

THE KING-BROWN EFFECT: AN EXPLORATORY
INVESTIGATION OF A MODEL OF
PSYCHOLOGICAL JUDGMENT

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CHAPTER I

INTRODUCTION

During the decade of the 1950's and the early 1960's Martin Luther King and The National Association for the Advancement of Colored People (NAACP) were, in the opinion of the author, viewed as radicals and extremists by the majority of the population in the United States. After the advent of H. Rap Brown and the Black Panthers, however, the position advocated by Martin Luther King appeared to be far less extreme than it had previously. In other words, the advent of a radically extreme position (H. Rap Brown) made a less extreme but formerly rejected position more acceptable (Martin Luther King).

The notion that a radically extreme position can make a moderately extreme and formerly rejected position more acceptable has a good deal of intuitive appeal, and is by no means a new phenomenon. Boring (1951, pp. 61-62), for example, noted that Gall and Spurzheim's contributions in the area of phrenology had a similar effect on Flourens' work in the area of localization of brain function:

...by going to extremes, Gall made a radical but less extreme view actually seem conservative....Flourens' position was much strengthened because he could appear as a conservative correcting the pseudo-science of Gall and Spurzheim.

The problem to be explored in this research concerns the effect a radically extreme position has on a moderately extreme and formerly rejected position. Specifically, this research was designed to determine

whether or not a "position" (i.e. an opinion, statement of belief, expression of policy, etc.) that was once rejected by an individual or group can be made more acceptable by subsequently exposing the individual or group to a position that is even more unacceptable.

The process described above--exposing an individual or group to a position they reject, then exposing them to an even more unacceptable position of the same kind, and finally reintroducing the initially rejected position in the hope they will now accept it--has been labeled the King-Brown effect. The present study was designed to evaluate the validity of this effect under laboratory conditions.

The purpose of this investigation is to conduct exploratory research on the King-Brown effect, working within the theoretical framework provided by Sherif and Hovland's (1961) Assimilation-Contrast Theory. Two psychophysical experiments have been conducted in an attempt to assess the effect a radically extreme position has on a moderately extreme and formerly rejected position. These experiments were designed to test the reliability and validity of the King-Brown effect.

The hypothesis tested in both Experiment I and II was that the introduction of a radically extreme position will make a moderately extreme and formerly rejected position more acceptable.

CHAPTER II

REVIEW OF THE LITERATURE

Theories concerning the formation and change of attitudes constitute one of the oldest, most central areas in psychology. The emergence of this hypothetical construct was a fortuitous result of the Wundtians investigations of reaction time (Boring, 1950, pp. 146 & 405). Specifically, in his work on reaction times, L. Lange found that subjects who were prepared to respond to a signal performed better than subjects who did not have a set (aufgabe) to respond.

One would expect a construct as old as attitude to be well defined, and that theories pertaining to the formation and change of attitudes would be well substantiated. This, however, is not the case. One can readily locate a number of different and divergent definitions of attitude, theories of attitude formation, and models of attitude change (Fishbein, 1967; Insko, 1967; Kiesler, Collins and Miller, 1969). With respect to a definition of attitude, Allport (1935, pp. 804-805) cites 25 different meanings of the construct, and his discussion doesn't include any of the research conducted during the past 37 years.

Theories pertaining to the development of an attitude and methods of attitude change are ambiguous, and often lead to contradictory predictions and explanations. In general, psychologists have categorized attitude theories into two very broad groups, those emphasizing an objective, behavioral approach, and those emphasizing a subjective, cognitive approach.

General Discussion of Assimilation-

Contrast Theory

One of the more interesting cognitive theories of attitude formation and change is Sherif and Hovland's (1961) Assimilation-Contrast Theory. This theory, which provides the theoretical framework for this research, assumes that the basis of attitude formation is a categorization process wherein stimuli are placed along a continuum. Specifically, the authors state:

An individual confronted with a series of stimuli tends to form a psychological scale for judgment, even when the stimulus series is not well graded and when explicit standards for judgment are lacking (Sherif and Hovland, 1961, p. 179).

The scale the individual forms as a result of his categorization process may be thought of as his frame of reference for the class of stimuli in question. Such frames of reference are influenced by factors such as the objectivity of the stimuli being judged, the internal and external factors of the person doing the judging, and the phenomenon known as anchoring.

One of the most important concepts in Assimilation-Contrast Theory is the anchor. A succinct discussion of this concept is provided by Sherif and Sherif (1969, p. 78):

In any given instance, all of the stimuli and past experiences of the person that compose the frame of reference will not have equal weight. Those that contribute more to the psychological pattern are termed anchors.

The factors that induce one component of a frame of reference "contribute more to the psychological pattern" and thus make the component an anchor, are one or more of the following: (a) extremity of

the stimulus relative to the other components of the frame of reference; (b) the end components of a series of stimuli that constitute a frame of reference; and, (c) the frequency with which a component of a frame of reference is presented (Sherif and Hovland, 1961, p. 29; Sherif and Sherif, 1969, p. 77).

The anchoring phenomenon is a particularly important component of the attitude change model proposed by Assimilation-Contrast Theory. Sherif and Hovland (1961, Ch. 3) contend the introduction of an anchor at a point just beyond the end of an individual's frame of reference will produce assimilation; that is, the individual's frame of reference will shift toward the anchor. However, introducing anchors that are "considerably distant" from either end points of an individual's frame of reference will produce a contrast effect; that is, the person's frame of reference will shift away from the anchor.

Sherif and Hovland draw the primary support for their theory from a psychophysical study conducted by Sherif, Taub and Hovland (1958). The prime purpose of this investigation was to establish a psychophysical model that demonstrated the operation of assimilation and contrast effects in judgment. Specifically, the two hypothesis tested were:

...The introduction of anchors at the end points of the series or immediately above and below the series will cause displacement in the distribution of judgments of series stimuli in the direction of the anchor (i.e., Assimilation).

The introduction of anchors at points at increasing distances from the end points of the series will cause the distribution of judgments to be displaced in the direction away from the anchor and the whole judgmental scale will be constricted (i.e., Contrast).

To test these hypotheses the investigators had six male Ss participate in ten different judgment situations. During the first of these sessions each S made 50 judgments of each of six different weights (55 to 141 gm.) via the method of absolute judgment (single stimuli). Following this "no anchor" session each S was exposed to nine different anchored sessions during which the experimenters used the method of constant stimuli to obtain judgments. In the first of the anchored sessions the same six weights that were used in the no anchor session were employed, with the heaviest weight (141 gm.) serving as the standard or anchor. On each of the remaining sessions the first five of the original six weights were used, and the anchor weight was made progressively heavier. Thus each of the nine anchored sessions consisted of a stimulus series which included the first five weights used in the original no anchor session (i.e., 55 to 125 gm.) plus one anchor. The anchors ranged from 141 to 347 grams. The results of this investigation are presented in Figure 1. While no statistical analyses were performed, the results are clearly in support of the investigators hypotheses and the assumptions of Assimilation-Contrast Theory. Anchors introduced at the end point of the subjects' stimulus series (i.e., frame of reference) were assimilated while more remote anchors set up a contrast effect.

It should be emphasized that this single piece of research did not mark the emergence of the concepts of assimilation or contrast in psychological research. A number of investigators have conducted research on these two phenomena, and Assimilation-Contrast Theory gains additional support from a review of the literature pertaining to the effects of assimilation and contrast on judgment.

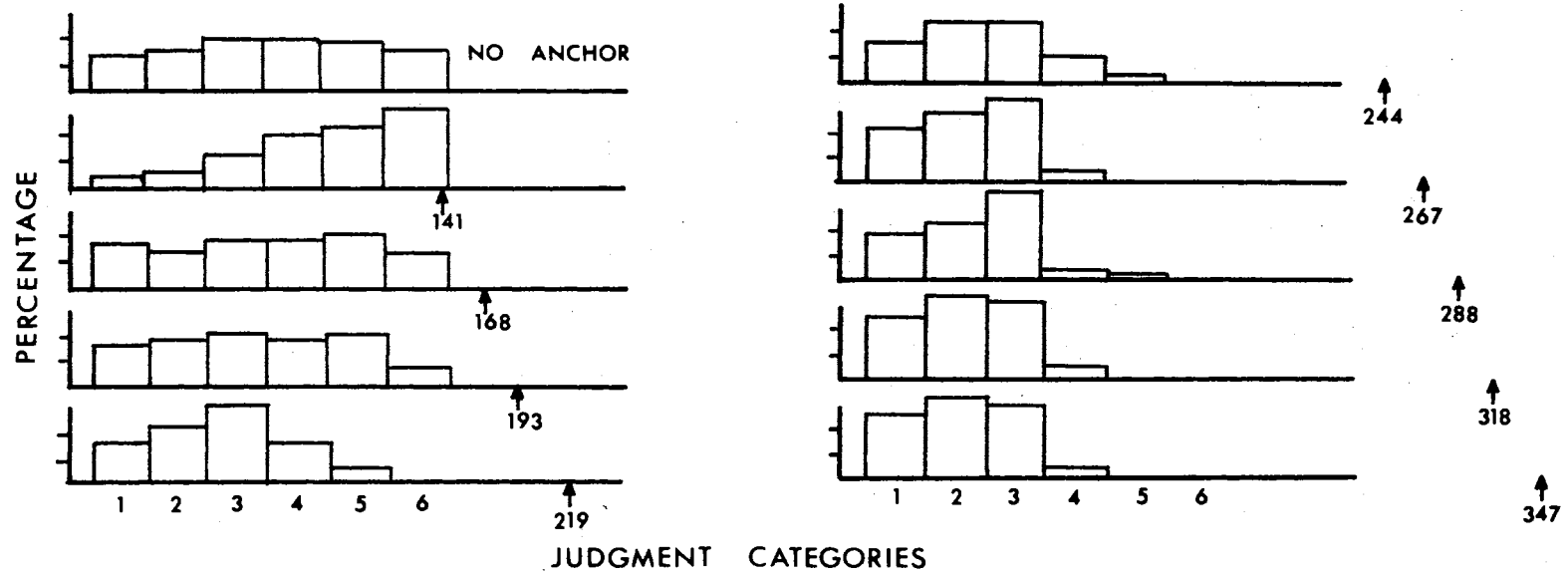


Figure 1. Experimental Demonstration of Assimilation and Contrast Effects in Psychophysical Judgments (from Sherif, Taub and Hovland, 1958, p. 152)

Contrast Effects in Judgment

Two of the earliest discussions of contrast effects appeared during the last third of the nineteenth century in the works of Helmholtz (Warren and Warren, 1968, p. 157) and Hering (Woodworth, 1938, pp. 567-571). Helmholtz advanced a "central" theory of contrast; that is, he viewed contrast as a psychological process wherein the individual cortically integrated the stimulus and its context. Conversely, Hering adopted what became known as a "peripheral" theory of contrast. It was his opinion that contrast was essentially a sensory phenomenon. Color contrast, for example, is evoked because "...the external stimulus evoked a certain chemical reaction in one region [of the retina] and induced the opposite reaction in the adjacent region," (Woodworth, 1938, p. 569).

The work of Helmholtz and Hering no doubt provided a good deal of impetus for the vast quantity of research that has been conducted in this area. The present review of the literature pertaining to contrast effects in judgment will be organized in two categories: (a) research pertaining to contrast effects in relatively simple judgments, and (b) research related to contrast effects produced in relatively complex judgments.

With respect to research pertaining to the demonstration of contrast effects in relatively simple judgments, a number of investigators have demonstrated contrast effects using visual stimuli. Bacon, Rood and Washburn (1914), in one of the earliest demonstration of contrast, set out to test the following hypothesis:

The pleasure of an agreeable experience is heightened if it is preceded by a disagreeable experience, and an impression in itself unpleasant may be felt as pleasant if a more unpleasant state has been its antecedent (p. 291).

As predicted, they found neutral colors were more positively evaluated following the presentation of relatively unpleasant colors than when they were preceded by relatively pleasant colors.

Findings similar to these have been reported by other experimenters. Hunt and Volkmann (1937), using internal or implicit anchors and a design similar to that of Bacon, et al., also found contrast effects with anchoring of visual stimuli. Rogers (1941) has demonstrated a direct relationship between the remoteness of the anchor and the amount of contrast displayed in judgment. Immergluck (1962) found "goodness-of-form" judgments of geometric figures were higher when the forms used were presented in the context of random lines than when the same figures were presented as a part of a symmetrical configuration.

Pratt (1933a, 1933b) has found evidence suggesting the operation of contrast effects in judgments of auditory stimuli. Specifically, he presented four Ss with five different, equal-interval auditory stimuli, first by the method of single stimuli, and then by the method of constant stimuli with the middle stimulus serving as the anchor. The method of single stimuli yielded a PSE of 1.61, while the method of constant stimuli produced a distribution with a PSE of 1.39, demonstrating a shift away from the anchor. Needham (1935), also using auditory stimuli, found that a "soft" stimulus series was judged less intense than normal following the introduction of a "loud" anchor. Conversely, he found a "loud" series was judged more intense following the introduction of a "soft" anchor. Long (1937) conducted a study similar to Needham's, and also found contrast effects in auditory judgments.

Several experimenters, in addition to Sherif, et al. (1958), have demonstrated contrast effects in judgments using the classical method of lifted weights. Rogers (1941), in the second part of the study cited above, found a direct relationship between the distance between the anchor and the original stimulus series and the amount of contrast displayed. That is, as the size of the anchor increased, the amount of contrast displayed also increased.

Helson (1948) compared the judgments of five stimuli made using the method of single stimuli with constant stimulus judgments of the same stimuli made under "heavy" and "light" anchor conditions (anchors = 90 and 900 gm). He found the average of the stimulus series was lower following the heavy anchor, and higher following the light anchor when compared with base-line (i.e. single stimuli) judgments. Heintz (1950), also working with lifted weights, conducted a study which further substantiates the results obtained by Rogers, Helson, and Sherif, et al.

Contrast effects have been demonstrated with respect to olfactory and temporal judgments as well as the sense modalities mentioned above. Beebe-Center (1929) and Cohen (1937) have demonstrated that neutral olfactory stimuli are judged more pleasant following unpleasant anchors, and more unpleasant following pleasant anchors when compared to non-anchored, base-line conditions. Postman and Miller (1945) demonstrated the existence of contrast effects in temporal judgments.

