

1944

Your Eyes Reveal the Secrets of Your Interests

Herman F. Brandt
Drake University

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Recommended Citation

Brandt, Herman F. (1944) "Your Eyes Reveal the Secrets of Your Interests," *Proceedings of the Iowa Academy of Science*: Vol. 51: No. 1 , Article 40.
Available at: <https://scholarworks.uni.edu/pias/vol51/iss1/40>

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YOUR EYES REVEAL THE SECRETS OF YOUR INTERESTS

HERMAN F. BRANDT

Numerous methods have been employed and tests devised for the purpose of measuring interest and interest values. Subjective measures open to the usual errors of personal judgment, prejudice and observation are those requiring an oral or written response. When individuals are questioned about their interests or preferences, they may not know them accurately or be inclined to answer according to what is expected, or find difficulty in expressing what they feel. Testing interests is for the above reasons often cumbersome and unreliable. In addition to the limitations stated above, individuals, when required to make a verbal or written response, often become self-conscious and, as a result, emotions block their decision.

Interest in an advertisement may not always be interest in the product advertised. Few men, even though they do not smoke, could fail to have some interest in contemporary cigarette advertisements. The illustrations and the excellent artistry of many of these advertisements could be of interest to them from an artistic or economic point of view.

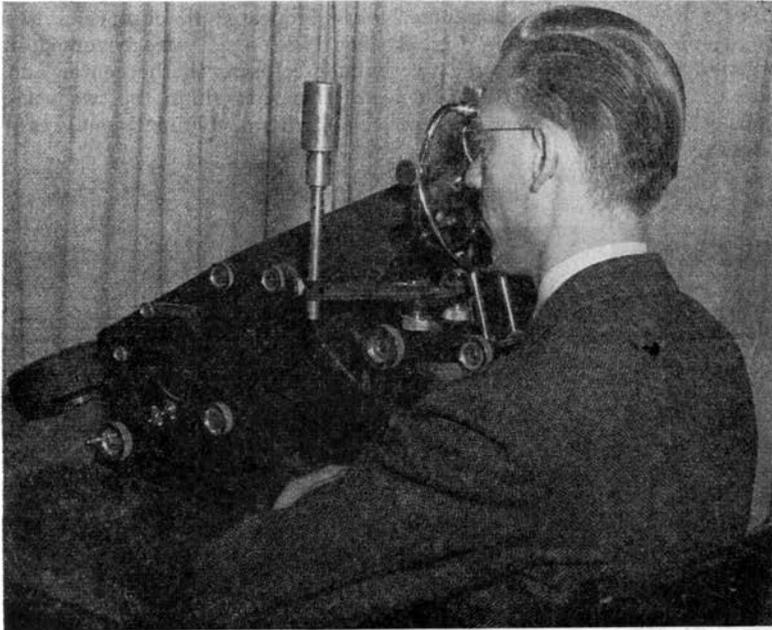


Fig. 1. Camera employed to determine the relative attention value due to position and interest.

Based on the laws of attention, the advertiser realizes that it is essential that he makes his advertisement interesting. Even though this interest in the product may be secondary in the initial stages of observation, it may serve as a means of getting the reader's attention and finally lead to the importance of the product itself. So long as the cause of the interest is not antagonistic to the purchase of goods, it may contribute to influencing the buyer in making the purchase of the product advertised. Tests developed to evaluate attention, generally deal with physical factors as the major determiners of the attentive process. While such determiners are important, the psychologist, educator, artist, or advertiser in addition needs to evaluate the attention value of such psychological factors as interest, curiosity, and the purpose of the observer.

It is self evident that in any type of pictorial layout both the mechanical and the psychological determiners operate simultaneously, but for purposes of analysis and interpretation the two will be separated.

POSITION AS A DETERMINER OF PREFERENCE

To test the relative attention value of center and outside positions, fifty subjects selected at random were requested to observe a two page spread illustrated in Fig. 2. The two pages were reversed in position in order to place the two outside columns in the center and thus determine the relative influence of this variable in the two positions. The relative time was recorded with a bidimensional eye-camera.



Fig. 2. A two page spread with pictures in the two outside and two inside columns.

Table I

Relative Time Spent on Inside and Outside Positions of a Lay-Out

| Position | M | σ EM | M diff | σ E diff | C.R. |
|----------|-------|-------------|--------|-----------------|------|
| Inside | 17.09 | .66 | 5.00 | .91 | 4.56 |
| Outside | 12.09 | .66 | | | |

The percentages as indicated on each of the four columns in Fig. 2 show the relative time subjects devote to the center and outside portions of the spread. Based on 100 per cent, 59.89 per cent of the total time is spent on pictures when appearing in the inside positions while only 40.11 per cent of the total time is devoted to the same pictures when appearing on the outside positions.

Whenever anyone of the four columns is changed from an outside to an inside position, the percentage of time devoted to that area is increased. In those cases where a column is changed from a left outside position to an inside right position the increase is small, however, due to the fact that the left position preference is competing against the center position preference thereby causing two laws of attention to operate. Whenever an inside left competes against an outside right, the difference in attention is far greater than when an inside right competes against an outside left.

SEX—A DETERMINER OF PREFERENCE

A second test to determine the preference of male and female for their own or the opposite sex was designed by using the same exposure



Fig. 3. Relative time in per cent spent by male and female on commodities worn by men and women respectively.

card as was used in the preceding experiment. An equal number of men (25) and women (25) were requested to look at the exposure card illustrated in Fig. 2 as long as they desired.

