

# A Study of Interactive Narrative from User's perspective

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**Abstract.** The topic of interactive narrative has been under research for many years. Many regard the term itself as an oxymoron [1] [2], while others see narrative as an integral part of every interactive production [3] [4]. While there has been much research exploring the development of new algorithms that enable and enhance interactive narratives, there has been little research focusing on the question of how players understand and internalize their interactive narrative experiences. In this chapter, we discuss the interactive narrative experience as seen through the users' eyes. Specifically, we report on a study we conducted using a phenomenological approach to explore the participants' lived experience of playing an interactive narrative. We chose to use *Façade*, as an example interactive narrative for our study due to its accessibility and its focus on social relationships, conflict, and drama as its core mechanics. As we look into the experience of interactive narrative, we reflect on enhancements to the design of future interactive narratives and discuss open problems in the field of interactive narrative.

**Keywords:** Design, Interactive Narrative, Storytelling

## 1 Introduction

The topic of interactive narrative has been under debate for several years. What does it mean to be engulfed in an interactive narrative? Can users engage in a meaningful interactive narrative experience? Who tells the story, the designer or the player? While answers to these questions have not been formulated, the community is split. Some regard the question of interactive narrative as an oxymoron, philosophically regarding narrative and play as two separate entities [1, 2]. Others regard narrative as an integral aspect of any interactive or media production [3], [4].

A reasonable approach to this dilemma is to explore these questions through the design, development, and evaluation of interactive narrative experiences. Many researchers have explored the design of interactive narratives integrating believable agents [15], drama managers [6], user modeling [7], [8], [9], and planning systems [10]. In our view, the design of a good interactive narrative requires the understanding of the participants and their experience. Even though research is ongoing in the development of interactive narratives, there is very little research exploring how users view their interactive narrative experience. This chapter focuses on a research study

that attempts to understand the interactive narrative experience through the voices of the participants themselves, using a phenomenological method.

For the study, we chose to use *Façade* as an interactive narrative experience; *Façade* was developed by Mateas and Stern and released to the public in 2005 [11]. While some may argue that video and computer games are rich with examples of interactive narrative, we believe *Façade* is a better choice to explore. Most video and computer games use puzzles, quests, destruction, or collection as their core mechanics, where narrative is often used for motivation or game aesthetics. *Façade* focuses on social relationships, conflict, and drama as its core mechanics.

In this paper, we report results from a qualitative study exploring the questions: how do participants define interactive narrative before playing *Façade* and what are their impressions and experiences after playing *Façade*? Husserl's phenomenological philosophy [12] best suit our research question since it seeks a descriptive analysis of several individuals understanding of a phenomenon. Historically, the evaluation of computational artifacts do not employ phenomenological methods, but instead use empirical methods, such as human factors, HCI, and usability. However since interactive narrative in video games incorporates the player's social and psychological participation, using a phenomenological approach is best as it gives us an eye on the players' lived experience to better understand the enjoyable qualities of this medium. For our purposes, we attempt to suspend judgment in order to articulate the essence of interactive narrative from the participants' in depth perceptions of their interactions. We use a phenomenological method of data analysis to interpret the participants' experience based on the works of Moustakas [13] and Colaizzi [14].

The primary contribution of this work is in presenting results exploring the experience of *Façade*. We describe the study we conducted looking at participants' views and thoughts about interactive narrative before and after playing *Façade*. We analyze the participants' responses and organize them into themes centered upon two lenses: *System Constraints* and *Role Playing*. In addition, we reflect on the relationship between these lenses and participants' background, previous play experiences, and culture as well as discuss implications for future interactive narrative designs.

## 2 Previous Research

### 2.1 Interactive Narrative Architectures

During the past few years there has been much research that explored the design of interactive narratives. Many research projects are within the Artificial Intelligence field. The Oz project is presented as one of the earliest works in this area, where researchers concentrated on developing an interactive drama architecture composed of believable agents [5] with emotional responses [10], [15], and a drama manager that guides the drama as it unfolds [6]. One of the OZ project's visual prototypes entitled *The Woggles* consisted of a goal directed reactive agent architecture that adapted virtual character behaviors' to characters' personality and emotional states. Inspired by *Disney's Illusion of Life* [16] this introduced a new visual form of interactive

entertainment as part of interactive story systems for the participant. The authoring environment also allowed characters to behave and act based on the enactment of goals. The Oz architecture comprised of a simulated physical environment which contained the automated agents, a user interface, and planner. Following their work, Mateas and Stern developed ABL (A Behavior Language), which allowed designers to author character behaviors with joint goals. This language is used to author behaviors for *Façade* [11], [17]. Since we are using *Façade* for our study, we will describe it in more depth in section 3.

Stanford University's Virtual Theater project is similar to the OZ project. They also developed intelligent, automated characters that acted in an improvisational environment. The synthetic actors contained a social-psychological [18] model to bring "life-like" qualities to their performances. The project aimed to provide a multimedia environment in which users played different roles in an improvisational theater company. Intelligent agents filled in the roles that were not assumed by the user. They improvised, and collaborated with the user in the creative process.

There are several research projects that explored different types of interactive narrative experiences, such as emergent narrative and third-person interaction models [19, 20]. FearNot!, Fun with Empathic Agents Reaching Novel Outcomes in Teaching, is a virtual drama for children developed with the goal of addressing the bullying problem in schools. The interactional structure of FearNot! was inspired by the political improvisational theatre developed by Brazilian dramatist Augusto Boal [21]. In his improvisational games, he divides the audience into groups; each group takes responsibility of one character within the improvisation; they elect one actor who performs the role of the character. They then meet with the actor and negotiate with him/her what he/she should do at the moment. The actor then takes the advice and improvises with the other characters within the scenario. The scenario is then stopped; each actor goes to their teams and discusses strategies to do next, and so on. FearNot!'s appraisal-driven agent architecture replicated this technique as a mechanism for generating an emergent narrative. It divides the narrative into several pieces; for each piece, the scenario is shown and then the user interacts with the character by selecting a coping strategy and reasoning with the character as to why such strategy will work. The resolution of the narrative happens in the last narrative piece and is dependent on user's suggestions and advice.

Cavazza's group has offered additional insight into a third-person interaction models for multi-agent interactive narratives. Using his plan-based hierarchical task network controlling characters' potential behavior, he created a familiar situation comedy as a prototype to explore this model further to affect stories. For this example, he addressed how a player's direct physical interaction with virtual objects could change or mislead an unfolding story. In the prototype, the player acts as an invisible actor, or in "god" view, and can change the story world to foil plans or coach players into achieving their goals.

In addition, researchers recognize the utility of user modeling on drama management as a facilitator of conflict and drama [7],[22], [23]. Szilas discusses a simulated model of the user that gathers data specific to the story told so far. This assessment is based on a model of how the user perceives the possible action presented. He used scores calculated based on this assessment to derive narrative effects which helps the intelligent narrator predict the impact of each event.

Seif El-Nasr draws from well established theories in theater, performance arts, film, and animation to enrich the user's dramatic experience in interactive narrative [22]. The prototype developed, called *Mirage*, is similar to Mateas and Stern's beat system, but incorporates user modeling techniques to predict the users' character. Based on this model, the system chooses story beats and character behaviors as well as adapts visual scene elements, such as camera movement, character staging, character movement, and lighting color/angle/position. These adaptations were made to stimulate self-growth, self-reflection, empathy, and anticipation.

## 2.2 Evaluating the user's experience within interactive narrative

The research works discussed above have a strong design and computational focus. Very few researchers focused on empirically evaluating the interactive narrative experience. From these few empirical studies, there are some who adopted a quantitative method evaluating their interactive narrative experience through likert scale questionnaires gauging specific areas of interest [19] [23]. Quantitative methods have several disadvantages, however, including constraining participants' responses to the questions posed. Alternatively, other researchers explored using qualitative methods to understand participants' experiences. We discuss phenomenological methods in more detail in section 4.

