

SLOVENSKÁ TECHNICKÁ UNIVERZITA V BRATISLAVE

Fakulta architektúry

Ústav dizajnu

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COLOR AND DESIGN – SUMMARY

Theme of Academic Dissertation: Colour and Design

Supervisor: doc. Milan Lukáč, ak. soch.

Form of Study: external study

Beginning of Study: 1. 10. 2005

Study Programme: Design

Field of Study: 2.2.6. Design

21. 9. 2008

FOREWORD

Theme of my academic dissertation – Colour and Design – was inspired with my pedagogical practice at Department of Art Education of Faculty of Education of Palacký University in Olomouc. Colour theory education lectured at DAE is focused mainly to classical theory of painting designed for painters. Branches such as graphic design or printing need more complex information.

What are the aims and what new does the dissertation work bring?

The answer could be divided into two parts:

1. Creation of educational text dealing with another aspects of colour and art practice – especially use of colour in the area of product and graphic design, printing and architecture.
2. Methodological part of accademic dissertation – closely associated with the theme of dissertation work – is my own research of effectiveness of colours realized at Department of Art Education of Faculty of Education of Palacký University in Olomouc.

CONTENTS

HISTORY OF COLOUR THEORY

A brief abstract of color theory evolution from 500 B. C. to Twentieth Century. Influential scientists, artists and theorists and their essential ideas, discoveries and their views of color theory. Development of colour spaces from linear to three-dimensional ones.

FUNDAMENTAL TERMS

Fundamental principles of origin of colour – reflection and refraction of light, light colours (RGB), pigmented paints and printing inks (CMYK). Primary, secondary and tertiary colours. Mixing of colours – additive and subtractive mixing of colours. Colour contrast, complementary colours, colour harmony, etc. Colour perception, colour illusions.

DEFINITION OF COLOURS

Colour spaces used in computer graphic area (B/W, Grayscale, Indexed colour, Lab, RGB, CMYK etc.), colour depth of digital image, range of colours – gamut. Process colours: CMYK, PANTONE solid colours, metallic colours MetalFX. Systems of coating compositions, colour cards (samplers). Summary and history of colour systems in use: Methuen, RAL, NCS (Natural Color System), Federal Standard, etc.

COLOUR AND SPACE

Interaction of colour and space, colour in architecture. Warm and cold colours. Camouflage as a shift of „destruction“ of space. Colour and surface. What is the principle of gloss

and matt surface? Gloss and matt colours.

COLOUR IN ART PRACTICE

Samples of colours used in the field of various art branches (especially design and graphic design). How colour influences on expression of product. Storiated.

PSYCHOLOGICAL EFFECT OF COLOURS

Methodological part of academic dissertation. Colour tests or how colour effects on human psyche. Research work on colour reception realized at Department of Art Education of Faculty of Education of Palacký University in Olomouc /Figure/.

PSYCHOLOGICAL EFFECT OF COLOUR

Reception of colours depends on many influences – light, cultural, geographical, psychological and many others. There are several colour tests in the area of psychology. The best known and most widely used are Lüscher and Frieling colour tests. Research of Guerilla Marketing agency is included in as a pendant.

LÜSCHER TEST

Swiss psychologist Max Lüscher is one of the best known scientists engaged in the research of psychological effect of colours. He established popular test based entirely on colours. There are two variants: „small“ (8 colours) and „big“ (73 colours). For common use the eight-colour test is satisfactory. It consists of four basic colours – deep blue, green (blue-green), yellow and red (orange-red) – complemented with subsidiary hues – violet, brown, grey and black.

Four basic colours represent four basic human needs:

blue – calmness and satisfaction

green – assert

red – activity

yellow – expectation

Additional colours mean:

violet – cognition

brown – body

grey – disengagement, concealment

black – renouncement, asceticism

Means of these colours are constant. Personal affinity to colour is dominant. Tested person is to choose and place colour cards from the most favourite to the obnoxious hue. Together with a sequence of particular colour cards, correlation of colours is very important too.

