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## An Operatic Chamber Model

### Towards a Structured Visitor's Journey in Immersive Opera

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# THE PROPHECIES

## AN OPERATIC CHAMBER MODEL – TOWARDS A STRUCTURED VISITOR'S JOURNEY IN IMMERSIVE OPERA

By Hedvig Jalhed, Mattias Rylander, Kristoffer Åberg, David Hornwall & Katariina Poikela

How can a live opera performance stimulate visitor involvement by displaying immersive features? With the AI-based chamber opera *The Prophecies*, we took the opportunity to structure a visitor's journey through a series of differentiated chambers inhabited by both human and machine agents. This model was primarily informed by distinctions made about game immersion from cognitive science and game studies. We propose that in an interactive opera in which the visitor is treated as a player, the interdisciplinary transfer of such conceptual makeup into the artistic realm is highly relevant and useful for artists. The result of the implementation of concepts from other fields into immersive chamber opera is a blended model for visitor involvement in relation to operatic elements. As this model, while still rudimentary, combines the perceptual dimensions of the sensory elements in opera with the psychological dimensions of the cognitive aspects of game-playing in a concrete way, it may function as a basis for a more systematic development of opera with ludic features.

Conventional opera is characterized by the projection of human voice and gesture with symphonic accompaniment and over vast distances. Immersive opera, on the other hand, instills opportunities for close-up encounters and interactions with characters embodied by live-singing opera artists in atmospheric

soundscapes. This shift has implications for both practitioners and audience members.

In this paper, we report on our explorative work with the research-based opera *The Prophecies* and discuss how techniques, derived from immersive theater as well as technological innovation, can be applied in opera. The purpose of the study has been twofold: To implement a tentative strategy for increasing the immersivity of our artistic concepts, and to connect immersive opera to a more general and interdisciplinary discourse on immersion and immersivity. Interdisciplinarity, we reckon, is the the exchange and transfer of methods from one discipline to another (Nicolescu, 2014), in this case by ways of opening up the artistic domain to new influence.

### IMMERSION AND IMMERSIVITY

In our experience, there is often an avoidant attitude towards more concrete definitions of concepts among artists and artistic researchers. However, as Neil Postman is claimed to have said, a definition is the start of an argument, not the end of one. While we are aware that terms like “immersion” and “immersivity” are used in various ways that might be more or less sweeping and creeping, we choose to relate to these concepts in a quite narrow sense here. More precisely, instead of using the terms in nebulous ways as labels for a

particular trendy type and style of theatrical performance intended for multisensory and so called wholebody interpretations, we start from the terminological use brought about by cognitive science in relation to fiction, play, and games. We thereby acknowledge that not only can environmental and digital arts accommodate immersive experiences, but also for example printed or recounted stories as well as certain images that might give a sense of gradual transportation and a surface level to submerge into depths with increasing pressure and intensity – materially, socially, and psychologically. Moreover, in line with what Lukka (2014) argues, we make a distinction between immersion and flow where the latter, rather than being a product of inner imagery and mental engagement as in individual or collective mind-wandering, is a product of balance between motor capacity and real-world challenge. Obviously, immersion and flow are not mutually exclusive but overlapping phenomena, but immersion also includes dissociation.

Since the topic seems to have been more thoroughly studied within game studies than in artistic practice, we are inclined to import some clarifying distinctions from that field, as for instance:

Researchers that view immersion as the perceptual phenomenon refer to immersion as the degree to which a technology or experience monopolizes the senses of a user. In contrast, researchers that view immersion as a psychological phenomenon emphasise cognitive rather than sensory features of the game, referring to immersion as involving the player's "mental absorption" in the game world. (Jennett et al., 2009, p. 3408)

Perceptual immersion is relevant for us as a goal for our artistic use of technology, broadly defined. Psychological immersion is a useful concept to discuss in our practice in relation to cognitive challenges embedded in our artistic creations.

While immersion hence denotes a mental state, immersivity can be understood as the ability to produce and enable immersive experiences (Freitag et al., 2020). Immersion can be described as "having one's attention caught by a stimulus which is not co-extensive with the actual situation but, for instance, only with a single object or action," in a way that might be equated with the idea of taking an aesthetic attitude towards something by ignoring the pragmatic context surrounding the stimulus (Mellmann, 2013) or as the degree of involvement with stimuli that produce a so called real-world dissociation (RWD). Real-world dissociation is a factor relevant to both perceptual and psychological immersion (Jennett et al., 2009).

