the game, which was removed in the second game. The mechanic played a significant role in the first game, and when removed, was perceived as a missing feature by returning players.
“I do, however, miss some aspects of EU. Capturing live aliens and assaulting much more varied downed UFOs are the biggest missing pieces.” - Participant 8, 17 years old.

“XCOM 2 is a great improvement from the first one. However In the old game, I loved the jet mechanic where you could shoot down UFOs and then raid them.” - Participant 4, 21 years old.

5. Analysis

5.1 Interviews

Looking at the results and comparing them to the research previously presented, there are parallels to be drawn. Looking at the experience of experienced players painted a different picture of the game than when looking at inexperienced players. Going through the various categories of questions, there were several points made by experienced players that show that their experience of the first game plays well into the second - making playing both games a continuous sequence.

5.1.1 Analysis - Ability to maintain concentration

The ability to maintain concentration on the game was universal. There were no inherent continuity breaks, and there was no difference in the answers between experienced and inexperienced players. The one complaint about loading times causing a player to be unable to maintain concentration is a single complaint, and not an indicator of a larger, general problem.

5.1.2 Analysis - Ability to match player skill

The responses provided when asked about the game’s ability to match player skill showed an interesting result - that several experienced players failed initially because they saw the game as a continuation of their experience. They tried to play the sequel the same way they played the original, despite there being several differences that new players were vary of from the beginning. Relating back to activity theory, this experience can be explained by a series of de-automatizations. Experienced players have to de-automize what they’d previously learned in order to automatize the way the sequel works, while inexperienced players can automatize from the very start.

5.1.3 Analysis - Ability to improve player skill

When asked whether or not players were given the opportunity to improve their skills over time, while many agreed that the game enabled them to do so, some experienced players reported the same issue as in the previous question. Experienced players experienced de-automatization of previously learned skills, while inexperienced players were able to start automatization immediately. In short, experienced players had some issues improving their skill that inexperienced players didn’t.

5.1.4 Analysis - Level of control

On the topic of control, players unanimously agreed that the game gave limited control to the players. The core control mechanics were so similar to the previous game that experienced and inexperienced players alike shared the same experience. The control mechanics of the game weren’t changed enough to create a continuity break - unlike the difficulty aspect previously discussed.
5.1.5 **Analysis - Presentation of goals**
Participants also unanimously agreed that the game was able to sufficiently present its goals in a clear and understandable way. There were no discrepancies from the original to the sequel game, making the experience similar for both experienced and inexperienced players. Goals may or may not have been presented differently in the sequel game, but in that case, experienced players did not take notice, or experience continuity break.

5.1.6 **Analysis - Sense of progression and immersion**
The same goes for the participant’s sense of progression and immersion. They all had similar experiences, experienced and inexperienced participants alike. They all experienced a sense of progression and immersion. By having experienced players not being disappointed or experiencing continuity break, the sequel succeeded in either improving it’s sense of progression or immersion in a meaningful way, or keep it similar to previous games.

5.1.7 **Analysis - Capability of social play**
When it comes to the capability of social play, there were differences in answers, but not as to see any differences in experienced and inexperienced players, but rather in personal preference. Participants reported either not caring about the social aspect of the game, or a disappointing experience which was “similar to the previous game”. Those who were interested in an updated multiplayer section of the game were disappointed, looking for “improvements” upon the previous game (such a new set of possible actions). These players were expecting changes in actions, and didn’t experience any change. While not strictly a sort of continuity break, this touches on a point of discussion - the necessity of change, an integral part of GameFlow.

5.1.8 **Analysis - Game comparison**
When looking at the final set of questions, asking experienced players to compare their experiences based on, there were two interesting observations. First off, experienced players were pleasantly surprised by the sequel, and figured their experience with the original game was a driving factor in making them excited for the sequel. Despite continuity break when it came to difficulty and minor features, the positive changes presented for players meant more for experienced players rather than inexperienced players. Experienced players had the previous game as a point of reference. While new players were able to appreciate the new features for what they were, while experienced players (who enjoyed the original game) saw the presented features not only as attractive features in and of themselves, but as improvements on a game design they already appreciated. Secondly, there was the issue of missed features. Participants reported minor features missing. Features they’d anticipated. While the missing feature didn’t impede the game experience in the frame of reference of GameFlow, it still caused a continuity break for several participants by having missing possible actions.

5.2 **Analysis summary**
Looking at the results and possible causes, there are a few conclusions that can be drawn by looking at the related research. Many of the experienced players experienced a strong sense of de-automatization when it came to difficulty (ability to match and improve player skill) and changes in strategic possibility, causing an initial difficulty spike that was unpleasant (see image 5.1). Inexperienced players, while learning the game from the ground up, did not experience the same sense of de-automatization.

