

中文摘要

本研究針對歐普藝術(Optical Art)先驅維克多·瓦沙雷利(Victor Vasarely 1908-1997) 1929年至1992年間720件的藝術作品，進行有關「造形」、「色彩」、「應用認知心理學理論」三大部份之應用趨向研究。研究中採文獻調查法、集群分析法與實驗設計法分別進行瓦沙雷利畫作應用之趨向分析；及進行造形、色彩與瓦沙雷利原著作品的視覺空間錯視效果之實驗比較。研究發現有兩大部份，分別是：

1.瓦沙雷利1929年至1992年的畫作應用之趨向為：

「造形」部份大量使用抽象、複合組合(點、直線、曲線、面、體)、空間感與質感、比例與秩序、分割原理等技法較多。「色彩」部份則偏好應用多色有彩色(多色相)、色彩對比原則、明度對比、漸層式調和與色彩注目性高等原則較多，較少使用補色對比。「應用認知心理學理論」部份則側重完形組織法則(Gestalt laws of organization)中的相似性法則(principle of similarity)、空間深度等理論的應用。本研究結果統計可知，瓦沙雷利畫作中使用「造形」、「色彩」與「應用認知心理學理論」部份，均以1966年至1970年期間最為頻繁，而1971年至1975年期間則次之。

2.造形及色彩與瓦沙雷利原著作品的視覺空間感錯視效果之實驗結果可發現：

受測者對於空間感感覺程度高者，在「造形」方面以正方形較常使用，較少使用圓形。在「色彩」方面以黃色與紫色互補色較常使用，較少使用紅色與綠色互補色。受測者對於空間感感覺程度低者，在「造形」方面常用三角形、不常使用圓形。在「色彩」方面則較常使用紅色與綠色互補色，少使用橙色與青色互補色。實驗統計結果發現，受測者對於空間感感覺程度最高者，多選擇瓦沙雷利該原著作品，顯示瓦沙雷利原著作品在造形與色彩組合下，的確容易造成視覺錯視空間感。實驗結果也顯示，不同性別的受測者對於色彩在視覺錯視空間感的認知上是有差異的，不同學習背景的受測者對於造形、色彩在視覺錯視空間感之看法也是有差異的。

綜合研究結果顯示，形與色的視覺錯視研究和實驗結果與瓦沙雷利作品在造形、色彩、應用認知心理學理論之應用趨向相近，顯示瓦沙雷利善用造形和色彩的相互關係創作出圖形或色彩的錯視效果，使觀賞者的眼睛受到強烈的刺激而產生前進或後退的空間深度知覺，印證許多相關文獻資料的研究所得。

英文摘要

The study is an advanced research on the trends of the application of 'shape', 'color', and 'applied cognitive psychology theory' applied on the artifacts of Victor Vasarely (1908-1997), one of the progenitors of Optical Art. The study analyzed 720 artifacts of Victor Vasarely from year 1929 to 1992.

The study analyzed the trends of the application on the artifacts of Victor Vasarely by literature survey method, cluster analysis method, and experiment method. The comparison of the sense of spatial visual illusion effect on shape and color was experimented as well. The study can be generalized to two summaries as below:

1. The trends of the application on the artifacts of Victor Vasarely from year 1929 to 1992 are:

In terms of shape, the techniques such as abstract, compound combination (point, line, curve, plate, solid), space and texture, proportion and order, and division theory are applied most on the artifacts. In terms of color, the preferences of principles are multi-color of chromatic color, color contrast principle, value contrast, gradation harmony, and high color visibility. The complementary color contrast is applied less. In terms of applied cognitive psychology theory, the most considered applications are the principle of similarity by Gestalt laws of organization, space depth, etc. The statistic result of this study shows that shape, color, and applied cognitive psychology theory in the artifacts are applied most frequent during year 1966 to 1970, and second during year 1971 to 1975.

2. The findings in the experiment of the sense of spatial optical illusion effect on shape and color of the artifacts of Victor Vasarely are:

People who have better sense of space often use square shape rather than circle shape, and prefer using yellow-violet complementary color more than red-green complementary color. On the other hand, people who don't have well sense of space often use triangle shape rather than circle shape, and prefer using red-green complementary color more than orange-blue complementary color.

The experiment can generalize a statistic result that the triers who have better sense of space choose original version artifacts of Victor Vasarely. This shows that the combination of shape and color in the original version artifacts of Victor Vasarely do result the sense of spatial visual illusion effect. The experiment result also shows that the realizations of the sense of spatial visual illusion in color for triers in different genders are different. The realizations are also different in shape and color for triers in different education backgrounds.

Generalizing the findings listed above, we know that the experiment results of visual

illusion on shape and color are very similar to the trends of the application of shape, color, and applied cognitive psychology theory on the artifacts of Victor Vasarely. Victor Vasarely applied the techniques between shape and color on his artifacts so expert, so that people get strong excitation when looking at his artifacts. At mean time they feel the flicker of back or forth, while the space depth is generated. The results above nicely agree with the experiment results in other relevant literatures.