Bild und Bildlichkeit in Philosophie, Wissenschaft und Kunst

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Development of Picture Statistics in Czechoslovakia in the 1930s

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The picture statistic development in Czechoslovakia is connected with the name of Augustin Tschinkel (1905-1983). He was invited to cooperate with Peter Alma on charts creation for the book „*Gesellschaft und Wirtschaft*". (Neurath, Kinross, 2009). After the completion of this task, Tschinkel collaborated with the Gesellschafts- und Wirtschaftsmuseum – Ge-Wi-Mu (Social and Economic Museum), returned back to Czechoslovakia and became a pioneer of this method. The aim of this paper is to describe the situation in former Czechoslovakia and Tschinkel's contribution.

A short presentation of Augustin Tschinkel's activities clarifies his position and approach to the techniques used in the Ge-Wi-Mu. In 1928 he worked on preparing the Czech exhibition on tradeshow Pressa in Köln, Germany. (Kapounová, 2009). On that occasion, he met Franz Seiwert a leading member of the movement „Die Gruppe der Progressiver Künstler", which he soon joined as a free associate member. Members of this group were Heinrich Hoerle, August Sander and Gernt Arntz (the leader of graphics staff in the Ge-Wi-Mu and a member of permanent staff since January 1929). The general concept of this association was a pictorial documentation of human and social structures of that time. Under their influence, Tschinkel began to use a so-called social graphics. „*The social graphics should have a utility that transforms art into a political weapon, and is ideal for visualization of social relations.*" (Kapounová, 2009). Social graphic uses black and white and factually constructivist style, deals mainly with a focus on injustices of capitalism and war. Under Seiwert's leadership, the group tried to be as simple as possible and expressed reality unambiguously, which should lead to a universal understanding. The graphics are without a prospective arrangement and the characters do not have faces details. This technique helped spread radical leftist views of this movement between groups of workers.

In his own graphics, Tschinkel focused on the theme of industrialization and the depersonalization of human masses (Kapounová, 2009). Industrialization is a treat, as well as the uniformity of workers. The repetition of certain elements appears here already, which point out depersonalization and feeling of the collectivity. This is compounded with the idea of Otto Neurath and completes the visual representation of the Vienna method. Graphic style of designers working for the Ge-Wi-Mu was not identical. The style was only similar and therefore also took random variations of symbols used in the Vienna method (Neurath, Kinross 2009). It could also happened that standardization has not been taken into account at all in my country, because of the late emphasis on symbols standardization.

Pictorial statistics in the Czechoslovakia was associated mainly with education, both the dissemination of information about itself, as well as a subject in some schools. New minister of School Education and National Enlightenment, Dr. Ivan Dérer began to implement extensive reforms. A book named „*Školství za ministra Dérera*" (Educational system under Minister Dérer) by Vladimír Ryba informs about the reforms (Ryba, 1935). The diagrams in this book were design by Augustin Tschinkel. (Figure 1) Pictorial statistics introduced in this book is a vague mixture of standard methods of statistics (curve graphs) and an attempt of using a graphic picture language. Although at first sight these symbols resemble those used in the application of the Vienna method, on closed inspection there is a serious infringement of the system. The principle of the repetition, the simplicity of symbols and distinguishing by essential features (different headgear) remain. Clustering in smaller logical parts (for example 10 peaces), as well as graphically distinct difference is not indicated (for example for state and non-governmental education). Although the difference in the number of schools is recognizable at the first sight, it is not shown in the state and non-state geographic distribution. The difference between this style and the Vienna method is the representation of the parts of symbol. A visually inaccurate horizontal division is used every time instead of a vertical distribution. Psychologically, division at the waist of figure suggests rather a greater part of the image, not a half. Poorly selected symbols can be seen as a character of one-class schools and more-class schools, which was not possible to understand without the verbal description in any way. To this helped even the absence of any explanatory legend, which Neurath used in the early Vienna method. It can be considered positive for at least the repetitive use of the same symbol for school children in the Slovak Republic. The data are barely legible in well-performed charts.

