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English Summaries

Page 6 | Robert Fuchs

The discovery of pigment manufacture in antiquity

Pigments from ancient Egypt to Greece and Rome

The first two synthetic pigments produced by mankind were "Egyptian blue" and "Egyptian green". The latter was a sub-standard reject that the ancient painters learned to use and greatly valued. These pigments marked mankind's first step away from natural mineral-based pigments to synthetic products for painting. The early history of paint pigments is fascinating and gave rise to colors that could only be used on certain materials of the objects being painted. This is a learning process that even modern researchers have to go through. The knowledge of the processes was born of the ancient artists' creativity and attentiveness, but frequently over the centuries it was lost due to external circumstances and had to be rediscovered by modern chemistry.

Page 16 | Doris Oltrogge

Alchemy grun, lead oxide, and aurum musicum

Manufacture and use of pigments between 800 and 1600

The first synthetic pigments were produced in antiquity. The methods used to create white lead, lead oxide, and verdigris did not change significantly until well into modern times. In the Middle Ages and the early modern era, innovations in color technology occurred mainly in connection with glass manufacture, smelting, and experiments by alchemists. Like the simple processes used to obtain white lead, verdigris, and lead oxide, these experiments were knowledge "in the public domain". The knowledge was disseminated in artists' recipe collections and in art books, though production was mainly in the hands of specialized craftsmen. By contrast, innovations in glass, ceramic and smelting technology tended to be handed down internally through apprentices and migrant craftsmen.

Page 26 | Sven Dupré

The Role of Judgment in the Making of Glass Colors in the Seventeenth Century

This essay discusses the manufacture of colors in Venetian and *à la façon de Venise* glass that was produced from the fifteenth century and codified in print in the seventeenth century. The focus is on "L'Arte Vetraria", the first printed book on glassmaking, published by the Florentine alchemist Antonio Neri in 1612. In this essay we consider Neri's recipes for making glass colors in light of the issue of color systematization and standardization. I will show that standardization of glass colors was absent in the seventeenth century prior to the multiplication of color systems in the eighteenth and nineteenth centuries. Neri repeatedly emphasized the importance of judgment by the eye in the production of glass colors.

Page 36 | André Karliczek

Developing color standards in the early sciences of the 18th century

The development of color standards in the early days of science is linked to two currents within the emerging sciences: on the one hand the classification of nature as a natural history endeavor and, on the other, quantification, or the effort to make nature measurable. In developing color sample standards, natural science draws on practices previously established by artists and craftsmen and adapts them to its specific needs; however, it also comes up against special difficulties with regard in particular to the durability and reliability of the master samples.

Page 50 | Friedrich Steinle

Colors in the 18th century: practicalities and systematization

The 18th century was an era of great significance for knowledge about color and its practicalities. Both quantity and diversity increased enormously in all practical – commercial and economic – spheres relating to color, as did knowledge about color. By the end of the 18th century the situation was radically different from that at the beginning. In this article, after a brief look at the economic aspects, I wish to attempt to outline knowledge about color, all the while keeping the practical applications in our sights. Although it is not always possible to draw clear distinctions between the different areas, such classification helps us to clarify the main features.

Knowledge and the art of dyeing in the Swiss Indienne industry in the 18th century

Calico printing, which draws on innovative dyeing techniques adopted mainly from craftsmen in India, gained prominence in Europe at the end of the 17th century. Taking the Swiss calico printers as an example, the article delves into the question of the pathways along which knowledge of the new techniques was disseminated and adopted. It focuses on the practices and debates surrounding Indienne printing in the knowledge culture of the 18th century, when technical and scholarly knowledge overlapped and complemented each other; it also shows the importance of testing and commercialization of recipes for learning the new dyeing techniques.

Visibly Invisible: Color in Modern America

Color is the perfect subject for historians seeking to explore relationships among technology, modernity, and the culture of consumption. The history of twentieth-century color is full of intriguing personalities like the fashion maven Margaret Hayden Rorke, a pioneering color forecaster who directed the Textile Color Card Association of the United States, and alluring visual materials like the product advertisements that dominated magazines such as the *Ladies' Home Journal* and the *Saturday Evening Post* in mid-century America. As historians of technology, it is our remit to connect these historic actors and artifacts to important themes that can enhance public understanding about consumer culture and everyday life.

The Global Blue Jeans Transformation

Blue jeans, which were first manufactured by Levi Strauss & Co. in San Francisco in 1873, revolutionized fashion. A key feature of blue jeans? The color. Blue is symbolic of their origins – pants for blue collar workers. Colored by indigo, blue masked dirt. The planet Earth is often described as the Blue Planet in reference to water, but perhaps the term could be used to describe a world wardrobe. Some speculate that in most countries on any given day, almost half the population is wearing blue jeans. This paper examines the remarkable global rise of blue jeans; how they wear and how they have come to symbolize societal shifts, culture, and politics.

Laser Nano-Structuring: Adding Colors or Trapping Light

or: The Wind of Light

We don't see light through the air; we can only see the obstacles it encounters. In fact, our perception is all about collisions. Our vision itself begins with collision on the surface of our eyes and ends with the mind construct we call reality. Let's then play with the nanostructure of the surfaces. This article will briefly describe the major steps in developing a machine using laser to structure 3-D surfaces and then present the different attempts in adding colors by light by reflection as well as light trapping.

I paint colors. From painter to color researcher

Stefan Muntwyler from Windisch, Switzerland, is a painter and color researcher. Over the past four decades he has built up a large store of knowledge about pigments, dye-stuffs, binders, and formulations. He collects everything worth knowing about coloring agents: from cultural history and general history to chemistry, technology, literature, anecdotes, and art.

"Ayn liblichs piechel" is digitized

Tracing the assay manuscript of Wok Pniowsky von Eulenberg (1526), believed to be lost

Prior to digitization of the manuscript "Ayn liblichs piechel" for the e-codices website, the author compiled information about it that has significantly broadened the knowledge documented in the Iron Library and has refuted the view established in historical (Czech) research that the manuscript had gone missing in 1924. "Ayn liblichs piechel" is a manual for metallurgical assays (Probierbuch), whose author calls himself Wok Pniowsky von Eulenberg and gives 1526 as the year the manuscript was written. Scion of a noble family in northern Moravia, Wok was heavily involved in mining in the region. In the second half of the paper, the author describes the "re-discovery" of the manuscript by a Czech researcher in the mid-1960s, though little notice was taken of this event.

100 years of GF at Klostergut Paradies

From farm estate to cultural monument

In 1918, Georg Fischer Ltd. purchased a farm in Schlatt in the Canton of Thurgau. The purpose of the acquisition, an unusual step for an industrial manufacturer, was to use the land to produce food for the company's employees in wartime. The former Poor Clares convent Paradies was located on this farmland. GF used the property for many years as employee accommodation, later as old-age housing, and after World War II in part as the seat of the Iron Library Foundation. The Corporate Archives also found a home here in 1948. The carefully restored convent building has served since 1974 mainly as the Corporation's training center. The centenary celebration "100 years of GF at Klostergut Paradies" is an opportunity to look back over the last century of history at the Paradies convent.