In addition to the above literature concerning contrast effects with relatively simple stimuli, much research has demonstrated that contrast effects may be produced in judgmental situations incorporating more complex stimuli. For example, Hunt (1941) conducted an extensive investigation wherein he examined contrast effects in judgments

concerning affective, aesthetic, intellectual and ethical stimuli. The basic technique followed throughout his entire study was to present the subjects with a series of stimuli (e.g., 12 color squares, 12 ivory carvings, eight art reproductions, eight types of crimes), and ask them to rate these on an 11-point continuum. Later, he selected one of the end stimuli to serve as the anchor, and was able to demonstrate contrast effects in all the different types of judgment except those pertaining to the art reproductions.

McGarvey (1943) conducted a similar study in which he sought to determine whether or not contrast effects pertain to judgments of the social prestige of various types of occupations as well as the desirability of different types of social behaviors. McGarvey had six graduate students scale a large number of both types of stimuli, and then presented these stimuli to the subjects under anchored and non-anchored conditions. The results he obtained were in accord with the previous literature; the introduction of an anchor produced contrast effects in the subjects' judgments of both occupational prestige and the desirability of certain types of social behavior. Furthermore, as was the case in the study conducted by Rogers, McGarvey found the greater the distance between the anchor and the stimulus series being tested, the greater the contrast effect produced.

The classic study demonstrating contrast effects in judgments of social stimuli, and one which represents a departure from the methodologies employed in the research cited above, was conducted by Chapman and Volkmann (1939). Using basic psychology students as their Ss, these investigators selected four groups and asked the members of each group to estimate how well they thought they could perform on a 50-item

test of literary acquaintance. Prior to making their judgments, however, the groups received some additional instructions; group B was told that a group of literary critics had made an average score of 37.2 on the test; group C was told a group of WPA workers had averaged 37.2 on the test; group D was told a group of college students made an average score of 37.2 on the test; and group A was given no special instructions. The results were in line with the literature on contrast effects: both the high and low-anchored groups shifted away from the anchors, with group B underestimating their performance and group C overestimating their performance.

Research conducted by Campbell, Hunt, and Lewis (1957); Bieri, Orcutt and Leaman (1963); and Weiss (1961) further demonstrates the operation of contrast effects in social judgments, and should be of particular interest to the clinical psychologist. The material judged in the first two studies consisted of responses obtained from patients in mental hospitals, and the material judged in the last of these three studies concerned the severity of punishment warranted by juvenile offenses. In the Campbell, et al. study the investigators first obtained data in response to a word association test, and then categorized it into three degrees of disorganization and eccentricity (high, medium, and low). Forty undergraduate Ss were then presented with these stimuli in a high-medium-low arrangement, while another 40 undergraduate Ss received the same material in a low-medium-high arrangements. These investigators found the first set of subjects tended to under-rate the medium stimulus materials, while the second set of Ss tended to over-rate the medium stimulus material.

A study similar to the Campbell, et al. (1957) study was conducted by Bieri, Orcutt, and Leaman (1963). These investigators had 176 undergraduate Ss rate behavioral descriptions of mental patients for general psychopathology. They found that Ss given low pathology descriptions first were prone to over-rate subsequent cases, while those given high pathology cases first tended to under-rate cases presented later.

Weiss (1961) had two groups of college students rate 20 statements pertaining to the use of punishment on juvenile delinquents. The experimental group was told to use the following statement as indicative of statements belonging to the eleventh category of an 11-point continuum: "All delinquents, regardless of the nature of the offense, should be executed." The control group did not receive this anchor. The results were in the predicted direction: the experimental group rated the 20 offenses significantly lower than did the control group.

Another complex stimulus domain which has been found to be susceptible to contrast effects is the area of attitude scaling. The classic study in this area was conducted by Hovland and Sherif (1952) wherein they demonstrated the manner in which internal anchors (i.e., the judge's own position or attitude) operated to product contrast effects in attitude scale construction.

Hovland and Sherif's 1952 study was essentially a refutation of Hinckley's (1932) position that the attitude held by the judged used in Thurstone's method of Equal appearing Intervals does not operate when the judges are sorting attitude statements. In the Hinckley study judges with pro and anti-Negro attitudes sorted 114 items dealing with

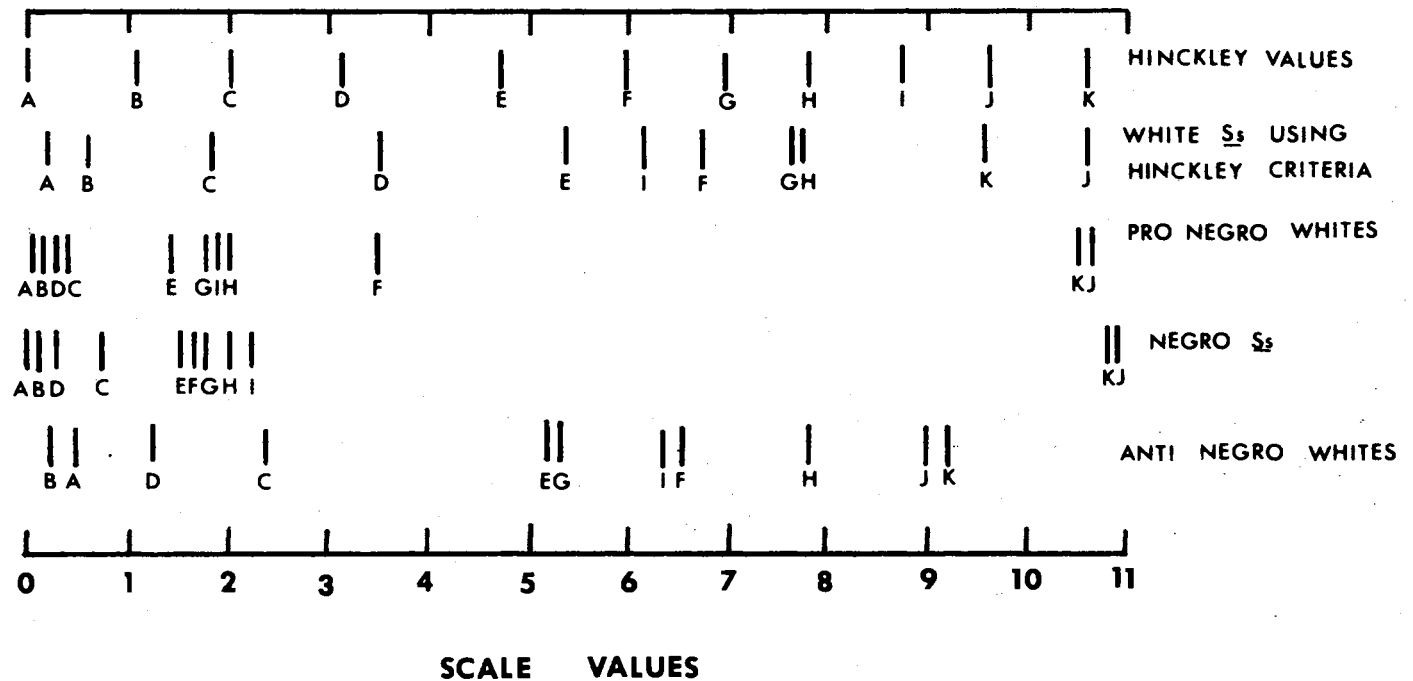


Figure 2. Values Obtained for Eleven Representative Items From the Hinckley (1932) and Hovland and Sherif (1952) Investigations of the Effects of Judges' Own Position on Equal Appearing Interval Method of Sorting (cited in Hovland and Sherif, 1952)

the social position of Negroes by Thurstone's method of Equal Appearing Intervals. He reported a correlation of $+0.98$ between the average scale values obtained from the two groups.

Hovland and Sherif (1952) contend Hinckley's methods distorted his results. Their criticism is focused on Hinckley's rejection of all the judgments made by any judge who placed more than 30 items in one category. While Hinckley believed such behavior was indicative of carelessness, Hovland and Sherif contend such behavior suggests the operation of a strong, internal anchor (i.e., their own position or attitude of the judge).

Hovland and Sherif (1952) conducted a systematic replication of Hinckley's study using four different types of judge, 103 Negroes, 17 anti-Negro whites, 19 pro-Negro whites, and 158 white students drawn from two universities. Each group was given the same 114 items used by Hinckley, and told to sort them in accordance with Thurstone's method of Equal Appearing Intervals. The results of these sortings for 11 representative items are displayed in Figure 2.

The results demonstrate the operation of internal anchors (i.e., the judge's own position or attitude), as well as the contrast effects that result from such anchors. Negro judges and pro-Negro whites tended to displace neutral items toward the negative end of the continuum and anti-Negro judges showed a slight tendency to positively evaluate neutral items.

Additional support for the operation of contrast effects in attitudinal judgments is presented by Hovland, Harvey, and Sherif (1957), Manis (1960), Sherif and Hovland (1953), Webb (1954), and Zavalloni and Cook (1965). Prothro (1957) has also found support for the contrast

effects demonstrated by Hovland and Sherif (1952) when the attitude domain under consideration pertained to Negroes and their social position. However, in an investigation of the effects of a judge's position on the scaling of attitude items concerning Jews, Prothro (1955) found no contrast effects and few differences between the ratings made by American and Arabian University students.

Assimilation Effects in Judgment

Assimilation refers to the process in which the introduction of an anchor or new position just beyond the individual's frame of reference yields a shift in judgments of the individual's frame of reference toward the anchor or new position, rather than away from it as in the phenomenon of contrast. Bezold's color-mixture effect (Burnham, 1953) represents one of the earliest formal demonstrations of the assimilation phenomenon. Bezold found that when colored areas were overlaid with white arabesques, the colored areas appeared lighter than when overlaid with black arabesques. Bezold called this phenomenon a reversal of classical contrast due to the fact that the law of contrast yields the prediction that white overlays should have the effect of making the colored areas appear darker, and dark overlays should have made the colored areas look lighter.

Newhall (1942) investigated the Bezold effect and found some support for the phenomenon. Using copies of Riedel's face-figure which consists of identical gray outlines of a human head with hat on black and white backgrounds, Newhall showed the stimuli to a number of observers at varying distances. He found approximately 15 percent of his SS reported a reversal of classical contrast (i.e., assimilation); that

is, 15 percent reported the gray face on the white background was lighter than the same gray face on the dark background. Newhall also found that contrast reversal occurred at close distance (5 ft.) while contrast occurred at longer distances (15 ft.).

Burnham (1953) conducted a study on the reversal of classical contrast wherein he examined the interaction of this effect with eye movement. Burnham mounted identical light blue patches on neutral surrounds that varied in lightness and in the complexity of the border surrounding the blue patch. Seven stimuli were used in the study and were presented via the method of paired comparisons with Ss indicating which stimuli in each pair was the lighter of the two. Two groups of Ss were used, one group was instructed to fixate their gaze on a point located between the stimuli while members of the other group were allowed to look directly at the two stimuli. Burnham found Ss in the group who were allowed to look directly at the stimuli showed contrast reversal whereas Ss in the fixation group showed contrast effects. Burnham reasoned contrast reversal resulted from diffusive color mixture, and that eye movement from one stimulus to another promoted mixture and yielded contrast reversal whereas fixation reduced color mixture and yielded a contrast effect.

The classic study of contrast reversal, and the first study wherein this effect was labeled assimilation, was conducted by Sherif, Taub and Hovland (1958). To reiterate the discussion of this experiment presented at the beginning of this chapter, these investigators found that anchors introduced at the end point of a S's frame of reference caused the S's frame of reference to shift toward the anchor (i.e.,

assimilation), while more remote anchors caused the S's frame of reference to shift away from the anchor (i.e., contrast).

The results of the Sherif, Taub and Hovland (1958) study have been criticized by several sources, one of which is a study conducted by Bravo and Mayzner (1961). These authors used the same procedures used in the Sherif, et al. study except the Ss lifted the weights directly and the only anchors used were the first and the last (i.e. 141 and 347 gm.). Their results offered support for contrast effects, but no support (statistical or intuitive) was found for the phenomenon of assimilation.

One major source of criticism of the Sherif, Taub and Hovland (1958) study, and Assimilation Contrast Theory in general, stems from Helson (1964a, 1964b) and the proponents of Adaptation Level Theory. The basic position of the Adaptation Level theorists is a frame-of-reference approach wherein stimuli are regarded as members of classes (Helson, 1964a, Ch. 4). Proponents of this position focus their attention...

...on the way each stimulus is ordered both as a function of membership in its class and as a result of the adjustment made by the organism to the class as a whole. The basic assumption is that stimuli are judged with respect to internal norms representing the pooled effects of present and past stimulation... (Helson, 1964a, p. 126).

A key component in the above statement is "internal norms." The internal norm is the adaptation level an individual forms as a result of experiencing stimuli within some frame of reference. The adaptation level appears as a neutral or indifferent point somewhere in the individual's frame of reference and stimuli falling above and below this hypothetical construct are judged as heavy and light, respectively.

Both the phenomenon of contrast and assimilation are dealt with explicitly by Adaptation Level Theory (Helson, 1964a, Ch. 4). Contrast occurs when an anchor beyond the Ss original frame of reference is introduced, and has the net effect of shifting A.L. toward the anchor (Helson, 1964a, p. 227). Such anchors have the effect of altering Ss perceived range of stimuli. Specifically, these anchors expand the perceived range of stimuli or frame of reference and move S's indifference point (i.e., A.L.) toward the anchor. Moreover, this expansion of range is inversely proportional to the difference between the anchor and the original frame of reference. Anchors considerably beyond the original frame of reference produce proportionately less change in S's A.L. than do anchors introduced just beyond the original frame of reference.

According to Assimilation-Contrast Theory (Sherif & Hovland, 1960, Ch. 3), anchors introduced at or near the end points of an individual's frame of reference yield an assimilation effect; that is, they cause S's distribution of judgments to shift toward the anchor. In terms of Adaptation Level Theory assimilation is evidenced by a compression of the individual's perceived range of stimuli and a shift of A.L. away from the anchor.

