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Comments on the Grid

*Gridform Both as a Visual Approach and a Principle of Structure*

Theses

There is something in the form of square lattice overarching through centuries and cultures that makes it universal, moreover it is one of the basic schemes of human thought.<sup>1</sup> This general form, stripped to its viscera, serves humanity in its numerous unique manifestations (including cages, filters, calendars and screens).

At the same time we can look at this pattern as the basic structural approach of certain economic, political and aesthetic systems. For example let us think of the outstanding importance of the web-like pattern of perspective in western art history.<sup>2</sup> (It is not by accident either that Heidegger sees “enframing” as the essence of modern technology.)<sup>3</sup>

So what is the grid? In its primary form it is no other than a series of horizontally and vertically running equally spaced lines crossing each other at right angles. The theme of the abstract grid can concern several fields of science. Among them so-called hard sciences including network theory<sup>4</sup> and matrix theory<sup>5</sup>, or in humanities aesthetics<sup>6</sup> or art history<sup>7</sup>. Also

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<sup>1</sup> vö.: Behrend, Heike: Ham Mukasa csodálkozik. Megjegyzések egy afrikai Angliában tett útjáról (1902). in: Biczó, Gábor (szerk.): Az idegen: variációk Simmeltől Derridáig. *Csokonai Kiadó, Debrecen, 2004. ford. Teller Katalin et al.*

<sup>2</sup> Siegert, Bernhard: Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Real. *Fordham University Press, New York, 2015. ford. Geoffrey Winthrop-Young, 98. o.*

<sup>3</sup> Heidegger, Martin: Kérdés a technika nyomán. in: Tillmann J. A. (szerk.): A későújkor józansága II. *Göncöl Kiadó, Budapest, 2004. ford. Geréby György*

<sup>4</sup> Barabási, Albert-László: A hálózatok tudománya. *Libri, Budapest, 2017.*

<sup>5</sup> Rózsa, Pál: Bevezetés a mátrixelméletbe. *Typotex Kiadó, Budapest, 2009.*

<sup>6</sup> György, Péter: A sorozat, a rács és a hálózat. *Jelenkor 2006/7-8.*

<sup>7</sup> Kraus, Rosalind: Grids. *October Vol. 9, 1979.*

in the field of image processing<sup>8</sup> and graphics theory<sup>9</sup> we can encounter interesting findings worth mentioning regarding our topic.

Certainly I do not undertake to touch on all these viewpoints in my dissertation. The facts raised by myself have already been thoroughly examined in other fields of science. If there is something new in my dissertation, it is not the axiomatic statements, but maybe that particular point of view I have on my topic and also the way I arrange these statements hopefully accessible to anyone (but mainly any educated reader).

My thesis namely – concerning its goals – is an art thesis: I start from the visual characteristics of my subject and return to visuality. From the very beginning I considered this illustrated text as a work of art or artists' book, and the challenge meant to find the right way to balance requirements of academic writing with my aesthetic pursuits.

The dissertation consists of two main parts – a theoretical and a practical one. At the same time some overlapping may be experienced between the two parts, the transition is continual between the two members of the thematic division. This transition is represented by the chapter titled Junctions.

My investigations concerning gridlines derive from a basic interest in media art, the digital picture, and the question of the nature of digitization. This would be the first thematic group of my explanations. Following this, going deeper into or nearer to our topic I deal with the question of the pixel as the basic element of digital pictures and its theoretical aspects in a narrower and broader sense.

Following this as to give a frame to all the topics mentioned above I deal with the grid itself. Finally the theoretical part (before the mentioned transitional part) ends with a (partial) description of art historical aspects of my topic. At the same time I could not strive for completeness in this description either, rather tried to present excerpts from the historical avant-garde and neo-avant-garde eras.

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<sup>8</sup> Sonka, Milan et al.: *Image Processing, Analysis, and Machine Vision*. Cengage, Boston, 2015.

<sup>9</sup> Müller-Brockmann, Josef: *Raster systeme für die visuelle Gestaltung*. Niggli Verlag, Salenstein, 1981.

The order of the chapters follows the chronological order of their writing, so this way the process of my immersion in the examined field can be traced back. The presence of the grid pattern – as a way of seeing and a principle of structure – can be detected in each of the subjects I studied.

