Games as an aesthetic form are at a moment of crisis. As has been often pointed out by the popular press, the digital game industry, only thirty odd years old, has quickly become a powerful economic force in the realm of entertainment media, surpassing the revenues of the film industry’s box office. I have remarked elsewhere on the fact that games are played in 90% of U.S. households and young people in the U.S. spend an average of 20 minutes per day playing video games.¹

But, while these are certainly impressive facts, they hardly point to games as an important artistic force. Games are conventionally seen as entertainment for children, lacking in artistic merit, and prone to unrepentant violence. They lag far behind media such as film and books in their recognized cultural value. By many accounts, the predominant entertainment form of the coming century will be digital and playful but also vapid and violent. In fact, the very evolution of the game form is imperiled by its limited cultural status, by the expectations of its core audience, and by the exclusionary practices of its chief creative's. A recent article in the London Review of Books equates the arcane and internally referential design of modern game play to that of Opera.

John Lancaster writes, “Stanley Cavell once pointed out that the conventions of cinema are just as arbitrary as those of opera. Both those observations are brought to mind by video games, which are full, overfull, of exactly that kind of arbitrary convention. Many of these conventions make the game more difficult. Gaming is a much more resistant, frustrating medium than its cultural competitors. Older media have largely abandoned the idea that difficulty is a virtue; if I had to name one high-cultural notion that had died in my adult lifetime, it would be the idea that difficulty is artistically desirable.”²

But there are, today, a number of designers of games who are struggling against these inherent challenges in game design to articulate the nature of the creative process that goes into ludic systems – not just the visual designs and the software development, but the creation of rule sets that contain the potential for meaningful
play – and to take ownership, authorship really, of the dense “procedural rhetoric” produced by the play of games. There is, for example, an emerging genre of social issue games, or “serious games” that address topics previously taboo to playful practice. Games about political issues, health practices, tragic events, etc. There are also experimental game designers such as Jason Rhorer, whose games such as Passage and Gravitation, deal procedurally with themes of life and death, the balance between home and family and artists ambition. Also, Jenova Chen, my former student, whose games such as Cloud, f0w, and the recently released Flower, create playful worlds around the themes of peacefulness and wonder, loneliness and joy.

It’s not unusual for an emerging form to question its underlying merits, its aesthetic potentials. Early film theorists such as Rudolf Arnheim posed the inevitable question of whether film could be considered an art in the mid-20th century, and that question is echoed today in discussions of game aesthetics and game design. Rather than attempt to find a definitive answer to that potentially paralyzing question, some experimental game designers, myself included, are simply assuming that a solution lies along the path of practice; that by making attempting to games that are purposefully expressive and imbued with aesthetic intent, that we can find the limits, or the lack thereof, in the form through experimentation.

Over the past several years the team at The Game Innovation Lab at USC has been deeply engaged in this challenge. We have produced research games such as Cloud, which posited the possibility of a game mechanic that expressed peacefulness, wonder and awe. Another research game-turned-commercial-product, f0w, puts the pace of progression into the hands of the player, creating a relaxing, joyful, experience. And for the past several years, working with media artist Bill Viola, we have been experimenting with the boundaries of video game aesthetics and technologies to explore the universal story of an individual’s journey towards enlightenment.

The Night Journey Project
The Night Journey project was conceived a number of years ago by media artist Bill Viola. Viola, whose work has been described as the “pursuit of enlightenment through attention to transcendent experience,” began working in video art in the early 1970s, when the medium was just emerging. While he was still attending art school at Syracuse University, he was showing his work in exhibitions with people like Nam June Paik, Bruce Naumann, Richard Serra, Peter Campus – all leading early video artists. Early on, Viola realized that the “other half” of the raw material of video was “the human perception system … the viewer, or the viewing experience – the other half of the system. It’s the dynamic interaction between these two systems, not just the technology and language of video alone, that is the fundamental nature of the medium.”

