

Treating the three-dimensional grid in the second-dimensional digital space was always an intriguing matter for graphic designers, programmers, creative coders and visual artists. *The Alphabetical Room* is a systematic exploration into the boundaries and limits of writing within a strictly calculated mathematical three-dimensional grid within the flat digital space. The following essay offers a glimpse into the process of *The Alphabetical Room* along with a brief overview of previous works that have explored related visual issues of spatiality, grid structure and illusion.

The starting point of this project was the three-dimensional grid^{Fig.01} which Josef Müller Brockmann proposes in *Grid System* to help exhibition designers and curators alike to set information and visuals inside a three-dimensional room. He wrote: *“This perspective drawing shows diagrammatically how space can be articulated and structured with the aid of the grid. Furniture, ceiling lights, typography and illustrations are all matched to the grid insofar as size and arrangement in space are concerned. One of the many possibilities is to cover the floor with tiles or mats which are the size of a grid unit but it can just as well be covered with a plain wall-to-wall carpet. A monochrome floor covering can be very helpful in throwing the other elements into prominence.”*⁰¹ Brockmann’s three-dimensional grid compelled me to explore how shapes react to it and how they transform with the restrictions of the grid. Therefore, I have recreated the grid digitally and manipulated the grid with the *Shape-Builder tool*. This digital tool, subtracts or adds shapes together and is used by dragging the mouse over the shapes in order to connect/subtract them. Naturally, when dragging the mouse, one has no complete control over the outcome. I have tried to use this method in order to “write” the letter: A, over the grid in different angles.

During these experiments the illusion of a three-dimensional room was created. The letters lay across the grid in different angles, as if they were alive and shortly creeping on a wall, ceiling or floor. These visuals raised the question: is the three-dimensional illusion real? The illusion seems to be real especially in the side angled experiments.^{P.08} On the other hand, one can perceive a vector, digital shape that was created with a digital tool and is completely flat and built on a single axis. The term ‘*Proun*’ that the Russian artist El Lissitzky defined describes the state of *“where one changes from painting to architecture”*⁰² or the “exploration of the visual language of suprematism with spatial elements”. This term is relevant because of the interchanging mediums and from the tension created between the two-dimensional and three-dimensional artwork. The *Proun Room* (or *Prounenraum*)^{Fig.02} that El Lissitzky created, is an example of the illusion and tension between the shift of the second-dimension and the third-dimension. For *superstudio* the grid became a tool for their conceptional approaches and ideas to architecture, they explored the three-dimensional grid in conceptual drafts, furniture and collages, symbolizing a network that connects humans and creates freedom.^{Fig.03}

A far more earlier reference to this work is a research that was conducted by the end of the renaissance by the German mathematician Lucas Brunn. Brunn explored the calculation of capital latin letters placed as three-dimensional drawings inside a drawing.^{Fig.04} This work was published around the same period of time as the painting *The Ambassadors* by Hans Holbein. This painting is well-known for the anamorphic skull element that is placed as an optical illusion.

Another aspect of the project is the loss of control. In applied design fields, the graphic designer usually has full or almost full control over the design/artwork, especially in the fields of type design that require special attention for details. In this project,

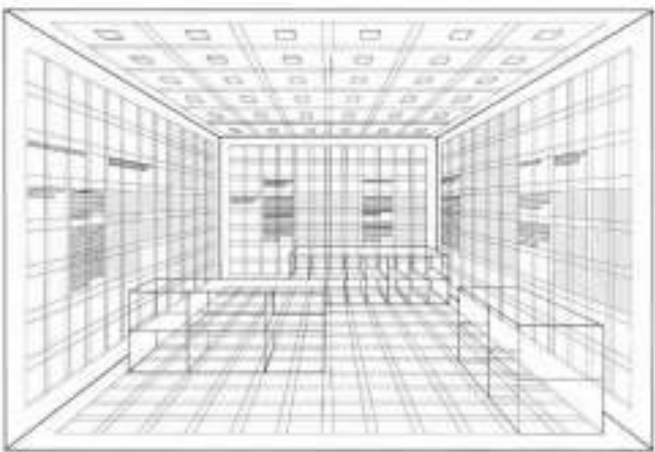


Fig.01 Grid in the three-dimensional space, Josef Müller-Brockmann 1961

1011 "Grid System", Josef Müller-Brockmann 1981 P.148



Fig.02 El Lissitzky Proun Room, 1923, (reconstructed 1971)

