Relational architecture general concept

Relational architecture can be defined as the technological actualisation of buildings and public spaces with alien memory. Relational architecture transforms the master-narratives of a specific building by adding and subtracting audiovisual elements to affect it, effect it and re-contextualize it. Relational buildings have audience-activated hyperlinks to predetermined spatiotemporal settings that may include other buildings, other political or aesthetic contexts, other histories, or other physics.

Virtual architecture could be differentiated from relational architecture in that the former is based on simulation while the latter is based on dissimulation. Virtual buildings are data constructs that strive for realism, asking the participant to "suspend disbelief" and "play along" with the environment; relational buildings, on the other hand, are real buildings prettending to be something other than themselves, masquerading as that which they might become, asking participants to "suspend belief" and probe, interact and experiment with the false construct. Virtual architecture tends to miniaturize buildings to the participant's scale, for example through VR peripherals such as HMDs or CAVEs, while relational architecture amplifies the participant to the building's scale, or emphasizes the relationship between urban and personal scale. In this sense, virtual architecture dematerializes the body, while relational architecture dematerializes the environment.

Virtual and relational architectures are not opposing practices, nor are they mutually exclusive. They are similar in that both are largely participant-centered, computer-generated, and less permanent, expensive, sheltering and territorial than physical architecture.

Relational architecture need not be inscribed within postmodern parasitic or symbiotic practice nor post-structural self-referentiality; it is not necessarily engaged in deconstruction, nor does it need to use the language or structure of the building itself. Instead, relational architecture events could be considered "buildings with subtitles", where the translators may or may not speak the building's language: the subtitles need not be causal, referential, or even contextual. Relational architecture pieces vindicate their synthetic, artificial qualities, and reserve the right to be effectist, improvisational and useless.

Fig. 1 Architakt Interface
The real motivation behind relational architecture is the modification of behaviour: the artist creates a situation where the building, the urban context and the participants relate in new, "alien" ways. The piece can be considered successful if the artist's intervention modifies the point of equilibrium between the public's actions and the building's reactions, and vice versa. There can be a variety of causal, chaotic, telepresent, or emergent behaviours programmed into the piece but the uncertainty of the outcome is one of the main motivations for doing such a piece.

Although relational architecture is a relatively new field within media arts, precedents date back to ancient Greece [Simonides' discovery of mnemonics] and to the use of the Art of Memory in Chinese and Hermetic rhetoric traditions. Contemporary practices of site-specific installation, street performance and public art have been of paramount importance in the development of the field. A significant number of artists have been, and continue to be, influential in the practice, among them Krzysztof Wodiczko, Archigram, Toyo Ito, Gordon Matta-Clark, Jenny Holzer, the Situationists, Christian Møller, Christo, Peter Greenaway, Vito Acconci, Dennis Adams, Knowbotic Research, Dan Graham, and Rachel Whiteread.

Rafael Lozano-Hemmer and Will Bauer are collaborating in the development of a series of relational architecture pieces to be presented over the next few years. The pieces entail the development of novel architectural interfaces using real-time computer graphics, 3D sensors, electro-acoustic music and robotic lights. The events, which will take place after dusk, will be presented in half a dozen cities including Barcelona, Graz, Madrid and Mexico City.

Displaced Emperors

Displaced Emperors is a relational architecture piece designed to transform the emblematic Linz Castle high above the bank of the Danube. The piece constructs a vector between two apparently unrelated historical oddities that link Mexico and Austria: the Mexican empire of Maximilian of Habsburg (1864-1867) and the "Penacho de Montezauma", the Quetzal-feather crown of one of the last Aztec Emperors, currently housed in the Ethnological Museum in Vienna. This juxtaposition seeks to involve the public in a web of power relations in which history is seen as a virtual environment and identity is a performance sponsored by the myth of cultural property.

