THE CINEMA AS A GRAPHIC ART

by **VLADIMIR NILSEN**

foreword by **S. M. EISENSTEIN**

WITH MORE THAN 200 ILLUSTRATIONS

THE CINEMA
AS A GRAPHIC ART

(ON A THEORY OF REPRESENTATION
IN THE CINEMA)

BY

VLADIMIR NILSEN

WITH AN APPRECIATION BY
S. M. EISENSTEIN

and more than two hundred illustrations

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Dedication

SERGEI MIKHAILOVITCH
EISENSTEIN—

TEACHER AND FRIEND

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Acceptance

My dear Volodya,

I am eager to accept the dedication to me of your book, for it is a pleasure to recognise that the methods of approach to the artistic problems of film creation used at the director's faculty of G.I.K.,[1] of which I have been in charge for the last five years, have now extended also to the faculty of camera-men.

I appreciate your effort to make the first steps towards clarification of the specific problems in the work of the camera-man considered as problems of art—that light, indeed, in which they should be faced and considered. In this way you are successfully profiting from the great experience you gained during your work as second to so great a master as Eduard Tisse on my productions " October " and " The General Line ", and also from your own successes as first camera-man during the last two years.

This experience, together with the serious and scientific approach we have introduced and are trying to cultivate in our Film University—the first in the world—is what renders your book of real value and interest to everyone concerned with the work of the camera-man as an artist. Regarding him—the ' man who turns the handle '—as such is the only fair, right and useful way of looking at him. This attitude characterises your book, and is due to that principle of artistic collectivism, or ' team-work ', which is so typical of our Soviet methods of creation and contrasts so strongly with the individualist approach to art typical of the bourgeois conception. To this principle of creative collaboration we owe the most brilliant successes in the history of our Soviet cinema.

I wish the book every success.

S. M. Eisenstein.

[1] G.I.K.—the State Institute of Cinematography.—*Ed*.

INTRODUCTION

CREATION AND TECHNIQUE IN THE CINEMA

THE film is a synthetic art. A cinematograph film is built up as the result of collaboration of a numerous creative group : scenarist, director, camera-man, sound-recordist, composer of the musical score, art director, and actor.

A highly complicated technical process is involved in cinematographic art. The modern cinema is not only a specific form of art, but a branch of industry, developed on a peculiar industrial basis.

Technique is the basis of cinema production. The development of productive forces at the beginning of the nineteenth century led to the creation of photographic technique, and this in turn became the source of cinema technique. Photography came into being as the result of man's desire to fix permanent pictures of the reality existing around him. The cinema provided him with such pictures, with the addition that they were capable of being reproduced dynamically. In fact—the ' moving picture.'

The cinema established a new profession, non-existent in any other form of art or branch of industry : the camera-man. For a long time his rôle consisted in the passive documentation of real objects, without any active intervention in the photographic process of recording. In those days the cinema was without dramaturgist or director, actor or art director. Only later, when the cinema's possibilities of expression had been sufficiently realised, when the cinema had taken its place in the arsenal of art-weapons influencing man, did the director, dramaturgist (scenario-writer) and actor appear, each deriving from closely related fields of art.[1] But the one man who wields the special technique of the cinematic process, who must possess a knowledge of all the technical resources and special means involved in the peculiar ' shooting ' process of cinema, remains the camera-man.

What is the camera-man's profession ? What precisely does he do, and what rôle does he play in the ranks of the creators of the film ?

In view of the youthfulness of the film as a special art form, such questions may at first seem surprising. The functions of the various participants in shooting a film may at first sight seem so obvious as scarcely to call for definition. Broadly speaking, the camera-man's job is generally understood as the technical process of getting the given scene on to the film, by means of photographic and cinematographic technique.

None the less, this conception of his job, although the one generally accepted, particularly outside the U.S.S.R., does not provide an answer to the main question : Is his work creative ?

Certainly the purely technical functions of the camera-man are easy enough to define. The technique of film photography, built up on the basis of the pertinent facts of photo-chemistry, optics and mechanics, can be listed in six principal

[1] Sound recording also derives from a related field.—*Ed.*

divisions. To carry out the various requirements of the director, the present-day camera-man must be master of the technique of exterior and interior photography, slow motion and ultra-rapid photography, process work [1] and cartoon work. To be all-sided he should also be acquainted with the types of filming employed in scientific work, [2] for all this comes within the sphere of the representational resources of the cinema. Thus his technical knowledge must embrace a large variety of problems, and demands protracted and systematic study in a large number of sciences.

But the camera-man works in a branch of industry whose product consists of ideological values. The story film is first and foremost an art product. The director and camera-man may be separated by their respective rôles in the complexity of the technical process of film production, but at the same time they are united by the unity of the content of the film. What is the camera-man's job from this point of view ?

For the camera-man the technique of film photography is only the necessary means of realising the film's artistic content. Technique, with such manifold pictorial possibilities at its command, cannot in story film be considered in isolation from the creative process. Every technical device has significance only in so far as it contributes to the expressive language of the film. Dissolves and fades, multiple exposure, optical combined printing, trick processes, sharp and soft focus, long-shot and close-up, tonal gradation of the image—all these are means of expressing content, the means used by cinema.

The artistic cinema [3] is a new form of artistic expression, a new art form with its own special technique. Cinema art may be ranked as a special plastic art, but possessing extensions in time (and therefore dynamic) and in sound. It is already apparent that the day is not far distant when it will also incorporate the technique of colour and stereoscopy. The more complete technique becomes, the more possibilities of expression become available, thus enriching the resources available for achieving the creative tasks of cinema art.

The creative element is the guiding one in the camera-man's work, and technique is only the means of realising the artistic purpose. And if this be so, if his work involve elements of artistic creation, then it is clear that it will be governed not only by a technical methodology, but also by principles of an art methodology, which in this case may be termed the art of constructing cinematic portrayals.

The theatre has its theory of stage expression, the pictorial and sculptural arts have their theoretical basis. The theoretical basis for film direction is slow in developing, and so far such a basis is altogether lacking for the camera-man's art. None the less, during its four decades of existence cinema practice has accumulated a rich empirical material, and the formulation now of certain methodological conclusions is certainly not premature.

The precise rôle played by the camera-man in the creative process of making a film has already been the subject of frequent discussion, both abroad and in the U.S.S.R.

In the bourgeois cinema the camera-man's creative tendencies are to some extent inhibited and his work reduced to the narrowly technical process of photographing the film. This exclusion from the creative group is to be attributed

[1] i.e. back projection, Schufftan, Dunning, multiple printing, etc.—*Ed.*
[2] As X-ray, microphotography, etc.—*Ed.*
[3] Here the expression implies story film plus subjective documentary, i.e. anything in film not a simple record.—*Ed.*

to the methodology of the organisation of bourgeois film production and the nature of its æsthetics, in both of which social limitations tend to prevent a clear approach to understanding the specific qualities of the new art form. The Soviet cinema is founded and developed on other principles, and for us the question of the respective rôles of every person participating in the creative group acquires a different character, one oriented solely and unrestrictedly on the specific qualities of cinema and the peculiarities of its creative process.

I make no claim that the following chapters constitute an exhaustive basis for the theory of the camera-man's art. Even the very term ' camera-man's art ' is used only provisionally, because the cinema as yet possesses no clear, established terminology. I shall have been successful in my task if, as I hope, I shall have indicated, even if only approximately, the main features of its creative peculiarities.

THE CINEMA AS A GRAPHIC ART

CHAPTER ONE

THE COMPOSITIONAL CONSTRUCTION OF THE SHOT

1. PICTORIAL TREATMENT IN FILM

EVERY art product, independently of the application of the means of expression specific to the given art, is a special form of imaginal, concretely sensuous perception and modification of objective reality : inevitably, we may add, an expression of social ideology.

In all the forms of its creative manifestation artistic reality is not a simple *documentary* reflection of the phenomena of reality. On the basis of the perceptions experienced by the artist in the process of his reaction to his environment, on the basis of his social experience, he obtains an idea of the subject of the art-product, and this is transformed to a concrete image, reproduced in this form by the artist with the means of expression proper to the given art-form.

The art-image does not exist in physical form apart from the subjective treatment by the artist, and hence cannot be other than a reflection of his social perception and comprehension of the laws governing reality.

As the treatment of the art-image is determined by the artist's social tendency, that tendency in turn determines the tendency and character of the spectator's conception of reality as reflected in the given art-product.

The achieving of the subjective treatment of an art-product desiderates on the artist's part the discovery and mastery of the specific means of expression peculiar to the given art. This is followed by the technical fixing of the art-image with the aid of the expressive technique thus acquired.

Take pictorial art as an example. The achieving of the pictorial image is the incarnation of the picture-idea of the subject by means of the construction and conjunction of lines, colours, masses, perspectives, forming a unified composition. But in pictorial art we have the most individual and self-complete form of production of the art-image, inasmuch as all the means of creative construction and technical expression of the conceived image are concentrated in the hands of one artist. The theatre provides a different, contrasting and complex example. Here the creative function is differentiated among playwright,[1] producer,[2] actor and

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[1] In the cinema the corresponding dramaturgist is the scenarist. (Or sometimes ' Screen play author,' the term ' scenarist ' then being restricted to the technician who, aiding, or—in Western practice—sometimes in place of, the film director, re-writes the author's treatment in shot-script form).—*Ed.*

[2] In cinema, the director.—*Ed.*

scene designer,[1] and the unity of their collective creation constitutes the theatrical production as a whole. The technique of expression in theatrical art relates to a spectacle consisting of numerous component elements, and so demands a corresponding division of labour, in other words, a distribution of the creative function among the various participants in the creative process. In the theatre that process is considerably modified from the direct, simple example provided by pictorial art, and here the line of construction of the art-image must run unbrokenly from the playwright's and producer's treatment of the production to the treatment individually accorded by each actor. The cinema introduces yet another, new quality, alien to the schematic process of constructing the art-image in the theatre. Although still frequently exploited only for the documentation of the object photographed and its simple mechanical fixation on the film, cinema technique possesses such various means of constructing and expressing an art-image that it cannot be regarded as inevitably merely an instrument of recording, of making for example, the pictorial record of a theatrical expression.

The possibilities of expression at the disposal of cinema technique, still far from fully realised, in fact represent a new sphere of formal art methods, unavailable to either pictorial or theatrical art.

In film art the process of constructing the art-image is by no means ended with the working out of the script and the director's and actor's treatment of the scene. In the cinema it is not enough to incarnate it in director's and actor's treatment. What the spectator sees on the screen is not the real action of the scene as it took place in front of the lens at the moment of shooting, but its optical interpretation as fixed on the film.

We use the term " interpretation " deliberately, for the cinematic representation is never absolutely identical with the reality subjected to transmission. In all cases it is a specific optical treatment of the object, more or less modifying its character and even its content significance. Even those films we are accustomed to call ' documentaries ' really give us only a greater or lesser degree of approximation to simple transmission of the true geometrical relationships and physical qualities of the object photographed. A photograph is by no means a complete and whole reflection of reality. The specific properties of the two-dimensional plane of the picture enable it to transmit the aggregate of qualities of a real phenomenon only in a very one-sided fixation. Quite apart from the exclusion of natural-colour transmission [2] the photographic picture represents only one or another selection from the sum of physical attributes of the object photographed, and the character of that selection depends not only on the laws of optics, but, principally, on the *methods used in composition* of the picture.

In so far as we have hitherto discussed the special transmission of the object photographed, the foregoing remarks are equally applicable to simple static photography. As soon, however, as we turn to the second quality of cinema portrayal, the possibility of reproducing an object not only in its spatial but in its temporal relationships, we immediately realise the decisive influence of such factors as speed and rhythm on the character of the perception of a film picture. The technical resources available to the cinema enable it not only to modify the spatial relationships of the object, not only to create new forms of vision of the real environment, but, within broad limits, to change the speed at which the real dynamic processes occur.

[1] In cinema, the art director.—*Ed.*
[2] At present the limited number of organic colours available to cinema technique does not make possible fully natural colour transmission.—*N.*

Thus it is impossible to claim an absolute identity between the picture on the film, and a spectator's direct perception of the same object. At the same time this by no means justifies repudiation of all degree of objectivity in photographic transmission in general, or of realism in cinematography. In his investigation of photographic processes, Warstatt points to the relatively objective character of the photographic negative, which preserves proportionally the formal and linear relationships of the object to an extent adequate for cinematography at the present stage of its development.

What is the basic difference between the photographic picture and a spectator's direct impression ?

The difference consists first and foremost in the fact that, owing to the associative links of his thought, the spectator's direct perception modifies and adds to the perceived phenomenon from the store of his cognitive experience, transforming it into a pictorial representation, whereas photographic objectivity only transmits, relatively truly, the scheme of formal and linear elements of the object. However, the limited realism of the picture in the film is entirely sufficient to evoke in the spectator an aggregate of associations corresponding to the object filmed. It is to this ability of the picture to cause the required reaction in the spectator, and not to the ' lifelike ' copying of nature or the situation in the given scene, that we must look for the cinema's genuine possibilities of expression.

Thus the task of constructing a cinematic picture is not the fixation of a ' documentary ' record, the endeavour to achieve absolute verisimilitude in respect to the object on the screen, but the discovery of a form of visual picture adequate to the art-image of the film, in other words, one that is most fully expressive of the idea of the given production. Realism in cinematic representation is not necessarily a flat and impotent copying of nature, but an art-interpretation of it such as will enrich us with a new perception of the genuine meaning, associations and essence of that nature. The search for a genuine, realistic discovery and interpretation of reality is the first, and the organisation of the necessary representational resources for reproduction of optical images adequate to the art-images of the film is the next, stage in the creative work of cinematography. It is at this point that, in addition to the dramaturgist's, director's, and actor's treatment of the scenario, a new factor enters, involving a fully competent co-author—the factor we shall call *representational treatment of the production.*[1]

Representational treatment in general involves determining the style in which the camera-man's work shall be carried out, and also deciding on the methods of building up the film as a whole and in its various component parts.

Who is responsible for this representational treatment ?

It is achieved by the director and the camera-man in the course of preparations for, and during the actual shooting of the picture. And their creative work is determined by their general perceptions, their cultural background and their craftsmanship. Everything depends on the manner in which the camera-man realises the director's instructions, and the means he employs, i.e. upon his method of compositional construction ; for the content and æsthetic sense of the object filmed are changed accordingly, often its social implication is changed also, and consequently the meaning of the picture as created by the dramatist, director and actor is modified. The significance and importance of the camera-man's craftsmanship arises out of his enormous, and at times decisive, influence through

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[1] The art-director is not mentioned here, as he is not germane to the point. His enormous share in realising the expressive treatment of a film is quite obvious, and does not call for discussion.—*N.*

his representational treatment. We could give several examples illustrating how the creative principles of various camera-men's work reveal this decisive influence, not infrequently to the extent of being in sharp antagonism to the main standpoint expressed in the scenario.

The camera-man's starting-point in deciding upon the representational treatment is the content of the scenario.

As a literary production the scenario has its own specific form of construction, and in particular its own method of setting out the material. This literary exposition gives a temporal development of the material, which in every case is built up on specific laws.

In graphic arts the material is given only spatial development. Consequently, so far as these arts are concerned we can speak only of spatial representational composition.

But the cinema is a synthetic art, and in it the material is developed, in its various elements, temporally, as well as spatially in representational form. The various representational elements in cinematographic production are bound up in the development of the film scenario ; the scenario scheme predetermines the specific disposition of the various representational elements of the film, the specific principle governing the expressive construction in space and time.

Editing is the method of creative unification of the film's representational elements, and consists of the organisation of the shots in such a way as to reduce the shot system to a general thematic and compositional unity. It has its own laws of compositional construction, rhythm, and methods of influencing the picture. We must point out that there is an essential difference between the simple assembly of film shots and their editing as a method of creative unification of the film.

Accordingly, a film scenario provides both the scheme dictated by the theme of the material, and the scheme dictated by the editing methods which are to be adopted. In addition it can include sound and music elements. All these factors go to make up the film as an integral creative whole. The compositional scheme laid down in the scenario predetermines the task of each representational element, and thus determines the character of its compositional construction. In the course of working over the scenario content the camera-man plans how to give expression to the intention of each episode, each scene. The raw material for the film, the scenario, is analysed, and this process gives birth to those basic ' pictures ' which are afterwards realised by the camera-man as concrete images, the pictures of the celluloid film.

We will now briefly analyse the process of carrying out the representational treatment of the film, within the limits of the scheme dictated by the specific conditions of film production.

Having to achieve the effect postulated by the scenario, the camera-man breaks up the given theme into a series of pictorial representations. Each of them deals with phenomena and objects which, when thrown on to the screen, act on our perception in a definite association and logical sequence. In the theatre this perception of the spectacle is achieved directly, but in the cinema it is achieved by the accumulation and juxtaposition of the desiderated associations in the spectator's mind, evoking in him a certain idea of the relations existing between the screened objects.[1] When producing a play on the stage the producer has to work

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[1] In cinematic production the manifestation and juxtaposition of associations are achieved in the course of editing, which thus constitutes one of the specific peculiarities of the cinema as an art.—N.

with an episode or scene as the smallest element in the production, but in the cinema this disintegration is carried farther. We are compelled to work out the scenario content down to every detail, though the time taken by the action of that detail in the final version of the film may only last a second or two. Yet that detail has to retain all its significance as a constituent element of the production, and is subjected to the general laws of the treatment and construction of the film as a whole. Thus, in the course of analysing cinematic construction we arrive at the *conception of the cinema shot*, a conception specific to cinema, which we must pause to define.

2. THE CINEMA SHOT

By the cinema shot, or the editing unit in cinematic construction, we mean that specific single element in the film which, conditioned by the scenario content, makes a separate and indivisible contribution to the film construction in the course of editing.

In addition to the definition of the shot as an element in creative production, the terms ' set-up ' or ' camera-angle ' are also applied.[1] But these are purely technical conceptions.

At various stages of the production process the shot is of varying importance. In order approximately to elucidate the conception of the ' shot ' according to its content, we will consider a brief example of the way in which the thematic task is developed and carried through to the point of the camera-man's treatment of the scenario.

We will assume that we are set the task of presenting the scene of Brutus murdering Julius Cæsar. For simplicity in exposition we deal with a very short episode, which will enable us to develop our task in a narrowly thematic and primitive form.

We can formulate the action in words, as : " Brutus strikes Cæsar a blow with a dagger ". Let us assume that this is to be the content of a single *scenario shot*.

In the hands of the director the subject is given a definite tendency. He selects the most typical, characteristic aspects, and decides upon the situation in which the action is to occur. From the various possible actor's methods he selects the variant affording maximum expression in correspondence with the given theme and situation. Thus we obtain the directorial plan of the treatment, which lays down exactly where, in what circumstances, when and how Brutus is to kill Cæsar. The directorial treatment of the scene includes both the scheme of spatial organisation and the scheme of temporal organisation of the action. And so we are provided with the *director's shot*, which is to be staged and filmed.

Now we are faced with a further task. The director's shot has to be translated into terms of representation. We have to plan the details of and then create the visual image which will express the directorial treatment of the episode.

We have already remarked that the representation of the object as fixed on the film is never identical with the facts of the object as directly perceived. Only

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[1] ' Set-up ' as equivalent of ' shot ' refers to the fact of unique setting-up and erection of camera position (including its movements) for each particular shot. ' Camera-angle,' similarly (in this case meaning the visual field embraced by the angle of the lens [L.S., M.S., or C.U.] in each given set-up) is also used in English as equivalent to ' shot '. The author here often uses in Russian the word ' frame ' as equivalent for ' shot ', deriving from the compositional conception of given frame limits resulting from each set-up. In English, however, this word is so regularly restricted to the single static picture resulting from a single photographic exposure and of which many hundreds may go to form a ' moving ' shot, that, to avoid ambiguity, in this translation we have used ' frame ' only in this sense or where its implication as physical limit of the composition is quite obvious.—*Ed.*

in isolated cases will a shot happen to provide a complete representation of the object, and in the majority of cases we get an extremely one-sided fixation which is by no means characteristic of the object as a whole. In addition, owing to the influence of a number of factors which we shall consider later, the object as shown on the screen in the conditioned time and space of the shot is perceived very differently from its immediate perception in reality. Supposing the camera-man contented himself with a mere recording of the episode, without attempting to organise it in the space and time of the shot. Then, in addition to the expressive aspects characterising the moment of action, namely, those dealing with the blow Brutus strikes with the dagger, the shot will contain a number of fortuitous elements unrelated and unessential to the task that was set. When thrown on to the screen these elements will also engage the spectator's attention, and may distract him from the main action. In consequence his attention will not be entirely concentrated on the essential element, and so the shot will not entirely fulfil, and may even modify, the function it was allotted in the scenario.

Thus we are confronted with the necessity so to organise the expressive elements in the space and time of the shot that the idea at the basis of the directorial treatment will be clearly manifested, and this will only be achieved if fortuitous, unessential elements are suppressed.

What methods do we employ to organise the object in the space and time of the shot ?

Here we need to consider the definition of the conception *composition of the shot*, which includes all the elements in the expressive construction of cinematic representation.

In its general form the task of composition is to organise the object in the space and time of the shot with a view to obtaining the most expressive possible exposition of the content and significance of the given art-image.[1]

The resources of composition are used to manifest both the object of the representation and those associations and agencies by means of which we gain a general understanding of the idea and significance of the art-image.

In our example of Cæsar's murder, which we temporarily considered within the limits of a single director's shot, the main composition motif was the expressive manifestation of Brutus' action. In practice, on receiving the director's treatment of the staging of the murder, we have to transfer the most highly expressive projection of its elements to the plane of the shot's spatial and temporal extension. Having decided upon the *form of composition*, we proceed to realise it in a shot.

So far we have considered the simplest solution to the scenario task, one which gives it a one-sided illustrative representation. We have, as the result, an informative exposition of the subject in a single shot, obtained by means of a single set-up of the camera. The absence of dynamism in the resultant record indicates from this viewpoint a similarity in principle between the single cinema shot and a static photograph.

In order to get over the abstract quality of a one-sided, informative exposition of the subject, and to raise it to the heights of emotional impression, we can introduce a number of new representational features which are not to be found in our original simplified treatment. We can differentiate the content to be expressed, and break up the shot treatment into several expressive elements, to be transmitted by means of several different set-ups.

We give the following simple analysis as an example.

[1] The problems of the æsthetics of the compositional structure cannot, of course, be isolated from the content significance, except for convenience in discussion.—*N*.

First : The representational characteristic of the place of action. Brutus and Cæsar in one frame.

Second : The representational characteristic of one person : Brutus.

Third : Representational characteristic of the other person : Cæsar.

Fourth : Brutus' operative tendency. He raises his hand.

Fifth : The instrument of the murder. The dagger in large-scale detail.

Sixth : Cæsar's reaction to the operative tendency. He attempts to ward off the blow.

Seventh : Brutus fulfils the operative tendency. He strikes the blow.

Eighth : Cæsar falls.

Thus we now have an exposition of the same subject in eight shots, each of which has its special and distinct task. These eight shots are linked with one another by the unity of their compositional theme. The elements of this unity have to be introduced into the separate compositional scheme of each shot, for in order to fuse the separate shots into a single integrated conception of the entire episode, we have to pass through the stage of editing unification of the shots.

This brings us to a fundamental question:

If unity in the compositional theme be a prerequisite to the ultimate editing unification, it is evident that there exists a single *principle* of compositional structure, which, in any estimate of the correctness of the compositional form given to each shot, must serve as sole criterion.

We shall not find the answer to this problem merely by considering the problems of composition involved in each separate shot, and we have to discuss now the conception which we have above called *editing.*

3. SHOT EDITING

As we have already remarked, the composition of a film involves a number of compositional elements. At the moment we shall only consider the element of compositional editing, which has an inseparable connection and fundamental interaction with the problems of shot composition.

The process of creating a cinematic picture runs in an unbroken line from the original scenario, by way of the directorial and actor treatment and the photographic process, to the editing of the various single shots, into which the prototypes of the future unity have by then been introduced. This means that the cinematic structure of the picture has to be considered as a unity of the general in the particular ; the seeds of the final unity must exist in each single unity, in other words, in each shot.

Editing as a method of artistic unification is not in itself the be-all and end-all of cinematography. Made necessary owing to the specific peculiarities of cinematographic technique, editing is the indispensable means of producing a more fundamental and organic form, and hence becomes an inseparable factor in revealing the art-image and demonstrating the general idea of the film.

The form which the compositional editing of the film shall take cannot be decided upon by the director arbitrarily, ignoring the content and the formal arrangement of each separate shot already taken. Editing will only make an integral, creative picture out of the separate shots if the content and formal details of each shot have been subordinated to the scenario and the directorial task, which predetermined the rôle and place of each shot in the final assembly, and so predetermined the form of the compositional editing.[1]

But while the content and the formal treatment of the individual shots determine to a large extent the criteria of the correctness of the editing, the scheme of compositional editing outlined in the scenario predetermines the principle governing the compositional structure of the individual shot. In shooting the film the director and camera-man have to bear in mind the ultimate editing, and they have to arrange the materials so that each light-accent, each movement, fulfils a definite function in the ultimate interaction of the edited shots. The camera-man must ' foresee ' the function of each shot in the edited film.

Because of this, he must take into account the situation and rôle of the given episode or scene not only for its own sake, but as a factor in the creation of the picture obtained by the final editing. He must have a creative understanding of the material in each shot, he must decide what is the essence of the shot, and its main representational elements, on the basis of the future interaction of the system of shots when edited. And it is the ability to do this which is the chief and most valuable quality distinguishing a good camera-man from an ordinary mechanical photographer.

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[1] " Without committing blunders," says Engels, " thought can only bring together into a unity those elements of consciousness in which, or in the real prototypes of which, this unity already exists." (*Anti-Dühring*.)—N.

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Thus the conception *shot editing* is not to be regarded as implying a simple mechanical assembly of shots into a picture. In reality the two compositional elements, shot composition and editing composition, must interact and inter-penetrate, with editing composition taking the leading part. Mechanical disin-tegration always involves an erroneous understanding of the entire system of the cinematic construction of a picture.[1]

Having reached a correct understanding of shot editing as the inseparable unity of two compositional elements in interaction, we can now determine the difference in principle between the method of constructing a cinematic shot and that of constructing a static art-photograph.

The art-photograph presupposes the presence of a principle of compositional building up of the image in which its aggregate of representational elements expresses a whole finished picture and the whole idea to be achieved.

The cinema shot is built up on an organisation of the representational elements in which the shot fulfils primarily only the single function which the director has assigned to it. Of course, the image in any single shot has its own ideological and art content. The failure to understand this characterised the ' mechanistic ' deviation in the Soviet cinema, the theorists of which deviation almost entirely rejected any significance for the single shot and placed all the emphasis on editing. The representation in a single shot was regarded as a ' primal element,' as some-thing neutral, void of any ideological content in itself. But we reject this idea in favour of our principle of the inter-influence and inter-penetration of the single shot and the edited picture, and consider that the developed and finished form of the picture is achieved only by the compositional editing of a number of shots as planned to that end in the scenario.

Obviously, the question whether the representation itself is static or dynamic is without importance in principle in regard to this issue, as in isolated instances it is possible to construct an art-photograph with the resources of ' moving ' photography, in other words, by means of cinematic technique.

A consideration of the elements of compositional editing in their indivisible unity will help us to understand the processes of shot composition without resort-ing to the metaphysical division into ' spatial ' and ' temporal ' composition ; for the functions of space and time in the shot are equally the functions of space and time in the edited film, and every shot has a functional value in the editing system.

[1] The declaration of the ' Kino-Eye ' group is a characteristic example of failure to comprehend the essence of the process of constructing a cinematic picture. Vertov writes :
" I am the ' kino-eye,'
From one I take hands, the strongest and most skilful,
From another I take legs, the most beautifully proportioned and fleetest,
From a third a head, the most beautiful and expressive,
And by montage (editing) I create a new, perfect man."
(*Lef*, No. 3, 1923, p. 140.)
" . . . The members and organs of a living body," says Hegel, " have to be considered not merely as its parts, since they represent something which they achieve only in their unity, and are not at all indifferent to that unity. Those members and organs become simple parts only under the hands of an anatomist. But then, he has to do not with living bodies, but with corpses." (Hegel, *Encyclopædia*, Vol. 1.)
As an illustration of the conception of *organic unity* which exists in the cognising pro-cess, Hegel's remarks are perfectly applicable to the problems of film editing. Only in highly exceptional cases can we take shots without regard to the general guiding conception of the picture, and still obtain such a conjunction of expressive elements as will enable us in the course of editing, to achieve a distant approximation to a creative picture instead of a mechanical imitation of one.—*N.*

We must now deal with the problem of inter-action between the form in which the compositional editing is carried out, and the form of compositional construction of the shot.

Editing as a means of creative construction uses a number of methods, the application of any one of which will involve one or another form of compositional editing. We will not enter into a detailed consideration of the many forms of structural editing, but will only briefly summarise certain of the methods on which assembly of the shots can be based.

The primitively informational form of editing is the most elementary, and is characteristic of the early stage of development of cinema art. In this form of editing we confine ourselves to the representation of the given scene in the given shot, and edit those shots in order according to the simple, natural-logical development of the theme, in the order of the change from one camera viewpoint to another.

Parallel editing is characteristic of a certain period of American cinema, and arose as a further development of the primitively informational form. The ' classic ' example is the type of picture depicting the heroine on the point of perishing and the race to save her. This theme obviously suggests division into two compositional series of shots. Parallel editing can also be applied as a method of evoking a simple and obvious comparison (' man and monument,' for instance). In this case the principle of compositional construction of shots placed in succession when edited forces us to seek a representational form in which the idea of association through resemblance is evoked in its most immediate and simple form.

Obviously, we can use similar methods to evoke an associative idea of the object alternatively through its points of contrast.

There are also forms of editing assembly specific to the cinema, carried out within the limits of a single shot. Later we shall deal specially with the many varieties of this ' intra-shot ' editing.

At higher stages of cinema development we get forms of editing based on the simultaneous interaction of a number of shot sections, evoking thereby complex associations in the spectator. Eisenstein has worked out the theory of associative editing in its higher forms, and has expounded it both in his theoretical works,[1] and in the special course for directors which he has given in the U.S.S.R. Institute for Cinematography. But we cannot stop to consider this question further, as it does not fall within the main scope of our task.

[1] S. M. Eisenstein, " Perspectives," *Iskusstvo*, Nos. 1–2, 1929. " Re the Frame," a postscript to Kaufman's *Japanese Cinema*, 1929.—*N*. The latter, in translation by I. M., was published as " The Cinematographic Principle of Japanese Culture," in *Transition*, Nos. 19–20, June 1930, pp. 90 *et seq.*, and reprinted in *Experimental Cinema*, No. 3.—*Ed.*

4. THE ELEMENTS OF SHOT COMPOSITION

Having established that the principles of compositional construction of the single shot are in functional dependence upon the principle of the organisation of the shots in the course of editing, we can now consider the compositional factors by means of which we organise the image shot spatially and temporally.

As the photographed object is reproduced in the space of the frame and so is limited by definite bounds, the camera-man is faced with the task of selecting those representational elements which can and must be included in the shot's field of vision. He separates out, abstracts from the environment those objects which are required to reveal the purpose of the shot.

The next stage is to *place* the object in the space of the shot. Here we are faced with the problem of the perspective relationships between the various parts of the image, with the problem of the inter-relationships of the various objects in the shot, their movement and rhythm. In order to determine the place of each object in the shot, we need to understand the optical laws of *perspective*. On the principle of perspective unity we have to base our decisions respecting the camera-angle [1] of the subject, its *foreshortening*, and the relative proportions of the various masses and surfaces.

The picture of the image is obtained by the action of the optical apparatus used in photography. Each lens possesses its own peculiar optical properties, and the character of the optical transmission of the linear and plastic aspects of the object photographed depends on the choice of lens. Consequently, the camera-man has to include optical resources among those which he creatively exploits in carrying through his plan of compositional construction.

In order to transfer an impression of the bulk of a three-dimensional object to the two-dimensional plane of the shot, he must not only place it correctly in the shot, but give it correct lighting. This raises the problem of distribution of *light and shade*, which is one of the chief factors in the camera-man's art.

The *tone* of the image is closely connected with the question of light and shade distribution. Tone and its distribution in the shot play a large part in displaying the specific features of the object photographed. To this end the camera-man exploits several technical resources which assist in varying degrees to modify the tonal correlationship of the shot.

Finally, in order to organise the movement of the object within the shot the camera-man must understand the effect of the speed of photographing as a means of representing and modifying dynamic processes.

We can now turn to an analysis of the various compositional elements with

[1] ' Camera-angle ' means plane of distance of the camera from the object shot, i.e. long-shot, mid-shot, close-up, etc. The word derives from the fact that it is possible to determine the apparent distance of the object by change of lens, with a specific angle of embrace, in one and the same set-up. (For secondary meaning see note, p. 20.)—*Ed.*

the aid of which we carry out the task of composition. We shall consider them in the following order :

(a) The limits of the shot. (The frame of the image in each separate shot.)
(b) The camera-angle.
(c) Viewpoint (set-up) and foreshortening.
(d) Perspective unity.
(e) The optical design of the image.
(f) The lighting and tone of the image.
(g) The time factor.

After briefly explaining the essence of each of these elements of composition, we shall analyse their interconnections in the dynamic process, using a particular scenario outline as an example.

(a) THE LIMITS OF THE SHOT. (FRAME OF THE IMAGE)

The frame limit determines the spatial bounds within which the object to be shot is to be confined. As the frame limit effects a strict demarcation of the image from the general field of vision, it is a means of making a primary selection. When the camera-man includes any object within the spatial limits of the frame he is taking the first step in actively organizing the filmed object for expressive purposes.

Our perception of any object bounded by the frame limits differs considerably from our direct perception of the same object under ordinary conditions. When we place the object within the frame limits we bring to the screen a presentation of that object in a definite spatial situation, as well as of the spatial extent of the image as a whole. Consequently, the question of the proportions of the frame limits, in other words, the correlation of its sides, is of extreme importance in the compositional task.

The frame proportions have been the subject of unending, fierce discussions throughout the forty-odd years of the cinema's existence. These discussions, which from time to time have led to modifications in the frame format, have arisen not so much because of the question of technical standardisation as out of the problem of cinema-frame composition.

In 1929 the scientific research laboratory of the Kodak firm published an article[1] by Lloyd Jones dealing with the proportions of the frame rectangle from the aspect of shot composition. Despite the empirical character of the article, the material collected by the author is of great interest to us, for the proportions of the frame limits are still not fixed at a constant ratio.

In comparing the various correlationships of the frame sides, Lloyd Jones expresses the proportions in an abstract dimension obtained as the result of dividing the frame width by its height. This abstract dimension, or coefficient, vacillated from 1·25 to 2 during the early years of cinematography. During the following period the international format of the frame limits was temporarily standardised at a ratio of four to three, the coefficient being 1·33. But with the arrival of the sound film the sound track reduced the width by 2·5 millimetres, and the coefficient was modified to 1·15. In the opinion of many cinematographers such a format does not meet the compositional needs of the frame, and in 1933 it

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[1] *Bulletin of the Kodak Scientific Research Laboratory*, Rochester, U.S.A., 1929. No. 410.

was again altered in the direction of the previous correlationship of the sides of the silent film, expressed by the coefficient 1·33.

It may be remarked here that the problem of the proportion of the rectangle in relation to compositional tasks has been frequently discussed not only in regard to cinema, but also to the original pictorial arts. In the literature dealing with these arts we find the following classification of the proportions of the rectangle framing the given work of art.

In the first class are rectangles of the 'static symmetry' type, the area of which can be divided up into a number of equal squares. For instance, a rectangle with sides having the ratio 3 to 2 can be divided into six equal squares.

In the second class are rectangles of the 'dynamic symmetry' type. The ratio of the sides of such rectangles can be expressed in coefficients the dimensions of which are equal to the square roots of whole numbers. These include the coefficients $1\cdot414 = \sqrt{2}$, $1\cdot732 = \sqrt{3}$, $2 = \sqrt{4}$, $2\cdot236 = \sqrt{5}$, and so on. In the same class of 'dynamically symmetrical rectangles' are those with proportions based on the principle of the Euclidean 'golden section'.

Fig. 1 shows the proportions of rectangles belonging to the first and second class. Fig. 2 shows the construction of a rectangle with sides the ratio of which is expressed by the coefficient equal to the square root of two. The line OB' is a diagonal of the square OAB'. As can be seen from the dotted line, the side OB is equal to the diagonal OB'. Taking the side OB as the basis of the rectangle, we get sides with a ratio having a coefficient of $1\cdot414 = \sqrt{2}$. The rectangle with the base OC gives a ratio of sides expressed by the coefficient $1\cdot732 = \sqrt{3}$. On the base OD we have a rectangle with the coefficient $2 = \sqrt{4}$, and on the base OE we have one with the coefficient $2\cdot236 = \sqrt{5}$.

Fig. 3 shows a rectangle, the proportions of which are strictly in accordance with the principle of the so-called 'golden section.' BDAC' is a square. O is the middle of the base BC'. Obviously the line OA is equal to the diagonal OA'. Taking the side BA as the base, we get the rectangle BDFA, which has a side ratio expressed by the coefficient 1·618.

After examining a number of classic and modern works accepted as perfect in point of composition, Jones came to the conclusion that it is impossible to get a standard size which shall satisfy the variety of forms of compositional construction in cinema. The differences between the needs of portrait and landscape composition, for instance, are so great, that a so-called 'standard size' would in the majority of cases be merely a compromise solution to the problem.

Jones made certain deductions in regard to the problems of dynamic composition of the cinema-frame, and, regardless of the standpoint and prerequisites on which he based his work, these deserve practical attention. They were as follow : For landscape and mass compositions the most favourable ratios of frame sides are those expressed by coefficients ranging from 1·55 to 1·60. But for portrait compositions sizes expressed by the coefficients from 0·88 to 1·48 are more suitable. Therefore, from the compositional aspect the then obtaining shape of the sound-film frame, which had proportions expressed by the coefficient 1·15, was satisfactory only for close-ups and medium-shots showing small groups, which deduction was confirmed by the practice of recent years. Hence, it was desirable to revise the shape of the sound-film frame in the direction of approximating its proportions to produce a coefficient of wider average application.

The proposal made in America to resort to a 'wide frame' with sides of 48 × 22·5 millimetres (the Fox Grandeur Film standard) only partially satisfies
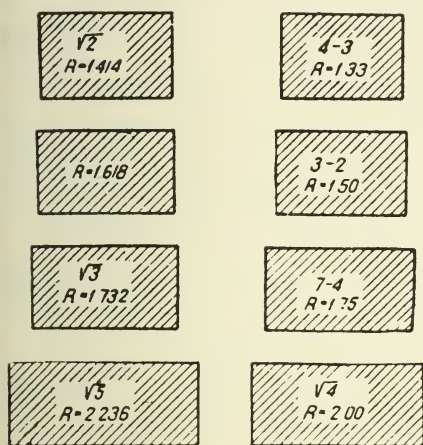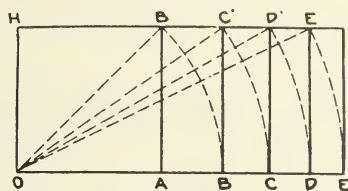
FIG. 2.—Calculation of the proportions of rectangles based on 'square roots.'

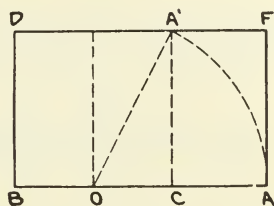FIG. 1.—Proportions of rectangles ; groups of ' static ' and dynamic symmetry.

FIG. 3.—Calculation of the proportions of rectangles based on the ' golden section.'

one aspect of the task of compositional construction, by providing the director and camera-man with new creative possibilities in the sphere of mass scenes, landscapes, and battle episodes. The proportions of the ' wide frame ' are obviously not perfect, since they render the construction of portrait and group compositions very difficult. Such a shape will not allow of a single compositional centre, and in such conditions the planning of a close-up presents considerable difficulties.

This tendency towards widening the frame has so far been resorted to in cases where the director and camera-man were faced with the task of compositional planning of mass and battle scenes.[1]

Perhaps the suggestion made by Eisenstein in 1930 was the most rational of all. He proposed to make the frame limit circular in form, and to change the sides in the course of projection. Rectangles of various proportions introduced into the circle would then completely satisfy the varied compositional needs that arise in the course of successive shots.

By reducing the height of the sound-film frame, the cinema has been able to return to the former ratio of four to three for the picture. However, as we have said, this shape is not likely to prove a satisfactory standard, and it is highly possible that it will again be revised.

Once more we must emphasise that we have by no means disposed of all our problems arising out of the frame limits when we have established their general proportions, for the possibility of exploiting those limits in compositional construction makes them one of the essential means of organising the shot to achieve maximum expression.

The margin of the image not only acts as a restriction of the field of vision, but is also an important resource in compositional construction. When the camera-man isolates a section of the general field of vision within the limits of the

[1] The ' triptych screen ' of Abel Gance in " Napoleon ", for example.—*Ed.*
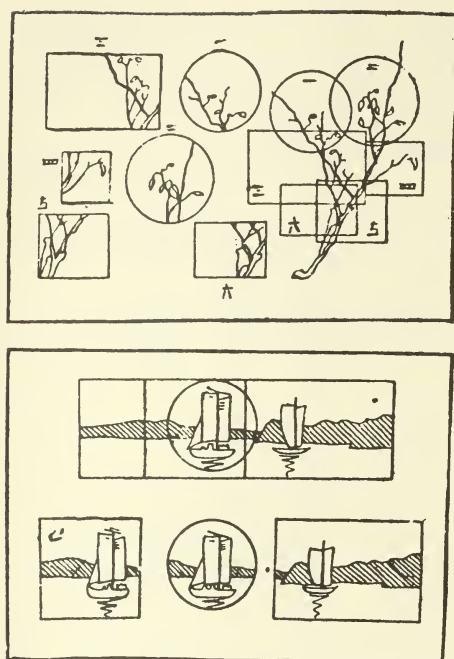
FIG. 4.—Page from a Japanese drawing primer.

frame, he *ipso facto* predetermines the form of the linear composition of the shot, since he establishes the vertical and horizontal axes along which the frame space is perceived by reference to those frame limits.

In camera-man's terminology ' to pick a set-up ' means first and foremost to find the appropriate margin for the image. Only when the margin is fixed can we proceed to the distribution of the objects in the shot, and then to determining the remaining elements of compositional unity.

It is interesting to note that the cinematic method of ' picking out ' the frame is used in Japanese schools as a first stage in the study of drawing. From a general landscape the students ' pick out ' various rectangles, circles and squares, isolating a given detail, and thus creating their own composition. Evidently the Japanese teachers have a sound understanding of the primary importance of the margin of the image in the general process of composition, and so introduce it in this way into the first stage of study. Fig. 4 shows a page from a Japanese primer of drawing.

The cut-outs of the branches of the cherry tree are particularly characteristic, for they most clearly reveal the correlationship of the form of the cut-out with that of the detail thus isolated from the object as a whole.[1]

We must now consider the compositional bases obtained by modifying the position of the frame limits in relation to the vertical and horizontal axes of the object filmed.

In the film " October " [2] (director, Eisenstein ; camera-man, Tisse) is a scene in which the revolutionary workers of Petrograd are preparing their defence.

[1] See " Re the Frame," Eisenstein's postscript to Kaufman's book *Japanese Cinema*, 1929, p. 29.—*N*. (Ed. Note, p. 25.)
[2] English title, sometimes, " Ten Days that Shook the World ".—*Ed.*

People carrying rifles and dragging cannon march past in uninterrupted procession. The drama of the defence is conveyed by the tense dynamism of the procession passing through the streets of Petrograd at night.

This procession could have been filmed in the manner shown in Fig. 5. But in this construction the spectator does not feel the dynamism of the unbroken procession, as the right dynamic distortion has not been found for the figures.

For these shots a sloping platform was constructed, up which the people passed. If a set-up had been selected which preserved the horizontal, the compositional scheme shown in Fig. 6 would have resulted. Here the line of the platform runs almost parallel with the diagonal of the frame, and so the effect of the dynamic slope of the figures is partly lost.

The camera-man Tisse modified the frame horizontal limits by tilting the camera sideways, so as to bring them into parallel with the line of the slope. The result is shown in diagram in Fig. 7.

Fig. 8 is a frame from the film " October ".

In one of Harold Lloyd's films a similar method was used to produce an impression of a man bewildered by a misfortune with his car. (Fig. 9.)

This method of modifying the horizontal limits was frequently resorted to by camera-man A. Golovnya in the films " The End of St. Petersburg " and " Deserter ".

In addition to its importance in such instances of shifting the frame limits in order to achieve a definite significant and emotional effect, the frame is also of great importance when we are determining the compositional relationships between close-ups and long-shots, in other words, in the unfolding of space.

Figs. 10 and 11 are reproductions from works by Degas, a painter who is highly characteristic for his ' picking of set-ups '.

(b) THE CAMERA-ANGLE

The term ' plan ', which is used in the cinemas of many continental countries as the equivalent of ' camera-angle ', is borrowed from the theatre. In these countries the term ' first plan ' is used in the theatre to indicate the distance from the proscenium to the first line of wings, and in the cinema for the ' close-up ' ; the ' second plan ' indicates the space between the first and second line of wings, and so has come to be used for a medium shot, while the ' third ' or ' distant plan ' is applied to the depth of the stage, and is used in the cinema for a ' long-shot '.

As in its elementary beginnings the cinema developed under the direct influence of theatrical tradition, the mechanical borrowing of theatrical terminology was a common phenomenon. In certain departments of film production some of this terminology is in use in English, as for instance the scenario terms ' interior ', and ' scene '.

In English the term ' plan ' has been replaced by ' camera-angle ', which is used to indicate the scale of the object's image in the frame, whether it is in ' close-up ', or ' long-shot ', for example. The point at which a long-shot merges into a medium-shot and so on is very approximate, for the cinema does not recognise any exact demarcation between the various sizes of the object in the frame.

In the early days of the cinema the planning of the scene was restricted to the general distribution of the objects in the frame limits, which were regarded as a special form of theatre proscenium. Only a primitive form of *long-shot* was exploited. Then came the development of the *medium-shot*, which enabled us

FIG. 5.—Compositional plan for a shot in the film " October " (Form I).

