

Chapter Title: THE ORIENTATION FILM, "THE BATTLE OF BRITAIN"

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## CHAPTER 2

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### *THE ORIENTATION FILM, "THE BATTLE OF BRITAIN"*

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CHAPTER 2 presents the procedures used and the findings obtained in the experimental study of one orientation film. The procedures described serve to illustrate the methods used throughout the series of orientation film studies. Readers whose primary interest is in research on the general principles of communication may wish to omit reading the detailed findings presented in the latter portions of the chapter.

A great deal of interest attended the experiments carried out to evaluate the Army's orientation films. These "Why We Fight" films constituted probably the largest-scale attempt yet made in this country to use films as a means of influencing opinion. The films were of especial interest to people concerned with mass education because their purpose was not purely instructional in the manner of a training film, but was rather to get across particular interpretations of facts, overcome prejudices, arouse motivations, and in general to modify attitudes rather than merely to convey factual information.

In the present chapter research on "The Battle of Britain," the fourth film in the "Why We Fight" series, will be described. This film was more extensively studied than any of the others and in some ways appeared to achieve the greatest effects. However, before describing this study, it is well to indicate more specifically the nature and purpose of the film and the criteria of effectiveness that were used.

#### THE OBJECTIVES OF THE FILM

##### 1. NATURE OF THE ORIENTATION FILM SERIES

The orientation films were a series of seven 50-minute films that traced the history of World War II from the rise of Fascism in Italy

and Germany and the Japanese attack on Manchuria in 1931 through America's mobilization and participation after Pearl Harbor. The general title of the series was "Why We Fight." The films were designed for showing to new recruits during basic training, and their purpose is indicated by General Marshall's statement in the opening title of the first film:

"This film, the first of a series, has been prepared by the War Department to acquaint members of the Army with factual information as to the causes, the events leading up to our entry into the war, and the principles for which we are fighting. A knowledge of these facts is an indispensable part of military training and merits the thoughtful consideration of every American soldier."

The style of the films was for the most part objective and documentary, with direct quotations, references to official sources, animated diagrams, cuts from domestic newsreels, and cuts from foreign newsreels and propaganda films. The visual presentation was drawn together by a running narration which told the story of the war and explained the scenes. While the general tenor of the films was "the facts speak for themselves," they were not dryly factual. Foreign speech was frequently translated into English with a "foreign accent," "production" shots using actors were employed to tie the documentary material together, the films were scored throughout with background music, and montages and trick photography were used in trying to achieve vivid and dramatic presentation.

## 2. CRITERIA OF EFFECTIVENESS

Two basic assumptions appeared to underlie the preparation of these films.

1. That a sizable segment of the draftee population lacked knowledge concerning the national and international events that resulted in America's entrance in the war.

2. That a knowledge of these events would in some measure lead men to accept more willingly the transformation from civilian to Army life and their duties as soldiers.

In line with these assumptions, the experimental evaluation of these films involved three aspects: first, the measurement of the extent to which the film produced changes in factual knowledge about the events concerning the war; second, measurements of changes in interpretation of these events (opinions concerning the war effort, the allies, and the enemy); and, third, measurements of changes in acceptance of the military role and willingness to serve.

A distinction should be made at this point between the effects *intended* for a film and the effects *actually produced*. A film might be very effective at getting across material that was not part of the initial purpose. From the standpoint of teaching ability such a film would be very successful, but from the standpoint of achieving its particular educational purpose, the film would be unsuccessful. This distinction was crucial in the decision as to what should be tested for in studying the effectiveness of the orientation films, since they could fail in their intended effects either because the presentation did not get across the material or because even getting across that particular material might turn out to have no effect on the desired response.

In the evaluative studies done on the "Why We Fight" films, the attempt was made to study simultaneously the effectiveness in terms of the *intended effects* of the films and in terms of the *material covered* in the films. The criteria for testing the former were derived from the stated objectives of the films; the criteria for testing the latter were derived from content analyses of the film coverage. However, because of the wide coverage of material in these 50-minute films and the practical limitations on the number of areas that could be tested in an experiment, no attempt was made to cover all possible effects of a given film. First priority was given to intended effects, second priority to any possible "boomerangs" or undesirable effects, third priority to the basic material in the film thought most likely to be a source of the intended effect, and lowest priority to possible effects relevant only to presentation technique or film study in general.

In the case of the orientation films the intended effects were not specifically designated for each film, and the artists in charge of production had considerable leeway in determining the content of the films. Therefore, since the films were part of the total orientation program, the objectives of this program, insofar as they were relevant to a particular film, were used as criteria of the degree to which a particular film achieved its "intended" effects. An overall objective of the orientation program, as indicated above, was the increase of willingness to serve, and the effects in this area were determined for each film. In addition, the orientation program had a number of subobjectives which were regarded as means by which the above overall objective would be achieved. These subobjectives, as stated in a directive to the Information and Education Division, were to foster the following:

1. A firm belief in the right of the cause for which we fight.
2. A realization that we are up against a tough job.
3. A determined confidence in our own ability and the abilities of our comrades and leaders to do the job that has to be done.
4. A feeling of confidence, insofar as is possible under the circumstances, in the integrity and fighting ability of our Allies.
5. A resentment, based on knowledge of the facts, against our enemies who have made it necessary for us to fight.
6. A belief that through military victory, the political achievement of a better world order is possible.

In a sense each film had these objectives in view. Material relevant to all of these objectives was not included in each film, but none of the films was to include material running counter to any of the objectives.

### 3. THE NATURE AND OBJECTIVES OF "THE BATTLE OF BRITAIN"

"The Battle of Britain" was aimed primarily at objective 4 in the preceding list—it sought to establish confidence in the integrity and fighting ability of our ally, Britain. It dealt with the dramatic British resistance to the German air attacks on England during the fall of 1940, and covered the period starting with the fall of Dunkirk in June 1940 to the last major bombing raid of the Luftwaffe, which set fire to large areas of London in December.

The story told by the film may be briefly outlined as follows: Hitler had a plan for world conquest which had moved forward without a hitch through the conquest of France and the evacuation of the British at Dunkirk. If Hitler could have conquered England and taken over the British Isles and the British fleet, America would have been placed in a very dangerous position. Hitler did attempt to conquer England but failed because he could not get control of the air over Britain. This failure, which gave America precious time in which to prepare for war, was due to the almost superhuman efforts of the British people and of the RAF and to the unwillingness of the British to give up even in the face of apparently hopeless odds.

Although "The Battle of Britain" thus had as its chief objective the strengthening of confidence in America's ally, Britain, the experimental study also took the other orientation objectives into account in measuring the effects of the film.

### THE EXPERIMENTAL PROCEDURE

The experimental test involved an *experimental* group that saw the film, a *control* group that did not see the film, and the adminis-

tration of an anonymous check-list questionnaire to both groups, ostensibly as a War Department "survey" but actually as a measure of knowledge and opinions on subjects related to the film. The effects were determined from a comparison of the experimental and control groups, any statistically significant differences in their responses being assumed to be due to the film. The details of the experimental design will be described shortly.