In 1930 (Ryba, 1935), Dérer as a minister introduces the first single uniform curriculum for all primary schools in the country. Shift occurred from memorization to encourage children to self-education, from the submission of ready knowledge to stimulate the preparation of separate tasks. In this direction a textbook by Sutner, Mendel and Tschinkel was released, called „*Malá vlastivěda*" (Small homeland study), a teaching material approved by government for the general and civic education. This book is the first unified example of the use of the Vienna method. Unfortunately, even here we do not find compliance with all principles. If we compare it with the book „*Die Bunte Welt*", we can find substantial differences, repeating from the book „*Školství za ministra Dérera*". Using expressive graphics in „*Malá vlastivěda*" (for example, black background) comes in front of purity of a method. (Figure 2) Similar effect has the use of non-standard quarters figures for the representation and differential cascade of export and import commodities. Visual effect (from the largest to the smallest) prevails here over the same shift so that cannot be quickly compared. Despite all these shortcomings, this small publication is the best example of the use of pictorial statistics in the early 1930s.

In Czechoslovakia, to complement the image statistics of precise numbers was a trend. Although this provides the viewer more accurate information about absolute values, there is a significantly slower perception of graphs and worse possibility perception differences of „inaccurate" figurative representation. It lacks the advantage of quick and easy relationship remembering. However, his method was taught in schools in accordance with the approved curriculum.

Tschinkel focused on the overall visual communication characters and the psychological effect of the symbol

and published his article in „Československý kreslíř" in years 1938 and 1939. Generally he integrated custom elements like symbol consisting of concrete elements with abstract phonetic symbols. His contribution to visual communication is already very far from the original Neurath's idea of mass dissemination of information for the less literate or illiterate population.

Dissemination of pictorial statistics was practiced more within the meaning of development of graphical methods of work as a separate block of education in schools. This was mainly focused on the dissemination of production teaching of the pictorial statistics. A teacher Vladimír Konvička from Zlín was highly active and as the editor of „Československý kreslíř" in the early 1930s he brought a series of articles about creating and possibility of using pictorial statistics. As he states, he visited the Ge-Wi-Mu in Vienna and met with this method directly. Yet he later tent to the Soviet School. He did not deny Neurath's contributions in establishing Isostat, but saw Soviet approach for advanced. Questions that the Soviet pictorial statistics at that time dealt with concerned expressions as accurately as possible the number of units, which can provide the addition of numbers and graphs of flat or spatial representation. (Konvička, 1935).

To my knowledge, only one article was written directly by Otto Neurath in the Czech language. It is „*Obrazová statistika – metoda zrakové výchovy"* (Visual statistics - a method of visual education). Besides other, it attempts to weaken preference for creating graphic images and noted its importance for educational work with prefinished boards. „*Misleading is the view that the activity of students lies in converting the numbers in a number of drawing characters. A ready-made statistics board - like the map – gives a picture of reality from which you can read a lot of relationships."* (Neurath, 1935) Even this article is not accompanied by the original method of Vienna charts, but by the work of school children of the Experimental Burgess School in Zlín. (Figure 3) Not an arrangement, but some signs are closed (workers) or identical (cattle) with the Vienna method used in *„Die Bunte Welt"*. This further obscures the original pure idea of a standardized visual language and professional development of characters.

It can be conclude that Augustin Tschinkel did not promoted idea of the Vienna methods in Czechoslovakia. His work shows just the spread of pictorial statistics ideas but not precise and sophisticated model of Otto Neurath. It was probably not about misunderstanding of the nature of this method, because his article from 1929 about Ge-Wi-Mu was all right (Tschinkel, 1929) and accompanied with original images. We can find its grounds possibly in their own clear idea of the graphic representation of reality, focused on graphic, not on education.

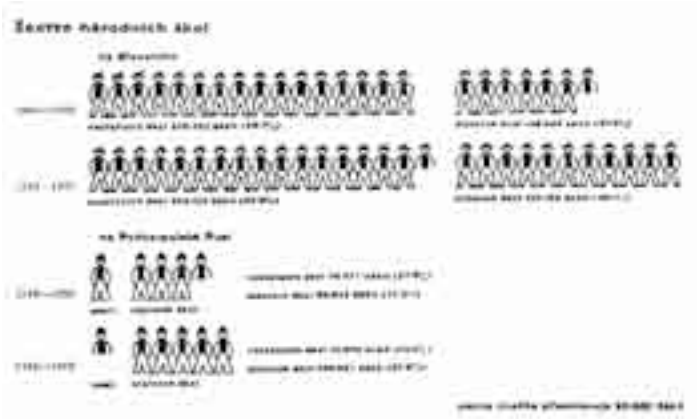

Figure 1 – Ryba, Vladimír 1935 *Školství za ministra Dérera*, Praha: Ú.D.K.N. A. Svěcený, p. 25