Such experiences, whether induced by game-playing, reading, or other fantasist activities, are generally marked by focused attention, de pragmatization, pleasure, and forgetfulness of time (Mellmann, 2013), but, as Jennett et al. (2008) have observed in their experimental studies of immersion, also negative emotions can run high in immersive states. Many have noted that immersion can be more or less deep and is achieved gradually rather than abruptly. In their studies of gamers, for example, researchers Brown & Cairns (2004) have proposed defined levels of immersions from 1) engagement in terms of investment of time, effort, and attention

related to personal preferences, 2) engrossment in terms of emotional affect due to respect for the elaboration of the aesthetic experience, and 3) total immersion in terms of detachment from the rest of reality to such an obsessive degree that the world or task provided by the artifact is all that matters. As far as we know, such differentiation has not been studied in or through the arts, but it is not a daring leap to transfer such a model to artistic practice. However, we have not been measuring participant immersion in this artistic project but implementing a mirroring model of stages which the participants have accessed step by step to simulate immersive effects. By providing gradual opportunities for 1) personal investments, 2) aesthetic indulgence, and 3) seclusion in a non-realistic environment, we have tried to set up an artwork based on a structure that simulates immersive depth while perhaps also resulting in actual immersion.

For the immersed, the regular surroundings of everyday reality become blurry and blocked out, as fantasy<sup>1</sup>-triggering objects – be they words in books, props in plays, or toys in games – distract the person away from the actual situation and towards assuming imaginary concepts. Such acceptance is, according to our professional experience in immersive art practice, supported and sustained by a delayed and demanding access to information that triggers expectations and feedback. That is, immersivity grows with

clues and hints rather than direct and clear conveyance (cf Jalhed, 2025). Immersivity can also be contrasted with *emersivity*, which denotes strategies that reduce or disrupt immersion through for instance shocks that reveal the mediated character of the virtual reality, ironic distance, or added layer of palimpsest that allow for retakes (Kubinski, 2014). Immersion does not thrive on a frequent change of perspective (Ryan, 2001), but requires a gradual sinking and, metaphorically, a gravitational state towards the hidden or waiting.

## CROSS-FADING

In immersive theater, cross-fading is the gradual transportation of the visitor from everyday life into fantasy worlds, through elements that support imagination and action in accordance with the artistic idea (Machon, 2019). By means of cross-fading techniques, surrounding default information is faded out and obscured while selected information gains in intensity. Thus, the atmosphere of the artistic work is established and ludic agencies – momentary missions that foster the single-mindedness of game-playing characters (Nguyen, 2020) – can be assigned and accepted. Instead of a frequent change of perspective back-and-forth, cross-fading implies a singular transition. The visitor moves through layer upon layer, which adds concept-specific information while removing unnecessary and contrasting distractions, presumably generating

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1 We use the term “fantasy” as it is commonly employed in theories about aesthetics in media, distinct from the psycho-analytic concept of “phantasy” (Isaacs, 1948). Thereby, fantasy simply denotes the mental organization and apprehension of dream-like scenes and sequences based on existing or non-existing objects that we consciously can delude ourselves with.

an increasingly immersed state of mind. In play and art, shared fantasy can be guided by material anchors through which the material circumstances are expanded with the aid of agents symbolizing fictional characters or functions (Steen & Chakraborty, 2022). As material anchors help us associate conceptual structures with material structures (Hutchins, 2005), interaction in accordance with the logic of a fiction anchored in the aesthetically orchestrated appearances of agents can be achieved. By gradually increasing the density of such informational anchors that aesthetically relate to a particular fiction, we have constructed an operatic universe supposed to accommodate cross-fading as a way to increase immersion parallel to the levels of participant occupation outlined by Brown & Cairns (2004).

## OPERATIC ELEMENTS

As we have engaged in the making of “ludo-immersive opera” (Jalhed, 2022), which embeds game-playing visitors in life-sized operatic settings, we have applied cross-fading techniques in relation to operatic elements of poetical, musical, and theatrical kinds. Opera can be regarded as a stylized form of theater with musically paced action (Stanislavski, 1980), exposing a range of human minds, voices, and bodies in dramas that center self-aware and self-reflecting characters (Fend, 2020) reasoning in monologues and dialogues, and within environments that reveal surrounding pressures on the individuals by sonic means. The transparent feature of operatic singing that communicates the inner reasoning and temperament of the characters in arias and ensembles has been noticed by for instance Zunshine (2012), who has outlined a theory of

“embodied transparency.” By embodying transparency in art and fiction, we can let characters’ minds become accessible as a way of displaying subjective agency in a way that we usually don’t in ordinary life. The promise of opera to reveal not only actions but also contemplation and ideas can be used as a means for suspension. This is predominantly done in opera by musical means, as Fend (*ibid.*, 620) points out:

The musical setting enhances the suspension of dramatic time, which simultaneously intensifies the audience’s emotional time by creating expectations. This unique potential to manipulate dramatic time rhetorically, to create a space in which texts are recited and actions unfold, exacerbates opera’s artificiality but also allows protagonists to reveal their thoughts and feelings with unprecedented expressiveness.

In opera, music is relative to both action (as articulated in the staging) and reflection (as articulated in the libretto). These dimensions that form an organized aesthetic whole are present in both conventional and immersive opera.