As was pointed out in the preceding chapter, the learning of factual material presented in a film can be measured with full awareness on the part of the subjects that they are being tested, but effects of the film on interpretations, opinions, etc., must be measured without the subjects' awareness that they are being tested. In testing the orientation films, however, *both* factual knowledge and interpretations were measured *without awareness* on the part of the men that they were being tested. This was done partly for greater efficiency, in that only one experiment was thereby required, partly because it was desired to get both types of measures on the same men, and partly because it was not certain that all men would accept all of the factual material without reservation. The methods of achieving lack of awareness were inherent partly in the measuring instrument, partly in the design, and partly in the administration of the experiment, and will be explained in connection with each of these aspects of the study.

### 1. THE MEASURING INSTRUMENT

The check-list questionnaire used contained two types of items that formed the measuring instrument per se: multiple-choice *fact-quiz* items of the type used in the *Time* magazine current-events quiz, and *opinion* items that obtained the individual's interpretations and opinions on nonfactual items and his personal feelings on matters related to his role in the war. The opinion items were predominantly of two types: (1) multiple-choice—expressing varying shades of opinions; and (2) "agree-disagree" statements made up of quotations with which the individual expressed agreement or disagreement. Free-answer and other types were less frequently used. In addition, the questionnaire contained *personal-history* items for obtaining information about the individual's education, age, etc., and what might be called "camouflage" items that were not necessary for the test but were used to give scope to the "survey" and reduce the concentration of items dealing with material covered in the film.

a. *Qualitative "pretesting" of items.* In preparing the items that formed the measuring instrument proper, one of the important steps was the *qualitative pretesting* of the wording and meaning of the items. Qualitative pretesting consisted of face-to-face interviewing of soldiers, with the questions asked verbally by the interviewer in some cases and read by the respondent in others. In these interviews the interviewer, usually a civilian or enlisted man, identified himself as an official War Department "pollster" but kept the interview informal, encouraging the respondent to discuss the general topic of each question and to qualify his answers. In this way, misinterpretations of the questions and misunderstood words were uncovered and at the same time natural wording and natural categories of response were revealed. After the first few interviews suggestions for rewriting were accumulated and the items were revised and pretested again, the whole process being repeated until difficulties were reduced to a minimum. In the orientation film studies more pretesting was given to attitude items than fact-quiz items, but there was ample evidence that even simple completion-items of the fact-quiz type require qualitative pretesting.

b. *Quantitative pretesting of items.* In addition to the qualitative pretest of items a *quantitative* pretest was conducted. The purpose of the quantitative pretest was the advance determination of the approximate distribution of answers to each question and the relationships between questions. For this purpose a sample of two hundred men was used.

The analysis of the relations between questions consisted mainly in an analysis of the attitude items in terms of their conformity to scales of the type to be discussed in Volume 4 of this series. The assumption in this analysis was that if a group of items in a given area were found not to "scale" in the quantitative pretest, the area, as defined a priori, was not a single content variable and the items had to be treated as specific and separate areas of response. If on the other hand a group of items did "scale" in the pretest, it was assumed that they could all be treated as representatives of a single content area. In cases where individual items did form a scale in the pretest, only two or three items from the scale were used in the experiment, and effects on these items were assumed to be evidence of effects in the entire area.

The approximate distribution of responses to the check-list categories, as determined in the quantitative pretest, also served as a basis for selecting or revising items to use in the experimental test

of the film. In such cases one consideration was the initial split of opinion on the item. For example, an item in which 90 per cent of the population endorsed the favorable category was considered undesirable for measuring increases in favorable opinion since the number of individuals who can be shifted to the favorable response is very small. Another reason for considering the initial split arose in connection with items to be used in analyzing the film's effects as a function of initial response. In such cases response categories that made for subgroups too small to analyze were undesirable.

c. *Avoidance of items that suggested the film.* One factor that had to be considered in preparing the measuring instrument was the possibility that the items would be so specific to the material in the film that they would remind the men of the film. This was avoided in line with the general motive mentioned earlier of preventing the men from divining that their reaction to the film was being studied. But even if this suspicion were not aroused, a question that specifically suggested the film might get an unrepresentative measure of the film's effect merely because the individual would not normally be viewing his response in the light of the film. Thus, he might have more respect for Britain's participation in the war when he happened to be reminiscing on episodes from "The Battle of Britain," but such occasions might be rare occurrences. Ideally the individual should be "taken unawares" by the question and give his typical response.

This latter problem was more important in the case of opinion questions than fact-quiz questions, where specificity is an inherent aspect of the content and less variability of response is to be expected. In order to prevent the specificity of the fact-quiz questions from affecting the responses to the opinion questions, the fact questions were placed at the end of the questionnaire where they would be read only after the other responses had been made. Fact questions relating to material covered in the film were distributed among an equal number of "camouflage" fact questions unrelated to the film. Even with these precautions, a certain amount of specificity was sacrificed in order to prevent a tie-up with the film.

## 2. THE DESIGN OF THE EXPERIMENT

Two different experimental designs were used in the study of "The Battle of Britain." One design involved measuring at a specified time after the film showing the factual knowledge and opinion in a *film* group (which saw the film) and a *control* group (which did not



see the film). This design was termed the "after-only" design because measurements were not made for the same group of men both before and after the film showing. The other design had the additional feature of getting a measurement on the same men before the film showing. This was termed the "before-after" design because measurements were taken on the film and control groups both *before and after* the introduction of the experimental variable.

Each of these two designs has its advantages and disadvantages. In general, the before-after design is superior from the standpoint of problems of analysis and sampling, whereas the after-only design is better from the standpoint of being easier to administer and less subject to the possibility that the measuring process will bias the measurements obtained. The relative advantages and disadvantages of the two designs are taken up in more detail in Appendix C.

It should be pointed out that in the before-after design it was possible to match the before and after questionnaires of the same individuals and still maintain anonymity. The responses to personal-history questions (age, education, region, etc.) in the "before" and "after" surveys provided a basis for matching the two surveys of a given individual in most cases, and handwriting was sufficient additional evidence to permit the matching of practically all the men in the sample who filled out both questionnaires. The matching process was greatly facilitated by the fact that the men filled out both questionnaires in platoon groups. The platoon could be identified, so that matching was initially narrowed down to groups of around fifty men each.

The time interval between the film showing and the administration of the survey after the film was set at approximately one week in the case of all of the experimental studies of orientation films and always involved an intervening week end. While the effects might have been greater immediately after the film, it was desired to determine the more lasting effects, so the interval of about one week was selected as an appropriate point for testing. In the study of "The Battle of Britain," however, an additional feature was the determination of effects after a lapse of about nine weeks from the showing of the film. Only the short-time effects (just under a week) will be described in the present chapter. A comparison of the effects of the film after the short-time interval and after nine weeks is reported in Chapter 7.