Our study is similar to the phenomenological approach taken by Mallon and Webb [24] discussion of player engagement in commercial adventure role playing games. They too focus on illuminating the player experience in terms of player motivations, strategies, and game play-patterns to strengthen the narrative potential of the game mechanics. Many of our lessons in the reflection section are consistent with their observations specifically in regard to player-game character interplay and balancing the player's freedom and control of the narrative. Their findings differ as they chose a comparative analysis of eight commercially available adventure role playing games that emphasize different core game mechanics such as examining and collecting artifacts, navigating within a larger game world in pursuit of goals, and fighting to ward off enemies.

Two research projects have previously evaluated the experience of *Façade*. One study focused on evaluating the conversation interaction identifying participants' interpretation of conversation breakdown and character responses. They used qualitative analysis based on grounded theory where they triangulated data in the form of: observation notes, participants' interpretations of their actions after showing them the video of their interaction with *Façade*, and system tracing revealing the systems' inner interpretations of participants' utterances [26]. Some of their findings were similar to what we found in our study, as discussed later. The second study focused on evaluating participants' experiences across three different versions of *Façade*: two virtual desktop versions: in one version users' type in their utterances and the in the other users speak their dialog; the third version is an Augmented Reality version where Trip and Grace are projected into the participants' physical space through an HMD (Head Mounted Display). They used qualitative analysis based on grounded theory to gauge the participants' sense of presence vs. engagement. Their results indicate that even though participants were more present in

the AR *Façade* they were not as engaged as within the virtual desktop interface [27]. While these studies are closer to what we are exploring here, there are several differences. First, we present a phenomenology study of the users' experience of an interactive narrative. Thus, while we touch on many aspects of conversation (as discussed later), this is only one of the many elements we examine. Second, our subject pool is very different due to a different geographic location, culture, and school philosophy. Third, the study procedure and design presented is purely phenomenological in nature.

### 3 *Façade*



**Figure 1.** Screenshot of Trip and Grace with the participant interaction

The story of *Façade* [28] introduces the player as a long time friend of Trip and Grace, two Non-Player characters, who have invited the player for an evening get together at their apartment. The participant takes on a first person perspective and the player uses the keyboard to interact with Trip and Grace through natural language (as shown in Figure 1). The player is also free to move about the apartment, manipulate objects, and perform simple social gestures, such as kiss or hug. The game begins inside the hallway outside Trip and Grace's apartment, where they can be overheard arguing. Once inside the apartment, the player gets caught between Trip and Grace's arguments, as the drama unfolds. It is up to the player to resolve the course of the drama. While typing responses, Trip and Grace respond verbally. Once the story concludes, a script is generated showing all the dialogue that occurred. Figure 2 shows an excerpt.

```
...  
ED: did you cheat on him grace?  
GRACE: Ah!  
TRIP: Heh, hey... heh heh heh, hey, no no no, don't -- don't try to... don't -- don't try  
to accuse me of -- of -- of anything with Maria...
```

**GRACE:** Oh God...

**TRIP:** No -- no, no, Grace, don't, don't even about think that -- look, look --

**TRIP:** look, our -- our 'friend' has just gone too far this time, that's all that's happening here...!

**ED:** so you did trip?

**TRIP:** No no, there's nothing to... uhh...

**GRACE:** No, of course, Trip, there's nothing, there's nothing... -- (interrupted)

**ED:** that is low

**GRACE:** No?

**ED:** grace you should leave...

...

**Figure 2.** Dialog excerpt of Trip and Grace's conversation with the participant playing Ed (Participant ID: 8)

## 4 Method

Our study uses a qualitative phenomenological methodology to understand the user's in depth experience. A phenomenological philosophical approach is chosen in our study because we believe current user models employed in interactive narrative can improve through an understanding of the player's lived experience. A robust user model is strengthened by how it engages player behavior and is therefore much more than a mechanism to assign player actions into lists of variables and predicted outcomes.

Founded by Husserl at the turn of the twentieth century to understand the meaning for several individuals lived experience, phenomenological methods are commonly used today in the social sciences such as psychology, sociology, and education. Husserl's reflective examination of the structures of lived experience criticized a positivist and empiricist conception of the world as an objective universe of facts. There are many branches of phenomenology by disciples of Husserl and for this study we focus on transcendental phenomenology by Moustakas [13] which contains four basic assumptions [25].

- (1) Knowledge begins with a description of the experience returning the traditional task of philosophy as a search for wisdom.
- (2) Phenomenology involves an attempt to suspend all judgments about what is real until they are based in more certainty.
- (3) The intentionality of consciousness posits that the reality of an object is intimately linked to one's consciousness of it and the meaning if found within.
- (4) Phenomenology calls for the refusal of subject-object dichotomy. Reality is only in the meaning of the experience of the individual. According to

Moustakas, the goal of phenomenological research is to provide the reader with an accurate understanding of the essential, invariant structure (or essence) of an experience.

Mallon and Webb used a focus group approach for data collection that ranged from 2-4 participants in each group. The first group comprised of 11 subjects that played four adventure role playing games to form preliminary findings. The second group comprised of 13 different subjects that evaluated four different adventure role playing games. The second group was also presented with debate topics informed by the first group preliminary findings. Participants played the games for several hours before discussion as this was necessary to become familiar with them. Their methods differed from ours in duration of play, the number of games studied, and the double focus group structure. For our study we conducted sessions individually to minimize influence by other participants. This was also the case because *Façade* is designed for single player interactions.

## 5 Study Design

### 5.1 Participants

We recruited eleven participants from the School of Interactive Arts and Technology (SIAT) at Simon Fraser University (SFU). To minimize influence of previous knowledge, we asked for participants who never played *Façade* before, but who have a new media understanding. All eleven participants were undergraduates at SIAT enrolled in the Foundations of Game Design course—a course within the media arts stream within SIAT, which indicates that these participants had a variety of artistic and design interests.

Four female and seven male students participated in this study. The average age was 24 years with a varied cultural backgrounds, including six Canadians, two Canadian with Chinese decent, one Canadian with Japanese decent, one Iranian, and one Turkish (refer to table 1).

Even though all participants were recruited from the Game Design course, which suggests interest in interactive entertainment, our interview questions regarding the games they enjoy playing revealed a variety of tastes and interests. Table 1 shows the breakdown of participants by age, gender, cultural background, game genre they enjoy, and their academic background. As can be seen from the table, participants have very different tastes, some enjoy action and shooter games, others enjoy role-playing games which includes story and character development, some enjoy short casual games such as mobile games, others enjoy adventure style games that focus on characters, story, and puzzles quoting some Chinese and Japanese games. It is important to note that three out of the eleven participants took a course on interactive narrative, where they experienced new research-based projects experimenting with interactivity and narrative.

**Table 1.** Participant Profiles

ID	Sex	Age	Cultural background	Gamer type	Development Background
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01	F	27	Canadian /Japanese	role-play	artist/designer
02	F	28	Canadian	prefers old games	artist/designer
03	M	23	Turkey	action/FPS/RPG	artist/designer
04	F	20	Canadian/Chinese	RPG/Action/Mobile	artist
05	M	22	Canadian/Chinese	MMORPG/WOW	designer
06	F	22	Iranian	action	artist/designer
07	M	29	Canadian	FPS	designer
08	M	21	Canadian	Action/adventure	artist
09	M	29	Canadian	action/RPG/MMORPG/Mobile	designer
10	M	21	Canadian	action/RPG	programmer
11	M	22	Canadian	action/FPS	artist/designer

## 5.2 Procedure

The study was divided into four phases. All phases occurred in a one-on-one session format taking place in a computer lab, lasting approximately one-hour. Phase I lasted approximately 10 minutes, starting with an ice-breaker conversation, where the participant was asked to discuss his interests. He was then cued to talk about games he enjoyed playing, his cultural background, as well as his view of interactive narrative.