This recognition of the viewer/participant is critical to Viola’s work, which includes video, installations and, recently, a visualization of the Wagner opera Tristan und
Isolde. The Night Journey project sprung from the realization that computers and video games were part of a major historical shift in imagery. As early as 1985, Viola was already thinking ahead towards the level of today’s computer graphics: “I see the technology moving us toward building objects from the inside out rather than from the outside in ... soon images will be formed out of a system of logic, almost like a form of philosophy – a way of describing an object based on mathematical codes and principles rather than freezing its light waves in time.”

Viola began working to define the Night Journey with a research group from Intel, including Kevin Teixeira, in 1998. The specification written by Teixeira was a starting point for us at The Game Innovation Lab, providing goals for interactivity, visual concepts and scenarios. One important idea described in this early specification was “explorable video,” which became a touchstone for the team in creating the visual feel for the game.

The aesthetic aspirations for The Night Journey project were developed in a series of preliminary creative meetings in 2005 in which we discussed both Bill Viola’s inspiration for the piece in the illuminated manuscripts of historical mystics as well as the potentially innovative nature of the gameplay as it might relate to the Journey of Enlightenment. Several high-level goals emerged from these meetings, which have guided the design process. These were:

1) The desire to evoke in the player’s mind a sense of the archetypal journey of enlightenment through the “game mechanics” of the experience – i.e. what the player is doing in the game.
2) The desire to create a world of “explorable video,” integrating the work and sensibility of Viola's prior art into the game world.
3) The importance of creating an experience that would appeal to (and be accessible to) both art patrons who might play it in a gallery setting, and also game players, who might access it through another from of distribution.

The process of setting high-level player experience goals as part of the artistic process for games is an integral part of a “playcentric” design process, which I have described elsewhere. In general, the key difference in the playcentric approach and a traditional game design process is in the type of design goals which are set and the methodology for reaching those goals during the production. “Play-centric design is design and technology at the service of the player experience.”

Throughout the design and development process, prototyping and playtesting are used to confirm the alignment to aesthetic goals, measuring actual player experience against the high-level goals.

Team and Inspirations
After the initial set of meetings, The Night Journey team began concept work in the fall of 2005. Together, we represent a wind range of backgrounds, skills and interests. Of course, there is Bill Viola himself, and his creative partner and
executive producer Kira Perov, both with their vast experience in media and fine art, but also deep personal connections to the subject matter of the piece. Our early concept team at The Game Innovation Lab also included Scott Fisher, a pioneer in immersive world design, and Andreas Kratky, a media designer with a focus on new forms of cinema and myself, a game designer, originally trained as a filmmaker. Of special note are the inspiring collisions of experience and understanding created by the backgrounds and skills of core team members Todd Furmanski, Kurosh ValaNejad, and Michael Rossmassler.

Programmer Todd Furmanski was a student at USC, one of the first to graduate from the fledgling Interactive Media M.F.A in 2005. Todd’s thesis, on emergent generation of landscapes, architectures and related creatures in digital worlds seemed an excellent fit for some of the questions we were asking in the initial concept meetings for The Night Journey. For this project, Todd would wind up creating a set of procedural visual tools, which drew inspiration from the prior works of Bill Viola. Together with another key team member, Art Director Kurosh ValaNejad, who built an archive of visual references for the 3D objects, scenes and presences in the piece, the two would develop the unique look and feel of the landscape and objects, creating a bridge between the “real” and the “imagined,” memory and experience. Kurosh’s background in immersive environments, terrain design, architecture all complemented the work that Todd had done, so that Kurosh, assisted by graduate student Mike Rossmassler, was able to actualize the ideas behind Todd’s experimental visual tools and processes into a viable real time experience for The Night Journey world.

As the game designer for the project, I drew on my own background in creating playful systems, but also on my early love of cinema and visual play on the screen. A game designer tries to create an elegant set of rules and procedures that will constrain the player just enough for them to find the opportunities for play. Here, the challenge was to discover rules and procedures that might evoke a sense of spiritual exploration, meditative reflection, and eventual transformation at the core of the archetypal journey of enlightenment.