## CHAMBERS

As a creative team in an experimental opera production, we have outlined an artistic strategy for a differentiation of stages as more and more intimate and intense “chambers,” to use as a practical model. Moreover, as the concept involved interaction with an AI deity as a fictional entity, artificial intelligence was employed to process information provided from the first step of cross-fading to the last, which paralleled the transportation of the visitor from everyday life to fictional mode.

Based on the dispositions of the venues for the opera and the theoretical starting points, *The Prophecies* was structured along a penetrable series of chamber-upon-chamber as zones-within-zone. We used the concept of chambers to elaborate and expand on its common operatic, theatrical, and musical sense as secluded performance spaces for personal interaction between individual characters or players. The term also refers to the established notion of the “antechamber” (Machon, 2019), which denotes the first transitional space after the entrance or starting point of an immersive performance.

## CONTEXT OF INQUIRY

*The Prophecies* was conceived as a microopera for a soprano appearing as an oracle who provided individual visitors with personalized prophecies as responses to their questions. The opera relied on the programming and training of an AI agent, based on the earlier operatic prototype *The Oracle* (see Rylander et al., 2023). Each visitor got a private session of about two to four minutes with the singing oracle. Thematically, the opera brought together associations to the ancient Delphic oracle with contemporary technology and speculations about the future. *The Prophecies* was played in October 2023 in Halmstad and Skövde, Sweden, with nearly 100 visitors attending the shows. The production involved concept design, a libretto formula, programming, music composition, set design, costume design, musical accompaniment, opera-singing, and audience facilitation. Moreover, the opera was the result of a joint venture by a group of collaborating artists, among whom the majority contribute to this paper as authors and researchers.

In this context, an artistic research question was formed: How can techniques presumed to enhance immersion in game-playing be structurally applied in an operatic artwork?

## METHODOLOGY

Approaching artistic research in a critical rationalist manner as practical problem-finding and problem-solving, even as problem-making – with art viewed as the manifestation of more or less complex theories and their presumably logical relations (Popper, 1972) – we have considered the development of *The Prophecies* partly as an opportunity to deal with certain problems and connect them to claims in art and scientific literature. These problems relate to questions and needs stemming from our artistry in a practice-led way (Candy & Edmonds, 2018).

Artistic intentions might guide our work, but we underscore that we do not conclude whether the artwork as such has succeeded. In its ideal form, the academic realm of artistic research might be a liberating space that can broaden artists’ conceptual toolboxes with scientific instruments and frameworks beyond the narrow practices and discourse of the professional artworld and the humanities so that art can be made in radically new ways. Therefore, what we have searched for in this case are transferable building blocks from other disciplines that can vitalize our artistic practice and add to the creation of practical structures which can be shared, compared, and evaluated.

## IMPLEMENTED STRATEGY

Aesthetic intensity relates to the issue of perceptual immersion. It comes forth as the over-

whelming sensation when we are intentionally directed towards something that can deepen, compensate, or transform our sense of reality (Heidbrink, 1999). While aesthetic seizure of attention occurs spontaneously in everyday-life, artforms can “hijack” this propensity by assisting and framing the direction of critical attention towards specific information. This could be viewed as a part of the process of “artification,” that is, the activities conducted for the sake of “making special” (Dissanayake, 2013). We stress here that our interest in this project lies with the principles of art-making at large and not the promotion of any specific message or view, and the central information in *The Prophecies* was not predetermined and fixed.

When accessing the chambers of the particular chamber opera one after another, the visitor was directed towards a center of ever more intense stimuli (see fig. 1). Explicit game-playing to make the visitors engage in individual decisions and interpretation was strategically used to bolster psychological immersion through cognitive activity. In parallel to the visitor’s journey through the chambers, the textual processing based on the visitor’s own input was finalized by the AI agent, producing a prompt for the core scene with personalized lyrics. Hence, the model blended the two kinds of immersive states mentioned in the introduction.