The experimental studies of the film were conducted at two different camps, one during February and one during April of 1943. The

total sample on which the data presented in this chapter are based is 2,100 cases. Half of these were men who saw the film, and half were controls who did not. The after-only design was used at one camp ( $N = 1,200$ ) and the before-after design was used at the other ( $N = 900$ ).

### 3. SAMPLING PROCEDURE

It would have been desirable from the standpoint of sampling to have the experimental and control groups composed of men selected at random from the total available group. But such a procedure could easily have biased the results because it would have been contrary to all precedent in the training centers. Assembling a random audience from many different outfits to see a movie would have been a most mysterious event and would have led to numerous speculations as to why it was done. Moreover, this procedure would require the same mysterious assemblage in taking the survey. From the standpoint of getting a realistic and unbiased estimate of the effects of the film as it was to be used by the Army, therefore, it was considered necessary to show the film by company unit, with the consequence that the sampling was unit sampling rather than individual sampling.

The effect of this unit sampling procedure would be expected to increase the sampling error as compared with a random sampling of individuals. The difference would be a function of the variables that had been used to assign the men to a particular company and the correlation between these variables and questionnaire responses. It was usually alleged that men were assigned without any system, but fairly large variation in composition of companies was occasionally found in the film studies.

It will be noted that the increase in sampling error that may occur with unit sampling applies mainly to the after-only design and exemplifies the sampling advantage of the before-after design. Varied composition of companies would increase the chance of obtaining sizable after-only differences between experimental and control groups due merely to initial differences in the two groups. But in the before-after design such differences are revealed in the "before" survey.

It should be pointed out that even in the after-only design relatively large differences in composition are required before the sampling error of the group is noticeably different from a random sample. And even fairly large differences in composition will have little effect

on the sampling error unless fairly large correlations exist between responses being measured and the composition variables on which the groups differ. (See Appendix C.)

#### 4. EQUATING OF EXPERIMENTAL AND CONTROL GROUPS

Partly to compensate for the effects of unit sampling, it was considered desirable to *equate* the experimental and control groups as far as possible on the major variables that might be related to the responses of the men. This was done both in the course of setting up the experiment at the camps, and in the construction of the final sample after the survey responses had been punched onto IBM cards. At the camps, distributions of Army General Classification Test scores, education, age, and census region of birth were obtained for each company, and two "most comparable" groups were selected by grouping of the companies. "Comparability" not only involved the personal history variables mentioned above, but also the balancing of stage of training, previous exposure to orientation material, and any other local factors which affected company units and were considered relevant. Thus the only random factor was the decision as to which of the two groups so selected would be experimental and which control, and this was decided by tossing a coin after the two groups were selected.

The equating of the two groups was further refined after all the questionnaires had been coded and punched onto cards. AGCT information was not available at this stage because the questionnaires were anonymous, but the other background information listed above, plus additional information such as marital status, rural-urban origin, etc., had been filled in by the men and was used for further equating on IBM machines. This was done simply by discarding, on a random basis, men of a given background type in whichever group—film or control—had an appreciably larger number of that type.

#### 5. ADMINISTRATION OF THE EXPERIMENT

For proper administration of the experiment it was important to present the film under realistic conditions, to prevent the men in the sample from realizing that an experiment was in progress, and to obtain honest answers in the questionnaires. For realism in presentation, the film showings for the experimental group were incorporated into the training program and scheduled during the weekly orientation hour exactly as the films were to be used. This not only

insured realistic presentation but also avoided any evidence that the film was being tested, films being a standard part of the men's training.

The questionnaires were presented as being part of a War Department survey to find out how a cross section of soldiers felt about various subjects connected with the war, with examples being given of previous Research Branch surveys and how they were used. Questionnaires were filled out by all the men in a platoon at once, the men being assembled in mess halls for the purpose. The questionnaires were administered by "class leaders" selected and trained for the job from among the enlisted personnel working in the camp orientation office and in the camp classification office. In the introductory explanation of the survey, the class leader stressed the importance of the survey and the anonymity of the answers. The purpose of this emphasis was to get the men to take the survey seriously and to give honest answers. No officers were present at these meetings and the men were assured that the surveys went directly to Washington and that no one at the camp would get a chance to see what they had written.

#### 6. SPECIAL PROBLEMS IN THE ADMINISTRATION OF THE REPEAT SURVEY

In the case of the before-after design a special rationale must be prepared to explain the fact that a second survey is made. In a repeat survey with a long intervening time interval (e.g., two months or more) probably no precautions are required to explain the similarity of the two surveys. Many respondents will then have forgotten the content of the preceding survey, and the previous experience probably only makes the "after" survey seem less out of the ordinary. If anyone does comment on the similarity, "checking on trends" is a convenient rationale. But when the time interval is only two or three weeks, some reasonable explanation must be provided.

The rationale used with the before-after design in evaluating "The Battle of Britain" was that the questionnaire had been revised on the basis of preliminary results. The class leaders were rotated so that the same men did not administer the questionnaire to the same platoons, and the new class leader mentioned in passing that "some of you men may have filled out a questionnaire like this a while back" and went on to explain that a similar survey had been made but that the questionnaire had been revised and was being adminis-

tered again. The format of the repeat questionnaire was conspicuously altered, and it carried a "REVISED" in large type next to the survey number on the front page. Items for which retest answers were not needed were included in only one of the questionnaires, so their addition or deletion provided some of the "revision." The addition of the fact-quiz items, which were not included in the "before" questionnaire, also increased the extent of revision, together with omitted, added, or revised "camouflage" questions.

As an added precaution in the administration of the repeat survey the class leader never allowed anyone in the class the opportunity to ask a question before the group. After his introductory explanation, he instructed the men to start filling out the questionnaire and to raise their hands if they had any questions. This procedure prevented the possibility that some one man might express suspicion as to the true nature of the "survey" before the entire class and thereby raise suspicions in the minds of the others.

It should be pointed out that these precautions and some of the others described above were taken mainly on a priori grounds and they do not indicate that evidence for a frequent tendency to be suspicious was ever obtained. Actually, only a very small percentage of men were ever found to indicate suspicion of the purpose of the surveys in the film studies, even when questions were specifically directed toward this point.

### RESULTS OF THE EXPERIMENTAL EVALUATION

The results of the experiment are presented in terms of the percentages of men in the film and control groups who chose various responses after the film showing. The difference between the film and control percentages for each questionnaire item indicates the effect of the film on responses to that question.

In using this procedure it is recognized that the effect of the film is not being completely described. For example, positive effects cannot be detected among those who initially select the key response on a question: such men are already as positive as the measuring instrument can record. Similarly, the above procedure does not detect changes among those who are influenced in a positive direction but not sufficiently to shift to the key response of the question. Furthermore, the only kind of effect that is detected is a shift of response to a questionnaire item. Other kinds of effects are likely to be present, or some effects may be latent and emerge only at a later time in combination with causal factors other than the film.

Thus the difference between film and control percentages choosing the key response must be regarded only as a standardized indicator of the complete effect that is present as a result of the film. A discussion of some of the problems of describing and measuring effects will be found in the Appendix.