Parducci and Marshall (1962) conducted a study designed to examine the validity of the assimilation phenomenon within the theoretical framework of Adaptation Level Theory. Using the same basic weight series (55,75,93,109,125,141 gm) used by Sherif et al. (1958), these investigators had one group of Ss make judgments under the following anchor conditions: No Anchor, Heavy Anchor (standard = 141 gm.), Anchor = 5 (i.e., anchor assigned to category five instead of six). A second group was exposed to the Heavy Anchor and then the No Anchor

conditions. The third group experienced only the Anchor = 5 treatment, while the fourth group was exposed to a 7-category treatment, wherein the anchor was assigned to category six, but Ss were allowed to make their judgments in terms of seven categories. Finally, the last group experienced a Light Anchor Treatment (anchor = 55 gm.). Ten Ss served in each group, and each S made 288 responses under each condition. The results of this study are presented in Table I.

TABLE I
MEAN, MEDIANS AND ADAPTATION LEVELS FROM
PARDUCCI AND MARSHALL (1962) STUDY

Treatment	A.L.	Mean	Median
No Anchor 1st	103	3.45	3.50
Heavy Anchor 1st	87	4.18	4.29
No Anchor 2nd	94	3.88	3.92
Heavy Anchor 2nd	93	3.88	4.05
Anchor-5	94	3.80	3.89
Anchor-5 3rd	101	3.44	3.59
Light Anchor	105	3.39	3.44
7-Categories	95	3.69	4.40

The above data are very important to a discussion of Assimilation-Contrast Theory and Adaptation Level Theory as they clarify some points of difference between the two theories. One thing indicated by the above data is the presence of assimilation effects under the Heavy Anchor condition. This anchor (141 gm.) is the same one that produced assimilation effects in the Sherif et al. (1958) study.

This confirmation of the phenomenon of assimilation is partially clouded by the presence of highly significant order effects. For example, the group receiving the No Anchor condition second responded quite differently from Ss who experienced this treatment first. Hence, Parducci and Marshall argue that Sherif, et al.'s procedures confounded their results.

It is also apparent from an examination of the data that the response categories available to Ss substantially alters the amount of assimilation displayed. Looking at the adaptation levels and measures of central tendency for the A-5 and 7-Category treatments, it is apparent that when the anchor is not the heaviest category, less assimilation occurs. Parducci and Marshall argue this is due to the fact that the designated anchor is not the real standard of comparison - the adaptation level is. After S has made several judgments and is then presented (via the method of constant stimuli) with the standard, weight six, and the comparison stimulus, weight five, the subjective comparison of these two weights is not made solely in terms of just the two weights involved. Rather, the standard is the A.L. which is made up of a focal stimulus (the standard), background stimuli (the current judgmental environment), and residual stimuli (the residual effects of previous judgments). The net effect is the perceived value of the standard stimulus is lower than the perceived value of the comparison stimulus (weight five); hence, S judges weight five to be heavier than weight six.

The Parducci and Marshall (1962) study raises a serious question regarding the Assimilation-Contrast Theory; specifically, is the phenomenon of assimilation valid and reliable? If one examines the

distributions and measures of central tendency of the Parducci and Marshall study (Table I), in addition to the previous literature cited, the answer is yes. However, Parducci and Marshall suggest the assimilation displayed in their study as well as others is an artifact of experimental methodology. Specifically, they believe assimilation results from the instructions provided §§ regarding the responses available. In addition, it is argued the assimilation effects reported by Sherif, Taub and Hovland (1958) were confounded by order effects.

Although it is apparent the assimilation effects reported by Sherif et al. (1958) are confounded, data from other sources indicates assimilation is a valid and reliable phenomenon. Parducci and Marshall's data (Table I) suggest this. If assimilation was not occurring then the adaptation levels resulting from treatment conditions A-5 and 7-Category would have been equal to or greater than the adaptation level obtained under the No Anchor 1st condition. The fact that the adaptation level in these two treatments shifted away from the anchor indicates the operation of assimilation effects.

Research conducted by Helson and his associates also confirms the operation of assimilation effects. Helson and Rohles (1959) and Helson and Joy (1962), have conducted research on the phenomena of assimilation and contrast which represents a logical extension of earlier work on the Bezold effect. Rather than using the artistic designs used in previous demonstrations of the Bezold effect, these investigators used 7 x 11 inch gray cards ruled with white lines on one half and black lines on the other half. In the Helson and Rohles (1959) study white and black lines of 1 mm. were used, with the gray separations varying from 3 to 55 mm. in steps of 4mm. In the Helson and Joy (1962) study the width of the

white and black lines was also varied. Six white and black line widths and six gray separation widths were used, with the line widths and separations equal to 3,10,20,30,40 and 50 mm. The results of these two studies are very similar, and the results of the Helson and Joy (1962) study are presented in Figure 3.

The data from the Helson and Rohles (1959) study indicates that the gray separations overlaid with white lines are always perceived lighter than the gray separations overlaid with black lines. The Helson and Joy data (Figure 3) suggests this assimilation effect persists with almost all line separations up to the point where line width equals 10 mm. From that point on contrast occurs.

The results of these two studies indicate two things. First, assimilation and contrast are valid and reliable phenomena. Second, these two phenomena are:

...far from being mutually exclusive processes...
 Assimilation and contrast are complimentary processes which plot on a single continuum separated by a neutral zone in which white and black lines neither lighten nor darken intervening gray areas. (Helson, 1964b, p. 32).

Theoretical Foundation of the King-Brown Effect

The King-Brown effect has been developed within the theoretical framework provided by Assimilation-Contrast Theory (Sherif & Hovland, 1961). To reiterate, these investigators contend that when an individual is confronted with a series of stimuli he tends to organize them along some psychological continuum (a frame of reference). Certain of these stimuli (i.e., novel or frequently repeated stimuli or those occurring at the end points of the continuum) serve as anchors for the other stimuli. When new anchors are introduced which are just beyond the

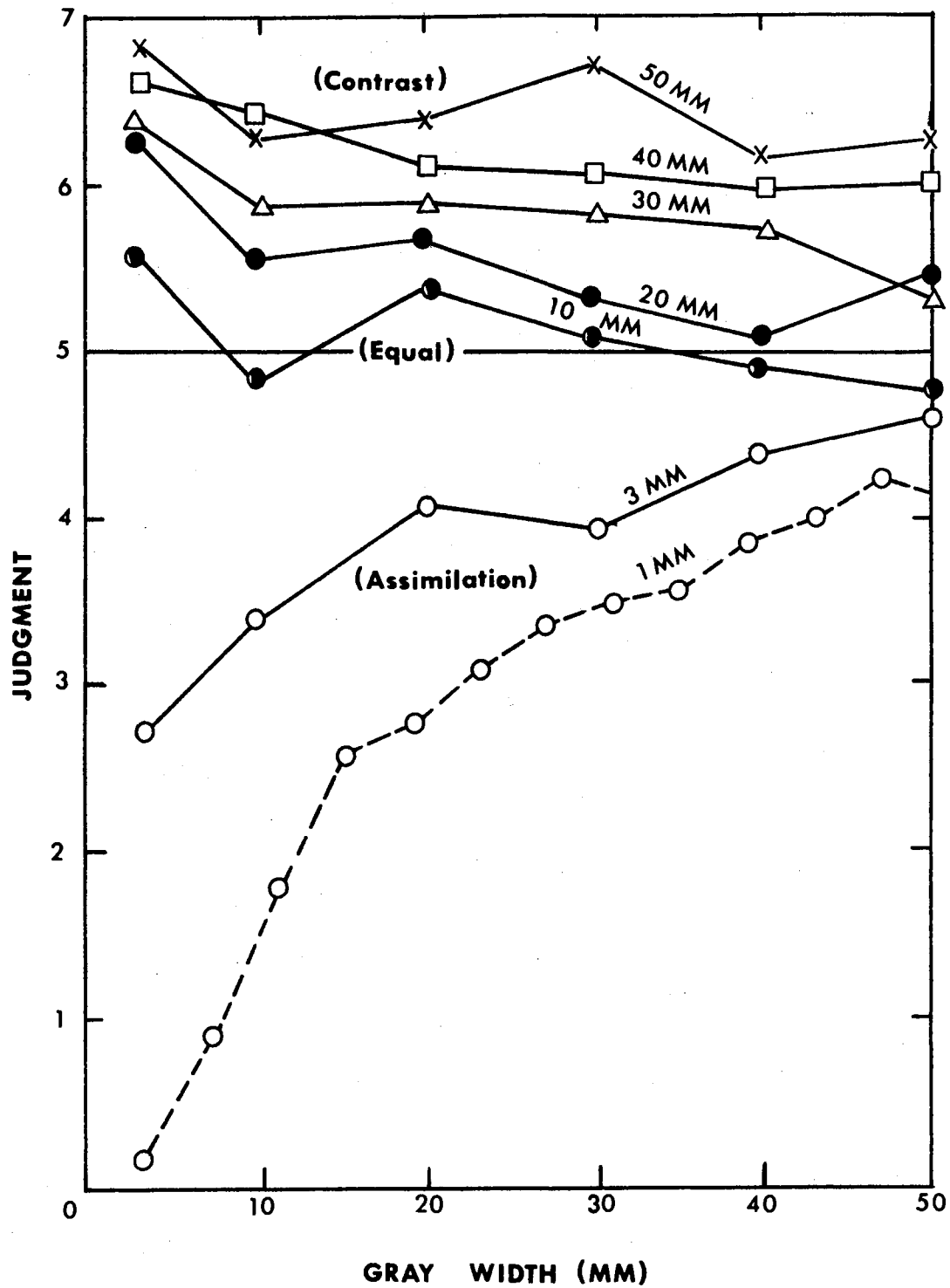


Figure 3. Contrast and Assimilation as a Function of Line Width for Each Line Separation. The Parameter of the Curve is Line Width (Helson, 1964a, p. 285)

individual's frame of reference assimilation results wherein the distribution of stimuli along the psychological continuum will be displaced toward the anchor. However, when an anchor is introduced that is quite discrepant from the individual's frame of reference a contrast effect results. An illustration of these two phenomenon is presented in Figure 4.

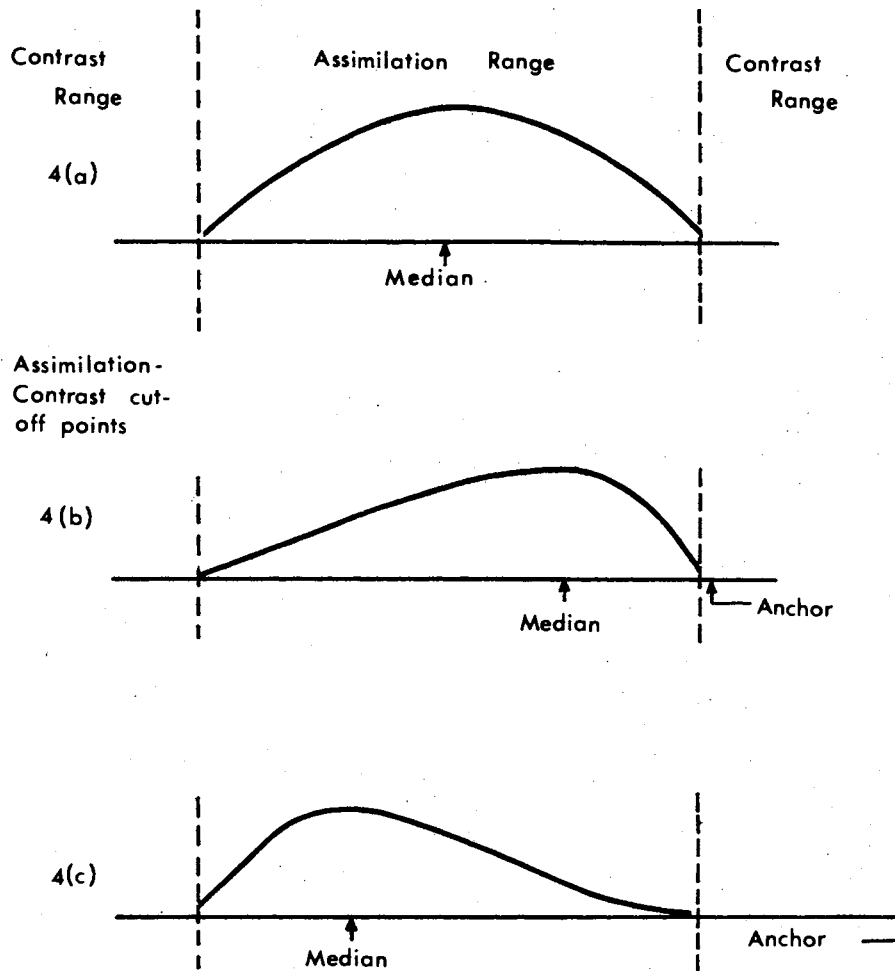


Figure 4. Graphical Representation of Assimilation-Contrast Theory Displaying Formation of Individual's Original Frame of Reference (4a), Assimilation Effects (4b), and Contrast Effects (4c) (Adapted from Sherif and Hovland, 1961, p. 49)

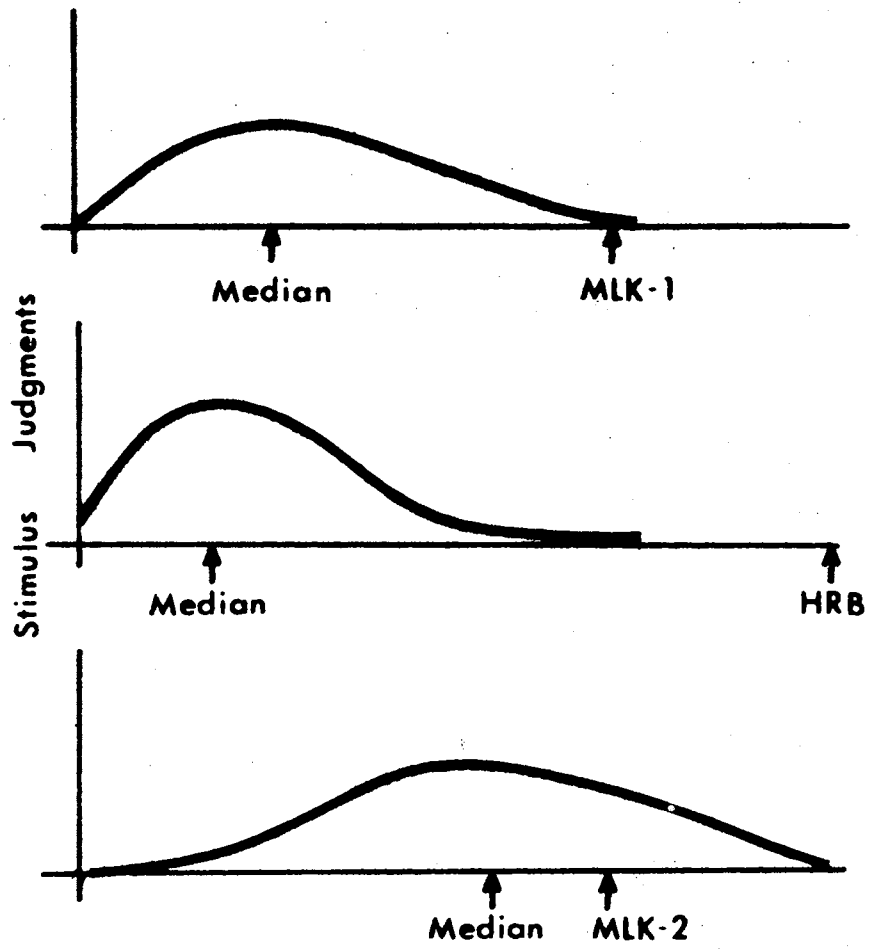


Figure 5. Graphic Representation of King-Brown Effect

CHAPTER III

EXPERIMENT I: PSYCHOPHYSICAL INVESTIGATION OF THE KING-BROWN EFFECT

The purpose of the first experiment was to test the King-Brown effect using the psychophysical procedures of single stimuli and constant stimuli. The procedures and stimuli used in this study were chosen for three reasons. First, they provide the opportunity to investigate the King-Brown effect under well controlled conditions. Second, an implicit assumption of the King-Brown effect is that the presentation of the MLK-1 stimulus yields a contrast effect. To meet this assumption the stimuli employed by Sherif, Taub and Hovland (1958) were used, and an anchor that had formerly produced a contrast effect (168g.) was employed as the MLK-1 stimulus. Finally, use of these methods and stimuli facilitate data comparisons with previous research.