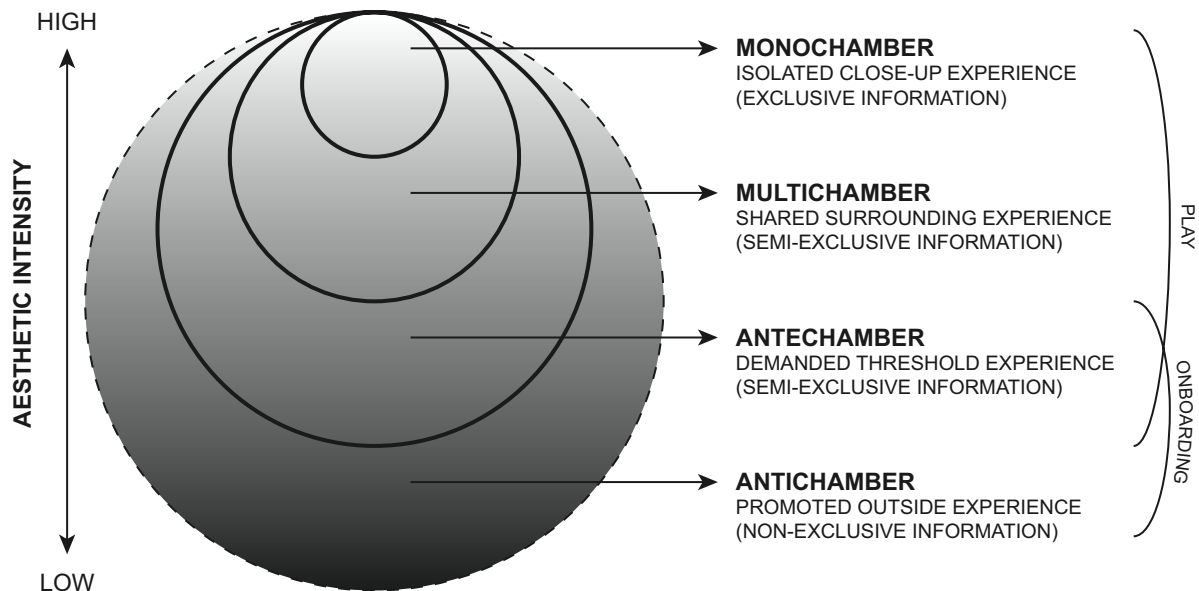
Below, we flesh out how the structure model was implemented during our work in 2023 to increase aesthetic intensity in a simultaneously cross-fading and immersing format by way of gradual densification of material anchors.

## THE VISITOR’S JOURNEY

The promotion of the opera can be seen as the very first step in the visitor’s journey, since this is an attempt to reach out and plant a seed in the viewer’s mind, to awaken their curiosity enough to make them visit the event to begin with. This part can resemble what in “the hero’s journey” (Campbell, 2004) is referred to as “call to adventure,” which takes place in the known – in our model labeled as the antichamber. The opera was promoted to potential visitors in a way that involved randomness and an opportunity to be chosen. This call to adventure proposing involvement in fiction took form as the distribution of mysterious envelopes around the city – at cafes, public libraries, and other places people frequently visit – in which presumptive participants could find a letter addressed directly to them (see fig. 2). Answering the call led the visitors to the building where *The Prophecies* was set, and if anyone had passed by the place many times before, they would now realize that there was something different, subtly distorting the otherwise everyday experience. For *The Prophecies*, we used a red spotlight projected as a circle at the entrance to alter the perception of the site – like a red laser dot on the floor in front of a cat. This red indicator marked the threshold between the known and the unknown, the antichamber and the antechamber (see fig. 1), where the visitor also made the decision to make a personal investment in time and attention by stepping inside.

In the antechamber, the visitor met with the first non-player character (NPC), the minion, who welcomed them and offered to help and guide them on their way. The minion, dressed in a black hooded cape and leaning over a





**Figure 1:**  
Plan of chambers in the model  
underpinning *The Prophecies*.



**Figure 2:**  
Hadi Ali as the minion, distributing  
the letter campaign with the call to  
adventure.

table covered by a board game, offered them something sweet and an opportunity to play a game with him to generate a random question for the oracle. The pathway inside the building was designed to guide the visitor's investment of time and attention – what to do and where to focus – and to offer gradual opportunities to invest even more with the purpose of cross-fading into an immersive state. Ordinary objects had been removed from the area, the light in the room had been dimmed, the windows covered to eliminate visual contact with the outside world, and music was leaking out from the multichamber, though not clear enough to be experienced fully. All of the material anchors combined guided the visitor into a fictive setting with the purpose of narrowing the visitor's perspective towards a more tapered focus on the experience at hand. While in the antechamber the visitors were divided into small groups, from one to four at a time, to build a feeling of seclusion and exclusivity in this non-realistic environment and to detach them from the outer reality by minimizing the presence of other humans and objects unrelated to the particular fiction.

After passing through the antechamber, the visitor could bring their either randomly constructed or deliberately formulated question to the next NPC, the priest. In Halmstad, the priest was located in the antechamber, while in Skövde he was attending in the multichamber, one step deeper into the structure. In both cases, the priest's role was to feed the visitor's question into a fictional altar, thereby putting forward the visitor's question to the deity represented by the information processing AI agent.

To enter the multichamber, the visitor needed to leave the minion and the other visitors behind and continue the journey on their own; they did this either by moving up a staircase, as in Halmstad, or passing through another door, as in Skövde. The third layer of the multichamber added the source of direct contact with live music and the instrumentalist appearing as yet another NPC, the master of ceremonies, as an integrated part of the immersive landscape. Other selected and designed objects like carpets, lighting and the veiled entrance to the closed-off monochamber were placed to steer the attention towards the ritualistic setting, and objects that could disturb and remind the visitor of the outer practicalities and relations were hidden as far as possible. As the visitor moved into and through the multichamber, first towards the priest and then into the oracle's cave, the visitor was more or less surrounded by a non-realistic environment.