In phase II, the researcher asked the participant to read a description of *Façade* [[www.interactivestory.net/#Façade](http://www.interactivestory.net/#Façade)] and watch a YouTube clip [[youtube.com/watch?v=GmuLV9eMTkg](https://www.youtube.com/watch?v=GmuLV9eMTkg)]. The researcher then conducted a one-on-one interview exploring the participant's view on interactive narrative. This phase lasted around 10 minutes.

The researcher then proceeded to set up *Façade* for the participant to play for phase III. During this phase, the researcher refrained from speaking and instead took notes of noticeable actions the participant took and any other interesting observations (which were then noted as discussion points for phase IV). During play, participants were encouraged to speak about their experience, if they were comfortable to do so. Afterwards, we saved the recorded the session script of their interaction. This phase lasted around 20 minutes.

Phase IV involved a *Façade* post-play interview which varied in duration per participant but overall lasted 20 minutes. The interview questions were devised based on what the participants remembered from their play session along with their reflections. For example, the researcher asked a participant “what stuck out in your memory”, “elaborate on their non-verbal behavior such as laughing or hand-tossing”, or perhaps “what they thought about their story ending?” These questions became catalysts to discuss other aspects of participants' play experience. We address all four phases in our analysis organized by shared patterns of experiences across phases.



Many perspectives exist regarding validation of qualitative research data. We address this issue by: (1) including an internal and external reviewer who oversaw the analysis process and (2) reporting on results of member checking, where the analysis is sent to participants for validation. To date, we have received positive responses from eight out of the eleven participants; they all agreed with the analysis made and meanings formulated.

## 6 Analysis

We employed Colaizzi's method [14] for analyzing the participants' transcripts. Written transcripts were read several times to obtain an overall feeling for them. From each transcript, significant statements that pertain directly to their lived experience were identified. We looked for explicit or implicit value judgments in regards to what the participant seemed to either criticize or desire. Significant statements from each participant were extracted into *meaning units* and correlated with similar statements made by other participants. The formulated meanings were then clustered into *themes* to provide a structural description of "how" the experience happened the way it did. In this section, we present the findings as a composite description that incorporates both the direct statement and the structural description that is the "essence" of the phenomenon.

We found a total of 289 significant statements in the phase I, II, and IV transcribed interviews (each statement averaged 3-4 sentences long) extracted from approximately 930 statements. Using this method, we identified eleven themes that occurred in phase I, twelve themes that occurred in phase II, and sixteen themes that occurred in phase IV. Since phase III is the game play phase, we will not report on it in this chapter.

### 6.1 Theoretical Lenses for discussing participants' experience

Informed by game design as seen through play testing [4, 29] procedures and payer *agency* [30] which is the ability for players to take meaningful actions within a narrative and to see the results of their choices, we developed two lenses: *System Constraints* and *Role Play*. We use these lenses to distill the rich participant responses to better understand the pleasures unique to interactive storytelling. These lenses touch upon several theoretical perspectives on how to enhance the participant experience and suggest future research directions. We chose these two lenses because it was the best possible way to articulate the participant experience using current game play research and theory. The first lens frames the participant's views in terms of game mechanics, boundaries governed by rules, and outcomes tied to goals. The second lens focuses on the participants themselves: how they prepared for role play and the process by which they interacted in the narrative. The Role Play lens operates independently from rule-based constructs.

The *System Constraints* lens encompasses four concepts: **boundaries, freedom, goals, and control**. These constructs are emphasized as important concepts within the interactive media literature. First by defining boundaries while preserving freedoms, player agency is enhanced. Second, the implementation of system architectures to

facilitate agency through adaptable goals linked to changing outcomes is in itself a technical challenge. There are numerous examples, such as *Mimesis*, which dynamically generated coherent action sequences to achieve a specific set of in-game goals [31] and *GADIN* which used a dilemma based choices to create dramatic tension [32]. When these constraints are balanced, we argue the participant experience is enhanced.

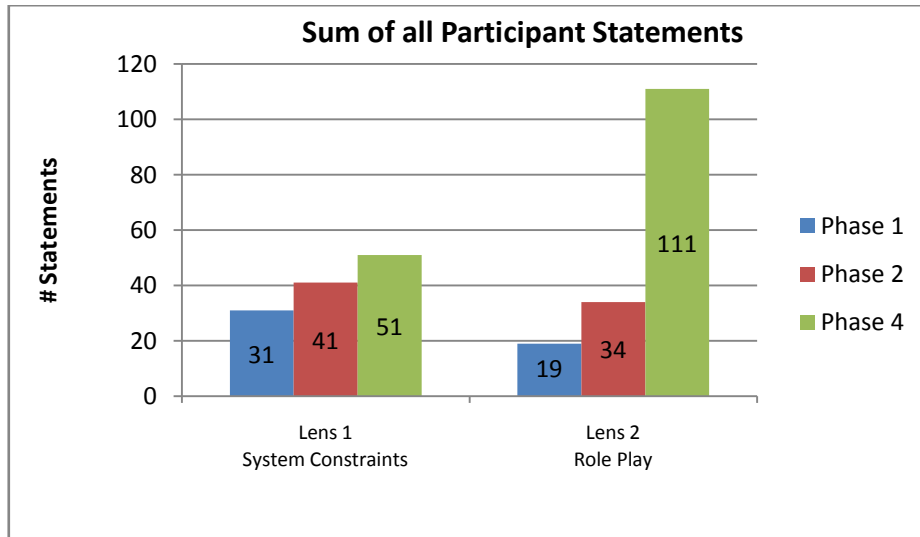
As participants assume and embark on a play or interactive experience, he also takes on a theatrical role [33]. This concept is not limited to role play games; we broaden the term to include taking a role within any interactive experience. This lens describes role play in terms of two perspectives informed by creative drama [34]: preparation for role play and process of role play, both following a dramatic structure.

These lenses are important to consider as complementary when exploring the quality of an interactive narrative. While *System Constraints* defines a structure of participant interaction within a story there will inevitably be usability and HCI challenges to address. These challenges are dependent on the individual participant characteristics and interpersonal differences in their understanding of *Role Play*.

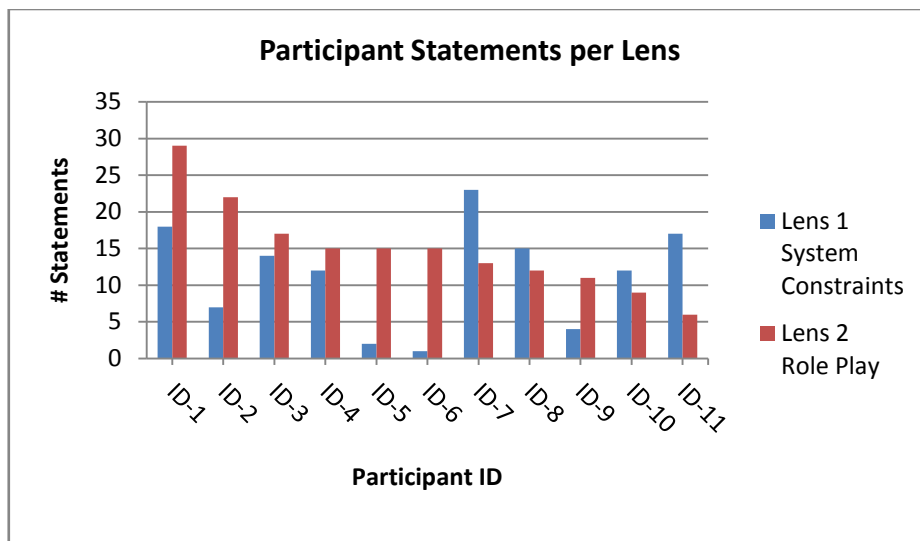
## 6.2 Summary of Participants' Statements

We plotted the participants' statements collected across each phase and graphed them to see how many statements participants devoted to particular lens within each phase. Figure 3 shows the number of statements given each lens within each phase. As shown, we see each lens received increasing numbers of statements as the session progressed and that the *role play* lens most sharply increased. Because this increase is most prominent in the last phase, this indicates participants associated role play as a fundamental component of interactive narrative only *after playing*.

