Archetypes are psychological concepts described by the renowned Swiss psychologist Carl Jung. It is possible identify archetypal forms in eminent buildings of different regions and ages, recognizing archetypes as a multi-cultural liaison for various architectures. These concepts function as basic precedents of spatial design in different geographical and historical contexts.

The emerging digital culture is establishing a plethora of virtual environments, through web-pages of the Internet, global TV, multimedia CD, video games and immersive devices. These virtual environments offer electronic activities and tools for architectural practice. In both senses, virtual architectures conforms to the visual and spatial characteristics of technologies. Thus, electronic capabilities establish digital habitats and references to contemporary architecture.

Since virtual architectures are inmaterial constructions, perceptual properties guide the spatial and formal design. In that sense, archetypes allow a basic vocabulary for the design of virtual architectures, linking them to cultural history and giving them a human orientation.

Archetypes as precedent of virtual architectures

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Los arquetipos son conceptos psicológicos descritos por el renombrado psicólogo suizo Carl Jung. Es posible identificar formas arquetípicas en prominentes edificios de diferentes regiones y épocas, reconociendo los arquetipos como un vínculo multi-cultural en distintas arquitecturas. Entonces se puede inferir que estos conceptos actúan como precedentes básicos de diseño espacial en diferentes contextos geográficos e históricos.

La emergente cultural digital está estableciendo una plétora de ambientes virtuales, a través de páginas Web de Internet, Televisión global, CD multimedia, video-juegos y dispositivos inmersivos. Estos ambientes virtuales ofrecen actividades electrónicas, así como herramientas para el trabajo arquitectónico. En ambos sentidos, las características visuales y espaciales de estas tecnologías conforman "arquitecturas virtuales". De modo que las capacidades electrónicas establecen hábitats digitales y actúan de referencia de la arquitectura contemporánea.

Debido a que las arquitecturas virtuales son construcciones inmateriales, solamente las propiedades perceptuales guían el diseño formal y espacial. En este sentido, los arquetipos permiten un vocabulario básico para el diseño de arquitecturas virtuales, vinculándolas a la historia cultural y otorgándoles una orientación humana.

1. Archetypes in architecture.

Archetypes are psychological concepts described by the renowned Swiss psychologist Carl Jung, like part of the "collective unconscious". These concepts are the sense of self, couple of anima-animus, mandala circle, quaternity, etc [Jung:1989]. It is possible identify archetypal forms in temples, public buildings, labyrinths and urban organizations of different regions and ages, like classical cultures, american civilizations and current architectures. Recognizing archetypes as a multi-cultural liaison for various architectures. Based on a common psychological background. Then, these concepts function as basic precedents of spatial design in different geographical and historical contexts.

2. Virtual architectures.

Currently, the Internet has made popular the term "virtual" referring to different tasks assumed through Web-pages, like shopping, visit to museums or tourism, conceiving the network as a "virtual space" for communications and activities [Mitchell: 1995]. In the same sense, the global coverage of TV-channels like CNN, ESPN and MTV, is creating worldwide common places of information, and the multimedia-CDs are providing similar stages for interactive education. Also, computer graphic and video-games are building electronic worlds for entertainment and participation, and various immersive devices allow a full perception of synthetic surroundings [Bollinger and Hill:1993]. Thus a variety of technological advancements are providing increasingly many experiences of "virtual environments" in the current culture.

These technologies give to the practice of architecture new ways for communicating with clients as well as with members of the design team. They allow more possibilities to get information for the project and different media to simulate the building design. And there also exists a new market of electronic architectural models for TV sets and backgrounds of multimedia-CDs or environments of video-games [Bermudez and King: 1995].

Architectural information is established in electronic media as a reference for future buildings as well as for digital use. That information includes tridimensional geometries, material appearances, constructive details and spatial perceptions, constituting a complete architectural description and experience in digital media. Those "virtual architectures" are built through the capabilities and properties of the technologies, with additional data for the material construction, or exclusively the electronic destiny. In both cases, the constrains and possibilities of digital systems establish the procedure and scope of those architectures [Campbell:1994].

In that way, the electronic capabilities define the characteristics of designs. The complexity of shapes and appearances depends on the ranges supported by the developing platform or the reproduction media. That restricts the digital model and also influences the construction project.

The computational esthetic is observed in many drawings and built works of contemporary architects like Zaha Hadid, Bernard Tschumi, Eric Owen Moss, Morphosis and Peter Eisenman [Garcia: 1997]. In some cases there is not a direct use of electronic tools, but the search of advanced designs causes the architect to resort to digital shapes and images.

3. Design of virtual architectures.

The virtual architectures built in electronic settlements are abstract constructions, without material reality or physical correspondence [Matthews]. The information is maintained in hardware, not altered by the amount or kind of information, and shown in ephemeris images. Thus the form and spatiality of designs exist only in the perception of user.

Without constructive elements or natural landscapes, the architectural experience is only the reception and interpretation of digital data. The perceptual properties of technologies guide the design decisions. Even in the models for real buildings, the digital representation is the complete

support and reference for the construction.

With the lack of material constraints and physical laws to be respected, only the perception of the user and mind-interpretation serve as the unique driving force for the design of virtual architectures. That explains the extensive use of traditional environments like castles, forest, toy-houses, urban streets or sky-lines in the current video-games, CDs and TV-sets. Instead of an exploration of shapes to take advantage of the material freedom, the public design of virtual architectures is for the most part limited to well-known mental models. On the other hand, the professional designs in advanced digital systems force the geometry and appearances of shapes, losing orientation and visual recognition.

A study of archetypes of Swiss psychologist C. G. Jung provide an insight into patterns and forms which shape the individual and collective consciousness. These archetypes can serve as a basic vocabulary for virtual architectures, upon which can be founded the design of digital environments and building simulations with a proper spatial concepts. The archetypes are part of architectural tradition and a intuitive reference of human being. Hence they can link the virtual architectures to cultural history and give them a user orientation.

Although, there are initial intents to use basic spatial concepts for virtual designs [Bridges et al: 1997] and to establish archetypes like a 3D digital vocabulary [Graham], we propose an experimental and theoretical definition of spatial archetypes for virtual architectures, applied to building simulations and electronic environments.

The juxtaposition of current concepts of the contemporary architecture, virtual technologies and psychology of space can assure the theoretical value of archetypes in the architectural discourse. Then, the design of basic computational environments based on the psychological archetypes, and the exploration of the spatial perception of the user, can demonstrate the practical use of these concepts as a spatial vocabulary for the new digital architectures.

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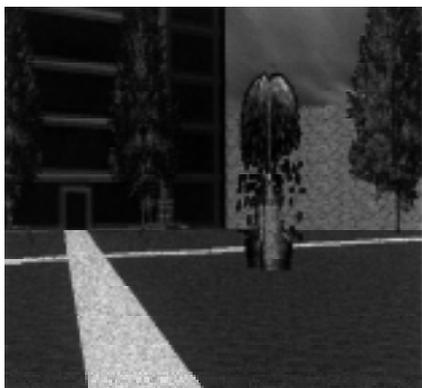**Mitchell; William**, "City of Bits", MIT Press, Massachusetts, USA, 1995.

Fig. 2 Virtual Polis

Fig. 1. Carl Jung.

Fig. 3 Drawing Zaha Hadid.