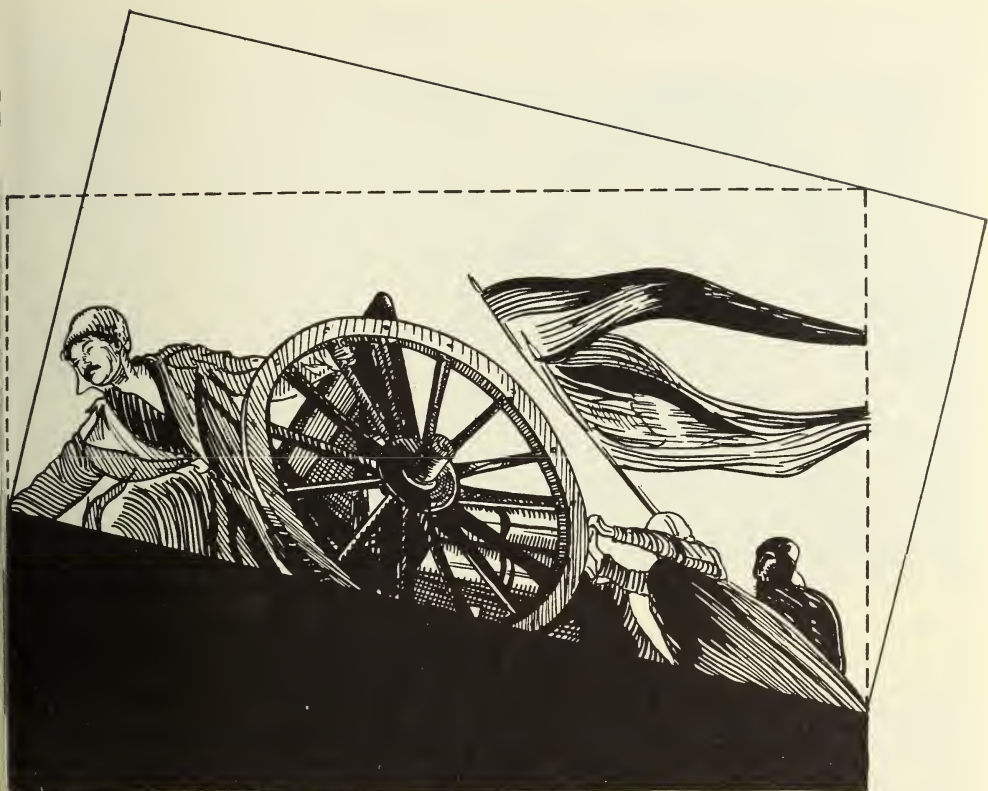FIG. 6.—Compositional plan for a shot in the film " October " (Form II).

FIG. 7.—Compositional plan for a shot in the film " October " (Form III) showing tilting of frame.

FIG. 8.—Shot from the film " October ".

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FIG. 9.—Shot from an American film with Harold Lloyd

to bring the object perceived closer to the audience. With the introduction of the medium-shot came also the possibility of giving special emphasis to one or another part of the scene being filmed, by isolating it from the long-shot of the general scene. Correspondingly there was a change in attitude to the scale relationships between the object and the frame limits, since these limits now began to lose their original purpose as an abstract proscenium. With the arrival of the *close-up* this evolution found its natural completion. From the first day of its introduction into cinema practice the close-up broke down the tradition of the planning of the shot on theatrical lines. In due course it became a specific means of cinematic expression, and a stimulus to the understanding and working out of a theory of editing, apart from which the close-up loses most of its significance.[1]

The close-up is a means of concentrating the spectator's attention, of bringing the object nearer to him and so overcoming the space between him and the action of the film. It acquires genuine significance of expression only when utilised in a correct system of editing construction. The successive transition from one stage of closeness of the object to another must be based on the logic of the action or the compositional construction of the picture, when it creates a single line of influence on the spectator, from his illustrative perception of the long-shot to his intensively saturated perception of the close-up, through all the intervening stages of scale enlargement. Thus the spectator is no longer an ' outside observer '. The camera brings him, so to speak, into the action, by picking out the close-ups and the details from the general scene, emphasising the more important moments of the action, accentuating their specific features, and revealing the relationships between the whole and the part, the general and the detail, which would remain imperceptible in a distant, illustrative long-shot.

In all cases the determination of the camera-angle to be adopted in accordance with the directorial shot system is dependent upon the proposed editing scheme for the film. Each of the camera-angles picked out by the camera is part of the

[1] The ' discovery ' of the close-up is usually attributed to D. W. Griffith. This, in fact, is not quite accurate, for the close-up as a dynamic photo-portrait existed before him. Griffith was the first to realise its importance in the film's editing context, and so was able to work out pragmatically the elementary principles of editing theory.—N.

FIG. 10.—Frame margin in a picture by Degas.

FIG. 11.—Frame
margin in a picture
by Degas.

general plan of the scene, and, after the editing process, should comprise a development, definition, and accentuation of the single action of the entire episode. Neither the director nor the camera-man should arbitrarily select the degree of scale enlargement of the object, for the scenario and the editing should remain the main determining element in the selection of camera-angle, as they are in the selection of the set-up for each shot.

In addition to our simple setting out of the episode into camera-angles, we also have differentiation into different planes of distance within a single, unbroken editing unit or shot. If we have several active objects in a given shot, we can plan the frame so as to concentrate the spectator's attention on the main object, placing it in the foreground. Thus we demonstrate the spatial connection between the main object and its surroundings. Or alternatively, by placing an actor in the foreground with his back to the spectator, we can achieve the converse effect, and concentrate the spectator's attention on the action taking place within the depths of the shot. In the latter case, by use of a close-up for the next shot we establish the spatial orientation requisite to effecting a transition to the detailed setting out of the same scene in various close-ups.

Finally, by redistributing the object in a shot within the limits of a single, unbroken editing unit, we can change the plan of distantial planes in the shot in the actual process of shooting. A similar reorganisation of the shot can also be achieved by shifting the point at which the camera is set up in the course of a single editing unit. In the first case we get a moving object in static surroundings, while in the second case, by shifting the camera, we get a changing background against a motionless object which retains its primary spatial position, and merely passes to a different plane of distance within the same shot.

In all its forms the camera-angle is an essential factor in composition, for almost all the perspective constructions in the shot are achieved by juxtaposing and counterposing the objects distributed in the various planes of distance from the lens. Establishment of the camera-angle (or plane of distance) for the various objects or parts of objects shot implies a primary form of organising the shot space.

But as the spatial element of a single editing unit or shot functionally depends on that necessitated by the editing construction of the given scene, the camera-angle cannot be determined irrespective of the general plan of shot distribution laid down in the editing scheme.

Having decided upon the ' picking out ' of the image to be achieved by the frame limits of the shot, in other words, having decided upon the camera-angle, or, in non-technical language, the plane of distance, our next task in considering the spatial organisation of the shot is to discuss the aspect or foreshortening of the object within that given camera-angle.

(c) VIEWPOINT AND FORESHORTENING

The camera viewpoint has a large share in determining the direction and angle from which the spectator perceives the photographed object.[1] When he selects the camera viewpoint the camera-man determines the spectator's relation-

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[1] Technically, the camera viewpoint is the point at which the camera is set up, in conjunction with the direction of the optical axis of the lens. But the angle at which the spectator perceives the screened film also depends, although in lesser degree, on his view of the screen during projection of the film. Here the essential factors are the angle at which the spectator perceives the screen, and also the size of the screen.—N.

FIG. 12.—Change of viewpoint for direct perception of action.

ship to the object photographed. With every change in the viewpoint there is a change in the spectator's perception of the object, and therefore in the meaning and significance of that object.

Ordinarily we see surrounding reality from innumerable viewpoints. But our visual notion of the perceived objects is preserved in our memory only in the form corresponding to the most frequently repeated forms of our perception. If we think of a man walking along the street, as in Fig. 12, we see that his view changes its direction with every step.

As we glance around at surrounding objects, we obtain an unbroken series of visual impressions, which provoke ideas of the form and peculiar features of the objects we have seen. Since our memory retains only those visual ideas corresponding to the most frequently repeated aspects of what we see, we evoke in the cinema audience associations of an object only if we shoot that object in a customary aspect, which does not differ from the customary visual notion of it.

In cinematographic construction we pick out the shot object from its surroundings by fixing it within the frame limits. By doing so we violate the continuity of visual perception, only to recreate it in a different form by means of editing. By transferring the object to the abstract space and time of the shot, we compel the emergence of a visual idea of it in different associations, i.e. by revealing the content, the significance of the object in a new expressive form. Naturally, this changes the character of our perception of the object shot, so there cannot be absolute identity between the everyday viewpoint and that of an object shown on the screen.

When we take a long-shot of a scene from any point, the camera-angle gives a picture of the scene which is that of an ' outside observer '. If we bring the camera within the *mise en scène*, and break the scene up into mid-shots and close-ups, the picture acquires the viewpoint of the persons taking part in the scene, and reveals the shot objects in the form in which these perceive them. In other words, by giving the camera such a viewpoint we reveal the actual sensations provoked in the actors by the surrounding objects. In such viewpoints the cinema camera is brought into the action of the scene, and picks out shots corresponding to the momentary glances and sensations of those taking part. This complex projection of the camera into the *mise en scène*, conditioned by the logic of the scenario's editing scheme, engenders the emotional intensity and reality

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which differentiate creative cinema construction from an informative ' news '
exposition.

In selecting the camera viewpoint the basic principle for the camera-man
is the *motivation* of such a viewpoint, its task as laid down by the scenario. In
general form this motivation may be determined by the narrative development
of the scene being filmed. In the course of the narrative the actor passes from
spot to spot in accordance with the scheme drawn up by the director. These
successive movements force the camera-man to change the viewpoint. The
camera shifts accordingly, and so we can build up a scheme of camera movement
parallel to those of the actor, and revealing the consequential, logical character
of the changes from one camera viewpoint to another.

Supposing that in one shot of a scene the actor glances at a building outside
which he is standing. He sees the building from below, so in the following
shot a view of the building taken from a viewpoint below it will be a logical suc-
cession to the actor's glance. We put the camera in the actor's place and show
the building as he sees it. In other words, we place the spectator in the position
of the actor.

Like the logical distribution of the continuous action into camera-angles,
the employment of transitions from one viewpoint to another, logically motivated
by the narrative, only came into cinematic practice as an elementary form of
scenario construction when the cinema abandoned the stage traditions of its early
period, and created those primary elements specific to it. In the early days of the
cinema, scenes were filmed entirely from one viewpoint, the camera remained in
one spot throughout the process, and this single viewpoint of the object corre-
sponded to the fixed viewpoint of the spectator in a theatrical auditorium. As
soon as the first distribution of shots into camera-angles occurred, the camera
viewpoint gained more freedom. But the old principle of a ' single ' viewpoint
still held sway, as is shown by the fact that the viewpoint was changed only along
the optical axis of the lens. Technical progress in optics enabled us to shift
the object nearer or farther along the line of the optical axis without moving the
camera itself. Cameras were constructed with lenses swiftly changed by means
of a revolving attachment. By merely changing the lenses, the camera-man could
alternate long-shot, mid-shot and close-up. But the viewpoint always remained
outside the scene, and so the entire picture retained a merely illustrative quality.
The creation of an elementary editing theory led to further freedom of viewpoint,
and thus developed the method of determining the viewpoint we have described
above, constructed on a logical, narrative motivation for every transition to a new
point.

In addition to the logical narrative development, the formal representational
features of the object filmed can also motivate one or another viewpoint. In
certain instances the correct choice of viewpoint consists in fixing a view of the
object in which the specific features of its construction are most fully and expres-
sively revealed. And for this an important factor is the discovery of the true
geometrical projection of the three-dimensional object in the two-dimensional
plane of the shot.

Consider the sketches of a building given in Fig. 13. They are based on
photographs taken from various viewpoints.

In Fig. 13A we have a frontal view of the building in symmetrical plan. A
central viewpoint from average height has been chosen. If we preserve the sym-
metrical plan, but lower the viewpoint somewhat, we get Fig. 13B. Here the
predominant feature becomes the statue, which is sharply defined against a back-

ground of sky. In addition, such a viewpoint gives us a perspective of the wings not existing in the previous illustration.

Shifting the viewpoint to the left, we get a diagonal view of the building, which preserves the general balance of the composition, but endows the representation itself with a relatively dynamic quality. Fig. 13C is a sketch based on photographs taken from such a viewpoint.

In Fig. 13D the viewpoint is shifted to the right, and nearer to the building. The right arch is differentiated from the others by disproportionate enlargement, and becomes a dominating factor in the composition.

In Fig. 13E the viewpoint is lowered. The building is thrown backward and its architectural unity is lost.

By raising the viewpoint above the average height, we get Fig. 13F. The statue is thrown against the background of the columns, and the building as a whole loses its monumental quality.

This brief example of compositional construction of a static object reveals the paramount importance of correct choice of camera viewpoint. In certain cases, when the camera-man is faced with the necessity of displaying the specific features of a certain type of architecture for instance, his choice of viewpoint is dependent to some extent on this circumstance. For instance, the balanced statics of a Renaissance building demand symmetrical, frontal composition, and so dictate a central viewpoint, whereas Baroque architecture needs predominantly a viewpoint to one side, in order to reveal the dynamics of the lines and planes of the projecting pediments, cornices, etc. Here we are directly dependent on the nature of the building, for by a simple change of viewpoint we can change the impression of the photographed object, either emphasising its characteristic features, or completely suppressing them by the deliberate choice of another viewpoint.

Hitherto we have been discussing single cases of static construction, in which the choice of viewpoint is motivated chiefly by the specific features of the object in its various aspects. The correct choice of viewpoint is just as essential when we are shooting a continuous process, since on it depends the exposition of the essence of that process. Supposing that we have to take several shots of a potter at work, showing the most important details of the process. If we shoot him from a viewpoint level with him, as in Fig. 14, the result is only a general presentation of the form of the potter's wheel and his position when working. Such a viewpoint does not reveal the characteristic features of the potter's process. But if we choose a viewpoint from above, we get the photograph shown in Fig. 15. In this picture the essence of the process is clearly revealed, and so provides a motivation justifying the choice of viewpoint from above.

In this example we have not touched upon the question of the æsthetics of compositional construction. Of course the æsthetics of construction cannot be isolated from the problem of displaying the object's functions and the specific features of its form and spatial situation. But whereas the predominating factor in the composition of a scientific, technical or educational film is the display of the object's functions, in artistic construction the predominating factor is the organically combined display of the function of the shot in an æsthetically significant composition. It is highly essential to take the æsthetic factor into account when choosing the viewpoint of an object, but there are no hard and fast rules or compositional canons to govern this problem. The camera-man will only be able to display the most important of the complexity of factors influencing perception when he has a thoroughly clear understanding of the scenario-editing

Fig. 13A.—Influence of viewpoint o[n] the character of the photograph[ic] reproduction of architecture. V[e] have a frontal view of the buildi[ng] in symmetrical plan. A centr[al] viewpoint from average height h[as] been chosen. If we preserve t[he] symmetrical plan, but lower t[he] viewpoint somewhat, we g[et] Fig. 13B.
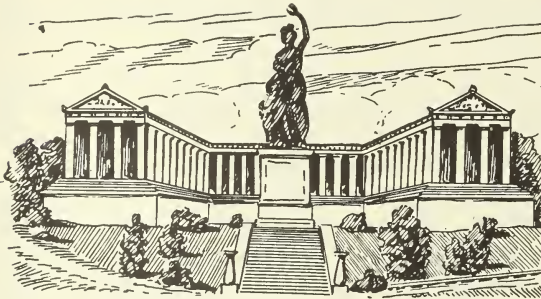

Fig. 13B.—Here the predominant fe[a]ture becomes the statue, which [is] sharply defined against a bac[k]ground of sky. In addition, suc[h] a viewpoint gives us a perspecti[ve] of the wings not existing in t[he] previous illustration.
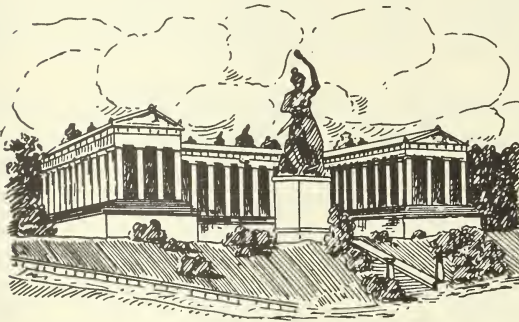

Fig. 13C.—Shifting the viewpoint t[o] the left, we get a diagonal view o[f] the building, which preserves th[e] general balance of the compositio[n] but endows the representation itsel[f] with a relatively dynamic quality.

construction of the given episode or scene, and so can ascertain the correct motiva-tion for the viewpoint in each separate shot.

The choice of viewpoint plays just as important a rôle in shooting a moving object, for here we are set the task of displaying the character of the movement in its clearest and most expressive form. We will analyse several typical examples, such as are frequently found in cinematic practice, of constructing objects in a shot.

First Example.—From a static viewpoint we have a shot of a moving object against a static background. The direction, speed and character of the movement are perceived by the spectator in their relation to the static background. In this case the background plays a secondary rôle, remaining in an unchanged position throughout the shot, whereas the moving object is continually under-going change. The camera viewpoint is chosen with the purpose of concen-trating the spectator's attention on the moving object.

FIG. 13D.—The viewpoint is shifted to the right and nearer to the building. The right arch is differentiated from the others by disproportionate enlargement, and becomes a dominating factor in the composition.

FIG. 13E.—The viewpoint is lowered. The building is thrown backward and its architectural unity is lost.

FIG. 13F.—By raising the viewpoint above the average height we get Fig 13F. The statue is thrown against the background of the columns, and the building as a whole loses its monumental quality.
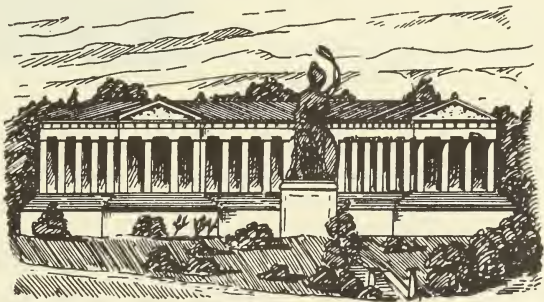
An illustration of the above is a man moving across the screen, with a street and houses motionless in the background.

Second Example.—The viewpoint is motionless, the shot showing a static foreground object and dynamic background. The dynamism is conveyed by the movement of the background alone, and so it becomes the basic compositional factor, and is continually changing throughout the shot. In choosing our view-point the first thing we have to consider is the change of background, and the position of the new objects coming within the frame of the shot during the shooting process.

An illustration is a man standing motionless in the foreground, with his back to the camera. The background is formed by a procession passing across the screen. New persons are continually coming into the shot, passing out beyond the frame limit.

Third example.—With a moving-camera viewpoint, the shot shows a motionless foreground object and moving background. If the background moves in the
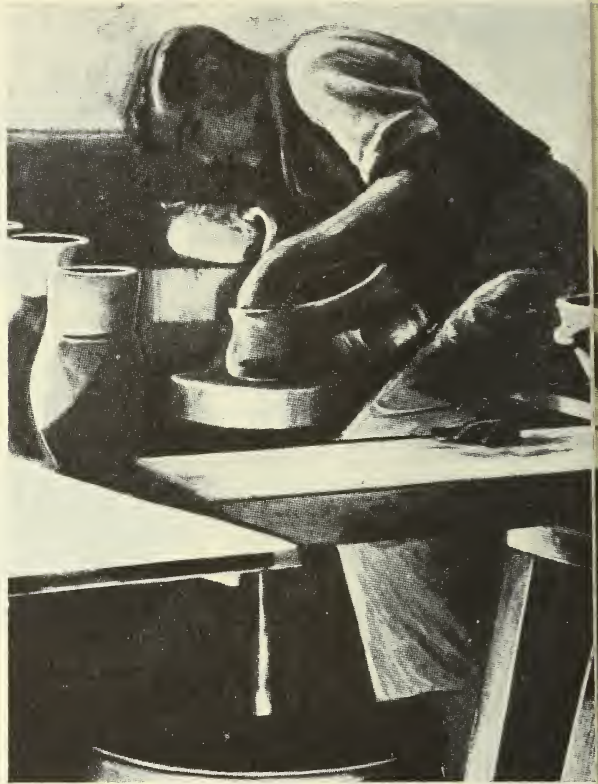
Fig. 14.—Profile (frontal)
viewpoint.

same direction as the camera viewpoint, and the latter's speed is synchronise(
with the former, the background becomes static, and so we get the same resul
as that of the first example, namely, a moving object against a motionless back
ground.

A good illustration is provided by a worker standing motionless at a conveyoɪ
The camera moves parallel to the conveyor's movement, and so one section oː
the conveyor is fixed within the frame limits, and the sense of movement is lost
The worker's figure passes across the shot field of vision.

Fig. 15.—Viewpoint from
above.

Fourth example.—A moving object is made to appear motionless. The camera viewpoint is chosen to ensure that, provided the object is moving in the same direction and at the same speed as the viewpoint, the background is excluded from the field of vision. As in consequence any movement of the object could only be perceived in relation to the frame limits, it is made to appear motionless.

To illustrate this, take a mid-shot of a walking man, against the background of a cloudless sky. The camera moves parallel to the man. Provided that no tendency to movement has been suggested in the shot immediately preceding it in the editing sequence, the sense of dynamism will be lacking.

Fifth example.—The viewpoint revolves around its centre, while the object and background are static, so that the impression of a turn is conveyed. The viewpoint revolves around the optic axis of the lens.

In illustration, consider the effect of filming a group of people in a square from above. During the process the camera turns on the optical axis of the lens. On the screen the entire square revolves. (This kind of shot can be taken without moving the camera, by means of a special revolving prism.)

The unbroken movement of the camera viewpoint in a vertical or horizontal direction, or in the direction of the optical axis of the lens, overcomes the restrictions of the frame limts as a kind of permanent margin closing the shot field of vision. We achieve this effect in all pan (panorama) shots, and also in tracking shots, in which the camera moves towards or away from the object. This change of viewpoint results in an unbroken change in the picture picked out by the frame limits, and so in the image thrown on the screen.

We have specified only a few of the most typical examples of the extensive possibilities of exploiting the camera viewpoint in compositional construction. Obviously, there are many other ways of combining the dynamic and static elements in the frame. The viewpoint must be chosen in each case in accordance with the motivation provided by the scenario. And it is impossible to foresee and list all the variety of scenario motivations and the methods of realising them.

But we must consider one other factor. Not infrequently camera-men avoid resorting to ' extreme ' viewpoints, by which they mean those looking perpendicularly down or up at an object. They try to keep to the ' usual view ', assuming that by so doing they express the scenario purpose in a more ' intelligible ' representational form. Thus a set standard arises, and the camera-man loses one of

FIG. 16.—Viewpoint from above.

his valuable assets : the ability to reveal the shot content in a distinctly original form corresponding to any one of the possible positions of the surrounding reality. Suppose a scenario contains the following shot : " Looking out of his window, he sees a man striding energetically along the pavement." We could shoot this scene by a long-shot at normal height, and the man would be receding in the distance. But we could also use this shot to convey the sensation of a momentary downward glance, and then we should get a viewpoint similar to that of Fig. 16.

Here we get the strongly defined movement of a man striding along a square cobbled road. The nature of the road strikes the eye ; it is emphasised by the camera viewpoint ; and we can distinguish the rectangular shape of each separate stone. From such a viewpoint the regular movements of arms and legs act as unbroken rhythmic strokes. Dynamism becomes the basic, predominant element in the composition. Out of a momentary glance a long-remembered impression is created : one stronger than if the shot had been taken from the ' usual ' viewpoint. Undoubtedly such a method gives organic, and not merely mechanical expression to the task we were set.

But this example must not be regarded as confirmation of the supremacy of ' original ' over ' usual ' viewpoints. In this case we were given an exact instruction, which served as our motivation for choosing a viewpoint from above. There was no need to avoid the vertical in looking at the object ; on the contrary, the very task dictated that viewpoint, and in such cases the camera-man need have no fear that the representational form will be ' unintelligible '. Such ' unintelligibility ' to the perception only occurs when there is no corresponding motivation for such a viewpoint in the editing construction of the scenario. Then such a view definitely constitutes a formalistic approach to the task, in other words, there is a discrepancy between the constructional form and its intended purpose. And so we get the self-sufficient æstheticism of ' original ' foreshortening, which we frequently come across in cinematography.

We must now consider the interaction of the viewpoint with the other compositional elements. In any compositional construction of a long-shot we can clearly establish that the height of the horizon functionally depends upon the chosen camera viewpoint. If we film our object from the lowest viewpoint, i.e. from ground level, the shot will not show any horizon, for the latter will be below the lower limit of the frame. As we raise the viewpoint, so the horizon line will come into and rise in the shot. But if we reach the highest viewpoint, in which the optic axis of the lens is directed vertically downward, the horizon line will disappear above the upper limit of the frame. This invariable dependence of the horizon height upon the level of the viewpoint is a highly important factor in compositional construction.

Figs. 17 and 18 show the changes in the character of the image arising from a change in the viewpoint and the horizon. The dotted line $h-h^1$ marks the horizon line in both illustrations.

In the first case, owing to the lower viewpoint the horizon has dropped, and simultaneously the distant perspective creating the impression of depth has disappeared. In the second case the raised viewpoint brings the horizon line across the middle of the picture. Here the landscape perspective is clearly visible through the span of the arches.

In cinema construction changing the camera viewpoint in order arbitrarily to change the height of the horizon in the shot is utilised as a compositional method. By raising or dropping the horizon on the shot we can set the chief object being
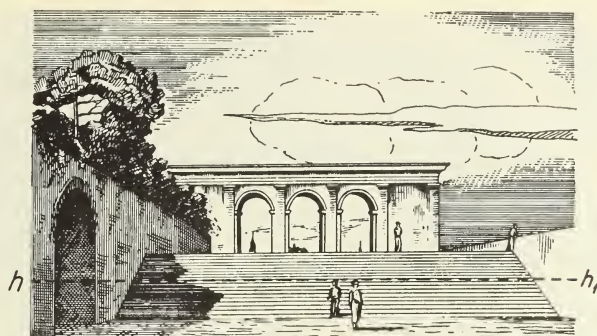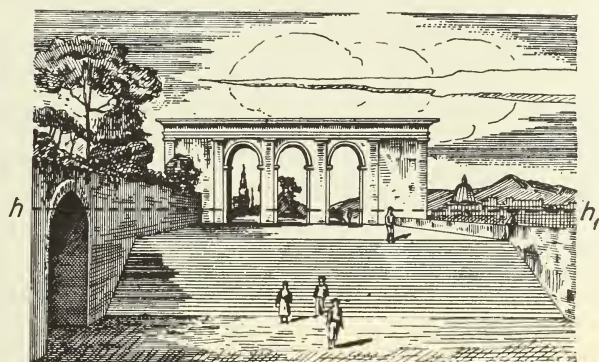
filmed either against the light background of the sky and clouds or the dark background of the earth.

A change of camera viewpoint upward or downward is not only of decisive importance in determining the height of the horizon, but also has considerable influence upon the spatial situation of the main object being filmed. This brings us to the question of foreshortening, which we must now discuss.

In the representational technique of the cinema, foreshortening is taken to mean the perspective situation of the object, in which, viewed from any angle, it is traversed by the plane perpendicular to the optical axis of the lens. When the vertical and horizontal axes of the object exactly coincide with the plane perpendicular to the optical axis of the lens we can conditionally say that there will be no foreshortening in the image. In practice there is complete absence of foreshortening only in exceptional cases, when we photograph plane surfaces all the points of which are disposed perpendicularly to the optical axis of the lens. But the usual shot of a three-dimensional object always involves the presence of a certain amount of foreshortening, sometimes so insignificant that it is imperceptible to the eye directly perceiving the image.

Owing to the influence of the perspective disposition of the objects over the plane of the frame, foreshortening leads to a perspective shortening of the linear dimensions of the object on the one hand, and on the other creates the impression that the object is being directed into the depth, or alternatively out of the depth of the shot. Because of this effect, foreshortening is one of the most powerful expressive resources in the dynamic organisation of frame space.

By foreshortening the construction of the object in the shot, while following

FIG. 19.—Motivation for foreshortening construction.

the associative laws governing perception of the screen image, the camera-man can achieve psychological effects, quite peculiar in the strength of their impression, which will reveal the significance of the object being shot, and interpret it in the sense laid down by the scenario. To make this clear we will give one or two examples.

The psychological and emotional effect of foreshortening can be demonstrated by a number of shots from Pudovkin (director) and Golovnya's (cameraman) picture " Mother ". The depression, grief, and despair expressed by the actors are psychologically intensified by foreshortenings achieved by filming from a viewpoint slightly higher than the normal. As the result the actors appear to
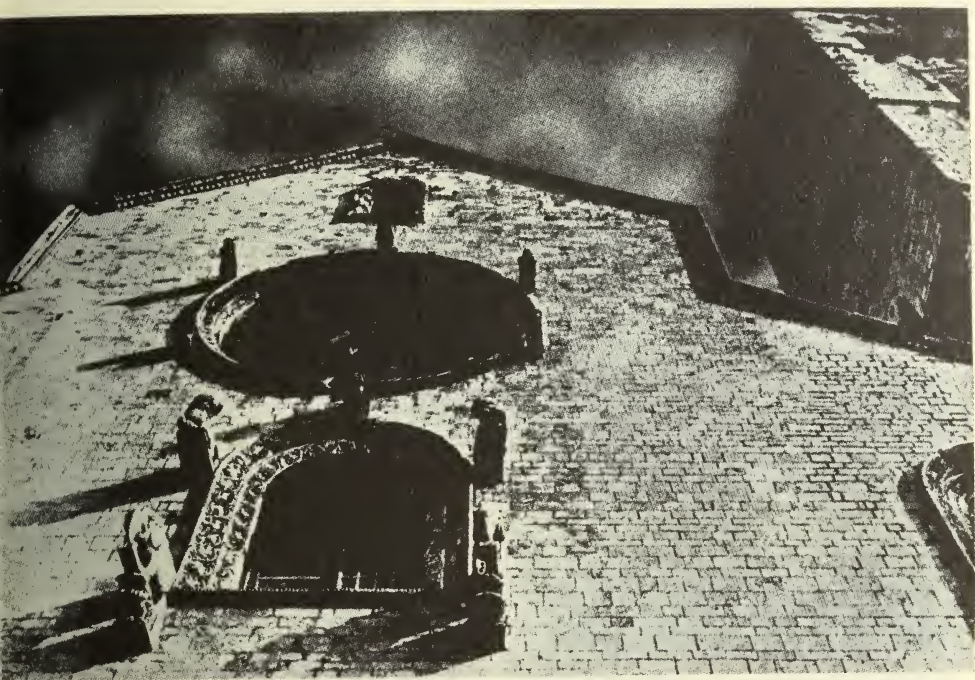
FIG. 20.—Motivation for foreshortening construction.

be crushed to the ground. " Mother " also provides an example of foreshortening which has become ' classic ' in cinematic practice. I refer to the shot of the policeman, in which foreshortening produced by filming from a viewpoint lower than normal intensifies the impression of towering strength conveyed by this agent of Tsarist autocracy.

There is a sequence in " Potemkin " in which the camera-man Tisse has achieved a symbolic awakening of sculptured lions at the first shots from the insurgent battleship. He gets this effect by successive modification of the fore-shortening in each shot, followed by constructive editing. In the same film he employs foreshortening to demonstrate the mechanical might of the battleship,

filming details which, despite the static quality of individual shots, in their repre-
sentational form have a sharply expressed dynamic quality, linked by the general
editing composition of the film.

The decision as to the foreshortening to be given to any object when composing
the shot is closely connected with the choice of camera viewpoint. Here we must
distinguish the three most typical kinds of motivation for any given foreshortening.

To begin with, one motivation for foreshortening construction is found in
the necessity for the camera viewpoint to reveal the viewpoint of the actor. Here
we have a direct connection between the viewpoint and the ascertained fore-
shortening of the subject. Figs. 19 and 20 show such a connection.

In Fig. 19 the foreshortening of the details of the building is determined by
the viewpoint of the actor as he stands gazing at the building from below. His
viewpoint motivates the choice of this form of foreshortening. In Fig. 20 we
have the same motivation, but the foreshortening is that of a side viewpoint deter-
mined by a side glance of the actor.

Secondly, foreshortening may be conditioned by special psychological needs,
involving an associative juxtaposition of two objects. By employing foreshortening
we confirm the resemblance between two different objects. Fig. 21, a shot from
" The End of St. Petersburg " (Pudovkin and Golovnya), gives such an instance.
In the great majority of cases this type of foreshortening juxtaposition arises
out of the editing tasks of the scene.

Thirdly, the necessity for severe foreshortening construction may arise out
of the specific peculiarities of form appertaining to the object shot. An instance
is provided by Baroque achitecture. In order to display the structural features
of this architectural order we must resort to foreshortening construction from
one side.

Foreshortening of the object in the shot as a factor in composition is in
inseparable functional inter-action with the choice of camera viewpoint, its per-
spective, and the optical characteristics of the lens, which also influence the
nature and degree of the foreshortening.

(d) PERSPECTIVE UNITY

Perspective in all its various forms is at the basis of a realistic perception and
organisation of seen space. The essence of realistic organisation of space in repre-
sentational technique consists in the last resort in transmitting, on the two-
dimensional plane of the image, the optical impression of objects distributed at
varying distances from the eyes. In their general form the laws of construction
of perspective correspond with the laws governing our physical sight.

The farther the object is situated from our eyes, the smaller and less distinct
it appears to us. And this conditions the system of the perspective view of space.

As in pictorial art, we recognise two main forms of perspective construction :
linear perspective, the effect of which is achieved by organising the graphic elements
of representation, and aerial perspective, achieved by the tone of the image, and
the distribution of light and shade. We must consider certain factors involved in
the transmission of linear perspective in the cinema.

If we imagine a series of parallel planes distributed in the order of their
successive distances from us, and project parallel lines through those planes, we
get the impression of a gradual convergence of those parallel lines upon a single
point, which is called the point of convergence or vanishing point. All the horizon-
tal, vertical and sloping lines distributed over the plane of the image undergo an
illusory abbreviation as they approach the horizon and the vanishing point.

FIG. 21.—Foreshortening
construction motivated by
editing factors.

If the perspective of the object is so constructed that the point of convergence
is also the central point of the illusory or actual horizon line, the result is an
orthographic frontal construction with a central vanishing point, involving sym-
metrical composition.

An example of symmetrical composition built up on a perspective with a
central vanishing point is given in Figs. 22 and 23, taken from Hobbema's
picture : " Avenue at Middleharnis ".

By shifting the vanishing point to one side of the central point of the
horizon, we get a side view of the object in its spatial distribution, in other words,
an asymmetrical construction.

If we place the vanishing point at the height of the human eye, we get a
normal perspective, corresponding to the most usual conception of space. In
this case the horizon line will also be at average height. But if we lower the
vanishing point, and consequently shift the horizon of the image in the same

FIG. 22.—Hobbema's picture " Avenue at Middleharnis ".

direction, all the details of the lower part of the image will be perceived in strong perspective foreshortening. If we do the opposite, i.e. raise the vanishing point and consequently the horizon line, all the details in the upper part of the image will undergo perspective foreshortening. And if we shift the vanishing point still higher, we shall arrive at the ' bird's eye perspective '.

Consideration of the system of perspective unity reveals the functional dependence of a number of compositional factors in their spatial interaction. Whether illusory or actual, the horizon line is of tremendous importance both in regard to the height of the field of vision, and in creating the impression of depth in the image. Meantime the situation of the horizon line is linked up with the choice of viewpoint, and this latter in turn determines the distortion of the object and its distantial plane. On the height of the horizon line depends the predominance in the image of details situated below, or details situated above that line. If a painter is most interested in representing the fields, trees and structures in a given landscape, he chooses a higher viewpoint, the horizon line is raised, and these details predominate. But if the composition of the image is based on the predominance of details situated above the horizon, then, of course, he chooses a lower viewpoint.

Such are the elementary rules of linear perspective which are necessary to our further argument.

Of what importance are the laws of linear perspective in the compositional construction of a cinematic image ?

Before we can answer this question we must point out certain peculiarities,

Fig. 23.—Compositional scheme in Hobbema's picture.

specific to the cinema, which confront us when we apply to cinema the laws of linear perspective governing the graphic arts.

Although linear perspective as a method of seeing and representing was known as early as the fifteenth century, almost every artist from that day to this has used compositional constructions which modify the true relationships between the actual dimensions and the position of the represented objects. These modifications are the result of the artist's attempt to present his personages in the most impressive and outstanding form possible, in other words, to represent them as being at a comparatively close distance while the architectural and landscape background is represented as being at a greater distance, so enabling him to reproduce as large a section as possible of the seen world on the small field of the picture. In his work *Mathematics and Painting* Georg Wolff made mathematical investigations into a number of the best-known productions of the greatest masters of the Renaissance, and came to the conclusion that in many cases there was deliberate violation of the laws of linear perspective. These violations, which in the artist's own days were called ' errors ', came about as the result of the artist's attempt to convey his artistic intention as expressively as possible, and to reveal that intention in his compositional construction. Wolff writes[1]:

Schilling and Viner noted that Paul Veronese, the brilliant representative of pictorial art of the Renaissance, adopted, in his large picture " Marriage at Cana ", painted as early as the latter half of the sixteenth century, seven vanishing points and five horizons. A closer study of this picture would reveal many more. . . .

[1] George Wolff, *Mathematik und Malerei.—N.*

Raphael also similarly abandoned the logic of construction (the boat in the pictur "The Miraculous Draught of Fishes" is small out of all proportion to the figures. The same can be said of Leonardo da Vinci ("Secret of the Evening") and all th other great masters.

In his picture "Secret of the Evening" Leonardo da Vinci did not subject certai details to the general law of perspective composition. For instance, the distribution of th crimson carpets on the walls and the foreshortening of the plate standing on the table By these means the artist was able to conceal the lack of correspondence between the scal of the figures and the architecture. Leonardo da Vinci put too many carpets on the walls so creating the impression of depth. As for the plate on the table, in relation to the con struction as a whole it is not given the foreshortening it should have if the laws of linea perspective were to be strictly observed. But because of this seeming geometrical error the image of the plate most substantially transmits the easily recognised and most customar form of the object, for we most easily recognise the content of that pictorial representatior of objects to which we are visually accustomed.

There are further examples of this abandonment of the rules of linear perspective in Raphael's picture "The School of Athens", in which the columns of the portico seem unusually high in relation to the figures, yet in reality do not exceed twice the height o a man.

Farther on, in a comment on the German art historian Schreiber,[1] Wolff makes the following remarks concerning Albrecht Dürer's picture "Saint Jerome in his Study".

However, if Jerome were to stand up, we should be greatly surprised. For he would prove to be a disproportionate figure with short legs and an exaggeratedly long torso. The saint would almost reach the ceiling, and his hat, hanging above him on the wall, would be incredibly large for his head.

Such discrepancies between the foreshortenings, the scale of the figures and the surroundings, in works of which the artistic quality and compositional unity are unviolated, are a frequent phenomenon in the history of art. Wolff's book provides a detailed analysis of them. We are interested not so much in deter- mining the actual fact of departure from the laws of true geometrical perspective in any one pictorial production as in the reasons which led the artist to ignore those laws. We shall consider the example already referred to : Dürer's work "St. Jerome in his Study".

If Dürer had exactly retained a true geometrical perspective, the figure sitting at the table would either have been completely lost in the room, or, if it had been brought nearer, only part of the wall with fortuitous bits of furniture and utensils would have been visible behind the large figure of St. Jerome. But the content of the work demanded the expressive isolation of the figure of Jerome against the surroundings presented in detail, and emphasising by their character the specific atmosphere of philosophic contemplation and profound peace. Obvi- ously the psychological effect would have been lost if the artist had not ignored certain laws of linear perspective.

So that in pictorial art the problem of the expressive organisation of space is not infrequently resolved at the expense of a certain deviation from the laws of linear perspective. Is such an arbitrary modification of perspective relationships possible in photography also ?

The photographic lens in its normal application will always give us a repre- sentation defined and limited by the laws of optics, in the sense of transmitting a geometrical perspective. The task is also complicated by the fact that the angle of vision of the present-day cinematic lens also has its limits. For these reasons, as a means of effecting arbitrary changes in the perspective inter-relationships

[1] Schreiber, *Malerische Perspektiv.*—N.

with the aid only of the usual methods of photographing, the employment of linear perspective has definite limits. But the camera-man can resort to a number of technical methods which will enable him to some extent to go farther than the transmission of space in the form of a primitive reproduction. Among these methods are the employment of special lenses which cannot be used in the so-called simple 'record' shot. By choosing his lens the camera-man can modify the perspective to some extent, so creating the illusion of greater or less depth to the image. And by resorting to certain methods of combined photographing it is not impossible to combine in one frame a number of objects not geometrically associated in perspective unity.

Thus, in transmitting space by methods of linear perspective the camera-man's chief task is not to make a simple 'record' reproduction of the object, but to achieve an expressive organisation of the dimensions and space within the frame, with the aid of the representational resources available to cinematographic technique.

Hitherto, in so far as we have been speaking of static perspective construction, the foregoing considerations equally apply to simple photographic representation. The cinema shot introduces a new factor into perspective unity, which we may call the kinetic of perspective construction. The movement of the object along the main line of vision into the depth of the frame, or along the diagonal of the frame, at a certain angle towards the main line of vision, creates a dynamic perspective not only in the sense of the dynamism of the lines projected into the depth, but also in that of the movement of the objects themselves in the frame. In the cinematographic representation this perspective movement is perceived differently from its perception in reality. A number of laws govern the cinematic transmission of the illusion of perspective movement, and on these laws the theory of cine-perspective is based.

A mathematical theory of cine-perspective, establishing the inter-relationships between the representation of the object on the plane of the screen and its movement in space and time has been worked out by *A. N. Rinin.*

We think it desirable to give his thirteen basic theorems of cine-perspective. The reader will find their mathematical bases in his work *Cine-perspective and its Application in Aviation.*[1]

Theorem 1. (The law of relativity in cine-perspective.) If an object is moving in space according to a given law, and the camera is motionless, the change of its perspective in the picture will be the same as if the camera moved according to the same law, but in an opposite direction, while the object was motionless.

Theorem 2. If the object moves along the main ray its perspective is in converse proportion to its retrogression from the lens.

Theorem 3. Given the same movement, the speed of change of perspective is in converse proportion to its retrogression from the lens.

Theorem 4. Given the same movement, the speed of change of perspective is in direct proportion to the square of the speed of the object and in converse proportion to the cube of the object's retrogression from the lens.

Theorem 5. Given the movement of a plane figure parallel to the picture along the main ray, the area and clarity of its perspective changes in proportion to the square of the relation of the focussing distance to its retrogression from the lens.[2]

[1] Published by the Section for Aero-Photography of the Scientific Research Institute for Aviation, Leningrad, 1932, p. 75.—N.

[2] 'Clarity of the perspective' is the relation of its area to the area of the figure.—N.

Theorem 6.   Given the same movement, the speed of change of the area c̷
the perspective is in direct proportion to the speed of the figure and the squar̷
of the focussing distance, and in converse proportion to the cube of the distanc̷
to the lens.

Theorem 7.   Given the same movement, the speed of change of the area c̷
the perspective is in direct proportion to the square of the focussing distanc̷
and the speed of the figure, and in converse proportion to the degree of distanc̷
from the lens.

Theorem 8.   The depth [1] of the perspective of the object is in direct pro̷
portion to the focussing length and in converse proportion to the square of th̷
distance from the object to the lens.

(*Note.*—The analogous theorems (3, 4, 5, 6 and 7) are deduced in regard to a move̷
ment of the object not along but parallel to the main ray.)

Theorem 9.   Given the movement of a line parallel to the main ray, alon̷
itself, the dimension of its image is proportional to the focussing distance, it̷
distance from the main ray, and its dimension, and is in converse proportion t̷
the projection of the space between its two ends to a neutral plane.[2]

Theorem 10.   Given the same movement, the speed of movement of an̷
point of the perspective is in proportion to the speed of the corresponding poin̷
in space, and in converse proportion to the speed of the retrogression of th̷
point in space from the neutral plane.

Theorem 11.   Given the movement of a point parallel to the picture, th̷
speed of movement of its perspective is in proportion to the speed of movemen̷
of the point itself and the focussing distance, and in converse proportion to the̷
retrogression of the line of movement of the point from the lens.

Theorem 12.   Given the movement of a perpendicular line parallel to the̷
picture, the dimension of the perspective changes in direct proportion to the̷
retrogression of the line from the main plane [3] and in converse proportion to the̷
distance of its ends from the neutral plane.

Theorem 13.   Given the same movement, the speed of movement of perspec-
tive of any point along a line is in proportion to the speed of movement of the̷
line itself, and in converse proportion to the retrogression of a point on the same̷
line from the neutral plane.

We must close this section with a few words on *aerial perspective*.

In linear perspective the impression of spatial depth is created mainly by̷
the distribution of dimensions and the lines marking them.   But in aerial per-
spective the same effect is achieved by the tonal differentiation of planes and̷
dimensions, distributed at various distances from the foreground.   The closer̷
the object is to the foreground, the more intensively do our eyes perceive light̷
and shade, and the stronger are the light contrasts of the image.

Our impression of the form and outline of the object also changes equally̷
in correspondence with the object's distantial relationship to the foreground.   At̷
a close distance the object is clearly outlined, and as it recedes into the depths̷
of the image it loses its distinct outlines and is perceived as a tonal mass.

Aerial perspective is in direct dependence upon the laws of the strength of̷

[1] ' Depth of the perspective ' is the relation of the height of the perspective of the̷
body's depth to its actual depth.—*N*.

[2] ' Neutral plane ' denotes the plane passing through the centre of the lens parallel̷
to the picture.—*N*.

[3] ' Main plane ' is used to denote the plane perpendicular to the picture, passing̷
through the centre of the lens and parallel to one (vertical) side of the picture.—*N*.

he light, reflection, and nature of the sources of the light. The camera-man
ot only possesses means of arbitrarily changing the correlationships of linear
erspective, but also can change the nature of the transmission of aerial perspective.
Ve shall deal with this question in more detail in the section devoted to the light
nd tone of the image.

(e) THE OPTICAL DESIGN OF THE IMAGE

The notion of the real world and its space obtained by direct visual perception
s based on binocular vision. But the construction of the cinematographic image
n the plane of the frame is achieved through the monocular action of the photo-
raphic lens. The optical system embodied in the cinematograph camera is an
ntermediary technical means of constructing the form and outlining the details
f the image in the shot. The character of cinematographic representation
epends on the specific peculiarities of this optical system. So we may regard
ptics in its various forms of creative exploitation as a compositional resource.

Judged from the aspect of its technical attributes, the photographic lens
ossesses a number of technical constants. For the purpose of our present theme
e are interested in the focal length of the lens, its angle of vision, the degree
o which the optical system corrects the chief optical defects, and the depth of
ocus available to the lens.

By changing the focal length we can bring the camera viewpoint nearer to
he object photographed, along the line of the optical axis, in other words, the
ocal length of the lens determines the size of the image in the frame. Without
hanging the camera viewpoint, by selecting a lens with suitable focal length we can
ring the object nearer or shift it farther away, so changing the size of the image.

An increase in the focal length involves a reduction of the lens angle of vision,
nd this interdependence of two optical constants also determines the character
f the perspective transmission of the object photographed. A short-focus lens
lattens the perspective, while increasing the height and breadth of the object
hotographed. A long-focus lens deepens the perspective, while reducing the
eight and breadth of the objects situated in the foreground.