This way in my reading the structural characteristics of the digital picture and digital data are concrete, materialised manifestations of this abstract grid character. All chapters are interconnected through several threads. The raised aspects cover different aspects of the same issue.

In the practical part of the dissertation we can see a series of experiments gradually built level by level, whose medium or preferably interface<sup>10</sup> is the grid. Although these grids compared to the empty, primary grids, having been discussed previously, have additional features: here the grid cell locations contain numerical values, that is the reason why I refer to them as matrices.

With these numerical values I performed various basic mathematical operations (primarily additions) then I matched the applied sequence of numbers to the values of a colour scale. This way I instantly found myself right at the basics of digital imaging.

The catalyst of the experiment flow for me was the idea of “art as science”<sup>11</sup> derived from the representatives of the historical avant-garde whereas they meant the approximation of the methods and notions of science and art, in the synthesizing spirit of “total art”<sup>12</sup>. This previous approach, nowadays among others, can be called as art based research or artistic research (or *künstlerische Forschung*<sup>13</sup> in German).

I consider my own aspirations (or rather I like it to be seen) as a fundamental research fitting into the mentioned tendency, which aims at answering the seemingly simplest questions concerning digital media; to be more precise I was motivated by the examination of the

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<sup>10</sup> Clifton, Chuck: Douglas Engelbart. in: Sugár, János (szerk.): *Hypertext + Multimédia. Artpool, Budapest, 1998. ford. Bartha Gabriella et al.*

<sup>11</sup> vö.: Beke, László: *Konstruktörök és fejlesztők a művészetben és a tudományban.* in: Kürti, Emese (szerk.): *Művészet mint kutatás. Semmelweis Kiadó és Multimédia Stúdió, Budapest, 2007.*

<sup>12</sup> Kandinsky, Wassily: *Punkt und Linie zu Fläche. Verlag Albert Langen, München, 1926.*

<sup>13</sup> Klein, Julian: *Was ist künstlerische Forschung?* in: *kunsttexte.de/Auditive Perspektiven, Nr. 2, 2011.*

primary features of digital imaging. For my part, the focal point of this endeavor is found in the grid.

As for the aesthetic features of my experiments, I was aiming to practice a form of self-discipline and radical self-limitation, which also may have manifested itself in my insistence on flatness (though still overwritten in some places). If I put it another way, primarily I was engaged with the logical structure of the examined patterns, that is the features, which can be separated from the unique visual characteristics of the individual compositions. At the same time this means that the presented visual-logical sketches may have several specific concretizations and actual aesthetic applications.

In this regard we can say that the discussion about grids is not necessarily bound to a distinguished aesthetic direction, the abstract quality of it makes it possible to view the grid as the basis for the expression of locality (see weaving patterns) or we can consider it as the pattern of a global, visual unification (for example we can think of the cube-like aesthetics of skyscrapers, too). Therefore I think of the grid as a syncretic phenomenon, that due to its generality overwrites certain opposites.

I interpreted the grid as a representational technique of separating and organizing the visible into individual units.<sup>14</sup> Among others I examined the grid as a method of objectification in western art.

My method aimed to achieve a “close reading”, which, at the same time in accordance with its subject, is analytical in nature, that is it breaks down the examined phenomenon into its elements then it is reconstructed and recontextualized with the goal of being able to get to a viewpoint that can be called general.

The frequent element of my analysis was the confrontation of dualities in connection with the topic, too. This way I aimed at resolving tense contradictions between diverse opposites such as the opposition of analogue and digital or material and immaterial qualities.

Further important tool of mine was – primarily during the production of my so-called practical works – the method of experiment, which simply means that the regularities or assumptions in question were put under trial and from the visual results deriving from them this highlighted newer characteristics. So new problems arose, and I made attempts to answer them by solving newer tasks. This way I can call my research cyclic or iterative in nature.

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<sup>14</sup> Siegert, Bernhard: i.m.

As a result of this I came closer to the exploration of such general questions concerning my topic as symmetry, inversion, the question of complementer forms or the point- and wave-like qualities of patterns. I touched upon the sign-like qualities of patterns and finally took a closer thorough look at the question of pattern interaction.

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