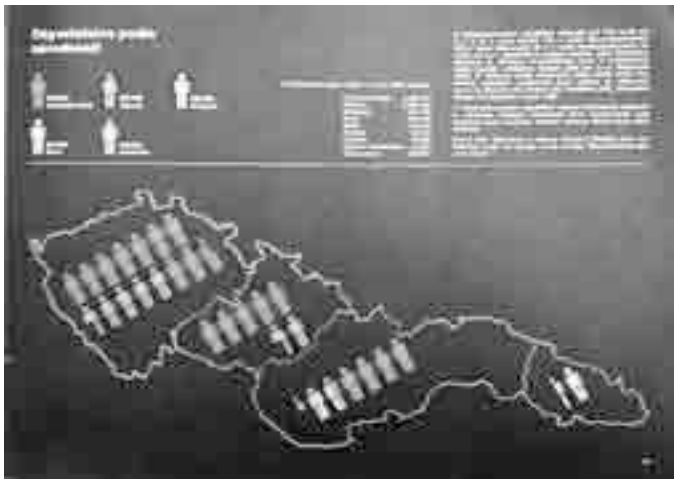

Figure 2 – Sutnar, Ladislav and Mendl, Bedřich and Tschinkel, Augustin 1935 *Malá vlastivěda*, Praha: Státní nakladatelství, p. 17

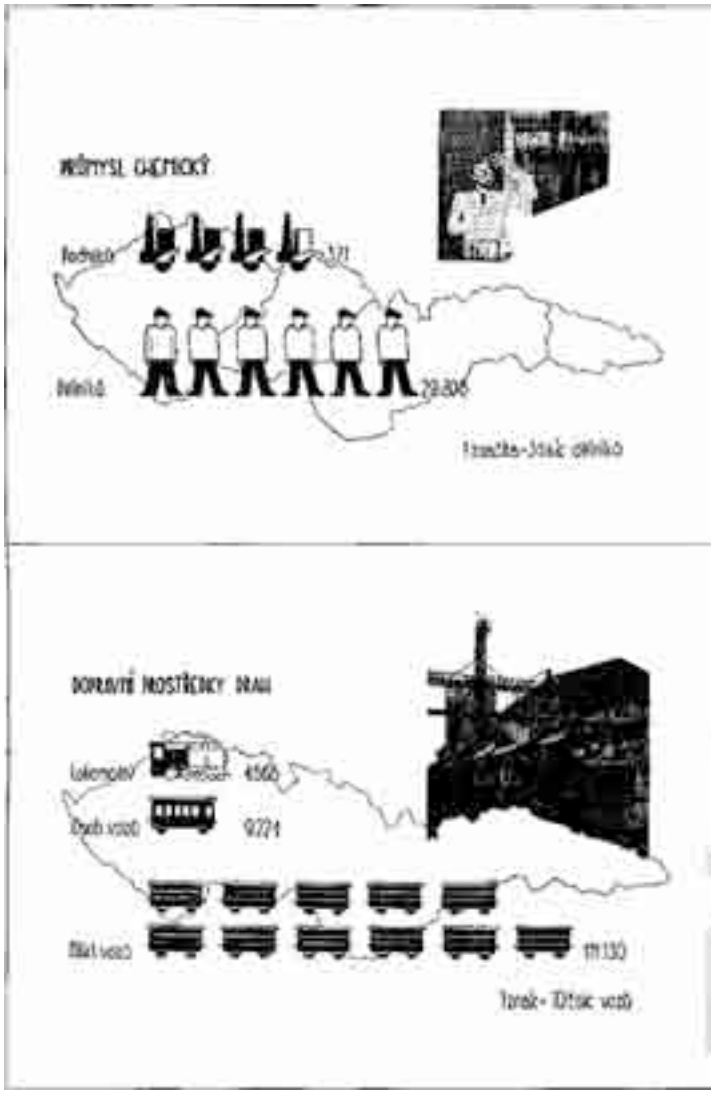

Figure 3 – Production of third grade school children at Experimental Burgess School in Zlín taught by Josef Císař. Neurath, Otto 1935 „Obrazová statistika – metoda zrakové výchovy", *Československý kreslíř* 4, 210-214, p. 213

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