The game design explorations arose from a central question that I asked of Bill Viola early in the design process: what is the “game mechanic” of enlightenment? How can we abstract and systemize such an intensely personal, yet archetypal experience? We did not want to make a typical “quest-based” mechanic, in which we told the players what to look for and set obstacles in their path. Rather, we wanted the act of questioning what they were looking for, and how they might find, and what their relationship to the game world was to form the central cognitive and emotional activity of the game. We spent a significant amount of time building paper prototypes and rough digital prototypes looking for procedural opportunities to express these ideas through the game play.
The Game World

The Night Journey is a 3D first person game, and like most such games, is organized around a navigable landscape. Unlike most games, however, the Night Journey is not broken into a series of “levels,” but is instead designed as a progressive “layering” of experiences over the course of play. While experienced as mysterious and obscure, as will be shown below, there actually is a simple underlying layout for The Night Journey landscape.

The player begins in the intersection of four key geographical spaces: forest, mountains, desert and sea, each with their own sense of “infinity” stretching out to the horizon, and each with their own thematic core. In the forest, we find the encounter with what Bill Viola has called “the irreconcilable otherness of an intelligence ordered around a world we can share in body but not in mind.”\(^\text{13}\) While in the mountains we follow the tradition of discovery through withdrawal, epitomized by mystics including St. Anthony and St. John of the Cross. As Bill Viola has described, “I want to go to a place that seems like it’s at the end of the world. A vantage point from which one can stand and peer out into the void …”\(^\text{14}\) Each of the key areas centers around such an experience, each different, and yet all tied to the traditions of the spiritual quest.

In addition to the four key geographic areas, there is also a vertical pole reaching to the heavens and falling through the landscape. These “6 degrees of freedom” (Figure 1) were sketched out by Bill Viola early in the design process.

![Figure 1: “6 degrees of freedom” in the world, design sketch by Bill Viola (left) and early landscape design (right).](image)

The play begins at a singular point of day, which is not day or night, but a mysterious mixture of lightness and darkness. The sun, sinking below the horizon, still lights the sky, as does the moon, already rising. As the player begins their journey, they fall down the vertical pole to the “landing spot.” Throughout this initial fall, they have control of their gaze, but not their imminent downward motion. At the highest point of the fall, the player can see out across the immense vista of the game landscape in all directions: a huge, unknowable space that would take lifetimes to explore. Upon landing, the player is free to traverse the game landscape
in any way they see fit. If they were looking carefully during the fall, they may have seen several points of light off in the far corners of each of the four areas of the landscape and may head in these directions.

Along their way, the player will encounter other points of interest and exploration. The basic controls consist of “looking,” “moving” and “reflecting.” These are accessed using a PlayStation 2 gamepad, with looking assigned to the right thumbstick, moving to the left thumbstick, and reflecting to the “x” button. Reflecting is a way of interacting with the world that evokes a layering of imagery, and conceptual space, upon the 3D world. When players choose to reflect, the world “transforms” under their gaze. Reflecting also transforms the player, though they may not realize this immediately. The more time a player spends reflecting, the faster they will be able to move through the world and the higher their viewpoint, until finally they lose their connection to the earth and begin to glide over the landscape, barely touching the tips of the trees at their highest level.

Reflecting will also maintain the fading light, keeping darkness from approaching. By reflecting on specific points of beauty and interest in the landscape and allowing these points to “fill them” with light, players will be able to keep darkness at bay and traverse the landscape a much longer period of time.

Eventually, however, darkness will fall. At the end of this extended “twilight,” when the sky has completely darkened to black, the player will “fall asleep.” When they sleep, they will dream of their journey, a procedurally created video piece based on their travels. After this interlude, they will be transported to a new area of the landscape and gently dropped back to resume their journey.

