

found that the constancy ratio in the horizontal direction is greater than it is in the vertical direction.

c) Shape constancy is examined in different angles of orientation. It is found that as the angle of orientation from the parallel plane increases, the shape constancy decreases.

d) Factors that distort the tridimensional organization distort also the perceptual constancy : weak illumination, monocular vision and vision through the pseudoscope.

3. Size constancy is explained by the gradient theory.

4. Shape constancy and chromatic color constancy are explained in accordance with the general spatial framework theory. The same explanation is applied to the visual speed constancy phenomenon. All these explanations were supported by the evidence of experiments performed in the Laboratory of Psychology, Fouad I University, Cairo.

5. An attempt is suggested at a new theory of epistemology based upon the facts of perceptual constancy phenomena.

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تلخيص مقال أحمد زكي صالح

مدرس علم النفس المساعد بمعهد التربية للمعلمين

عرض للوسائل التجريبية التي استخدمها المؤلف وللنتائج التي وصل إليها في رسالته لدرجة الماجستير في موضوع ثبات الإدراك . وقد نشر المؤلف ملخص بحثه في القسم العربي من هذا العدد في باب رسائل علم النفس الجامعية ص ٢٠٣ كما أن ملخصاً لمناقشة الرسالة نشر في باب أخبار علم النفس في مصر والخارج ص ٢٤٩

plane. To determine the linear dimension of the stimulus shape, certain mathematical calculations were carried out. The index of phenomenal regression was deduced by the same law of Thouless-Brunswick. Results:

T. 1		T. 2	
Circles in diff. planes		Circles on the table	
40°	Const. ratio is .5139	in A 56° 18'	Const. ratio is .9008
60°	„ „ .4077	B 71° 34'	„ „ .7654
80°	„ „ .2912	C 77° 20'	„ „ .6469
T. 3		T. 4	
Ellipses. 75 in diff. planes		Ellipses put on the table	
40°	C.R. .5046	56° 18'	C R. .7979
60°	„ .3541	71° 34'	„ .6424
80°	„ .2444	77° 20'	„ .5187

III. COLOR CONSTANCY

Theories of color constancy are discussed, particularly those of HELMHAOLTZ, VON KRIES, HERING, BÜHLER, JEANSCH, & KATZ. Some of these theories are refuted; others are discussed to show the flaws in them.

We have to distinguish between two aspects of *color constancy*: white constancy i. e; *achromatic color constancy*; and color constancy i.e. *chromatic color constancy*. Experiments were performed which have verified the Gestalt hypothesis of the principle of neutral level or the *achromatism of the framework*.

The author tries to explain the constancy phenomena in spatial terms. The whole aspect of perceptual constancy is based upon one and the same category: *constancy of framework*.

GENERAL RESULTS¹

1. The empirical interpretation of the perceptual constancy is refuted.

2. Perceptual constancy phenomena depend upon spatial factors:

a) Perceptual constancy depends upon the mode of organization of the objects used in the experiments.

b) Size constancy is examined in different directions. It is

1. One must bear in mind that all we have done here is to draw a brief outline of some points; the principal work is in about 200 pp. 70 tab. + 35 fig.

S is the stimulus character "retinal image", P is the phenomenal character "the judgement of O.", R. is the real character "the object".

Spatial organization. In our experiments, certain experimental conditions were originated to test accurately the relation between *size constancy* and *spatial organization*.

1. We performed the experiments when the two objects were represented in the horizontal plane of the O.

2. Experiments were performed when the objectively smaller object was in the horizontal plane, while the other object was in a plane of angle of elevation $8^{\circ} 52'$.

3. Experiments were performed under the same conditions of (2) except that the angle of elevation was $14^{\circ} 27'$.

4. The angle of elevation was $29^{\circ} 5'$, other conditions were the same as 2 & 3. The results are :-

Ang. of elev.	Dist. of big obj.	Index of const. aver. 15 Os
0°	615 cm.	.7827
$8^{\circ} 52'$	622	.6665
$14^{\circ} 27'$	635	.5748
$29^{\circ} 5'$	703	.3370

II. SHAPE CONSTANCY EXPERIMENTS

The apparatus is a table 350 cm. long, 80 cm. high. The table is surrounded on all sides by a white screen to isolate the field of experimentation from the field of the outside world. In the frontal screen a hole of $10 \times 6 \frac{1}{2}$ cm. is cut. The O looks through this hole at the objects employed. All precautions to prevent any shadow are taken. The object is put on the table at three different distances to produce three different angles of orientation e.g. $56^{\circ} 18'$, $71^{\circ} 34'$ & $77^{\circ} 20'$. In the second set of experiments the objects are presented to the O in non-frontal planes i.e. planes with angle of orientation 40° , 60° , & 80° . The objects employed are a circle 20 cm. in diameter and an ellipse 15×20 and its ratio. 75. All the objects are employed in each of the experiments.

To know the phenomenal shape, a series of accurate ellipsis in cardboard was presented to the O. in the frontal parallel plane, so that he could choose the one which appeared to him equal in shape with that which was in the non frontal parallel

at the back of the room, far away from the only source of light, so that it reflects much less light than the grey paper, the O "observer" perceives the white as white and the grey as grey in spite of the fact that the grey paper reflects much more light to the eyes than the white one.

EXPERIMENTAL WORK

Aim of experiments made. Experimental work was performed to examine the factors that determine the constancy phenomena, and in particular to examine the validity of the relation between *constancy* and *spatial organization*.

I. SIZE CONSTANCY EXPERIMENTS

Experiments were performed in the Laboratory of Psychology of the Faculty of Arts in Fouad I University, summer 1944.

