The social Role of Virtual Architecture

FUNCTION FOLLOWS FORM

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“...Well, I have finally bought land and a farmhouse on Tuscany Island. The situation is gorgeous - I'm on a slope down from the Tuscan castle that stands at the centre of the land, so I have the castle behind me, and gentle hills in front of me, running down to the sea, where I have access to the landing stage. The water front itself is public, but if I want, I can keep a small boat pulled up on the shore and ready for when I want to go sailing (although I might just rezz it when I want it)...”

Analog vs. Digital
The Stiff People’s League soccer table interface for controlling the virtual figures. The stadium in Second Life is projected onto the table. When avatars run into the ball, they automatically kick it...
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THE FUNCTIONAL AND THE SYMBOLIC

On a social level, buildings have the purpose of constraining behavior. In a very physical way, they direct our movement into certain trajectories or prevent us from going to certain places. They keep certain spaces dry and warm, while leaving others cold and wet. They keep certain people out, or other people in. Further, buildings also have the potential to induce behavior and influence our attitude. In a church, people start to whisper; but in a bar they'll need to shout to be heard. Taken to an extreme, Bentham’s Panopticon enforced the discipline of its inmates by means of the centrally located but invisible wardens. This control is accomplished by means of an architectural rhetoric with social implications. For example, the acoustics in a cathedral cause noises to echo, disturbing everyone else in the church and inviting disapproval from other patrons. As a result, visitors quickly learn that appropriate behavior in that space is to whisper.

In the virtual realm, the existence of a “building” is purely symbolic. It is a reference to a real-world structure, created in a space where none of the utilitarian functions – protection from the elements, air circulation, seating, etc. – have any relevance. Its symbolic functions bring legibility to what could otherwise be an incomprehensible abstract space.

We can understand this legibility as functioning much like the architectural logic of movie sets. Function follows form; the function of a place is unclear unless the building tells you what it is. A door on stage is not so much a functional connection between two spaces but a narrative device. This also works for more complex structures like cities. The organizational logic of E. Kettelhut’s design for the film Metropolis is immediately understood as a picture of class differences. This principle, the inscription of a narrative into a spatial structure, is what Norman M. Klein calls a “scripted space,” architectural space that is experienced according to a spatial movie script.

This legibility works in two primary ways: buildings in Second Life tell us both about how their creator expects them to be used, and also how their owner wants to be perceived by others.

The rhetoric of space places individual behavior into context and renders it either appropriate or inappropriate in much the same way as we see it in the real world. Not only is architectural vocabulary highly exaggerated in order to make the message clear, there is also a strong expectation concerning the behavior of avatars.
What convinces people engaging in online worlds to replicate and follow these conventions in an environment where supposedly everything is possible? This effect is an interesting feature of virtual worlds like Second Life and would not be possible in a purely abstract virtual environment. One hardly would know by intuition what behavior is appropriate in a purely abstract virtual word.

VIRTUAL SOCIAL ARCHITECTURE

Based on our observations of Second Life, we have developed a series of projects that investigate the social role of architecture in a practical way. We present two of them here to serve as concrete examples of that role. The first project, Agree/Disagree Spaces, focuses on ways in which the creative abandonment of the physical limitations of real world meeting places might lubricate the process of achieving decision consensus. The Stiff People’s League provides a mechanism for economic and social interaction between avatars and the real players of a table soccer game. In both these projects, we propose specific ways in which virtual architecture plays a big role in creating new kinds of social spaces that couldn’t exist outside of a virtual environment like Second Life.

AGREE/DISAGREE SPACES

Through chairs, buildings, and avatars, the form elements in Second Life are quite strong. This is carried over into the design of meeting spaces. They usually have strongly corporate overtones with high backed chairs, wood tables, and projects. And yet, a meeting held standing up in a house or bar would have the same functionality. What’s missing is a functional approach to the design of social architecture. In our work, we try to build social spaces that have the functional richness of offline spaces, but in ways that can be more naturally expressed in a virtual environment than in a physical space or on the web. One of our projects that neatly captures this approach is a series of designs for meeting rooms. One benefit of working in a virtual environment is that spaces can be fluid and dynamic, because it’s easy to change the design of the space and its functional attributes, we are free to design spaces for very specific kinds of interactions and then switch between them as our goals change. This is in contrast to physical spaces where the space itself is designed to be generic, and we use furniture and technology to try to adapt the room (with varying levels of success) to different purposes. We have started with a simple agree/disagree space for discussing a new technology.