The focal length and the lens angle of vision modify the projection of the
ctual object in the plane of the frame, for any change in the perspective distri-
ution of the details affects not only the depth of the image, but also the appearance
f the individual objects themselves. Figs. 24 and 25 show the difference in the
ptical transmission when an object is photographed from the same viewpoint,
ut with lenses differing in focal length.

In Fig. 24 the perspective diminution of the horizontal lines of the tower
s insignificant, for a long-focus lens has been used. Here it is quite easy to
ecognise the square form of the tower, whereas in Fig. 25, photographed with a
hort-focus lens, the horizontal lines of the tower are sloped sharply towards the
orizon, and in consequence it is difficult at first glance to recognise the actual
orm of the object.

We will consider three examples of strong optical distortion of objects,
chieved solely by employing the appropriate lens.

The first example shows an extension of the object along the frame verticals.
Fig. 26 is a portrait taken with a long-focus lens. Here we get an optical trans-
mission in close correspondence with the actual linear correlationships of the
bject. Fig. 27 gives the same object, but taken at a close distance with a short-
ocus lens. Here the vertical extension is clearly evident, and the character of
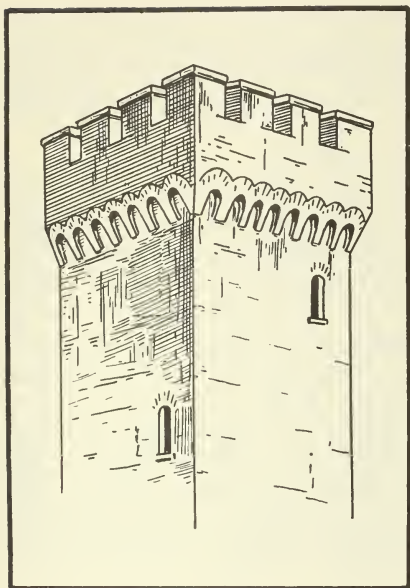he face completely changes in consequence.

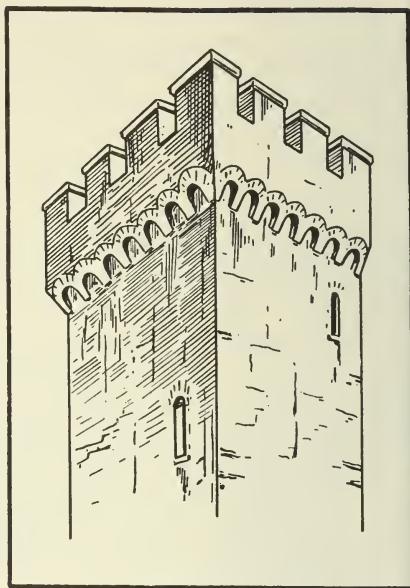FIG. 24.—Projection of a tower as taken by long-focus lens.

FIG. 25.—Projection of a tower as taken by short-focus lens.

Our second example is that of the extension of the object along the horizontals. This is achieved with a special distorting optical accessory, the Jacquencrole lens. Fig. 28 gives an illustration of such an extension.

Our third example is that of a sharp perspective distortion caused by photographing the object with a short-focus lens at close distance. Fig. 29 illustrates this distortion.

The camera-man can meet a number of expressive demands by intelligently exploiting these peculiarities of the optical system, which in the dawn of photography were regarded as ' optical defects ' of the lens. Many manuals of artistic photography still give exact instructions against any deviation from the ' normal ' optical transmission of the object photographed.

The principle of naturalistic reproduction dominates every camera-man until, in the practice of his profession, he is forced to recognise optics as a vital means of expressively organising the object photographed, one which enables him to change the character and significance of the object in accordance with the needs of the scenario and the director. In certain cases, when the scenario demands a complete abandonment not only of primitive naturalistic reproduction, but of realistic transmission, he may and ought to make use of all the representational resources at his disposal, including the peculiar qualities of optics.

In order to complete our summary of the varied possibilities of exploiting optics we give one more example of paradoxical optical transmission. In this case we have not only distortion of the object in the ordinary sense of the words, but also the creation by optical means of a visual image which has no counterpart in reality. Fig. 30 reproduces a photograph taken with a special multiplying lens (the Jacquencrole). In the one picture we have a five-fold repetition of the same detail, a man's two eyes, while all the rest ot the portrait is transmitted without any perceptible distortion. Obviously the same optical accessory will
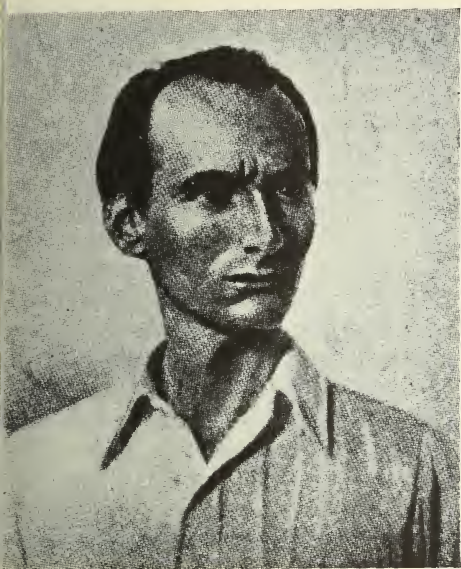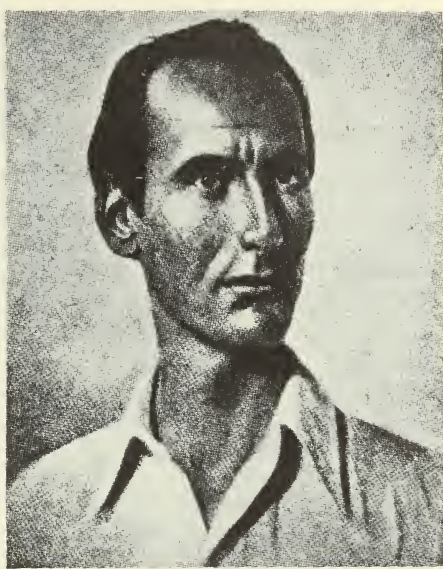
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FIG. 26.—Portrait taken by long-focus lens.

FIG. 27.—The same portrait, taken by short-focus lens.

enable us to achieve the effect of multiplication of any other detail of the object.

The examples we have given illustrate certain possibilities of exploiting optics to achieve a linear distortion of the object photographed. In these cases the distortion affects primarily the linear outline of the object and the linear correlationships of its details. Now we will consider another peculiarity of optical transmission, which plays no less part in the construction of the visual image.

If our optical system is relatively entirely corrected against the basic defects arising in optics (spherical and chromatic aberration, astigmatism, coma, etc.) we get a sharp image exactly reproducing the technical details of the object photographed. But if certain of the optical defects are retained in the optical system, the image will be less sharp and distinct in its technical details. The lens will give a varying degree of sharpness of details, a varying softness of the image, according to the extent of the optical correction. This peculiar ability of an incompletely corrected lens to soften the details of the image is also exploited by camera-men as a means of giving expression to a specific scenario or directorial intention.

Judged from the aspect of this optical peculiarity, existing varieties of lenses can be classified in three main categories, according to their effects.

The first effect is the sharp outline obtained by using lenses with good optical correction. In practice these lenses are called ' sharp ' or ' hard '.

The second effect is the soft outline obtained by using lenses with incomplete optical correction.

The third effect is that produced by lenses which soften the image not throughout its field, but only in certain parts. There are varieties of lenses which soften the edges of the image, and others which soften its centre.

By using soft-focus lenses the camera-man can convey the dimensions of

FIG. 28.—Perspective optical distortion of the object.

the object, while partially or wholly obscuring its linear contours and details
He can also exclude certain details from the field of vision, transmitting them so
indistinctly that the linear contour and detail are not perceptible to the spectator.
In this case he has a number of auxiliary resources at his disposal, such as special
optical attachments to the lens, diffusers, gauzes, etc. By creatively exploiting
the various forms of optical transmission he can convey on the screen the specific
peculiarities of an actor's subjective sensations.

A weeping man, seeing his surroundings through his tears, a prisoner staring
at the monstrously extended, hypertrophied profile of the judge, the complex
hallucination of an invalid—a number of features affecting the psychology of
visual perception can be shown as the result of the intelligent exploitation of the
peculiarities of photographic optics. The camera-man must seek ways of directly
presenting an actor's sensations not by a theatrical demonstration of his reactions,
but by an appropriate optical transmission of the environment as perceived by the
actor in one form or another, and presented from his point of view.

The *depth of focus* of a lens is usually regarded as only a technical constant,
but it also plays a considerable part in the optical organisation of the visual image.
As the lens' focal length is increased the depth of the focus is decreased. As a
result the lens cannot longer simultaneously transmit with identical sharpness
objects situated at varying distances from the camera viewpoint. But what is
apparently a technical defect can be made to serve as an effective means of expres-

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ve construction of the visual image. While transmitting the main object of
he photograph, situated in the foreground, sharply and distinctly, we can com-
letely eliminate all the background of the shot, by taking it out of focus, so
oncentrating the spectator's attention on the main object. By using the long-
ocus lens we cause the object to dominate the shot, for all the perspective depth
f the image is reduced to a fluid flatness void of any definite outlines.

All the methods of optically neutralising parts of the image by focus are based
n the same principle. Here we shall mention two uses of focus as a representa-
onal resource.

Differential focus.—The main object, on which the spectator's attention has
o be concentrated, is photographed in perfect focus, while all the surroundings
re transmitted with a varying lack of definition. This effect is frequently observ-
ble in the photographing of close-ups. Here all the spectator's attention is to
e concentrated on the play of the actor's face, and sharp transmission of the
ackground would only distract his attention. The degree to which the depth of
he shot is optically softened depends in every case upon the given scenic situation.

Changing focus.—The shot depicts two actors talking to each other. First
ne of them is brought into focus, then the other. Thus in the course of a single
hot the spectator's attention is transferred from one object to the other.

We must once more emphasise that which method is expedient in any par-
cular cases can only be decided by analysing the entire *mise en scène* and the
cenic situation connected with it. The question calls for much thought and
onsideration, otherwise the result may prove to be very different from, and
ossibly quite the reverse of what was required.

Imagine a situation in which an actor is placed in the foreground of a shot,
nd playing the chief part, while in the depth of the picture considerable move-
ent, a fight for instance, is going on. By exploiting differential focus we achieve
 sharp transmission of the actor, concentrating the spectator's attention on him
y softening the depth of the shot. But the effect of this may be quite the con-
erse of what we wanted. At first the spectator's attention will be concentrated
n the actor, since his sharply transmitted image will at once strike the eye. But
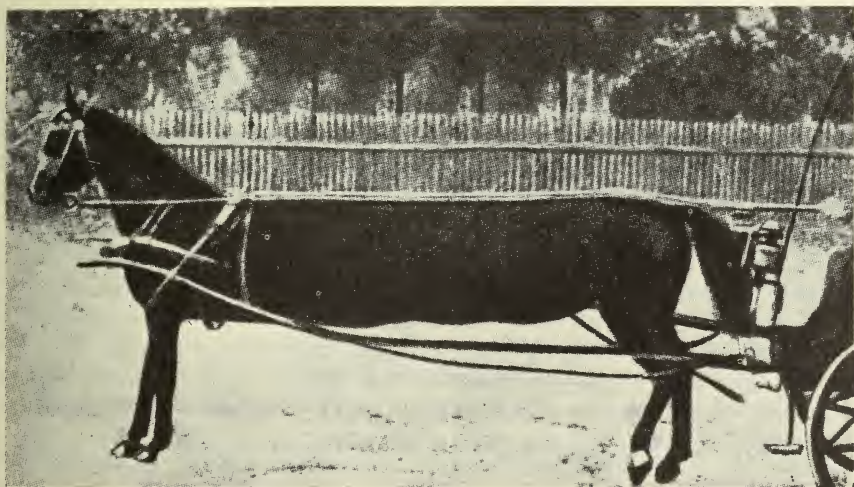hen the attention will inevitably wander to the background, where considerable

Fig. 29.—Plane optical distortion of the object.

FIG. 30.—Repetition of detail of a face with aid of special multiplying lens.

movement, transmitted in a softened and therefore not clearly distinguishable form, is going on. As he cannot clearly recognise the details, the spectator will concentrate his attention on endeavouring to make out what is happening, and so it will not be directed to the point desired.

Finally, we must note one other method of creatively exploiting the focussing process. By gradually bringing the object into and shifting it out of focus, we achieve the impression of a successive materialisation and dematerialisation of the visual image.

There is an example of this method in the shots showing the separator in " General Line ", where it is exploited to express a specific scenario and directorial requirement. The gradual optical materialisation of the separator in these shots is here deliberately linked up with the inculcation of the idea of collectivisation in a simple form into the peasants' minds.

Thus, when deciding upon the nature of the optical transmission of the object, the camera-man is once more dependent upon the *motivation*, which he derives from an analysis of the production scenario of the film both as a whole and in its various editing sections. Sharp linear optical transmission, softened presentation of the image, the various methods of optical distortion : all demand subject and stylistic motivation, without which optics lose their significance as a specific means of expression, and become merely a matter of technique.

(f) THE LIGHTING AND TONE OF THE IMAGE

The distribution and inter-relationships of the tonal transitions from black to white are a technical means of constructing the cinematic image. The light

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nd shade mould the dimensions, transmit the plane, provide spatial depth, and, strictly speaking, even the linear and graphic details.

The screen image is essentially a light reflection of the original reality, modified to the extent conditioned by the influence of the laws of optics and photographic transmission. Light is the main resource of photographic construction, and without its primary organisational activity a photographic image is impossible.

Two kinds of lighting, producing different visual effects, are used in the cinema.

If *direct, concentrated lighting* is used, the photographic image is built up of a harshly contrasting distribution of light and shade. The object's outline, and the detail of its contours, are sharply revealed. Heavy shadows and clearly illuminated white surfaces predominate.

With *diffused lighting* we get a soft, plastic distribution of light and shade. Half-shadows predominate in the image, while sharp, deep and clear lights are almost entirely absent.

The *tonal correlationships* of the photographic image are in direct dependence upon the lighting of the object.

In contradistinction from colour representation, painting for instance, in which the colours of an object play an essential role in the general construction of the image, ordinary photography has at its disposal only one greyish colour, which in transition from black to white forms *tonal scales* of varying gradations. The more numerous the intervening stages from black to white revealed by the image, the broader becomes its tonal scale, and the greater the gradation of semi-tones and shades of grey in the photograph.

In photographic transmission with the aid of diffused lighting we get a broad tonal scale, and as the result semi-tones become the predominant element. On the other hand, harsh, contrasted lighting narrows the tonal scale, and when this is used extreme, intense tones predominate, and the image is built up of sharp contrasts.

We have already remarked that tonal correlationships play a decisive part in constructing aerial perspectives. A broad tonal scale distinctly transmits the finest gradations of aerial tones, and so we can convey the impression of tonal depth. In this regard the question of choosing a suitable type of negative is of great importance. Negative film with insignificant contrast values and great breadth of scale is the best for transmitting aerial perspectives.

Light and tone are two inseparably associated means of representation, the first being the cause, and the second the effect. The breadth of the tonal scale varies *in dependence upon whether concentrated or diffused lighting is used*, while the *direction of the light rays* governs the variation in *distribution of light and shade* over the surface of the object, and therefore the *grouping* of the tonal spots.

The process of constructing light and tonal composition can be shortly summarised under three heads.

1. *Exposition of the form of the object.*—As the photographic image consists of a fixed projection of an object on a plane surface, the illusion of three dimensions is achieved by varying the degree of lighting of the surface of the object. Taking a three-dimensional object as a system of reflecting surfaces, by changing the intensivity and direction of the lighting we can reveal one or another side of the object, intensifying and modifying the tone and the correspondingly distributed light and shade. Thus we get the conception of lighting contrast, which in photography is practically the same as tonal contrast. Owing to the tonal contrasts the plane surface of the image takes on the quality of relief, which creates

the illusion of three dimensions. But as light and the tonal relations it sets u
are essentially the sole means of transmitting both objects and space, both a
and colour, we can use lighting to express predominantly one or the other
the above specified ' formal categories '. For instance, we can express the thre
dimensional volume of objects, which will then have distinct contours, line
definition. Or with the same lighting we can treat dimension ' pictorially ',
which case it will no longer be distinctly plastic, but vague, fluid, and as thoug
veiled in a fine mist. It is essential to give full attention to these two contrapos
treatments of the image : linear-dimensional, and light-plastic, which is pr
dominantly spatial. In the first treatment space will be perceived as depth, i.
in its volume and linear aspect. In the second treatment space will be perceiv
as light and air, in other words as an aerial perspective.

2. *Exposition of the texture of the object.*—The character of the lighting pla
a decisive part not only in constructing the dimensions of the object and of spa
in the photograph, but also in revealing the texture of the material. Here bo
the intensivity of the lighting and its direction are of importance. An unequa
rough surface reveals its texture when lit by an intensive, direct light. Polishe
metal, on the other hand, needs soft, diffused lighting. In accordance with tl
nature of the material and the task we are set, with the aid of lighting we ca
either accentuate the texture, sharply revealing it, or we can modify its characte
Here the action of light is analogous to the action of lenses, and we obtain tl
effect we need by correspondingly co-ordinating the choice of lens with the di
tribution of the light.

3. *Fixing the general tone of the image.*—A general change in the intensivi
of the lighting involves a change in the general tone of the image. The tone
the image is in direct dependence upon the intensity of the lighting. If w
increase its intensivity we shift the tone in the direction of the lighter gradatio
of the tonal scale. By differentiating the lighting of the various surfaces of tl
object, we obtain a differential distribution of the tonal spots.[1]

The foregoing are the chief features characterising the importance of ligl
and tonal composition. We must consider certain problems connected with tl
technique of distributing light and shade and of grouping the tonal areas.

When a ray of light falls on any object it forms light and shade areas on tl
surface of that object. If we carefully examine the image we can distinguis
bright lights, shadows, semi-shadows, and gleams. Deep shadows are also forme
around the object, and these give us a silhouetted contour of that object.
on the side opposite to the source of light the object is bounded by light surface
the deep shadows produce *reflections* formed by the action of reflected ligh
Thus *light, semi-shadow, shadow, gleam and reflection* are the main elements in tl
optical representation of the object photographed.

We shall consider eight methods of lighting which schematically show tl
distribution of light and shade in dependence upon the number of sources of tl
lighting and the direction of the light rays.

First method. Back lighting.—The source of light is placed diametricall
opposite the camera, and lights up the object from behind. In this case we ge
the effect of back lighting. Fig. 31 shows the distribution of light and shadov

[1] The length of exposure of the negative also plays a great part in achieving a give
tone in the image. By under-exposing we achieve a general reduction in tone and
compression of the tonal scale. The image darkens and becomes ' contrasty ' in natur
By over-exposing the general tone is heightened, and the image loses the quality of contrast
—N.

ith such lighting. The linear outline of the object is sharply defined, but the ace is represented as a dark tonal plane. This method of lighting is used to ⸱veal the contoural outline of the object, silhouetting it.

Second method. Front lighting.—The light rays are directed from the position ⸱ which the camera is set up. The face is presented as a clearly lighted plane. ʾhe contoural outline is established by a dark tonal line (Fig. 32).

Third method. Side lighting from the left.—The left side of the face is brightly ⸱t, in contrast with the dark tonal surface of the right side (Fig. 33).

Fourth method. Side lighting from the right.—This gives the converse of the ⸱ird method (Fig. 34).

Fifth method. Side lighting from both sides.—Both the side surfaces are ⸱rightly lit. The dark tonal area passes along the line of division of the side ⸱rfaces of the face (Fig. 35).

Sixth method. Top lighting.—This gives deep shadows in the eye-sockets, ⸱nder the nose, on the neck and part of the chin (Fig. 36).

Seventh method. Bottom lighting.—This gives the converse effect of the ⸱xth method (Fig. 37).

Eighth method. Mixed lighting.—This clearly reveals the facial relief, which ⸱ obtained by equal distribution of the light (Fig. 38).

The foregoing give only a general idea of the visual effects to be obtained ⸱y regulating the *direction and intensivity* of the lighting.

Having thus become acquainted with the elementary schemes of light and ⸱ade distribution in one or another direction, we can explain the general method ⸱ working out the lighting scheme of the shot.

First stage.—We determine the general tone of the image, achieving this by ⸱qual saturation of the entire field of vision by diffused lighting from above.

Second stage.—We pick out the contoural outlines of the objects by setting ⸱ back lighting, consisting of concentrated light.

Third stage.—We work up the relief of the object by mixing sources of light ⸱om the side, above and below.

Fourth stage.—We resort to special lighting effects by which the tonal spots, ⸱flections and gleams are distributed.

Fifth stage.—We set up front lighting, so softening the general lighting ⸱ntrast.

When the task calls for it we need exploit only certain forms of lighting, ⸱cluding one or another source of light from the lighting scheme. It is impos- ⸱ble to give fixed formulæ for lighting, for the variety of lighting combinations ⸱nnot be reduced to the narrow limits of a previously stated ' law ' of lighting. ⸱ all cases the decisive factor in carrying out a lighting scheme is the camera- ⸱an's own creative method, or his relation to the director's aims and creative ⸱ethod.

The determination of the light and tonal composition is one of the most ⸱mplicated tasks in the camera-man's art, since light creatively exploited becomes ⸱ powerful means of exerting emotional influence.

By changing the general tone of the image we can direct the spectator's ⸱rception to one or another sensation. Intensive lighting, forming brilliant ⸱nes, and engendering bright, dancing gleams, conduces to an optimistic per- ⸱ption of the object. A change in the direction of dark tones correspondingly ⸱wers the spirit of the spectator's perception. A gleam of light or a clear tonal ⸱ot concentrates his attention on a definite object, and thus we get the *light-* ⸱cent, which plays a significatory function in compositional construction.

FIG. 31.

FIG. 31.—First method. Back lighting. The source of light is placed diametrically opposite the camera, and lights up the object from behind. In this case we get the effect of back lighting. Fig. 31 shows the distribution of light and shadow with such lighting. The linear outline of the object is sharply defined, but the face is represented as a dark tonal plane. This method of lighting is used to reveal the contoural outline of the object, silhouetting it.
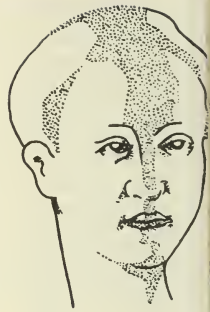
FIG. 32.—Second method. Front lighting. The light rays are directed from the position in which the camera is set up. The face is presented as a clearly lighted plane. The contoural outline is established by a dark tonal line.

FIG. 33.—Third method. Side lighting from the left. The left side of the face is brightly lit, in contrast with the dark tonal surface of the right side.

FIG. 34.—Fourth method. Side lighting from the right. This gives the converse of the third method.

FIG. 35.—Fifth method. Side lighting from both sides. Both the side surfaces are brightly lit. The dark tonal area passes along the line of division of the side surfaces of the face.

FIG. 36.—Sixth method. Top lighting. This gives deep shadows in the eye-sockets, under the nose, on the neck and part of the chin.

FIG. 37.—Seventh method. Bottom lighting. This gives the converse effect of the sixth method.

FIG. 38.—Eighth method. Mixed lighting. This clearly reveals the facial relief, which is obtained by equal distribution of the light.

FIG. 32.

FIG. 33.

FIG. 34.

FIG. 35.

FIG. 36.

FIG. 37.

FIG. 38.

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Fig. 39 is a photograph in which the perspective construction has been achieved by a correlation of tone. From the foreground, built up of black, saturated tones, we pass to the middle ground, carried out in grey tone, and then to the background, consisting of white tone. This gradual tonal transition creates the illusion of depth. Almost all photographic constructions of aerial perspective are based on the principle of successive transition from one shade of tone to another. Here the light filter comes to our aid, for by its use we can change the tonal transmission of the film to a greater or less degree. The technical limits to the possible changes in tone of the object are determined by the co-ordination of the properties of the light filter, gauged in relation to the light transmission of the negative, with the contrast values of the negative and the length of exposure.

(g) THE TIME FACTOR

The time factor has to be considered in relation to the following aspects of the shooting process.

First : The general length of time taken to show the given shot or cutting unit. There is inviolable dependence between the cutting time and the time the spectator takes to apprehend the composition of the given shot.

Second : The speed at which the dynamic process occurs in the shot. This speed can be varied by accelerating or reducing the *speed at which the camera operates while the shot is taken.* There are three factors which affect the relations between the speed of shooting and the effect of the movement on the screen.

Complete correspondence between the shooting speed and the projection

Fig. 39.—Perspective construction, effected with aid of tone contrast.

speed gives the closest approximation to a transmission of the true speed movement of the object.

Acceleration of the shooting speed produces a braking effect during pr jection, and this can be carried to the extent of effecting an analytical disintegr tion of the actual movement into its various phases.

Reduction of the shooting speed produces the effect of accelerating tl movement on the screen.

In the first instance the time taken to show the dynamic process on tl screen exactly corresponds with the time taken by the actual process during i shooting.

In the second instance the projection time exceeds that taken during tl shooting of the original dynamic process.

In the third instance the result is the converse of the second.

The time factor is of enormous importance as a means of expressive organ sation of the shot temporally.

We can either slow up the movement or can accelerate it to the point of tl grotesque, can approximate it to an analytical disintegration into its componei phases ; by such means in any case we can control the length of the dynam process on the screen one way or another.

Just as we can isolate details for the spectator's attentive consideration l photographing in close-ups, so, in the edited projection of a dynamic process w can give a ' close-up ' of an individual phase of a movement by giving it long projection, transforming it into an expressive accent of the editing phrase. Tl accentuation of an accelerated or retarded turning movement, the accentuatio of a slow fall, the accentuation of temporally protracting a piece of acting : the are all means of expression which we can apply with other means, already mer tioned, to produce a given emotional effect when constructing the image.

Our motivation for deciding upon one or another method of temporall organising the dynamic process may be found either in the specific qualities the object photographed (unusually fast or slow actual movement which calls fc alteration) or in the purely scenario requirements determining a certain significa tory and emotional effect.

5. CONSTRUCTION OF THE SHOT COMPOSITIONAL SCHEME

So far we have been considering the elements of composition analytically, abstractly reducing them to the statics of single examples. Now we must tackle the task of showing the process by which we find and technically interpret the compositional scheme of the shot *in practice*, by using the example of a complete scenario fragment. For our purpose we can select any subject construction in any directorial treatment, since at the moment we are concerned not with the correctness of the director's choice of any particular treatment, but with demonstrating the *process itself* : the successive working out of the scenario fragment and its reduction to the compositional scheme of each separate shot, considered in its editing context. We must strongly emphasise that the treatment of a scenario fragment which we outline below is only one of the possible ways of achieving the task set.[1] The fragment is to be regarded only as instructional material, which we use to show the elements of the camera-man's participation in the creative process of working out a scenario. For this reason we can to some extent ignore the question of the correctness of the directorial method, so simplifying our exposition of the actual process of the work.

To provide ourselves with a literary scenario we use the following fragment from *Pushkin's* poem : " The Brazen Horseman ".

> Around the base of the idol
> The unhappy maniac passed,
> And threw his wild and savage glance
> At the features of the lord of half the world.
> His chest contracted. His brow
> To the cold railings he set.
> His eyes were enmisted,
> A fire sped through his heart,
> His blood boiled. Gloomy he stood
> Before the haughty idol,
> And, grating his teeth, clenching his fists,
> As though moved by an evil power,
> " Good, thou worker of miracles ! "
> He whispered, angrily trembling,
> " Enough of thee ! " And suddenly headlong
> He turned to flee. It seemed to him
> That the terrible lord,
> Momently burning with anger,
> Slowly turned his face. . . .
> And through the empty square
> He ran, hearing behind him
> The turbulent roll of thunder :

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[1] This treatment (the division into shots-scenes and the draping of the *mise en scène*) is executed by the author in accordance with the methods taught by S. M. Eisenstein in the directors' faculty of G.I.K. The compositional schemes and drawings associated with were executed after the author's sketches and under his direction by the directors' faculty students, Kadochnikov and Velichko.—*Ed.*

A heavy, ringing gallop
Over the quivering roadway.
And, haloed by the pallid moon,
With one arm stretched on high,
After him speeds the Brazen Horseman,
On a ringingly galloping horse.
And all that night the unhappy maniac,
No matter where he turned his steps,
Heard behind him the Brazen Horseman
With heavy clatter galloping.

Our first task is to elucidate the conception, *the theme* of the scenario
fragment we have selected.

The theme of the poem " The Brazen Horseman " can be defined as essentially one of individual revolt, which in its isolated attempt to rise against the autocracy is foredoomed to failure.   The figure of Peter the Great, the " idol on a brazen horse ", stylistically treated in a pose of classic immobility, is revealed as a symbol of the " State power " of the period of Nicholas the First,[1] which ruthlessly smashed any attempt on the part of personality and individuality to oppose the ' legalised order ' of the feudal-police monarchy.

In our attempts to reach a clear understanding of one of the two opposing forces of the poem—the ' idol ',—we shall find a poem by *Adam Mitskievitch*, " The Road to Russia ", of great interest for its characterisation of Peter the Great.

In this poem Mitskievitch speaks of Peter's passion for conquest, of the " Brazen, knout-autocratic Tsar," whose " horse reared refractorily, seeking the frontiers of distant lands ".   Mitskievitch provides us with a very clear pictorial comparison which is of great help in elucidating the principle on which we should base our representational treatment of the " idol on a brazen horse ".

The tsar shook loose the reins, the horse flew off,
Champing at the bit. . . .
Now it fell. . . .
But still the cliff was inviolable.
And the Brazen Horseman, furious and scowling,
Still set his horse jumping at random.
Thus, *by winter cold imprisoned*,
The cataract hangs over the abyss.[2]
But in these dead expanses
Only the Western wind breathes,
The sun of freedom shines on all,
And the cataract of tyranny crashes down.[3]

Thus the essentially dynamic figure of the " Brazen Horseman " is presented in monumental immobility, in static violence, like a " cataract hanging over an abyss ".   The monument of Peter is an embodiment of the ruthless, oppressive tyranny of feudalism, which has already completed its historical task, and now acts only as a stagnant and frozen force.

The individual force opposing him, the representative of a new, though still indeterminate element, is the maniac Eugene.   His picture is unfolded in the dynamics of his behaviour, on which all the development of the subject is concentrated.

[1] The period both of Pushkin and his character Eugene.—*N.*
[2] Here and in the following quotations the italics are the present author's.—*N.*
[3] A. Mitskievitch, " The Road to Russia ", *Monument of Peter the Great.—N.*

From the ironic " Good, thou worker of miracles ! " Eugene rises to the direct threat " Enough of thee ! " And this threat, shattering against the dead statics of the monument, returns like a boomerang to strike Eugene himself, evoking the hallucination that he is pursued, and so driving him insane.

Thus, the theme itself necessitates different treatment for the two protagonists. The monument of Peter, and in particular the statue itself, in conjunction with the Empire details of the surroundings, postulates monumentally static treatment. The image of Eugene, as the chief actor, is treated in unbroken dynamic form, with a dynamic line continually intensifying from the moment of the threat to the final destruction of the maniac pursued by the ' Brazen Horseman '. The narrative line of this scenario fragment develops through the clash and conflict of these two tendencies : static and dynamic.

We turn to a detailed consideration of the actors and the scene of the action, and to the elucidation of a number of representational indications provided by the text of the poem itself.

Eugene's character.—In Pushkin we find the following clues to an understanding of Eugene :

> But my poor, poor Eugene. . . .
> Alas ! His disordered mind
> Against those terrible shocks
> Could not withstand.

And, farther on :

> He soon to the world
> Grew alien. All the day

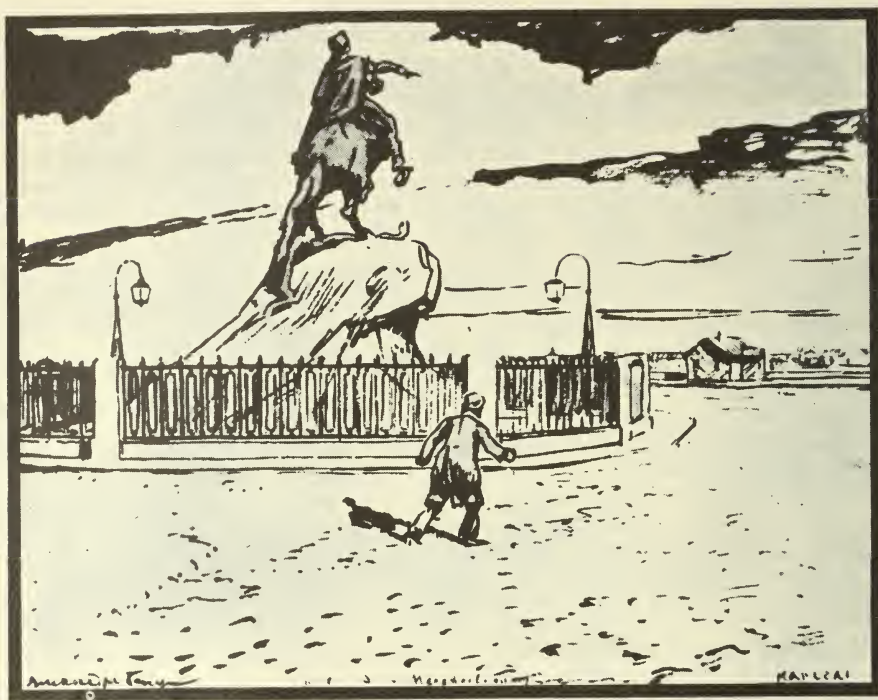Fig. 40.—Illustration by A. Benois to " The Brazen Horseman ".

FIG. 41.—Illustration by A. Benois to "The Brazen Horseman".

> He wandered on foot,
> And slept on the quay.
>   He lived
> On food passed through windows.
> His dilapidated clothing
> Tore and rotted on him.

From these passages we can make the following obvious deductions. Eugene is in a state of temporary aberration. He is inclined towards unstable activity he reacts neurasthenically to every outward provocation. He is pursued by the memory of his past experience. Pushkin describes his appearance in the following words :

> And so his unhappy years
> He dragged away, nor beast nor man,
> Nor this nor that, nor inhabitant of the
> World, nor dead spectre. . . .

He is dressed in torn, rotting clothing (" His dilapidated clothing tore and rotted on him "). He wears dirty worn-out bast shoes (" all day he wandered on foot "). His face is pale and haggard (" slept on the quay," " lived on food passed through windows "). He is wearing a shabby cap (" He removed his shabby cap," we read elsewhere in the poem). These are all the clues the poem gives us concerning Eugene's dress and appearance.

The scene of action :
Eugene arrives at the Senate Square in Petersburg.

> He found himself beneath the columns
> Of a large house. Beside the steps,
> With one paw raised as though alive,
> Stood guardian lions,
> And opposite, towering in the darkness,
> Above a rock railed all around,
> An idol with extended arm
> Was riding a brazen horse.

These lines give us some description of the scene of the action. The spot whence Eugene turns his steps towards the monument is the edifice of the Senate, the main steps with columns and guardian lions.

Farther on Pushkin mentions the time of the year and conditions in which the action occurs.

> The days of summer
> Were declining into autumn. There breathed
> A rainy wind.
> . . . It was dark ;
> The rain sprinkled drops, the wind howled drearily.

So Eugene arrived at the square on a dark autumn night. A wind was blowing, a fine rain was falling. The cobbled roadway and the iron railings around the monument must have been wet.

> Eugene shuddered. His thoughts
> Strangely clarified within him. He recognised
> The place where the flood had rolled,
> Where the rapacious waves had danced,
> Angrily tossing around him.

FIG. 42.—Illustration by A. Benois to " The Brazen Horseman ".

FIG. 43.—Illustration by A. Benois to " The Brazen Horseman ".

There had recently been a flood in the Senate Square. We may justifiab assume that the road would be torn up in places by the action of the waves. Ar the lower part of the railings might be heaped with sand. These details a also essential to the further development.

Finally, Pushkin gives us some highly important clues to the lighting of th square. He says :

> And opposite, towering in the darkness,
> Above a rock railed all around,
> An idol with extended arm
> Was riding a brazen horse.

He goes on to say that the brazen horseman is ' terrible in the surroundir mist '. But at the end of the fragment come the lines :

> And, haloed by the pallid moon,
> With one arm stretched on high,
> After him speeds the Brazen Horseman,
> On a ringingly galloping horse.

From the foregoing we may assume that at the beginning of the action, whe Eugene first appears, the moon is hidden by clouds, and the figures on the squar emerge as silhouetted outlines. Then the moon emerges from the clouds and th lighting changes. We may even assume that the moon is hidden behind cloud several times during the action, and that, driven by the wind, the clouds rac swiftly across it. This feature is a highly important factor in the constructio of the later shots, and we must emphasise it.

Now we will briefly expound the narrative scheme of the scenario fragment.

One dark autumn night Eugene finds himself in the Senate Square. He recognises the scene of the recent flood, and, in the grip of memories of the event, he turns his steps towards the monument of Peter the First. To Eugene Peter is the personification of the ' evil element ' oppressing the burdened and enslaved country. In an outburst of hatred he challenges the monument. His sick imagination suffers an hallucination. He imagines that the ' Brazen Horseman ' comes down from its pedestal and pursues him. He flees. Pushkin gives the dénouement as an unbroken pursuit of Eugene by the ' Brazen Horseman '. He is overtaken ; in other words, he is vanquished by the invincible might of Russian absolutism. The ' Brazen Horseman ' triumphs. Eugene goes mad, and perishes.

Such is the narrative scheme of the fragment. We must now decide what are to be the bases of the directorial treatment of the subject, for we cannot achieve any representational treatment of the film without a previous, definite directorial treatment.

If we were to lay out the subject content in approximate representational form we could confine ourselves to six episodes which keep the spectator informed of the action.

First : Eugene stands at the steps of the Senate.
Second : He walks to the monument.
Third : He challenges Peter.
Fourth : Peter turns in his direction, and he turns to flee.
Fifth : He runs across the square, the ' Brazen Horseman ' behind him.
Sixth : The ' Brazen Horseman ' overtakes him.

These six episodes in representational exposition can be depicted in the form provided by A. Benois in his sketches illustrating the text of " The Brazen Horseman ". Figs. 40–45 give, in their order, the six sketches which have direct reference to our fragment.

But a representational scheme which is completely adequate and highly artistic in pictorial illustration is poor and inexpressive for the cinema. If we

FIG. 44.—Illustration by A. Benois to " The Brazen Horseman ".

were to screen six shots with such a simplified scheme we should have a primiti
informational exposition of very little emotional effect, and by no means revealir
all the true expressiveness of the subject. Obviously we should have a mechani
ally illustrative, simple staging of the subject, which would not capture all th
pictorial wealth of Pushkin's poem.

With the aid of the specific resources of cinematic expression we shall try
find a compositional unity which will give us at least a distant approximation
the content and the stylistic construction of our literary fragment.

The directorial treatment must note the following narrative episodes callir
for expression.

1. Eugene finds himself on the Senate Square. Here we must give, fir
a representational idea of the scene of the action, and the specific details of th
square, and then an idea of Eugene as the chief actor.

2. Eugene makes his way to the monument. When a little way off he rais
his eyes to it, and, suddenly caught by a fixed idea, he seeks a meeting ' face
face ' with Peter.

3. In a feverish agitation, shudderingly he raises his eyes to Peter.

4. The meeting ' face to face '. Peter's eyes—Eugene's eyes.

5. Eugene utters his challenge to Peter.

6. The ' Brazen Horseman ' reacts to the challenge. Peter's eyes light u
with sullen fire. The horse rears on its hind-legs.

7. Eugene turns to flee. The rider on the granite rock turns after him

8. The narrative dénouement. Peter pursues and overtakes Eugene.

The directorial treatment can handle the first three episodes in annunciativ
form. This includes all the shots dealing with Eugene's arrival at the squar
and walk towards the monument. The fourth and fifth episodes deal with th
scene of the clash between Eugene and Peter. Eugene challenges Peter, and th
challenge recoils on Eugene himself. The sixth episode is the most complex t
treat in our cinematographic medium. The rearing of the ' Brazen Horseman
and his turn after Eugene is the culminating point of the entire construction. Th
seventh and eighth episodes give the narrative dénouement, leading up to Eugen
being pursued and overtaken by the ' Brazen Horseman '.

Now we are confronted with a decidedly difficult task. The literary fragmen
we have chosen is an exposition both of real details, and also and especially c
the hallucination which Eugene suffers because of his sick imagination. Thu
we have to utilise the cinema's representational resources to disclose Eugene'
subjective experiences, and at the same time, in the dénouement, we have to shov
the unreality of the final incident. If we were completely to ignore the logica
motivation in the development of the narrative we would treat it mystically, an
that would be ideologically incorrect treatment of the fragment. Meantime, th
text of the poem itself supplies several hints which enable us logically to elucidat
the conditions in which Eugene's hallucination arose. We recall these hints i
their definite connection with our task.

Eugene walks into the square at night. The moon is hidden behind clouds
An autumn wind is blowing, and a drizzling rain is falling. Eugene utters hi
challenge. The moon emerges from behind a cloud and lights up Peter's face
In Eugene's imagination the suddenly illumined features ' momently burn witl
anger '. This serves as the impulse to the development of the hallucination
Eugene is afraid of Peter's vengeance : he awaits an answering blow. He onl
imagines that the monument turns round. He has the inpression that the horse
man is turning to follow him.

FIG. 45.—Illustration by A. Benois to " The Brazen Horseman "

He runs to the spot where he had halted first, whence he gets a frontal view of the monument. The moon completely emerges from cloud. The shadow of the ' Brazen Horseman ' falls across him, and this acts as a further impulse to the development of the hallucination. He is pursued not by the ' Brazen Horseman ' itself, but by its shadow. He runs across the square, and falls. The moon passes behind clouds, and a dense shadow covers the prostrate Eugene. The final shot shows the monument standing immovably on its granite rock. And thus we provide a complete explanation of the unreality of the incidents we have been filming.

Thus we arrive at one of the possible forms of directorial treatment. Once

more we emphasise that it is only one of various ways of solving our task. W
make no claim to reproduce exactly the narrative scheme of the chosen fragmen
since our purpose is first and foremost to demonstrate the *process* of working ou
the directorial and camera-man's treatment of the task, and not the constructio
of a scenario ideologically and formally of equal value to the poem.

Now we come to the construction of the *mise en scène* of the action.

In order to simplify the exposition of the following material we can ignor
certain features in the actual layout of the monument on the Senate Square, an
in particular its situation in relation to the Senate building. We will assume tha
the ' Brazen Horseman ' faces the Senate steps, and not the river Neva, as i
really the case.

Fig. 46 gives the *mise en scène* of Eugene's wanderings over the Senate Squar
in sketch form. Fig. 47 gives the same *mise en scène* in plan form.

Eugene arrives in the square by the section of the *mise en scène* running fron
point A to point B. At point B he changes his direction, and walks right aroun
the monument along the first spiral. Then we have a brief transition to point E
He steps back a few paces and utters the first part of his challenge : the wor
" Good ! " After this first cue he runs back, and finishes the phrase with th
ironic : " thou worker of miracles ! " Then he runs forward and throws out th
challenge : " Enough of thee ! " Here we have a brief pause. Peter's hors
rears on to its hind-legs. The ' Brazen Horseman ' answers with his blow. I
a panic Eugene flees, and is crushed and destroyed by Peter's angry gesture. Th
flight begins from point F, and is accomplished along the second spiral of th
mise en scène through point G. At this spot Eugene falls on one knee. At th
same moment the monument completes its turn through the whole 360° of
circle, and returns to its starting-point. The moon emerges, a shadow falls acros
Eugene. He turns to run, and the shadow follows him along the dotted line
parallel to the line of Eugene's flight. At point H Eugene falls again, the
changes the direction of his flight. At point I the shadow overtakes and cover
him.

Such is the kinetic scheme of development of the subject. On the basis o
these actions as determined by the *mise en scène*, we can now proceed to the scenari
distribution into shots.

SHOT PLAN (SHOT SCRIPT) OF " THE BRAZEN HORSEMAN "

I. *Eugene arrives at the square, and passes around the monument along the*
first spiral

Script shots :

1. Detail of the Senate (armorial bearings).
2. The Senate steps. Eugene comes on.
3. Long-shot of the Senate entrance.
4. Mid-shot of Eugene coming on (face to the camera).
5. Close-up of Eugene.
6. Close-up of Eugene (from behind).
7. Mid-shot of Eugene in front of the Senate entrance (from behind).
7a. The camera (viewpoint) is lowered and the monument is seen in the
  background.
7b. Eugene's advance in the same set-up.
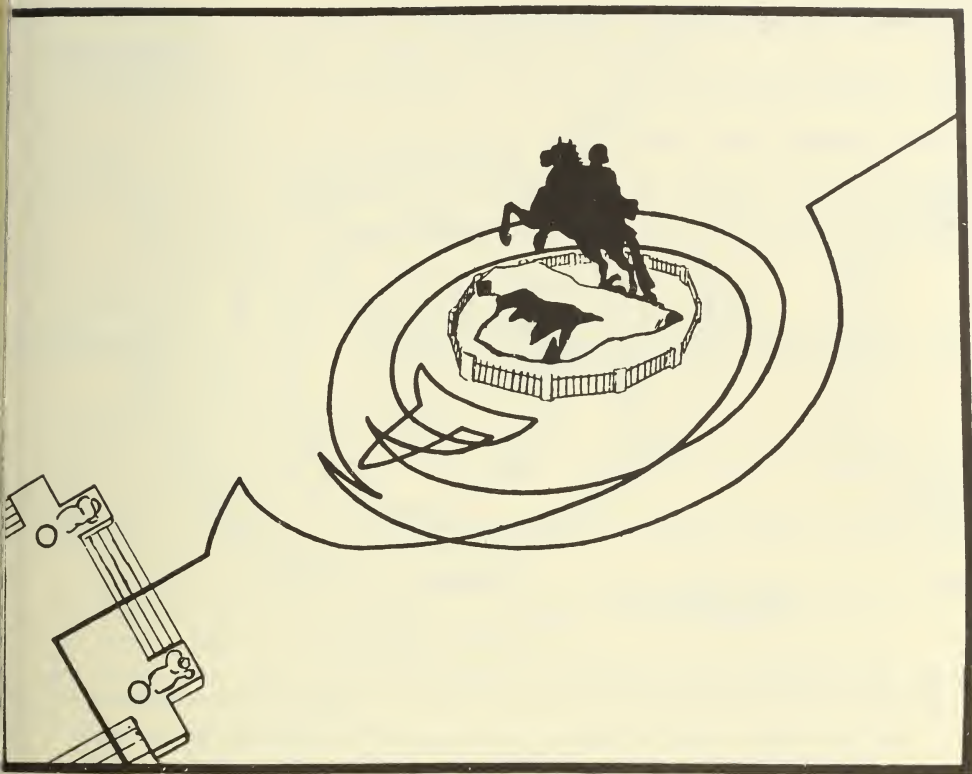7c. Mid-shot of Eugene's advance.