Looking back at the GameFlow model, a sudden increase in Challenge (Difficulty) causes anxiety in players, pulling them out of the Flow Zone (which balances challenge with player ability). With several experienced players experiencing the same sense of de-automatization,
leading to anxiety in the early game, we can conclude that there is a possible design opportunity to alleviate this issue.

6. Reflection

6.1 Improvements
There are several possible improvements to increase the accuracy of this study. First off, covering a wider variety of games may yield different results, as the reception and perception of the game, from a user perspective, might differ wildly. In the case of this game, most participants had deep insights into the workings of the game, as well as to what aspects of the game they enjoyed. In other games, it might not be as obvious.

Second of all, the interviews could cover a wider array of questions. While the use of questions from a user experience perspective proved useful, there might be more information available by looking at other aspects of user experience. A future improvement would be to cover a wider set of questions, as to cover a wider discovery of possible design opportunities.

6.2 Game of reference
The game used as a frame of reference needs to be addressed as well. The userbase of each game differs wildly, and for this particular strategy title there were a lot of fans who had insights into the details of the game. As explained in the section about experienced and inexperienced players, a minimum of 6 hours of play was used as a way of determining whether or not a player was experienced or not. But within games of advanced complexity, 6 hours might be too little. However, there is no frame of reference to determining whether or not a player is experienced, and since this variable differs depending on a game’s complexity, there also needs to be a way to determine a game’s complexity. However, all participants in this study had much more than 6 hours of gameplay experience, so for this particular study this was a lesser problem, but one that should be addressed. In order to properly study a game, there needs to be a way to determine whether or not a player is experienced or inexperienced, and in order to determine that, there needs to be a way to determine how complex a game is.

6.3 About methods
While the methods used in this study has been tried and true in cases of user experience study, there are other options that might work. For example, a quantitative study might be preferential in cases where game mechanics aren’t as complex, where simple “yes” and “no” questions might suffice. In these cases, a quantitative study might, in fact, bring simpler and more reliable facts for designers to take into consideration. The dangers of using a quantitative method is to not have a representative test group, and if there is a possibility to use a method that minimizes this risk, there should at least be a consideration to do so in applicable cases.

6.4 Participant diversity
The diversity of the participants wasn’t as varied as expected, with all 18 volunteering participants identifying as male. While there was some variation when it comes to age, the group was largely homogeneous. Three participants had played only the sequel
(inexperienced players). The most important group were those who’d played both, who could
tell us about experiences that those who’d only played the sequel couldn’t have. Still, the 3
who had only played the sequel provided a point of comparison, and for that reason alone, a
larger group of inexperienced players would’ve been useful. Despite these issues, the
interviewed participants were able to provide a representative picture of the average player of
this particular game and genre, whereas they might not be as representative of other games
or genres. While these numbers show that there is a bias towards males preferring the XCOM
series, it doesn’t equate to the results being male-centered. Gendered preferences in games
are not necessarily a design choice, but an individual difference in preference to reaching a
state of flow. Why this trait can be shared by many members of the same gender is a matter
of cognitive processing.

“[...] it would be naïve to suggest that these differences are the result of gender. The
real culprit here is likely individual differences in cognitive processing from which
the gender patterns emerge. That is, individual differences in cognitive processing
are confounding the relationship we see between sex and genre preference.” (Sherry,
J. L. 2004.)

6.5 Future research
There is plenty of room for future research from the continuity perspective. This particular
study was performed from the perspective of the user, but there could be other studies using
the perspective of the design team, for example. Following a design team during the creation
of a sequel game, from the perspective of including a continuity perspective, would be an
interesting way to see, firsthand, the impact of introducing new design opportunities to a
design team. It would be interesting to see to what extent new design solutions are
introduced, if any, and to what extent.

Another idea for future research would be to consider this study from a less contextual
user experience perspective, and look at it in terms of cognitive science and experience as a
whole. While these subjects are considered and touched upon in this study, these are large
and established fields. Continuity studies in user experience can be considered and
researched from many angles. In this particular study, it was considered from the angle of
user experience and for the purpose of opening possible design solutions - but the
possibilities are many and diverse.

7. Discussion

7.1 Prior research
Looking at previous research from a continuity perspective, the aspects of continuity are still
relevant (mechanical, dramatical, esthetical and technical), the mechanical aspect has been
the most impactful. Although a few participants mentioned both disappointment and
satisfaction to a small degree when it came to the technical aspect, and there were mentions
of a positive experience when it came to the dramatical aspect. Overall, the mechanical
aspect was by far the most important factor. All participants reflected mainly on the
mechanical aspects of the sequel. While other aspects still have an effect on user experience,
the mechanical aspect was the most important in this case. However, there are things to take
into consideration. The game series we used as a frame of reference was mainly a strategy
title, which has gameplay revolving around mechanical decision making. Horror games might also have useful mechanical aspects, but they also require a distinct esthetic aspect.