The overarching structure of The Night Journey is a cycle of loss and rebirth. Unlike most games, in The Night Journey loss is not a conclusion or even a punishment. The slow, extended experience of loss is, rather, another opportunity for reflection of a more personal sort. By taking the common, mostly unexplored essence of loss in video games and making it a central to the experience of the journey, we hope to
allow players time and opportunity to reassess the quality of both their play, and their loss, its textures and nuances.

Should players reach the points of light seen during the initial fall that are in each of the four areas, they will find a “St. John’s hut” – a spiritual hermitage in the form of an old trailer, a cave, the ruins of a building, or an abandoned cabin, “representing the tradition of spiritual recluse that the earth has nurtured over the ages.” Each of these huts exists in multiple moments time, only some of which are active for the player, who must change their “one-way experience” of time by reflecting on the huts, cycling through their stages of life, from new to abandoned, rotted, to reclaimed by the earth.

In several stages, each hut will contain a doorway that the player may enter. Coming close to the doorway, the player will hear the faint whispered thoughts of those who have gone before. Inside the doorway to each hut, the player moves into a complete emptiness. All sounds of the natural world fall away in these stark, empty spaces. As Bill has written in the past, “Removing all cues, from the outside, the voices of the inner state become louder, clearer.” If the player stands still while in the hut, all else falls away, and they hear only their heart and breath sounds.

Walking forward, these sounds fade away, to be replaced by hushed footsteps and faint, whispering voices. As the player moves forward, a point appears in the nothingness. As they move forward, the point grows, becoming a doorway much like the one they originally entered. Finally, they will pass through this doorway and return to the “natural” world of the 3D landscape. This is the player’s first experience of the “invisible world” that underlies The Night Journey and at this point “the real nature of the path and the journey begins to materialize.”

On exiting any particular hut, that location is reclaimed by the earth, exhausted; reflecting on it yields no further doorways. However, the other huts and other entry points in the world are still accessible, opening the way to the final experience, in which the “natural world” of the game falls away and the player loses their “continual attraction to the physical world.”

**Expressive Geography**

Most first person 3D games strive to create a recognizable, geographically consistent terrain, which the player’s and designers have come to think of as “realistic.” This, combined with interface features such as “mini-maps,” provides contextualization and guidance for the player in game worlds, an important feature when the goals of the level are built around motivating movement from one point to another, and creating dramatic staging for moments of game play.

For The Night Journey, we imagined the geography as an expressive element, rather than a practical one, changing with the player’s perceptions, actions, with time,
movement, perspective and overall offering the potential for a different interpretive experience each time the player accesses the game. We wanted to build what Bill has referred to as a “poetic landscape.” “Sense of place has always been of primary importance in my video work,” he says. “Sometimes the landscape becomes the subject of a work, other times it shares the moment in balance with an action taking place in it, yet, always its energy is present and felt for what it is – the natural raw material of the human psyche.”

Upon landing, as described above, the player is able to look around, and to move at the relative speed of a human being. While most 3D games “empower” the player by allowing them to move at relative speeds about 40-50 miles per hour across the virtual terrain, the player of the Night Journey must be satisfied with pedestrian speeds calculated to enforce our goals of moving slowly and looking deeply at each moment of the experience. (This restriction on the player’s movement is slowly and subtly released as they learn to reflect.)

![Image of the “Great Tree” and the mountain peaks.](image)

The underlying terrain itself has fixed landmarks, in order to allow the player navigate, such as the “Great Tree” in the center of the world, which is visible from many points in the landscape. This tree, along with the mountain peaks and the full moon, allow the players to situate themselves relative to map, no matter how far they travel. This is important because the player of the Night Journey will receive no “mini-map” to guide their progress.

As mentioned above, one way for the player to “push back” the coming darkness is to find and “reflect” on special points in this expressive landscape. These points are generally based on scenes from prior works by Bill Viola, as is described below.
Figure 4 shows an owl, which will respond to the presence of the player if they wait long and patiently enough. Figure 5 shows a vulture circling lazily over the player. If the player reflects on these points, they will be rewarded with the layering of visual imagery as well as a subtle change in their relationship to the game world.