The agree/disagree space encourages people involved in the meeting to use their physical position in the space as a social signal. The space is divided into four major zones. The agree/disagree area is very much like a traditional sports field with zones labeled “agree” and “disagree.” It provides a space for people to position their avatars on a continuum within the zones to show their attitudes about the issue under discussion. The fluid self-arrangement of people based on their opinions provides a literal basis for seeing “where someone is coming from”, and the status of the group’s attempt to reach consensus. The virtual space of the field is therefore connected in a real-time fashion to the intellectual space of the discussion. Furthermore, you know that the people near you on the continuum agree with you more than people elsewhere on the field. Of course, not everyone always wants to reveal their opinion about the issue at hand. Literally “on the sidelines” of the main agree/disagree field is an area for people to position themselves to participate in the discussion without taking a stand. Still further from the field is an observation area for people who just want to watch but not play a role in the meeting. Finally, there is a platform for the moderator with controls to manage properties about the space itself.

The virtuality of the space allows us also to include a set of social utilities to support the continuous presentation of the contributions and shifting viewpoints of each participant. For this application, we have focused most on portraying the history of movements and conversation in the space, which serve to augment each avatar’s presence in the space. The first step is to show how long each avatar has been standing in their current position. When an avatar pauses for a while, a transparent column will slowly rise out of the ground. The longer they stay there, the taller and thinner the column gets. When they move, the column will slowly shrink and eventually disappear. In this way, avatars leave a temporary mark on the space with their presence, and other people can use this signal to better understand what their position means. Their tall column would suggest they are steadfast in their support for something, or that they’re not really paying attention. These different meanings can be disambiguated using other contextual information like what they’re saying or whether they’re idle. When an avatar in this space moves around, a path in space is drawn behind them. This makes movement a more explicit signal. Even if another person wasn’t watching when they moved, a record of their movement stays in the space for a while before fading away. The space also records “spoken” contributions in text boxes that appear and then stack above the head of the avatar.

This creates a visualization of chat over the course of the meeting, displaying what was said, when it was said, and where in the room the avatar was when they said it. Finally, the floor of the agree/disagree field displays the current average vote, as well as its deviation. Like chat messages, a representation of the group’s collective view also floats up into the sky, providing more context about the overall feeling of the avatars in the space over time.

These social utilities create a space in which people’s interactions with the space represent a new kind of social vocabulary based on position. This is just one way in which you can combine social utilities with the design of the space to create a specific kind of social space. There are other important ways in which the room might affect the behavior of people in it. Archiving can be turned on or off by the moderator for quick, off-the-record sessions. Avatars can be made anonymous, disconnecting chat from people’s identity to change the social dynamics of the conversation. Various data about participation can also be visualized in the space or on the avatars to encourage different participation patterns. The space is rich with opportunities for adjusting the social functionality of the space to influence the behavior of people inside it along with the process and ultimate success of reaching decisions.

STIFF PEOPLE’S LEAGUE

Virtual environments have never been completely separate from their offline counterparts. Indeed, the boundary between the virtual and physical world is often quite porous, relatively freely allowing the movement of money, identity, and social networks. Still, people are interacting on the same terms and through the same interface. If socially significant activity is taking place in virtual environments (and we believe it is), then it is unreasonable to expect that there will be only one way for people to interact with other people in a virtual world. The Stiff People’s League is a cooperative game between the virtual and physical world with some ironic undertones. In order to play, a team of avatars is recruited from within Second
The presence of other people in Second Life is central to what sets it apart from other media. Life to play for one of the two teams. When these avatars run into the ball, they automatically kick it. They can control the direction of the kick by approaching the ball from different directions. The players at the soccer table can only control the lateral movement of the rods, using the table’s existing rods as the interface. This gives them the power to interfere with the movement of the ball and the avatars: they can block the ball, block the movement of avatars, hit the ball sideways, and push avatars sideways. The physical players can’t spin the rods, so they have to rely on their team of avatars to support them by pushing the ball forward. In this mixed reality construct, the rules and conditions of the game are a matter of negotiation between the two worlds. The real players need the virtual players to play the game, and each kind of player interacts with the game in very different ways. The physical players face disconcerting restrictions. In order to be successful, they must rely on the cooperation and skill of the avatars because their control in the game world is limited to a few clearly defined channels. Importantly, the soccer ball exists only in the virtual world, so the game is very much native to Second Life, and the physical players can only interact indirectly. This privileges the virtual players.