The hypothesis tested in the first experiment was that a moderately extreme and formerly rejected position may become more acceptable following the introduction of a radically extreme position. Statistically, it was hypothesized that the value of judgments when the MLK stimulus was first operative would be less than the value of judgments made the second time the MLK anchor was operating.

Method

Subjects

The Ss employed in the first experiment consisted of 20 undergraduate students who were enrolled in an introductory psychology course at Oklahoma State University during the spring semester of 1972. Ten males and ten female Ss were selected for the experiment on the basis of an availability criteria; that is, Ss were randomly selected from among those students who were available and willing to participate in the experiment. For their participation each S was rewarded with credit toward his final grade in the introductory psychology course in which he was enrolled.

Each S was treated individually in a sound-deadened room in two data collection sessions, the first of which lasted approximately one-half hour and the second lasted approximately one and one-half hours. These two sessions were held approximately two days apart. Upon arrival for the first session each S was randomly assigned to either the experimental group (n=10) or the control group (n=10). The sex distribution in both the experimental and control groups was equal.

Apparatus

The apparatus employed in Experiment I consisted of one pair of adjustable opaque goggles, and eight constant volume judgment weights. The sound-deadened room was located in the basement of a classroom-office building, and was free from distracting stimuli. A table and two chairs were located in the middle of the sound-deadened room and were arranged in such a manner that S sat facing E across the table

at a distance of approximately 30 inches. A floor fan was located underneath the table and was used to provide a mask for noise as well as for ventilation.

The adjustable, opaque goggles were designed to completely screen S's vision, and were used to prevent S from picking up cues that might have affected his judgments. The weights employed in this research consisted of plastic vials (3.3 cm. x 8.5 cm.) filled with lead shot and cotton wadding. The values of the eight weights, in grams, were 55, 75, 93, 100, 125, 141, 168, and 347. The values of the weights employed were identical to those used in the experiment conducted by Sherif, Taub and Hovland (1958).

Procedures

The procedures followed during the first experiment consisted of two steps: (a) the establishment of a frame of reference or judgmental base line for each S using the method of single stimuli, and (b) test of the King-Brown effect using the method of constant stimuli.

Establishing a Frame of Reference. During this part of Experiment I E presented Ss with six stimuli (55-141g.) via the method of single stimuli. Each weight was presented 25 times in random sequence, with each S treated individually. Data collection during this part of the experiment took approximately one-half hour. The data gathered during this part of the experiment served as a base line with which to evaluate S's subsequent performance.

Prior to the data collection E read the following instructions to S:

This is an experiment designed to test your ability to distinguish between six different weights. Previous research has shown that some people can distinguish between weights that are very close together, while other people need weights further apart before they can tell any difference between them. I am interested in determining how well you can distinguish between different weights.

Here is what I want you to do:

- (1) Move up very close to the table and place your preferred hand and arm on the table in front of you.
- (2) Place your hand flat on the table, relax your arm and fingers, and spread your thumb and index finger. I will place the weights you are to lift between these two fingers.
- (3) When I place a weight between your index finger and your thumb I want you to grasp the weight at its base, lift your entire forearm and hand from the table, leaving your elbow on the table.
- (4) Each time you lift the weight, lift it approximately six inches off the table, hold it there for a count of two, then place the weight back on the table.
- (5) After you place the weight back on the table I want you to rate that weight on a scale from one to six, with one being equal to very light, and six being equal to very heavy. For examples, if you think the weight is very heavy you would respond by saying "six." If you think the weight is very light you would respond by saying "one." If you think the weight is somewhere in between these extremes you should respond with whatever number, from one to six, that you think is appropriate.
- (6) Remember, there are six weights and each will be presented 25 times in a random order.
- (7) Before we begin I want to give you some experience with the heaviest weight or weight number six, and the lightest weight or weight number one. Here is number six...Now here is number one.
- (8) Do you have any questions?

Following these instructions E presented the stimuli to S in blocks of 25 trials, with 60 second rest pauses between blocks. After S had made all 150 judgments he was told the first part of the experiment was over, and E set up an appointment with S for the second

session. Furthermore, at this point E gave S a blank sheet of paper and asked S to describe what he thought the experiment was about and what he thought E was trying to do.

Psychophysical Test of the King-Brown Effect. During the second part of Experiment I the first five stimuli used in the first session were employed (i.e. 55-125g.). In addition, anchors (which are the standard stimulus in the method of constant stimuli) of 168g. (the MLK stimulus) and 347g. (the HRB stimulus) were used. These anchor stimuli were used in the Sherif, et al. (1958) study, and both have been shown to produce contrast effects.

During the second session of the first experiment each S was required to make a total of 450 judgments, 150 judgments with each of the following three sets of stimuli: Set 1: 55, 75, 93, 109, 125, and 168gm. Set 2: 55, 75, 93, 109, 125 and 347gm. Set 3: 55, 75, 93, 109, 125 and 168gm.

These three sets of stimuli were presented via the method of constant stimuli. Each weight served as the comparison stimulus 25 times and was presented in random sequence with the heaviest weight serving as the standard stimulus or anchor.

Two aspects of this part of the experiment should be emphasized. First, the order of administration of the three sets was identical for all Ss. That is, all Ss were first exposed to Set One or the "King" position (subsequently labeled the MLK-1 set); next they were exposed to Set Two or the "Brown" position (subsequently labeled the HRB set); finally, Ss were exposed to Set Three or the "King" position (subsequently labeled the MLK-2 set). Second, procedures were the same for all Ss except for the fact that the control Ss did not receive the HRB

set. Instead, between the administration of the MLK-1 and MLK-2 sets, each S in the control group merely sat in the experimental room for a period of time equal to the amount of time it took S to make the 150 judgments required by the MLK-1 set.

Prior to the administration of the procedures of part (b), E read the following instructions to S:

This is the second stage of a study designed to see how well you can distinguish among different weights. Your task today will be a little different from what I asked you to do the other day. Specifically, here is what I want you to do:

(1) Move up very close to the table and place your preferred hand and arm on the table in front of you.

(2) Place your hand flat on the table, relax your arm and fingers, and spread your thumb and index finger. I will place the weights you are to lift between these two fingers.

(3) This time, instead of giving you one weight at a time and asking you to rate them on a one to six scale, I'm going to present you with two weights, one right after the other.

(4) The first weight will be the standard, and will always be equal to number six on a one to six scale. The second weight will vary, and may be any of the six stimuli in the one to six series.

(5) I want you to lift the standard weight first, and in the same manner as you did before. Lift the weight with your thumb and index finger. Lift it approximately six inches off the table using your forearm, leaving your elbow resting on the table.

(6) Hold the standard for a count of two, then place it back on the table, and lift the comparison stimuli in the same manner.

(7) After you place the second stimulus back on the table I want you to tell me where you would rate the second stimulus on a one to six scale. Again, think of number one as very light, and number six as very heavy. Remember, the standard will be equal to number six on the rating scale.

(8) Before we begin let me give you some practice with what you're going to do. Here is the standard or number six... Now here is a comparison weight. In this case I gave you weight number one. Now let's try it again. First lift the

standard stimulus...Now lift the comparison. This time I gave you weight number six, which is equal to the standard.

(9) Remember, each of the six stimuli will be presented 25 times in random order. Also remember that the standard will be paired with itself 25 times, so don't hesitate to use category number six when you make your ratings.

(10) Also remember that the standard will always remain the same, i.e. will always be equal to weight number six.

(11) Do you have any questions?

Following these instructions the data were collected. Again, each of the three 150 trial sessions (MLK-1, HRB, and MLK-2) was broken down into blocks of 25 trials each, with a 60 second rest pause inserted between blocks. Also, when the experiment was over E gave S a blank sheet of paper and asked S to describe what he thought E was trying to accomplish.

Results

Research Design and Analysis

The research design employed in the first experiment was a three factor design with repeated measures on two factors (Winer's Case I, Winer, 1962, p. 319). A block diagram of this design and the observed cell means are presented in Table II. The dependent variable in this design is the average response elicited by each stimulus.

Results of Data Analysis

The results of the three factor analysis of variance are presented in Table III. The F-ratios in Table III were tested using both liberal and conservative degrees of freedom. All effects found significant under the liberal test were also found to be significant when tested

TABLE II

RESEARCH DESIGN AND OBSERVED CELL MEANS FROM EXPERIMENT I

Anchor	MLK-1					MLK-2				
Stimuli	1	2	3	4	5	1	2	3	4	5
Experimental Group	1.25	2.10	2.91	3.70	4.46	1.95	2.92	3.58	4.17	4.99
Control Group	1.34	2.38	3.18	3.96	4.71	1.51	2.58	3.47	4.14	4.86

TABLE III
SUMMARY OF ANALYSIS OF VARIANCE FOR EXPERIMENT I

Source	df	MS	F
<u>Between Subjects</u>	19		
A (Treatment Group)	1	.01	.003 (n.s.*)
Subjects in A	18	1.43	
<u>Within Subjects</u>	180	8.77	
B (Anchor)	1	8.77	45.68 (p .01**)
AB	1	2.36	12.29 (p .01**)
B x Subjects in A	18	.19	
C (Stimuli)	4	64.01	598.25 (p .01**)
AC	4	.14	1.26 (n.s.*)
C x Subjects in A	72	.11	
BC	4	.07	2.06 (n.s.*)
ABC	4	.04	1.33 (n.s.*)
BC x Subjects in A	72	.03	

*tested with maximum degrees of freedom

**tested with minimum degrees of freedom

with the minimum degrees of freedom. This procedure, which is presented in Winer (1962, p. 322), was followed to circumvent the laborious procedures required to test the assumptions underlying the analysis of variance model employed.

Following the overall tests of significance reported in Table III a posteriori analyses (Newman-Keuls procedures, Winer, 1962, p. 309) of the B and C main effects were computed. These analyses, which are presented in Tables IV and V incorporate the data from the No Anchor condition.

TABLE IV
TEST OF MEANS OF THE ANCHOR MAIN EFFECT
USING NEWMAN-KEULS PROCEDURE

	Anchors	MLK-1	MLK-2	No Anchor
Ordered Means		2.999	3.418	3.592
		MLK-1	MLK-2	No Anchor
Differences Between Pairs	MLK-1	—	0.419	0.593
	MLK-2		—	0.174
	No Anchor			—
$S_{\bar{B}} = .155$			$r = 2$	3
$q_{.95}(r, 36):$			2.86	3.44
$S_{\bar{B}} q_{.95}(r, 36):$			0.443	0.533

TABLE V
 TEST ON MEANS OF THE STIMULUS MAIN EFFECT
 USING NEAMAN-KEULS PROCEDURE

Stimuli	C_1	C_2	C_3	C_4	C_5
Ordered Means	1.512	2.578	3.439	4.201	4.952
	C_1	C_2	C_3	C_4	C_5
Differences Between Pairs	C_1	1.066	1.927	2.689	3.440
	C_2		0.861	1.623	2.374
	C_3			0.762	1.513
	C_4				0.751
	C_5				
$S_{\bar{C}} = .088$	$r = 2$	3	4	5	
$q_{.95}(r, 72):$	2.83	3.40	3.74	3.78	
$S_{\bar{C}} q_{.95}(r, 72):$.221	.265	.291	.310	

CHAPTER IV

EXPERIMENT II: PSYCHO-SOCIAL INVESTIGATION OF THE KING-BROWN EFFECT

Introduction

The purpose of the second experiment is to test the King-Brown effect using psycho-social procedures that parallel the psychophysical procedures used in Experiment I. In this experiment Ss were required to make judgments of complex, psycho-social stimuli rather than the relatively simple, well defined, physical stimuli employed in the first experiment. The assumption underlying the second experiment is that a test of the King-Brown effect using social stimuli would provide a real-world oriented test of this phenomenon. If the hypothesis tested in the second experiment was not rejected these results would then extend the King-Brown effect beyond the results obtained under the highly artificial conditions of the psychophysical experiment reported in the preceding chapter.

Method

Subjects

Sixty paid¹ volunteers were employed as Ss in the second

¹Ss were paid \$2.00 for approximately one-half hour of their time.

experiment, 59 of whom were enrolled in undergraduate courses at Oklahoma State University during the summer semester of 1972. Fifty-seven Ss were undergraduates, two were beginning graduate students, and one was a senior at Stillwater High School. The sample consisted of 29 males and 31 females, and had an average age of 20.20 years (range = 17-27, S.D. = 2.20). All Ss were Caucasian. Additional selected demographic characteristics of the sample are displayed in Appendix B.