Figure 4 shows the participant's statements per lens organized individually. As shown, the number of participant statements varied by individual although their responses tended to emphasize the role play lens. Each lens received comments from all participants.



**Figure 3.** Sum of all participant statements organized by shared experience



**Figure 4.** Participant statements per lens organized individually

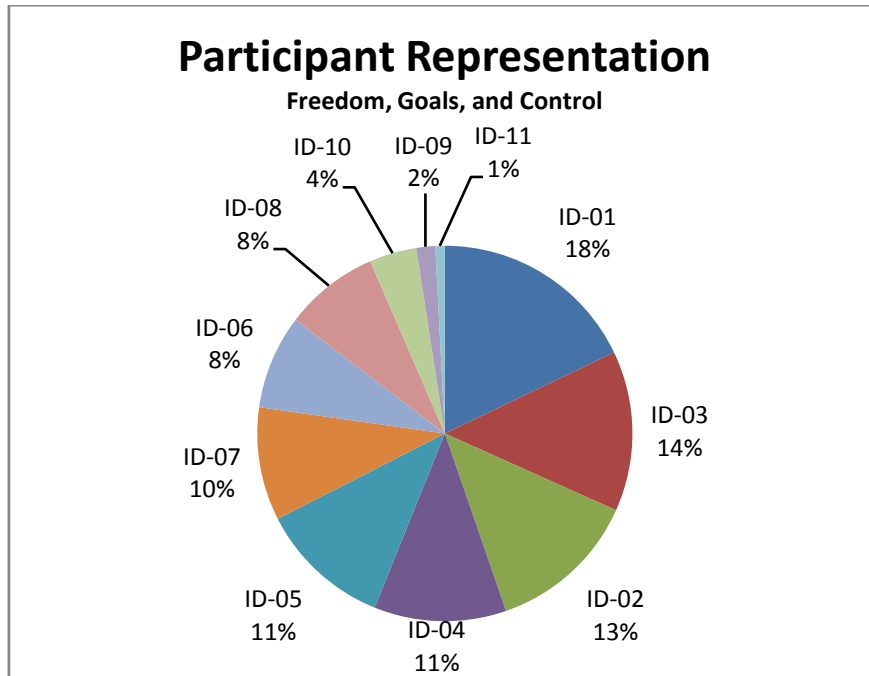
## 7 Results

### 7.1 Lens 1: System Constraints (informed by boundaries, freedom, goals, and control)

As shown in figure 3, the cumulative statements of all phases associated with this lens accounted for 42% of the total statements. It is interesting to note from this figure each phase received proportionally increasing comments. Specifically phase I and II received approximately equal responses when compared to lens 2: Role play, which indicates that both lenses are fundamental in the initial and pre-play conceptions of interactive narrative. Table 2 introduces the coded themes we used to describe each phase that relates to lens 1: *System Constraints*. In Figure 5, the total number of statements associated with this lens is broken down into a per-participant representation. Some themes are clearly consistent across all phases like clear goals, even though the reference changed from games the participant enjoyed, to *Façade's* description, to their own post play interpretations. The rest of the themes are informed by rules that define boundaries for play, the extents players are in control, and how these facilitate the sense of freedom.

**Table 2.** Themes associated with the *System Constraints* lens (freedom, goals, and control) in interactive narrative.

<b>Phase I Themes</b>	<b>Phase II Themes</b>	<b>Phase IV Themes</b>
<ul style="list-style-type: none"> <li>• Clear Goals</li> <li>• Feeling Lost</li> <li>• System Design: Outcomes, Character Attributes, and Selective Perspective</li> <li>• Being Influenced</li> <li>• Temporal Effects</li> </ul>	<ul style="list-style-type: none"> <li>• Clear Goals</li> <li>• Variable Outcomes or Too Many Outcomes</li> <li>• Freedom and Control</li> <li>• System Mechanics: NL Text Interaction Model</li> <li>• Variability / Boundary</li> <li>• System Mechanics: Technical language confusing or unclear</li> </ul>	<ul style="list-style-type: none"> <li>• Clear Goals (narrative vs. Puzzle)</li> <li>• Unsure of Control (narrative vs. Puzzle)</li> <li>• Loss of Control – No Ownership</li> </ul>



**Figure 5.** The *System Constraints* lens is comprised of 125 statements centred upon freedom, goals, and control.

### 7.1.1 Phase I: Initial Conceptions of IN pertaining to System Constrains Lens

Participants have all played different kinds of computer games (refer to table 1), and thus their responses to our questions about interactive narratives drew upon the games they played and enjoyed. During the first phase, three clear themes emerged from their interviews that relate to lens 1. These themes support the player sense of freedom by incorporating variability and meaningful choices to shape the story. Furthermore, players understand *their* purpose in participating and retain a sense of control even as their goals are influenced.

**Freedom and variable outcomes** allowed by system design were noted as important factors of interactive narrative by seven participants. For example, two participants defined interactive narrative as a story that a player takes an active role in terms of unfolding it” and that it allows “flexibility” for the users to “experience what is the story.” The rest of the participants expressed variable outcomes as a main feature of interactive narrative discussing how the system can let the player change the narrative path through “choice points”, “triggers”, “finding story pieces”, or through replay to achieve different endings or plots. Three participants recalled a graduate student interactive film project [35] where the viewer perspective on the narrative could be switched from the viewpoint of many characters thereby altering the story telling.

The importance of *clear goals and purpose* was strongly expressed by three participants. One described the collection of important items (referring to *Prince of Persia*) as one way to clearly communicate goals, saying “there are certain things that I have to get...If I don’t get it ‘this happens’ if I get it ‘that happens’. When goals were not clear in games, this participant felt lost. He discussed this issue in particular saying, “I wouldn’t know what to do, would I? ... How would I know how to finish the game?”

Some participants discussed how the system *influences them or nudges* them towards successful paths to achieve their goals while retaining *players’ sense of control*. In particular, three participants recalled being influenced by games to make choices to fulfill their goals in accordance with the story while “making you feel like you’re in control.” One participant relied on “useful” information from the game as a guide especially “if you think you are stuck in one part, they will be helping you for that part.”

### 7.1.2 Phase II: Pre play conceptions of IN from the *Façade* description pertaining to System Constrains Lens

When participants learned about *Façade* as a new kind of interactive narrative they were confronted with a description of an unfamiliar experience. Although showing a YouTube video revealed a taste of the moment to moment game play, the larger story goals and varied story outcomes were not clearly conveyed which led to a variety of responses. Specifically, we identified six themes that emerged from interviews within phase II pertaining to the lens of *System Constraints*.

Participants within this phase used their previous game experiences to relate to *Façade*. Five participants in particular tried to associate the concept of *clear goals and boundaries* that they often experience in games to *Façade*. Some were confused as they could not find a clear goal or boundaries from *Façade’s* description; others embraced this lack of clear goals as a new type of game allowing participants the freedom to explore whatever they like. One said “it’s not making enough sense,” when she tried to establish a goal for playing *Façade* as trying to get the characters out of trouble. Another simply described himself as a goal oriented-type and disassociated himself from *Façade* given its uncertain goals. Two participants felt a little confused not knowing how to win. Three participants expressed concern regarding the variety established with the story with no clear boundaries or goals. In addition, another participant felt there were more possibilities and that “anything could happen.”

*Freedom, agency, and control* were themes that emerged through the interviews with at least six of the participants. Agency is defined as the satisfying power to take meaningful action and see the results of our decisions and choices [30]. Because some participants became excited and felt a strong sense of freedom, some prematurely assumed a high degree of player agency, as one explained “I’m creating my own story.” Another participant enjoyed the idea of pushing the NPC’s in any direction he wants. However, some participants viewed this freedom with skepticism because the authors’ defined choices are not provided which made them feel a little nervous. This view relates back to the lack to boundaries or clear goals discussed above. Some were

excited about the sense of freedom given by the interface; they believed anything could be typed which encouraged them to think that they can play any role such as a detective or comedian.