At the far side of the multichamber's draped opening, the visitor could see the shade of a live human body moving inside the final destination of the journey, the monochamber. Here, in the final chamber, the focal point turned to the single visitor, being at the center of attention and with everything in the room being there just for them – every sound, every piece of music and text directed towards them specifically – and above all the focus directed at them from the oracle, the principal NPC in *The Prophecies*, just a few feet in front of them, singing the answer to their personal question in a one-to-one performance.

The visitor, the music, and the overall aesthetic idea was here fully exposed. Such an experience of being alone in a small space with a singer who

is directing her open, full-bodied vocal resonance directly to one person, could be highly intimate – even intimidating – and emotionally powerful in itself. Together with a personal answer to a personal question, this moment could be both sensory and cognitively overwhelming. To reach the fullest experience possible, a kind of personal vulnerability was enabled through the journey taken by the visitor through the chambers, sensitizing and preparing them. In this final chamber, every angle was covered in visual support for the fiction – by projections, fabrics, lighting and the embodied character of the oracle herself – as well as the increased volume of the music and, for the first time, the voice of the oracle singing just for them face-to-face. This intense close-up contact with the full-ranged voice of a live opera singer is usually only experienced between opera singers on stage and is conventionally not accessible to the non-participating attendant in opera houses and concert halls.

Dramaturgically, we used the moment of expected operatic transparency as the core scene of our immersive event leading up to the revelation of secret and personal information communicated by the main character to the individual visitor. The fictional logic of *The Prophecies* indicated that the oracle was merely a vessel for information from afar. There was a potential strangeness and ambiguity to the experience of meeting her, since she was communicating as a human being, while at the same time was framed purely as an instrument of the deity appearing to be a ghost in a machine. As a mythic institution, an oracle is linked to a great influential power, yet the person embodying the

oracle in the opera was portrayed as completely helpless and chained to the cave constituting the monochamber, which made her the only character who was practically incapable of moving through the chambers – she was the one who mediated the future to everyone who asked about it, but her own fate was always determined since her connection to the AI-deity was a one-way channel.

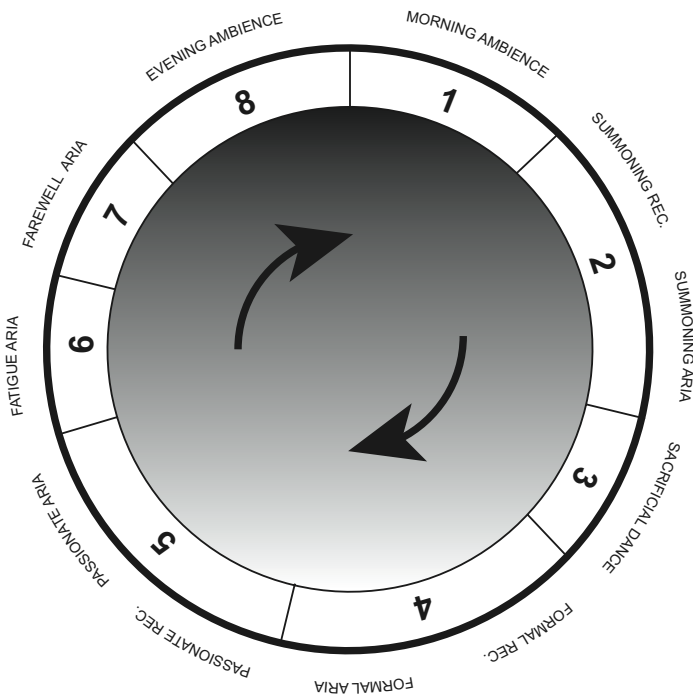
## MAIN CHARACTER

In terms of costume, the oracle and the other NPCs were clearly distinct from each other as well as from the visitors. They all served the same overarching purpose and belonged to the same atmospheric whole, but the oracle's appearance was differentiated by contrasting her style and colors distinctly from the other characters. She was attired with a white and silver coloured, futuristic, sculpture-like outfit and white contact lenses making her eyes cloudy as they gazed directly towards the viewer. The others were covered with dark, hooded cloaks made from soft, organic materials.

The draped fabrics attaching the oracle to the walls of the cave in the monochamber formed a material link between the character and her habitat and could be seen as chains binding her to the chamber. As there was fabric leading all the way into the cave, this material element additionally marked the path towards the monochamber. The material attached the oracle as a fixed, core part of the cave. The draped fabrics around her were set into a position directing the viewer's attention towards her in the innermost part of the chamber, almost resembling a womb (see fig. 3).