FIG. 46.—*Mise en scène* of Eugene's course around the monument.

These shots cover that part of the *mise en scène* dealing with Eugene's arrival in the square. Noting down the camera points corresponding to this distribution of shots, we get the scheme shown in Fig. 48. The line of movement covered by the above-specified shots is marked with a thick line. All the rest of the *mise en scène* is shown by a dotted line.

The distribution of the shooting points is shown by straight line segments, each marked with the appropriate number of the scenario shot. The length of each segment determines the breadth of the field of vision in the given shot (long-shot, mid-shot or close-up). The direction of the viewpoint is indicated by an arrow.

To continue the distribution of shots :

Script shots :

8. Eugene passes around the monument.
9. He emerges from behind the monument.
10. With face to the camera, close to the railings, he passes to the left.
11. From behind, in a mid-shot he passes to the middle of the railings.
12. Close-up of Eugene at the railings (from behind).
13. His face taken through the railings.
14. His face seen through the railings, very large scale.
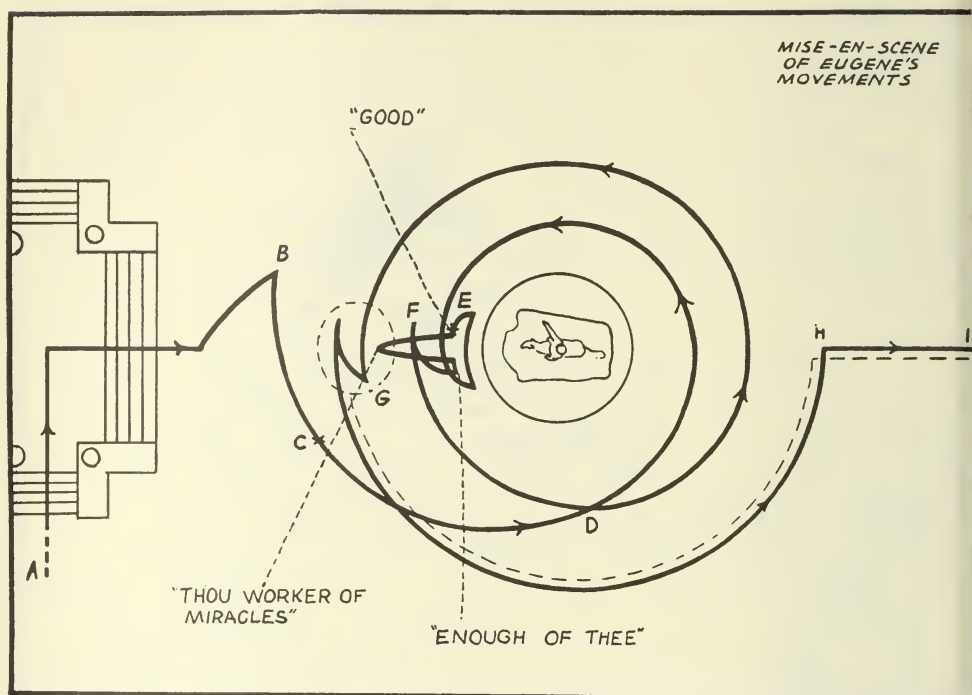15. A flowing pan-shot upward over the monument.

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FIG. 47.—*Mise en scène* of Eugene's course around the monument (in top plan).

Fig. 49 gives the shooting points covered by the above shots. These fifteen shots embrace all the *mise en scène* from Eugene's arrival in the square to his first circling of the monument.

II. Eugene's movements at the monument

Script shots :

16. Eugene's face, staring at the monument.
17. Peter's monumental, brazen face.
18. Peter's motionless eyes (in very large size).
19. The moon, the dark sky, and a motionless small cloud.
20. Eugene's shifting eyes (large size).
21. The moon, dark sky, and very slowly moving small cloud.
22. Peter's eyes, with the shadow of the cloud moving very slowly over the face.
23. A detail of the monument : the outstretched arm.
24. Detail of the monument : snake under the horse's hoofs.
25. Detail of monument : Peter's head and shoulders.
26. Close-up of Eugene facing the camera. Eugene says : " Good ! "
26a. The same set-up. Eugene steps backward, then runs back.
27. Peter in the foreground. In the top left corner of the shot, in the background from above, the tiny figure of Eugene is visible.
28. The same viewpoint, on somewhat larger scale.
29. Eugene in the foreground. In the right top corner of the shot the

monument is visible in the background. Eugene completes his phrase with the words : " thou worker of miracles ! "

30. The railings in the foreground. In the depth of the shot Eugene's legs are visible.

30a. In the same set-up Eugene runs to the railings and clutches them.

31. Pan of the monument in a single shot.

32. Eugene runs into close-up (out of focus) at the railings, his face towards the camera. When his face completely fills the screen he shouts : " Enough of thee ! "

33. Eugene's hand raised, with fist clenched.

34. The dark sky ; clouds draw swiftly across the moon.

35. Close-up of Peter. A shadow from the cloud falls across his face. His eyes light up.

36. Peter's head and shoulders.

37. Peter's face, his eyes burning darkly.

38. The railings right across the frame. Eugene's figure, running, seen beyond them.

39. Three shots (a, b, c) cutting pieces of the running Eugene, his leg, arm and face blurred in movement.

40. The horse rearing on its hind-legs, in three static shots. Progressive lowering of the viewpoint and change of the foreshortening.

41. Peter's head, in large size.

42. Long-shot, with tiny fleeing figure of Eugene in the depths of the shot below the railings.

III. Eugene's flight around the monument along the second spiral

Script shots :

43. Eugene runs across the frame from right to left and passes out of the shot.

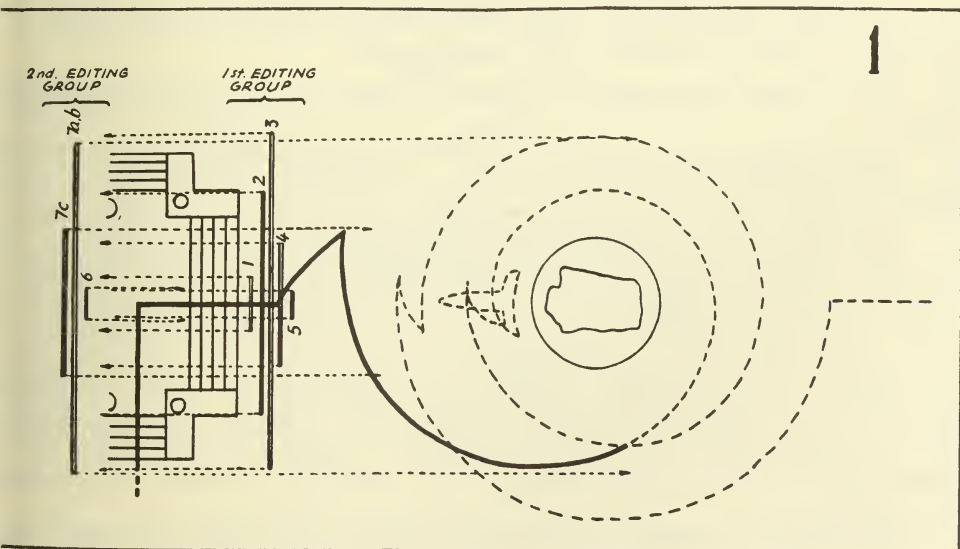44. The monument makes a slow turn of 75°.

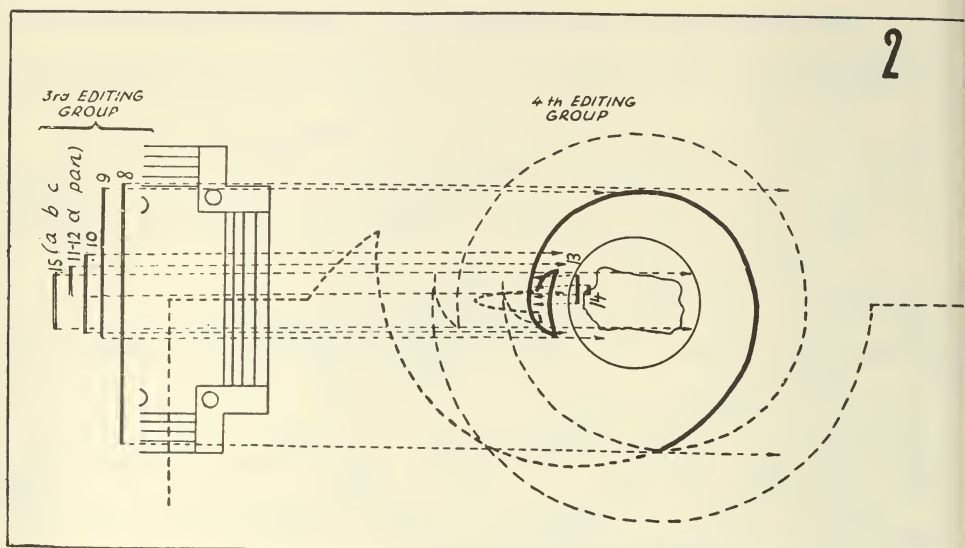FIG. 48.—1st section of *mise en scène* with distribution of set-ups.

FIG. 49.—2nd section of *mise en scène* with distribution of set-ups.

45. Eugene runs around the monument.
46. The monument accomplishes a further turn of 75°.
47. Eugene runs across the frame in the same direction. Mid-shot of his course.
48. Third turn of the monument by 75°.
49. From outside the frame Eugene runs in towards the camera.
50. In three successive cutting pieces the monument makes a swift turn (by 45° in each turn. Thus, together with the preceding turns, it has now accomplished a complete circle of 360°.)
51. Eugene runs into the frame from the left, and falls on one knee.
52. Mid-shot of Eugene, fallen on his knee.

Fig. 51 shows the section of the *mise en scène* to which the foregoing shots relate.

At this stage of our analysis we are not dealing with the technique of carrying out the tasks we have set ourselves. But, in elucidation of the scheme given above, we think it advisable to make certain explanations of a technical nature.

The turn of the monument on its axis can be achieved by either of two methods. Either we make a papier mâché model of the monument and turn it round in the course of shooting, or we carry the shooting point around the monument. In the first case the shooting process presents no special difficulties, but, on the other hand, if we use this method we are unable to show the monument as it turns in its immediate, realistic surroundings. In the second course we have to resort to special technical accessories [1] for carrying the camera around the monument, but we are saved the necessity of making a model, which by no means always conveys a perfect illusion of the actual object we wish to incorporate in the film.

We choose the method of carrying the camera around the monument. For

[1] With rails—a track shot. Without rails—a truck shot.—*Ed.*

his purpose, the scheme of our *mise en scène* (fourth plan, Fig. 51) must also how the course of the camera around the monument. The direction of its ourse is shown on the scheme by a line of short dashes. The first section of he course gives us shot 44. In this shot we have a turn of 75°. The second ection gives us shot 46, with a turn of 75°. The third gives shot 48, with a further urn of 75°. Shots 50, *a*, *b* and *c* give the completion of the turn in three cutting ieces, with a turn of 45° in each case.

The course of the camera around the monument is shown by a circle marked a short dashes. The circle in longer dashes gives Eugene's course. This latter s shot from fixed points. Shots 43, 45, 47, 49, and 51 show Eugene's course. ll the shooting points for these, together with the direction in which they are hot, are also indicated in Fig. 51.

IV. *The final section of the* mise en scène

Script shots :

53. Close-up of Eugene.
54. Three short cutting sections. A hoof of the rearing horse, the horse's muzzle, Peter's distorted face.
55. Eugene's eyes, looking askance.
56. Three short cutting sections. Peter's face, the horse's muzzle, the raised hoof. (Repetitive editing formula for ' crushing underfoot.')
57. Eugene covers his face with his fore-arm, as though expecting a blow.
58. Eugene in long-shot runs out of the frame. Behind him the shadow of the horseman rushes into the frame.
59. The shadow of the monument slowly extends across the roadway.
60. The pedestal without the statue.
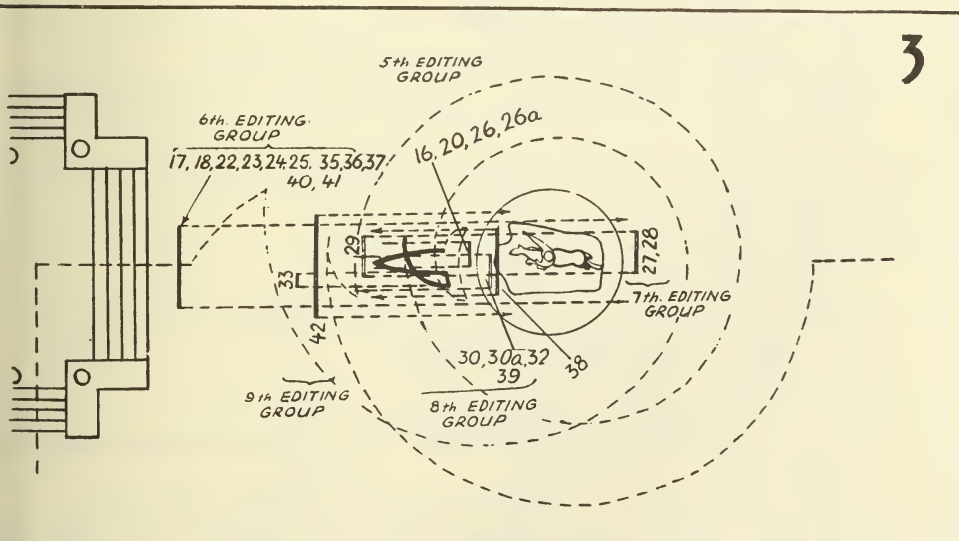61. The full moon emerges from a cloud.

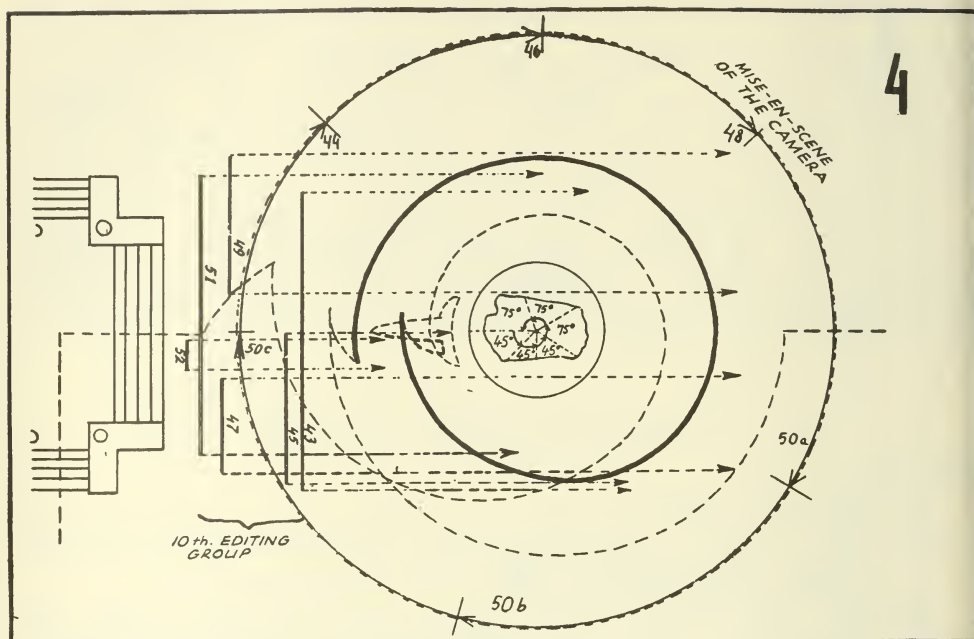FIG. 50.—3rd section of *mise en scène* with distribution of set-ups.

FIG. 51.—4th section of *mise en scène* with distribution of set-ups.

62. The shadow of the horseman extends across the roadway.
63. Eugene in long-shot runs across the frame. In the middle of the frame he momentarily falls. He runs out of the frame, and after him the shadow of the statue passes across the frame.
64. The pedestal without the statue.
65. A cloud passes across the moon.
66. The shadow of the statue passes across the roadway.
67. Three short cutting pieces : the raised hoof, the horse's muzzle, Peter with outstretched arm (editing formula for ' crushing underfoot ').
68. The corner of a house. Eugene runs into the frame and disappears round the corner.
69. Three very short cutting pieces, as 67.
70. The shadow passes across the roadway.
71. Eugene runs in facing the camera.
72. Three cutting pieces of formula ' crushing underfoot ', as 69 and 67.
73. The shadow passes across the frame.
74. Long-shot of Eugene's flight.
75. The shadow passes in the same set-up.
76. Eugene runs into the frame and falls. He is covered by the shadow of the ' Brazen Horseman '.
77. Three cutting pieces : raised hoof, horse's muzzle, Peter's face.
78. Close-up. Peter's head moves towards the camera and fills the frame.
79. A dark cloud covers the moon.

80. A silhouette of the 'Brazen Horseman' standing motionless on the granite rock slowly fades out.

The End

The conclusion of the *mise en scène* with the distribution of shooting points according to the various shots is shown in Fig. 52.

This completes our scheme of distribution into shots, and we turn to the next step : the construction of a compositional scheme for each shot to be taken.

In its simplest form the compositional scheme should fix two main features :

1. The scheme of linear composition, in other words, the compositional distribution of the objects in the shot.

2. The direction of the objects' movements in the shot.

So far as we are able to do so with the aid of a simple sketch, the representation of the image, the foreshortening of the object, and the object's movement should undoubtedly be shown in the compositional scheme. For the tonal treatment of the shot and the lighting motivation a separate sketch showing the treatment of this is required, and this can only deal with those main shots in each editing group which determine the tone and lighting treatment of the entire episode or scene.

The compositional schemes given below for the shot distribution of the 'Brazen Horseman' naturally only give an approximate idea of the actual com-
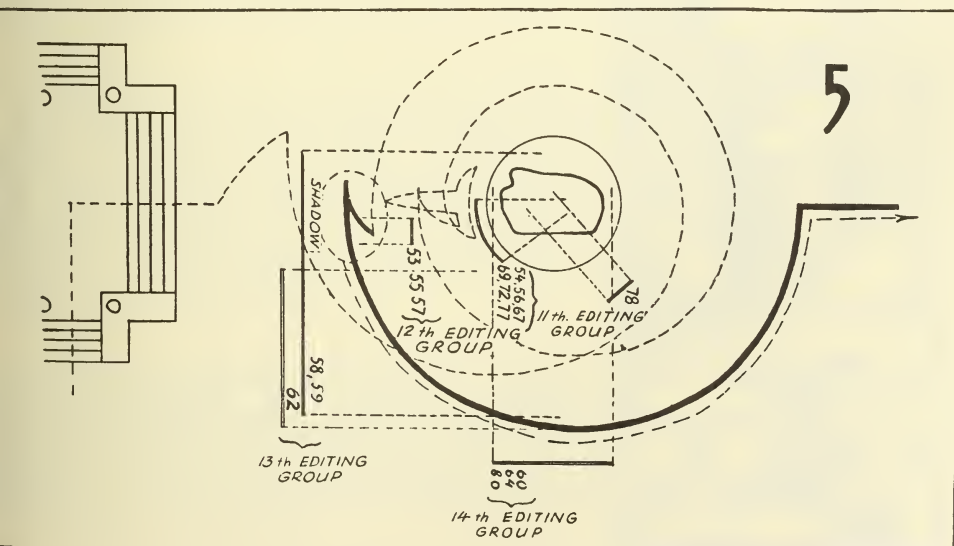
Fig. 52.—Last section of *mise en scène* with distribution of set-ups.

positional construction of each shot. As we are compelled to restrict ourselv
only to a scheme of linear composition, a number of important details will escap
the reader's notice. So we shall attempt to summarise the tonal and lightir
treatment of the given scenario at the end. We shall also separately consider tl
technical methods of obtaining certain shots.

In each of the pages that follow we give six compositional schemes for sho
in their editing sequence. Each scheme is provided with a commentary and tl
motivation for the principle of compositional construction employed.

1. The Senate armorial bearings (detail). A gradual materialization of the object out of obscurity. As the beginning of the scenario fragment is expounded in narrative form, throughout the first twelve shots we retain balanced frontal composition. The shots are mainly static; symmetry is the keynote of their construction. The armorial bearings are taken frontally, symmetrically, without foreshortening. In the opening shots the tone is sharply lowered. The objects emerge as soft, fluid, silhouetted outlines. The armorial bearings are lighted with side-glancing light.

2. The entrance to the Senate. Long-shot. Also frontal, symmetrical construction. The viewpoint raised somewhat. Side lighting, with deep distribution of shadow. The armorial bearings are picked out with more intensive lighting, as they serve as a connecting, transitional detail.

3. Eugene arrives. Viewpoint lowered. In the foreground symmetrically distributed lions. The figures of the lions are optically distorted by the use of a short-focus lens (focal length 28 mm.). By comparison with them Eugene's figure is lost in the depth of the shot. Eugene is lit mainly by back lighting, almost as a silhouette. The texture of the stone lions is emphasised by side lighting.

4. Mid-shot of Eugene (continuation of his advance). The compositional construction remains symmetrical. The depth of the frame is optically softened. Eugene is now lit more intensively. We can clearly distinguish his features and the details of his dress.

5. Close-up of Eugene (completion of his approach to the camera). The close-up is taken frontally. The depth of the frame is out of focus. In this shot we prepare to transfer the camera viewpoint to the opposite side. The face is lit by mixed lighting revealing the characteristic peculiarities of the actor's facial expression and action. His entire course right up to this close-up is given in unbroken movement. This piece is devoted primarily to exposition of the actor.

6. Close-up of Eugene (from behind). He moves away from the camera. In the depth of the frame are fluid outlines of dark clouds. Strong back lighting, picking out the contour of the head. As in the preceding shot, this close-up is taken with a long-focus lens. The object's advance and retreat along the optical axis of the lens are made at a slow pace.

7. Mid-shot of Eugene's advance (from behind
The flight of steps is shot symmetrically. The dep
of the frame is out of focus. The arches emerge as
dark silhouette against a grey background. The came
follows Eugene.

7a. Continuation of the camera's movement. Tl
camera viewpoint lowers by successive stages and tl
silhouette of the ' Brazen Horseman ' is outlined in tl
shot perspective.
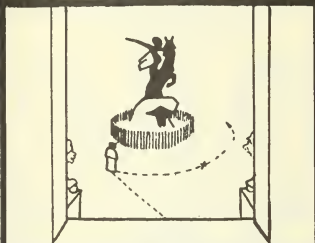
7b. Continuation of the camera's movement. Th
camera passes through the arch on to the porcl
Eugene in long-shot makes his way towards the monu
ment. The monument is composed in the centre of th
shot. In the compositional scheme the dotted line show
the direction of his approach to the monument. Shot 7
is cut off at the moment of his coming to a halt.
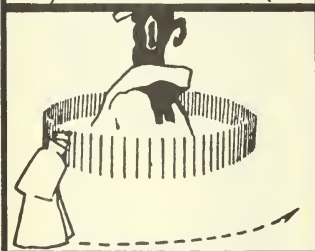
7c. Eugene continues his advance to mid-shot
This shot is cut into the middle of shot 7b, and is taken
from the same point, but with a long-focus lens (only
the degree of nearness of the object shot is changed).
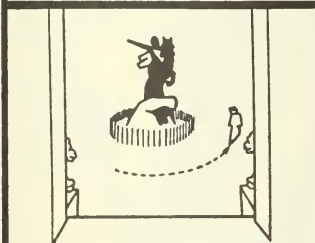
7d. Completion of Eugene's advance in long-shot
Here we cut in the completing section of shot 7b.
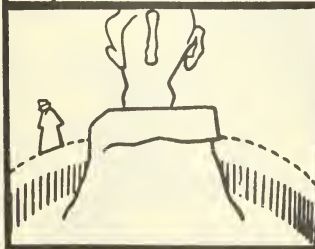
8. The curve of Eugene's course round the monu-
ment. The viewpoint is raised. Peter's figure is partly
cut off by the frame limit. The main attention is con-
centrated on Eugene's course. Peter as a new personage
in the action is introduced into the field of vision only
in the subsequent shots.

9. Eugene appears from behind the left side of the monument. A side viewpoint is chosen in relation to the monument. The horse and rider are cut off by the same limit. The viewpoint is raised sufficiently to reveal the line of the railings.
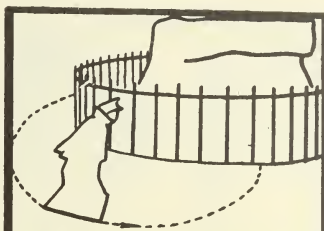
10. The viewpoint is transferred to the monument. Eugene is shot facing the camera through the railings. Here he takes the same course as in shot 9. The background is out of focus.
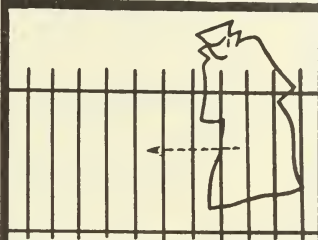
11. Mid-shot of Eugene's advance to the railings. He is shot from behind. The movement is in the contrary direction to that of shot 10 and in the same direction as that of shot 9. The background is out of focus.

12. Close-up of his advance to the railings (with back to the camera). He enters the frame from the left. This shot completes the movement carried on through shots 9, 10 and 11. The inclination of Eugene's figure is the same as that of shot 11.
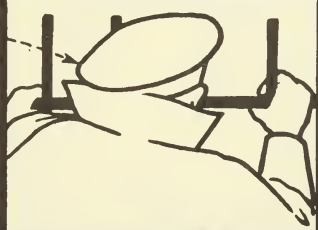
13. The same close-up, but facing the camera. He enters the frame from the right. The inclination of the figure is in the opposite direction to that of 11 and 12. He seizes the railings.

14. His face through the railings. The close-up is composed diagonally. The railings are taken very sharply and lit with harsh back lighting. All the depth is completely out of focus.

15, 15*a*, *b* and *c*.   These four shots cover the main phases of a single pan, moving upward over the monument.   The motivation for the pan is revealed in the subsequent shot. (Eugene raises his eyes to Peter.) The pan begins from a lower viewpoint, corresponding with Eugene's glance.   The camera is set up inside the railings, so that these do not come within the field of vision. The pan ends before it reaches Peter's face.   The foreshortening of the monument is increased as the pan is raised.   The tempo should be fast.

16. Large-scale close-up of the upper part of Eugene's face.   He raises his eyes to Peter.   The camera viewpoint is from slightly above.   Eugene's face is taken in strong foreshortening.   All the depth of the shot is in focus.   The damp, cobble-stoned roadway, lit with contrasted lighting, forms the background.   The composition of the close-up is diagonal.   The figure is sharply inclined forward, and the face is tilted upward. The scheme shows how the face is cut off by the frame limit.

17. Peter's monumental face.   The eyes are cut off by the frame limit.   This shot does not yet show the meeting 'face to face'.   Peter's face is taken frontally. The camera viewpoint is fixed along a line perpendicular to the plane of the object.   The lighting is mainly from the back.   Peter's face is in shadow and sharp outline. Only the characteristic form of the face is emphasised by side lighting.

18. Peter's motionless eyes. The close-up is lit by concentrated lighting from one source below. Deep shadows in the eye sockets. Frontal construction.
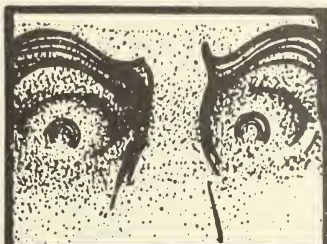
19. Editing cut-in. A cloud slowly passes from the disc of the moon. Diagonal composition. The shot is taken on a sunny day with panchromatic negative and a strong red light-filter. The spaces of blue sky should come out quite black in the shot.
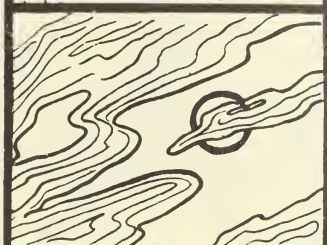
20. Eugene's eyes, large-scale. Fixed gaze. Frontal composition with a slight tendency to turn to one side.
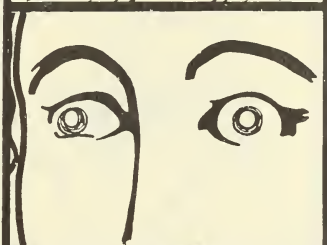
21. Editing cut-in. The cloud reveals the face of the moon. Conditions of photographing as in shot 19.
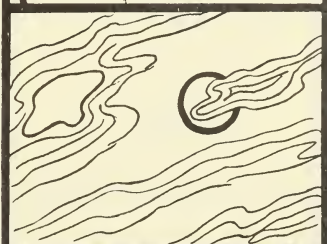
22. Peter's eyes, large-scale. A shadow slowly crosses his face. The main lighting is from below. Side lighting is gradually introduced.

23. Peter with outstretched hand. Harsh lighting from the left side. The composition of the outstretched hand follows a diagonal contrary to the movement of the clouds in the preceding shots (19, 21).

24. Detail of the monument. A snake under the horse's hoofs. The composition is along the same diagonal as that of Peter's outstretched hand in the preceding shot. Harsh back lighting. The depth of the shot is out of focus.

25. Detail of the monument. The horse's muzzle and part of Peter's figure in dynamic foreshortening. Composition along the same diagonal.

26. Close-up of Eugene. In this shot he utters the word: " Good ! " The close-up is taken frontally, somewhat from above, with the figure leaning slightly forward. The left side is lit more strongly than the right.
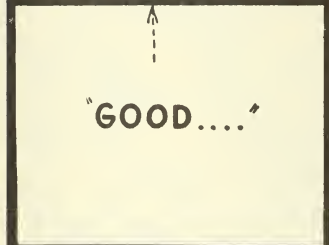
26a. This shot is a continuation of shot 26 (a single cutting piece). Eugene utters the first part of his challenge: " Good ! " and runs back. The camera pans upward and he appears in the frame in full length. The shot is taken with a short-focus lens possessing adequate depth of definition. The damp, cobbled roadway is lit with oblique (glancing) side rays of directed light.

27. In the foreground is the figure of Peter with outstretched hand, his back to the camera. In the perspective Eugene's figure is visible from above, running back. (Logical continuation of Eugene's run, taken in long-shot.) The shot is taken with a short-focus lens.

28. In the foreground, Peter's head taken from behind. In the background is a mid-shot view of Eugene. This shot is in essence an enlargement of the previous shot, and preserves the same principle of composition. Peter's head is taken in silhouette; Eugene's figure is lit evenly. The attention is concentrated on Eugene's movement.

29. In the foreground, Eugene with back to the camera. In the background is the monument, which is lit with back lighting and emerges as a dark silhouette against the grey sky. Eugene is lit evenly, with clear definition of the profile, obtained by semi-back lighting. Eugene's head turns to the camera, and we see him in profile. In this shot he completes the phrase: " thou worker of miracles ! "

30. In the foreground is the upper part of the railings. The camera viewpoint is raised. In the background Eugene's legs are visible, running towards the camera. In the scheme the direction of the movement is shown by an arrow.

30a. Continuation of the same cutting piece. Eugene runs up to the railings and seizes them.

31. First phase of the pan upward over the monument. The monument is shot somewhat from one side. The direction of the pan is shown by an arrow.

"ENOUGH OF
THEE !"
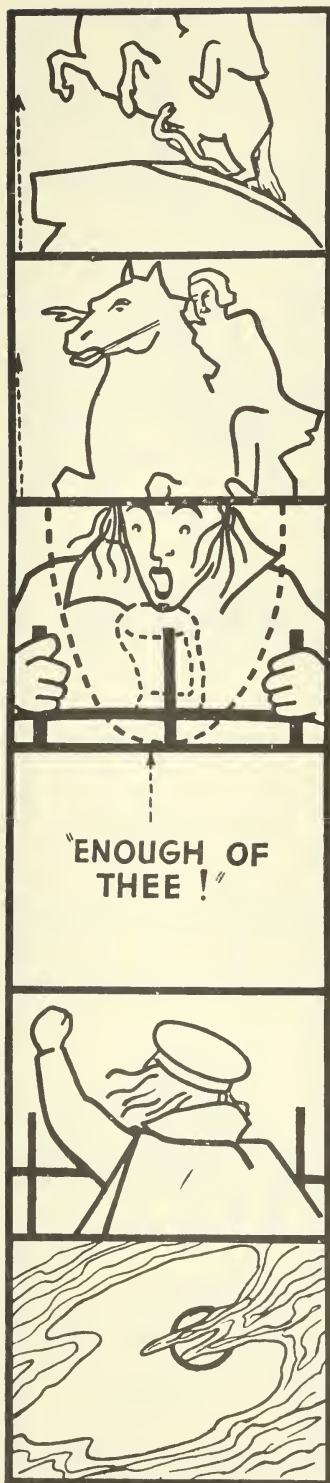
31a. Continuation of the same cutting piece. Secor
phase of the pan upward over the monument. As th
process continues the foreshortening of the object
increased.

31b. Continuation of the same cutting piece. Thir
phase of the pan upward over the monument.

32. In the foreground is part of the railings, wit
Eugene taken through them. Frontal construction. Th
shot is taken with a short-focus lens focussed exactly c
Eugene's original position. In the course of the shot h
moves towards the camera, and his face fills the entir
frame. Thus we reach a close-up, the composition c
which is shown on the scheme by a dotted line. As th
focus has been fixed on Eugene's original position, th
close-up is taken partly out of focus. Moving swiftl
towards the camera, Eugene utters the threat : " Enoug
of thee ! " At the moment of the shout the face lose
almost all definition (to correspond with the hysteria c
the shout).

33. Mid-shot of Eugene. With his back to th
camera, he raises his clenched fist. All the depth c
the shot is out of focus. (The shot is taken with
long-focus lens with insignificant depth of definition.)

34. A cloud passes over the moon. The shot i
taken in the same technical conditions as those of th
previous editing cut-ins, with the one difference that i
this shot we reduce the speed of photographing, whic
on the screen results in a swifter movement of the clouc

35. Close-up of Peter. Frontal construction. The [subj]ect is harshly lit by back and two-sided lighting. A [sha]dow runs across the face.

36. Peter's figure. His head is cut off by the [fra]me limit. The same conditions of lighting. A [sha]dow passes swiftly over the figure.

37. Close-up of Peter. The lighting is the same [as] in shot 35. A heavy shadow falls across the face [' Peter scowls ']).

38. Through the railings Eugene's running figure is [se]en in long-shot. Shadows run across the roadway. [Th]e shot is taken slowly, so that on the screen Eugene's [mo]vements are accelerated.

39. Three short cutting pieces. Fragments of the [flee]ing Eugene. In this shot his arm is blurred in [mo]vement. The shot is taken with a long-focus lens, [and] the speed is reduced. The aperture is fully open. [Gi]ven these technical conditions, we get the effect of [hea]vily blurred movement.

39a. Eugene's leg blurred in movement, taken as he [run]s. The same conditions of photographing.

39b. Eugene's distorted face, blurred in moveme[nt]. The same conditions of photographing.
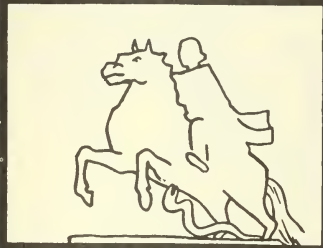
40, 40a and 40b. Three short cutting pieces [of] Peter's horse 'rearing'. In each successive shot t[he] camera viewpoint is lowered and shifted somewhat [to] the left. When cut in short sections these three pie[ces] give the effect of rearing up a steep spiral. As t[he] camera viewpoint is lowered the foreshortening is i[n]creased.

40a. Second phase of the 'rearing'. The viewpoi[nt] is lowered more, and shifted somewhat to the left.

40b. Third phase. The camera viewpoint is sti[ll] lower, and even more to the left. The foreshortening i[s] increased.
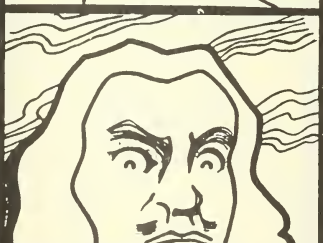
41. Peter's head, very large scale. All the depth o[f] the shot is in focus. The background consists of swiftl[y] moving, dark clouds. Peter's eyes light up. This i[s] achieved by the following technical method. The sho[t] is taken in the usual way, but the negative is lef[t] undeveloped, except for the first two or three frames which are then set in the gate of the camera. Then, i[n] the studio, two shining points are set against a blac[k] velvet background, and are adjusted to the position of th[e] developed frames so that they correspond with Peter'[s] eyes in those frames. After the camera has been set u[p] accordingly, the exposed but undeveloped section o[f] negative is placed in position, and a second exposur[e] produces the shining points in Peter's eyes.
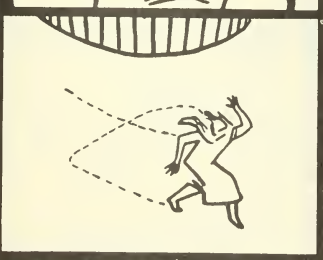
42. A long-shot, taken from a viewpoint above, of Eugene's tiny figure running in zigzags.

43. Mid-shot. Eugene starts to run round. In the scheme the direction of his run across the frame is shown by the dotted arrow. The granite rock is taken in profile. The horse and Peter's figure are cut off by the edge of the frame. The viewpoint is chosen in order to make the railings the background of Eugene's flight.

44. The turn of the ' Brazen Horseman '. The first phase of the turn, through 75°. The turn is achieved by carrying the camera in a circle around the monument.

45. Eugene runs round the monument from right to left. The viewpoint is taken from above, so that the curve of the railings, seen in the left-hand corner of the frame, visually duplicates the curve of Eugene's run.

46. Second phase of the ' Horseman's turn ', through a further 75°. As in shot 44, Peter's figure and the horse's muzzle are partly cut off by the frame limit.

47. Eugene runs across the frame from right to left. The viewpoint is taken from above, so that his figure is thrown entirely against the background of the cobble-stoned roadway. We exclude the horizon from the field of vision in this case, because if the flight were brought into relation with the distant line of the horizon we would not obtain the necessary effect of speed (this remark also applies to shot 45).

48. Third phase of the ' Horseman's turn ', through a further 75°. With each successive phase of the turn the speed of shooting is slightly reduced, and in consequence each successive phase shows an acceleration in speed of turn when projected on to the screen.

95
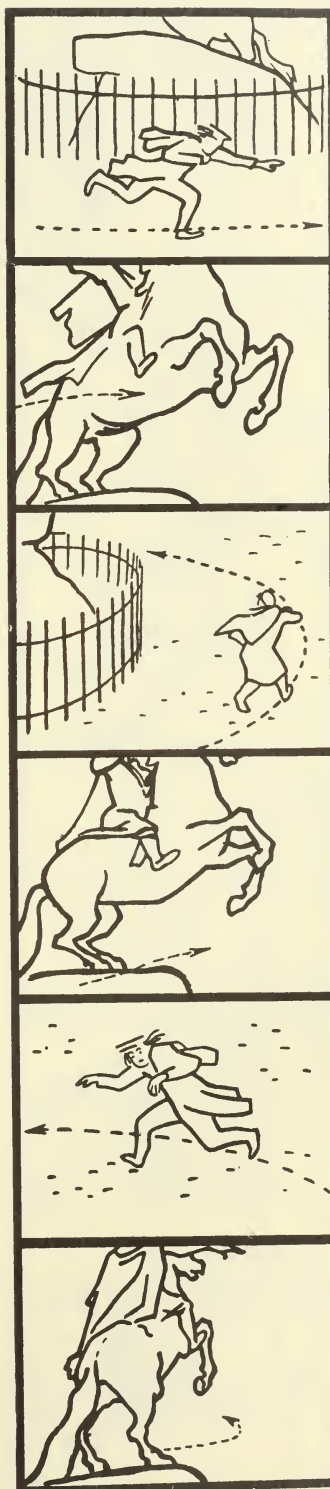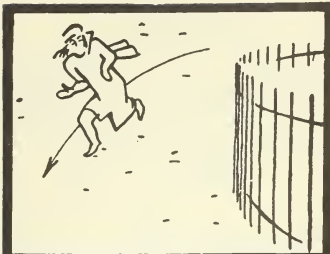
49. Eugene runs into the frame. On the right-hand side is the railing, the curve of which duplicates the curve of his run. The shot is taken with short-focus lens, and so his movement towards the camera acquires tremendous impetuosity.

50, 50a and 50b. Three short editing pieces, completing the turn of the ' Brazen Horseman '. Shot 50 gives the first phase of the turn, through 45°.

50a. Second 'editing' piece, a further turn through 45°.

50b. Third editing piece, a further turn through 45°, bringing the ' Horseman ' back to his original position. The figure is taken in strong foreshortening. In all three pieces the shot is taken slowly, so that when projected the speed of the turn is very fast. Swiftly moving clouds form the background to all three pieces.

51. Eugene runs into the frame from the left, and falls on one knee. The viewpoint is from above. A part of the railing is visible in the upper part of the frame.
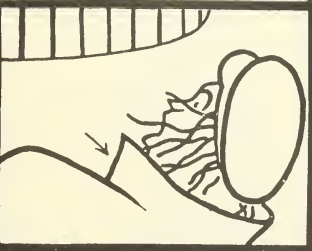
52. Close-up of Eugene fallen on one knee. The close-up is composed diagonally, with the figure sharply inclined. The shot is taken with a short-focus lens. All the depth of the shot is in focus. Part of the railing is clearly visible.

53. Eugene's foreshortened face. A close-up, face the camera. Diagonal composition.

54. ' Editing formula ' for Eugene's crushing under-ot. Three cutting pieces. The first piece shows the rse's hoofs, taken very close up, with a short-focus is (focal length—28 mm.). Strong optical distortion.

54a. Second piece : The horse's muzzle, taken on ge scale. Shot with the same lens giving strong tical foreshortening.

54b. Peter's face and burning eyes. Very short tting piece.

55. Eugene's eyes, on very large scale. Diagonal mposition, the same diagonal as that of the close-up Eugene in shot 53. Sharp optical delineation, harsh, itrasted lighting.

56. Repetition of the ' editing formula ' for crushing derfoot, but in the contrary order. First cutting ce ; Peter's face strongly foreshortened.

56a. Second cutting piece : the horse's muzz[le].
The foreshortening and the optical distortion intensifi[ed].

56b. Third cutting piece : the horse's hoofs. Fo[re]shortening and optical distortion intensified.

57. Eugene bursts into the frame, covering his fa[ce] against a blow. In the same shot he turns sharply a[nd] passes beyond the field of vision.

58. The beginning of the shot of Eugene's r[un] along the second spiral. The viewpoint is from abov[e]. The direction of the run is shown by the dotted arrow.

58a. The cobbled roadway, and part of the railin[g]. The shadow of the ' Horseman ' comes into the fram[e,] appearing from the lower left-hand corner. (In th[is] and all the similar following shots the shadow is supe[r]imposed by laboratory methods from a previously take[n] negative.)

59. The shadow of the ' Horseman ' extends acro[ss] the roadway and passes out of the frame, moving in t[he] same direction as Eugene's run.

60. The granite rock, without the 'Horseman'.
his may be achieved by taking an exposure on the
t with the aid of a screening mask. The monument is
otographed, but in exposure the image of the horseman
bscured by a cut-out mask. After the first exposure
the exposed negative is wound back to the first frame,
l a second exposure is taken. All that part of the
ative on which the granite rock has been taken is
cured by a mask, and clouds flying across the sky are
otographed on the unexposed upper part of the frames.)

61. Editing cut-in. A cloud swiftly covers the face
the moon. Composed along the diagonal shown by
dotted arrow.

62. The shadow of the 'Horseman' flies across the
ne along the same diagonal.

63. A corner of a house in the upper part of the
ne. Eugene runs across along the same diagonal as
of the preceding frames. At the spot indicated in
scheme by the turn of a dotted arrow, he falls and
s for a moment. Then he passes beyond the camera's
l of vision. For a few seconds the spectator sees an
ty frame.

63a. The same cutting piece. The shadow of the
azen Horseman' runs into the frame, halts in the
re for a moment, then passes beyond the field of
on.

64. The granite rock without the 'Brazen Horse-
'.

99
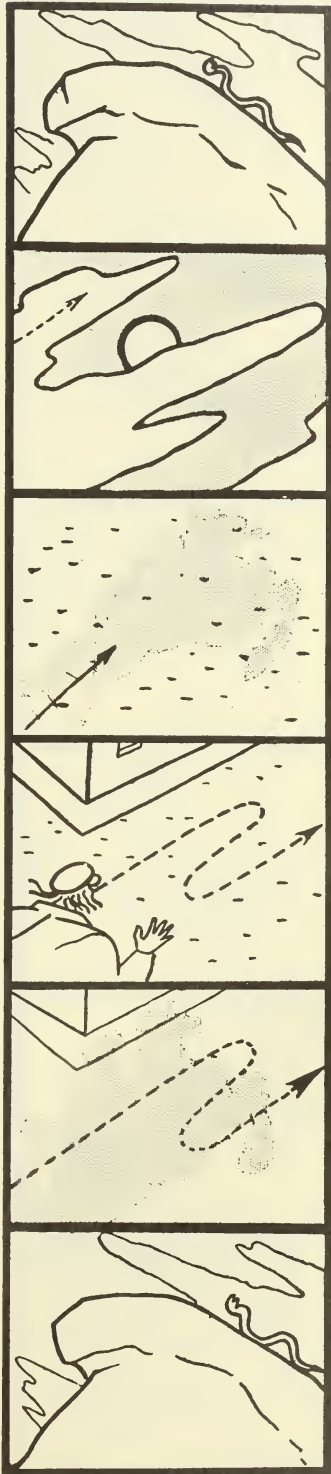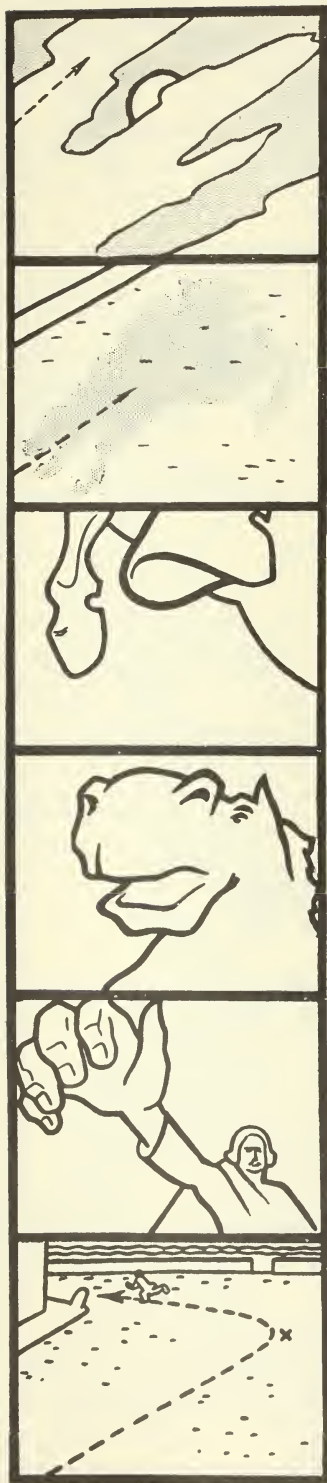
65. Editing cut-in. A cloud covers the moon. T:
direction of the cloud is indicated on the scheme by
dotted arrow.