The Ss in Experiment II were selected on the basis of their willingness to participate in the study as well as their ability to work the experiment into their schedules. Although the initial selection procedure was not random, the assignment of Ss to treatment groups was, with 30 Ss randomly assigned to the experimental group and 30 randomly assigned to the control group.

Each S made his judgments while sitting in a booth that visually isolated him, and data were collected from two to seven Ss at one time. All data for each S was gathered at one sitting which lasted approximately one-half hour. Upon arrival for the data collection session Ss were randomly assigned to either the experiment or the control group. The distributions of selected demographic characteristics of each group are presented in Appendix B.

Instruments

The instrument used to collect the data in Experiment II consisted of attitude statements concerning the social position of the Negro. For purposes of administration, the statements were printed on 3" x 5" cards, with one statement per card. These attitude statements were

derived from attitude scales constructed by Schumann and Harding (1934), Sheatsly (1966), Upshaw (1962), and Woodmansee and Cook (1967).

Prior to collecting the data in Experiment II an instrument containing 138 attitude statements derived from the above four sources was presented to 104 student volunteers who served as judges to assess the scale values of the statements. The 104 judges were enrolled in introductory psychology at Oklahoma State University during the spring semester of 1972. Fifty-five of the judges were male and 49 were female. All were Caucasian and had an average age of 19.1 years. The gross characteristics of the judges were similar to the characteristics of the Ss employed in Experiment II (see Appendix B).

Scale values for the items were computed by means of Thurstone's Method of Successive Intervals (Edwards, 1957, Ch. 5). The obtained scale values ranged from 0.013 to 3.331, with a mean equal to 1.489 and a standard deviation of 0.747. The instructions, attitude statements, and obtained scale values for the 138 items are presented in Appendix A.

Following the derivation of the scale values for the 138 items, 60 statements with low scale values (i.e. scale values ≤ 1.517 or 60 of the 64 items with the lowest scale values) were divided into four groups of 15 each. These four sets of stimuli were used to assess the operation of assimilation and contrast in conjunction with the test of the King-Brown effect. A more complete discussion of their use is presented in the following section. The distribution of these four sets was rectangular; for example, the first set contained those items with the first, fifth, ninth, etc. lowest scale values. The second set contained those items with the second, sixth, tenth, etc., lowest scale values. This method of constructing the four sets of stimuli

was followed as E believed it would be more sensitive to assimilation and contrast effects than if the sets were constructed by means of random sampling. The four sets that resulted from this sampling plan, together with their item identification number (see Appendix A), are as follows:

Set A: 1, 5, 9, 13, 17, 21, 25, 29, 37, 41, 45, 49, 57, 62, 64.

Set B: 2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42, 46, 50, 53, 58.

Set C: 3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43, 47, 51, 55, 59.

Set D: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 48, 52, 56, 60, 61.

In addition to these four sets of stimuli, two sets of anchor stimuli were selected from the 138 scaled items to represent the "King" or MLK position and the "Brown" or HRB position. The MLK set of anchor stimuli consisted of five statements with scale values of approximately $+0.25$ standard deviation. The MLK set contained items numbered 76, 79, 82, 84, and 85, and had an average scale value of 1.799 (range = 1.681-1.814). These statements were chosen because they represented a moderately favorable position with respect to the Negro's social position, and therefore, might be expected to produce a contrast effect when presented with the four sets of 15 stimuli discussed above.

The second set of anchor stimuli represented the HRB position, and consisted of three statements with scale values of approximately $+2$ standard deviations. The HRB anchor set contained items numbered 133, 137, and 138, and had an average scale value of 2.955 (range = 2.637 - 3.331). These three stimuli were chosen arbitrarily as they were perceived as representing a very favorable position relative to the social position of the Negro, and E believed they would produce a contrast effect when presented with the four sets of 15 stimuli.

Procedures

The procedures followed during the second experiment consisted of two steps, the establishment of a frame of reference or judgmental base line for each S using a psycho-social procedure analogous to the psychophysical method of single stimuli, and the test of the King-Brown effect using a psycho-social procedure analogous to the psycho-physical method of constant stimuli.

Establishing a Frame of Reference. This part of Experiment II was designed to establish a base line of performance so that shifts in subsequent performance could be assessed. During this part of the experiment E presented Ss with one of the four sets of 15 stimuli discussed above², then read the following instructions³ to Ss:

You have been given 15 cards, each of which has printed on it one attitude statement concerning the social position of the Negro. You have also been given six scoring envelopes numbered from one to six, where number one equals "Low Social Position" and number six equals "High Social Position." Your task is to assign each statement to the envelope or category which best indicates the level of social position expressed by the statement. Whether you agree or disagree with the statement should not enter into your judgments. You are only to judge the social position of the Negro that is expressed by each statement, and NOT the extent that you would be willing to endorse the opinion expressed.

Category one will contain those statements which place the Negro in the lowest social position, and category six will contain those statements which place the Negro in the highest social position. In like manner, the categories labeled two, three, four, etc. refer to statements that give the Negro higher and higher social position.

²The order of presentation of these four sets was randomized.

³These instructions were adapted from those used in research conducted by Rambo (1969).

Read each statement, then place that statement in the category you judge to best represent the level of social position expressed by the statement. Hence, at the completion of the task you will have, in a sense, arranged all the statements in six steps of the social ladder that is represented by the six categories.

DO NOT try to assign the same number of statements to each category. Use your own judgment as to the position of each statement, and do not be concerned about the number of times you assign statements to any one category.

Please try to bear in mind at all times that you are to judge only the content of each statement. Whether you agree or disagree with a statement should not enter into your judgments. You are only to judge the social position of the Negro that is expressed by a statement, and not the extent you are willing to endorse the opinion expressed.

Following these instructions E answered any questions raised by Ss, and then instructed Ss to begin their sorting of the stimuli.

Psycho-Social Test of King-Brown Effect. E initiated the second part of Experiment II immediately following the first session. During this stage of the experiment Ss in the experimental group made three different sorts of 15 cards each, using a procedure analogous to the psychophysical method of constant stimuli. Specifically, during the first sort, Ss were given one set of 15 stimuli plus one stimulus randomly chosen from the MLK anchor set. They were instructed to sort the 15 statements on a one through six continuum, using the MLK anchor stimulus as a reference point equal to category six. Following this, Ss sorted another group of 15 statements, on a one to six continuum, using one stimulus randomly drawn from the HRB anchor set as a reference point equal to category six. Finally, Ss were given a fourth set of 15 statements plus another statement randomly selected from the MLK anchor set, and were again directed to sort the statements on a one through six continuum with the reference card serving as a representative of category six.

Prior to each of the three anchored sorts E read the following instructions to Ss:

You have again been given a group of 15 statements concerning the social position of the Negro, plus one reference card that represents category number six. Your task this time is to sort the 15 statements into six categories, using the reference card as a guide for your judgments. Work quickly and don't spend too much time on any one card. Remember, judge only the social position of the statement and NOT the degree to which you agree or disagree with the statement.

There are two additional aspects of these procedures which should be mentioned. First, all the data in Experiment II were collected at one session lasting approximately thirty minutes. Second, Ss assigned to the control condition were treated exactly the same as Ss in the experimental group except they did not sort cards with an HRB anchor. Instead, during the second stage of the second session Ss in the control group merely sat for a period of time approximately equal to the amount of time it took them to make the MLK-1 sort.

Results

Research Design and Analysis

The research design employed in the second experiment was a three factor design with repeated measures on two factors (Winer's Case I, Winer, 1962, p. 319). A block diagram of this design and the observed cell means is presented in Table VI. The dependent variable in this design is the average response elicited by the stimuli. For purposes of analysis the 15 stimuli judged under each anchor condition were condensed into five groups of three stimuli each. Hence, the mean reported in each cell of Table VI is averaged across three stimuli as well as across Ss.

TABLE VI
RESEARCH DESIGN AND OBSERVED CELL MEANS
FROM EXPERIMENT II

Anchor	MLK-1					MLK-2				
Stimuli	1	2	3	4	5	1	2	3	4	5
Experimental Group	2.01	2.75	3.08	3.45	4.12	1.58	1.90	2.69	3.00	3.85
Control Group	1.88	2.30	2.91	3.20	4.18	1.70	2.10	2.62	3.25	3.72

Results of Data Analysis

The results of the three factor analysis of variance are presented in Table VII. The F-ratios were tested using both liberal and conservative degrees of freedom. All effects found significant under the liberal test were also significant when the minimum degrees of freedom were employed. This procedure was used to avoid the laborious calculations required to test the assumptions associated with Winer's Case I design (Winer, 1962, p. 322).

Following the overall tests of significance reported in Table VII a posteriori analyses (Newman-Keuls procedure, Winer, 1962, p. 309) of the B and C main effects were computed. The a posteriori test of the B main effect yielded no significant differences among the means of the anchor treatment. The comparisons of the differences among the means of the C main effect indicated the differences among all the means were significant at the 95 percent level of confidence.

TABLE VII
 SUMMARY OF ANALYSIS OF VARIANCE FOR EXPERIMENT II

Source	df	MS	F
<u>Between Subjects</u>	59		
A (Treatment Group)	1	.46	.14 (n.s.*)
Subjects in A	58	3.42	
<u>Within Subjects</u>	540		
B (Anchor)	1	18.00	10.85 (p .01**)
AB	1	2.57	1.55 (n.s.*)
B x Subjects in A	58	1.66	
C (Stimuli)	4	85.37	153.82 (p .01**)
AC	4	.11	.19 (n.s.*)
C x Subjects in A	232	.56	
BC	4	.41	.70 (n.s.*)
ABC	4	.79	1.34 (n.s.*)
BC x Subjects in A	232	.59	

*Tested with maximum degrees of freedom

**Tested with minimum degrees of freedom

CHAPTER V

INTERPRETATION OF THE RESULTS

Discussion

The purpose of this investigation was to explore the reliability and validity of an hypothesized judgmental phenomenon labeled the King-Brown effect. Using psychophysical and psycho-social procedures the investigator attempted to determine whether or not a moderately extreme and formerly rejected position could be made more acceptable through the introduction of a radically extreme position.

To avoid rejection of the hypothesis the observed results of the two experiments should closely approximate the hypothetical data displayed in Figure 6. Empirically, confirmation of the hypothesis required the subjects in the experimental group to display a larger quantity of assimilation to the MLK-2 anchor condition than the subjects in the control group.

Examination of the Analysis of Variance Summary Tables for both experiments (Tables III and VII) indicates the data from the first experiment support the hypothesis, but the data from the second experiment do not. The observed results presented in Figures 7 and 8 also indicate mixed support for the hypothesis.

Inspection of the results of Experiment I, displayed in Figure 7 and Table III offers support for the hypothesis. Ideally, the results of the first experiment (Table III) would directly conform to the