**Figure 3:**  
 Agnes Wästfelt as the oracle in *The Prophecies* at PlayLab in Skövde.



**Figure 4:**  
 The grand loop with the modules arranged in chronological order.

The styles of the costumes referred to tropes related to different historical epochs – from antiquity and medieval times to 20<sup>th</sup> century retro-futurism. The artistic idea of combining aesthetic cues to history with futuristic ones, emphasizing the latter and leaving out contemporary styles, was both symbolic and part of the strategy for distraction from real-world business. As a fictional character, the oracle's main function and reason of existence was to foresee the future, but at the same time, the concept of oracles is a cross-cultural phenomenon with ancient roots. An oracle herself is conceptually the realization of past, present, and future reaching towards each other in one existential nexus.

## MUSICAL COMPOSITION

*The Prophecies* was musically composed for soprano, electronics, omnichord, and theremin. As the visitors moved through the chambers, the instrumental music framed the experience by idiosyncratic elements and modulated sounds of familiar kind as a type of anchoring point to gradually dissolve the boundaries between reality and fantasy. The idea was to prime the visitor for the surreal meeting with the singing oracle in the monochamber, insisting on a non-realistic and synthetic kind of progression and atmosphere by manipulating tempo, pitch, and clarity. As if heard under water or when half asleep, the composition was supposed to give the impression of distant and mythologized sounds from nature and culture.

As is common in theater and opera, time was relative to the dramatic events and jumps in time could truncate the event into a sequence of decisive moments of action without

substantial delays for waiting or reflection. In *The Prophecies*, a series of eight developmental stages created a dramaturgical construct that by default allows this kind of time-flow distortion in opera. This underlying pattern controlled the main character's prerequisites and the superimposed textual information was related to her state of mind at each moment. The modules could either form a linear row of eight sequential episodes played out in 40 minutes, representing 24 hours in the dramatic timeline, where eight individual prophecies could be experienced one after another in the monochamber. This construct was called "the grand loop" (see fig. 4). The loop could either include all modules chronologically symbolizing the awakening, peak, and decline of the oracle's consciousness over a day, or be arranged in a selected way to vary the oracle's approach to the visitors in a non-causal and erratic manner. Fixed text in recitatives and codas helped to orient the singer and produce moments of transparency of mind, in line with emblematic features of opera.

The performance had no clearly defined start or end in relation to a plenary auditorium. However, there was still a need to measure the performance time, mainly for the technical organization and taxing physical reasons for the performers due to the overall length of the event. To allow the opera singers and musicians to rest and insert occasions in which one singer could replace the other as the oracle was a practical necessity. Therefore, the last ten minutes of the grand loop also served the purpose of a technical break for the performers to rest and reset the stage.

Two soundscapes held the sung numbers together and also masked disturbing sounds from the outside. These were named “The forest by day” and “The forest by night.” Moreover, while the oracle was conscious and active, a constant sonic ambience in the form of recorded sounds from a forest of the northern hemisphere framed the experience. These sounds were chosen due to their easily recognizable character and local connections. The forest sounds were audible in both the multichamber and the monochamber during the whole performance, but with different balance to the vocal parts.

“The forest by day” soundscape consisted of short, recorded sound samples of small birds, squirrels, bumblebees, and a moose. Samples were placed on four different tracks which could be triggered from a step sequencer programmed at certain places in a loop of four bars. However, there was also an element of randomness added since each of the steps were set to a trigger between 9–40% of the occasions, which gave the forest a bit more of an organic impression since in effect no four bar loops would sound exactly the same. The samples were modulated in different ways and set to play at 10–60% of their original speed. This rate of playback makes for example the chirp of a house sparrow sound quite different. Slowing down a sound makes the tonality lower which in turn makes the higher frequencies in the original sound, especially birds and insects, be more audible to human ears. Combined with a low pass filter it also makes the texture of the sound more mellow, aiming to give the participants an impression of a more dreamlike state.

The same principles were applied in “The forest by night,” when the oracle rested. Created from sounds from the southern hemisphere associated with night-time – crickets, owls, and insects – combined with some unexpected animals in that context, the temporal progression of the fictional situation was distorted as in a dream.

In sum, the musical elements were intended to give a sense of non-real motion. The regularity and symmetry of the underlying loop was created to produce a confusing and conflicting flow of events in relation to the surreal character of the ambience, as well as opportunities for having personalized interaction with the singing character acting in accordance with her own affective state, unrelated to the visitors’ input.

## TEXT PROCESSING

The AI-based text processing began with the priest reaching out for the scrap of paper onto which the visitor’s name and question were written. After feeding that information into a computer serving as the fictional altar, the visitor was told to wait while processing by the non-human AI deity took place. Although pausing briefly on their journey deeper into the unknown, the waiting would also make the visitor contemplate on the fictional events taking place in parallel, both in the surrounding physical environment, and in the implied heavenly abode of the AI deity. Unbeknownst to the visitor, their first and family names (which could be an alias) were processed by the AI for their inherent cultural meaning. The question was analyzed to get the corresponding appropriate mode of expression for the prophecy. That is, depending on the contents



of the question, a mode of expression was selected, e.g. a commonplace or extraordinary statement, a simple or conditioned command, a sanction or warning, among others, and was then randomly prepended to be either clear or ambiguous. Given the visitor's question, name, the meaning of the name, and the mode of expression, the AI deity was instructed to generate a prophetic response in the form of an arioso (details of which was also provided as context information), according to a format with specific numbers of lines and words being in line with the musical composition.