In combining the results of the two camps only the "after" responses are used for the camp at which the before-after design was employed. The "before" differences between answers given to questions by the experimental and control groups at this camp were slight (none greater than 4 per cent and most close to zero) so that the results are not materially altered by using only the "after" differences between film and control.

The fact that sampling was on a unit basis, plus the counteracting factor of equating of the groups, makes it difficult to evaluate precisely what constitutes a statistically significant difference between the responses of the film group and the control group. However, differences of 6 per cent or more between the percentages choosing a particular response in the film and control groups may fairly safely be regarded as significant beyond the 1 per cent level of confidence, and were so regarded in evaluating the film.<sup>1</sup> It is worth pointing out that borderline cases are not particularly important in any case since, even if a six per cent difference were *statistically* significant, it will usually be of little practical significance from the standpoint of achieving the film's objectives.

The experimental findings will be presented first in terms of the content areas covered in the film and then in terms of more general effects upon attitudes related to orientation objectives, including possible adverse effects of the film ("boomerangs").

#### 1. EFFECT OF THE FILM'S PRINCIPAL CONTENT THEMES ON MEN'S OPINIONS

a. *There was an actual "Battle of Britain."* One of the main themes of the film was that the air raids by the Nazis were an all-out attempt to knock Britain out of the war. The inferred plan of the Nazis for taking England after the fall of France was described in the early part of the film. Animated maps were used to illustrate

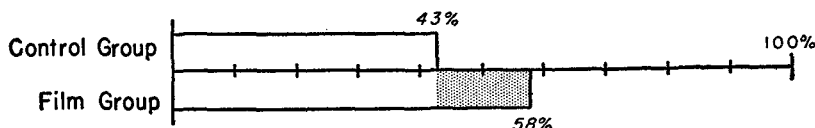
<sup>1</sup> A 6 per cent difference would occur about one time in a hundred by chance with the *N*'s involved if sampling had been random and if the initial frequency of a response is 50 per cent. The fact that control and film groups were equated and that most responses had a frequency greater or less than 50 per cent tends to make this a conservative estimate of the 1 per cent level of confidence.

the plans and German shots were interspersed showing Hitler and his staff in conference and German forces in readiness. The outcome of the air warfare over England was presented as a distinct German defeat, in which the plan to conquer England was upset because the Nazis could never accomplish the first phase of gaining control of the air over the British Isles. This interpretation of the Battle of Britain was presumably in contrast to the conception previously held by the soldiers, for whom the Battle of Britain was a relatively forgotten phase of the war and was thought of more as merely a series of bombing raids than as a prelude to a projected invasion.

The film produced a substantial change in the men's interpretation of the Nazi bombing of Britain. This is illustrated by the responses to the following item, which was presented to the men as part of a fact-quiz series.

*Question:* "The heavy bombing attacks on Britain were part of an attempt by the Nazis to . . . CHECK ONE" (of the four possible answers)

Percentage of men checking "key" answer:<sup>2</sup> i.e., "invade and conquer England."



The other alternatives presented in this particular question were "get even with the British for bombing German cities"; "keep them from helping Russia"; and "break down their morale so they would surrender."

b. *Heroic British resistance.* Closely related to the foregoing theme was one depicting the effort and spirit of the British people in blocking the invasion attempt. Facing great odds, the British people refused to give up and, despite the terrible bombing of their homes and cities, were willing to go on with their efforts as the only nation fighting against the Nazis. This theme emphasized what little the British had with which to defend themselves, the terrible

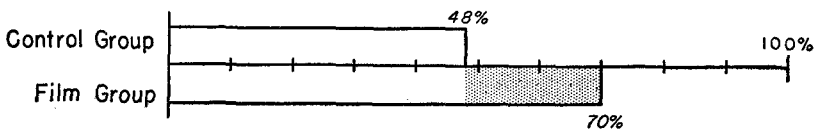
<sup>2</sup>The "key" answer is the critical one, the response which the film was calculated to change. It is the one used in the measurement of the film's effectiveness; in the case of a fact-quiz item this is of course the correct answer to the question. Questions presented in the text will quote only the "key" answers—or the "correct" answers in the case of information questions—unless it is felt that the other answers may be helpful in interpreting the findings.

punishment they had to take, and the extent to which everyone in Britain was integrated into an all-out war effort.

Evidence of the effect of the film in this area is furnished by answers to a question asking for the probable reason why the Nazis did not invade Britain after France fell. Interpretations implying that the Nazis did not attempt an invasion of England were much less common as a result of the film, and there was a corresponding increase in the number of men interpreting the Battle of Britain as an unsuccessful invasion attempt which was thwarted by the determined resistance of the British.

*Question:* "What do you think is probably the real reason why the Nazis did not invade and conquer Britain after the fall of France?" (three alternatives)

Percentage of men checking "key" answer: i.e., "the Nazis tried and would have succeeded except for the determined resistance of the British."



The all-out effort of the British and their strong spirit despite their hopeless position was documented with a considerable amount of material: the Home Guard, factory workers putting in long hours, women taking over men's jobs, excerpts from Churchill's famous "we shall never surrender" speech, workers continuing at their jobs through the bombings, volunteer firemen and rescue workers, Londoners "taking" the blitz all night but getting back to their jobs in the morning, and so forth. Several agree-disagree items were used to test for effects of this material on the men's evaluation of the efforts of the British people. As can be seen, very little effect was obtained on these items.

	Control Group	Film Group	Differ- ence
Percentage of men who <i>agree</i> with state- ment:			
"The British stood up under bombing better than Americans probably would."	28%	36%	8%
Percentage of men who <i>disagree</i> with state- ment:			



"The British are taking it easy in their war effort in the hope that America will win the war for them."	75	79	4
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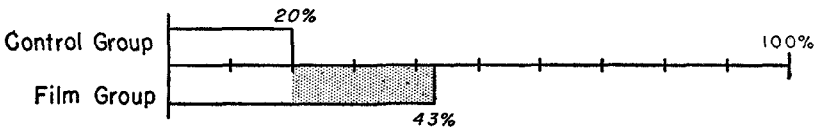
Percentage of men who *disagree* with statement:

"If the Germans had kept up the bombing of London a little longer the British might have given up and asked for peace."	76	79	3
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c. *Contribution of the Royal Air Force.* Linked to the theme of the attempted invasion was the magnificent job of the RAF in staving off the German attack. The RAF occupied a fairly central role throughout the film, which contained many striking action shots of planes in combat. The outstanding performance of the RAF was documented with figures showing their disadvantage in numbers, figures showing the greatly disproportionate plane losses of the Luftwaffe, and action shots of British fighters skillfully shooting down German planes. In general, the tenor of the film was that German conquest hinged on control of the air and the Germans lost because they were beaten by the RAF. A sharp increase was shown in the per cent crediting the RAF with giving the Nazis their first real defeat.

Question: "In your opinion who gave the Nazis their first real defeat?"  
(four alternatives)

Percentage of men checking "key" answer: i.e., "the British Royal Air Force."