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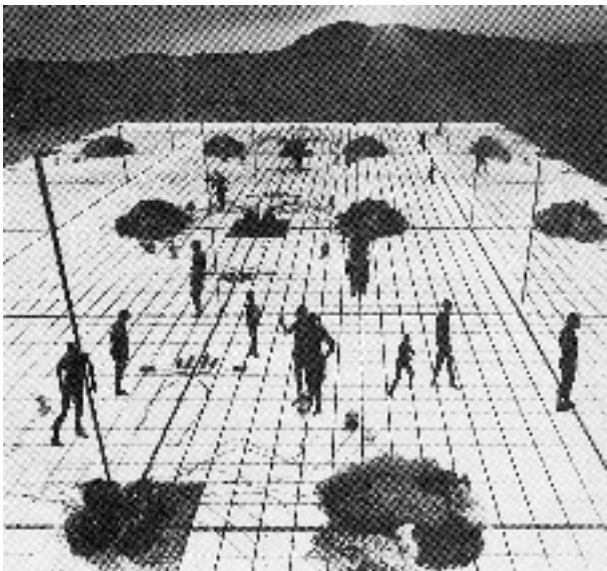


Fig.03 Superstudio. Architectural Record. Jan 1974

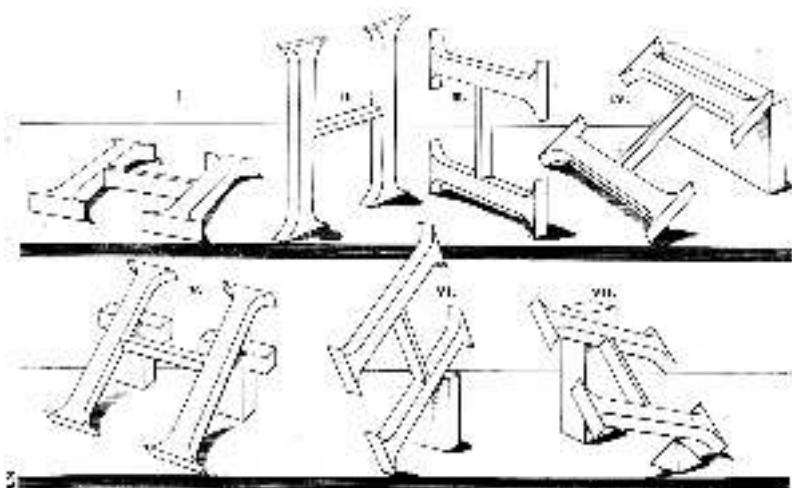


Fig.04 Praxis Perspectivae. Das ist: Von Verzeichnungen ein ausführlicher Bericht, Lucas Brunn 1615