7.2 Game design

This study uncovered a continuity break for experienced players - the initial difficulty caused a de-automatization, forcing experienced players to re-learn how to play the game. Using a continuity perspective, this issue was uncovered and argued that it could be alleviated. In the early stages of a sequel game’s design, there is a possibility to uncover issues from a continuity perspective before the game is released to its audience. Doing user experience testing with both experienced and inexperienced players might be one way to uncover continuity issues, as illustrated in this study. Asking players of various backgrounds to test for continuity discrepancies could open up new design opportunities, and invite for possible solutions. In this case, the issue could’ve been addressed by having separate tutorial missions for starting players. One for inexperienced players, teaching them the basics, and one for experienced players, helping them re-learn the game and addressing the new mechanics in a transitional way.

This study shows that, first of all, playing a game sequel can be considered a continuous experience. Game designers should take this into consideration in order to prevent unnecessary and unwanted continuity break. By increasing awareness and designing for continuity, more game design opportunities appear. Whether or not they are addressed are another issue in and of itself, and in what way they should be addressed. There are economic aspects and time constraints that need to be considered, but as most large game titles have a portion of their budget set aside for user testing and quality assurance, continuity could become a part of regular user testing by considering the inexperienced and experienced as having separate entry points into a series. Allowing players to choose difficulty is a starting point, but if the game requires a player to re-learn mechanics, a transitional approach might be preferential.

7.3 Inherent need for change

In experiences designed to invoke a sense of flow in the user, there is an inherent need for change within the system. For example, increase in difficulty to challenge the user’s evolving abilities. If a player’s action is not met with an appropriate reaction, the experience becomes stagnant. When looking at experiences from a continuity perspective, change becomes even more important. Too much change can cause a continuity break in users, while too little hinders the sense of flow. In the case of this study, several players experienced continuity break when their skills weren’t applicable, and when features they’d anticipated weren’t there, and while we’ve already discussed why that is (change of action, de-automatization), it is important to mention that not all users experienced this. There were several who did, yes, but it was not universal, which brings forward an important point - to know your users. As mentioned earlier, Brusilovsky (1998) discusses the necessity of designing for user interest and user traits. When designing a sequel, this becomes even more important, especially if the job is to be done by a different company. To know their users interests, traits, and previous experience with the game series. There are also reasons for a designer to disregard design priority for returning players, in which case continuity becomes less important. For example, when there is a particularly small core audience, and the developer wants to concentrate on bringing in new players.
7.4 Final words
In this study we've accomplished a few things. We've found issues from a GameFlow and user experience point-of-view. These issues were found using a continuity perspective, which is based in activity theory and game design. By finding new issues to address, game designers gain access to new design opportunities, further improving user experience for players. In this particular case there were mostly mechanical issues, matters of accessibility and usability, which the field of HCI thrives in correcting. Improving the ease and intuitive way we interact with games, or in this case how we transition seamlessly from one game to another, is very much an HCI issue. By seeing the play of one game to another not as separate experiences, but a single one, we open up for the opportunity to bridge the gap between experiences.

There are already studies suggesting in what ways HCI and game design can be implemented in a collaborative manner. This study is another tool in that toolbox of HCI tools that can be used in game design. Performing a qualitative study of a game, from a continuity perspective, is a way to improve the user experience of returning, experienced players. The experience of a player matters, and in this study, we've looked at a particular kind of experience - previous experience of a single game. Apart from this single variable, the testing group was largely homogeneous. All identifying as male, for example. And while they differed in opinion in some matters, and their ages, they were able to uncover continuity issues. This is not a quantitative study, where we look for a certain number of people having the same issue for it to qualify as a serious problem. This is a method for uncovering potential problems in continuity. How severe these issues are is a completely separate question, worthy of another study entirely.

This study has been a first attempt to look closer at sequels. Looking at it from a pure game design perspective would have been less fruitful. Activity theory allowed us to not just discover the reason behind player frustration, but to explain it. It is not simply frustration that “you can’t buy ships” in the game anymore - it is a matter of a change in possible action. It is not just an issue of “having to relearn basic strategies” - it is de-automatization. So while GameFlow theory allows us to ask these questions, it is by looking at HCI and user experience theories that we can understand the answers.

This study contributes to the field of game design and experience by showing that there are other issues that need to be attended, and that all kinds of game designs have different possibilities. When designing an original game, there is little to no continuity to take into account - but then there are other issues instead. There's the issue of creating a clear brand, responsive controls and balancing a sense of Flow. This study shows that the context in which a game is made matters into where opportunities of game design can be found, in this case, for sequels in particular.

As mentioned in the beginning of this paper; “the book was better than the movie”. There are reasons why users experience this disconnection between expectation and reality, and perhaps the continuity perspective can be used to alleviate this transition. At least, perhaps, in games.

8. References