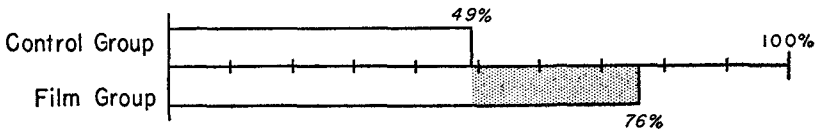


This change not only underscored the importance of the RAF but was further evidence that the men who saw the film perceived the air attack of the Germans as constituting a major battle and a formidable military defeat—comparable to the Russian victory at Stalingrad and the Allied victory in North Africa which were included in the other choices to the question.

The answers to another question also combining the themes of attempted conquest and credit to the RAF show the effectiveness of the film in getting across this message.

Question: "Which of the following would you say was the *most important* reason why the Germans were not able to conquer England?" (four alternatives)

Percentage of men checking "key" answer: i.e., "they were stopped by the RAF."

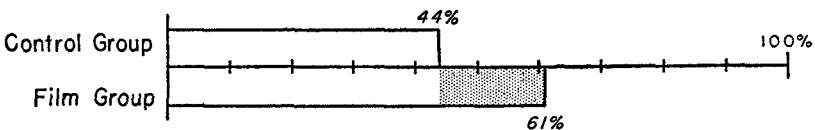


The other alternatives presented to the men on this question were: "the Germans were afraid of having to fight a war on two fronts" (which decreased from 24 per cent to 9 per cent); "the British Navy kept them from crossing the English Channel"; "the British Home Guard prevented them from landing any troops."

Increased recognition of the outstanding performance of the RAF was also shown from the answers to the agree-disagree item shown below.

Percentage of men who *agreed* with statement:

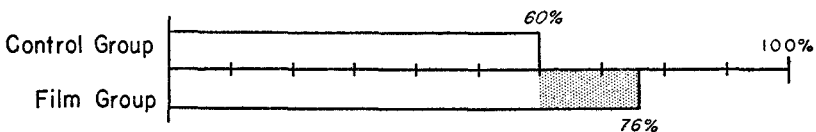
"About the best job of fighting that has been done in this war has been done by the British Royal Air Force."



d. *British resistance gave us time to prepare.* A fourth important theme of the film was that the British, in staving off a German invasion of England, gave America and the rest of the world precious time to get prepared for the struggle against Germany. This was explicitly stated in the final sentences of the narration and was implied in other portions of the film. The results of an agree-disagree item on this theme are shown below.

Percentage of men who *agreed* with statement:

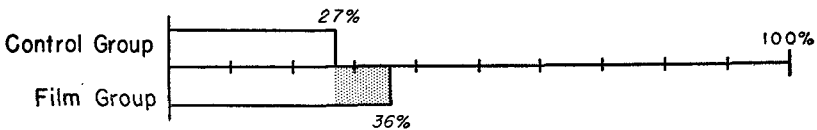
"By refusing to surrender to Hitler, the British people probably kept American cities from being bombed by the Germans."



In the introductory portions of the film in which Hitler's dreams of world conquest were discussed, the point was made that if Hitler could conquer Britain and get control of the British fleet, he would be in a position to "phone his orders to Washington." This was accompanied by an animated map showing ships representing the combined sea power of all fleets controlled or taken over by the Axis moving into position around the United States. This, together with the later portions of the film, carried the implication that after Britain, the U.S. was next on Hitler's list and that Britain's resistance, therefore, saved us from attack. A write-in question was included as a test of whether the men concluded from the film that America would have been attacked next if Britain had been conquered.

*Question:* "If Hitler had been able to invade England and defeat the British, what country do you think he probably would have attacked next?" (write in answer)

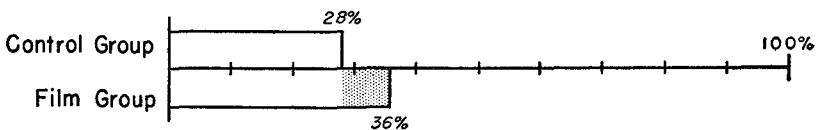
Percentage of men writing in the answer "United States."



A third question was asked at one camp ( $N = 1200$ ) on the general theme of obligation to the British: "Which country do you feel deserves the most credit for fighting off the Axis while we were getting better prepared?" The three alternatives were "Russia," "Britain," and "China." Initially the majority of the men in the sample favored Russia rather than Britain or China. (During the two years preceding the study, the major scenes of action had been in Russia.) However, some effect of the film in increasing the per cent choosing Britain is seen in the results below.

*Question:* "Which country do you feel deserves the most credit for fighting off the Axis while we were getting better prepared?" (three alternatives)

Percentage of men checking "key" answer: i.e., "Britain."



Another version of the question restricted to countries fighting the Nazis was asked at the other camp and yielded similar results.

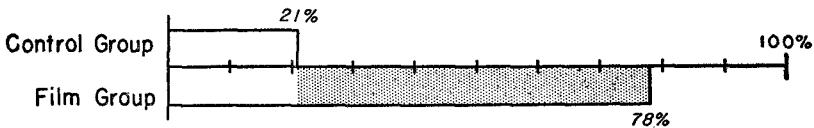
The four themes outlined so far—real invasion attempt, all-out effort of the British, outstanding performance of the RAF, and winning precious time for the rest of the world—constituted the major content of the film. The remaining content not coming under one of these headings dealt primarily with military information concerning the strategy and tactics of the British and the Nazis.

## 2. EFFECTIVENESS OF FILM IN IMPROVING KNOWLEDGE OF MILITARY EVENTS

In connection with the British defense, the film pointed out that the RAF had learned "the lesson of Poland" and had scattered their planes at the edges of airfields to prevent their being destroyed on the ground. The large effect of the film in getting across this point is shown below.

*Question:* "The reason Germany was not very successful in bombing British planes *on the ground* was that . . ." (four alternatives)

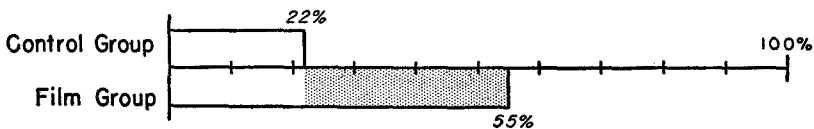
Percentage of men checking "correct" answer: i.e., "the British kept their planes scattered at the edges of the fields."



That the film was effective in getting across the numerical disadvantage of the RAF relative to the size of the Luftwaffe is seen in the results of a fact-quiz item concerning the extent to which the RAF was outnumbered.

*Question:* "When the Germans began mass bombing attacks on Britain, the Nazi Air Force was . . ." (four alternatives)

Percentage of men checking "correct" answer: i.e., "ten times as large as the British Air Force."