While the test was originally designed to determine the relative attention value of center and outside positions, it was now employed to determine the relative time men and women devote to looking at their own and the opposite sex.

Data based on research of this problem reveal that men spend 56.95 per cent of the total time looking at women and 43.05 per cent looking at men, with a C. R. of 3.18. Women, based on the results of the same study, spent 47.51 per cent of the total time looking at men and 52.49 per cent looking at women, with a C. R. of 1.18. Men, according to this study, spend significantly more time observing pictures of the opposite sex, while women spend approximately an equal amount of time on the two sexes.

INTEREST AS A DETERMINER OF PREFERENCE

In order to test certain preferences due to interests, seventy-five men and seventy-five women were requested to observe two pages of a mail order catalog, (see Fig. 3) one page being composed of commodities used by women and the other page containing merchandise worn by men. The relative time devoted to each page was again recorded with the eye-movement camera, with results as indicated in Fig. 3 and Tables II and III.

Table II

| Relative Time Spent by Men Observing Men's and Women's Shoes | | | | | |
|--|------|-------------|--------|-----------------|------|
| | M | σ EM | M diff | σ E diff | C.R. |
| Men's Shoes | 9.50 | .67 | | | |
| Women's Shoes | 5.50 | .07 | 4.00 | .93 | 4.30 |

Based on the results as indicated in Fig. 3, men spent significantly more time on articles related to their needs while women spent more time with articles of interest to them. When comparing the percentage of time men spend on women's supplies and the time women spend on the men's supplies, it is apparent that women spend relatively more time on articles of masculine interests than men do on articles generally used by women. This difference is likely due to the fact that women purchase more than eighty per cent of all household supplies.

Table III

| Relative Time Spent By Women Observing Men's and Women's Shoes | | | | | |
|--|------|-------------|--------|-----------------|------|
| | M | σ EM | M diff | σ E diff | C.R. |
| Men's Shoes | 7.39 | .69 | | | |
| Women's Shoes | 7.61 | .69 | .22 | .95 | .23 |

Based on the results of the above studies, it is clear that subjects spend more time on those areas in which they may be interested. To

evaluate and announce our own interests is in most cases impractical and unsound. It may in many cases yield preferences which are supported by rationalization or a type of justification for a choice which in reality are not truly representations of the real unconscious tendencies.

The study of ocular patterns is significant, because it suggests that one type of performance is preferred to another and that this preference is influenced by the physical structure of the field, the physiological constitution of the senses, the organization of the nervous system, and the habits, interests, and aptitudes of the individual.

Ocular patterns are as individual as the speech or walking habits of human individuals. However, certain characteristic eye movements are common to all, and on the basis of these similarities the science of psychology may arrive at sound conclusions. The discovery of these principles provides valuable information for the analysis and interpretation of human behavior.

If properly employed, Ocular Photography can reveal what catches and sustains attention, and can indicate centers of interest. This is expressed in terms of the location, frequency and duration of eye fixations, as well as in the direction and sequence of excursions. Ocular performance is thus becoming a measure of the attention value of lines, space, size, position, color, objects or implied motion. It serves as a measure for determining the relative precedence of headline, slogans, pictures, or text in the advertisement and determines for it the power of its carry-through effect.

However, this technique not only reveals the physical variables and their effect in gaining and sustaining attention; in addition, it divulges the secrets of the interests, purposes, and desires of the observer. Even the habits of the individuals may be made known when ocular patterns are analyzed.

If these findings of ocular performance are practically applied, the artists, educators, advertisers, and editorial writers alike may attach a relative attention value to specified areas of the respective determiners of attention.

Proceeding on the assumption that interests are symptoms of abilities, it is likely that aptitude tests can be devised employing Ocular Photography to determine certain vocational interests and aptitude of individuals. If interests are symptoms of abilities and if we attend to that which interests us, it seems feasible that certain abilities could be discovered by means of this technique. Interest and attention are co-extensive in that they constitute the experience itself. Schools and industries must ultimately reckon with this human attribute, and if the scientific study of ocular performance will throw light on this vital phase of human adjustment, this science will have served a valuable end.

Since interest presupposes previous experience, information, or a degree of familiarity, a sense of satisfaction, or a feeling of worth and advantage, an unconsciously expressed act of likes or dislikes and an active effort to respond to respective situations are implied. Ocular Photography may be the logical approach to the scientific

study of this important problem. Interests are not superficial but are based on a neural organization which owes its source to native capacity as well as to acquired habit patterns of the individual.

The degree to which these interests may be discovered will depend largely upon the adequacy of the design of the experiment itself. To know that human interests exist and to discover to what degree they function is to create a physical setting in which individuals have an opportunity to express their preference and thus be objectively measured and evaluated.

It is likely that by means of this approach we shall be able to discover clerical, mechanical, social, and art abilities of human individuals which will predetermine the type of training necessary, as well as the selection of a vocation properly adapted to the respective interests, capacities, and abilities of professional and non-professional men and women. Such ocular patterns may constitute a graphic representation of human inclinations and desires and, if properly obtained, yield indispensable information for teachers, parents, and vocational counselors alike.

DRAKE UNIVERSITY
DES MOINES, IOWA