66. The shadow of the 'Horseman' passes acr(
the frame along the same diagonal.

67. The 'Horseman's leap'. Effected by :
'editing formula' of three pieces. First piece: t
horse's hoof strongly foreshortened with extreme opti:
distortion.

67a. Second cutting piece. The horse's muz:
strongly foreshortened with extreme optical distortion.

67b. Third cutting piece. Peter's outstretched ar,
composed perspectively, along the diagonal of the fran
The wrist is disproportionately enlarged, owing to t
optical distortion. (Taken with lens of 25 mm. fo
length.)

68. Part of the Neva embankment seen on t
horizon. On the left side is a corner of a house. Lor,
shot taken from an upper viewpoint. Eugene ru
across the frame and disappears round the corner of t
house. On the scheme the direction of his run is in(
cated by a dotted line. At the point marked by a cr(
he makes a turn.

69. Repetition of the previous ' editing formula ' : the ' Horseman's leap '.   First cutting piece: the horse's hoof.

69a. Second cutting piece : the horse's muzzle optically distorted.

69b. Third cutting piece : Peter's outstretched arm. Conditions of shooting the same as for shot 67b.

70. The shadow of the ' Brazen Horseman ' passes across the frame, in the direction shown by the dotted arrow.

71. Eugene runs in the same direction, making a turn at the point marked with a cross.   This shot duplicates his run in shot 68, with the difference that in this case he runs towards the camera.   The principle of the construction is the same as for shot 68.   The compositional succession is preserved, so serving as a link between these two shots.   Thus, when edited there is no break in the continuity of Eugene's flight.

72. The ' Horseman's leap '.   First cutting piece : the horse's hoof.

72*a*. Second cutting piece : the horse's muzzle.

72*b*. Third cutting piece : Peter's face. In all thr
pieces the same conditions of shooting are observed
in the previous repetitions of this ' editing formula '.

73. The shadow of the ' Horseman ' passes acro
the frame in the direction indicated by the arrow (tl
contrary direction to that of Eugene in the followir
shot).
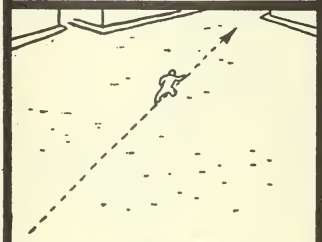
74. Long-shot taken from an upper viewpoint. Tl
tiny figure of Eugene runs diagonally across the frame.
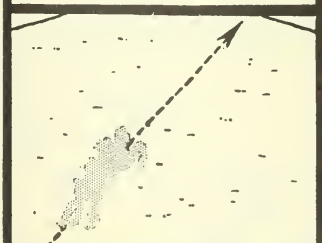
75. The same set-up. The shadow of the ' Horse
man ' passes along the same diagonal.

76. Eugene runs into the frame and falls. Diagona
composition. For some seconds he lies motionless
Then he tries to rise. The shadow of the ' Horseman
passes into the frame in the same direction, and cover
Eugene.

77. Final repetition of the editing formula for Eugene being crushed underfoot. Cutting pieces consisting of six or seven frames each. First cutting piece : the horse's hoof.

77a. The horse's muzzle.

77b. Peter's foreshortened face.

78. Peter's head, taken in profile. Back lighting. The camera moves towards him, and the black silhouette of the head slowly fills all the frame field of vision. The distribution of the silhouette in its final phase is shown in the scheme by a dark contour.

79. A cloud slowly covers the moon. A slow fade-out. A faded out pause.

80. The silhouette of the ' Brazen Horseman', standing motionless on the granite rock, slowly fades in from the obscurity. The monument is taken in profile. The viewpoint is at average height. Only back lighting. The completely black sky serves as background. Compositionally the ' Brazen Horseman ' should be static. The shot fades out.

Arising out of the foregoing analysis, we must note the following facts which are directly connected with the practical exploitation of a number of spec resources of the camera-man's art.

1. The change in the tone of the image throughout the scenario fragme. From a lowered tone in the opening shots, the tone of the image is raised to degrs of lightness in the group of shots covering the ' dialogue ' with Peter and e pursuit, lowering again in the closing shots. This change in tone is achiev, first by the selection of appropriate lighting schemes, and second by variatis in exposure.

2. The change in the texture of the image. The opening shots are givi softened optical treatment, to correspond with the low tone. A sharp fos transmission is employed in the ' dialogue ' with Peter and during the pursu, and is followed by the use of softening lenses during the final episode. Togeth with a change in the optical transmission there is a change in the lighting treatmet of the texture of the object.

3. Foreshortening construction is almost completely absent during t opening shots. The greatest resort to foreshortening constructions comes duri the middle section (the ' dialogue ', the Horseman's rearing, and the pursui

4. Optical distortion, achieved by the use of a short-focus lens, is maii employed in foreshortening constructions.

5. The shooting speed is exploited in several ways as a means of expressi organisation of the dynamic processes. The turns of the Horseman gradua become swifter in correspondence with the acceleration of Eugene's flig. Eugene's hurried running to and fro is achieved by slowing up the shooti speed. The movement of the clouds is arbitrarily made swifter and slowed by changing the shooting speed, in dependence upon the episode into which t particular editing piece is cut.

6. In certain cases the cutting-off of the image involves bringing the frar limit horizontals into a slanting position in relation to the true horizontal of t field of vision. This applies primarily to the foreshortening constructions of t close-ups of Eugene.

Thus, by considering each shot separately we can draw up a detailed e planation of the technical resources by means of which the given compositior scheme can be carried out.

In the foregoing analysis we have contented ourselves with reducing t task to a simple scheme of linear dimensional composition, which establishes t disposition of the objects in the frame field of vision. Many directors and camer men are in the habit of fixing the compositional task not only in the form of simplified linear scheme, but also in that of a developed sketch. For instanc the director L. Kuleshov made compositional sketches for his film " The Gre Consoler ". Fig. 54 reproduces a sketch for linear composition and Fig. 56 f lighting of long-shots in that film.

Further we give examples of compositional schemes for various films ma outside the U.S.S.R. Fig. 53 is a scheme of linear-dimensional composition f a mid-shot from the American film " The Big House ". This figure provides complete compositional scheme, for the cut-offs of the frame limits, the distortio and the viewpoint for the objects are all clearly fixed.

In the case of Fig. 55 also, behind the apparent simplicity of the shot whi we see on the screen there has obviously been a great deal of creative work. Th sketch gives a scheme not only for the disposition of the objects, but also f lighting. Figs. 57 and 58 were used for a German documentary.

FIG. 53.—Sketch of linear-dimensional composition for a shot in the American film " The Big House ".

FIG. 54.—Sketch of linear dimensional composition for a shot in the film " The Great Consoler ", by L. Kuleshov (dir.).

Fig. 56.—Sketch of lighting composition for a shot in "The Great Consoler".

FIG. 58.—Compositional sketch for "The Mooring of an Airship" (medium shot).

6. STATICS AND DYNAMICS OF SHOT COMPOSITION

The dynamics of any shot may be displayed by means of the direct movement of the object in the shot (or the movement of the camera viewpoint in retion to the object), and also by a suitable form of compositional construction f the static object. In the first case the predominant factor in the dynamics f the shot will be a direct kinetic movement. In the second case it will be a potetial movement of representational forms static in themselves, and expressed a emphasised by the compositional construction.

This division into the kinetics of the shot and the potential movement f representational forms essentially static is only abstracted for the purpose f analysis ; for the conception of the dynamics of the shot is itself a generalisati embracing both the elements of kinetics and the elements of compositional movment of representational forms. In addition, in all cases the dynamics of t separate shot is bound up with the dynamics of editing composition, apart fr which there cannot be correct determination of the movement inside the sh

In regard to the question of movement in the shot, we consider it m essential to define those main methods of dynamic organisation of the shot whi are of practical importance for the camera-man. If the camera-man has definite idea of the main principles of dynamic construction of the shot, t kinetic movement usually develops into a primitive muddle. This is especial the case when he is faced with the task of planning a mass scene with intensi movement. Not infrequently the massing of two or three hundred people h much less expressive effect upon the spectator than the correctly organised mov ment of twenty to thirty persons.

Consideration of the eight schemes of direction of kinetic movement with the shot given in Fig. 59 will lead us to determine two factors. The first is t direction of the kinetic movement in relation to the frame limits. This directi is marked by an arrow. The second is the direction of the kinetic movement relation to the static surroundings serving as background for that movemer The composition of the static surroundings is formally indicated by parallel lin in the schemes.

In the first scheme the static background is composed along one diagon of the frame, while the movement of the object is in a direction contrary to t diagonal. The dynamic tendencies are sharply emphasised, on the one hand b the contraposition of the object's movement with the composition of the bacl ground, and on the other by the conflict between the direction of the movemer and the sides of the frame.
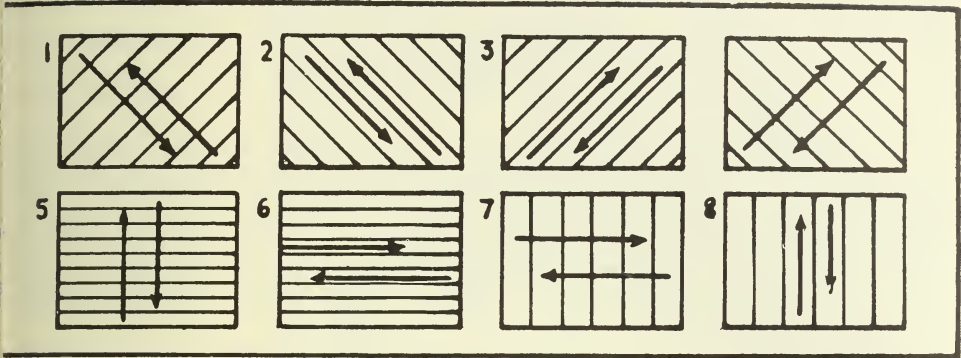
FIG. 59.—Plan of directions of kinetic movement in the frame.

In the second scheme this conflict between the direction of the movement and the composition of the static background is absent, and because of this there will be less dynamism revealed in the frame.

In the third scheme we have the same composition as in the second, but it is along the contrary diagonals. The fourth scheme gives a composition analogous to that of the first, but also along the contrary diagonals. In the fifth scheme the composition of the background is in a direction parallel to the direction of the horizontal sides of the frame. But the movement occurs in a direction parallel to the vertical sides. The movement will be expressed in a weaker form by comparison with the first scheme, for the conflict between the direction of the movement and the composition of the background is obscured by the parallel qualities of the frame sides.

Finally, we get the weakest demonstration of dynamism in composition in the schemes six and eight. Here the movement flows parallel both to the sides of the frame and to the direction taken in composing the background. The seventh scheme is analogous to the fifth.

Thus we get the greatest expression of dynamism in those forms of diagonal composition of the movement in which the static background is composed along the contrary diagonal. And we get a weakened effect if the direction of the movement is paralleled either by the frame sides, or by the composition of the background.

Only when the subject motivation of the movement is defined with sufficient clarity can the camera-man select one or another scheme of movement in compositional construction. It far from always follows that the purpose of the shot involves the necessity to seek the greatest expression of dynamism. In certain cases the needs of the narrative demand a weakened dynamic effect, and then he must use a composition that will satisfy this particular scenario and directorial demand.

The second method of revealing the dynamics of the frame arises from those types of compositional construction in which the dynamic tendencies are revealed in the potential movement of representational forms which in themselves are essentially static. Into this category come first and foremost foreshortening constructions. By their very nature such constructions presume the presence of a dynamic tendency, carrying the object out of the stable equilibrium of the static strictly horizontal or vertical composition.

The dynamic impulse is the dominating factor in foreshortening constrúc-tion, and from this aspect it is difficult to conceive of foreshortening apart from the dynamism inherent in it.

Fig. 60 gives three photographs showing the ' Brazen Horseman ' in succes-sively increasing foreshortening.

In the top shot, taken from one side, there is relatively little foreshortening. The middle shot shows increased foreshortening, while the viewpoint has been shifted somewhat to the left. In this shot the dynamic effect is intensified not only by increasing the foreshortening, but also by scale enlargement of the object. In the bottom shot there is still greater foreshortening, and the figure is still larger. The dynamic effect is at the maximum by comparison with the preceding shots.

If we edit these shots in the above order, we get the effect of the monument ' rearing', which we required in " The Brazen Horseman " scenario treated in Sec-tion 5. Provided the editing pieces are cut to the necessary shortness, the dynamism of the foreshortening construction of each separate shot is transferred to the dynamism of editing.

We could achieve an effect analogous in principle by continuous shifting of the camera viewpoint, at the same time gradually bringing the camera nearer the object. In that case we should get a single, continuous editing piece, in which the object would gradually pass through all the stages of foreshortening con-struction. The dynamic effect would be achieved solely by the agency of the intra-shot dynamism, without resort to the dynamism of editing.

In foreshortening constructions the exclusion of a static point of support from the field of vision plays an essential part. If we shoot a man first full length and then from the waist upward, using the same foreshortening construction, the dynamic effect will be stronger in the second than in the first case, because the static point of support will be invisible to the spectator. The same effect is noticeable in glancing at the three shots of the ' Brazen Horseman ' we have just discussed. The more comprehensive the composition, the closer we approach to revealing the static point of support, the weaker becomes the dynamic effect of the foreshortening construction.

We must also briefly consider a few general factors determining the elements of static and dynamic composition in the construction of the shot.

A symmetrical, frontal construction, distinguished by the stability of its equilibrium, least of all reveals the dynamic tendencies of the object.

On the other hand, an asymmetrical, diagonal construction is the charac-teristic feature of dynamic construction.

A flat, single-planed construction is less dynamic than one with depth and several planes. The existence of several planes creates the illusion of depth, and the eye, linking up the middle ground with the background, is more disposed to perceive the dynamism than in the case of a static contemplation of a single-planed, flat construction. The impression of depth is almost always evoked by the juxtaposition of the middle with the background, and the dynamic effect of a linear perspective passing into the distance essentially depends on this factor.

The diagonal composition of a linear perspective in turn gives a stronger dynamic effect than a symmetrical composition from a central viewpoint.

From the aspect of the tone of the shot, compositions built up on sharp tonal contrast will be more dynamic than compositions carried out in softened and monotonous tone.

A sharp optical transmission is more conducive to the perception of a dynamic
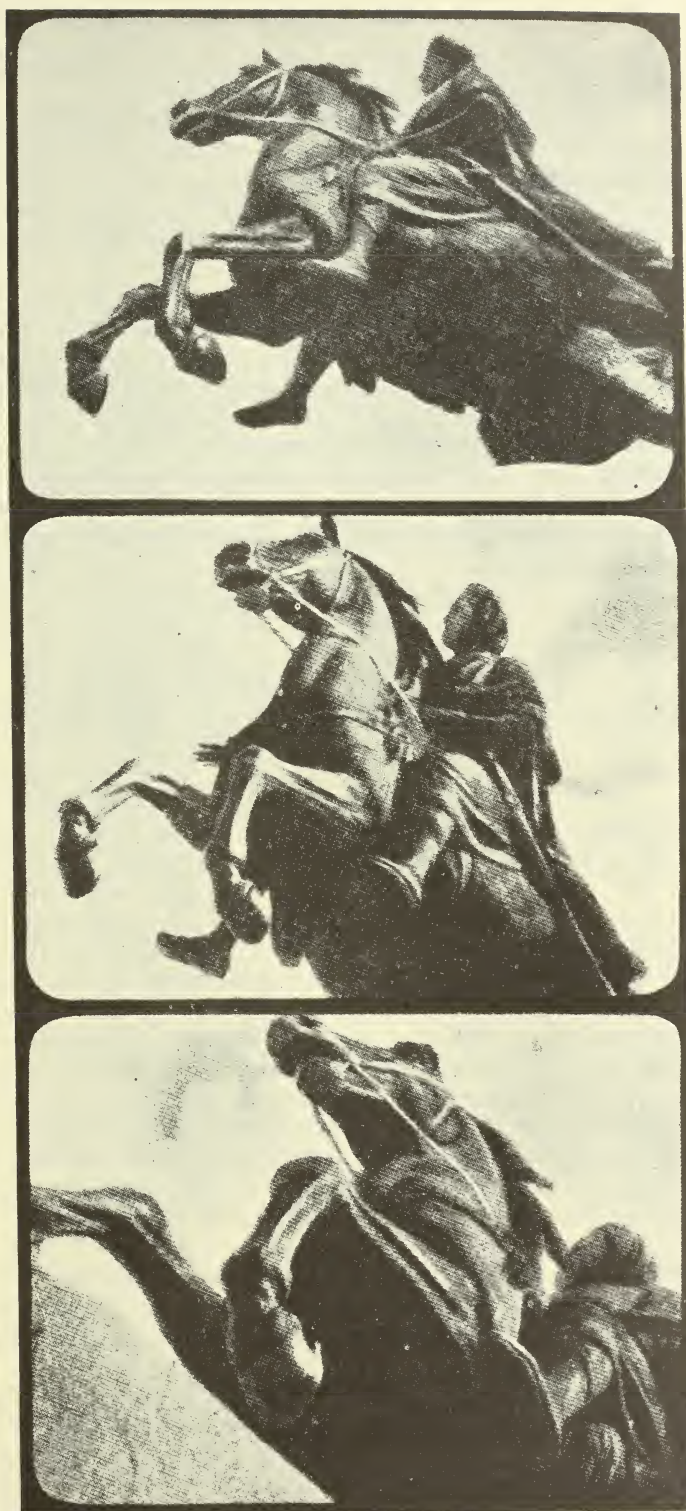
FIG. 60. — Dynamism
y aid of foreshortening
onstruction.

III

subject than is a softened optical transmission of the ' picture-book ' type, c.-
posing to a passive, contemplative perception.

The foregoing general factors all affect the method of displaying the dynami
of the representational elements in the shot. It has to be emphasised that 'e
dynamic effect of a single shot in its general form cannot be determined ap
from the editing composition of the given episode, just as it is not possible
find a compositional form for any shot apart from the general element of co.
positional succession.

If we isolate a single element in the shot, and give it dynamic impulse wit.
out taking into account the compositional task of the shot as a whole, we viol
the intra-shot responsibilities of the narrative development, which in turn affe
the development of the narrative in the editing composition of the film. T
statics and dynamics of each shot are inseparably bound up with the statics a
dynamics of the narrative development. As in the case of general composition
problems, the static or dynamic determination of each shot can be decided up
only by analysing the narrative development of the scenario in its final form

So that, in this regard also, the element of compositional succession is
prime importance.

7. THE PRINCIPLE OF COMPOSITIONAL UNITY

We must briefly summarise the abstract methodic scheme of compositional treatment worked out in the preceding sections.

1. Ascertaining the theme of the literary fragment.
2. Deciding upon the representational characteristics according to the scenario material.
3. Exposition of the main tendencies of the treatment.
4. Exposition of the narrative.
5. Construction of the *mise en scène*.
6. The directorial distribution into shots.
7. Deciding the shooting point and the editing groups according to the *mise en scène* and the shot distribution.
8. Working out the compositional schemes.
9. The technical interpretation of the compositional schemes.

The foregoing summary is an approximate outline of the way in which the thematic task set by the literary scenario is concretely realised in the taken film. A number of conclusions follow from this.

The camera-man may have a varying degree of freedom in the course of realising the task in the representational treatment of the film. He may have :

1. *Maximum freedom.*—In this case he is given a theme which serves as the starting-point from which he carries out all the treatment from beginning to end. This happens almost exclusively in the sphere of the news film. The newsreel camera-man carries out his own independent narrative treatment of the news outline, being responsible for it through all the stages of creative achievement.

2. *A scenario task already distributed into shots.*—In this case the narrative has already been given concrete form, and the shot distribution has been made. In shooting a story-film the camera-man proceeds on the basis of the director's verbal explanations of the action, and reduces the representational treatment to concrete form.

3. *Minimum freedom.*—In addition to receiving a scenario already distributed into shots, the camera-man is also provided with a compositional scheme or sketch. He has only to realise the optical image which is schematically provided in the sketch.

In all these cases it is possible to determine the correct representational treatment of each shot only if the camera-man has a clear understanding of the intrinsic, inseparable connection between the various stages of realising the theme, their relation to one another, and their rôle in developing the theme as a whole. Only thus will the main determining feature of the camera-man's work, the feature of *compositional succession*, be revealed.

Before formulating the final conclusions of this chapter, we must consider one other problem which plays a highly important part in clearly elucidating the specific qualities of compositional construction of the cinema shot.

Are there any such things as compositional formulæ which can be applied to individual shots without taking into account the factor of compositional succession ?

This question arises when the camera-man attempts to isolate a separate shot as an independent representation unit from the general editing context. In such cases it is not unusual for the camera-man to lay down a number of compositional ' laws ' which are mechanically applicable to any compositional task. Such ' laws ' are to be found in many practical primers on art-photography and cinema.

In order to demonstrate the worthlessness of such ' laws ' when applied to the specific features of composition of the cinema shot, we will consider certain ' generally accepted ' assumptions of this kind. The following material is borrowed partly from an American manual, " The Perfect Photograph ", and partly from German handbooks on amateur cinematography.

The horizon should not cut the middle of the frame.

The horizon line must not run parallel to the lower limit of the frame.

The camera should be set up perfectly horizontally (the tripod provides a level for this purpose).

An image with a balanced and monotonous foreground is not expressive.

When photographing architecture the image should not be ' leant '. Strong fore-shortening results in distortion.

The perspective must be built up along the frame diagonals (study Leonardo da Vinci).

An object photographed from above, down the verticals, loses its form.

Too large a close-up is inartistic.

A wide-angle lens distorts the perspective.

The depth of the picture should be in focus.

An object photographed from below is distorted.

Use soft, diffused lighting.

Fill the frame-space in a balanced manner.

The main object should be composed in the centre of the frame, otherwise the unity of the picture is violated.

Sharp movements are not conducive to good photography. They are blurred on the screen.

Harsh shadows and silhouettes are not pleasant when projected on the screen. Work in half-shadows.

And so on.

Every law, every formula warns you against ' distortion and deformation '. The spectator is ' afraid of sharp impressions '; he wants quietly to contemplate ' normal ' images such as he is accustomed to seeing in nature.

This dogmatism in regard to ' distortions ' and ' foreshortenings ' has long since been disproved by cinematography. On the screen we see shots taken from an aeroplane, and so having no horizon at all; we see people taken from the same viewpoint, silhouettes with ' unbalanced ' lighting, close-ups without depth, architecture filmed down the verticals—in a word, everything that contradicts the ' artistic ' in the narrow, abstractly formal sense in which writers use

te word. The camera is set up crookedly and sideways, the lens gazes upward
and downward, sharp movements are blurred on the screen : and yet it is impos-
sible to deny that these shots are expressive. Any newsreel camera-man in
action is a practical proof of the stupidity of such compositional restrictions, yet
in the debris of antediluvian conservatism this doctrine of ' distortions ' con-
tinues to exist, mutilating and crushing the artistic sense of cinema youth with its
'authority '.

What is at the back of it all ? What is the real danger in ' foreshortening '
and ' distortion ', and where have we to be on our guard against it ?

The danger in ' foreshortening ' arises wherever it violates the correct treat-
ment of the content of each separate shot, wherever there is violation of the unity
between the shot functional task and its formal accomplishment. If the com-
positional construction of the shot *does not express* the functional task decided
upon after analysis of the content of the scenario editing scheme, there will cer-
tainly be a cleavage between the psychological action of the optical image and
the significance of the art-image as conceived in the scenario. In that case there
will be self-sufficient juggling, an æstheticising formalism. Hence it is obvious
that any contradictions between the representational and the scenario-directorial
treatment of the scenario must in reality have a far deeper basis in principle than
that of the formal determination of a single isolated shot, considered apart from
the editing context. Hence any ' laws ' of composition have to be deduced not
by analysing a single shot, but by establishing the general *principle* of composition
in the cinema ; the principle determining the general *method* of compositional
construction.

In the foregoing analysis we have abstractly distinguished four main ten-
dencies which involve four forms of determining the general compositional task.

First form.—This is dimensional-spatial determination of the composition,
or, as we conditionally call it, the *linear-dimensional composition*. When distri-
buting the objects in the frame space we make the basis not the elements char-
acterising the æsthetic perfection of the single photograph, but the aggregate of
expressive elements typical of the system of shots in their editing context.

Second form : Lighting composition, which is in dependence upon the char-
acter of the determination of the dimensional-spatial composition of the shot.

Third form : Tonal composition, which is functionally bound up with lighting
composition.

Fourth form : Temporal composition, engendered of the aggregate of kinetic
elements. This compositional form determines the internal frame rhythm, and
is in direct dependence upon the rhythm of the editing.

What interaction is there among these four compositional forms ?

We hold that they can be regarded both as four successive stages of deter-
mination of the general compositional task, and also as four independent types
of composition. If the camera-man is dominated by an ornamental-superficial
conception of the shot, one may reasonably presume that dimensional-spatial
elements will play a secondary rôle in his decisions. But if he regards depth
perception as primary, obviously dimensional-spatial decisions will characterise his
work. In practice either this or one of the other forms of compositional decision
always predominates. In addition, it is possible to have stylistic decisions entirely
constructed on one type of composition and suppressing all the other elements.

In the most naïve and elementary films we find cinematic production con-
structed on the content unity of the narrative, apart from any attempt at com-
positional portrayal of the dramaturgic and directorial task.

There may also be a content unity based on the unity of the lighting an tone composition, or on the unity of the rhythmic elements.

Or we may have a transformation of the narrative and content unity int an organic unity of all the four compositional forms possessed by the cinema representational technique, and then we get the highest, most valuable and per fect form of interaction between editing composition and shot composition.

In all four cases unity may be achieved not only by the simple ' corres pondence ' of compositional forms, but, in accordance with the development of associative thought, we can employ any compositional form in accordance eithe with the element of associative contiguity, or with that of associative contras The lighting and tone compositions may be independent lines of development i the editing scheme, and may even be contraposed to the form of linear com position ; but in the general conjunction of all four forms we must achieve content unity determining the correctness of the entire compositional decisio as a whole.

A unity of the various compositional forms apart from the general narrative content motivation leads to a formalistic determination of the compositional task in other words, to a disjunction of the representational treatment of the film from the dramaturgic and directorial treatment.

Thus we get the first, and in our view the only compositional law : *the law of the organic co-subordination of the whole and its parts.*

This involves a co-subordination of the editing composition and shot com position on the one hand, and the co-subordination of the compositional form of the various shots to the principle of compositional succession on the other

To illustrate this interconditionality of the intra- and inter-shot construction we give an example of perspective analysis of linear composition made by Eisen stein in respect to one of the episodes of his film " Potemkin ". In Figs. 61–62 are given fourteen successive shots from the scene preceding the firing on the ' Odess Steps.' In this scene the inhabitants of Odessa send yawls with food to the insurgent battleship.

We reproduce the analysis of the linear-dimensional composition in the exact form given by Eisenstein.[1]

The sending of greetings to the battleship is constructed on the definite crossing of two themes :

1. The yawls speeding to the battleship.
2. The inhabitants of Odessa waving.

Finally, these two themes are fused together.

The basis of the composition is that of depth and foreground. The themes dominate the picture in turn, each in turn advancing to the foreground, and each in turn thrusting the other into the background.

The composition is built up : (1) On the plastic interaction of depth and foreground within the shot. (2) On the change of lines and form in depth and foreground from shot to shot (achieved by editing). In the second case the com positional play consists of the action of the plastic impression of the preceding shot in conflict or interaction with the succeeding shot. (At the moment we are basing our analysis purely on the spatial and linear element. The rhythmic and temporal correlations are discussed elsewhere.)

The movement of the composition (see Figs. 61–62) takes the following course :

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[1] This matter is dealt with by him at greater length in the forthcoming monograph-symposium on " Potemkin " shortly to be published in U.S.S.R.—*Ed.*

I. The yawls in movement. A smooth move-
ment, parallel to the horizontal limits of the frame.
All the field of vision is occupied by the first theme,
the horizontal play of small, vertical sails.

II. Intensified movement of the yawls of the
first theme (also aided by the emergence of the second
theme). The second theme comes to the foreground
by way of the strict rhythm of the motionless
vertical columns. The vertical lines foreshadow
the plastic distribution of the future figures (in
shots IV, V, etc.). Interplay of the horizontal
wave troughs and the vertical lines. The yawl
theme is pushed back into the depth of the shot.
The plastic theme of the arch emerges in the lower
part of the shot.

III. The plastic theme of the arch grows
until it fills the entire frame. The play caused by
change in construction from vertical lines to the arch.
The theme of the verticals is retained in the move-
ment of the people going away from the camera.
The yawl theme is finally thrust into the background.

IV. The plastic theme of the arch finally
occupies the foreground. From formulation in
terms of an arc it passes into the opposite construc-
tion, which is indicated by the contour of a group
formulated in terms of a circle (the umbrella pre-
figures the composition). The same transition to
contraposed construction occurs also within the
vertical construction : the backs of tiny figures
passing into the depth are replaced by large figures
taken frontally, and retaining their places. The
theme of the yawl movement is retained in reflec-
tion : in the expression of the eyes and their
movement along a horizontal line.

V. In the foreground is a common compo-
sitional variation : an even number of people is
replaced by an uneven number. Two by three.
This ' golden rule ' of change of the *mise en scène* has
behind it a tradition which can be traced back to the
Italian " Commedia dell'Arte " (at the same time the
direction of the glances also crosses). The arch

FIG. 61.—Analysis of linear-dimen-
sional composition in an episode
of the film " The Battleship
Potemkin ".

motive again emerges, with the arch this time bent in the opposite direction. It is repeated
and supported by a new parallel arch motive in the background : the balustrade. The
yawl theme is represented in movement. The gaze of the eyes extends right across the
horizontals of the frame.

VI. Shots I to V give the transition from the yawls theme to the watchers' theme,
developed in five editing pieces. The interval V to VI brings a sharp return transition
from the watchers to the yawls. Strictly in accordance with the content, the composition
effects a swift transformation by all its characteristic features into its opposite. From the
depth the line of the balustrade is swiftly brought into the foreground, being repeated by
the line of the boat's gunwale. It is doubled by the boat's water-line. The main elements
of the composition are the same but the treatment is contraposed : shot V is static, shot
VI is crosslined by the dynamic of the boat's movement. The vertical division into ' three '
is retained in both shots. The central element is texturally similar (the woman's blouse,
and the material of the sail). The side elements are in sharp contrast : the black patches
of the men on either side of the woman and the white gaps at the sides of the sail. The
vertical distribution is also contrasted : the three figures cut off by the bottom horizontal
of the frame undergo transition into the vertical sail cut off by the upper horizontal of the
frame. In the background emerges a new theme—the battleship side, cut off at the top
(preparation for shot VII).

VII. A new, sharp turn in the theme. The theme of the background—the battleship
—is brought to the foreground (the jump in the theme from shot V to shot VI served as

FIG. 62.—Analysis of linear-dimensional composition in an episode of the film " The Battleship Potemkin ".

a kind of ' anticipation ' of the jump from shot VI shot VII). The viewpoint is changed by 180° : shot taken from the battleship, the reverse of sh VI. This time the side of the battleship is in the foreground, and is cut off at the bottom. In the depth is the sails theme, expressed in verticals. The vertical of the sailors. The gun-barrel statical continues the line of the boat's movement in the preceding shot. The battleship side appears to b an arc, which passes into a straight line.

VIII. This repeats IV with heightened intensity. The horizontal play of the eyes is trans formed into the vertical of waving hands. From the depth the theme of the vertical has emerged t the foreground, repeating the thematic transference of attention to the watchers.

IX. Two faces, on larger scale. Generally speaking, an unfortunate combination with the pre ceding shot. It would have been better to have introduced between them a shot of three faces, t have repeated shot V for example, also in heightened intensity. This would have produced the construc tion 2 : 3 : 2. Moreover, the repetition of the familiar group in shots IV and V with the new ending shot IX would have heightened the impression of the last shot. The position is saved by some enlarge ment of the scale.

X. The two faces pass into one. A very energetic throw of a hand up beyond the frame limit A correct alternation of faces (if we make the sug gested correction between shots VIII and IX) 2 : 3 2 : 1. A second couple correctly enlarged in size in relation to the first couple (exact quantitative repe tition with qualitative variation). The line of the odd numbers is different in both quality and quantity (different dimensions of faces and a different number, while retaining the common element of odd numbers).

XI. A new sharp turn in the theme. A jump repeating the jump between shots V and VI in heightened intensity. The vertical upthrow of the arm in the preceding shot is repeated by the vertical sail. But the vertical of this sail shoots up from the horizontal. A repetition of the theme of shot VI in greater intensity, and a repetition of composition II with the difference that the themes of the horizontals of the boats' movement and the verticals of the motionless columns are here blended into the one horizontal movement of a vertical sail. The composition repeats the thematic line of union and the fusion of yawls with the people on the shore (before passing to the final theme of fusion : of the shore by way of the boats with the battleship).

XII. The sail of shot XI is broken up into innumerable vertical sails scudding along in a horizontal direction (a repetition of shot I in heightened intensity). The small sails move in the opposite direction from that of the large sail.

XIII. Having broken up into small sails, the large sail is assembled again, not into a sail, but into the flag flying above the " Potemkin ". A new quality in this piece : it is both static and mobile—the mast is vertical and motionless, the flag flutters in the wind. Formally shot XIII repeats shot XI. But the substitution of the flag for the sail transforms the principle of plastic unification into an ideological-thematic unification. We have not only a vertical plastically uniting the various elements of the composition, but a revolutionary banner uniting battleship, boats and the shore.

XIV. Thence we have a natural return from flag to battleship. Shot XIV repeats shot VII, also in heightened intensity.

This same shot introduces a new compositional group expressing inter-relationships between the yawls and the battleship, in distinction from that of the first group dealing

th yawls and the shore. The first group expressed the theme : ' the yawls carry greetings
d gifts from the shore to the battleship '. The second group will express the fraternisation
boats and battleship.

The compositional dividing-point, and simultaneously the ideological unifier of both
mpositional groups, is the mast with the revolutionary flag.

Shot VII, repeated by the first section of the second group XIV, is a kind of fore-
arning of the second group and also the element linking the two groups to each other,
though the latter group had made a ' raid ' into the first group. In the second group
e same rôle will be played by the sections showing figures waving, cut in between the
enes of fraternisation between the yawls and the battleship.

It must not be thought that the shooting and planning of these pieces were
irried out in accordance with these tables, drawn up *a priori*. Of course not.
ut the assembly and distribution of these pieces at the cutting bench was already
early dictated by the compositional requirements of the cinematographic form.
hese requirements dictated the selection of these pieces out of all those at the
irector's disposition, and they also established the logical sequence of their
ternation. In point of fact, these pieces, considered only from the narrative
d theme aspect, could be rearranged in almost any combination, but in that
ise the compositional movement through their sequence being less logical in its
onstruction, the result would hardly be so effective even from the strictly narra-
ve or thematic point of view.

CHAPTER TWO

METHODS OF WORKING OUT THE SCENARIO

1. THE PRODUCTION SCENARIO

CINEMATOGRAPHIC production is closely bound up with a highly complicated technical process. The organisation of the shooting process occupies 90 per cent of the total time occupied in making a film from start to finish.[1] If only for this reason, the organisation of the camera-man's creative process calls for great systematisation and intensive thought.

In the ideal case, namely, when we are working in a creative group in which director and camera-man have been associated in uninterrupted work for many years, the camera-man does, in fact, take part in the creation of the film right from the moment that the author's intention is formulated in the scenario. Together with the director he collects and considers the material for the directorial scenario, together with him he decides upon the chief objects of each shot, and their character. For the camera-man this is essentially the most valuable stage of the preparatory work, for it is during this period that it is easiest for him to come to a clear, mutual understanding with the director.

However, such creative groups, built up in the course of long association, are very few in actual cinema practice. In the present-day system of production the camera-man begins to participate in the preparatory work only when the director has completely finished his plans for the film.

In the interests of our further conclusions we must here give a brief definition of the process of working out a scenario according to its various stages.

In future we shall use the term ' *literary* ' or ' *author's scenario* ' for the exposition of the film content in its abstract literary distribution into shots.

By ' *director's scenario* ' [2] we mean the exposition of the film content with precise directorial distribution into shots, which also include indications of the methods by which the director intends to carry through each shot (the director's solution).

By the term ' *production scenario* ' [3] we mean the exact production project of the future film, which is drawn up as the result of the collective creative activity of the director, camera-man, art director, and sound recordist. The production

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[1] Such thorough preparation is accorded in the Western cinema only to ' super ' and never to ' programme ' productions.—*Ed.*

[2] Nearest Western equivalent—the first ' shot script '.—*Ed.*

[3] Nearest Western equivalent : final shot script plus ' dope-sheets '.—*Ed.*

scenario should, also, contain the chief technical instructions applying to the various stages of the production process.

In actual practice we come across cases of a scenario being put into production before its treatment has been completely worked out. Taking for granted that such methods are in principle wholly impermissible, we shall consider only the fully worked out form of scenario treatment, in other words the production scenario.

Considering the production scenario from the aspect of the camera-man's participation in its creation, we can distinguish the following forms of camera man's treatment :

1st form : The shot script.

This system is employed in Western Europe, the equivalent term in German being ' Drehbuch '. The shot script gives the details of the technical method to be employed on each shot. Problems of compositional construction are completely ignored.

2nd form : The set-ups (camera viewpoints) are indicated for each shot on the basis of plans of the sets supplied by the art director.

3rd form : In this system a compositional scheme is set out for each shot

4th form : For each compositional scheme is set out the means of its technical realisation.

We must distinguish two further forms of construction of the production scenario, which have been established in foreign and Soviet cinema practice only during the past two or three years.

In Germany the initiator of a novel form of scenario method was the young director Frank Wysbar, who is noteworthy for his endeavours to improve the process of production, and also for the realistic tendencies observable in his work. Wysbar does not believe in the various members of the production group working in isolation from one another, and insists on the necessity for the collective creative activity of all the participants in the production process, basing his method of scenario treatment on this standpoint.

The main features of his scenario construction are the way in which the entire group is brought into collective creation, and his emphasis on the preparatory period. Shooting begins only when all the essentials of the future film are completely in draft. From the primary scenario sketch (or from the literary scenario) a kind of intervening form is prepared. This is on scenario lines, but more developed. Wysbar regards this form, which he calls ' the film on paper', as a new link in the process of production, and is inclined to consider it the basic and most important stage of the whole process.

The ' film on paper ' is a roll of paper on which are entered graphs corresponding to the various sections of the work of production. The first graph entered is the director's solution for each shot. The next is provided by the camera-man, and gives the compositional scheme of each shot and the technical methods of carrying it out. Then come the graphs of the sound-recordist, of the art director, and, finally, photographs of tests.

The entire paper roll is a skeleton form of film cut in its editing succession, and with the approximate indication of its length. In the course of unrolling it one obtains a thorough idea of the method of making the future film, and can consider in advance all the measures necessary to the process.

The Wysbar system provides an essential link between the production scenario and the so-called (daily progress) report sheets, and so is a very valuable form of preparation for the film.

However, the employment of this system in production involves the necessity for an exceptionally long preparatory period.

A similar system has been introduced in slightly different form by Kuleshov in the Soviet Union. By arranging for a long rehearsal period he makes it possible to detail the scenario treatment within certain broad limits. Kuleshov provides not only compositional schemes, but finished sketches of each shot for the camera-man's side of the creative process.

These sketches are prepared in two forms : (1) A sketch of the linear-dimensional treatment, and (2) a sketch of the lighting and tone construction (lighting theme).

We must also mention V. Zhemchuzhni's proposal to have two forms of fixing the preparatory scenario treatment, *the first form* to contain the scheme of linear-dimensional and lighting composition, *the second form* containing a description of the proposed technical methods of effecting the compositional schemes for each given shot.

FIRST FORM

1	5	9	Scheme for camera set-up and lighting	Composition of the shot
2	6	10		
3	7	11		
4	8	12	Description of lighting	Special attachments

SECOND FORM

CAMERA-MAN'S SCENARIO

CAMERA.
   1. Type of Camera.
   2. Focal length of lens (75, 50, 35 . . .), and its type.
   3. Light strength.
   4. Filter.

FILM NEGATIVE.
   5. Character.
   6. Footage.

COMPOSITIONAL FACTORS.
   7. Camera angle (Long-shot, mid-shot, close-up or figure indication).
   8. Pans.
      (a) Horizontal.
      (b) Vertical.

VARIOUS.
   9. Diaphragms.
      (a) External :
         iris in.
         iris out.
      (b) Internal :
         iris in.
         iris out.
  10. Dissolves.
  11. Number of frames per second (24, 18, 40, 120 . . .).
  12. Amperage.

Thus in the first form we have *compositional schemes* covering the whole of the treatment of the given section of the film, and in the second we are given prescriptions for the *technical accomplishment* of each given compositional scheme.

The author of the project reduces both the forms to one, assuming that it is possible during the preparatory period to foresee the exact details of the technical conditions of shooting. However, as we shall see later, they by no means always correspond to the conditions actually prevailing in the course of production.

We give one further example of camera-man's preliminary treatment. This is the most typical of all the attempts to rationalise the shooting process.

SHOT FROM THE FILM " ORDER FOR LIFE "	
LENINGRAD STUDIO	
No. of shot	1
Footage	12
Set-up	Camera viewpoint from below. Camera two feet from ground level
Camera-angle.	Long-shot
Technical peculiarities	Back lighting. Take with a glass diffuser, slightly accelerated. Iris in
Shot content	Horizon. Snowy fields. The sun rises in morning mist from beyond horizon. A caravan of camels is passing
Colour and tone	No colour
Note :	Take at 5 a.m., at dawn

Here we have technical indications for taking the film, expressed in literary form. But the compositional scheme, which is basic and the most important matter so far as the camera-man is concerned, is lacking. And the absence of a compositional scheme makes the predetermining of technical conditions of shooting in the form given completely pointless. The determination of the time of shooting, the set-up and camera viewpoint is possible only on the basis of a previously worked out compositional scheme on the one hand, and detailed acquaintance with the specific conditions of nature on the spot on the other. Thus, such a form of camera-man's preparatory technical treatment in reality predetermines nothing and rationalises nothing, and is only an arbitrary kind of ' bureaucratic red-tape '.

So that in the production practice of Soviet and foreign cinema we find the following forms of camera-man's treatment :

1. The organic inclusion of elements of the representational treatment in the production scenario (the Wysbar and Kuleshov systems).

2. A camera-man's scenario worked out independently and parallel with the directorial scenario (the Zhemchuzhni proposal).

3. The absence of any representational treatment in a preliminary worked out form, and its replacement by technical instructions, which are of no decisive importance in the subsequent shooting process (the form of camera-man's preparation most frequently met with in production).

Undoubtedly the most valuable way of preparing the camera-man for making

film is that of *deciding upon the compositional scheme of the shot by the process of analysing the author's and director's versions of the scenario, and organically including this compositional scheme in the production scenario.* The compositional scheme then becomes an inseparable element of the entire production project for the film as a whole, as it essentially should be of any production scenario in the true sense of the term. To work out the camera-man's treatment in a form isolated from the production scenario is a compromise resolution of the task, and in practice it arises when the director's version of the scenario is not advanced to its final production form, in other words, to the form of the production scenario. It must be especially emphasised that in the absence of a well-thought-out compositional scheme a preliminary purely technical treatment is in our view completely useless.

Having, on the basis of the previously existing material, established a number of factors determining the manner in which the camera-man is to participate in the creative process of preparing for and shooting the film, we must now summarise the conditions under which he can in fact fulfil the creative functions allotted to him.

Obviously, first and foremost there must be unity in the creative attitude of the director and the camera-man. Filming groups cannot be chosen by the administration assigning a certain camera-man to a certain picture, irrespective of his creative tendencies and gifts. He must actively participate in dealing with the director's version of the scenario during the preparatory period, since only in such conditions can he get a thorough grasp of the chief scenario-directorial purpose in the treatment characteristic of the given director. If he merely analyse the completed director's scenario without continual contact with the director during the process of working out the treatment, he will be much less likely to discover the organic form of the required representational treatment. If he participate in the process of working out the treatment of the director's scenario, it will be possible to consider his proposals in advance and include them in the production plan. And in certain cases these proposals may have a decisive influence upon the directorial treatment of the film.

When the director has completed his working out of the scenario, the camera-man should be allowed a period of working on the film together with the art director. The sketches for costumes and sets are produced during this period,[1] and in addition he works out compositional schemes for the various objects to be filmed, in conjunction with the art director.

We attach particular importance to the question of working in conjunction with the art director. A specific peculiarity of the architectural construction of sets for studio work is that each set is planned for a definite camera set-up, taking into calculation the definite angle of vision of the lens. Cases have been known of the art director setting to work to construct studio sets without reaching preliminary agreement with the camera-man. As the result the finished set has proved to be of less value than it should have been, because of the fact that the peculiarities of the optical transmission of the lens used have not been taken into account.

Now we must consider the various stages of the process of carrying out the camera-man's treatment in the form predetermined by the particular scheme adopted.

Jointly with the director the camera-man works out the director's version

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[1] In Western practice art director (sets) and dress designer are commonly (and illogically) separate persons who scarcely collaborate.—*Ed.*

of the scenario. Parallel with the directorial distribution into shots and h[...] planning of the *mise en scène*, the camera-man decides what are the main ele[...] ments necessary to the representational treatment of the given shot. By th[...] time he has finished working out the director's scenario he should finally hav[...] elucidated the following :

The chief elements governing his general standpoint in the representationa[...] treatment of the given film (the ' literary ' or stylistic characterisation).

His standpoint in relation to the representational characterisation of th[...] various persons in the film.

His chief technical requirements in regard to the decorative formulation c[...] the set, costumes and make-up, and finally, the technical requirements indis[...] pensable to drawing up estimates for the picture.

The next stage of the process consists in the detailed formulation of th[...] production scenario to be used in producing the picture. The elements of th[...] camera-man's treatment included in the production scenario are the following[...]

For each object in the film, taking the compositional scheme of the long[...] shot as his basis, the camera-man works out in editing form the compositiona[...] schemes of all the main shots that are of decisive importance in the editing com[...] position. We may also include editorial cut-ins of secondary importance an[...] shots which do not involve any special composition in advance. Taking th[...] normal length of a sound film at 7,200 feet and the average length of an editing[...] piece for a sound film at 15 feet, we get about 480 shots, of which some 300 may[...] require preliminary compositional treatment. On the average, the creation o[...] compositional schemes for this number of shots, with the camera-man and ar[...] director working together, occupies not more than from ten to fifteen days. The[...] compositional schemes thus worked out are then included in the production[...] scenario as illustrative material to each directorial shot. Each scheme is given[...] in fairly simplified form, without any indication of details. In the linear-dimen[...] sional scheme only the situation of the object in the frame space is usually given[...] Here the planning of the objects along one or another diagonal, the height of th[...] horizon in the frame, the foreshortening, etc., are provided for.