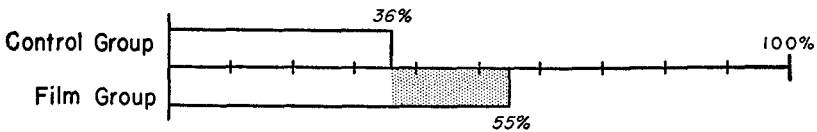


(The other alternatives presented in this question were: "five times as large"; "about the same size"; and "one-half as large.")

As a test of their knowledge of the role of the British Navy, the men were asked to check one of four alternative statements about the British fleet's part in the Battle of Britain. The results show that a sizable proportion learned that the fleet was of little use to the British as a defense against invasion.

*Question:* "At the time of the battle of Britain, the British Navy . . ." (four alternatives)

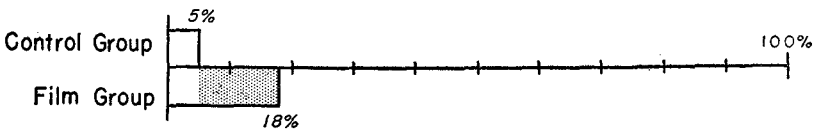
Percentage of men checking "correct" answer: i.e., "could not operate in the English Channel because it would be too easy to bomb."



Another fact-quiz item was concerned with the lack of military equipment after the fall of Dunkirk. In the film were shown shots of the evacuation, German shots of ruined British equipment covering the beaches, and shots contrasting the well-equipped Germans with Britain's inadequately equipped forces. The statement was made in the film that "in all of Britain there was not enough equipment for one modern division." The extent to which the film was effective in getting this point across is shown below.

*Question:* "At the time of the fall of France, the British Army had enough modern guns and other equipment to arm a force of about . . ." (four alternatives)

Percentage of men checking "correct" answer: i.e., "1 division."



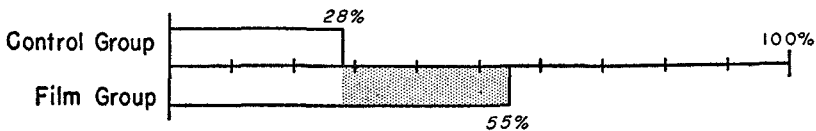
The other alternatives presented in the above question were 10, 30, and 100 divisions. In addition to this increase of 13 per cent in the number choosing the correct choice there was an increase of 8 per cent in the number choosing "10 divisions," indicating that some

men probably revised their estimates downward without having adopted the figure given in the film.

Two information questions used in the study dealt solely with Goering's strategy and tactics. In explaining the changing strategy of the Luftwaffe, it was shown that the original plan called for gaining control of the air as a prelude to invasion. The film portrayed the events leading to the final strategy of trying to force surrender by indiscriminate bombing of cities and civilians. One fact-quiz item dealing with Goering's strategy was included to determine not only the extent to which the film got across the original plan, but also the extent to which the film avoided confusion between the original and final plans. The men were asked to check one of four alternative statements about the original Nazi plan of conquering Britain.

*Question:* "The way the Nazis originally planned to conquer Britain was to . . ." (four alternatives)

Percentage of men checking "correct" answer: i.e., "destroy the RAF, then invade England with paratroops and panzer divisions."



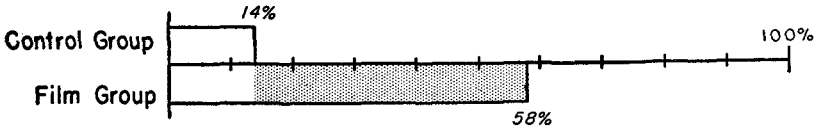
The other three alternatives were: "starve the British into surrender by blockade"; "destroy the British Navy, then attack Britain from all sides at once"; and "bomb the British civilians until they surrendered without a fight." Not only was a sizable effect of the film obtained on the "correct" choice, but also there was a decrease in the per cent choosing Goering's final plan, "bomb the British civilians until they surrendered without a fight," which might have been a source of confusion with the original plan. The per cent choosing "bomb the British civilians until they surrendered without a fight" dropped from 38 per cent (among men who did not see the film) to 20 per cent (among men who did see the film).

The other fact-quiz item dealing with Nazi strategy and tactics tested men's recognition of the targets and time of day of the first German bombing attacks against England. The film, showing the first bombing to be daylight attacks against convoys and harbors in

the Channel and along the Thames Estuary, was found to be effective in getting this information across to the men.

*Question:* "The first major bombing attacks on Britain in this war were . . ." (four alternatives)

Percentage of men checking "correct" answer: i.e., "daylight attacks on ports and ships."



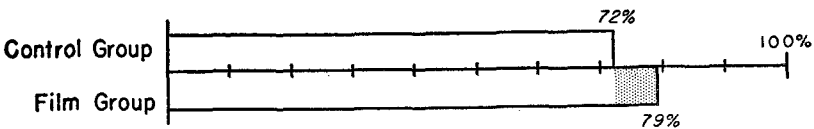
The other alternatives presented in the question were: "night attacks on RAF bases"; "daylight attacks on London"; "night attacks on London." Most of the increase in the percentage of men checking the "correct" answer came from the category "night attacks on London," which dropped from 63 per cent (for men who did not see the film) to 19 per cent (for men who saw the film).

### 3. EFFECTIVENESS OF FILM IN IMPROVING GENERAL ATTITUDES TOWARD THE BRITISH

Since one of the principal intended effects of "The Battle of Britain" was to establish a feeling of confidence in the integrity and fighting ability of one of our allies, a number of items were included which were less specifically related to the film content but concerned general attitudes toward the British. In contrast to the large effects afforded above, where the items were tied to specific phases of the British war effort covered in the film, *the effects were small or unreliable on the more general questions dealing with confidence in the British effort.* The responses to several questions in this category are presented below.

*Question:* "Do you feel that the British are doing all they possibly can to help win the war?" (two alternatives—"yes" or "no")

Percentage of men checking "key" answer: i.e., "yes."



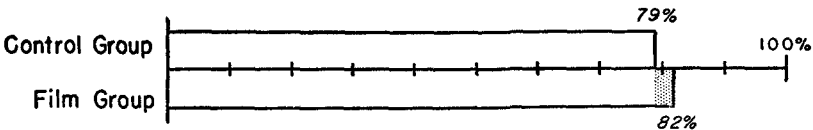
*Question:* "Do you think the British are trying to get others to do most of their fighting for them in this war, or do you think they are doing their fair share of the fighting?" (two alternatives plus "undecided")

Percentage of men checking "key" answer: i.e., "British are doing their fair share of the fighting."



*Question:* "Do you think Britain may try to make a separate peace with Germany before the war is over, or do you think Britain will keep on fighting to the end?" (two alternatives plus "haven't any idea")

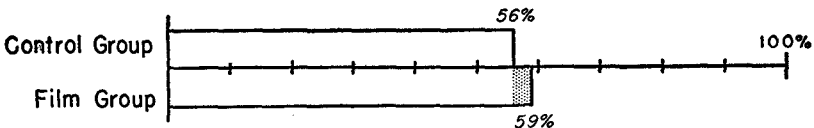
Percentage of men checking "key" answer: i.e., "will fight on to the end."