1 Architrect

Participants standing in the plaza situated between the Castle's Rudolfstor gate and Hofberg street interact with the Castle by pointing at it with their hand. A wireless 3D tracker calculates the direction of the participant's arm and a large, animated projection of a human hand appears wherever he or she is pointing [figure 1]. When the participant moves his or her arm, the telematic hand follows, sliding over the Castle's facade, creating the effect of an amplified caress. Depending on where and how the participant 'touches' the Castle, it transforms itself into Chapultepec Palace, Borda Gardens, or other residences of the Habsburg Emperors in Mexico. The telematic hand 'reveals' the Mexican palaces as though they were inside the Linz Castle: the exterior becomes the interior [figure 2]. As the hand activates certain windows, other audiovisual events relating to relevant architectural references are triggered and controlled. Fleshfactor: the 'architect' interface allows participants to read the building's media layer—a telematic braille that makes perception a highly physical act.

Maximilian and his wife Carlotta were elected Emperor and Empress of Mexico by a small group of conservative notables who wanted to protect their interests against the national liberal policies proposed by Benito Juarez [figure 3]. With the help of Napoleon III's army, Maximilian, himself a liberal, took over the country in 1864 having been deceived over the amount of popular support that his regime would have. The story ends in tragedy with the withdrawal of the French troops and Maximilian's capture and execution in 1867, an event portrayed by Manet in a painting that Bataille called the beginning of the modern movement [figure 4]. Maximilian's body was embalmed and shipped back to Austria in the Novara: it now rests in the imperial crypt of the Church of the Capuchins in Vienna [figure 5]. During their reign, Maximilian and Carlota lived in Chapultepec Palace, which they transformed so that it was reminiscent of...
their palace at Miramar in Trieste. This Italian palace, in turn, had several references to prior Habsburg palaces in Austria including the Schönbrunn. The Austrian palaces themselves are an expression of a variety of classical stylistic archetypes. This "mise-en-abîme" formed by palaces within palaces will be exploited in "Displaced Emperors" as a source of architectural samples to be mixed and remixed by the participant, who becomes a kind of deterritorialized, de-temporalized "architecture jockey" [figure 6].

2 Push Button Override

At a makeshift souvenir shop near the Castle there is a computer monitor that shows the location of the architect participants with Orwellian precision [figure 7]. The monitor is beside a big bright red button clearly labeled "Montezuma". Pressing the Montezuma button will do three things: a) turn off all the lights except a searchlight with the cultural property symbol which will automatically follow the participant who has the tracker; b) turn on a very large projection of the "Penacho de Montezuma" on the facade of the Castle; and c) trigger distorted Mariachi music [figure 8]. As soon as the button is released, the participants at the Castle can resume their interaction.

The "Penacho de Montezuma" is an Aztec headdress made out of the green tail feathers of the extinct Quetzal bird. Although there is no hard evidence that the Penacho was Emperor Montezuma II's "crown," it is well known that it was the symbol of the most outstanding political and religious power in Pre-Columbian Mexico. According to one version of its history, the Penacho was given by Montezuma to Spanish conqueror Hernan Cortes, who in turn gave it as a gift to Emperor Carlos I of Spain in 1519. In that same year Cortes captured and imprisoned the Aztec Emperor, who died shortly after under mysterious circumstances: according to Indian witnesses he was murdered by the Spaniards. The Penacho was passed from Carlos I to his brother Fernando who kept it in his art collection in the Ambras Castle. The Penacho was sent to Vienna and in 1878 it was taken out of the closet where it had been kept, folded and moth-eaten, for decades. The piece is now on display at the Ethnological Museum in Vienna.

Mexicans believe that the Penacho is a very important part of their national identity, a piece with extraordinary emotional, cultural and symbolic value. Indeed, Aztecs assigned considerably more significance to objects made with feathers than with gold and silver. Many notable Austrians have expressed their desire to see the Penacho return to Mexico, among them Rudolf Burger, Carl Pruscha, and Peter Noeuer. These Austrians believe that the Penacho should be given as a gift to Mexicans as a symbolic gesture, among other reasons, to thank them for their protest in the League of Nations during the German annexation of Austria in 1938.

The Montezuma button is a causal, irritating 1-bit intervention which serves as a metaphor for the simplistic, executive override features found in all complex control systems. The button is surrounded by copious information [posters, leaflets, etc.] on the political and legal situation of the Penacho, and whether it should be returned to Mexico, kept in Vienna, burnt, digitized, or otherwise preserved or destroyed. The Montezuma button is a parody of the currency of cultural exchange and a probe into the arbitrariness of the concept of "heritage".

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