Related to the freedom afforded by the interface – *the ability to type anything*, nine participants discussed this feature. All nine participants were interested in the ability to “talk to someone” and be free to “type whatever you want.” Some, however, were more excited than others. Some participants had negative previous experiences with dialogue in video games, which led to a more aversive reaction. Four already familiar with branching narrative in games wanted to know more about how the system analyzed syntax and keywords and felt concerned “they [Trip and Grace] won’t understand what I say” or slang expressions since predefined “clicking and choosing choices” is not an option.

### 7.1.3 Phase IV: *Façade* post-play interview pertaining to System Constrains Lens

The themes discussed in the phases I and II were amplified through the post *Façade* interviews. The post-play discussion predominantly centered upon control issues and loss of story ownership. Analysis of the interviews conducted during phase IV revealed four themes pertaining to the *system constraints* lens.

In particular, five participants addressed *clear, discernable goals* as a strategy for success in the unfolding narrative. These participants associated a certain function to their role in an effort to figure out a winning strategy or to solve an abstract puzzle. One participant discussed clear goals as a method of measuring rewards or punishments, and found the interactive experience disengaging due to its lack of such elements which are most common in games. Without clear goals, another participant said, “I didn’t know exactly what I should be doing. ... You’re trying to get involved in it or step away from it and they keep either pushing or pulling independent of what’s going on and you don’t really know where you might go with it.”

Seven Participants were *confused as they could not identify the method of narrative control*. For example, one participant commented, “I was just typing and I don’t know how exactly it worked, whether it will just hear what I said to one or the other or if it just kind of analyzes what I said and make something happen. Yeah, I just didn’t know.” Another participant commented on the mechanic of picking up the wine bottle; he said, “...the fact that you could pick it up makes you think you could do something with it” such as offer the characters more to drink.

Ten participants felt *loss of control and loss of ownership*. They commented that their interaction had little or no effect on the story. One felt “it wasn’t my story at all, and it was like I had no part in it. It wasn’t about me and it wasn’t about anything I would know.” One participant said, “I haven’t done anything, I was just there.” Another participant said, “I wasn’t even part of the conversation anymore [...] but I don’t want to be bzzzzz, bzzzzz each time;” another said “I could not break this conversation if my life depended on it.” One participant commented that using text conversations was “like I have a weapon, but I don’t know how to use it.”

Four participants focused on the *conversation pacing*. Their comments were similar to results discussed in the previous study on *Façade* conversations [19]. In

particular, one commented that the pace was “really fast” and that the story wouldn’t “stall for you [...] because too many things happened while typing.” Three participants elaborated upon their experience in other turn-based games where “if you stall the game stalls,” or “my action should trigger the next interaction.” Some commented that they didn’t have enough “space to say my things;” they were contently “being cut-off”, as it takes them time to type or they lost the opportunity due to pacing.

## 7.2 Lens 2: Role Play

As shown in figure 3, the cumulative statements of all phases associated with this lens accounted for 56% of the total statements. As discussed above, we define role play in terms of two perspectives: psychological and social preparation to play a role and the process of role playing.

Although each phase received increasing comments (similar to the *System Constraints* lens) this trend is skewed in that phase I and II received around 11% and 20.5%, respectively, while phase IV received 65% of the statements associated with this lens. This shows that participants had more to say about the intricacies of role play after the experience of playing *Façade* than before. This suggests that role-play in the context of an interactive narrative was specifically brought on by the *Façade* experience.

Participants’ approaches to role play were informed by themes outlined in table 3. In Figure 6, the total number of statements associated with the *Role Play* lens is broken down into a per-participant representation. In each phase, we discuss the themes through two different perspectives: preparation for role play and the process of role playing. These perspectives are informed by previous work in creative drama [34]. Creative drama is the process of storytelling through story dramatization techniques involving players, students and a teacher who takes the role of a coach. The story dramatization techniques include the use of several tools, including song, props, games, and rituals, and is guided by a six step process, which they call the Six ‘P’s of story dramatization:

- (1) Pique, where the teacher arouses the curiosity of the students. They suggest several strategies including song, props, games, rituals, etc.
- (2) Present, where the teacher takes the role of the storyteller and presents the story
- (3) Plan, at this stage the teacher transitions and prepares students to start playing and learn by doing.
- (4) Play, this part is when students play. This takes in various forms from theatre games, to acting out a story, to telling each other stories, with the teacher as a side coach.
- (5) Ponder, after the playing activity comes reflection on the play activity. Reflection is an important aspect of this process as it allows students to share each other’s experiences and start reflecting on what they learned through the process. It can also take on a critical form. Cooper and Collins suggest using several



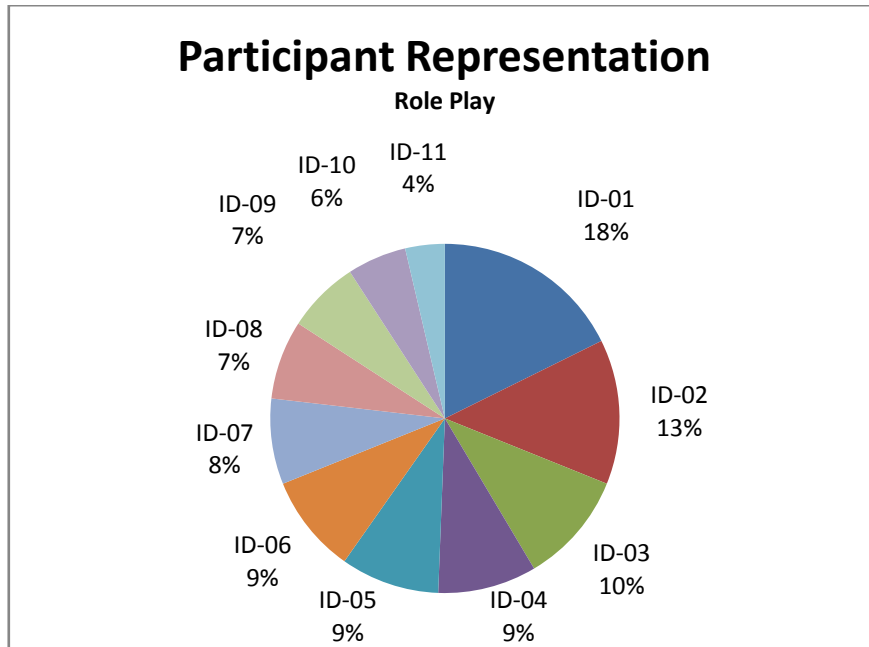
structured forms of reflection, such as critique sheets, questions such as ‘what worked?’, ‘what did we learn in this process?’, ‘how can we make it better?’

- (6) Punctuate, in this step the teacher brings the activity to a closure. Teachers use many strategies to close an activity; these strategies vary from rituals, song, story, or a game.

We used of creative drama as a lens to explain role play within the context of this study and looked at *Pique*, *Present*, *Plan* and *Play* from the participant’s perspective. Specifically, for our study *Pique* helped in the preparation for role play, where we focused on the arousal of player curiosity through back-story and mindset on interactive narrative informed by games they enjoy. Mindset is described as a habitual way of thinking that influences a set of beliefs, behavior, or outlook. Several factors influenced mindset including graphics, previous experience with narrative in games, and previous usage of chat interfaces. *Present* also aides in the preparation of role play as is seen through the discussion of back-story in previous games participants played and in *Façade* in terms of developing relationship with characters.

The process for role play perspective addresses themes in relationship to *plan and play* dramatization techniques in creative drama. Themes related to *plan* addressed how participants discussed player-centric vs. performer-centric strategies as a method of role play. *Play* is described in terms of satisfying & cohesive interaction with believable characters in an adaptable story. Satisfying and cohesive interaction is also addressed in relationship to the socially awkward situation and breaking implicit social boundaries.