Other questions were included to determine any positive transfer of the effects of the film to general "pro" and "anti" British sentiment. Here the questions did not refer to the war effort of the British but were regarded as indices of general friendliness or unfriendliness toward the British people. The findings, which are illustrated below, indicated little or no transfer of the effects of the film to overall attitude toward the British people.

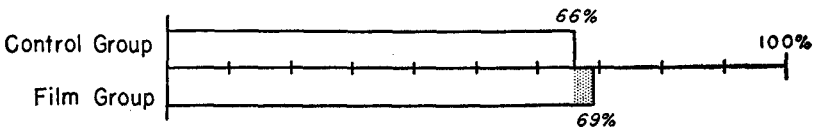
*Question:* "Some people say that the British are largely to blame for our being in this war. Do you agree with this, or disagree?" (two alternatives plus "undecided")

Percentage of men checking "key" answer: i.e., "disagree."



*Question:* "Do you think we ought to send food to England, even if it means rationing a lot more foods for civilians here in the United States?" (two alternatives plus "undecided")

Percentage of men checking "key" answer: i.e., "should send food, even if it means more rationing here."





## 4. EFFECT OF "THE BATTLE OF BRITAIN" ON MEN'S MOTIVATION

While the film's chief objective was to strengthen confidence in the integrity and fighting ability of the British, it presumably also had the general objective, common to the entire "Why We Fight" series, of influencing men's motivation. Accordingly, the film's effects with regard to willingness to serve, attitude toward unconditional surrender, and resentment against the enemy were examined.

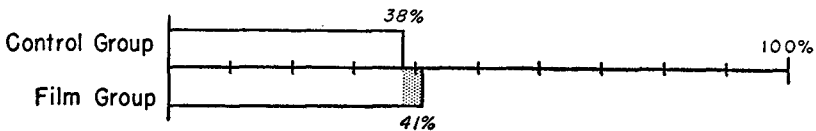
a. *Willingness to serve.* Did the film bring about an increased willingness to serve? This was considered to be one of the principal objectives in showing the orientation films. However, no reliable changes were found in this area as a result of seeing the film. The main question used was:

Question: "If you had your choice when you finish your training, which would you choose?" (Check one)

- ☐ Duty in an outfit overseas or  
☐ Duty in an outfit in the United States

Why? \_\_\_\_\_

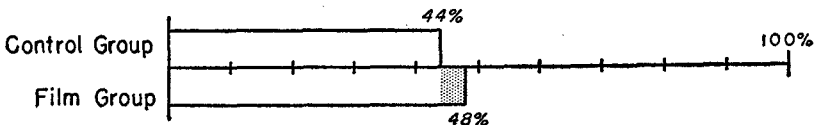
Percentage of men checking "key" answer: i.e., "duty in an outfit overseas."



Thus the results showed no reliable effect of "The Battle of Britain" on the men's answers to this question. The results on another question in this area asked at one camp (N = 1200) are shown below.

Question: "In your honest opinion, do you feel you can do *more to help win the war* here in the Army, or do you feel you were doing more to help win in the job you had before you came into the Army?" (three alternatives plus "don't know")

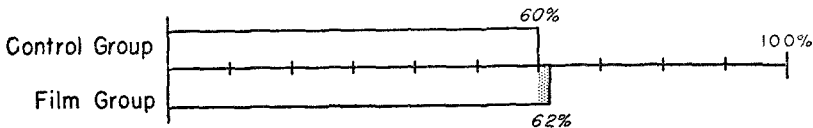
Percentage of men checking "key" answer: i.e., "can do more in the Army."



b. *Insistence on "unconditional surrender."* Similar results were obtained in a closely related area, namely agreement with the unconditional surrender policy of continuing the war until the complete defeat of the Axis powers. This question provided men who did not want to serve a convenient rationalization for their position and an opportunity to express their willingness to stop short of complete victory. As can be seen, no reliable change was produced by the film.

*Question:* "If Hitler offered to stop fighting right now and discuss peace terms do you think we should consider the offer seriously to prevent loss of American lives and money?" (two alternatives plus "undecided")

Percentage of men checking "no, should reject the offer."



c. *Resentment against the enemy.* Supposedly one of the important motivations making men willing to serve in the Army was resentment against the enemy. At the time of the study, mass bombing of cities had not yet become a regular part of Allied methods, and it was thought that resentment against the Nazis might be increased by such scenes as those of the indiscriminate bombing of civilians and the mass burials after the destruction at Coventry. However, no evidence was obtained for a reliable increase either in belief in Nazi brutality or in expression of aggression against the Germans. Relevant results are shown below.

	<i>Did not see film</i>	<i>Saw film</i>	<i>Difference</i>
Percentage of men who <i>disagree</i> with statement:			
"The Nazis probably do not treat the people they conquer as badly as American newspaper and radio stories say."	66%	70%	4%
Percentage of men who <i>agree</i> with statement:			
"We should see to it that the Germans and Japs suffer plenty for all the trouble they are causing us."	78	78	less than 1

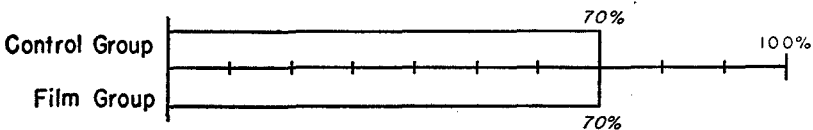
## 5. CHECKS ON POSSIBLE "BOOMERANGS"

There is always a possibility that some of the ideas emphasized in any film may produce "boomerangs"—adverse effects resulting from emphasis upon certain points with consequent distortion of related ideas. Accordingly, checks of these possibilities were usually made in each film study. In "The Battle of Britain" the following points were investigated as areas in which "boomerangs" seemed possible.

a. "*American help not really needed in war.*" A potential source of adverse effect upon the orientation objective of the necessity of our entering the war was the film presentation of the inability of the Germans to defeat England. It was thought that this might be used by the men in support of the belief that Germany was weaker than had been supposed and American help was not needed to prevent the Nazis from conquering the world. The film also explained how the British had withstood the enemy from across "that 21 miles of Channel . . . that short 8 minutes of water." It seemed possible that the men's reaction to this might be that if this was the case with England, we could certainly protect ourselves across 3,000 miles of ocean and so need not have sent our troops to Europe after all. However, the results showed no such effects on the items in this area.

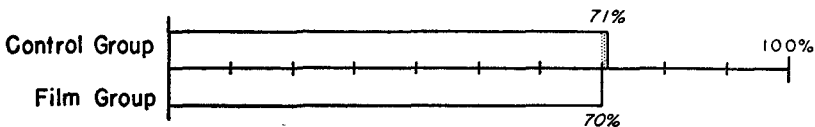
*Question:* "How much help from the United States do you think Britain and Russia *needed* in order to beat Germany?" (three alternatives)

Percentage of men checking "key" answer: i.e., "Britain and Russia would not be able to beat Germany without our sending both men and materials."