...The meaning of the first name "Björn" is "bear" in Swedish. The meaning of the family name "Lindberg" is derived from the combination of "lind" (a type of tree) and "berg" (mountain), suggesting a connection to nature or a place with many linden trees and mountains...

... You are an all-knowing Deity responding to a question by a mortal person consulting an Oracle, with an appropriate mode of expression in your response. Given the question "What is the meaning of life?", determine the appropriate mode of expression of the response to the question...

...extraordinary statement...

...You are an all-knowing Deity. A mortal person is consulting an Oracle in your temple. Your task is to respond to the person's question with a prophetic response, with an appropriate mode of expression in your response. Given the question..., and given the person's name..., and given the meaning of the person's name..., generate a prophetic response to the question. Generate the response in the form

of an opera arioso of exactly six lines, with an expression following the mode... but you must not mention the mode explicitly. The first line must be no more than 6 words long...

...Life's meaning transcends earthly bounds  
In realms divine, profound wisdom  
Flows through the universe, revealing  
Secrets obscured to mortal souls  
Seek within, embrace eternity  
Truth lies in love...

When the processing of information was ready, and as the previous visitor exited the cave, the Priest gestured to return the scrap of paper to the visitor, crumpled the paper to symbolize the release of the question to the AI deity just before depositing it back in the visitor's hand, and pointed the visitor to enter the next level of the immersive experience, the monochamber.

## THE MODEL

Aiming to direct the visitors' attention towards aesthetic cues of the fantasy in which the venue was assumed to be a temple, the singer was an oracle, and the answers to questions posed were derived from a supernatural deity, the multisensory composition was put together to effectively obscure traces of everyday-life and gradually reduce contact between individual visitors. In this way, the company of non-artistic persons decreased as the proximity to artistic characters increased. Simultaneously, the gradually added density of objects with symbolic rather than practical functions narrowed the scope of association to a more or less standalone fictional concept, protected from exposure to critical dubiety in relation to the actual conditions