FRIELING TEST

According to Frieling's own words the test was established as a verification of Goethe's statement: „Nothing is in, nothing is out, because what is in, that is out“. The test was based on projection of man's inner colour scale outwards. It was established in 1949. The principle of the test is (similar to Lüscher's) to choose: 1) the most favourite colour, 2) the obnoxious colour and 3) to put combinations of colours to the chart divided into four fields. The colour chart contains 27 colours. (Figure)

GUERILLA MARKETING RESEARCH

Beside colour tests of Max Lüscher and Heinrich Frieling, focused on sphere of psychology, results of research of Guerilla Marketing Agency are included. The research is aimed for the commercial occupancy of colour effectiveness. Results of the research are mainly exploitable in the sphere of advertisement and marketing. Except popularity, two other criterions as visibility and catchiness are involved. All results can be seen in the following chart:

color	sex	visibility	catchiness	popularity	associations
WHITE	man woman	high	low	low	cleanness
YELLOW	man woman	high	high	low	sun
PINK	man woman	low	low	low high	calm, relaxation, femininity curative effect, femininity
ORANGE	man woman	high	high	low	warm color, health
RED	man woman	high	high	high	danger, excitement warm, intimacy
GREEN	man woman	low	low	low	money, enjoyment
BLUE	man woman	low	low	high low	confidence, intelligence, protection depression, business, leading color
BROWN	man woman	low	low	high	wealth, earth
GREY	man woman	low	low	high	protection
BLACK	man woman	low	low	high	wealth sensitiveness

Unfortunately, no details of the research are known. It would be very important to know how it proceeded – what form of colour samples was shown (true colours or verbal expressions only), how many people took part in it, when and where it was realized etc. Even if the results are not – for the reasons above – very confidential, they can be still inspirational. Some discovered associations are very different from traditional color connotations: brown – wealth, grey – protection and black – wealth, sensitivity. Red – intimacy (women), pink – calmness, relaxation (men).

SUGGESTION OF ANALYSIS

When realizing their own graphic design projects, students often use very curious colors or colour combinations. I found out that they often chose colour only by chance and negated the original idea of the design. How do they sense colours? What colours mean to them? Various colour tests suppose color meanings as fixed. I would like to know what colours mean to the students of art education actually.

AIMS

- 1) How students sense colours? What the colours mean to them?
- 2) When testing, students have to think over the colours. They can make clear their feelings and attitudes to colours.

SELECTION OF COLOURS

color	positive meaning	negative meaning
YELLOW	radiation, joy, intellect	frivolity, enviousness
RED	love, power, action	aggressiveness, hate
BLUE	certainly, calm, freedom	emptiness, boredom, slackness
GREEN	life, hope, growth	ambition, unfairness
ORANGE	energy, activity, joy, optimism	frivolity, banality
VIOLET	spirituality, inspiration, meditation	melancholia, resignation
PINK	romance, gentleness	sentiment, loss of sense of reality
BROWN	tradition, rootedness	passivity, dullness
WHITE	cleanness, innocence	coolness, emptiness, perfectionism
GREY	neutrality, confidentiality	monotony, triviality
BLACK	dignity, indomitability	death, darkness

Selection of tested colours was very important. I have tried to set up an easy but conclusive test designing the number of colour hues as few as possible. I chose easy recognizable colours – three primary ones: yellow, red and blue, three secondary ones: green, orange and violet. Another chromatic colours – often used in design practice – were added: pink and brown and non-chromatic colours white, grey and black in the end.

PRINCIPAL AND TEST EVALUATION

There are eleven colour samples inscribed with numbers on the back. Tested student allocates cards with particular verbal senses to them. Verbal senses are positive and negative (enscribed with types on the back side). Every colour has one positive and one negative sense. Tested person has to use all cards. Test will be evaluated in the form of chart. Supposed meanings of colours will be confirmed or disconfirmed.

Supposed number of tested students (between 2008–2010): 100.