The concept of a game environment that requires interpretive projection on the part of the player and organizes itself geographically, visually and aurally around the sense of aporia and epiphany embodied in the archetypal spiritual journey has become very exciting to us. We feel that this concept of creating an “expressive geography,” both interactively and visually, is an important part of achieving our first aesthetic goal: to evoke in the player’s mind a sense of the archetypal journey of enlightenment through the “mechanics” of the experience – i.e. what the player is doing in the game. Also, we hope this represents a step along the path of practice that will lead games to a new potential for expressiveness and a wider breadth of playful experiences.

**Mechanic of Enlightenment**

One of the key goals for the game arising from the initial design meetings is the notion that the procedural mechanics and the message communicated to the player through their interaction with these mechanics should express, in some way, the sensibility of the spiritual journey within the player.
Many games use a risk/reward system for motivating player interaction. Typical examples of core game mechanics that involve weighing risk vs. reward include combat, resource management, puzzle-solving, construction, etc. The goals of the Night Journey preclude using these existing models as the basis for a core mechanic; rather, we began to look for mechanics that might offer an “action/reward” cycle, rather than a “risk/reward” cycle.

Examples of such mechanics include prior games by the USC Game Lab, including Cloud and fL0w. In these games, risk is minimized or absent, but action is still rewarded. Inaction is not punished, and players are judged under no time constraint or scoring system. Other games that we find work on this precept of “action/reward” vs. “risk/reward” include such disparate titles as Myst and its sequels, Second Life, Nintendogs, and Animal Crossing. In thinking about the appeal of these games, the team recognized that by diminishing the notion of risk, they invited players to explore, both geographically and conceptually.

As mentioned above, the core mechanics of The Night Journey are exploration, and reflection; basically, the player can look, move and reflect. The use of these actions leads an underlying transformation of the player that represents the emotional experience which at the center of the archetypal spiritual journey.

The Night Journey is a distinctly visual experience, and looking, while at first a seemingly simple mechanic, is actually central to the overall progression of experience. The player, from the moment they enter the game, can control their gaze – looking in almost perfect freedom around the virtual space. This freedom of control, as will be seen, is something that will undoubtedly be taken for granted, and yet must be given up willingly in order to progress in the game.

Moving is also a simple mechanic, easily seen as typical to traversal of 3D worlds. However, in the case of The Night Journey, this mechanic is also central to the overall progression of the experience, deeply tied into the mechanic of looking. At the beginning of the game movement is slow – noticeably slow for those familiar with 3D games. Moving at the relative speed of a human walking pace, the player may now explore any and all of the themed areas described above.

Reflection is an active experience, in which the player willingly gives up control of both moving and looking and by that release of control, gains a new perspective, and, in fact, transforms themselves in relationship to the “natural” world of the game. The player gains new perspective with a visual revelation of the poetic world under the surface of this landscape, through the seamless integration of video textures into the 3D world. Also, less apparent to the player, they themselves are also transformed by the act of reflection in relationship to time and space in the world of the game. The player can now move slightly faster, and also, the darkness is approaching slightly slower. These changes may not be apparent immediately, as they are subtle effects, but eventually, the player’s movement will increase to the
point where they begin to have a less stable relationship to the ground, and at this point, most players realize they have transitioned to another state based on their actions.

References to Prior Work

An archive of work from Bill Viola was created during the design research phase of this project. While not exhaustive, this archive did point to a number of stylistic motifs that could be replicated as effects in the 3D environment. For example, a number of the pieces were shot with a “tube” camera, a form of early video technology, which created distinctive artifacts in the images. These were caused by the use of a pick up tube rather than a charge-coupled device of current video cameras, and the blur and burn they caused were a desired effect in the images we were attempting to recreate.

Figure 6: Reference images from Bill Viola’s archive used to design video effects for the 3D environment.