Many themes were repeated across phases even though the reference changed from games the participant enjoyed, to *Façade*’s description, to their own post play interpretations. For example, role play preparation was consistently informed by the back-story and influences of chat interfaces on the mindset that either motivated or discouraged play. In addition, the process of role play was informed by multiple distinctions between players vs. performer interactions and the specification of character and story properties necessary for satisfying interaction. The rest of the themes discussed elaborate on these repeated trends.



**Figure 6.** The Role Play lens is comprised of 164 total statements and is divided into preparation and process perspectives

**Table 3.** The Role Play lens is comprised of statements centred upon Preparation for Role Play and Interaction while Role Playing across three phases

	Phase I Themes	Phase II Themes	Phase IV Themes
<b>Preparation for Role Play</b>	<ul style="list-style-type: none"> <li>• Back-story</li> <li>• Learning</li> <li>• Interactive Narrative in Previous Media</li> <li>• Disassociation of Interactive Narrative as a Game</li> <li>• Being influenced</li> </ul>	<ul style="list-style-type: none"> <li>• Cogitative Energy</li> <li>• Real life vs. Games</li> <li>• Chat Previous Experience</li> </ul>	<ul style="list-style-type: none"> <li>• Back-Story</li> <li>• Story Priming and Misalignment</li> <li>• Interactive Narrative is Not a Game</li> <li>• Interactive Fiction: Reading &amp; Conversation</li> </ul>
<b>Interaction while Role Playing</b>	<ul style="list-style-type: none"> <li>• Performance</li> </ul>	<ul style="list-style-type: none"> <li>• Role Play</li> <li>• Player Centric Narrative</li> <li>• System Mechanics: Naturalness and</li> </ul>	<ul style="list-style-type: none"> <li>• Participant Performance &amp; Participant Interaction</li> <li>• Story Interaction</li> <li>• Replay Thoughts</li> </ul>

		Story Flow • Social Situation	<ul style="list-style-type: none"> <li>• Character Believability (Action, Language and Comprehension)</li> <li>• Previous Lived Experience</li> <li>• Cultural Influences</li> <li>• Social Participation (seeking to disengage)</li> <li>• On Awkwardness</li> <li>• Testing the Boundaries</li> </ul>
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### 7.2.1 Phase I: Initial Conceptions of IN pertaining to Role Play Lens

In phase I the discussions focused on the preparation for role play in terms of back-story and the participant mindset.

#### 7.2.1.1 Preparation for Role Play

As participants described the interactive narrative experiences they enjoyed, they discussed back-story as an integral part that allowed them to role play. *Back-story* is defined as the background story behind the characters or setting involved in the narrative, scene, or artwork participants are about to experience; this includes character goals, motivations, history, and relationships with other characters including the user character (in case of an interactive media production).

During the interviews in phase I, three out of eleven participants discussed the role of back-story in preparing them to interact within an interactive experience. Three participants were able to plan and refine their goals using the back-story. They described it as “something [that] explain[s] the situation” or a method that allows “you [to] get to know someone.”

In addition, back-story was also described as a method of exposition, by which storytellers reveal virtual characters’ motivations and story events as they occur. One participant discussed how he relied on cut-scenes or other “subtle hints” to relate “mysterious” story events to explain why something happens within the storyline.

In addition to back-story, mind set is also a concept that came up in five participant interviews. Mindset was regarded as an important factor that influenced that participant’s motivation. For example, one participant was quick to *dissociate interactive narrative as a game* altogether. This player was not drawn to “story games,” because it required active thinking “I can’t remember story games as much as action games.”

### 7.2.1.2 The Process of Role Playing

There is no single process of role play. In our description we used creative drama as a theoretical basis that looked at the process of role play that involved elements of *pique* and *present* (from the description above). In *plan* and *play*, we made a distinction between the act of *playing* a role and *performing* a role [36]. When *playing a role* the ludic pleasure of winning or losing prevailed, while when *performing a role* the player assumed some character traits that defined his or her identity within the interactive experience; his engagement while *performing* is in acting “in character” while maintaining story constraints.

The *performative* aspect of “playing in character” was discussed by one participant in this phase. His comments support the difference between play-centric vs. performative-centric role play and cited multiplayer online role playing games (MMORPG) such as *World of Warcraft* and *Final Fantasy XI* as examples. In performative-centric role play several people opt to perform within a group either through designated servers or through role play guilds geared toward player development. Each member takes on a role of a character and performs through the interface provided. In such a case, he would play true to his game character for example “conduct the battle in character” and swap his character stories in the virtual tavern, although this would make typing more laborious.

This participant also discussed play-centric role play. Such a role is distinguished from performance centric role play, as the participant discussed, players would say distinctly out of character statements, such as complaints about laggy server speeds or even unrelated comments, such as “I’ve got my buddy over and we’re having a beer.”

### 7.2.2 Phase II: Pre play conceptions of IN from the *Façade* description pertaining to Role Play Lens

Participants continued to discuss back-story and mindset that can motivate or discourage participants from role playing. We found familiarity using a text interface also playing a role in shaping mindset.

#### 7.2.2.1 Preparation for Role Play

The *Façade* introduction informed nine participant’s mindset and their plan to interact as it showed the *Façade* conversation-based interface and graphics used. All nine participants were excited regarding their ability to “talk to someone”, flirt, and otherwise be free to “type whatever you want” which made the situation appear very “lifelike”. Two participants stated they avoid conversation and dialog-based video games explaining that they avoid reading-heavy games altogether due to the high cognitive load. They also commented that they “skip right through [conversations or text].”

*Familiarity using a text interface in games* also influenced nine participant’s mindset and ability to role play. Four, already familiar with (branching) narratives, wanted to know more about how the system analyzed syntax and keywords. They

were concerned with the system's ability to understand their words or phrases, saying the system "won't understand what I say," noting certain phrases and slang expressions. One participant wondered if the system would allow him to use emoticons (non-verbal textual communication) within the chat conversations such method is considered standard in text based chats and is a very effective way of conveying feelings.

The influence of graphics was also noted. One participant commented on the cartoon-like graphics that were "not completely realistic" which led her to think about her role in terms of a role playing simulation rather than a realistic scenario. This participant then diverted towards a play centric rather than a performance centric role play due to the influence of graphics.

### 7.2.2.2 The Process of Role Playing

Eight Participants had questions concerning how to effectively enact their role. They discussed the two perspectives of performance centered vs. player centered approach to role play. The performance centric approach was concerned with how participants perform a character within the story, while the player centric approach concentrated on role play with the goal to broadly influence the story resolution. The play centric approach was discussed from several perspectives as well. From a character based approach, participants discussed being informed by the character's frame of reference and participating in the *Façade* story. Conversely, some participants saw their role more as an author to shape the story and thought of it more as a story simulation. These different perspectives required different understanding of *Façade*'s affordances for participants to plan their role play.

Eight participants had questions concerning their *character traits and role*. At a basic level, two participants misunderstood their role (and were corrected by the observer). One said, "I don't know which character I could be" and another wanted to play the role of Trip. The rest were concerned about the means by which their characters can effectively shape the story. One participant understood her role to "solve their marriage problem through interactions", but questioned the influence of gender or sincerity of her character on the story outcome. Similarly, another participant wanted to know more about his own characteristics (classes, skills, abilities) in order to perform his role within the story. Three participants were interested in understanding how the NPC characters react in different situations. One participant, in particular, did not see the function of conversation within interactive narrative, such as *Façade*. He saw chat interfaces as purely conversational and devoid of narrative or dramatic structure.

Three participants discussed the role of *story mechanics*, which included their avatar actions and behaviors, in providing a means to play within the interactive narrative. Prior to playing *Façade*, these participants were excited to "alter the story" through "pushing characters to do specific actions", and then watch them "adapt." One was interested in "creating and following [his] own story."

### 7.2.3 Phase IV: *Façade* post-play interview pertaining to Role Play Lens

This phase included an explosion of statements and discussions concerning both preparation for role play and the process of role play. As shown in Figure 3, these topics received much more attention during this phase than before.