The apparatus is a table 6 m. long, 80 cm. high and 50 cm. wide. It is surrounded by a white cloth to prevent any spatial cue from the O's field. The O sits in such a way that the table lies in his frontal plane. All precautions to prevent any shadow in the visual field and any differentiation in illumination are taken. The objects used are two discs 29 cm. & 37 cm. in diameter, well cut and made of cardboard.

The O.s were three groups : A consists of 5 girls, B six adults, C four boys under fourteen. Four different methods are used : in the first one the two objects are put at 615 cm. from the O. Then the smaller one is moved towards him till he perceives the two objects equal in size ; the distance of the smaller one is then measured. In the second method, the physically smaller object is put so near the O. that he perceives it bigger than the other. Then it is moved away from the O. till he sees the two objects equal in size ; the distance is measured. In the third method, the smaller object is put in the range of phenomenal equality, and it is moved inwards or outwards the O. till he perceives the two equal ; the distance is measured. In the fourth method, the experimenter repeats any of the three methods in which he has observed any deviation in the O's judgements.

The calculation of the results is by means of the Thouless-Brunswick law of constancy : $C = \frac{\text{Log. S} - \text{log. P}}{\text{Log. S} - \text{log. A}}$ where

PERCEPTUAL CONSTANCY PHENOMENA

Summary of the thesis approved for the degree of M. A., FOUAD I University, Cairo, on March 17th. 1945 ; presented by Ahmad Zaki Saleh.

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THE PHENOMENA

In any perceptual process, three characters or aspects may be distinguished: first, the *real character*, i.e. the object as it exists in the external world or in the geographical environment; secondly, the *stimulus pattern* that constitutes the retinal image on the eye in the case of visual perception; thirdly, the *phenomenal character*, i.e. the object as it exists in the direct experience of the perceiving individual. While the first character is constant, the second one undergoes continuous change according to any change in the conditions of the perceptual field, e.g. size, color, shape, direction, distance etc... But in spite of this merely continuous change in the stimulus character of the perceived object, yet the phenomenal character tends to retain as far as possible the main characteristics of the real character, i.e. objects are perceived in accordance with their real character as far as the whole conditions permit.

For example the perceived *size* of a person is the same whether he is one meter away or six meters away, in spite of the change which the retinal image undergoes. In *shape* we find the same phenomena : hold a ring, turn it in different directions, in different angles of orientation ; you find that you are still perceiving it as circular and not as elliptical. In *color* : coal appears black even in sunshine ; chalk appears white in shadow. When a grey paper is put close to the only window in the room and compared with white paper put

insanity may occur in high grade aments, though their intellectual deficiency prevents them from systematizing their delusions. Some show expansive ideas due to lack of discrimination. These ideas may be of make belief type, and lying out of wickedness. Their delusions are puerile.

PROGNOSIS

1. Fleeting delusions are more favourable than fixed ones.
2. When delusions occur in a patient who has clouding of consciousness, they are of better prognosis than those occurring in a patient who has clear consciousness.
3. When their onset is abrupt and sudden, they are of a better prognosis than those showing slow and insidious onset. Thus delusional states arising acutely after operations, childbirth and debilitating diseases are usually of good prognosis and there is much hope of recovery.
4. In "folie à deux" when the pair are separated, the passive and sub-ordinate individual usually makes a good recovery, while the acute and primary patient remains a paranoiac.

There is no need to say that in paranoia the prognosis is extremely bad, because the delusions are fixed and the disease is very insidious in its course. There are abortive cases of paranoia which run a comparatively short course and end in recovery ; many authors especially KRAEPELIN consider these cases as manic-depressive.

تلخيص مقال الدكتور عبد القادر هلمى

طبيب بمستشفى الأمراض العقلية بالعباسية

عرض تخطيطى لحالات الهذيان ، تعريفها وتعليلها من الوجهة السيكولوجية مع بيان أسبابها وأنواعها والإشارة إلى مجموعات الأعراض التى توجد فيها وإلى مصيرها من حيث إمكان براء المريض منها أو عدمه . ويعرف الهذيان بأنه حكم خاطئ متمسك منطقياً ، لا يقبله الأشخاص الذين يشابهون المريض من حيث الطبقة الاجتماعية والتربية والعنصر والسن . ولا يظهر الهذيان ويتضح إلا فى حالة فقدان الاستبصار ؛ أما عودة الاستبصار فتؤدى إلى زوال الهذيان .

ومن الوجهة السيكولوجية يعتبر الهذيان بمثابة رغبة لاشعورية غير محققة ؛ فيفصح المريض عنها بعبارة لفظية لا يتفق مدلولها مع الواقع ، كأن يعتقد أنه ملك أو ثرى أو ما شابه ذلك ، أو أنه مضطهد الخ . . . والهذيان من وسائل التعويض عن الخيبة ومن الوسائل الشاذة لإرضاء الرغبات المسكوتة . وهو إما ثابت أو متغير أو مندمج فى نظام من الأحكام المتناسكة تماسكاً منطقياً خصب ، دون أن يكون للمقدمات أى سند فى الواقع . وتوجد حالات الهذيان فى كثير من الأمراض كالهذاء والفصام والنواب والصرع والأمراض العضوية التى يكون فيها الدماغ مصاباً . وهى أطف حلاً عندما تكون متغيرة أو فجائية الظهور أو فى حالة الخبال . أما فى الهذاء حيث يكون الهذيان ثابتاً ومحكم الأجزاء وبطء الظهور فلا يرجح لها شفاء .