For the tonal scheme, which is built up after the scheme of linear-dimen[...] sional composition has been determined, a more complex sketch is provided[...] While preserving the same distribution of objects as in the first scheme, the tona[...] scheme also gives the distribution of the tonal spots. With this scheme of tona[...] composition to guide him the camera-man can later judge of the type of negativ[...] required in filming the given object, the filter to use, and the contrast of imag[...] necessary.

In Fig. 63 (*a–e*) are given schemes of compositional treatment for th[...] film " Chapayev " (directors, the Vasilievs ; camera-man, Sigayev).

It is not always necessary to produce a worked-out lighting scheme for eac[...] separate shot, as the lighting scheme of the long-shot usually governs that of al[...] the editing links in the given scene. If, however, these provide special lighting[...] tasks, then of course supplementary schemes can be worked out and included i[...] the production scenario.

The production scenario also includes all the material obtained in making[...] tests. This material is of guidance mainly on the questions of actors' make-up[...] and costumes.

In regard to exterior shots the camera-man provides material for the pro[...] duction scenario only after he has examined the location of the exterior sho[...] jointly with the director.

FIG. 63.—Compositional sketches for the film " Chapayev ".

A general list of auxiliary technical attachments and lighting apparatus should be attached to the production scenario. The list of lighting apparatus is drawn up for the purpose of guidance, and takes as its starting-point the lighting scheme for the long-shots based on the models of the sets. The lighting list must be worked out in detail *before each object is shot*.

The production scenario also includes the camera-man's general technical observations on the shooting of individual objects. The technical treatments of separate shots are produced only after the camera-man has informed himself in detail on the conditions of shooting in the given exterior or on the actual set.

If the question of composite photographing [1] arises in the course of work on the film, the production scenario should include an exact plan for carrying out the given composite shot, with all the calculations, including scale, etc.

Such are the camera-man's main requirements in the course of working out the production scenario. We have deliberately omitted the question of working out the technical questions in detail for each separate shot, as it is not possible to include material of this kind in the production scenario. The compositional scheme always serves as an exhaustive criterion of the correctness of the camera-man's conception of his representational tasks. As for the technical methods of realising the given compositional scheme, in the great majority of cases this task can be resolved only after detailed acquaintance with the immediate conditions of shooting on the spot. This way of stating the case, however, by no means implies that it is impossible to work out the technical treatment of the compositional scheme in a preliminary form. On the contrary, if the shooting process is to be carried out rationally a preliminary technical treatment must be drawn up. But the conditions in which it has to be put into effect dictate a somewhat different form of scenario fixation from that required in order to put the production scenario into effect. We must consider this question in more detail.

The technical methods of carrying out the compositional schemes of a shot involve decision on the following technical factors :

[1] Superimposition, lap dissolve (mix), etc.—*Ed*.

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1. The choice of lens according to the character of the sketch, the lightin strength and focal length.

2. Determination of the position of the camera when shooting (the set-up).

3. Auxiliary optical attachments (supplementary lenses, gauzes, etc.).

4. The filter and its selective absorption.

5. The scheme of distribution of lighting apparatus or the distribution of the lighting accessories in exterior shots.

6. Determination of the technical method of fixing each shot.

7. Preliminary estimate of exposure time, etc.

8. Determination of the speed of shooting.

9. Special auxiliary attachments, etc.

Obviously, here we have to deal with a number of definite technical detail which must in some way be taken into consideration in advance. The inclusio of all such instructions in the production scenario is technically quite impossibl and for that matter is unnecessary. In the same way it would be stupid to deman that the art director should include in the production scenario all his exact instruc tions and estimates for the construction of the sets. The director is usuall content to confirm the model of the set, leaving the art director to solve th technical problems. Yet, independently of the production scenario, a preliminar technical treatment is of great importance for the camera-man, both in order t enable him to prepare for the shooting process, and also so that he can accumulat his technical experience in a permanent form. Consequently, a separate forr of setting out should be adopted for the technical treatment, and we may pro visionally call this form the ' camera-man's diary '.

It must be emphasised that the establishment of useful organisational form of preliminary treatment of the creative task must not be regarded as an attemp to restrict the camera-man's freedom in the shooting process. So far as he i concerned the compositional scheme is only a starting-point and guiding facto in the construction of the shot. He entirely retains his right during the shootin process to modify the compositional scheme adopted in any scene in order t bring it into correspondence with the actual conditions of shooting and the nev tasks that arise during shooting in consequence.

At the same time, the working out of compositional schemes during th preparatory period undoubtedly inspires the camera-man, and ensures that th compositional construction of the shots has been given adequate thought befor shooting.

2. REVIEW OF TECHNICAL METHODS OF SHOOTING

When the linear-dimensional and the tonal compositions have been com-
pletely worked out, the camera-man's part in preparing the production scenario
is virtually finished. As we have said, the technical aspect of the compositional
schemes should not be included in the production scenario, but should be drawn
up as a separate project, in the form of the ' camera-man's diary '.

In our opinion this ' diary ' should consist of a series of tables giving the
technical explanation of the most complicated of the compositional schemes,
together with exact instructions as to the technical methods by which they are
to be carried out.

The need for the ' camera-man's diary ' arises from a series of technical
difficulties. To begin with we must remark that so far cinematographic technique
has no satisfactory system of generally accepted recording of technical methods.
When the camera-man hands in his request for lighting apparatus and auxiliary
attachments to the corresponding department he usually employs his own primi-
tive symbols, and certainly not those of any single, generally accepted system.

In all other spheres of technique there is a single system of graphic symbols
for use in plans, diagrams, etc. And in view of the technical complexity of the
shooting process, we consider that a similar single system is very timely and
necessary in the sphere of the camera-man's technique.

In order to indicate technical methods the directorial scenario customarily
resorts to a standard literary description, such as ' slow lap dissolve ', ' wipe down-
wards ', ' fade-in ', ' fade-out ', and so on. Taking for granted that the production
scenario should contain not only the director's scenario treatment, but that of
the camera-man, sound-recordist, music composer, art director and other par-
ticipants in the process of film making, we must ensure that any form of technical
symbol should be as simple as possible. Otherwise the production scenario will
be overloaded with all kinds of literary annotations, which will make it impossibly
difficult to decipher during the filming process. Consequently, we propose a
provisional graphic system to convey the camera-man's technical methods.

In Fig. 64 we give simple symbols, founded on the principle of direct graphic
similarity with the functional aspect of each respective technical method. Only
elementary methods not involving special preliminary estimates are included.

1. Fade-out.
2. Fade-in (the reverse process).
3. Lap dissolve or Mix (combination of the two previous processes).
4. Pan in horizontal and vertical directions.
5. Iris diaphragm.
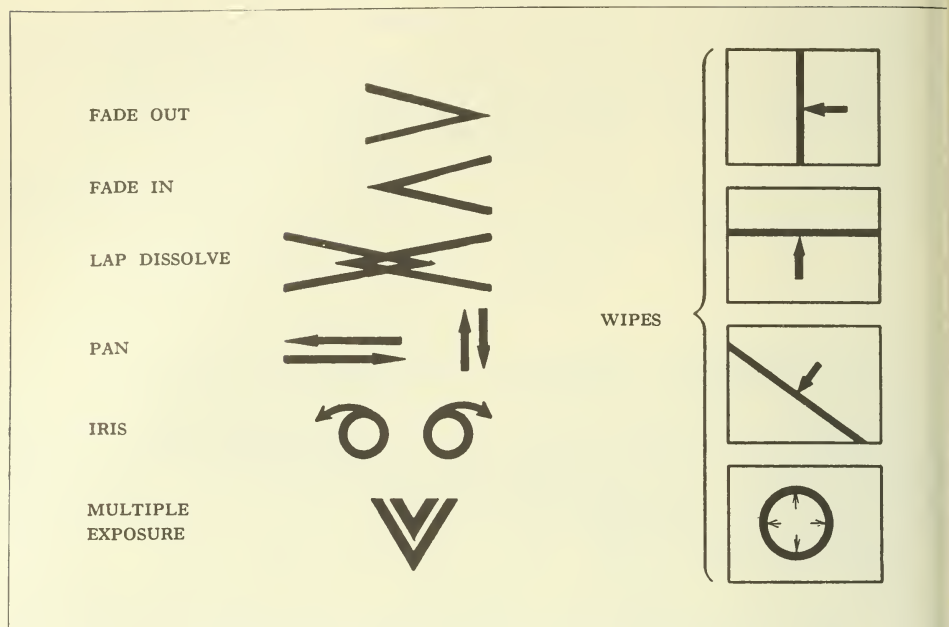
FIG. 64.—Proposed symbols for technical methods.

6. Multiple exposure (super-imposition).
7. Wipes of all kinds (along the frame horizontals, frame verticals, fram
     diagonals, and circular).

Fig. 65 is a table of abstract symbols for lighting equipment. Equipmen
for lighting from above, usually hung four to a frame, is indicated by a symbo
of simple graphic similarity. Standing equipment similar in construction wit
reflectors of 1,000 mm., 750 mm., 600 mm., 330 mm. and 250 mm. is represente
by a constant symbol, with the sole difference that the diameter of the reflecto
is indicated separately by its first figure, unless of 1,000 mm. when we give th
first two figures. Lens attachments, arcs, aggregates, and equipment for specia
lighting are given separate symbols.

In the process of shooting the various personages the camera-man make
notes of the actual lighting schemes used ; with the aid of these he can at an
time restore the system of lighting he has adopted. It is essential for him t
preserve such compositional schemes, for it frequently happens that certain shot
with certain actors are taken at the beginning of the production, and those imme
diately following are left until the end. If he has no memory or note of th
lighting scheme utilised during the filming of the first shots, he has to work i
out again during the actual process of shooting, as otherwise shots lit differentl
may not fit together well in editing. In Fig. 66 we give examples of the simples
method of preparing lighting charts for close-ups.

In Fig. 67 we give a table from the ' camera-man's diary ' ; this should b
printed in the form of a standard blank to be filled in. On the left side of th
table he briefly notes the number of the shot and its content according to th
production scenario. Underneath, he makes his notes on the specific features o
the given object (character of the lighting, day or night, tone, etc.). In the to
right-hand corner is given the compositional scheme. The setting of the lighting

TOP LIGHTS	
1000 mm.	10
750 mm.	7
600 mm.	6
500 mm.	5
330 mm.	3
250 mm.	2
SPOT	
ARC	
BANK	
SPECIAL EFFECT APPARATUS	
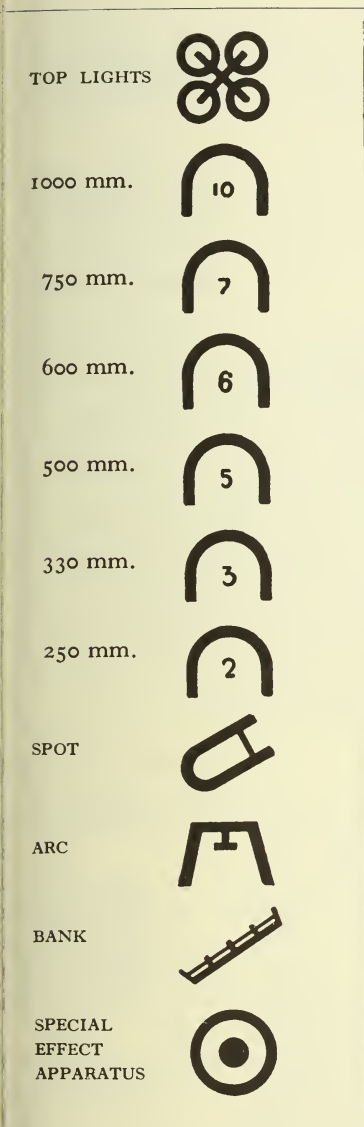
Fig. 65.—Proposed symbols for lighting apparatus.

SCHEME WITH 2 LIGHT SOURCES

SCHEME WITH 2 LIGHT SOURCES

SCHEME WITH 3 LIGHT SOURCES

SCHEME WITH 4 LIGHT SOURCES
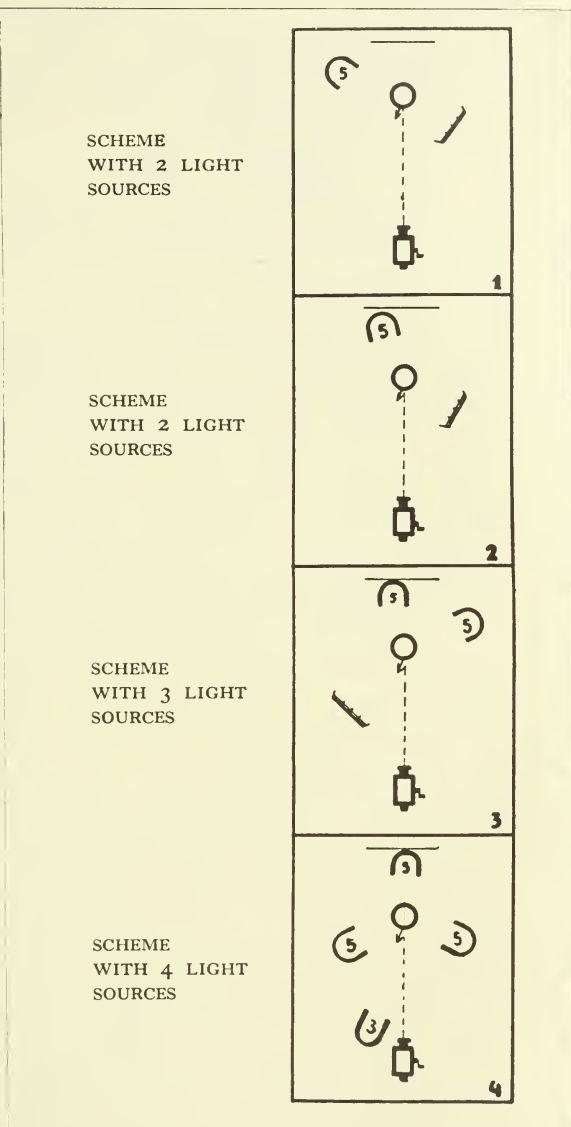
Fig. 66.—Chart of lighting scheme for close-up.

equipment and the camera set-up is marked down on a specially scaled graph. At the same time the technical conditions of shooting are approximately determined, and the laboratory treatment of the exposed negative noted down. In the lower part of the table is a schedule of the lighting equipment and a general estimate of the amperage.

Tables of this kind should be filled in exclusively for long-shots of each object. There is no necessity for such tables when taking mid-shots or close-ups, since the character of the lighting of the appropriate long-shot has provided the cameraman with a basis. Estimating that in a film of normal length (7,200 feet) there

will not be more than twenty to thirty long-shots, it should not be difficult f
the camera-man to fill in such tables. Copies are handed to the lighting depar
ment, and the electricians can carry out the positioning of the lighting equipme
exactly, as the tables provide them with a general outline of the composition
scheme of the shot.

Now to deal with the problem of noting down more complex technic
methods. If the camera-man has to take a shot involving a pan he is frequent
faced with the necessity of making a preliminary estimate of the length of tl
pan. Without such an estimate it is extremely difficult to determine ocular
the rate of movement of the panorama head. And the difficulty is increase
when the director requires the pan to occupy an exact length in the editing

The panning of the camera is achieved either by turning the correspondir
handles (one for horizontal and one for vertical pan) on the head of the came
tripod, or by shifting the camera by hand with the aid of a special lever provid
on tripods of certain types. In the first case the result is a slow, flowing pa
in the second a swift, abrupt pan. When reckoning the speed of the pan we tal
into account the angle formed by the direction of the chief optical axis of tl
lens before and after the beginning of the pan, and the magnitude of the effecti
angle of vision of the lens used, in the plane in which the pan has been carri
out. On these magnitudes will depend the footage of the pan shot, and also tl
degree of lack of definition of the image in the shot due to the swift moveme
of the pan. Usually the mechanism of the present-day tripod is constructed
shift the optical axis of the lens through an angle of one degree for every turn
the panning handle. It is difficult to turn the panning handle smoothly ar
steadily at a speed greater than two to three turns per second, and so in practi
the speed does not exceed this rate. Turning the handle at two to three turi
per second, we shift the optical axis of the lens at a steady angle speed of thre
degrees per second. And this figure provides us with a basis for estimating tl
length of film required for shooting the given pan.

Let us suppose we are taking a pan through an angle of ninety degree
Dividing ninety by three, we get the time-length of the pan, i.e. thirty second
In shooting sound film at a speed of twenty-four frames per second, eightee
inches pass through the camera in one second. So that in the thirty secon
occupied to take the pan through an angle of ninety degrees forty-five feet of fil
pass through the camera, and the scenario should provide for this.

We will analyse another complex technical method of shooting which al
requires preliminary estimates and noting down in chart form. In order to avo
errors the estimate of a complex shot including lap dissolves and fades shou
be made not only by noting down the number of handle-turns, but also with tl
charting of a diagram which at any moment will render it possible to see at
glance which stages are already shot and which remain to be shot.

We suggest a simple and convenient system of charting the processes of suc
a composite shot, based on the principle of co-ordinate construction. This sy
tem saves both the camera-man and his assistant the necessity of making ar
supplementary note during the actual shooting process.

In Fig. 68 we give a graph of notes for shooting processes involving dissolve
or transitions to exposure magnitudes other than the magnitude of exposu
adopted at the beginning of the shot.

Along the horizontal axis of the system of co-ordinates are placed the numer
cal turns of the camera handle. Along the vertical axis are given the magnitud
corresponding to the aperture of the angle of the shutter in degrees.

CONTENT OF SHOT NO.

AS PER SCENARIO_____

_____

_____

TYPE OF LENS_____

_____
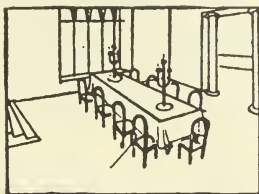
COMPOSITIONAL SCHEME
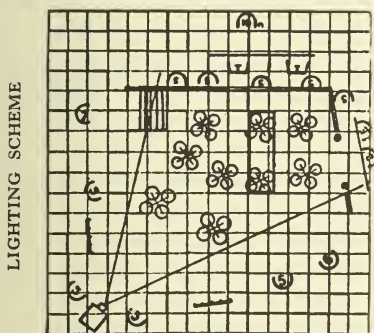
LIGHTING SCHEME

PHOTOGRAPHIC NOTES :

CAMERA_____

FILM STOCK_____

LENS_____f._____ap._____

SHUTTER_____

NOTES FOR LAB._____

_____

SCALE   FEET

LIGHTING	ARC	INCAN.
TOP		
1,000 mm.		
500 mm.		
330 mm.		
250 mm.		
SPOTS		
BANKS		
SPECIAL EFFECTS		

AMPERAGE

FIG. 67.—Page from ' camera-man's diary '.

Suppose we have to carry out a composite shot task of the following kind.
After four turns of the handle taking a normal shot we have to make a lap dis-
solve, next the shot proceeds normally for four turns, then a partial fade-out is
made for one turn ; the shot continues with an angle of aperture of the shutter
of 62° for three turns, then the aperture is opened to the maximum for two turns,
and lastly the shot proceeds normally. In our chart, the straight section, parallel
to the horizontal axis, represents the course of the normal shot during the first
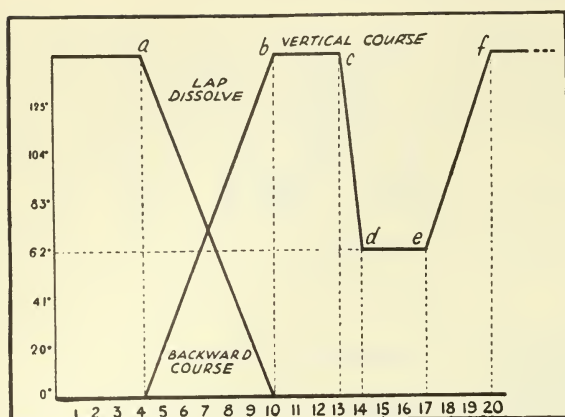
FIG. 68.—Chart of dissolve an
fades.

four turns of the handle. From the fourth to the tenth turn, beginning fro
point *a*, the straight line changes its course and goes sharply downward, i.e. the
is a fade-out. At the tenth turn of the handle the dimension of the angle f
opening of the shutter aperture is obviously equal to nil. Then the handle
turned in the opposite direction from the tenth to the fourth turn, with a clos
shutter. From point *b* to point *c* the straight section again takes a directi
parallel to the horizontal axis of the system of co-ordinates. The shot procee
normally from the tenth to the fourteenth turn of the handle. At point *c* t
straight line drops to point *d*, which corresponds to a closing of the shutter
62° during one turn of the handle. From point *d* to point *e*, during three tur
the shot proceeds with the shutter open to 62°. From point *e* to point *f*, duri
three turns the shutter is opened back to full, and then the shot proceeds no
mally. Counting along the horizontal axis the number of turns from the fi
to the final stage of the entire process, we get twenty turns, which, according
the calculation given above, corresponds to about seven feet.

In our chart we have set out along the vertical axis the designation of t
shutter aperture angles according to the seven degrees of the " Debrie " syste
Obviously, the construction of a chart for any other system presents no spec
difficulties. And in the shooting process the camera-man needs only to note ea
stage on the chart as it is made, in order to determine beyond possibility of err
what are the successive operations in the shot, and with what shutter openi
they have to be made. Supposing that at point *d* of our chart we have ma
fourteen turns of the handle and the shutter angle is 62°. By comparing the
details with the figures of the footage counter and the actual position of t
shutter-opening at that moment, the camera-man can at once determine whi
part of the shot has been taken, and whether any stage of fade-out or shutte
opening has been missed. The best way is to mark out the chart on paper squar
in millimetres, preparing a standard blank complete with co-ordinating axes a
denotations.

Finally, we have to consider one other variety of shot, which in practice
is impossible to make at all without preliminary calculation. This covers all t
forms of composite shots involving a simple perspective combination of a mod
and part of the full-scale set.

The method of combining a model with the full-sized set was first applied
Germany by the art director Lotka, who set up a miniature model of the upper pa

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a set directly in front of the camera lens, at a distance of three to four feet. The lower part of the set was built up in a corresponding position at a greater distance in full scale, and the action with the actors took place against the background of this part of the set. This method of combined shot is very simple to achieve technically, but the preparation of the model demands absolutely exact preliminary calculations, which the camera-man should make and hand to the art director.

In constructing a set to its natural scale the camera set-up, situated at a previously known distance from the set, is taken into account. In that case, using a lens with a definite focal length, only one definite point can be chosen along the line of the lens' optical axis at which the model can be set up. If the model is so sized that it must be set up at a distance of ten feet from the camera, then there can be no shifting of the model during the shooting process, otherwise it either hides part of the natural-size set, or comes out too small. Consequently the calculations governing the size of the model must be absolutely exact, and an error of three or four inches only will result in failure to achieve a perspective combination of the model and the full-size background set.

At the present time the method of simple perspective combination with a model is used a great deal, not only abroad, but in Soviet cinematography. Consequently, special attention must be given in the scenario to preliminary calculations of model position.

Fig. 69 gives an example of a preliminary calculation for such a model to be used in perspective combination.

Supposing that part of a set sixty-five feet long is built up in its natural size at a
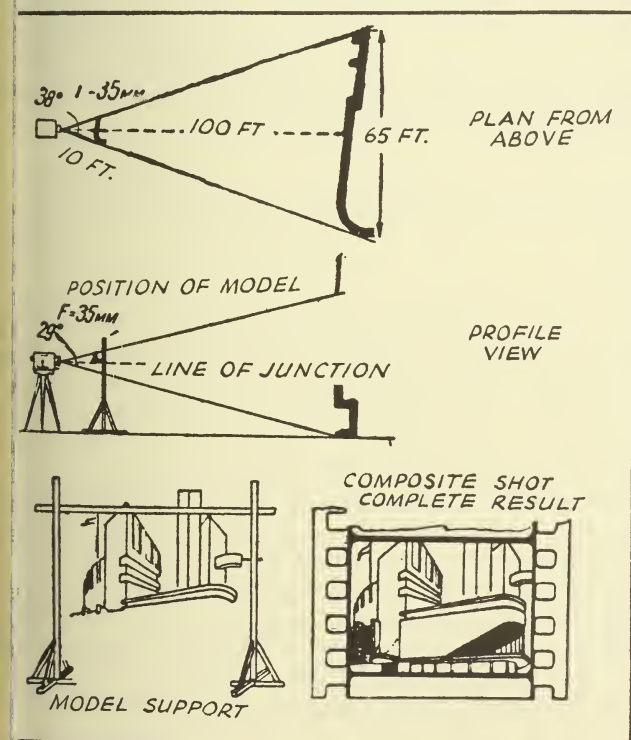
FIG. 69.—Diagram for combined trick model shot.

distance of 100 feet from the set-up. The shot is taken with a lens of focal length 35 mm. This lens will have an effective angle of vision of 38°, calculated along the frame horizontals.

Marking out the extreme limits of the effective angle of vision so that from the chosen set-up they completely embrace the natural section of the set, we get the dimension of our models for any point along the line of the lens' main optical axis.

The closer the model is brought to the set-up, the smaller will be its linear dimensions. On the millimetre-squared paper we can calculate the linear dimensions of the model to within three or four inches. Thus we get the necessary dimensions—the breadth of the model and its distance from the set-up.

We make a similar calculation for a profile-plan of the entire construction. In this case the effective angle of vision, reckoned for the verticals of the frame, will be equal to 29°. From this calculation we get the linear dimensions of the height of the model. After informing the art director of these dimensions the camera-man has only to mark out on his chart the point at which the model has to be set up in front of the camera. With such preliminary calculation the combination is achieved very simply, and the height at which the model is to be suspended on its supports can also be determined beforehand.

Among special calculations we must also include the determination of the size of representation of the object in the shot, which is required in many forms of short-timed exposure of the shot. It is necessary to introduce this calculation, based on well-known formulæ, into the camera-man's scenario treatment.

The foregoing comprise certain general considerations concerning the method of planning the camera-man's scenario treatment. Experience of recent years has shown that the existence of a special camera-man's scenario, worked out parallel with the director's and in contradistinction from his, is not desirable. Undoubtedly it is a sound principle to have only a single production scenario which should also be the general project for the film being made, and usable by everyone. The camera-man can make his separate notes.

CHAPTER THREE

CREATIVE PROBLEMS OF THE CAMERA-MAN'S ART

1. THE 'REPRODUCTION' PERIOD

IN order to elucidate the chief tendencies of development of the camera-man's art in the period of the birth of cinema, we must briefly deal with the history of photography, for it is here that the first creative impulses of the cinema camera-man have their beginning.

From the very first days of photography there were two main tendencies in its development. On the one hand it was accorded universal recognition as a means of scientific investigation, of exact documentation of the object photographed. At the same time, photography was given its rightful, and honourable place among the other previously existing representational arts as a new method of artistic representation.

The varied possibilities of photography were realised from the very earliest days of its existence. Gay Lussac, who on *July 30th 1839* expressed his opinion of Daguerre's invention, thus defined photography's future rôle.

Daguerre's method will undoubtedly have extensive application ; artists will use it for the manifestation of forms, designers as a perfect pattern for perspective and for studying the distribution of light and shade, natural scientists for study of the various kinds of animals and plants and their construction.

In its further development photography brilliantly confirmed Lussac's expectations. There is hardly a sphere of natural science in which it does not play a considerable part as a means of scientific investigation. Wherever photography has fulfilled the exact and definite tasks of scientific investigation and documentalisation, it has invariably earned high commendation as a perfect method of representation.

The position is a little different in regard to the development of photography as a specific form of representational art. The pioneer of photography, Daguerre, was a painter by profession. Working in the studio of the decorator Degotti, as early as 1822, he tried to find a more perfect method of representation than that of portrait painting. When he discovered a technique of photography he at once applied it as a means of artistic reproduction of a portrait, and his first work in this direction obtained general recognition as genuine examples of art. After Daguerre, the English artist, *David Octavius Hill*, in 1843–5 created a number of photographic portraits which aroused universal admiration by their artistic and realistic qualities.

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FIG. 70.—Anonymous photograph taken in the 'fifties.

With the aid of photography, both Daguerre and Hill created artistic works because both of them were genuine artists, creatively applying the new technique of representation. The works of these first masters of photography astonish us first and foremost by their clear expression of character, by their extreme endeavour to perceive the individual lines essential to the given object. The photographic portraits produced by both Daguerre and Hill are typical for the extraordinary profundity of their work on the characteristics of the subject portrayed.

The work of the pioneers of artistic photography was realistic, but at the same time it was by no means a simple passive reflection of the object. Mechanical reproduction, the technicalism of so-called ' documentary record ' photography had no place in it. The creative elements predominated over the bare technique brought into the service of the artistic tasks, and this was the main reason for the success of the first artists in photography. It is possible that, paradoxical as it may seem, this was conduced to by the imperfection of the lens with which Daguerre and Hill worked. The limitations of the visual angle of the lens and the lack of definition in the extreme limits of the image demanded a very exact planning of the object, an exact choice of the visible field of vision. And this necessitated thoughtful attention to the represented object, and selection of the most characteristic, most essential aspects on which attention had to be concentrated.

In the years of emergence of artistic photography, portrait photography was accepted as an art on the same level as painting. In this period photographic productions were hard to come by and were of considerable value.

But during the second half of the nineteenth century there were considerable changes in the development of artistic photography.

The general extension of photography arising out of technical progress, and in particular the development of a photo-optical industry, transformed it into a cheap and accessible means of representation. The varied demands made on it by science, technical investigation and amateur photographers led first and foremost to the isolation of applied photography, which now developed along separate lines. But artistic photography also was subjected to internal differentiations. The photographic illustration appeared, meeting the needs of the illustrated press and swiftly eliminating the sketch or drawing. There was a development of professional portrait photography, which, to please the bourgeois citizen, created the base style of the so-called ' salon ' photographs and family portrait groups. Finally, there was an extensive development of amateur photography, embracing unusually varied sections of the population.

Thus by the end of the nineteenth century photography was developing the following divisions :

First : Applied photography, arising out of the needs of science and technique.

Second : Photographic illustration (or photo-reporting) at this time serving mainly the illustrated gutter press.

Third : So-called professional ' salon ' photography, creating chiefly photographic portraits.

Fourth : Amateur photography, within which also there were several tendencies.

The positive aspects of the development of wholesale scale photography consisted in the accessibility and cheapness of the photograph as a means of multiplied information, as a representational means, and, finally, as a means of popular-
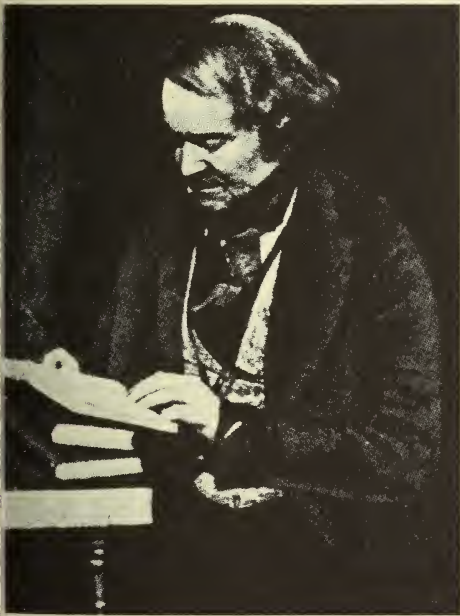
FIG. 71.—Portrait taken by Hill, 1843-45.

FIG. 72.—Example of nineteenth century professional ' salon ' photograph.

ising art productions. The positive value and exceptional possibilities of appli[ ]
scientific and technical photography need no demonstrating.

The positive aspects of the wholesale distribution of photography are [ ]
obvious that it would be a waste of time stopping to consider them. But [ ]
must consider certain results of a negative kind, which are directly connect[ ]
with our further conclusions.

' Professional ' photography always sought the greatest and most exact [ ]
semblance to the originals. The professional photographer took no trouble [ ]
reveal the characteristic peculiarities of the object photographed in artistic for[ ]
and endeavoured only to obtain a mechanical reproduction of the original, [ ]
make a copy void of any independent creative content, void of thought, whi[ ]
only the artist, creatively perceiving reality, can introduce. It was eviden[ ]
these negative features of professional photography that Hippolyte Taine had [ ]
mind when, in his lectures on " The Philosophy of Art ", he spoke on the incor[ ]
patibility of painting and photography as " equal " representational arts.

> Photography is an art which, with the aid of lines and shadows in one plane, reproduc[ ]
> the outlines and forms of an object exactly and without error. Undoubtedly photograp[ ]
> is a serviceable aid to painting ; sometimes it has artistic application in the hands of exper[ ]
> enced and capable persons, but none the less it does not think of placing itself on the sar[ ]
> level as painting.

Professional photography was mechanically ' exact ' and ' without error[ ]
But it was these very features that deprived it of its picturesque quality the chi[ ]
and most valuable quality that Daguerre and Hill portrayed.

As early as the 'sixties of last century professional portrait photography beg[ ]
to oust portrait painting, which became the property only of the most secu[ ]
classes. The cheapness of the photographic portrait and the possibility of t[ ]
wholesale copying of photographs deprived the average portrait painter, who h[ ]
worked for the urban citizen, of a large ' market '. This was the basis of t[ ]
antagonism that developed between portrait painting and photography. Mar[ ]
accusations were made against photography, all of them in the last resort amountir[ ]
to a denial that photography was an art. But we must remark that undoubted[ ]
there was formal reason for such an attitude, for at that time the artistic lev[ ]
of the professional photographer was below all criticism. Based on the curre[ ]
tastes of the middle-class citizen, ' salon ' photography was the very reverse [ ]
artistic. Yet this was no reason for denying its rôle as a representational art [ ]
general, for the creative possibilities of artistic photography had been clearl[ ]
demonstrated by Daguerre and Hill (Figs. 70, 71, 72).

The real reasons for the denial that photography is an art were differen[ ]
We shall deal with them later on. For the moment we note that, living miserabl[ ]
in the vestibules of art, photography borrowed from it the naturalism ruling i[ ]
the days of its own birth, and that in the most naive, vulgar and insipid forn[ ]
While in ' salon ' photography this naturalism was hidden beneath an extern[ ]
abstract ' beauty ' of subject and detail, in photo-reporting and amateur photog[ ]
raphy it was revealed in all its naked ugliness. The development of photographi[ ]
technique, the improvement of the lens, also drove it in the direction of insipi[ ]
naturalism. The anastigmatic lens with its exceptionally clear optical transmissio[ ]
and broad angle of vision came into use. A photograph taken with such a len[ ]
completely answered the needs of applied photography, but at the same tim[ ]
this lens became a dangerous instrument in the hands of the unqualified pres[ ]
and amateur photographer. The possibilities of the wide-angled anastigmati[ ]
lens encouraged them to delight in the definition of detail, and in the extraordin[ ]

rily broad extent of the field of vision. In the hands of a man with no artistic
culture or definite creative attitude the lens became a means of achieving simple
'reproduction' representation of fortuitous subjects, without any attempt at
deliberate selection of the expressive elements.

Hence arose the flooding of the illustrated journals with haphazard photo-
graphs, void of artistic value, frequently useless even as a simple means of in-
formation. Photography lost one of its most valuable qualities—its artistic
picturesqueness. The wholesale photo, which was merely a mechanical reflection,
a reproduction of a fortuitous subject, lost all right to be called an artistic pro-
duction. The professional portraits and 'family groups', the postcard views,
the low-standard newspaper photographs, the 'études' verging on pornography,
the famous 'Paris genre': all these together determined the negative character-
istics of photography. In this elemental flood of trash and representational
impotence, those few photographer artists who for several decades had carried on
the struggle for the right of genuinely artistic photography to be called an art
were submerged. For that matter, the struggle is still going on even to-day.[1]

Photography became a synonym for a non-artistic reproduction of reality.
Daumier, one of the greatest caricaturists of the middle of the nineteenth century,
made a bitter and evil caricature of the photographer *Nadar*, who in the 'sixties
was the first to take a camera up in a balloon. "Nadar raising photography to
a high art" was the sarcastic caption which Daumier put under his sketch
(Fig. 73). But meantime, Nadar's aerial photographs acquired the significance
of genuine artistic productions, despite the fact that he had originally intended
them only for 'land measurement and strategy'.

In his *Notes on Æsthetics* Franz Mehring quotes the lines of Anzengruber,
" commonplace, yet overflowing with true artistic spirit," which speak of the
lack of vitality of the photographic box.'

> Der soll sich nicht mit Kunst befassen,
> Der die Natur wie Jeder sieht,
> Er schleppt 'nen Photographenkasten,
> Der nur die Schulter, schief ihm zieht ;
> Wem irgend grosses ist gelungen,
> Der hat sich's selber abgerungen.
> Ob zart und mild, ob stark und wild !
> Hast du nur deinem Werke eben
> Aus eignem Ich was zugegeben,
>   So giebt's ein Bild ! [2]

At the first congress of the " Russian Artists and Amateurs of Art ", held in
1894, the right of photography to call itself an art was denied with exceptional
unanimity.

Instantaneous photography does not represent nature, it distorts it [said professor
Petrushevsky].

Photography may serve as a simple substitute, but not as an independent means of
artistic creation [declared Shaikevitch].

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[1] The reader is recommended to read the highly interesting works by L. Mezheritcher,
Light Influences in Photography and *The Art of the Present-day* (photo annuals for 1929
and 1930), from which we have taken part of our documental material.—*N.*

[2] Let him not associate himself with art who sees nature like anyone else. He simply
pulls out his photographic box, which only bows his shoulders. The man who has suc-
ceeded in creating something great has wrested it out of himself, whether it is soft and
tender or strong and savage ! If only you have conferred on your creation something of
your own ego, you have made a picture !
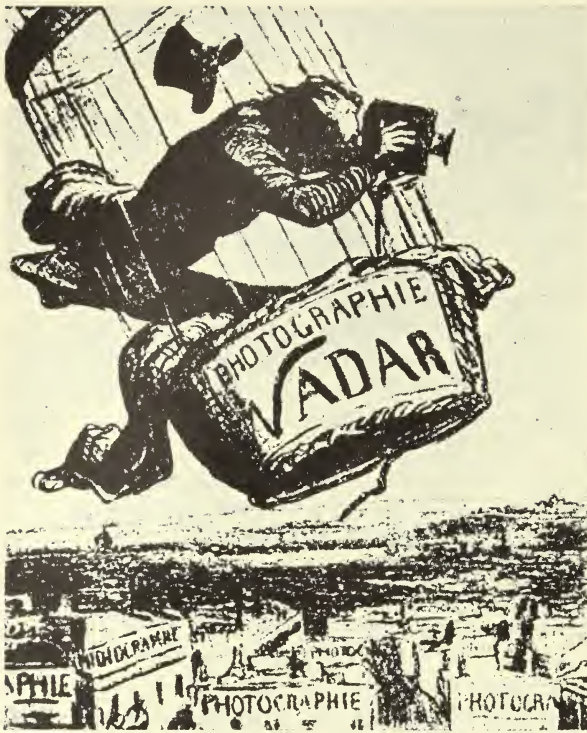
FIG. 73. — Caricature
Daumier of the Photograph,
Nadar : " Nadar raising phot
graphy to a high art."

All photography of beast or man represents a series of complicated caricatures [add N. N. Karazin].[1]

So photography was not an art.   It was dead, lifeless, and it distorted reali. In the best case it was accused of passive ' reproductionalism ', in the worst t was declared dangerous, but bearable to the extent that it satisfied the æsthec demands of the ' crowd '.

And here we find the true explanation of the negative attitude to photograp, adopted in bourgeois æsthetics.   It hands over this ' cheap ' art to the crov, and then treats it as not genuine art.   Typical bourgeois hypocrisy this, whi accuses the people of lack of culture, and with all its powers, including ideolo, —the gutter press and gutter art—deliberately keeps that people from cultu. Whereas true art exists only for the select few of the ruling class.

The bourgeois æsthetics of the period marking the close of industrial capit ism regarded photography inimically, as a mechanical art, just as it had machine and industry.   In modern society art is a commodity.   It is valued for its rar and uniqueness.

Commodity fetishism and its way of thinking regards only the hand-mac, craft-produced, unique and unrepeatable production as art.

During the epoch of imperialism the bourgeoisie's attitude to the machi and to industrialism changed considerably, owing to a number of reasons whi we need not consider here.   The attempt was made to create a new style on t basis of machine technique, an ' æsthetics of the machine ', of technical co

[1] *Proceedings of the First Congress of Russian Artists and Amateurs of Art*, 1894, Mosco, 1900, pp. 15, 42, 43.

:ruction. And photography also achieved partial recognition as an art. Attempts ere made to recreate artistic photography on new principles. Along this road reat, yet purely formalistic, intrinsically emasculated achievements stand to the edit of individual artistic photographers of post-war years. (Moholy-Nagy, Ian-Ray and others.) This attempt to create a new art was unsuccessful, and or the same reasons as those which led to the failure of attempts to create a new iachine-technique style : the complete bankruptcy of all bourgeois culture and leology, which during the period of disintegration of the capitalist system has ot itself into a blind alley. In the ' modern ' style, and even more in construc- vism, the artist, instead of creating a new organic style, occupies himself with :ylising machinery, with the self-sufficing æsthetics of play with new materials.

' Engine-ism ' and ' machine-ism ' are means of emasculating the ideological ontent of art, of reducing it to an empty trickery and ' divertissement ' and ccasionally to meaningless irrationalism, to idealist abstractionism, to the ' mas- :ry of the material ' and so on. In such conditions, naturally nothing significant, o serious and valuable art has been able to emerge from the attempts to create n artistic photography.

To what extent photography's miserable lot is not inevitable, to what extent hotographic technique provides every possibility of constructing a genuine art n its basis is shown by the practice of Soviet photography. Photography has nly to be transferred to the fruitful soil of art of a rising socialist society, it has nly to be given a social trend, and it is at once transformed into genuine art. nd here the distinction between photo-reporting and so-called artistic pho-)graphy is lost, for in such conditions both of them are justified in claiming the tle of genuine art.

Is photography an art ? [asks a writer in the *Express Poranny*, reviewing an exhibition ' Soviet photo-reporting in Warsaw]. Let those who have even a grain of doubt on the iestion visit the exhibition of Soviet photography. . . . Every one of the photographers ontributing to the exhibition is an artist, if only in the sense that he is in love with the orld, that he always looks at it with the wondering gaze of the eternal discoverer of new uths, seeing it always for the first time. Looking at the world through his eyes, in other ords through the lens of his camera, we also see this world for the first time. . . . The ost faithful expressers of the now officially proclaimed socialist realism in Soviet art, hich is primarily a thematic trend, are undoubtedly the photo-reporter artists.

Here is another report which emphasises the striking difference between oviet photo-art and the degenerate, æstheticising Western ' artistic ' photography.

In the works of the Soviet photographers [writes a member of the Union of Polish hotographers, the engineer Dederko], we do not see scattered collars, ash-trays with cigar id cigarette ends, or scraps of paper, but we see factory chimneys, machines, tractors, ientific expeditions, all the world, incommensurably more important than the glass of eltzer water of the super-refined people of Western Europe. The portraits are also stinguished from those we are accustomed to seeing. The expression is strong, the solute gaze reveals people firm, simple, and markedly different from us. . . . A char- :teristic feature of the exhibition is joy—tremendous, unrestrainable, sometimes simply iintelligible to us people of the West.[1]

The foregoing extracts call for no comment. At this stage we end our brief .cursion into the history of photography and come to the first stages of the birth ' cinema.

The cinema, which first saw the light in the last decade of the nineteenth :ntury, was originally not invented as a means of cheap mass amusement. During e second half of that century the development of experienced scientific know-

[1] Volsky: " Exhibition of Soviet photographs in Warsaw ". *Izvestia*, June 9, 1934.

ledge on the basis of the invention of photography and the creation of the requisi
mechanical attachments called the cinema into existence as an instrument
scientific investigation, of exactly fixing an object in its dynamic form. *Mare*
who in 1882 constructed his famous ' photographic rifle ', was least of all intereste
in " amusing " anybody, and he made use of the apparatus solely in his studi
on the flight of birds and insects, his observations providing valuable contributio
to the nascent science of aviation. *Edison* also, who invented a ' kinetoscope
at first did not intend it for the purpose of mass amusement. The simple e
amination of one or two historical dates relating to the period of the emergen
of cinematography will clearly reveal the true trend of these early inventions
the sphere of the technique of cinematography.

In 1874 the French astronomer *Jansen* utilised snapshot photography for ti
production of several successive pictures of the transit of Venus across the di
of the sun. In 1877 Robert Muybridge used a special photographic apparatu
to make a number of snapshots in order to study the movement of animals. I
1894 Jenkins constructed his first camera, which he designed to use for studyir
the flight of birds, the movement of animals, and the muscular activity of huma
beings. In 1897 *Oscar Messter* invented an apparatus giving discontinuou
movement of film, and made a film of the fall of a cat, with simultaneous fixatic
of the dial of a chronometer.

As we see, in its origins the cinema was intended exclusively for scientif
purposes. Only the subsequent course of development snatched this inventic
from the laboratory of the scientific investigator and, bringing the cinema int
commercial exploitation, threw it into the arms of the owners of fair booths an
cheap music halls. Regarded as a new kind of amusing trickery, in the earl
years of its existence the cinema was a mere primitive spectacle. The early fil
presented any dynamic manifestation in its length of some 150 feet, and th
mere fact of showing a moving object on a screen aroused the vigorous applaus
of the spectators.[1]

It is necessary to remark that the first men to fulfil the functions of camera
men had very hazy ideas of photographic technique. The first cinematograp
theatre in the world, the " Cinématographe Lumière Frères ", was opened o
December 28, 1895, in the cellar of the " Grand Café ", in the Boulevard des Capu
cins in Paris. The content of the first films, or rather of the various editin
units each taken from one single viewpoint, did not go beyond the simple chronicl
showing of short visual subjects. " Workers coming out of the factory of th
Brothers Lumière." " Arrival of a train." Such were the contents of thes
films.