The project plays on a very common notion of anamorphism, where the tokens in a game are alive and equipped with their own personality. Take for example the cricket game in Alice in Wonderland: the cricket bats used in this game are flamingos, while the ball is a hedgehog, living creatures that have to pretend they are objects. However, when they get bored with this role they start to misbehave and complicate the running game. This possibility for misbehavior and cheating is one of the more poetic advantages of Second Life as a place for games, when compared to typical computer games where rules are immutably executed by the machine. While the virtual players are reduced to the role of impersonating game figures, the balance of power and control between the virtual and physical worlds is not prescribed from the beginning.

To compensate the virtual players for playing for the real players, they are paid by the real players. Real players can offer more money to attract better players. By converting euros into Linden dollars, being a soccer player will be one of the most lucrative non-technical jobs in Second Life. This is an ironic commentary on the emerging labor model of virtual worlds. People’s league, this accentuates the virtual game is very much native to second life, and the physical players can only interact indirectly. Cooperation and skill of the avatars because their control in the game world is limited to a few clearly defined channels. Importantly, the soccer ball exists only in the virtual world, so the game is very much native to Second Life, and the physical players can only interact indirectly. This privileges the virtual players.

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Exploring the virtual landscapes of Second Life, a new visitor might be surprised by the large number of chairs in the environment and the prominence of the “sit” button in the context menu. Do avatars get tired from all the flying and need to rest frequently? In real spaces, chairs support our bodies, fulfilling an important physical function. Chairs let us comfortably spend time in the same place for long periods of time. Because the role of chairs in the real world derives solely from the physiological needs of real humans, it seems ironic that a virtual environment should have chairs in it at all; avatars don’t get tired, so why would they need chairs? The answer lies in the social function of showing your commitment to not moving which makes chairs, virtual or real, excellent examples of rich social objects from which we can learn a number of lessons about designing virtual social spaces.

Throughout cultural history, chairs stand for, more than any other furniture, social order – or disorder. The arrangement and design of seating immediately implies the existence or absence of hierarchies and modes of interaction. This can be easily illustrated by looking at the differences between the seating in an auditorium, a dining room, or a courtroom. By articulating the ways that chairs in Second Life function, we can explain the potential complexity of communication in a virtual environment.

Sitting in a chair, real or virtual, communicates a commitment to the space; a seated person is settled in, not likely to leave, and engaged with what’s going on in this space. In contrast, people or avatars that are standing feel transient. They’re just observing until they sit down. In Second Life, sitting down sends a similar message as taking off a coat or setting down a purse. Also, how the chairs are arranged in a space and where someone chooses to sit is important. A circle of chairs implies a discussion group, while an amphitheater layout implies a presentation or performance. People can also choose to sit relative to other people to communicate their involvement level; an avatar might sit near the back in a presentation space to show they’re not connected with the groups of people at the front of the space.

This richness makes chairs one of the most socially successful objects in Second Life. Although some aspects of the function of physical chairs don’t make sense in a virtual environment, the bulk of the meaning encoded in chairs and interactions surrounding chairs can be expressed successfully in a virtual environment. Chairs are a model for the level of social significance we think should be expected from Second Life objects.

Chairs are a real-world metaphor that works well in a virtual environment, but they are by no means perfect. Translating an object into a virtual environment involves some sort of conceptual abstraction, and the choices you make in that abstraction can limit its effectiveness. Virtual chairs, for instance, hold their position and can’t be adjusted to show your closeness with other people in the room. You can’t use them to hold a coat. You can’t etch graffiti into them. This is not to say that these functions are core to being a chair. Nonetheless, there are ways to provide ways for avatars to “sit” while still allowing them to serve other functions.
RESUL TS FROM THE FIRST ARCHITECTURE & DESIGN COMPETITION IN SECOND LIFE

THE WORLD’S BEST ARCHITECTURE IN SECOND LIFE

– MEYLENSTEIN, MAX MOOSWITZER, ADAM NASH, DC SPENSLEY AND...

CHRISTIAN ERTEL, NADIA CLEMENT, CARSTEN LUBITZ, ALES BURSIC, SCOPE CLEAVER, ROGER JEGERLEHNER, THOMAS RASOKAT / MARKUS BOKOWSKY, JON BROUCHOUD, DAVID DENTON, OVOS REALTIME 3D, DINAH LIM FAT, JOCHEN HOOG, STEFANO OSTINELLI, PIXELBREEZE LTD, LESTER CLARK, PETER SCHARMÜLLER, KÄTE ALLEN, ARCO ROSEA, LUTZ WAGNER, STEPHAN BOLCH, NOEMI ÓRÖGÖ AKÁ DIABOLUS, MEGHİTHLİD SCHMİDT FEİST, OLAF FINKBEİNER, İBRAHİM ABELEİHADİ, TORIN GOLDİNG, BRAD KLİGÉRMAN, ALFRED SABATO, CEZARY OSTROWSKI, PDINSK, UNİNETTÜNO, PULO FRIAS, MARÇ FROHN & SASHA CLAŠL, VERA BİGHETTİ, CISHELL SEİGUELMAN, JULIANA CONSTANTİNO & ELAİNE SANTOS

