

# 要 旨

## 色・形およびその数が変化する刺激の記憶再認能力

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幾種類かの色や形のパターンを同時に呈示してそれらを記憶し、その後呈示されるテストパターンが記憶したパターンの1つに含まれているかどうかを測定する実験を行った。この記憶による再認能力測定を、記憶パターン呈示枚数を変えて行った時に、色のみ変化したパターン、形のみ変化したパターンと比べて、色と形を両方変化させたパターンではどのような違いが出るかを調べた。

彩度・明度を一定とし、色相を等間隔に変化させた色刺激を、CRT ディスプレイに同形状で任意の数(1～7枚)呈示し、記憶に基づいて再認する際、呈示する刺激数及び色の条件がどのように影響するか調べた。また、色一定で図形が変化する刺激は、正方形、正三角形、円形および回転を組み合わせて作成し、同様に実験を行った。

色及び形が同時に変化する刺激を用いた実験では、被験者に刺激記憶の言語化を避けるよう伝えた場合とそうでない場合で結果に変化が見られた。前者では色のみ、形のみでの実験結果から導出されたモデル式

$$\text{予測値} = \text{色のみ変化する場合の正解率} \times \text{形のみ変化する場合の正解率}$$

より正解率の推測が可能であった。後者では予測不可能であり、正解率が予測よりも大きく低下した。言語化の影響が入った時は、色と形の両方が変化すると、記憶すべき量が多くなりすぎるためであると考えられる。

キーワード 再認, 言語化

# Abstract

## Influence of Simultaneous Change of Color and Shape to the Reconfirmation Capability by Memory

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I conducted the experiment in which I measured influence of simultaneous change of color and shape to the reconfirmation capability by memory. In the experiment, some kinds of stimuli with different color and shape were shown on a CRT display. A subject memorized stimuli and after it disappeared, one of stimuli was presented on the CRT display. The subject task was to judge whether the stimulus shown at the last was involved in a set of stimuli presented first. The number of the stimuli in the set was changed in each condition; only color was changed, only shape was changed and both color and shape were changed. In this research, the difference of reconfirmation capability by memory between the experimental conditions was investigated.

In the case of color only change, saturation and brightness of the stimuli were set constant in terms of a graphic application setting. Hue of the stimuli was just changed by equal interval on the graphic application. In the case of shape only change, the stimuli consisted of combinations with a circle, a square, an equilateral triangle and rotation. The number of stimuli presented on the CRT display at one time was from 1 to 7. I measured a rate of correct answer on 20 trials for each condition.

In the experiment with the stimuli changed in both a color and a shape, the result was not likely to the one in the experiments of the color only change and the shape only change. The following formula was assumed to explain the experimental result.

Predicted correct rate =

The rate of a correct answer in the experiment with the color only changes  $\times$

The rate of a correct answer in the experiment with the shape only changes

From this formula, the result of the experiments fitted well when the subject was not allowed to describe stimuli in language. However, the result of the experiment did not fit when the subject was allowed to use naming of stimuli. On these subjects, the rate of a correct answer decreased because the amount of information to be memorized by words would be beyond subjects' power.

***key words***    Reconfirmation , Naming