The decision, made early in the concept phase, to implement our entire 3D scene in black and white made it possible to mix various video references from different times and environments with a greater sense of coherence and so served a primarily aesthetic purpose. On a technical level, it also allowed for the use of a set of custom post-processing methods that mimicked the feel of video artifacting. Early work in the process included the creation of 3D objects and spaces based on those found in the archive images. So, for example, the caravan of people or the hut in the wilderness seen in Figure 6 were modeled and animated to be included in the 3D environment.

A basic problem with this approach, both technical and aesthetic, was one of aesthetic integration: the visual quality of the video references from Bill Viola’s work was at odds with the distinctive attributes of a real-time 3D environment. Traditional 3D game environments, even that using advanced rendering techniques
such as pixel or vertex shaders, have a recognizable "look and feel" that is quite different from that of video imagery. Like earlier attempts to make video look more like film, using post-production effects to simulate grain or scratches, the aesthetic goals here demanded a new technique for rendering the 3D scene in such a way as to bring its visual qualities in line with those expected from video images.

The specifics of this problem, and our solution, were also tied to a specific artist’s visual style; so, instead of striving to replicated realistic, highly detailed video imagery, the project has focused on producing 3D video effects that mimic artifacts such as blur, burn, glare, and interlacing, which are such an essential component of some of Bill Viola’s prior work.

**Conclusion**

Currently, we are finalizing work on The Night Journey, and as we do so, it often seems that our production process has only continued and extended the original discussion as to high-level design goals. Unlike a typical game design process, which would be focused on completing feature development and tuning level design at this point, or even a playcentric process, which would tend to have fairly stable high-level goals and a flexible, iterative methodology for reaching those goals, The Night Journey’s design process has been an ongoing philosophical trek throughout. Our first questions continue to return in new form and our designs are constantly informed by what Bill Viola describes as questioning the “ontological connection” between the images and the game play.

In many ways, this is one of the most important influences of Viola’s artistic process on the project. In speaking about his work he has said, “I sometimes think of my work as ‘rational inspiration.’ I don’t like the way things are done in films: an inspiration gets written up and set out as a sort of blueprint. The act of shooting the film becomes a matter of following the blueprint and reconstructing the original inspiration. Even though some of my work is precisely predetermined down to the individual shots, the experience I’m having while recording is still connected to the work. It’s really the reason why I do it, ultimately. It is important for me not always to know what I am doing.”

This seeming tension between the game design process and Viola’s description of his process, while at first disconcerting, no longer concerns us – in fact, the entire team has become clearer and clearer as to the benefits of this extremely iterative, artistic process as we proceed. It is not a journey of milestones and deliverables, but one of discoveries and insights, much like the one we are trying to create. In many ways, it is a productive merger of game design methodologies and one particular artist’s process. Whenever we voice the concern that a new idea may not be “doable” we receive a happy confirmation from Viola that this is how we know it is “worth doing,” because it is untried territory.
The Night Journey is an ongoing process, even in its final stages, and it remains to be seen how successful its design elements will be in the end. However, the internal playtesting we have done, and the limited previews we have shown at SIGGRAPH 2007 and the independent game festival Indiecade, have shown positive results.

The team itself has already found its own success in the sense that we have found a common territory for collaborative work between the different processes of the various artists involved. Overall, we feel that we have found the beginnings of a fascinating interplay between the process of game design and the process of one particular visual artist. As opposed to the focus on “fun” that traditional game design uses as a benchmark, the learning-based goals set by “serious” games, or even the high-level experience goals set by our own playcentric method, we believe we are on a path to discovering how aesthetic goals and the “voice” of a particular artist may be integrated into a game design through a collaborative, iterative process.

While these discoveries and reflections may only directly affect our own team’s work, the fact that we do this work at the dawn of what game designer Eric Zimmerman has termed the “Ludic Century”\(^2\) gives us hope that this points to a potential for fruitful outcomes from the current crisis of the game form. An opportunity for game designers, artists, technologists and players to redefine the boundaries of playful experience and discover within it the innate beauties of the human experience.

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\(^{6}\) http://thatgamecompany.com/
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