Percentage of men who *disagree* with statement:

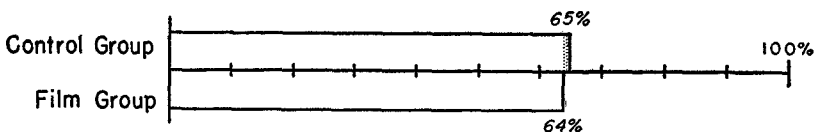
"Since the Germans couldn't even get across the 20 miles of the English Channel in 1940, they certainly could never have attacked American shores across 3,000 miles of ocean."



b. "*The Nazis will be easy to defeat.*" It was also thought that the film might have an adverse effect in connection with the objective of bringing about a realization of the difficulty of defeating the Axis. Thus it could be expected that the portrayal of an unprepared Britain successfully warding off an invasion attempt would lead to the men's concluding that the Nazis would be easier to defeat than they had previously supposed. Answers to an agree-disagree question, however, relating to the difficulty of the job show no increase in overoptimism.

Percentage of men who *agree* with statement:

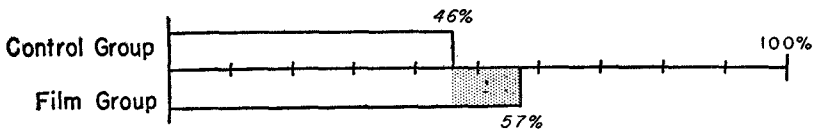
"America and her allies can still lose this war."



c. "*Civilians back home are not backing us up.*" Another potential "boomerang" was that the men's confidence in their own civilian support might be adversely affected by the film's showing the outstanding efforts of the British civilians. A question was included on the relative war effort of the American and British civilian workers. The results are shown below.

Percentage of men who *agree* with statement:

"America would be producing more planes, tanks, and guns if only American civilians would work as hard as the British have done in this war."

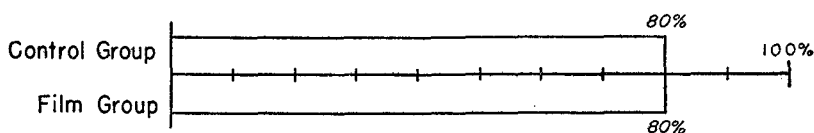


Thus, there was a sizable increase in the number of men agreeing with the idea that America would be producing more war materials if American civilians would only work as hard as the British civilians.

However, this effect of the film did not appear to carry with it any criticism of the war efforts of American civilians. A general item dealing with evaluation of the American civilian effort showed no increase in unfavorable attitude. The results were as follows:

Percentage of men who agree with statement:

"Most of the civilians in the United States are trying to do everything they possibly can to back up the armed forces."

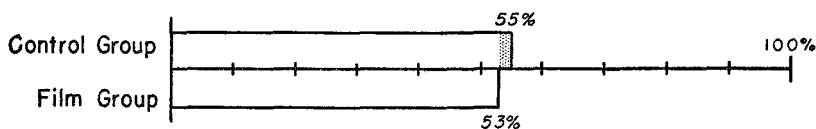


An explanation for the apparent inconsistency between this result and the one mentioned above was suggested by the comments of men who were given special film showings and interviewed about the film. While they recognized that the efforts of the British were greater than those of the American civilians, a frequent interpretation was that the British *had* to work that hard whereas America's situation was far less desperate so the American civilians did not need to work so hard.

d. "*American leaders did not fulfill their responsibility in preparing us for war.*" A theme of the film already mentioned was that Britain's victory saved a precious year in which America could prepare. It was thought that the film might have made the men wonder why America needed a year to prepare—why America was not already prepared to whatever extent was required. An agree-disagree item was included to check on this possibility. The results give no evidence of a "boomerang" effect.

Percentage of men who agree with statement:

"Our military leaders did everything they possibly could to try to get us well prepared for the war."



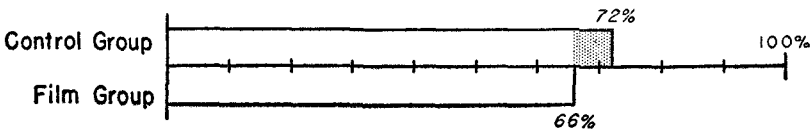
e. "*The Air Force is the only important branch.*" The possibility was investigated that the film's emphasis on the RAF and the dependence of the British on their fighter planes might cause the men to underestimate the importance of branches of service other than the Air Corps. The main question used to check this possibility was one asking the men which arm or branch of service they considered most important in present-day warfare. The choices were

Artillery, Armored Force, Infantry, and Air Force. The per cent choosing Air Force as most important was high in both film and control groups, but only 2 per cent higher in the film group, nor were there any reliable changes in men's evaluation of the other branches of service.

f. "*The Russians can't be depended upon.*" A final possibility of a "boomerang" was in the relative confidence in our allies. While Russia was not at all included in the film content, it was possible that the presentation of Britain's outstanding effort in holding off the Nazis might lessen the feeling of obligation to Russia. There might be a release of the men's former suspicions of Russian integrity—suspicions that had been inhibited by respect for and obligation to Russia since she had currently been doing the bulk of the fighting. Questionnaire items dealing with Russian integrity indicated that the film had some adverse effect in this area.

Question: (Immediately following the parallel question about Britain) "What about Russia—do you think she may try to make a separate peace or will she keep on fighting?" (two alternatives plus "haven't any idea")

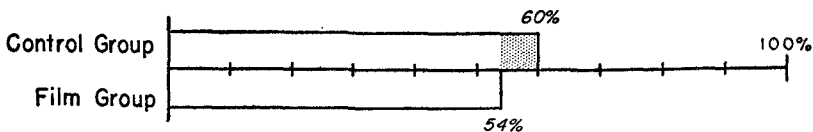
Percentage of men checking "key" answer: i.e., "will fight on to the end."



Except for the above question, which was asked at both camps, different items dealing with Russian integrity were asked at each camp. However, the results obtained at the individual camps were similar to those for the item used at both camps. At one camp (sample equals 1,200) the following results were obtained.

Percentage of men who *disagree* with statement:

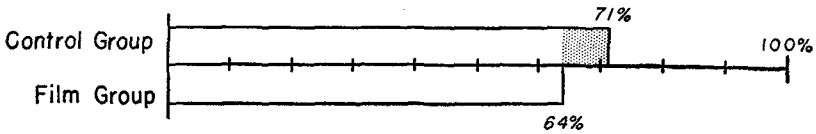
"After we help Russia beat the Germans the Russians are liable to turn around and start fighting us."



At the other camp (sample equals 900) several Russian-integrity items were used and all showed a slight negative difference between groups of men who had and had not seen the film. Results based on a representative item are shown below.

Percentage of men who *agree* with statement:

"If Germany is beaten before Japan, the Russians will probably help us fight the Japanese."



The consistency of the results on the various items and between the two camps makes it appear that a small but significant decrease was obtained in favorable evaluation of Russia as an ally. This constitutes the only "boomerang" revealed by the study.