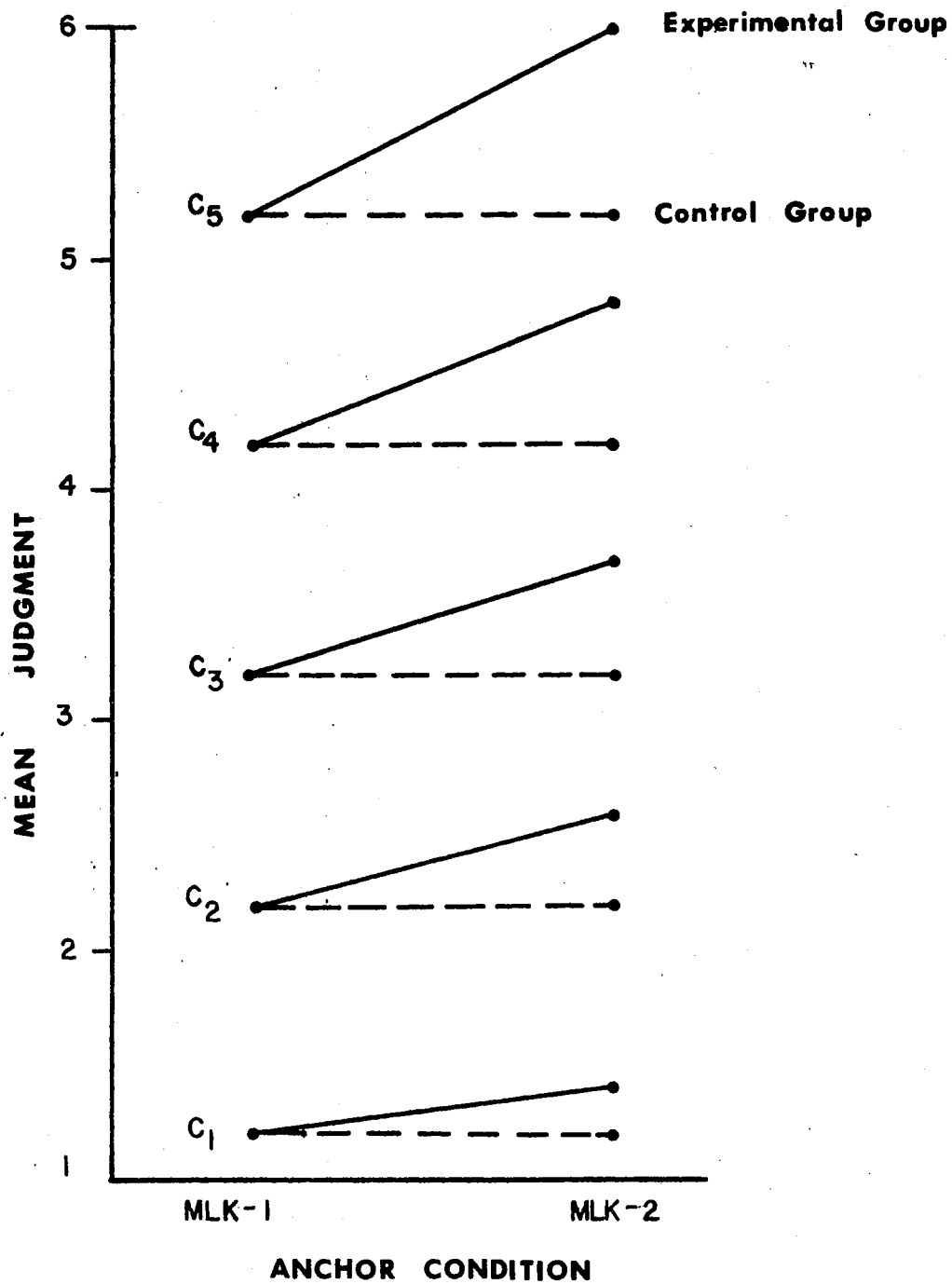


Figure 6. Anticipated Results of the Tests of the King-Brown Effect

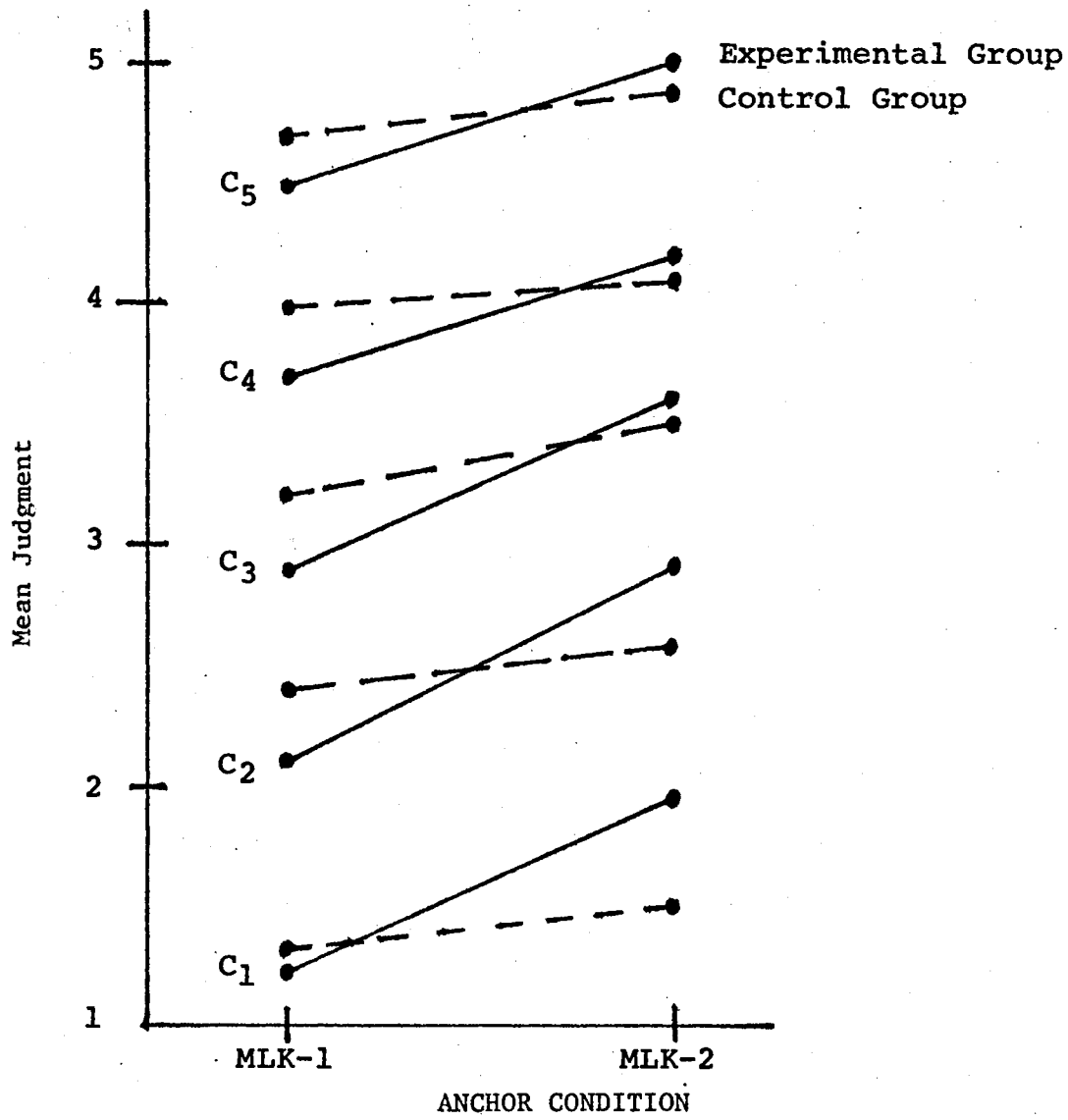


Figure 7. Observed Results from Psychophysical Test of the King-Brown Effect (Experiment I)

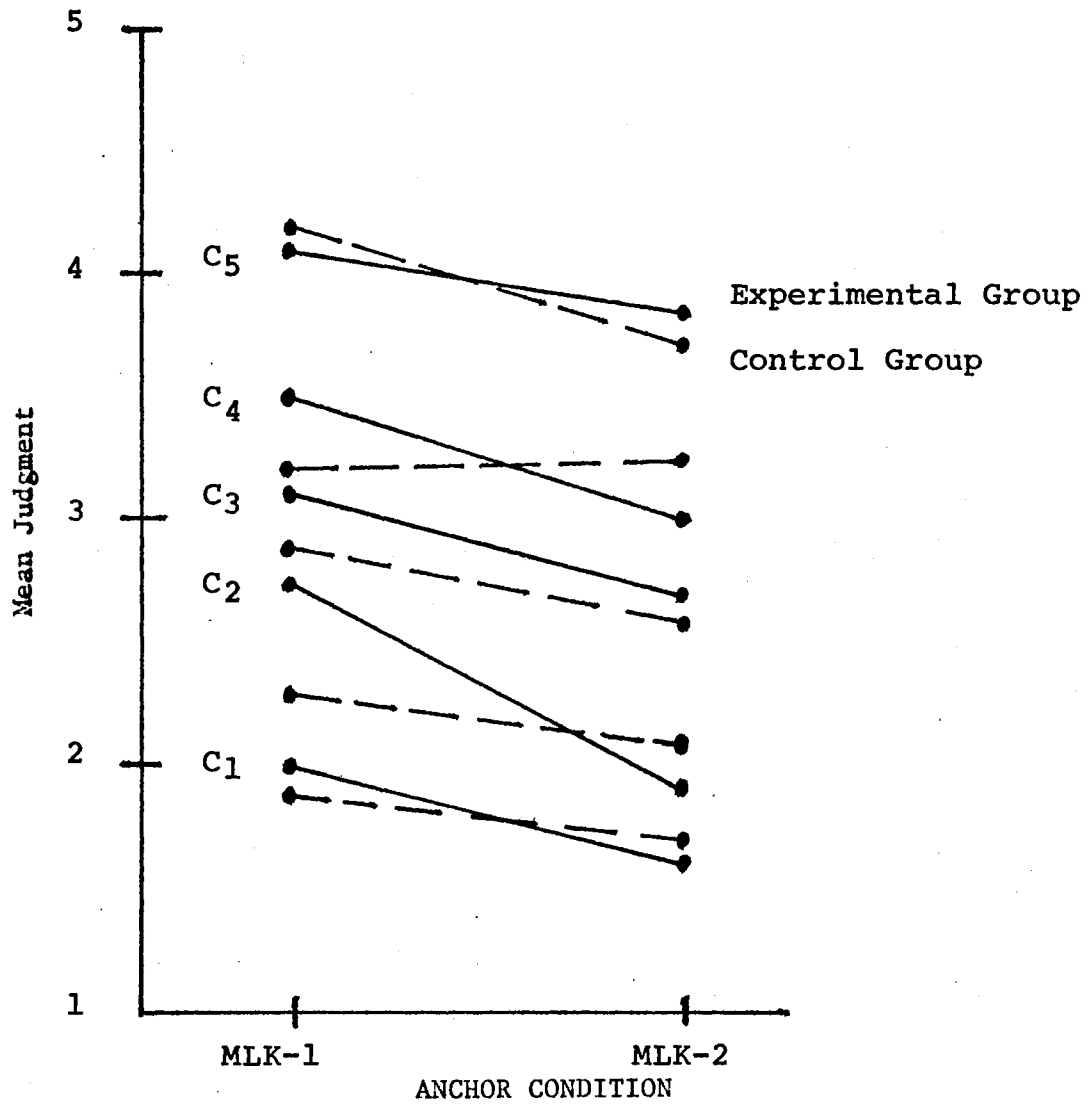


Figure 8. Observed Results from the Psycho-Social Test of the King-Brown Effect (Experiment II)

hypothetical data displayed in Figure 6. The data in Figure 6 indicate a significant A main effect and ABC interaction effect in addition to significant B and C main effects and an AB interaction effect. The observed data indicate a non-significant A main and ABC interaction effects.

The effects that are significant, however, offer the support essential for confirmation of the hypothesis. The presence of an anchor main effect indicates the subjects responded differently to the two anchor conditions. Moreover, the Newman-Keuls analysis of the anchor effect presented in Table IV suggests the subjects displayed contrast when presented with the MLK-1 anchor condition, and assimilation when the MLK-2 anchor was operating.

The stimulus main effect, together with the Newman-Keuls analysis of this effect (Table V), indicates the order of the subjects' responses to the stimuli paralleled the physical properties of the stimuli.

The most substantial source of support for the hypothesis is provided by the reliable Treatment Group x Anchor interaction effect. This effect suggests the subjects in the two groups responded differentially to the anchor conditions. A Newman-Keuls analysis of the Treatment Group x Anchor simple interaction effect indicates the subjects in the experimental group displayed contrast to MLK-1 and assimilation to MLK-2, while the subjects in the control group displayed contrast to MLK-1 but no assimilation to the MLK-2 anchor. A graphic display of these data is presented in Figure 9.

Of the remaining effects of Table III that were non-significant (A, AC, BC, and ABC), it was essential that two of these be non-significant, and desirable that the other two of these be significant.

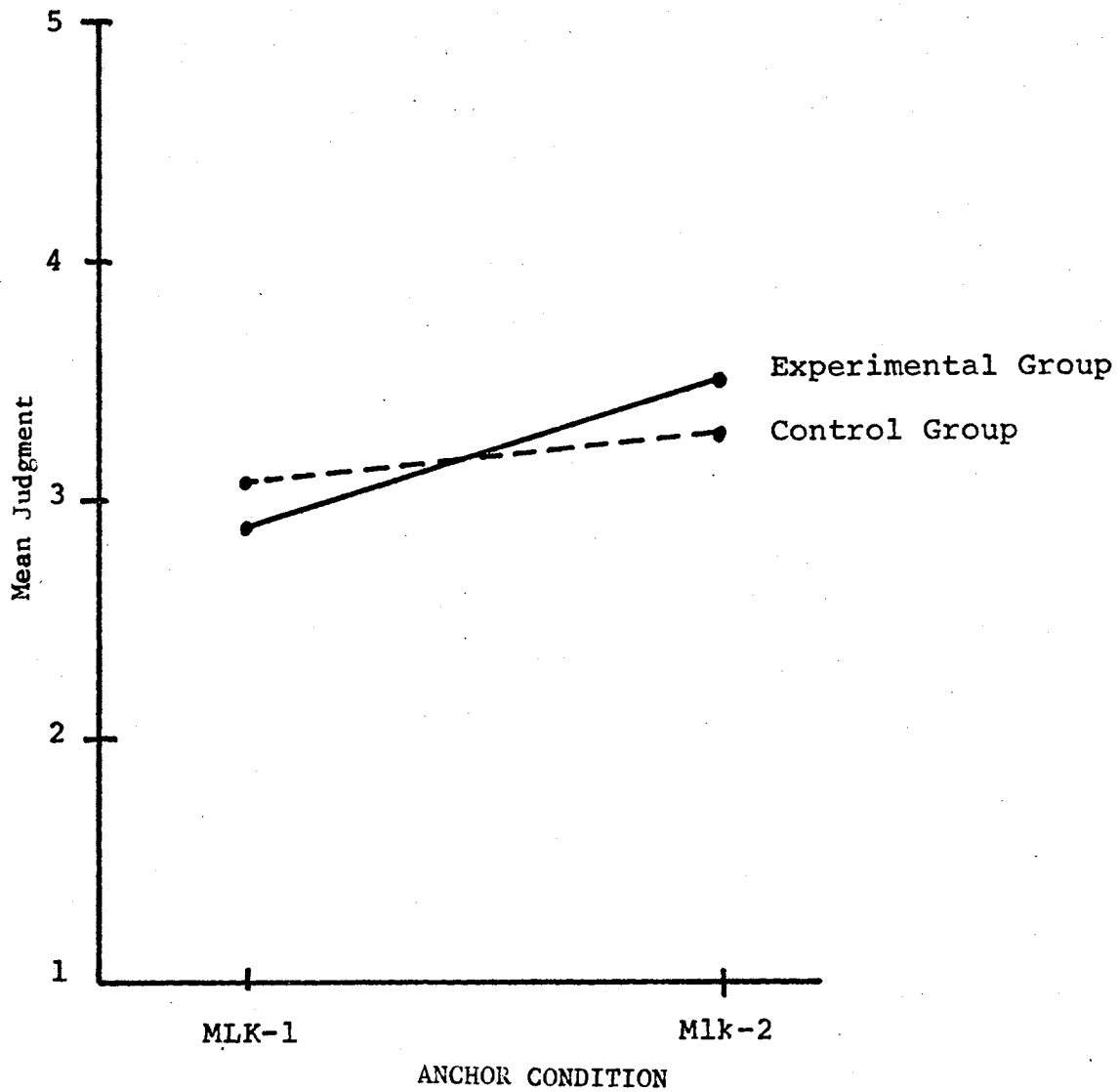


Figure 9. Observed Results of the Treatment Groups for the Two Anchor Conditions in Experiment I

Specifically, the Treatment Group x Stimulus (AC) and the Anchor x Stimulus (BC) interaction effects were expected to be non-significant, thereby indicating that the two groups responded in a similar manner to the stimuli, and that the anchor conditions did not interfere with the subjects perceptions of the order of the stimuli.

The investigator did anticipate a significant Treatment Group main effect, and Treatment Group x Anchor x Stimulus interaction effect. The absence of the Treatment Group main effect initially appears to lead to a rejection of the hypothesis due to the fact that this indicates the subjects in the experimental group did not behave in a reliably different manner than did the subjects in the control group. However, the Treatment Group x Anchor interaction effect over-rides this interpretation. This interaction indicates the subjects in the experimental group did respond differently than the subjects in the control group, and in a manner consistent with the hypothesis. The absence of a Treatment Group main effect apparently resulted from the fact that the subjects in the control group did not display as much contrast to the MLK-1 anchor as did the subjects in the experimental group.