Fig.05 Several editions of the letter "a" on the grid, Hofstadter

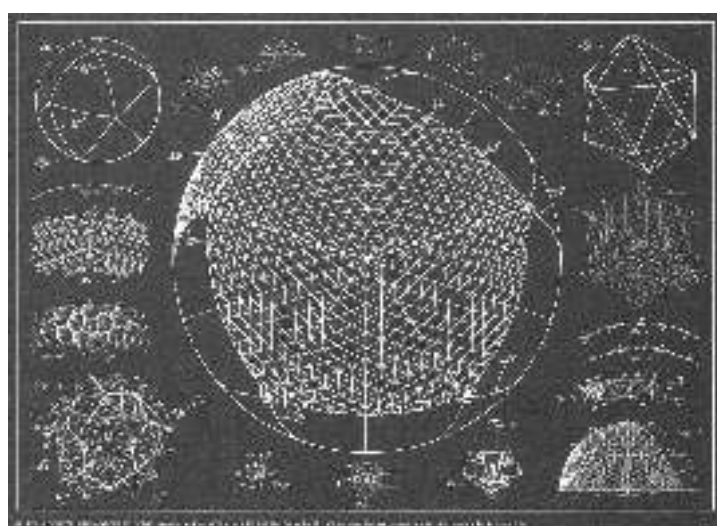


Fig.06 Richard Buckminster Fuller, 1954

- [03] "Computers and Design", Muriel Cooper 1989
- [04] "Rethinking the Book", David Small 1999

- [05] "Fluid Concepts", Douglas Hofstadter 1995 P.464

I have tried to lose control *through* a digital tool. The loss of control is emphasised furthermore through the contrast between the strict, mathematical grid of Josef Müller-Brockmann and the organic, free form looking shape of the letters that were created while dragging the mouse with the *Shape-builder* tool. *Letter Spirits* by Douglas Hofstadter^{fig.02} comes to mind, which explored how the digital restrictions create different letter shapes in which they are constructed to a set of laws that obey a certain grid.

A further artist that influenced my work is Richard Buckminster Fuller, an American architect, designer and philosopher that made extensive use of grids in his drawing and architectural works. In contrast to Brockmann, Fuller explores the rounded and hexagon based grids.^{fig.06} These grids allow one to focus on the subject of the grid itself as a visual image rather than a construct or a tool that allows the designer to create his artworks. I have also tried in my work to cite Fuller grids by applying the same method on circular grids.^{p.14} These grids also create the three-dimensional illusion although they are all built on one plane. The visual outcome of this experimentation can be later translated into real size objects and referring to the drafts of modules and buildings that Fuller has made.

With the spatial aspect of the work being central to the work, I introduced different viewing angles to the reader. I have tried to create the frontal angle of the room,^{p.06} then the side angle of the room^{p.08} and then the outer view of a closed room.^{p.12} I will mention here the work of Muriel Cooper and David L. Small as they tried to create a three-dimensional information system as a part of the *MIT Media Lab*. In their project, Muriel Cooper and David L. Small explore a speculative system that enables the user to explore information in a three-dimensional way. Through this method the viewer explores a digital space, and is able to experience three-dimensional reading. This enables the viewer to discover new ways to recognize and differentiate between hierarchy and information.^{03,04} Starting from Josef-Müller Brockmann's grid proposal for the design of interior spaces in 1961, the perspective of the viewer changes throughout the pages of the leaflet as does the resolution of the three-dimensional grids in which the hypothetical letterforms are displayed.

Although *The Alphabetical Room* does not combine all three angles in one form/medium, it might be the next step to implement the model as a programmed digital project in which one can navigate through. Another speculation was to implement the information/visual on a real three-dimensional room and again referring to El Lissitzky *Proun Room* and Muriel Cooper and David L. Small simultaneously. Furthermore, I have made some experiments with the grids on a smaller raster.^{p.16} Here is also a speculative example of a responsive three-dimensional room that the visual changes its shape due to the density of the grid.

In conclusion the project offers an ignition of ideas and methods concerning the three-dimensional digital space. There are no concrete conclusions but rather speculations, and experimentations of the possibilities this medium and space may offer a designer, coder or visual artist. It might set as well an example of losing control and depict the tension created between the uncontrolled and random aspects of digital design in contrast to the controlled, methodological approach of humanistic design. Here again I will mention one of the conclusions of *Letter Spirits*, that in the aftermath of the digital era, the human brain can make at the moment better designs than artificial intelligence; *"this kind of thing is not even remotely close to what goes on in actual human minds."*⁰⁵