Among the guests invited to the opening of the first cinema theatre was
famous illusionist and conjuror, *Georges Melies*. The few scores of feet of prim
tive ' living pictures ' shown by the Lumières made so great an impression o
Melies that he decided to abandon his profession and devote himself to the stud
of the new ' technical novelty ', the cinematograph. Melies, who at that tim
held the position of director of the " Theatre of Illusions of Robert-Houdin " i
Paris, tried to buy their apparatus from the Lumières, but although he offere
50,000 francs, they refused to sell. This failure did not check the enterprisin
conjuror, and a few months later he opened his own kinema-theatre in Paris

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[1] V. Shklovsky has an interesting reminiscence of the first cinematograph perform
ance in Russia. " Drankov is showing in ' Illusion ' a ribbon portraying a dog in th
street. . . . Drankov was very proud. As he showed it he shouted : ' Look, look ; it
hair is moving. I took it myself ! ' " V. Shklovsky, *Podenshchina*, p. 95.

howing films with the aid of the Edison ' kinetoscope '. Simultaneously he began
its own production of film pictures. While studying shooting technique, in his
inexperience he exposed the same piece of negative twice over, and this error
led him to the discovery of the possibilities of multiple exposure. After long
experimentation he made the first ' trick ' films, entirely built up of multiple
exposures, with black velvet as a background. In his few feet of pictures we
find skilful combinations of shots which had been exposed in sections. Thus,
in the film " Members of the Orchestra " there are shots with eighteen short ex-
posures, a work which, even with present-day technical equipment, calls for a
camera-man of great experience and intelligence. Later Melies thought of
sticking together sections of negative, which at that time never exceded fifty feet
in length. So that he essentially deserves the honour of the ' discovery ' of
present-day editing technique (Figs. 75–76).

The success of Melies' first films and the fame he acquired stimulated an
Englishman named Robert Paul to occupy himself with experiments in the sphere
of cinematography. At first Paul thought of asking Melies for help, since, not
having even an elementary conception of a cinematograph film, he ascribed the
quality of those early pictures entirely to the former conjuror's talent and ability.
However, after making experimental films, he came to the conclusion that in the
creation of cinematographic ' tricks ' of this kind the main part was played not
so much by the talent of the camera-man as by the technical resources which
he had at his disposition. In 1896 Paul set up his own workshop and carried
out experiments. Not knowing Melies' technical methods, which the French-
man kept strictly secret, he built up his first trick films not on multiple exposures,
but on the printing of one positive from two and then from several negatives.
With the greatest of difficulty he constructed a printing apparatus which enabled
him to make multiple prints on one and the same positive. In the course of
his work he began to use masks and shutters in the printer, with which he made
the first fades and dissolves. It has to be said that in certain cases his work
reached such a high technical level that even in present-day conditions certain
of his achievements remain unsurpassed.

In Georges Melies and Robert Paul we have the founders of the two main
tendencies in the modern technique of composite film effects. The first tendency,
which has as its basis the principle of partial and multiple exposure, afterwards
developed into the optical combination of images during shooting which we
have to-day. The second tendency brings us to the greatest achievement of
present-day cinematograph mechanism : the copying automaton of the optical
printer, with which the most complicated combinations of films can be made
in the laboratory.

A little earlier than Melies and Paul an American, William Dickson, one
of the closest assistants of Thomas Edison, began experiments with the ' kine-
matograph ' apparatus he had constructed. In 1884 the first production of
film spools was begun in America by the chemists *Eastman* and *Walker*. Dickson
used this light-sensitive material in his work, and in the same year set up the
first film studio, which afterwards was nicknamed ' Black Maria '.

The perfecting of technical resources and the influx of capital investments
transformed the cinema into an industry. It became a mass spectacle. For
nearly four years the content of the first films remained news subjects, but by the
beginning of the new century a differentiation arose in cinematography analogous
to that which had taken place earlier in photography. Thenceforth the scientific
and technical research cinema developed independently, regularly issued news-
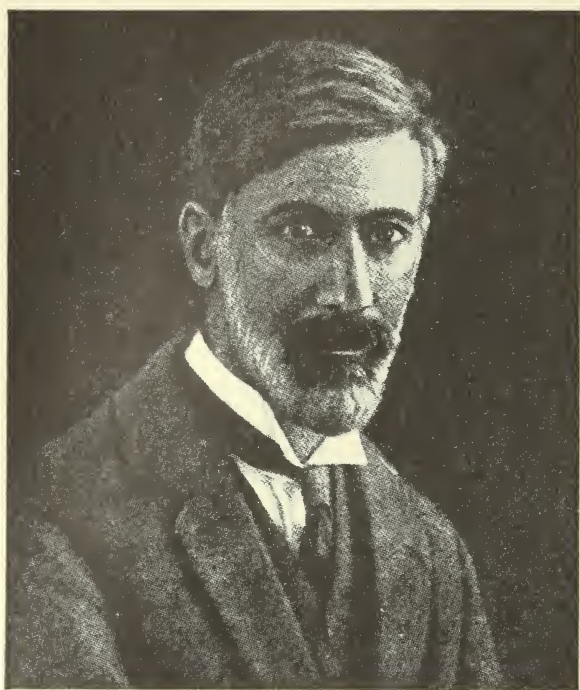
FIG. 74.—Robert Paul, one of th
first camera-man inventors, 1896.

reels began to appear, and finally the ' play ' cinema was established. In searc
of subjects the cinema turned to the theatre, and primarily to the contemporar
stage.

Who was responsible for the guidance of these early cinema enterprises
Who was the owner of the first cinema factory ?

There is an interesting description of the early business leaders in the cinem
industry in an article, by the director G. V. Alexandrov, devoted to the America
cinema.

Where did the people come from who at that time were the controllers or owners o
the ' Hollywood Film World ' ?

At the dawn of cinematography adventurers of all kinds abandoned their fairgrounds
roundabouts, *maisons de joie*, and show booths, and began to ' work ' with success in th
field of cinematographic activity. Their pictures brought them great returns, and the
became capitalists, the controllers of American cinematography.[1]

Of the director in the present-day sense of the word there was no though
at that time. In the chase after profit journalist types who had worked in th
sphere of gutter detective activity, and hangers-on from the lower fringes of th
theatre easily found their way to the production of cinema pictures, exploiting
the few camera-men necessary in the capacity of sole ' specialists '. Films wer
produced largely by poorly qualified photographers, who were far from being
artists and had taken up ' living photography ' because it provided a new sourc
of income. In the best case these men were of the Georges Melies, Robert Pau
and Dickson type, and in the worst were photographers who had not found room
for themselves in so-called ' art ' photography.

[1] G. V. Alexandrov, " American Film Production ", article in the journal *Proletaria*
Kino, Nos. 15–16, 1932.

In the search after new subjects for demonstration the cinema turned to utter detective literature. The first detective films appeared, and, in accordance with the social functions they fulfilled, as a means of amusing the ' rabble ', the cinema received due estimate from the representatives of bourgeois æsthetics. In his book *Das Kino in Gegenwart und Zukunft*, Konrad Lange writes :

Moving photography is less artistic than the ordinary kind. Consequently it has to be compared not with the pictorial and sculptural arts, as genuine arts, but with the various kinds of fairground attraction.

In his dissertation on *Philosophie des Films*, 1926, Rudolph Harms quoted a similar negative dictum :

The cinematograph, like all mechanical things, is by its nature more an enemy than an aid to culture. By comparison with it even the roughest of circuses is an artistic institution (Benno Ruttenauer).[1]

As we see, at that stage of its development the film could make no claim to the title of an art product, to being, in other words, an artistic phenomenon. More than that, in certain cases the cinematograph became not only an inartistic phenomenon, but downright dangerous, contradicting the elementary bases of bourgeois ethics and morals.

If anything can be called a coarse indecorum [wrote Konrad Lange], then first and foremost it is the public presentation of actions prohibited by the criminal code.

Thus, in regard to the cinema bourgeois æsthetics completely maintained the position earlier adopted in regard to photography, denying that it was an art.

Considering the cinema as ' living photography ', bourgeois and petty bourgeois æsthetics exactly repeated its old error. More than that. The rejection of photography as an art became the chief prerequisite to the denial of cinematography's right to call itself an art.

FIG. 75.—Shot from a trick film by Georges Melies.

[1] See Harm's book *Philosophie des Films*, 1926, p. 33, pub. Academia, Leningrad, 1927.

Moving photography [says Lange], can be recognised as an art only to the exten that it is photography. But, as everybody knows, photography is not a genuine art.

We have already considered the reasons for this negative attitude to photo graphy. The same reasons apply in regard to the cinema. But in the cinem the gutter influence was even more striking ; vulgarity was even better equipped And so there was more justification for this highly learned æsthetic hypocris This juxtaposition of the cinema and photography, the view of the cinema merel as ' moving photography ' is of interest to us in two aspects. In the first plac this attitude later led to the estimate of the camera-man's rôle as that of a technic: executant, passively photographically fixing the object filmed : an attitude whic has to be combated even at the present day. Secondly, while not denying th essential distinguishing features of movement and dynamism, Lange denied an qualitative distinction of cinema from ' moving photography '. In fact, it is thi very qualitative distinction, the result of definite internal processes, which con stitutes the specific feature which transforms the cinema into an art of quite special kind, different in principle from the theatre and painting.

Snatched away from the scientific laboratory and put into the grip of com mercial exploitation, the cinematograph was transformed into a means of mas amusement. With extreme realisticness the photographic lens represented what ever came within its field of vision. To the indignant eyes of the art expert i provided a genuine, completely unadorned spectacle of ' art for the masses ', ar of the ' fairground and show-booth '. The simple juxtaposition of these tw ' types ' of new art with the classic productions of painting and the theatre con vinced the bourgeois æsthete that they had nothing and could have nothing i common.[1] If the cinema does not want to be painting or theatre, then cinem is not an art. It belongs to a second class outside the bounds of art, to th class mechanical, ' hostile to culture by its very nature ' (Benno Ruttenauer) And, on the other hand, the attempts to ' ennoble ' the cinema, to make it a ' rea art ' followed the lines of mechanically imitating the theatre, and painting, with cinematographic resources. Photography and cinematography are essentiall realistic. In representing that which it least of all ought to represent, i.e. no reality itself but reality passed through the treatment of another art, the cinem: is indeed transformed into a non-artistic phenomenon.

The further development of the cinema can be conveniently divided int two periods. At first it was subjected to theatrical culture, owing to whicl elements of the organisational and creative structure of the theatre were intro duced into cinema production. During this period the film director strength ened his hegemony, and so dammed any possibility of creative growth for th camera-man.

The second period, which brings us down to the contemporary Wester cinema, was distinguished in its beginnings by the flourishing of scenario treat ments expressed as a literary form. Departing from the tradition of the stage the cinema borrowed from literature the construction of things as a whole, endea

[1] It is interesting to note that for a number of years even such an artist as Meyerhol maintained the attitude of bourgeois æsthetics, denying that the cinema was an art. In his book *On the Theatre* published in 1912 he wrote :
" The cinema, that heathen temple of the modern cities, is given too much importance by its defenders. The cinematograph has undoubtedly great importance for science, by serving as an auxiliary in descriptive demonstrations. The cinematograph is an illustrated newspaper (*Events of the Day*) for some it replaces travelling. But there is no place for the cinematograph on the plane of art, even where it desires to occupy only an ancillary rôle."
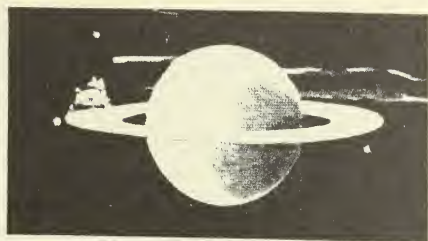
Fig. 76.—Shot from the Georges Melies film " On Saturn's Ring ".

during on this basis to work out and perfect its own means of artistic influence, specific to the cinema.

What modifications did this form of cinematographic development introduce into the position and the creative production functions of the camera-man as one of the makers of the film ?

His profession was regarded as socially rather higher than that of the chauffeur, but considerably below that which was anciently occupied by the portrait photographer. Portrait photography was at least regarded as an artistic phenomenon, whereas the adventure film was regarded only as a ' tolerated violation of the criminal laws ', tolerated to the extent that it turned the attention of the audience, chiefly members of the working class, away from social reality.

In the youthful days of the cinema the methods of constructing the shot were in direct dependence upon the slavish imitation of the forms of perception customary to the theatrical spectacle. The frame limits were determined by the dimensions and situation of the proscenium. The camera viewpoint was established along a line perpendicular to the object being filmed, and the height of the camera varied within the strict limits of 4·5 to 5 feet, which corresponds to the eye-level inferred from the average distribution of seats in the theatre (Fig. 77).

The composition of the shot was restricted by the demand for unconditional symmetry in the distribution of the actors and the objects being filmed. Cinematography, which at that time was still unacquainted with the close-up or even the mid-shot, made no æsthetic demands in constructing the shot, regarding the entire process of shooting as a mechanical reproduction of moving objects. This applied to the same degree to artificial lighting, which to-day is one of the most considerable resources of composition construction. The variability of sunlight forced the cinematographer to resort to a darkened studio, and necessitated the invention of other methods of lighting. Sunlight had to be replaced by something, and this replacement was effected on the basis of the direct imitation of the action of the lost source of light. The rays of sunlight which penetrated into the primitive film studio through a glass roof lit the filmed scene from above,

down the verticals. In the closed studio the first lighting equipment was t
up on the same principle. All that was thought necessary was to light the sce
sufficiently for exposure in the studio to become possible. At that time the
was no thought of its being possible to regulate and direct the light rays. For
long time artificial light was regarded in cinematography as only a technic
necessity, an ' inevitable evil ', arising out of the peculiarities of the cinematogra
film and rendering the camera-man's work more difficult, for he saw his task or
as that of filling the frame with equal, diffused lighting predominantly from abo
and from the sides.

As studio technique grew more complicated, and not only work in natur
i.e. exterior shooting in the true sense, but also ' naturalistic ' sets with artifici
lighting were brought into practice, there was a considerable change in the methc
of constructing the shot. The first outdoor use of the pan broke down tl
immobility of the orthodox theatrical proscenium. But the absence of the close-
compelled the camera-man to introduce the ' mask ' as a means of concentratir
the spectator's attention on a definite detail. We may note in passing that tl
' mask ', which as an isolator has fallen into desuetude, played a considerable pa
in the process of realising the new possibilities of shooting, since it showed tl
way of applying isolation to an object in exposing the shot, and also opened tl
way to methods of composite work with silhouetted and lighted objects.

Certain other movements away from theatrical influence were also observab
in the methods of constructing the shot at this time, and especially in lightin
But they were still far from being indicative of any creative understanding of tl
tasks of composition.

Now developed the first theory of ' studio lighting ', worked out on the bas
of primitive naturalism. In accordance with this theory the light had first an
foremost to be ' natural ', and, if a scene at a window was being taken, for exampl
the light rays had to penetrate into the room only through that window. N
other lighting methods were employed. The violation of this law was regarde
as indicative of illiteracy, just as, in its time, the change of the height of th
horizon or asymmetry in the frame was regarded as indicating lack of taste in th
camera-man. This tendency had such strong influence that even to-day th
vestiges of the former fear of ' unnatural ' light sources are to be observed in th
work of many camera-men. In America this lighting naturalism resulted in th
camera-men regarding it as correct to give only such lighting as would not b
noticed at all by the spectator, and even to-day the average American camera-mar
regards this reduction of artificial light to the level of a simple technical necessit
as showing a high degree of perfection in his art.

From the aspect of the artistic organisation of the cinema shot no essentia
changes were to be noted during this period. The camera-man was required
chiefly to provide a clear photographic image, or in the best case a few picture
postcard pictorial effects and landscapes. As cinematography as a whole was
still not regarded as an art, the cinema shot also remained outside the confines
of artistic treatment, and so it was still impossible to speak of any shot composition
in the real sense of the word.

Thus, during the first decade of extensive cinematographic practice the
creative tendencies of the camera-man's art amounted simply to the technical,
mechanical reproduction of the object filmed. To his share fell the ungrateful
task of cinematographically illustrating the literary theme of the scenario. The
sovereign hegemony of the director, who came to the cinema from adjacent spheres
of art, thrust the camera-man out of the sphere of creative work, leaving him

FIG. 77.—Viewpoint selected for camera in primitive ' theatricalised ' studio.

only the one way of perfection along the line of formal methods of shooting portraits and landscapes, and trick filming.

None the less, even within these narrow limits the cinematograph could not rise to the level of the craftsmanship which had characterised the brilliant period of Daguerre in photography. To a large extent master of the construction of static photography, the camera-man became hopelessly impotent as soon as he came up against the necessity of constructing a dynamic shot.

The arrival of the close-up brought a decisive break in the development of camera-man's methods. By stimulating the creation of modern editing, the close-up had a considerable influence also upon the methods of artistic organisation of the shot. But one of the immediate results of its application was the transfer to cinematography of the worst traditions of portrait photography. The ' art ' portrait, so memorable in all its varieties of ' salon ' post-cards, became the object of the average camera-man's enthusiasm. Over a number of years close-ups of all kinds of beautiful heads dominated the screen. The camera-man's art received its artistic heritage by no means from the hands of the true pioneers of art photography, but through the innumerable intervening instances of the illustrated gutter press of the late nineteenth century.

Thus, during the early period of the development of the camera-man's art, which for convenience we call the ' reproduction ' period, representational culture developed mainly on the basis of two dominating influences. On the one hand there was the influence of the theatre, which restricted the camera-man's creative

tendencies within the limits of the cinematic fixation of isolated fragments of the theatre spectacle. On the other there was the influence of professional photography, which, in respect to its artistic level, was outside the bounds of art.

The poverty of the technical resources, the unwieldiness and immobility of the camera, the restricted possibilities of the lens and light-sensitive material rendered the camera-man's work very difficult. And there was no clear understanding of the tasks of composition as a means of expressively organising the shot. The camera-man's sole task was the exact representation of the shot object, which was placed before the camera in the position dictated by the perception of the spectator watching a theatre spectacle. It was the cinematography of a single and moreover immobile viewpoint.

Only with the arrival of artistic literature in the cinema did the demand arise for a definite æsthetic minimum in regard to the cinema shot. Enriched with new technical possibilities, the camera-man's technique sought its own expressive resources. Endeavouring to bring elements of art into his work, and still not knowing how to manifest those elements through the specific attributes of cinema, he built up his work by borrowing them from the pictorial arts. In search of representational possibilities he copied the classic types of one or another school, and from that moment the cinema began to pass through a long period of ' infantile sickness ' of pictorial imitation.

2. PICTORIAL INFLUENCES

When we speak of the influence of pictorial art in the early period of development of the art of the camera-man, we deliberately use the term ' pictorial imitation ', since in their primary form these pictorial tendencies amounted mainly to a mechanical copying of individual compositional schemes and methods of lighting used in one or another product of pictorial art.

In its elementary form the imitation of pictorial art began at the moment when the camera-man attempted mechanically to copy the compositional schemes of those pictorial products similar in subject to the tasks of the single frames of a given film. We find this similarity in early films of Italian origin, for instance " Quo Vadis " and " Salammbo ", and then in the German historical pictures of a later period (" Lucrezia Borgia "). Certain American films which were issued during the war and immediately post-war period (" Intolerance ", " The Ten Commandments ") were also not free from mechanical borrowing of compositional schemes. These films are of interest for the contradiction which exists between the construction of the long- and mid-shots on the one hand, and the close-ups on the other.

The relatively static quality of the long- and the mid-shots, made it possible to apply to these the central, symmetrical composition of the pictures of the Renaissance period with their pomp and monumentalism, transferred to the perfection of the frame locked-in-itself. These shots were regarded as expressive to the extent to which, by cinematographic means, they reproduced subjects known from pictorial art, and their ' artistic qualities ' were judged in direct dependence on the extent to which the camera-man approximated them to the copied production. The situation was different with the composition of nearer groups and close-ups, where simple copying became impossible owing to the dynamic quality of the subjects. These shots interrupted and destroyed the illusion of ' artiness ' in the film as a whole, since they sharply differed from the pictorial stylisation of the long-shots. Whilst in long-shots the camera-man was still able to reproduce exactly the compositional scheme of the original, even approximately matching the main principles of distribution of masses and lighting, with the transition to dynamic group compositions and close-ups he had to treat the subject independently, and the absence of a compositional unity of the various shots was at once revealed. This partly explains the striving of both director and camera-man towards more general, and as far as possible static constructions, in other words towards forms which would enable them to keep to the ' reproduction ' standpoint entirely (Figs. 78, 79).

In close-ups the object imitated was occasionally a portraiture product, but
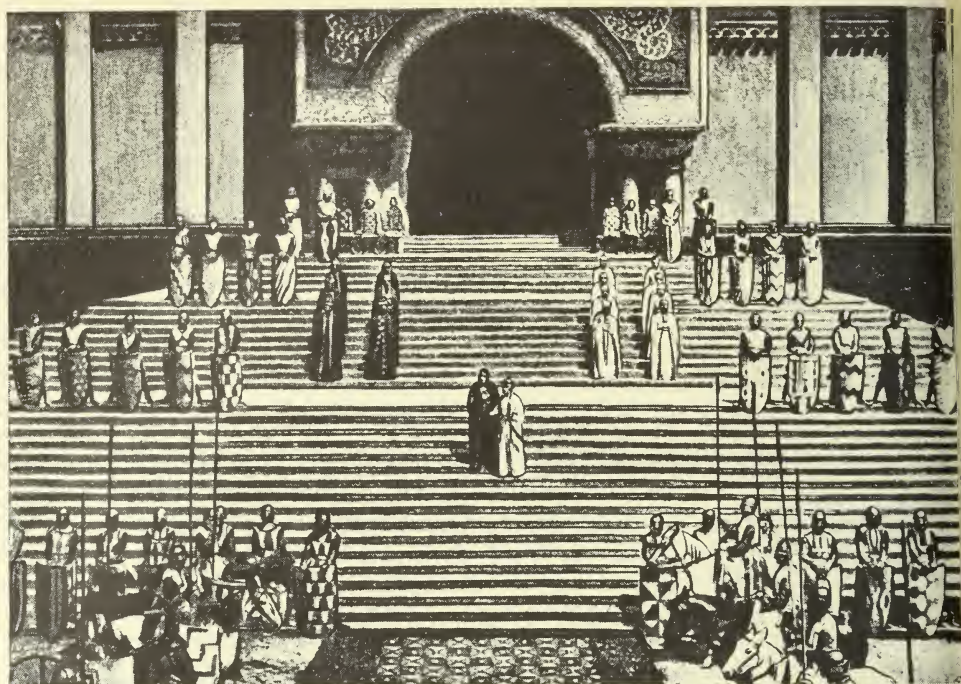
FIG. 78.—Shot from the film " The Nibelungs ".
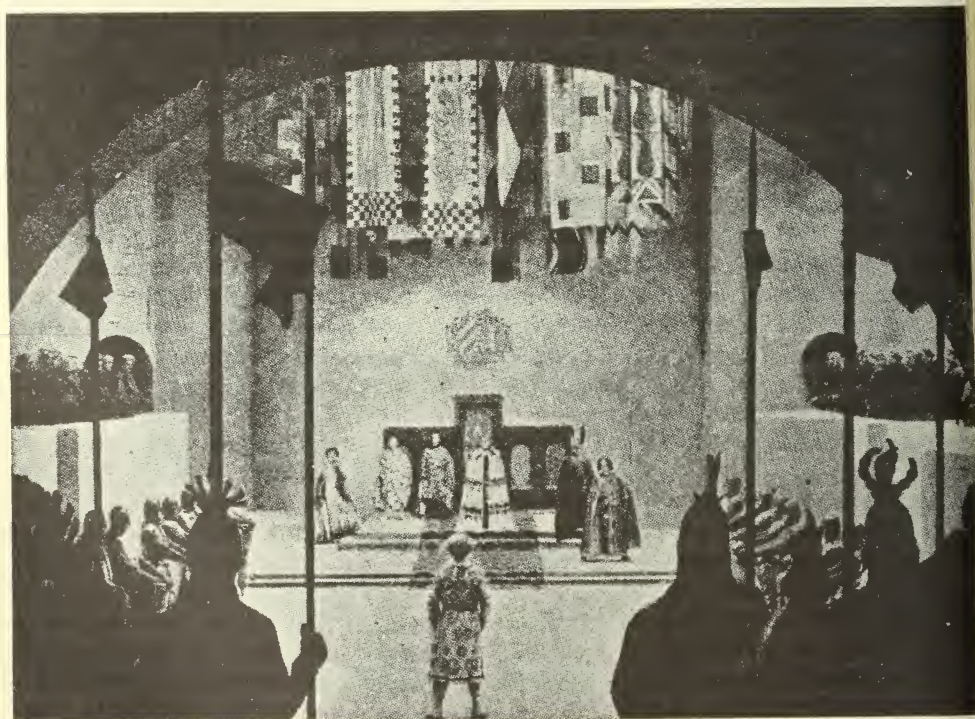
FIG. 79.—Shot from the film " The Nibelungs ".

s was to be observed comparatively rarely, for at that time the close-up was in general cut very short on the screen (Fig. 80).

During the early periods of the cinema's existence the screening of theatrical productions also conditioned special forms of compositional construction of the shot. The camera-man's dependence on the character and dimensions of planning of the theatrical set in the studio did not allow him to choose a construction outside the limits indicated by the art director, who had come to the cinema from the theatre. In such conditions the sole possible form of construction proved to be centric composition, corresponding in its symmetry to the frontal construction of scenery. Composition of this kind is highly characteristic of the pictorial art of the Renaissance, and so it was quite natural for the camera-man, working within the limits of the ' scenic box ' of the studio, to assert his ' artiness ' by imitating the classic types of Renaissance pictorial art. We reproduce some frames from certain so-called historical films of German production. In the " Nibelungs ", " Metropolis " and a number of other theatricalised cinema productions, these pseudo-classical compositions are predominant. Methods of this kind are evident in almost all the ' opera ' films of Richard Oswald, and also in the numerous dramatic and operetta productions of European and American directors. In its further development this attitude led to the 'studio set display ' style, constructed on the eclectic mingling of a theatrical formulation with elements of pictorial decorativeness, which characterises the culture of the average camera-man of the ' standard ' cinema of Europe and America.

A curious example of the mechanical transference of pictorial compositional schemes to the cinema is also to be found in the latest historical films of American production, in which this similarity to the pictorial original is exploited as an advertisement for the ' artiness ' of the film. We give a reproduction of Davis' engraving of the " Death of Nelson ", and also a shot from an American film on the same subject. As can be seen from this juxtaposition, the superficial compositional features are reproduced quite successfully, although the ' historicity ' and ' artistry ' of shots of this kind as a whole are open to considerable question (Figs. 81, 82).

FIG. 80. — Shot from the film " The King of Kings ".

So far we have been speaking of the most primitive forms of pictorial imit ation, based on the mechanical transference of individual compositional schem of given pictorial products to the cinema. The camera-man's independent i vestigations in the direction of establishing his own representational culture beg not here, not in the studio, but in the sphere of exterior photography.

Landscape panorama, the ' paysage ' frame of the old Italian or Fren films, was the field of the camera-man's first independent investigations. almost all the pictures of the old type, ' paysage ' shots are not characterised the general style of ' reproduction ' photography of the time, for they were t result not of simple technical reproduction, but of definite creative tendenci These shots were frequently included in the picture as a self-sufficient pictori element, sometimes entirely without relation to the general construction of t film, being offered to the spectator as a kind of ' emotional kick '. It is curio to note that even in present-day films shots of this kind sometimes preserve the independent significance. They are cut in by virtue of a very remote narrati link, that serves almost as an excuse, and not infrequently only to provoke a fe rapturous exclamations from the spectators, their attention then being transferre back to the main action. The landscape shot, carried out independently, pointe the road of treatment opened by the new technical resources. Instead of t clearly defining anastigmatic lens, the glass diffused or softening lens came int use, silk gauzes were introduced into the system of optical transmission, an several other optical attachments began to be employed. The camera-ma began to take a serious interest in problems of lighting, which were now recognise as an essential element of composition, and in this way he developed a new intere in pictorial art, particularly in that of the impressionist school.

The films of 1918 to 1920 clearly reveal this characteristic departure fro optically sharp treatment of the subject, and the endeavour to construct th expressiveness of the shot on the transmission of a momentary impressio fortuitous and unrepeatable, manifested by the finest transitions from light spot to soft semi-shadows, from sunlight to a fluid silhouette. In this regard certai early works of the finest of the German camera-men, such as Guido Zeber, Ka Hoffman, Gunther Krampf and Wagner, are of considerable interest.

If we adopt the viewpoint of purely formalistic investigation, then obviousl it is not very difficult to establish the connection and succession between th various methods of pictorial schools and analogous methods of constructing th shot in artistic cinematography.

The history of the development of representational forms in the camera-man' art reveals a parallel movement of two representational elements, the evolutio of which brought the cinema to two basic forms of optical treatment of the shot

Sharp, definite optical transmission, which we may call linear or graphi treatment of the shot, is characterised by the predominance in the optical imag of a clear, sharply defined contour. The lighting is built up usually on a narro tonal scale, with intensively saturated tones of black and white. Semi-tones i their pictorial aerial shades and innumerable gradations do not play any decisiv part in the expressive transmission of the image.

Softened optical transmission, on the contrary, is distinguished by a soft fluid contour, and a tendency towards semi-tones, which serve as the main resourc in constructing the image. While in the first case we are concerned with th movement of lines, as the main object of the spectator's perception, in softene optical transmission the tonal mass, the light spot, perceived in a more generalise form than as a purely linear contour, becomes predominant.

Fig. 81.—Shot from an American film " The Divine Lady ".

Fig. 82.—Engraving of the same scene, serving as the pattern for mechanical imitation.

Owing to its superficial similarity to certain tendencies in pictorial art the second form of transmission is not infrequently called ' pictorial treatment ' of the shot.

But of itself the presence of light and shade, the replacement of a sharp contour by a tonal spot or the general softening of the optical outline of the image far from determine a particular style in the camera-man's art. An aggregate of methods emerges as an independent style and forms an integral system whereve the unity of the compositional principles is combined with the unity of the func tional treatment of the shot, wherever each formal and technical method is recog nised as a means of effecting ideological influence, and, finally, wherever there successive logical development and transition of the film composition as a genera ising element into the compositional forms of the various shots. The form: methods of ' graphicality ' or ' pictoriality ' are only essential marks of styl when they express a peculiarity and distinctive character in the perception of th world, when they are the product of a definite emotional and intellectual treatmer of life. Only under such conditions do we get an organic artistic productio with expressive resources organised as a unity in treatment of the content throug a definite style.

A number of French films clearly reveal impressionist sources in the camera man's creative attitude. The finely filmed landscape shots in René Clair's picture provide examples of the transference to cinema not only of individual method of impressionist artists, but sometimes of complete compositional construction a general impressionist perception and treatment of nature.

The attempt to build the shot on the finest transitions from light spots t fine semi-shadows, and complete contempt for the linear aspects of the object the chase after gleams, silhouettes, aerial perspectives, and taking objects out of focus, are all characteristic features of this tendency in camera-man's treatment and relate him to the impressionist school. But is impressionism in the cinem: always the result of direct imitation, or does it sometimes arise as the expressio of a definite creative attitude ? That is a question which cannot be answere by way of simple analysis of only the formal elements of a film. Every art product including the cinematographic, always reveals the philosophy of the man wh creates it. Consequently, impressionism may indeed appear in the cinema from time to time as an independent phenomenon, apart from deliberate imitation o pictorial art, but owing to the force of logical succession one may none the les assume that pictorial influences have played their part even then.

In our opinion isolated impressionist enthusiasms, which arise out of th camera-man's temporary interest in impressionist art on the one hand, and ou of an increasing interest in lighting problems on the other, are insufficient justi fication for speaking of a definitely expressed stylistic attitude. These isolate tendencies have undoubtedly enriched camera-man's art with a number of nev technical resources, especially by the application of softening lenses and lighting but in a finished form impressionism has never existed as a creative tendency ir the cinema. The appearance of the light spot, the silhouette, ' Rembrandtesque lighting, are all attributable largely to the same imitative tendencies which com pelled the camera-man to bring the finished compositions of Renaissance pictoria productions into the cinema. The only difference is that in this case the borrow ing of pictorial experience took not only the course of adopting compositiona schemes similar in subject, but also that of studying the peculiarities of lighting treatment.

While the impressionist tendencies, which developed as the result of purely

itative influences, consisted mainly of a search for new methods of lighting, the emergence of expressionist elements in certain camera-men's work has a other different motivation.

We cannot go into an ideological analysis of expressionism and its social origins, but must confine ourselves to summarising its characteristic creative tendencies, and to stating the essence of the expressionist philosophy.

Never was there a time shaken with such terror, with such mortal fear [says Hermann Bahr]. Never was the world so mortally dumb. Never was man so small. Never was he so timid. Never was joy so far away and freedom so dead. Need is clamant, man summons his soul, time becomes a cry of need. Art adds its cry to the darkness, it calls for help, it calls for its soul : that is expressionism.

The influence of expressionism on the cinema as a whole, and on the German cinema of the inflation period in particular, was so obvious that it calls for no special demonstration. We will consider only certain expressionist influences which are of interest to us from the aspect of the representational elements of films.

We must note that these influences were manifested in camera-man's art much later than in film direction. In carrying out the director's creative tasks the camera-man by no means immediately finds the corresponding formal methods and technical resources for those tasks. This explains why the earliest films of this tendency were not characteristic of ' cinematographic expressionism ', judged from this aspect.

It is usual to regard the well-known film, " The Cabinet of Dr. Caligari ", made by the director Robert Wiene, as a typical example of expressionism in film production. But in this film expressionism was applied chiefly in the formulation of the sets, the costumes, and the directorial treatment, and not (with the exception of the lighting), by means of the specific resources of the camera-man's craft, which as a whole were exploited realistically. We suggest that we have to look for expressionism in the camera-man's work not so much in this film, as in the compositional peculiarities and methods of shooting which are to be found in a number of shots in other later films which were not generally regarded as expressionist.

Elements of expressionist treatment of the shot are to be found in many German films during the years 1920 to 1923. But especially interesting are the films " Nos Ferata ",[1] " Destiny ", " Raskolnikov ", and the Pabst-Zeber film " Secrets of the Soul ", in which an attempt was made to present on the screen the Freudian method of psycho-analysis.

" Unnaturally sourced " light, compositional asymmetry, pictures extremely out of focus, hypertrophied close-ups taken in an abstract, symbolic cut-out mask giving the frame limits a new shape, a high intensity of the visual image involving a deliberate modification of reality, are all obvious features of this tendency in the camera-man's art. In expressionism we have not a passive treatment of the object by means of impressionist light and shade, exploited on the basis of the greatest possible approximation to naturalism, but a vital modification of the real visual image, subordinating reality to the inventions of the creative mind.

In " Nos Ferata " (directed by Murnau) the camera-man Wagner shot a bare, half-ruined brick wall with sharp and deep shadows. Passing up the wall, the gloomy, sharply outlined shadows with their strong tonal contrast, the sharply

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[1] A pirated version of " Dracula ".—*Ed.*

FIG. 83.—Shot from the film "The Cabinet of Dr. Caligari".

FIG. 84.—Shot from the film "The Cabinet of Dr. Caligari".

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merging texture all conduced to an unreal, mystical perception of the object, correspondence with the entire character of this film of ' terror and delirium '. In certain places Wagner exploits a negative image, including it in the film instead of a positive. The shot in which the vampire Count passes by in his carriage is really terrible spectacle, for the negative image creates a completely distorted visual effect, almost void of all suggestion of reality.

We give several shots (Figs. 83, 84) and compositional sketches (Figs. 85, 6) from the picture " The Cabinet of Dr. Caligari ". Highly characteristic are the sketches for the lighting ; in certain shots the lighting is reduced to pure mysticism. The broken, non-natural perspective, the distribution of the light spots without any logical motivation, the lighting treatment of the actor's face (the medium Cæsar) as a dead chalk mask, are all reflections of expressionist tendencies in the camera-man's art.

We must also consider in more detail the work of Guido Zeber, as his films most clearly reveal the pictorial and especially the expressionistic influences of recent years.

The thirty years' cinematic practice of Guido Zeber, the oldest camera-man in the German cinema, embraces almost every stage of development of the bourgeois cinema. Working mainly on technical problems, Zeber not only created trick technique in its modern form, but also showed the ways to its creative exploitation. Yet his work is not a simple demonstration of the technical possibilities of the cinema. In his films we see that high degree of perfection to which artistic photography in its true sense can be brought. Unfortunately, owing to the conditions of development of the bourgeois cinema, these results mark the limit for Zeber, for he has never had an organic unity of creative outlook with his directors. The one exception to this is perhaps " The Joyless Street ", in which Pabst and Zeber worked as equal creators in their craft. But even in this film the camera-man's isolation is apparent : we can see that in the choice of expressive resources he does not always see eye to eye with the director.

Zeber's shot, considered apart from its editing context, is always irreproachable in formalistic compositional regards. One is struck by the perfection of the composition, the softness and plasticity of the lighting, the clear outline and the irreproachable treatment of texture. Even where he wanders off into expressionist treatment of the subject, he always remains faithful to the finest formal traditions of German artistic photography. Yet in expressive regards his perfect craftsmanship far from always serves the functional task of the shot to reveal its content, and so, not infrequently, superficial, abstract, showy effect dominates his work. This is particularly noticeable in " Secrets of the Soul ", in which he demonstrates a remarkable technique of multiple exposure. Yet in this very instance, where there would seem to be ample room for the camera-man to solve his compositional tasks on the basis of the film material, the absence of unity in the creative attitudes of Pabst and Zeber leads to the camera-man's craftsmanship acquiring the quality of a self-sufficing element, having no connection with the ideological content, and in places conflicting with the dramaturgic efficacy of the film. Thus we get an overloading with ornate pictorial effects, the imagery of which is frequently alien to the expressiveness of the shot as a unit in the editing.

The creative influx of expressionist elements into the work of such camera-men as Zeber, Hoffman and Wagner cannot be explained away as solely a superficial imitation of contemporary expressionist pictorial art, or as due to directorial influence. Although the expressionist tendencies in camera-man's art frequently take the form of a superficial mannerism, the representational

FIG. 85.—Lighting plan for the film "The Cabinet of Dr. Caligari".

treatment of such a film as " Secrets of the Soul " has only to be studied attentively for one to observe the signs of a definite method, organically bound up with the philosophy of the camera-man, and expressing his ideology. In Zeber's work we find shots compositionally treated so as to provide a kind of hint, an indication of an event occurring somewhere beyond the frame limits, intensifying its mysticism by this apparent allusiveness. A shadow or reflection running over the gloomy broken flight of an unlighted staircase, a monstrously enlarged hand, a face hyperbolically growing in non-natural camera-angle, in a painful distortion emphasised by the harsh treatment of the texture and the contrast lighting, are all methods which have as their purpose to symbolise a 'state of the soul', in this case the pathology of a perverted psyche. In this case, as in that of certain other camera-men, the representational treatment does not arise out of the content of the shot, conditioned by reality, not out of what we see in reality, but out of some abstract idea symbolically revealed by the active modification of the visual image, by the optical distortion of the object filmed. Such features forbid our attributing them merely to directorial influence, still less to superficial imitation of expressionist pictorial art, and compel us to assume that the camera-man himself possesses that outlook which in pictorial art and literature is described as expressionism.

Expressionism, which reached the height of its development during the years of German inflation, undoubtedly had a profound influence on the development of cinema art. Despite the decadence and injurious quality of its creative attitude, it played a definite, positive rôle in the camera-man's art, albeit a purely

rmal one. It enriched his technique with certain new technical resources, which
larged the scope of the cinema's expressive possibilities. The distorting lens,
w methods of lighting, innumerable methods of trick shooting are all due to
arge extent to the unusually complex creative tasks set by expressionism, which
ks demanded the greatest craftsmanship and power of creative representation.

Among the negative formalistic factors of expressionism is first and foremost
compositional illogicality, which arose out of the stylistic peculiarities of the
iting composition of expressionist films. With its deliberate ignoring of logical
d psychological laws it created special forms of editing composition in which
compositional succession was either violated or completely absent.

The striving after intensified dynamism which was peculiar to expressionism
d have positive significance, for it freed the cinema from the static frames of
e theatricalised cinema of the preceding period. But, on the other hand, the
iting disintegration, the unexpectedness of the transitions, the general incon-
quentiality of the editing exposition also arose as the result of this striving after
treme dynamism, and these led largely to compositional chaos. In expres-
onistic shots it was difficult to distinguish any guiding motives in compositional
nstruction.

After 1924 there was a retreat from expressionism in Western art generally,
d especially in cinema, but despite the partial turn to new forms and return
old ones, the superficial features of expressionism in camera-man's art have
en retained down to the present time in the bourgeois cinema.

We find as a ' final ' tendency an original combination of expressionist ele-
ents with an impressionist manner of treating the shot in the films of the French
mera-man Rudolph Maté.

Rudolph Maté, who has become famous for his work with the director
reyer, especially in the films " The Passion of Joan of Arc ", " The Vampire ",
d " The Extraordinary Adventure of David Grey ", has characteristically

G. 86.—Sketch for treatment of the face of the
medium Cæsar (" The Cabinet of Dr. Caligari ").

FIG. 87.—Shot from the film " The Passion of Joan of Arc " (Rudolf Maté, cam.).

FIG. 88.—Shot from the film " The Passion of Joan of Arc " (Rudolf Maté, cam.).

FIG. 89.—Shot from the film " The Passion of Joan of Arc " (Rudolf Maté, cam.).

nstable, unbalanced compositions which express a subjective striving to convey
ι the shot a single, unrepeatable impression of the object. The specific features
f Maté's later work, especially in the film " The Passion of Joan of Arc ", are
estruction of the depth of the shot by ' washing ' (i.e. putting it right out of
>cus), mid-shots and close-ups taken on the ' smooth canvas ' of a completely
hite sky, movement expressed in sharp, frozen turns, and absorption with aerial
erspective. Figs. 87–89 are three frames from " The Passion of Joan of Arc ".
lmost all his shots, taken with severe foreshortening, and with extreme regard
ɔ aerial perspective, reveal the camera-man's subjectivism, and his avoidance of
l generalising features in his compositions.

We should also note the influence of the ' abstract ' artists on the development
f the camera-man's art. Among them we may mention the work of the Scandi-
ɪvian artist Viking Eggeling and his film " Light Rhythms ", also that of the
rench ' Avant-garde ' group and the first films of Walter Ruttman. But as in
ɪese films it is impossible even for the purposes of discussion to separate the
ɪmera-man's work from that of the artist-designer, we shall not consider them
ere.

3. THE CINEMA AND PICTORIAL ART

Pictorial influences in the cinema are usually explained by reference to t
superficial similarity of the representational resources of photography and f
pictorial art. Maybe this explanation is partly correct, but it does not solve t
fundamental problem. Why is it that in regard to problems of the artis
construction of the shot the cinema, the youngest and most up-to-date of the ar,
has for a number of years taken the road of mechanical imitation of pictures, a
not that of mastering and transforming pictorial experience with the aid of t
specific qualities of the cinematographic method of representational constructior
Obviously, an exhaustive explanation has to be sought not in the technique f
reproduction, but in the peculiarities of the development of the bourgeois ciner
of which we have already spoken, and which have so largely subjected the ciner
to the theatre.

We must make it clear that in discussing the inter-relationships of the ciner
with pictorial art we by no means accept as correct the view of those theoris
who endeavour to determine the specific features of cinematographic expressio
by rejecting all succession and connection whatever with other representation
arts. Unquestionably pictorial art has played a considerable part in transformir
the cinema into an art, and that fact is as unchallengeable as is the influence
the theatre and literature on the development of cinematic forms.

Of course, that is not the real problem. We regard it as much more importa
to determine those changes to which the laws of pictorial art are subjected in t
cinema, and thus to determine which of those laws have lost their significand
and which, on the contrary, have received further development.

The cinema and pictorial art are related by the characteristic of being repr
sentational. A production of pictorial art is primarily a representation built u
on definite laws of composition. But is not the shot in its composition al
essentially no more nor less than a representation, also subject to those laws, ar
is not the dynamism of the cinema purely illusory ?

That is the conclusion we must come to if we take as the basis not the sho
the editing unit of a film, but the frame, its static element. Owing to a fal
assumption, the peculiar quality of the cinematographic process, the main cha
acteristic distinguishing the cinema from all other forms of representational ar
is ignored in coming to such a conclusion. We will try to restore the lost lin

How is an artistic image produced in pictorial art ? In building up h
picture the artist synthesises a number of general ideas which his mind has forme
under the influence of various facts and phenomena he has observed in everyda

ality.   In the course of reducing these general ideas to concrete form he arrives
one or another form of representational construction, which expresses not only
e artist's subjective relationship to the concretised picture, but the influence of
e epoch with its ideological trends.   A finished product of pictorial art is a
flection of its epoch to the extent that it expresses the outlook of the artist who
us created it.

A pictorial image is never absolutely identical with the object in reality, for
1 artistic production is not a fixation of an object in its uniqueness, but is built
) on the aggregate of a number of ideas about that object, which are creatively
orked up into a unity.   Take as an example the work of Daumier, the social
ontent of which is revealed in extremely laconic and expressive pictures.   Dau-
ier cannot be called merely a caricaturist.   He does not ' distort ' reality, but
presses its variety in the unity of compositional construction.   And yet a
awing by Daumier is not an absolutely exact reflection of the reality.   His
ompositions are a synthesis of many phenomena, many dynamic tendencies,
ganically manifested and generalised in a static image.

What distinction is there then in the process of pictorial construction in the
nema ?

A pictorial production is essentially self-contained, it possesses an intrinsic
ompleteness, and wholly expresses the picture conceived by the artist.   But the
nema shot is only an element, a single unit of an artistic production.   An isolated
not does not give us the complete picture, it only reproduces various of its pheno-
ena in isolation.   The picture in its complete form is born at the point when
e assembly of the shots is begun on the basis of their editing interaction.

The psychological peculiarities of our perception—that which we frequently
ll ' visual memory '—allow us to regard the dynamic processes in cinema as
ction genuinely taking place.   Consequently, in the cinema it is not the dynamism
at is illusory, but the static frame, which exists only for the purpose of abstract
alysis.

Pictorial art, with its picturesque construction reduced to the immobility of
atic representation, is restricted by the representational resources available to
.   It remains a spatial art, void of all temporal qualities.   William Hogarth
eferred to the restricted nature of the representational resources of pictorial art
1 the representation of dynamic processes in his " The Analysis of Beauty ".

The best representation in a picture, of even the most elegant dancing, as every figure
rather a suspended action in it than an attitude, must be always somewhat unnatural and
diculous.

Pictorial art operates almost exclusively with spatial categories.   Its time is
lways abstract, and not only extraordinarily restricted, but expressed in essentially
nly spatial visual categories (various allocations of foreground, background, etc.,
e direction of gesture of the figure, and so on).   For this reason pictorial art
annot directly convey movement, nor, consequently, action.   It can only repre-
ent a moment of movement, or convey a sense of movement by the intrinsic
ynamism of forms, lines, colour, composition and so on.   Pictorial art can only
voke in us the idea of action and incident, and that idea will be all the clearer
hen the artist represents the most characteristic situation.

But in cinema there is the temporal element, the time category is present,
nd so we can convey not only a represented situation, but action also.   And,
loreover, it is action not described, as in literature, but genuinely visually re-
resented.