The results from the psycho-social test of the King-Brown effect, presented in Table VII and Figure 8, do not correspond with the anticipated results displayed in Figure 6, and offer no support for the hypothesis.

As was the case in the first experiment, the stimulus main effect was the most statistically significant result of this test. Moreover, a Newman-Keuls analysis of the means of the stimulus main effect indicated the order of the subjects responses paralleled the order of the

stimuli used in the second experiment.

Examination of the anchor main effect yields a possible explanation regarding the lack of support for the hypothesis found in Experiment II. Although this factor was very reliable, the pattern of results was not in line with the anticipated results. Specifically, an examination of Figure 10, which shows the results of all three levels of the anchor, suggests the MLK-1 anchor stimulus resulted in assimilation rather than contrast. A Newman-Keuls analysis of the anchor means indicated no significant differences among the means, but the pattern did indicate that assimilation rather than contrast occurred when the MLK-1 anchor was operating.

Conclusions

Any conclusions based on these two tests of the King-Brown effect are predicated on a conclusion concerning the adequacy of these tests of the hypothesis. Is it reasonable to assume these two tests are adequate; and if so, what conclusions concerning the hypothesis may be drawn?

There are a number of aspects of Experiments I and II which, on the surface, suggest one or both of these tests are inadequate. The most salient of these are: (1) possible demand characteristics; (2) subject selection and sample size; (3) inadequate control groups; and (4) the criterion for selection of the MLK anchor in Experiment II.

The first of this list of possible extraneous variables, the demand characteristics of the experiment, was examined by means of the post-experimental interview suggested by Orne (1962). Following their participation in both Experiment I and Experiment II the Ss were asked

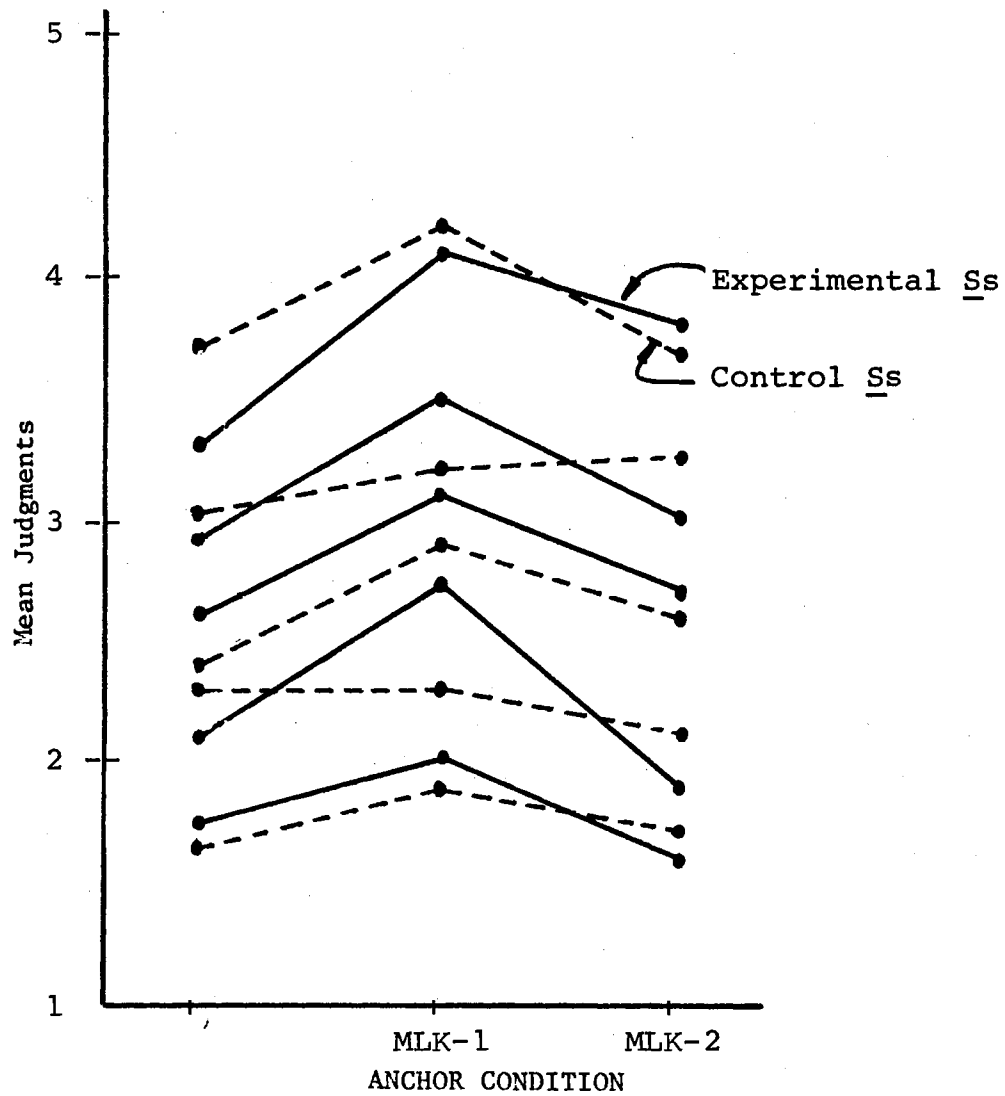


Figure 10. Observed Results of the Three Anchor Conditions from the Psycho-Social Test of the King-Brown Effect (Experiment II)

to explain, in as much detail as possible, what they thought the experiment was about and what the investigator was trying to accomplish. A content analysis of these de-briefings was performed in an attempt to determine if any of the Ss knew the nature of the hypothesis, and hence might have distorted his judgments. No evidence of demand characteristics was found in these de-briefings for either the Ss in Experiment I or those in Experiment II.

Although demand characteristics were apparently no problem, the samples used in both experiments present some potential problem for interpretation. One could argue the size of the treatment groups employed in the first experiment ($n=10$) was inadequate. Although much psychophysical research, including the Sherif, Taub and Hovland (1958) study on which Assimilation-Contrast Theory is founded, commonly uses small samples, it does not appear unreasonable to assume the small samples used in the first experiment introduced errors that obscured the results. This assumption could be readily tested by replicating the first experiment using identical procedures and a larger sample size.

The sampling plan used to select subjects for both experiments might also be scrutinized as the subjects were initially chosen on the basis of an availability criterion. Although casual observation suggested there were no substantial differences between the samples and the populations from which they were drawn, it is possible that this non-random technique introduced bias into the research designs. However, due to the fact that the subjects were randomly assigned to treatment groups in both experiments, it is argued that the major weakness of the sampling plan used was that it casts some doubt on the

generalizability of the results. Due to the fact that these two tests were designed as preliminary tests of the King-Brown effect, this weakness is not regarded as serious at this time.

A third factor to be considered before drawing a conclusion concerning the adequacy of these two experiments is the adequacy of the control groups. The decision to have the Ss in the control groups merely sit and do nothing between the administration of the MLK-1 and MLK-2 treatments was not a good one. It soon became obvious to the experimenter, particularly in the first experiment, that the experience of the experimental Ss was substantially different from that of the Ss in the control groups. This difference resulted not just because the experimental Ss received the HRB treatment; but also, because the experimental Ss were more fatigued and had had more practice than the control Ss.

A fourth element of contamination of this research concerns the method used to select the MLK anchor stimulus used in Experiment II. As was discussed in Chapter IV, these stimuli were selected arbitrarily, and it was assumed they would produce a contrast effect. It is obvious from an examination of Figure 10 that this is an untenable assumption. Evidently the location of the MLK stimuli along the psychological continuum containing the 138 Negro attitude statements (+ .25SD) was such that assimilation was produced when these stimuli were used as anchors in the second part of Experiment II. This suggests the second test of the King-Brown effect was an inadequate one. Fortunately, no such problem exists for the first experiment.

The overall conclusion concerning the adequacy of these tests of the King-Brown effect is that Experiment I is at least a partially

adequate test, but that Experiment II was totally inadequate. The results of the psychophysical test might have been strengthened by increasing the sample size, and, in particular, by requiring the control subjects to make as many judgments as did the subjects in the experimental group. The second test could have been improved by empirically testing the MLK anchor prior to the experiment to insure that it would yield a contrast effect.

Assuming the first test was at least partially adequate, attention is focused on the validity of the King-Brown effect. Information presented in Table III and Figures 7 and 9 allows one to draw the conclusion that the King-Brown effect has empirical validity as well as intuitive appeal. The responses of the two groups to the two anchor treatments indicates both groups displayed contrast the first time the MLK anchor was presented, and that only the experimental group displayed assimilation the second time this anchor was introduced. These results correspond with the results anticipated by the hypothesis. These results would have been more obvious had the Treatment Group main effect also been significant.

Suggestions for Future Research

Assuming the King-Brown effect receives attention in the future, there are several factors that should be considered in testing this phenomenon. First, it is recommended the methodology employed in the first experiment be used in any preliminary tests due to the high degree of control the investigator has over the parameters effecting the Ss' responses.

There are, however, two changes that should be made in the methodology used by this investigator in Experiment I. First, the size of the two treatment groups should be increased. While psycho-physical studies typically use small samples, such procedures introduce vulnerability into an otherwise rigorous experiment. Doubling or possibly tripling the number of Ss per treatment group could stabilize the results of the data. The second recommended modification of the methodology used in the first experiment is to treat the Ss in the control group differently. The control Ss in Experiment I merely sat and did nothing during the HRB phase of the experiment, while the experimental Ss made 150 judgments using the HRB stimulus as the anchor. This control procedure may not have been an adequate one as the control Ss did not have as much judgmental experience as the experimental Ss, and also were not as fatigued. Perhaps a more reasonable control procedure would be to expose the control Ss to the MLK anchor condition for a total of 450 judgments thereby equating the two groups on all factors except the anchor stimuli to which they are exposed.

If a decision is made to attempt to replicate the second experiment, one very important test must be conducted prior to such an experiment. Specifically, a value for the MLK anchor must be empirically determined. The value of the MLK anchor used in Experiment II (+.25 S.D.) was selected arbitrarily by the investigator, and it is obvious from an examination of Figure 10 that this value did not produce the desired contrast effect. Also, the recommendation made above regarding the treatment of the control Ss during the HRB anchor condition should also be followed in a replication of the second experiment.

CHAPTER VI

SUMMARY

There are a number of anecdotal accounts wherein a moderately extreme and formerly rejected position is made more acceptable following the introduction of a radically extreme position. The purpose of this investigation was to determine, in a controlled laboratory experiment, whether or not a radically extreme position such as that advocated by H. Rap Brown would make a formerly rejected position (i.e., Martin Luther King) more acceptable.

Two tests of this hypothesis were made within the theoretical framework provided by Sherif and Hovland's (1960) Assimilation-Contrast Theory. The first experiment consisted of psychophysical investigation involving ten experimental Ss and ten control Ss. Each S in the experimental group made judgments under a no anchor condition, moderately extreme anchor condition, radically extreme anchor condition, and then a moderately extreme anchor condition. The controls received exactly the same treatment except they were not exposed to the radically extreme anchor treatment. E anticipated the first presentation of the moderately extreme anchor condition would result in judgments less than the judgments obtained under the no anchor condition. The radically extreme anchor condition was expected to depress the judgments even further; and the second presentation of the moderately extreme anchor condition was expected to also depress the Ss' judgment; but not to the extent

which the first presentation of this treatment condition produced. The data offer support for these expectations. The subjects in the experimental group displayed contrast when the moderately extreme anchor was first presented, but assimilation the second time it was presented. The control group, however, displayed contrast effects the first time the moderately extreme anchor was presented, but did not display assimilation the second time it was presented.

The second experiment was designed as a further test and possible extension of the King-Brown effect. This test, which incorporated psycho-social techniques that paralleled the psychophysical methods used in the first experiment, involves 30 experimental Ss and 30 control Ss. The Ss judged anti-Negro attitude statements under conditions of no anchor, moderately extreme anchor, radically extreme anchor, and moderately extreme anchor. The Ss in both groups were treated equally with the exception that the controls did not receive the radically extreme anchor condition. The E anticipated that all three anchor conditions would produce contrast effects, and that the contrast effect produced by the second administration of the moderately extreme anchor condition would be less than the contrast effect produced by the first administration of this treatment condition. The data, however, were not in accord with these expectations. The King-Brown effect was not confirmed in this experiment, and E hypothesizes that this may have been due to the fact that the second experiment was an inadequate test of the effect. This inadequacy was due to the method used to select the stimulus values of the anchors used in this study.

It was concluded that the first test was at least a partially adequate test of the hypothesis, while the second test was clearly an

inadequate one. Suggestions for improving the adequacy of the psycho-physical test include increasing the sample size and using procedures that more fully equate the control group with the experimental group. Suggestions directed toward improving the psycho-social test include empirically testing the moderately extreme anchor to insure that it will produce the contrast effect it is supposed to as well as equating the control group and the experimental group.

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APPENDIX A

LIST OF ATTITUDE STATEMENTS AND SCALE VALUES
OF ITEMS USED IN EXPERIMENT II

The purpose of this study is to construct a scale for measuring attitudes toward the Negro. On the pages that follow you will find a series of statements that express opinions about the social position of the Negro. Beneath each statement you will find a scale of eleven categories, and your task is to assign each statement to the category which best indicates the level of social position expressed by the statement. Whether you agree or disagree with the statement should not enter into your judgments. You are only to judge the social position of the Negro that is expressed by each statement, and not the extent that you would be willing to endorse the opinion expressed.

Category 1 will contain those statements which place the Negro in the lowest social position, and Category 11 will contain those statements that place the Negro in the highest social position. In like manner, the categories labeled 2,3,4, etc. refer to statements that give the Negro higher and higher social position.

Read each statement, then draw a circle around the category number that you judge to best represent the level of social position expressed by the statement. Hence, at the completion of the task you will have, in a sense, arranged all the opinions in eleven steps of the social ladder that is represented by the scale.

Do not try to assign the same number of statements to each category. Use your own judgment as to the position of each statement, and do not be concerned about the number of times you assign statements to any one category.

Please try to bear in mind at all times that you are to judge only the content of each statement. Whether you agree or disagree with a statement should not enter into your judgments. You are only to judge the social position of the Negro that is expressed by a statement, and not the extent that you are willing to endorse the opinion expressed.