FACTS & FIGURES

Out of 126 entries four winners were chosen by the jury at the Ars Electronica 2007:

- Meylenstein, Adam Nash, Max Mooswitzer, DC Spensley

Out of the four projects Meylenstein’s “Living Cloud” (opposite page) won the PUBLIC VOTING via the internet. The prize ceremony took place at the UNESCO World Cultural Heritage Zollverein Essen.

MEMBERS OF THE JURY

Pascal Schönig, Shumon Basar, Melinda Rackham, Mathieu Wellner, Tor Lindstrand, Stephan Doesinger

CRITERIA

Definitions and questions for the jury at the Ars Electronica Linz 2007:

STYLE

Is the concept about? Is it sexy? Just a subjective evaluation!

INNOVATION

Is the concept about? Is it sexy? Visual utopia - is it something new?

SCRIPTING

How clever are the functions used? How complex is the programming and how easy is it to use? Are the scriptings inspiring?

SPATIAL CONCEPT & STORY

What is the concept about? Is it a cool spatial idea? Is the story convincing? Does the project support interaction with other people and avatars?

INTEGRATED MEDIA

Use of images, videos, music within the SL environment. Is it a “3D MySpace”?

CROSS MEDIA POTENTIAL

Are there any links to external media in “first life”? E.g. connections to mobile phones, GPS systems, etc. (at least conceptually)

IMAGINATIVE POWER

Is the project inspiring? What is the “mood” of the project? Are there any cultural references to art forms such as films, art, etc. Is there a cool ingenious narrative?

Virtually analog: Competition poster based on cut & fold paper models from magazines such as Vogue, Penthouse, Elle, etc. by Stephan Doesinger. (Original size ca. 5cm). The models are the structural and aesthetic basis for real 1:1 buildings.

© Stephan Doesinger & Ydo Sol

1ST ANNUAL ARCHITECTURE & DESIGN COMPETITION IN SECOND LIFE

2ND ANNUAL ARCHITECTURE & DESIGN COMPETITION IN SECOND LIFE

3RD ANNUAL ARCHITECTURE & DESIGN COMPETITION IN SECOND LIFE

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Effort / hrs.: between...

Many contemporary architects have long harboured a wish to suspend the laws of gravity. Coop Himmelblau's stab at the task took the shape of a whale catapulting its body out of the water. The idea was to freeze-frame the moment before this monumentally heavy body fell back into the sea. The sensation thereby captured would then inform the design of the building. The building would float over people's heads like a three-dimensional photo and stick its tongue out at gravity. After all, gravity is full of risks. So, were the whale not to drop back to where it came from along a Heisenberg curve of movement, it would not have hung suspended in the air as a trophy of interrupted movement.

Now, in cartoon films, one of the characters, e.g. Daffy Duck, might happen to career over a cliff edge, and only falls at the moment when he notices the yawning abyss below. There are many different versions of this motif in the genre. Sometimes Daffy tries to quietly make it back to the safety of the cliff top, sometimes he tries to fly with withered arms. But generally, the moment of realisation is the moment of the inevitable free fall. In Second Life, this fall never occurs, nor even the movement preceding it. The salty mortale moment is not there, so that the calculated point of impact is also absent. There is no fall line. The buildings float around motionlessly – apparently anchored by invisible stays. Only a few creative scriptings set the floating structures into controlled motion, changing shapes and colours like a cuttlefish. If nonetheless you get into the embarrassing position of falling over the edge with the avatar, there is always a soft landing. Though the term sounds very light-footed, it does not conceal the weight of fear that it actually expresses. The term features constantly in movies and computer games, the whale would have changed into a cloud or a spaceship. But generally, the moment of realisation is the moment of the inevitable free fall. In Second Life, this fall never occurs, nor even the movement preceding it. The salty mortale moment is not there, so that the calculated point of impact is also absent. There is no fall line. The buildings float around motionlessly – apparently anchored by invisible stays. Only a few creative scriptings set the floating structures into controlled motion, changing shapes and colours like a cuttlefish.

BETWEEN DISCOVERY AND FREE FALL?

Between DISCOVERY and free fall?...