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**Typography and Geometry in an information graphic**

Graphic designers need to structure and build with proportions the linguistic and iconographic signs of the visual systems we carry out. We also need to systematize, organize in a hierarchy, position and measure our designs, in areas such as visual identity, editorial design, or new informative formats to make easier the understanding of complex contents.

To achieve this, we apply concepts that derive from a field of knowledge with origin in Geometry. The history of Graphic Design is responsible for referencing very significant models or processes. We can mention milestones such as Harry Beck’s conceptual innovation in 1933 by using a single 45 degree angle on the London underground map (Rendgen 2012); or Rosarivo’s method for achieving the divine typographic proportion on the page (Catopodis 2014). We can also highlight the technical innovation for the generation of the curves and paths developed by Pierre Bézier, incorporated in the programs with vector tools and that every graphic designer or type designer currently dominates (Bringhurst 2014).

This contribution shows the preliminary results of a study that examines and revitalizes the links between these two disciplines. Through the bibliographical study of several authors, with this project we wish to identify, classify and propose certain mathematical-geometric procedures and knowledge related to the construction of our visual culture. We will start from the proportions of the page and later we will focus on small details of the letters, essential signs in our daily communication. We will carry out an inventory with concepts such as the golden section, the spreading of the module in the grid, the proportions of the alphabet, units of measurement, sequences, construction patterns as well as other systems of interchangeable parts (Bringhurst 2014, Cheng 2006, Elam 2014). This knowledge applied with good criteria makes the relationship between the components harmonious and consistent.

As a practical goal or a “graphic conclusion”, we want to dump this information into an infographics where this content inventory is visualized based on three interconnected areas: page, calligraphy and type design. This diagram will be illustrated with examples of our teaching and professional experience and can be used as educational material and inspiration for the community of students and professionals in graphic design, type design and information design in general.
TYPOGRAPHY AND GEOMETRY IN AN INFORMATION GRAPHIC

Graphic designers need to structure and build with proportions the tangible and intangible signs of the visual systems we carry out. We also need to systematize, organize in hierarchy, position and transform our designs, in spaces such as visual or material, to make easier the understanding of complex contents.

To achieve this, we apply concepts that derive from a field of knowledge with origin in the Geometry: The History of Graphic Design, the Golden Section and Proportions, among others. The knowledge of these studies is necessary in order to optimize signs for the human eye, to create proportioned and consistent content. The grid allows us to organize the elements on the page, we can consider different styles: Uncial, Gothic, Italic and Copperplate. We have started with an inventory of basic concepts related to Typography and Geometry: Proportions and nib angles for uppercase typographies of proportion of the classic proportion, based on the works of Gutenberg and Rosarivo method to reach the divine typographic proportion, based on the works of Bringhurst.

We have organized this information into an infographic that has been illustrated with examples of design. In a second step, we have organized this information into three interconnected areas: Calligraphy, Typography and Page Geometry. The study of these concepts have been extended to the sacred and secular areas: Calligraphy, Typography and Page Design. In a second step, we have organized this information into an infographic that has been illustrated with examples of our teaching and professional experience.

In conclusion, proportion, symmetry, balance and position are very important variables for graphic designers. This knowledge applied with good criteria make harmonious and complete the relationship between the components. In this way, our designs in the medium is mixed and the graphic objects become more pleasant and assemble.

BIBLIOGRAPHY


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PROPORTIONS

In calligraphy, we consider the width of the nib according to the calligraphy style, is essential to set up consistent texts.

GEOMETRIC SHAPES

The skeleton is the structure of a letter, is a constructive determinant of its morphology.

RESEARCH CURVES

Vector graphics method to draw curves with precision. (Paul de Casteljou and Pierre Bézier, 1962.)

REFERENCES