Statement	Scale Value
1. Race purity of the whites must be attained at all costs even to the extermination of the Negro.	0.013
2. Negroes should not be allowed to mingle with whites in any way.	0.019
3. The Negro is by no means fit for social equality with the commonest white people.	0.122
4. I want no Negroes around me.	0.124
5. The feeble-mindedness of the Negro limits him to a social level just a little above that of the higher animals.	0.134
6. The Negro is a necessary evil and is to be endured.	0.156
7. The Negro should be used to produce the white man's needs.	0.205
8. The full-blooded Negro is far beneath the notice of the most degraded white man.	0.259
9. No person with the slightest trace of Negro blood should associate with whites or be classed as a white man.	0.317
10. I believe in white supremacy.	0.300
11. My kitchen is the only place in my home where I should care to have a Negro seen.	0.370
12. The Negro will always remain as he is--a little higher than the brutes.	0.378
13. The social place of the Negro is slightly below the illiterate white man.	0.379
14. Under no circumstances should the Negro be allowed to attend the same schools as white children.	0.483
15. A "nigger" in his place can be tolerated, but as the social equal of the white man he cannot be endured.	0.508
16. The Negro should be treated and thought of as a domestic for the white man.	0.515
17. A Negro at the front door is an imposter; a Negro at the back door may be acceptable.	0.521
18. I would not patronize a hotel that accomodates Negroes.	0.564

19. No Negro should hold an office of trust, honor or profit. 0.569
20. The Negro should be classed as a servant, but should not be held in slavery. 0.572
21. In all social affairs implying equality, the Negro and the white man must be kept apart. 0.579
22. The Negro should never approach the front door of a white man's residence, and should never attempt to sit outside a certain marked section of a bus. 0.581
23. Since the Negro is best adapted to the menial tasks of life he should be assigned this position in life. 0.627
24. The Negro should be given social equality with the lowest class of white man. 0.640
25. The white man has clearly shown the dominance of his race and should continue to exercise his power of leadership over the Negro. 0.686
26. The only permanent position open to the Negro is that of laborer in the industrial South. 0.689
27. The lowest plane of living found in the white race is still higher than the average plane of living found in the colored race. 0.744
28. I would be willing to tolerate contact with the black man, so long as he is performing menial duties and there is no attempt at or suggestion of equality. 0.760
29. The Negro is high enough on the social scale to make a fairly intelligent servant to the white man. 0.763
30. The Negro has shown himself to be incapable of taking responsibility, and should thus be classed with our irresponsible whites. 0.767
31. Our judgments of social level are based on economic standing, and the Negroes are further down the scale than any other race. 0.784
32. The Negro makes a good chauffer but an impossible secretary. 0.797
33. Social recognition should be based on culture, without regard for color. 0.812
34. The black race and the white race can never merge, nor will the Negro ever reach the social equality of the white man. 0.816

35. The Negro should have freedom but never be treated on an equal basis with the white man. 0.816
36. Since the colored student proves to be about three quarters as efficient mentally as the white student, he should be given a corresponding inferior place in any social scale. 0.860
37. Negroes must undergo many years of civilization before they may be said to reach the social level of the whites. 0.868
38. Certain physical characteristics of the Negro make him an objectionable associate on any plane of contact. 0.871
39. The inability of the Negroes to develop outstanding leaders dooms them to a low place in society. 0.914
40. Rights of the Negro, which can be recognized only at the cost of holding back the evolution of the white race at any point, simply do not exist. 0.942
41. I think of the colored race as occupying a somewhat lower position socially than the white race. 0.954
42. In a thousand years the Negro might become the white man's equal, then his social position should be equalized. 0.964
43. The Negro should be allowed to associate with the white man only in necessary business relationships. 0.974
44. I am not at all interested in how the Negro rates socially. 1.021
45. The granting of social equality to the Negro would mean the loss of race integrity. 1.072
46. To eat at the same table as a Negro is considered the depth of indignity, but to eat food cooked by him, and often handled in the uncleanest manner by him, is taken as a matter of course. 1.101
47. A Negro's humanness can be recognized without raising him to the level of the whites. 1.110
48. The instinctive aversion which the white man has for the Negro will forever keep the latter far beneath the notice of the former. 1.115
49. The white man and the Negro should be given the same privileges, but separated in the enjoyment of these privileges. 1.137

50. The Negro should have the advantages of all social benefits of the white man, but be limited to his own race in practice thereof. 1.157
51. The Negro should not be condemned forever to a lower place than the white man, but a different place. 1.202
52. The Negro is fully capable of social equality with the white man, but he should not be so recognized until he is better trained. 1.238
53. The rich spiritual life of the Negro compensates adequately for the defects in his nature. 1.270
54. The Negro problem will settle itself without our worrying about it. 1.325
55. Cultural and mental differences have placed a wide gap between the white man and the Negro which will not be closed for many years. 1.329
56. The Negro should remain in his own social plane, even though in some ways it is equal to the social plane of the white man. 1.340
57. Although handicapped by slight intellectual inferiority, the Negro has gained a firmer hold on the higher spiritual realities than the white man. 1.376
58. In our efforts to help the Negro, we must not blind ourselves to the definite and marked differences which actually exist between the two races. 1.378
59. There are some Negroes that I would esteem it a privilege to travel with, but I would not spend an hour with a miscellaneous multitude of the Negro race. 1.389
60. Inherited qualities have predestined the Negro to the servant class of society. 1.408
61. After you have educated the Negro to the level of the white man, there will still be an impassible gulf between them. 1.460
62. Although the Negro is rather inferior mentally, he has a fuller and deeper religious life than the white man, and thus has an emphatic claim upon our social approval. 1.495
63. The Negro with a little education is a better producer and presents fewer health problems than the white man. 1.509
64. The differences between the black and white races is not one of mere degree, but of kind. 1.517

65. My lack of contact with the Negro makes it impossible for me to pass judgment as to his social position. 1.548
66. Although the Negro is wanting in social grace, his physical endurance makes him a social asset to our country. 1.549
67. Gradual desegregation is a mistake because it just gives people a chance to cause further delay. 1.572
68. Because they have felt intolerance against themselves, Negroes tend to show much less intolerance toward other groups than do most people. 1.578
69. It is doubtful that there is much difference in body odor between Negroes and whites. 1.580
70. The percentage of children born to unmarried mothers among Negroes is about the same as among white people. 1.588
71. Our social formula places the Negro far below the white man, but education will bring him up to our level. 1.622
72. Newspapers greatly exaggerate the differences between the white and colored races. 1.640
73. The educated Negro is less of a burden on the courts and is less likely to become dependent or a defective than the educated white man. 1.645
74. Social segregation of the races is the only solution to the Negro problem. 1.667
75. It is painful to have to record that people of our own race should be so saturated with hostility to a weaker one, which is unable to defend itself, either by law or force of arms. 1.679
76. In all sections of the United States, Negroes are denied opportunities for many good jobs and promotions that are given to white people. 1.681
77. About ten percent of the Negroes in the United States have traits that would place him on the same level as the average white man. 1.682
78. I think Negroes should make up a rather clearly defined working class in America. 1.698
79. The courts discriminate against the Negro far more than inherent differences between the two races warrant. 1.701

80. I don't know enough about the social possibilities of the Negro to pass judgment upon him. 1.711
81. The southern Negro daily meets such insults as shake the very foundations of his citizenship. 1.730
82. All political power which is set over the Negro ought to be, in some way or another, exercised ultimately for their benefit. 1.751
83. I am willing to let the Negroes work out their own destiny. 1.752
84. In large cities of the United States, there is the same rate of delinquency and crime among Negro youth as among native-born youth. 1.798
85. In general, Negroes who have openly opposed segregation in the south have shown unusual self-restraint and virtue. 1.814
86. It is possible for the white and Negro races to be brothers in Christ without becoming brothers-in-law. 1.824
87. The percentage of white who commit murder is about the same as the percentage of Negroes who commit murder. 1.837
88. It may not be widely known, but far more Negro men have volunteered for the military services than one would expect on the basis of their percentage of the population as a whole. 1.844
89. Give the Negro time: within the next 50 years he will astound you. 1.847
90. So great is the range between the highly educated Negro and the "nigger," that the race as a whole cannot be assigned to any one notch in the social scale. 1.851
91. In this day of rush and hurry, the Negro has met the problems of society in a much calmer manner than the white man. 1.864
92. If you give freedom, education and the Christian religion to the colored man, you cannot confine them to a future of permanent subordination. 1.864
93. Only a few extreme white people are against equal treatment of Negroes in restaurants, hotels, and similar places. 1.919
94. A wide awake Negro is physically superior and in other respects equal to the white man. 1.922

95. First we degrade human beings by the curse of slavery for 250 years, and then because they are not advanced we argue that they have not the capacity to rise. 1.923
96. Negroes are probably no more clannish than many other national or religious groups. 1.926
97. The future of the United States lies in the hands of the Negro. 1.935
98. The moving of a single respectable Negro family into an all-white neighborhood never really leads to serious disturbances. 1.940
99. The Negro is a valuable laborer; let us improve him and make his labor more intelligent, more skilled, and more productive. 1.971
100. The Negro is perfectly capable of taking care of himself, if the white man would only let him alone. 1.977
101. In all my dealings with the Negro, he has been agreeable and courteous. 1.986
102. The Negro must possess a much deeper moral nature than the white man, since he has progressed in the face of far greater obstacles. 2.007
103. Whether you welcome the presence of educated and prosperous colored people or not, they are here and must be given social recognition. 2.057
104. The Negro should not be simply the doormat of American civilization. 2.059
105. The Negro should be afforded equal rights through integration. 2.060
106. As long as the Negro continues his struggle to overcome ignorance and sin, we should assist by giving him every privilege, as far as possible, which we ourselves enjoy. 2.077
107. There are Negroes in this country today who are more honest and open-dealing than the typical white American. 2.107
108. The Negro brings a great spiritual contribution to the civilization of America. 2.131
109. There is probably no difference between the cleanliness of Negroes and other Americans of the same educational level. 2.138

110. Some Negroes are clean and some are dirty, but the average Negro does not differ in any way in his personal habits from the average white person in the United States. 2.149
111. It is certainly possible for mixed Negro-white housing areas to have as high property values as all white areas. 2.165
112. The sexual standards of many Negroes are as high as those of other Americans. 2.172
113. Although Negroes may be behind white people in some areas of achievement, there is definitely no difference between the two races in basic intelligence. 2.175
114. If there were complete equality of opportunity tomorrow, Negroes would almost immediately show themselves equal to whites in job skill and most other areas. 2.180
115. Negroes in the United States have certainly demonstrated that they are as ambitious and hard working as any race or national group in the country. 2.186
116. Scientists have shown that there is no difference in intelligence between Negroes and white people in this country. 2.251
117. Our refusal to accept the Negro is not based on any fact in nature, but rather on prejudice, and should be overcome. 2.268
118. Give the Negro a high position in society and he will show himself equal to it. 2.354
119. The Negro should be considered on par with the white man and given the white man's advantages. 2.360
120. Negro children in this country are at about the same education level, on the average, as other American children. 2.391
121. Negroes should have the right to use the same parks, restaurants, and hotels as white people. 2.397
122. If I were being interviewed for a job, I would not mind at all being evaluated by a Negro personnel director. 2.417
123. White students and Negro students should go to the same schools. 2.439
124. Negroes should have as good a chance as white people to get any kind of job. 2.441

125. The record of the Negro in the recent war places him on a level with any United States citizen. 2.462
126. I would take a Negro to eat with me in a restaurant where I was well known. 2.487
127. When whites and Negroes mix together closely---by living together on the same block, eating and entertaining in one another's homes, and so forth---their relations may well improve greatly. 2.513
128. You cannot condemn the entire black race because of the behavior of some of its members. 2.538
129. Physical characteristics of Negroes, such as dark skin, woolly hair, do not necessarily indicate anything about mental or moral traits. 2.558
130. Negroes should be given every opportunity to get ahead, including the opportunity to hold leadership positions. 2.567
131. I believe the Negro is entitled to the same social privileges as the white man. 2.571
132. Some of the ablest and most intelligent people in the United States today are Negroes. 2.614
133. Inherently, the Negro and the white man are equal. 2.637
134. The Negro should be given the same educational advantages as the white man. 2.669
135. The white and colored races should enjoy the same privileges and protection as set forth by law. 2.694
136. They should not be favored because they are Negroes, but should be given justice because they are men. 2.817
137. The Negro, a human being in every sense of the word, should be given equality of rating with the other races. 2.898
138. I see no reason why a Negro should not be allowed to marry a white person if both parties desire it. 3.331

APPENDIX B

SELECTED DEMOGRAPHIC VARIABLES OF SUBJECTS

USED IN EXPERIMENT II

SELECTED DEMOGRAPHIC CHARACTERISTICS OF SUBJECTS
EMPLOYED IN EXPERIMENT II

Variable	Judges (n=104)		Subjects					
			Total (n=60)		Experimental (n=30)		Controls (n=30)	
<u>Age</u>								
X	19.11		20.20		20.13		20.27	
S.D.	1.08		2.20		2.37		2.05	
<u>Sex</u>								
	n	%	n	%	n	%	n	%
Males	55	52.9	29	48.3	12	40.0	17	56.7
Females	49	47.1	31	51.7	18	60.0	13	43.3
<u>Education</u>								
X Years	13.52		14.72		14.67		14.77	
S.D.	0.80		1.33		1.40		1.28	
<u>Grade Point Average</u>								
X	2.80		3.04		3.02		3.06	
S.D.	0.85		0.34		0.51		0.61	
<u>Field of Study</u>								
	n	%	n	%	n	%	n	%
A & S	28	26.9	26	43.3	13	43.3	13	43.3
Business	25	24.0	9	15.0	4	13.3	5	16.7
Education	15	14.4	12	20.0	6	20.0	6	20.0
Agriculture	13	12.5	0	00.0	0	00.0	0	00.0
Tech. Inst.	7	6.7	1	1.7	0	00.0	1	3.3
Home Econ.	5	4.8	5	8.3	4	13.3	1	3.3
Engineering	4	3.9	3	5.0	1	3.3	2	6.7
None	4	3.9	2	3.3	1	3.3	1	3.3
P.E.	3	2.9	0	0.0	0	0.0	0	0.0
<u>Home Town Size</u>								
Median	29,786		30,500		18,000		47,167	
% from Oklahoma	92.45		89.65		89.65		89.65	

VITA

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