#### 7.2.3.1 Preparation for Role Play

Back-story and mindset continued to be discussed as factors that helped prepare participants for role play. Five participants discussed *back-story* as a factor that influenced how they learned about and developed relationships with characters. These participants wanted to know the characters' personalities and the "inside story" from one "point of view" or another. They discussed how such knowledge would help them "choose proper words", facilitate a "more of an immersive" one-on-one dialogue, and plan "different ways of [role] playing". In addition, three participants were especially interested to know or learn more about their own back-story "who's friend I was", which one is "more closer", and "what kind of friends am I to them?...I don't know how deep my relationship is to them?" They discussed how such knowledge could more clearly define social "boundaries" in the social situation. This came up as a significant factor as one participant tried to understand the reason he was kicked out of the apartment after confronting Trip about his marriage problem. Confused, he stated, "...they first want me to be involved in the conversation, but now they don't want me to?"

Four participants expected a different story outcome from the one presented. This expectation was formed based on their previous experiences. This unmet expectation negatively impacted these participants' experiences with *Façade*. For example, one participant didn't see how going back to an old college friend could lead to "this story that you wouldn't expect." This participant had fundamental problems with the back-story. She wanted to go back in time and have Trip explain how she had in fact introduced the couple 10 years ago "so he could tell me what happened." This participant felt frustrated that this particular approach was not recognized and chose not to play again. Another participant mentioned being "biased" in his comedic approach to role-play. He saw *Façade* as a platform for humorous text-based conversation, which clearly did not match the author's intentions. Another participant said, "you are getting different experiences, but it is not the experience I thought it would be."

The participant's *previous gaming experience* affected the mindset of five participants as they identified that their *Façade* experience was unlike the games they frequently play. Two participants described it as a "new form of entertainment" and "a story with game attributes." One participant was drawn to the "real life situation," while another found "no clear path" interesting to "puzzle it out." Another felt the interaction with the characters was "less pleasing," because she didn't feel they were even "half real."

These differences also centered upon their observations using the *real time chat interface*. Two participants tried to understand the role of conversation in *Façade* through their own experience with popular games, such as *King's Quest* and *Princess*

*Maker*. One found typing in commands was similar to King's Quest although in *Façade*, he was unclear about the mechanics or character actions that he can type. Another participant talked about Princess Maker, a relationship development game, where you "feel you're reading the story," because you can "pull out the menu and see the conversations that happened before." In *Façade* rather, she felt "through the conversation you pick up pieces from here and there," with no coherent stream or documentation to go back to.

One participant, using *World of Warcraft* as a reference, discussed negative aspects of using chats. He specifically discussed system lags which caused him to stop playing. He explained, "if there's something the matter with the way I can chat, then I give up... I can't continue to play because that is my voice."

### 7.2.3.2 The Process of Role Playing

Participants again commented on their role play effectiveness from a character and story simulation viewpoint, but this time with finer granularity. Several themes surfaced as participants started to role play, including believability of characters, the awkwardness of the situation, influence of real life relationships, and story cohesion through interaction.

Four participants discussed *Grace and Trip's performance and believability* in terms of actions, language usage, and language comprehension. One found their acting was "pretty good," while another found Trip's character to be "God awful" and "completely whiney." One said, "...they make you feel like you're talking to a person," but they were really "not listening." Two felt they were "not reacting as people really would in a conversation" or "not listening," because they "didn't need me and didn't answer me back half the time." One exclaimed "are you reading what I'm writing!?" Another said, "I was like sit down, calm down, you know listen; you're not listening, listen to me, can I ask you a question all that just to be, you know (laugh)." Another participant was expecting a "better" reaction after repeatedly kissing the characters, which got him kicked out.

Five participants discussed the topic of *Façade's awkward situation*. Participants described example awkward moments for them, including the phone call, "being trapped between arguments", "two people yelling at each other", and "bickering" which made them feel "confused", like "I don't want to be here", and "I don't see where you were going with this." One participant wanted to leave as soon as it became awkward because "in real life, I probably will not let myself get into that situation."

Five participants discuss the influence of their *own experiences and relationships*. Three participants discussed "already knowing" your friends' personality prior to a similar argumentative experience. Such a priori knowledge is important as it guides the "choice of words" and actions. One said, in regard to her experience with her parents, "I find the best strategy is to console them separately." In *Façade*, participants expressed their ignorance of the characters, which led to failure to identify with them. For example, one participant said her friends are "not like those people" and wanted to quit playing as soon as the situation became awkward.

There were also unexpected *cultural implications involving character interactions*. This specifically surfaced for two participants, while Canadians one was of Japanese decent and the other was of Chinese decent. Regarding politeness, one said “I don’t think I should go around touching things,” which limited her environmental and character interactions. This participant felt she was unable to “touch” Trip and Grace even though this was one of the interaction features. This participant also preferred to remain quiet (not interrupt), and wait for the conversation to naturally end which rarely happened in the argument. She also wanted to make some hot tea with Grace in the kitchen as a means to separate Grace from Trip. This strategy was not understood by the system. Similarly, another participant wanted to take off his shoes upon entering the apartment. He said afterwards, “it sets a barrier to tell me what is not provided.”

Five participants discussed the *cohesiveness of story interaction*. One participant found *Façade’s* conversation-based interaction “great” and more interesting than the marital subject matter of story itself. This participant, however, changed her affinity frequently as the story progressed, which made the story less cohesive as she was “especially confused at the last part,” when Grace asks, “is what you’ve said tonight supposed to add up somehow, to something?” Three participants mentioned general difficulties and uncertainty with this model of interaction as it continuously asked them to split their attention between following the story and taking the time to type responses. One was so consumed by the conversations between the two characters that he missed many opportunities to interact. Another said, “I wasn’t sure if I should talk or what was supposed to happen because it was like tension building so I’m thinking do I break it or do they break it themselves.”

Three participants emphasized more “meaningful” and “productive” interaction opportunities as part of *satisfying interaction*. For example, when “they [Trip and Grace] would ask me a question and, well clearly, I’m going to interact” but this would only serve to “piss the other one off” and seemed counter-productive. Another two participants thought the story tension could be relieved if they were able to cooperatively share activities, such as painting pictures together or re-arranging the furniture since these are contested conversation topics. Since many participants’ responses were ineffective in stopping or changing the overall attitude of the argument, two participants acquiesced to their role by following the natural flow of the escalating story argument. These participants were not initially inclined to role-play in this manner; one reverted to this approach after he was kicked out of the apartment the first time, while the other felt more immersed when he “just accepted it.”

The dramatic climate of *Façade’s* social situation discouraged six participants from fully engaging in or seeking to change the narrative. One was “really sensitive about negative energy.” Three were not motivated in the story; they made comments, such as “why should I even care about fixing a relationship?”, “I just wanted to let them figure it out”, and “I’m going to remove myself from the equation” to let them “work it out,” which still caused a “disturbing emotional effect.” Two participants were disengaged enough to want to “give up” and “get out” of the situation. One succinctly stated “I just don’t care” while another said “I felt like, I don’t know, like a poor friend who doesn’t know anything who doesn’t know how to help because she doesn’t know.”



Two participant's viewed their play experience as a form of *breaking implicit social boundaries* or "not playing by the rules." After he was disengaged by his initial interaction, one continued playing *Façade* with the mindset that it is a "social experiment". The other treated it as a "comedy" by default saying maybe on his "fourth or fifth try" would he try to help the characters and "play it the proper way".

Finally, those who viewed the *performative* aspect of their role commented on their ability to shape the story through direct involvement with the characters. Four players commented on their constrained ability to "start some topic", "change the subject", "lead the conversation", or "alternate the argument into something else." One player acted with a purpose to "egg them on," because she "had things to say...I had things to say to both of them...", "I could be all nice-nice", or "I could work Trip a little bit". All four, however, expressed their frustrations by saying, "I just wanted to get in [the conversation]", "you can't really find a hole to go into", "trying to somehow insert myself in there," and "you realize you're the 3<sup>rd</sup> party in the room."