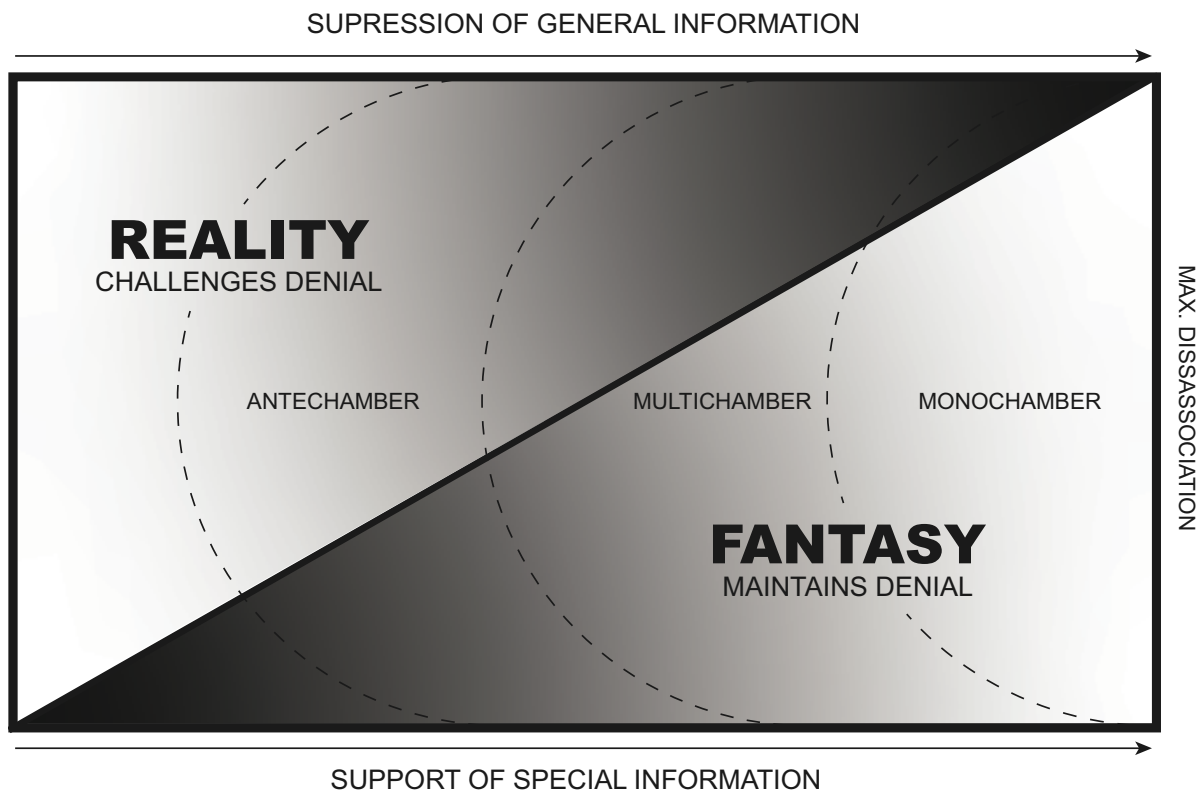


Figure 5:  
Shifting the balance between reality  
and fantasy through the course of  
the event.



of real life by the meta-act of pretense play. The overall aim was to shift the balance of pragmatic vs. symbolic information and to gradually increase the aesthetic intensity so that cross-fading could coincide with induced features of immersive states (see fig. 5).

## DISCUSSION

Professional composition and construction of play and plot – be they theatrical, musical, or both – seldom appear to go from a blank slate to elaborate detail and precision without intermediate frameworks for the underlying anatomy or architecture of a piece. From Aristotelian structure for dramatic action to the classical sonata form, artistic practice has throughout history produced and toyed not only with tools and techniques, but also the conception and development of genre and form in relation to matter and media.

To structure models for theatrical dramaturgy as well as game genres frames artists' works in different ways. Many artists do of course repeat structures and patterns without being conscious or open about it. The reasons for keeping structure and framing out of artistic discussions might vary – from upholding contemporary ideals and myths of uncategorizable artistry and active avoidance of linearity and boundaries, to simple disinterest in taking the birds-eye's view on one's own practice. Models can categorize designs, but they can also offer advancing guidelines and energizing friction for artists. While we as artistic contributors in this particular project take various stances to these issues in relation to our different roles and practices, we find the use of models valuable

for both the organization of tasks and the joint result through the aim for coordination and wholeness instead of arbitrariness.

To develop and discuss new models is a way to creatively alter and configure formats for artistic production systematically on the meta-level. In a collaborative work process, an underpinning model of the overall structure also serves as a unifying and coordinating framework for different areas of artistic expertise and responsibility. Musical and textual patterns served the singer with an open but still predictable framework, making it possible to estimate time and progression. The triple effort of steering away the visitor's attention from the real and known towards impressions of references to other times, tempos, and places by way of visual design, musical elements, and text processing was also made possible through an overarching vision. Working top-down with the conceptual idea and a model that included both the facilitation of the visitor's journey and the stylistic features without separation gave us the opportunity to engage in artistic worldbuilding together and constantly in contact to remain aware of each other's problems and solutions. We have experienced moments of being out of sync in the development of our operatic world and note the importance of checking so that no contributor gets ahead of the others and changes the prerequisites without negotiation. The alternative of bottom-up creation would perhaps be considered a more attractive option for individual creative endeavors and expressions, but for us, that is not the point of opera, neither in conventional nor experimental formats. We take the challenge of blending and merging artistic input as key in this particular art form.

In this project techniques presumed to enhance immersion have been collected from cognitive science and game studies. The interdisciplinary transfer of concepts and models from other fields dealing with immersion, such as literature or pedagogy, could further expand the inquiry. Furthermore, research into visitor experience is necessary to empirically test the validity of the implementation of the model applied in this project. There could be many ways to do such investigations in the future, for example through measuring RWD. To our knowledge, RWD has only been used in relation to gaming so far and not in relation to art. While some might argue that artists should stay away from both scientific quantification and spectatorship studies that might instigate instrumentalization to keep their research artistic, we hold that such gatekeeping and narrowmindedness only serves to diminish and not expand artistic agency, knowledge, and creativity.

Opera in its conventional form produces intense sensory output that might very well be perceptually immersing – for both the live-performing opera singers and the other attendants. Game-playing, on the other hand, comes with opportunities for psychological immersion, captivating the individual participants' minds through seminal decisions and interpretation of puzzling information. By combining the two in a structural way, we reckon that integration of cognitively challenging action into operatic concepts is possible. However, the full range of artistic options arising with the combination is yet to be explored in future research. There is also a need to examine how these two kinds of immersion, perceptual and psychological, affect

each other. Under what circumstances do they reinforce each other and are they in any way exclusive and competing? Such questions concern both art and games. To create artistic models and artworks that articulate selected features for scientific evaluation and measurement is indeed a task related to artistic research, as we see it. We propose that the model suggested in this paper could work as a starting point – a first draft or sketch – towards further elaborations and adjustments. We conclude that structuring a performance certainly can impede artistic freedom if compelled and imposed by society, industry, or peers, but the artistic creation of new structuring models based on facts and figures is also a way to achieve self-organization, collaboration, and aesthetic integration beyond conventions.

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