## 8 Reflections on Interactive Narrative

This phenomenological analysis resulted in an exhaustive description of the player narrative interaction in the *System Constraints* and *Role Play* lens above. In this section we aim to discuss how these lenses can influence future designs of interactive narrative, specifically through dependencies of game mechanics, player-character relationship, game character(s) and the interactive story design. Our lessons are also consistent with many of Mallon's [24] observations in relationship to commercial adventure role playing games. From these dependencies there are possibly infinite permutations to the design of interactive narrative. Each configuration may preference one participant profile over another in order to constrain interactions while preserving the sense of agency. These design choices will affect the resulting experience of these interactions. Identifying a desired user experience and benchmarking this experience with actual participant comments is key to the success of future designs of interactive narrative.

The presentation of constraints informed mindset (role play preparation) well before actual play occurred. Participants formulated impressions about their role playing ability based upon system constraints. This idea has been shown in psychology literature that impression formation plays an important role on judgment and perception [24]. The sense of freedom and variable outcomes suggested by the *Façade* web introduction led many to believe that they were free to write or do anything at any point in time. This made it difficult to predict the players' intentions as a method of role play had not been defined or conveyed to the user. Furthermore some were misled as if they were participating in a real-time chat conversation. Both of these factors led to an aversion reaction while playing. It also resulted in losing a sense of control.

**Lesson#1:** *designers need to address the participants' mindset early during their interaction by balancing the presented freedoms with the system constraints.*

Constraints were also set up through one's understanding of back-story to inform interaction. This interaction is informed through an initial understanding of the character's stories, personality traits, feelings, emotions, motivations, and goals. This particular pattern also surfaced in the role play lens where participants indicated how knowing characters' back-story could facilitate their performance through informed interaction.

**Lesson# 2:** *designers need to cue and prepare participants for action through the back-story.*

In terms of **role identification**, many participants felt no ownership and a loss of control while playing because they had difficulty identifying with their role. Participants identified with their role through conversation and their ability to pursue discernable goals. Conversation had become the source of many frustrations as well because many of their choices were not interpreted within the context of *Façade's* interactive narrative. For example, they commented on the lack of strategies to corner one character which was also discussed in the *Façade's* study reported in [19]. In addition several participants experienced problems with the conversation pacing and interaction using natural language: when they should type, when they should listen, how fast they should type before the characters move on to the next beat. A few participants also discussed the loss of control due to not knowing what words would affect the interaction which undermined their ability to effectively role play. These circumstances led them to conclude that characters were not listening to them.

**Lesson# 3:** *designers need to introduce means of interaction through using a tool or interface that can promote user's to effectively perform or play their role*

Participants also identified with their role through the pursuit of discernable goals in the narrative. To many this was a new form of interactive 'puzzle' that they couldn't map to their previous gaming experiences. Some have tried to map *Façade's* play experience to other games, such as King's Quest and Princess Maker. These mappings created false expectations of clear goals and a puzzle with some "positive outcome", which caused the experience of loss of control to be more pronounced. As one participant said, it is like having a weapon that you cannot use.

**Lesson# 4:** *designers need to understand participant's past experience and introduce their interactive models based on the participant's previous learned patterns or present a learning method for preparing participants to interact*

Maintaining a cohesive story became a struggle for many because their attention was split between following the story and typing to change it somehow. The novel encoding and management of a dramatic arc [6] indeed had elements of tension in what was "about to happen" for some participants although this was also frequently viewed as counter-productive in that the player was not involved enough into the action or plot. After multiple play attempts some had found the experience frustrating as they were inclined to manipulate the story against the primary story arc. This course of action made it difficult to identify intriguing characteristics of the main characters and social dynamics that would invite them to replay.

**Lesson# 5:** *designers need to demystify the process of cohesive story interactions with a desired user experience in mind*

As noted in our previous study [37], it is important to consider the players background, previous experiences, and mindset in the future designs of interactive narrative. We noticed the player's mindset was influenced by the perceived usage of a real time chat interface as a method to keep track of conversation or as a "voice". This changed the emphasis placed upon their avatar as merely an interface to choose amongst story choices or as an active character in the story. The *player-character relationship* also influenced the process by which participant's behaved. Player-centric vs. performer -centric role play changed the expectation of system constraints dependent on whether participants "role-played" respective of previous action/RPG games or "played in character" [36] with an entirely different understanding of dramatic conventions frequently found in MMORPG's. This depended on whether they viewed their character's play in relationship to a game or a performance in a story. For example, one participant commented on the cartoon-like graphics that were "not completely realistic" which made her view her role as playing a game. Similarly, one participant cared little for the dramatic coherence and logical sequencing of events; instead he saw his role as a performer. Another recalled improvisational theater and was very clear how the player-character methods differ.

**Lesson# 6:** *designers need to acknowledge that different styles of play exist and encourage them through previously learned patterns*

The participant's individual differences such as prior experiences with family and friends and cultural inconsistencies also played a role in this assessment. They described several inconsistencies between their previous experiences with such situations and their experience in *Façade*. For example, one participant noted that in their real-life experience, they would know their friends and thus would know how to interact with them. Others said in real-life they would just avoid such friends. These previous experiences shaped their understanding and their engagement with an experience such as *Façade*. Cultural inconsistencies that involved character interaction made some participants susceptible to miss-assess the social situation as well. For examples, subtle queues for interaction were missed for one participant due to her inability to interrupt other characters as interruption is considered impolite in her culture. These are examples of cultural norms that were expected within the minds of the participants as part of the social interaction norms, but were not facilitated within *Façade*. Believability is also informed by the interactions between characters as participants also commented on the awkward situation created.

**Lesson# 7:** *designers need to design for participant inconsistencies and different cultural experiences taking into account their target market*

The process of satisfying and cohesive story interaction is informed by the participant's motivation to alter its course, ability to follow the story, and the desire to adhere to implicit (social) boundaries for the sake of the dramatic or rewarding plot. This affected how participants evaluated the story which informed how they interacted and engaged with the experience. Many found conversing on the topic of a doomed relationship or being stuck in an awkward situation unappealing for instance two participants desired to "give up" and "get out" of the situation. Additionally, many participants were not able to follow the story coherency, for example after

getting kicked out of the apartment in an attempt to assist the situation. Another was confused why the characters couldn't discuss their memories when the marriage conflict began. Lacking social appeal led some participants to test the boundaries of the system rather than genuinely interact with the story. Playing a social situation is almost non-existent in previous forms or interactive models. This, thus, has caused much confusion and left many players feeling awkward and removed from participating.

**Lesson# 8:** *designers need to identify a process of story interactions with a desired user experience in mind*

## 9 Conclusion

In this chapter, we focus on exploring the meaning of interactive narrative from the users' perspective. We presented data and analysis of eleven participants' interviews. For our analysis, we used phenomenology, because we are interested in hearing participant's voices of their own experience and we believe that an understanding of the player's lived experience can improve interactive narrative experiences. Transcriptions of the interviews as well as all analysis phases were member checked by the participants themselves as well as reviewed by an external reviewer to establish validity. The contribution of this study is in the data presented as well as the methods used. We hope this data and our reflections can be used to influence future interactive narratives' design in relationship to the participant experience.

To summarize our contributions, we will iterate the main points we discussed in the chapter, we found that users' statements fall into two lenses: System Constraints and Role Play. The System Constraints lens is concerned with player agency through perceived boundaries while preserving freedoms and ability to define goals for their experience. The Role play lens is concerned with two perspectives. The first is the participants' preparation for role play influenced through participant's previous experiences and mindset as well as the experience design in terms of back-story, graphics, and how it prepares the user for interaction. The second is the process of role play which is informed by multiple distinctions between players vs. performer interactions and the specification of character and story properties necessary for satisfying and cohesive interaction. Through statements from participants we outline eight lessons showing how these lenses can influence future designs of interactive narrative, specifically through dependencies of game mechanics, player-character relationship, game character(s) and the interactive story design.

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