This, however, does not distinguish cinema from the theatre, where also we have action in a real situation, i.e. in a seen space. The difference consists in the circumstance that in the theatre we are given the real action of living people in relatively real three-dimensional space. But in the cinema that action is represented and built up by analogy with the pictorial arts, as we have shown in analysing the composition of the shot. The single frame is certainly a static picture, but brought into movement on the screen (i.e. where in fact the perception of the film begins) it is *no longer a static picture, but action*. The cinema is a new art, with a new, qualitatively distinguished image, although it has relation to the images of other arts. Only if this is taken into account can we reach a sound understanding of the relationship between static and dynamic in cinema.

Cinematic dynamism is manifested in two forms. The first is the dynamism of editing, which, however, *cannot be regarded as specific* solely to cinema art. If we imagine a film edited exclusively from static frames, it is impossible to establish any difference in principle between such a film and pictures edited in a given thematic sequence. If we imagine an ' editing of static pictures ' and then look at a film consisting of a number of immobile images, we get a result absolutely identical in all essentials, in which the cinema plays only the rôle of providing certain technical means of reproduction.

The second form is the intra-shot dynamism, which enables cinema to reflect any dynamic process in its real course, without reducing it to static representation. Here the kinship with pictorial art is largely lost, and it is this form in combination with the dynamism of editing which provides the predominant features of cinema. In the early period of the cinema the absence of an editing theory not infrequently involved abuse of intra-shot dynamism. But later, with the development of editing and not without the influence of pictorial arts, a second tendency emerged, taking the form of exclusion of intra-shot dynamism and its replacement by self-sufficient editing construction, in which the shot was allotted only the rôle of a basic non-dynamic picture in the film.

Of course, neither the one form nor the other exhausts the methods of expressive construction in the cinema, which must base its expressiveness on organic interaction, interpenetration of the editing and intra-shot dynamisms, in isolated instances even exploiting a transition to complete staticity as a means of influence and correction.

The cinema may resolve a composition dynamically in its entirety, without any enforced break and reduction to the static. It can and should reveal the content of the shot with the expressive resources organically peculiar to it, and should not mechanically take over superficial methods of formulation from the pictorial arts.

Fig. 90.—Representation of a galloping horse in a Roman fresco and in a medieval painting.

FIG. 91.—Drawing by the Japanese artist Ogata Korin (1700).

FIG. 92.—Photographs of a galloping horse, taken by Muybridge.

IG. 93.—Drawing by the Japanese artist Hokusai, made at the beginning of the nineteenth century.

FIG. 94.—Photograph by Ottomar Anschutz, taken 1848.

nd while in the early days of the cinema its expressive possibilities were created nd developed out of the experience of the pictorial arts, now it is possible to point) the converse influence of the cinema on the other representational arts. Even 1 the early days there were some most interesting examples of cinema photog- aphy's influence on pictorial art.

Man's visual culture, i.e. the character of his perception of surrounding eality, is not an absolutely fixed quantity : it changes and evolves. For instance, near perspective as a form of perception has not existed everywhere and always : here are entire epochs in the cultural development of various people in which near perspective as a form of perception was passed over. Our visual culture s also by no means free from a number of visual habits and fetishes, which deter- nine the forms of visual representation most customary to us. We perceive the urrounding environment under the influence of these visual habits, and not nfrequently those notions of objects which seem most in correspondence with eality far from correspond with it. A curious confirmation of this is found in apanese graphic art, which has compositional bases which the European percep- ion has to regard as abstract in many respects.

Until the invention of photography, and sometimes, even, to this day, Euro-

pean artists have persisted in representing a galloping horse with both hind-legs stretched backward, and both forelegs stretched forward (Fig. 90). Our visual culture, by force of a certain inertia, never notices the deviation from reality in drawings of this kind. But the Japanese represented a galloping horse quite differently in their pictorial art, and our eye, trained in a certain habit of perception, cannot reconcile itself to the Japanese construction. And so we call it abstract. With the invention of photography, when Muybridge succeeded in fixing a galloping horse in a series of sequentially taken photographs representing the various phases of the movement, a simple comparison of one of them (Fig. 92) with a drawing by the Japanese artist Ogata Korin, made in 1700 (Fig. 91), led to a quite unexpected discovery. It transpired that the eye of the Japanese artist, unfettered by the European's visual fetishes, had been able to catch the animal in a position, in a phase of movement which we Europeans cannot isolate from the general dynamic process. Thus, Japanese graphic art, which was regarded as abstract in its composition, in a number of respects reflects reality more truly than European naturalistic painting. The same conclusion arises from a comparison of the drawing of a stork about to fly, made by the Japanese artist Hokusai at the beginning of the nineteenth century (Fig. 93), with an analogous photograph by Ottomar Anschutz, taken in 1894 (Fig. 94).

Snapshot photography and, later, cinema sharply modified the manner in which pictorial art transmits various phases of dynamic processes, because the artist became provided with a new source of perception and observation of reality, one more perfect than the human eye.

In 1821 Géricault was still drawing a galloping horse with legs spread out symmetrically, two forelegs forward, two hind-legs backward (" Race for the Derby at Epsom "), but in 1880 Speyer in his " Moroccan Fantasy " represented galloping horsemen with great approximation to reality, undoubtedly owing to the influence of photography.

In the same way the specific peculiarities of photographic perspective also have their reflection in painting, caricature, and the graphic arts generally. The perspective foreshortening which is achieved in photography by taking the object with a short-focus lens evokes imitation in painting, caricature, and especially in the poster.

In Fig. 95 we give a photograph of a poster by the artists Mikhailik and Gershanik. Undoubtedly such a compositional treatment, based on the juxta-position of two different foreshortenings, could have arisen only because of the influence of photography and the cinema. The sharp perspective diminution of the police and the characteristic cutting off of the figure in the foreground by the picture limits, are specific to the cinematographic construction of a shot taken with a short-focus lens.

A fundamental influence has also been brought to bear on modern pictorial art by such forms of photographic art as photo-montage.[1]

By the mutual enrichment of experience we get the specific tendencies of so-called ' pictorial photography ', in which it is difficult to separate the pictorial from the photographic elements.

The cinema has enriched the pictorial arts primarily with a variety of new viewpoints, a new view of the object. Cinematographic foreshortening, mani-fested in the dynamics of a turn, has become an achievement of modern pictorial art. Not infrequently the cinema frame is directly imitated by the pictorial

[1] It is particularly interesting to trace the influence on modern Western art of such photographer-artists as Man Ray and Moholy-Nagy.—N.

FIG. 95.—May Day
    Poster.

rtist. Cinematographic pictures are frequently copied by artists, and, finally,
ven the stylistic peculiarities of the cinema are frequently reflected in pictorial
rt.

Compare the photograph of Sokolov's picture " The Arrest of the Provisional
Government " with a frame dealing with the same subject, taken from Eisenstein-
Tisse's film, " October ". Careful study will reveal not only a general similarity
n the compositional scheme, but identity in all the details of the planning and of
he individual images. The figure of Antonov-Ovseenko, the Red Guard standing
at his side, the figure of the Minister, the group of sailors in the left foreground,
are all borrowed entirely from frames of the film " October ". The artist had only
o introduce the chandelier also into his picture for his work to have lost all claim
o originality.

Analogous examples are to be found in Samokhvalov's picture : " V. I.
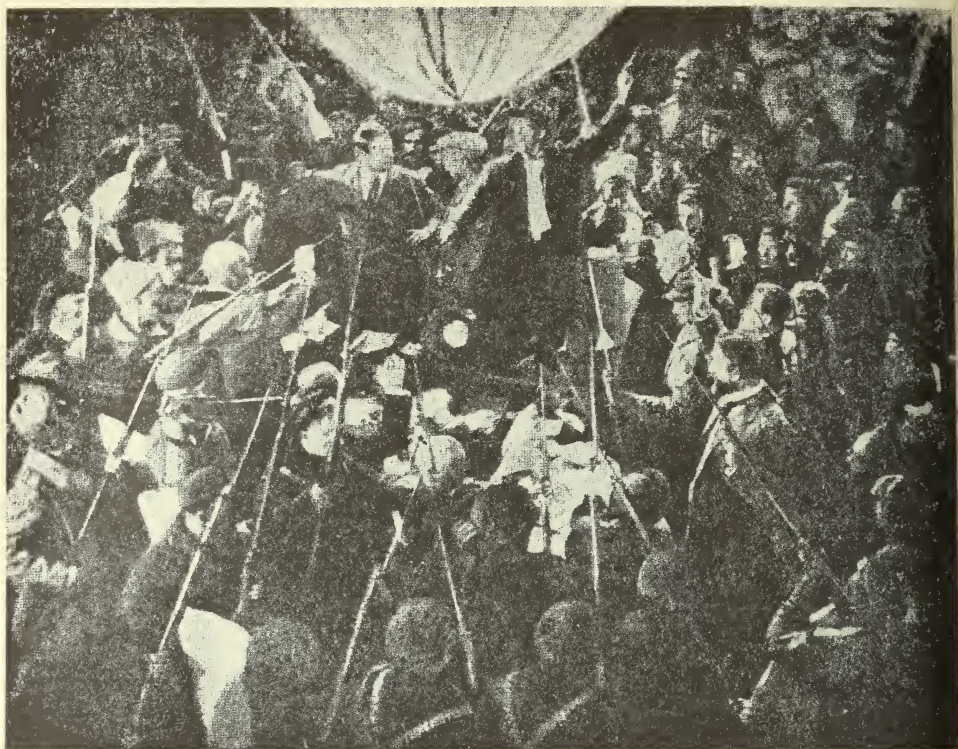
FIG. 96.—Arrest of the Provisional Government. Frame from " October ".

FIG. 97.—" Arrest of the Provisional Government ". Painting by M. Sokolov.

Lenin's Arrival in Petrograd in 1917 ", Ptchelin's " Session of October 10th ", and N. Shukhmin's " Landing from the Aurora in 1917 ". These pictures all reproduce subjects with the same compositional planning and the same details as those of certain frames of the film " October ".

Thus in various regards cinema and pictorial art mutually complement, mutually enrich each other. For the camera-man the study and knowledge of the laws of pictorial art are not only necessary but obligatory. He must learn from the artistic heritage of the pictorial, architectural and plastic arts, for only in such conditions can he consciously apply in his work the experience accumulated by the representational arts of origin earlier than the cinema.

But in what form can the camera-man borrow and apply that experience ?

It is essential that there must be no mechanical copying, no mechanical transference to the cinema of various methods and compositions of pictorial art, just as in pictorial art there should be no simple copying of the cinema frame. When applying the compositional scheme of any pictorial production in his shot construction, the camera-man must by analysis abstract and elucidate the principles of that compositional scheme, must envisage it not merely as a formal method, but as a philosophic quantity, as a method of artistic treatment of the real object. A comparison of the shot's functional task with the principle of the proposed compositional scheme will at once reveal to what extent that scheme is suitable for the expression of that functional and emotional task. In the search for methods of lighting, also, the camera-man is justified in turning to pictorial experience, but here, too, a critical approach is necessary, because any given method must be organically connected with the general representational treatment of the film. Only that which organically derives from the representational treatment adopted, and does not contradict the general style of the film, only those methods for which there is definite intrinsic justification can be exploited as means of artistic influence. When undertaken from this viewpoint the critical borrowing and mastering of pictorial experience is entirely expedient. When such an attitude is adopted the antagonism between pictorial art and the cinema is entirely eliminated.

But the mechanical copying of pictorial productions and various methods of pictorial art always leads to a superficial, external ' pictorial formulation ', which deprives the film of its genuinely cinematic expressiveness and transforms it into a ' substitute for representational arts '.

4. THE THEORY OF PHOTOGENICS

The representational qualities of the object filmed, as a subject for artistic representation, by no means always coincide with its expressiveness, that is, its ability to evoke in the spectator the definite association indicated in the scenario and the director's instructions. That is why in practice cinema art resolutely rejects any kind of canonised æsthetic recipes. Is it possible in the cinematographic process to establish the existence of intrinsic expressiveness in any object ? With the aid of the famous theory of photogenics, for instance, by which was understood a peculiar ability of certain objects to create effective, impressive shots, owing to qualities intrinsic in their form or surface ?

Practically, in the conditions of the Soviet cinema, we can regard the theory of photogenics as dead. Yet, despite several works by leading cinematographers disproving this theory, leisured theoreticians are still busily composing catalogues of photogenic and non-photogenic objects. Objects with a clear-cut contour and a characteristic texture, evoking an effective play of light and shade in the film, cityfied styles of buildings with rectangular construction, metallic objects with a smooth, polished surface are all recognised as photogenic owing to their innate beauty, and are recommended to the camera-man as ' effective ' material for the screen.

The theory of photogenics is simply one of the manifestations of bourgeois formalism and worship of things for their own sake. When the photogenic theory is predominant the bourgeois cinema (and the Soviet cinema also for some time was under its influence) becomes a prey to lack of ideas, gives itself over to thoughtless delight in the forms and textures of the material. The specific peculiarities of the bourgeois entertainment cinema also had their share in this result. In the directorial sphere a slavish satisfaction of the petty suburban æsthetic requirements of the bourgeois spectator led to the creation of favourite clichés, and in the camera-man's sphere to the selection, on the grounds of superficial effect, of the objects most easily susceptible to photography. Instead of ensuring that with the aid of technical resources and a definite expenditure of creative energy the photographed material shall achieve maximum expressiveness in the required direction, the bourgeois camera-man prefers to limit his activity to objects which, from the viewpoint of the sugary æsthetics of the bourgeois cinema-goer, are sufficiently beautiful in themselves. This attitude tends to neutralise his rôle, for not only is he not master of the material, but he simply renounces all participation in the creative process of making the film. A bourgeois fetishism for things, plus suburban ' salon ' æsthetics concealed under a super-

icial, sugary beauty, such is the content of photogenics in bourgeois cinema practice. It is more qualitatively refined and formalistic in the European cinema, in the work of Delluc, for instance, and more banal, vulgar and naïve in the ' standard ' cinema production of America.

In Soviet conditions creative work founded on such methods would undoubtedly be injurious and reactionary, for it would not only fail to organise the spectator, but would socially disorientate him, replacing the ideological content by purely æsthetic, superficially ' artistic ' moulds.

The German theorist of the cinema, Rudolf Arnheim, devotes a whole chapter to " The psychology of the Mass-Produced Film " in his book *Film*.[1] He says :

> Nearly all the stories of these films follow—unconsciously or otherwise—a definite trend ; not that they are preaching ; on the contrary, the dangerous thing about this trend is that nothing is formulated theoretically, nothing is exacted ; but the standpoint from which the things of this world are regarded, the choice of narrative and its implicit moral, are unilateral. . . . The mass-produced film titillates what is bad and stupid in man, it ensures that dissatisfaction shall not burst into revolutionary action, but shall fade away in dreams of a better world. It serves up in a sugar coating what really needs combating. . . . It is only necessary to pick out one or two of these films and to analyse them, and it will be seen at once how much secret poison there is in such apparently harmless entertainments.

Where did the theory of photogenics arise ? Its introduction to cinematography has to be attributed to Louis Delluc, who regarded as photogenic features that possessed character first and foremost. But this opinion admits the possibility of there being absolutely non-photogenic features as well as photogenic ones. And what is an absolutely non-photogenic face ? It is one void of any characteristic peculiarities whatever : in other words, it is a pure idealistic abstraction, void of all qualities, and consequently quite unimaginable.

The idea evoked in our minds by the superficial aspect of any object arises by no means as the result of an immediate visual impression, but, as Plekhanov pointed out :

> Sensations evoked by a certain combination of colours or of objects, even among primitive peoples, are associated with very complex ideas, and at any rate many such forms and combinations seem beautiful only thanks to such associations.[2]

The impression evoked in our minds by the sight of a motor-car acquires a certain direction not only because we see a smoothly polished surface, the gleaming metal parts and the plastic form of the body, but also because with our view of the car is associated the idea of speed of movement, and we value a car from the aspect of its service for this purpose. Any attempt to arrive at a valuation of the expressiveness of such material from the standpoint of bourgeois ' *a priori* ' or ' formalistic ' æsthetics invariably leads to serious errors, of which we see many examples in the history of the development of technical forms.

In the period of the birth of machine industry the machine, as we have already pointed out, was regarded as doubly unæsthetic. The first locomotives were provided with relief ornamentation in pseudo-classical style, giving them a superficial approximation to the ornamental finish of coaches. The chimneys were given the form of Corinthian columns, and the wheels were adorned with garlands. The unpleasant impression caused by the total absence of justification for such

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[1] *Film*, translated from the German by L. V. Sieveking and Ian F. D. Morrow, Faber & Faber, 1933—*Ed.*

[2] Plekhanov : *Letters without Address.—N.*

decoration was erroneously attributed to the action of the machine itself. But later, having accepted the machine, instead of organically perceiving it as a new subject for æsthetics, bourgeois æsthetics ascribed to it a ' pure ' objective beauty of its own. Bourgeois æsthetics only changes its fetish, but by no means changes the standpoint of its æsthetic estimates.

But if even objects and things evoke in us æsthetic impressions not ' in themselves ', but only as the result of our specific estimate of them, in relation to their function and purpose, this applies in still greater measure to living objects, and especially to man. We need not go further into the psychology of æsthetic perception, but note only that it is always conditioned socially and historically.

The sphere of visual perception is still insufficiently studied to enable us to talk of an immediate estimate of operative elements. Even when we take as our starting-point not a single shot, but an edited episode or scene, we can predetermine the character of the spectator's perception of any particular section of the film only very approximately, and then only granted a number of conditions, chief of which is that the social composition of the audience shall be known beforehand. Consequently it would be a great mistake to consider associative perception as a kind of unconditional reaction, corresponding to the simplest type of reflexological scheme. However, all this does not diminish in the least the possibilities of applying a single guiding criterion in estimating cinematic expressiveness. The whole problem consists in determining what particular association we have to deal with. If the orientation is fixed on a single, individual association, a preliminary estimate of the influencing elements in cinematographic shots is quite unthinkable, for, despite the uniformity of line of the majority of people, such an associative perception is the actual source of an endless variety in the character of impressions and tastes. But if we are speaking of association more or less generalised, in other words, peculiar to a definite group of people occupying a definite place in the social system—which association inevitably has a social tinge— a preliminary estimate becomes more possible.

Formal properties are not the main criteria in the artistic estimate of the expressiveness of an object. At the basis of perception is an involved ideological complex, which cannot be excluded from æsthetic perception, although of course one cannot completely reject the possibility of looking at so-called characters of beauty from a certain standpoint with a measure of objectivity. Consequently, any selection of expressive characters, made only with the aid of æsthetic recipes and abstract laws laid down once for all, will be fundamentally wrong, and will only lead to the superficial type of a ' standard of beauty '.

It is extremely interesting to investigate the evolution which the theory of photogenics has accomplished in the conditions of the American cinema. Here we meet with a peculiar theory of ' sex appeal ' which is in every respect a consistent development of the theory of photogenics. Speaking of the selection of actors in the American cinema, the director G. V. Alexandrov says of the ' expressive characters ' on which the selection is based :

The choice of actors for the cinema is made first and foremost on the basis of the given actor or actress possessing ' sex-appeal '. Consequently, when the actor or actress applies to the producer, he engages them only if, in his opinion, he or she is capable of exerting this erotic influence. Nothing else matters, so long as money can be made out of the appeal of the given actor.[1]

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[1] G. V. Alexandrov, " American Film Production ", in the journal *Proletarian Kino*, Nos. 15–16, 1932.
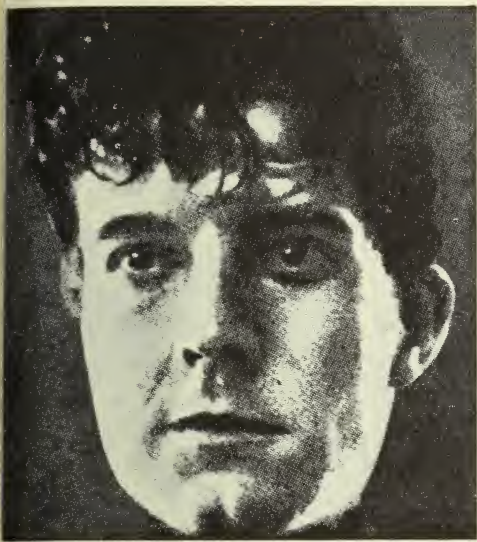
FIG. 98.—Ramon Novarro, photograph taken with ' characterising ' lighting.

FIG. 99.—Ramon Novarro, ' standard ' American photograph.

The invasion of the camera-man's art by such theoretical prerequisites as that of photogenics led to the establishment of standard methods of lighting and optical treatment of the visual image in the bourgeois cinema. If a close-up of a girl is to be taken the camera-man directs all his efforts into emasculating the facial texture, and depriving it of its characteristic and typical features. A fetishised image of a woman is created with a clear light aureole around her head, shining eyes, clearly defined shadows from the long, painted lashes ; a picture reminding one of a mannequin rather than a living human face with the individual features essential to it. A soft-focus lens smooths out all the inequality on the face, a soft, diffused frontal light destroys the relief, a strong back light emphasises only the contoural outlines, and as a result we see on the screen ' ideally beautiful ' close-ups, exact copies of the picture-postcard ' beauties ' beloved of the petty bourgeois.

How strongly the face is modified by such methods of optical treatment is evident from a comparison of the two photographs given in Figs. 98 and 99. The characteristic, naturally energetic face of Ramon Novarro is never shown us by the American cinema. Instead of this picture we see a sugary, handsome youngster, in whose face no individuality, nothing typical and vital is left. This emasculated manikin is as far from the original as the American cinema as a whole is from the realistic reflection of actuality.

In Fig. 100 we give six close-ups from various American films. Even if the spectator attentively studies each of these portraits with care for some minutes, he will not be able to remember a single face, so alike are they to one another. And besides, it is unnecessary that he should. The camera-man's task here has consisted only in manifesting the general prettiness of each girl and emphasising the superficial factors of ' sex appeal '—the eyes, the lips, the lashes. The spectator has no need of an actress ; he is satisfied with seeing a sexual fetish, in all cases evoking one and the same emotions.

FIG. 100.—Six close-ups from various American films.

FIG. 101.—Wax advertising models.

FIG. 102.—Mother and child. Shot from the film " Women by Day ".

FIG. 103.—Mother and child. Shot from the film " The Fate of Renata Langen ".

FIG. 104.—Mother and child. Shot from the film " Waste and Want ".

Compare these six portraits with the photograph in Fig. 101. Do not these six models remind us of the girls portrayed in Fig. 100 ? In the last resort the distinction consists only in the fact that these ' beautiful heads ' are immobile, whereas the cinema ' beauties ' are dynamic.

The search for ' photogenic ' types leads the camera-man of the bourgeois cinema to standard compositional constructions also, such as the average audience is considered to be ' accustomed to ', and corresponding to its conception of beauty. In the three photographs that follow we give shots from three German films. In every case the subject is the same : a young mother with her child (Figs. 102–104). The camera-men responsible for these shots knew only a single form of compositional construction for such close-ups. We can easily substitute the close-up of one film for another in a different film, and the spectator

is hardly likely to notice that there has been any change. The type image is prepared to exact order ; it completely corresponds with the suburban and petty bourgeois conception of the " glowing " face of a young mother.

In its various interpretations the theory of photogenics has taken strong root in the creative work of the bourgeois cinema. It is characteristic of the trends of that cinema, for lack of ideas is the basis of its work—it cannot have any other understanding of beauty. Because it endeavours from imagined immanent qualities of the object to justify the possibility or impossibility of that object's expressive construction in the cinema, it is a reactionary theory, limiting the creative horizons of cinema as a whole and of the camera-man in particular.

5. THE ROLE OF THE CAMERA-MAN IN THE WESTERN CINEMA OF TO-DAY

The invention of sound film has effected a decisive change both in the European and in the American cinema industry. From the creative aspect, the first sound films were hopelessly reactionary, a return to the worst days of Pathé and Gaumont. Burlesque singers, operetta duets, comic dialogue and dances—such were the subjects of these first sound films. In its incipient stage the sound film completely abolished the artistic culture of the camera-man which had been created during the preceding period. Shut up together with the director in a sound-proof box, deprived of the possibility of moving the camera, deprived even of the controlling right to ' turn ' (for the camera was set in motion by a motor), the camera-man completely renounced the artistic creative factor from his work. In fact, he yielded place to radio technique and the sound recordist, who was given complete charge of the process of shooting. The attraction of the sound film at first led to a general opinion that the camera-man was no longer needed at all. His artistic functions were handed over to the technician sound recordist, and the results of this attitude to the creation of an artistic work were immediately seen in the quality of the production. A complicated technique took predominance over the creative tendencies, and the camera-man found himself compelled to learn the shooting process all over again.

The invention of a sound-proof ' blimp ' completely surrounding the camera partially liberated the camera-man. He again entered the studio with his camera, and attempted, on the basis of the more complicated technique, to find new forms of compositional construction for the sound-film shot.

Meantime, in the European cinema fundamental changes were taking place in connection with the conquest of the European cinema market by American capital. After a stubborn struggle, German cinematography, which had previously occupied the leading position, was forced to yield pride of place to the Americans. As far back as the appearance on the European screen of Griffith's " Intolerance ", which first revealed the possibilities of the cinema when armed with all the potentialities of technique, Germany had been putting forth every effort to retain for herself the monopoly in European countries.

As a kind of patriotic and commercial revenge on the aggressive tendencies of the Americans, the Germans produced the film " Nibelungs ", which temporarily restored a certain equilibrium. But with the release of " Ben Hur " and a number of other strong subjects, America finally confirmed her supremacy. The expenditure incurred on the production and advertisement of the film " Metropolis ", on
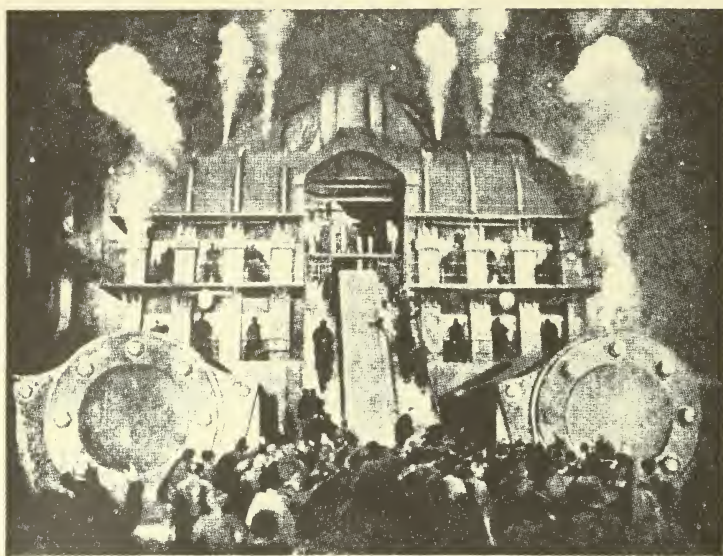
FIG. 105.—Shot from the film " Metropolis ".

which it placed its ' last shirt ', proved too much for German industry, already drained of its blood. " Metropolis " (Fig. 105), which according to official figures cost more than six million marks, finally undermined the material stability of Ufa, and with timely capital investments the Americans took charge of the German cinema.

The immediate result of the change in business leadership was the intro-duction of American production standards into the European cinema.[1] The course was taken of producing average films, made in the shortest possible time and with the least possible expenditure. The fine craftsmanship of the German camera-man school could find no application here, and the camera-men of high culture, such as Guido Zeber, went to work in the small cinema firms still inde-pendent, in order to continue the tradition of the German artistic cinema. One cannot point to a single really important phenomenon in the sphere of the European artistic cinema during this period. Yet what do the so-called ' standard ' methods of the American camera-man, which have found wide application far beyond the bounds of the American cinema, really signify ? For a qualification of those methods we make use of the materials of a report by E. K. Tisse on the American camera-man's work.

The average American camera-man is restricted in his work by the strict limits of the standard. Beyond those limits he does not seek new roads, does not experiment, and as the result of this attitude he exploits only those methods and technical possibilities which always give one and the same, certain and reliable effect. For instance, one rarely sees a camera-man on exteriors working with a dense light-filter. So, too, when he resorts to gauzes and lenses in order to achieve softness, applying optical ' retouching ', he always tries to keep within the bounds of ' normal ' photography. The standard has become so widely

[1] Protective legislation (of Quota or Kontingent) has not so much hindered American business domination, as forced it to take veiled forms, and has little interrupted the ideo-logical advance dating from this time.—*Ed*.

pplied that even in regard to close-ups and landscapes special ' types ' of ' artistic hotographing have been established.

In regard to methods of organising the camera-man's work, America has its wn system, which is determined by the standard character of production. The sual standard film is shot by several camera-men, at the head of whom is the irector of the group, the chief camera-man.[1] All trick photography is isolated 1 a separate studio equipped with special apparatus, and is partially produced 1 the laboratory. Sometimes a division is made between those who take studio nd those who take exterior shots. There are also more highly specialised cate-'ories of camera-men, such as one taking only portrait close-ups, another only ight shots, and so on.

While a differentiation of camera-men on the basis of their specialisation n various forms of cinema production is undoubtedly necessary and valuable vherever it is required by the specific nature of the work, any specialisation on 'arious forms of photography within the limits of a single film, if it be evoked by ommercial considerations only, is in our view a negative phenomenon which lepersonalises the camera-man, a creative worker, and transforms him into a echnical photographer mechanic. In any such organisation of the shooting process the integrity of the artistic production is seriously threatened so far as the epresentational treatment of the film is concerned.

From the aspect of the technical factors [says E. K. Tisse] the work of the American amera-man is undoubtedly on a very high level, and both the organisational side and the echnique of working up the material ought to be studied for application to our [Soviet] onditions.

The situation is different in regard to the methods of shooting. The American amera-man does not exploit one tenth part of the creative possibilities which could be us on the basis of the technique at his service. He exploits every technical method, very resource only as purposeless trickery, to create superficial effects of " sensational " hots. The American camera-man does not set himself the task of revealing the content f the editing unit, of manifesting it with the aid of expressive resources, by which we nean the composition of the shot, lighting, etc. For him the shot is *an end in itself, a pictorial construction*, which frequently is in sharp antagonism to the general tendency.

The standardisation of the general lighting, its reduction to ready prepared lighting chemes for a sunny morning, evening, sunset, and so on, may perhaps be admitted as xpedient within the limits of the American cinema. But attempts to standardise lighting by creating definite lighting schemes for long-shots, mid-shots and close-ups should undoubtedly be regarded with disfavour, since it leads to the introduction of stamp into he work of the camera-man artist.[2]

The director G. V. Alexandrov also speaks of ' standardised methods ' of vork and the narrowly technical specialisation of the American camera-man in iis article on the organisation of American cinema production.

For each film the shooting group has not one camera-man but several, differentiated according to narrow specialisation. For instance, exteriors are taken by one camera-man xpert, tricks by another, while studio sets are taken by a specialist in photography by irtificial lighting.

Such a system is adopted chiefly for standard production, which comprises the bulk of American cinema production. Of course directors like Chaplin, Griffith or Lubitsch vork outside this system. But the standardised system is predominant even in the best companies, releasing six or seven pictures every month. The entire shooting process is broken up into separate specialities, to be taken simultaneously in various departments of the production factory.[3]

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[1] Nowadays usually called the ' lighting expert.'—*Ed.*

[2] Shorthand report of E. K. Tisse's lecture at the conference of Moscow camera-men n *A.R.R.K.* (the Association of Russian Revolutionary Kinema), 1932.—*N.*

[3] G. V. Alexandrov, *op. cit.*—*N.*

So that in American cinematography, with the exception of a few isolated cases, the camera-man is outside the creative process of work on the film and is a passive executant of the director's will. A similar situation prevails in present-day European cinematography, although here isolated exceptions from the general system are more frequently to be found.

In bourgeois cinematography the camera-man's work is customarily understood as the technical process of bringing a scene to the screen with the aid of photography and cinematographic technique. Such an understanding is natural to the bourgeois cinema, built for output, for there the only creative element in realising the film task is the directorial construction of the picture, which has no connection with the camera-man's activity in carrying through the representational treatment of the given work. Certainly in this case the camera-man's share consists only in photographically fixing the scene being taken.

In such a situation the camera-man is placed outside creative art, for his potentialities are regarded only as a *technical resource.*

But as soon as we attempt to consider the technical resources of cinematography from the angle of the *expressive functions* they fulfil, the fundamental viciousness of the bourgeois cinema system becomes fully apparent.

In the production process of the bourgeois cinema the camera-man is not, as a rule, an independent worker, and is not creatively associated with the director. The entire sum of artistic elements and the creative conception in the making of the film are allotted to the director, while the camera-man remains a voiceless executant of the director's will, which holds sway even over the technical sides of film making. The camera-man's work is estimated solely according to the criterion of successful or unsuccessful photography. Even though we do occasionally meet in bourgeois cinema with a combination in which the work of the director and the camera-man are of equal value in their craftsmanship, none the less we never see them creatively associated by a joint standpoint in the making of an artistic production. In the majority of cases the camera-man of the bourgeois cinema has only a superficial idea of the ideological approach, and of the editing formulation of the film being taken. He makes no investigation into the directorial construction of the picture, is deprived of a general perspective, and is restricted to a formal treatment of the various shots, having no connection with the general scheme and the scenario task. Mechanically fixing the scene taking place before the lens, he is guided in his work by certain ' inviolable ' laws of composition and lighting, borrowed in the best case from pictorial art, and in the worst from so-called art salon photography. Naturally, the estimate of his work primarily takes the line of his craftsmanship in portraiture and pictorial constructions, and not that of his expressive formulation of the scenario task in the shot. Even in the leading country of bourgeois cinematography, America, despite all his qualities the camera-man remains a technical executant, invited to participate only for the shooting period, while the full, authoritative hegemony remains with the director.

What is the cause of this isolation from the creative processes of making a film ? What is the reason for his reduction to the level of a passive camera technician ? Logically the reason is primarily that in the process of its development the creative organism of the bourgeois cinema was built up by mechanically borrowing structural elements of previously existing arts, and especially those of the theatre. The methodology of bourgeois cinema production could not decide upon the rôle and place of the camera-man in the creative process, and, rejecting the principle of the organically welded creative group, was forced to

gard him as only an ' inevitable evil ', standing between the director and the screened film.

While the director is able to work over the material in detail during the preparatory period, the camera-man has to decide highly complex compositional tasks of shot construction not on the basis of the scenario content, with which usually he is acquainted only superficially, but in accordance with the director's verbal instructions, at the actual moment of shooting. That is why in the bourgeois cinema we frequently meet with cases where the camera-man has exploited technical methods of shooting without taking the director's scheme for the shot into account.

As a result of this attitude, in formulating the compositional tasks of the shot the camera-man is guided not by its functional task, but by the aggregate of superficial features of the material. In other words, he does not try to convey the idea and theme expressiveness of the shot, but is satisfied with a representation of the shot scene in a form dictated by the formal elements of the object shot.

In constructing the shot he takes as his starting-point not the function of the given editing piece, but only the representational elements of the material, and tries compositionally to ' formalise ' them into something whole and complete. In his search for new and original methods of formalising the material as such, he makes an excursion into the museums of old pictorial arts, demonstrating a ' Rembrandt ' lighting effect or parading an impressionist play of light and shade. Naturally, effects of this kind, organically unconnected with the content of the shot, in other words with its editing function, are in the majority of cases only self-sufficient pictorial effects.

The book already mentioned, Rudolph Harms' " Philosophie des Films ", thus defines the tasks of the camera-man :

His task is to paint the picture with the aid of the camera lens, emphasising the depth, isolating the forms, deepening and softening the sharpness of their situation, catching the intervening shades between the most brilliant light and the most complete darkness, and, while doing all this, making a clear picture distinct in all details, which may be soft and fluid, but must not be indistinct, may be sharp and emphasised, but must not be excessively harsh and distorted.

This definition perfectly expresses the principle of superficial ' cinema-formalisation ' which lies at the basis of the non-Soviet camera-man's work.

Thus the present-day bourgeois camera-man, who not infrequently rises to the level of great formalistic perfection, with all his achievements still remains outside the framework of the specific features of cinematic expressiveness. The creation of shots of ' genius ', of model ' pictures ' in the film, of which the disunity with the succession cannot be overcome either by the unity of action or by the unity of the images—such is the result of the bourgeois camera-man's striving to achieve ' independent ' creation despite his suppression as a creative colleague.

6. THE DEVELOPMENT OF THE ART OF THE CAMERA-MAN IN THE SOVIET CINEMA

No profound analysis of the main creative tendencies of Soviet cinematography has yet been made. Even in regard to questions of differentiation of cinema genres, only now are isolated definitions of a general kind being established, and these cannot be regarded as so far sufficiently formulated. This greatly hinders a survey of the creative trends of the camera-man's art, for representational treatment cannot be considered in isolation from the theme and content of an artistic film, and cannot be wrested from the dramatic and directorial treatment. For these reasons we have to confine ourselves only to certain general observations which are necessary to our final conclusions.

During the early years of its existence, Soviet cinema, which arose on the ruins of the pre-revolutionary Russian cinema, was deprived of even an elementary technical basis. A few poor studios, built for filming by sunlight, a half-destroyed lighting equipment, imperfect accessories and antiquated cameras were what the Soviet camera-men inherited from Khanzhonkov, Ermoliev, and Darikov.

The position was still worse in regard to the 'artistic legacy' of the pre-revolutionary Russian cinema which burdened the shots of the few camera-men.

A theatrical property-set eclectic of half-dark interiors, the most trivial of 'photographic formalisations' of portraits of the favourite heroes of the memorable "Golden Series", [1] absurd compositional laws and recipes—all this heavy baggage of rubbish crashed on to the shoulders of the Soviet cinema, which did its best to acquire a new thematics with the aid of this 'artistic heritage'.

The old school of camera-men, working with a few simplest of compositional principles for photographic fixation of theatrical scenes, proved bankrupt in face of the creative tasks of the newly born revolutionary cinema. The camera-men who had taken a course of 'artistic photography' with Pathé and Gaumont were far from possessing any creative understanding of their rôle. In the best case, they could more or less successfully copy those models of camera-men's art in foreign cinematography which appeared on the Russian screen of the time.

Passive reproductionalism, dead fixation of theatrical scenes, the absence of any creative tendencies characterised the work of the old school of camera-men. There were no artistic films even in the non-value application of the word. [2] Soviet cinema took its first steps in a new sphere of creation, with the news-film.

[1] A pre-revolutionary serial film thriller.—*Ed.*

[2] As already noted elsewhere, Soviet film terminology uses 'artistic' film to mean non-news-reel or non-documentary, what we should simply call 'story-film'.—*Ed.*

the new conditions the Soviet news-film had enormous influence on the development of the camera-man's art, and became the means of education of the new camera-men.

Faced with the task of direct representation of the historical events of revolutionary reality, the Soviet news-reel involved the necessity that the camera-man should possess an ideological striving to an end, the greatest of energy, gifts for creative representation, and the intelligence to adjust himself to any conditions of shooting. Certain camera-men were transferred from story-film cinematography to news-reel work, and became permanent travelling companions of the Red Army detachments. In the foremost positions at the Polish front, in the Crimea, with the Budienny cavalry, in the rear of the Czechoslovaks, everywhere the camera-man was to be seen, actively participating in the military operations and the battles. He was already far from the neutral position of the bourgeois news-reel reporter who seeks sensational shots amid the circumstances of a fighting front. He became an active agitator and propagandist, frequently changing his camera for a rifle. In these harsh circumstances of the civil war he was subjected to an ideological transformation, for he recognised the importance of his rôle as Soviet news-reel reporter, and distinctly understood his social obligations to the millions of workers who were thirsting to see on the screen genuine cinema documents of the day-to-day events. In the process of this continuous active work a new type of camera-man was created, completely unlike the ' artists of photography ' of the days of Pathé and Khanzhonkov. The news-reel became a school for the organisation of the ranks of all camera-men. It brought a vital

FIG. 106.—Shot from the film " Strike " (Eduard Tisse, cam.).

creative content into the dead forms of the old camera-man's art, and this content radically broke away from the established tradition of the pre-revolutionary school.

An essential part in the reorganisation of the ranks of camera-men who had come into news-reel work was played by the specific nature of the news-reel itself, which made extreme demands on the camera-man. We must consider in more detail the specific peculiarities of news-reel filming, since it will help us considerably to explain the sources of the creative tendencies which emerged in the camera-man's art of the succeeding period.

Whereas in the making of an artistic (or story) film the camera-man's task is to find a unity in the representational treatment of artistic images, and a style which organically arises out of the content and artistic intention of the scenario, a news-reel film confronts him with a by no means less complex task. Owing to the specific conditions of making a news-reel film a number of episodes are entirely handled by the camera-man himself, and completely depend on his artistic culture and ideological approach. He has no predetermined scenario distribution into shots, so he is compelled directly in the process of shooting to create his own plan, and, following that plan, ' editably ' to shoot each shot, preserving the general narrative and compositional succession. Here, in fact, the camera-man has to undertake director's functions, and the quality of the film depends to an enormous extent on his artistic perceptions, craftsmanship, and skill. We have already said that in editing only those shots can be reduced to an artistic unity which, in the shooting process itself, have been taken with regard to the general guiding editing conception.

The so-called ' news-reel ' increases these demands still more, since here the camera-man's social outlook, philosophy of life and creative understanding of his tasks play a decisive part.

The ' news-reel ' demands a distinct understanding of the social essence of the events taking place and being shot. It necessitates a radical ideological reorganisation, and the resolute rejection of the neutral position of ' objective ' reporting. In the actual technique of filming it demands extreme laconism in the shot, expressiveness, ability to reveal the main and essential, intelligence to capture and transmit in a short narrative the chief features of the event shot, and a basic clear social approach.

Among the camera-men who played a great part in the creation of historical news-reel documents we must mention first and foremost E. K. Tisse, A. A. Levitsky and G. V. Giber. We mention them in particular because their creative road is most characteristic of the first period of development of the Soviet camera-man's art.

When they went back to story cinematography A. A. Levitsky and G. V. Giber took with them a high level of technique, enriched by their experience of news-reel shooting.

We must give special consideration to E. K. Tisse's creative work, since his name is inseparably linked with the greatest productions of Soviet cinema, with films of historical importance to us. In 1913 Tisse passed out of a commercial marine high school and entered Graenzing's studio of painting and photography. In 1914 he began practical work, shooting nature pictures on expeditions organised by the Graenzing studio (fishing in Holland, travelling through Scandinavia, etc). During the war he was a war correspondent camera-man, and filmed the military operations on various fronts, frequently in conditions of immediate danger, for instance in the battle for Riga and the surrender of the Iskulsk fortress. After the October revolution and the establishment of the Soviet Government he entered
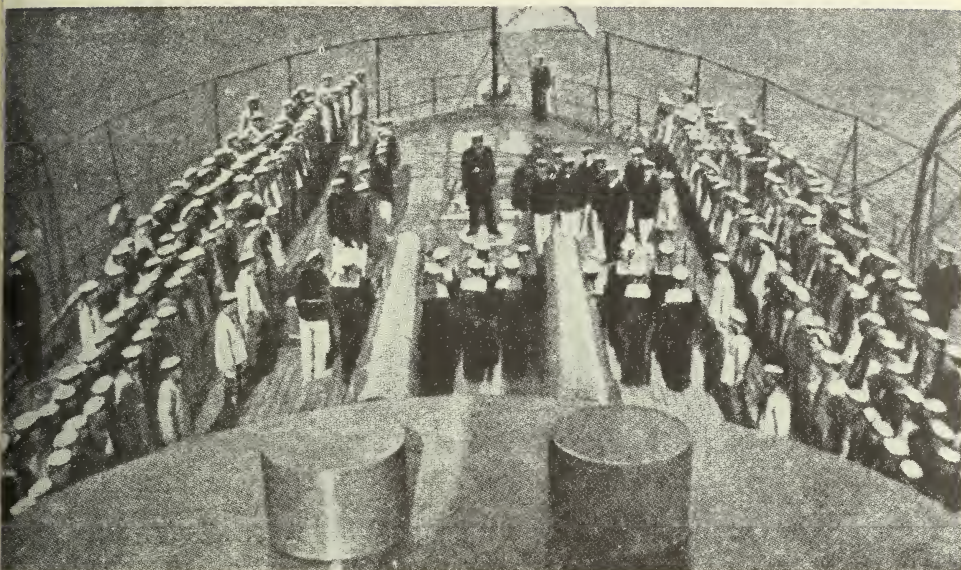
FIG. 107.—Shot from the film " The Battleship Potemkin " (Eduard Tisse, cam.).
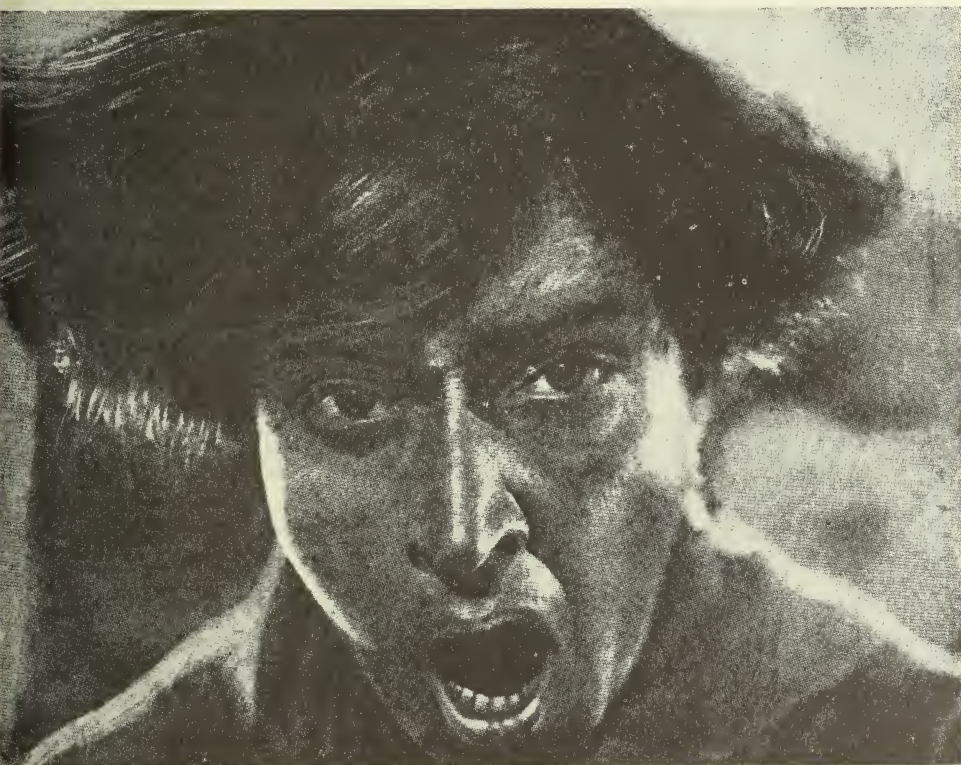
FIG. 108.—Shot from the film " The Battleship Potemkin " (Eduard Tisse, cam.).

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FIG. 109.—Shot from the film " The Battleship Potemkin " (Eduard Tisse, cam.).

the service of the newly organised photo-cinema committee, N.K.P., in May 1918.

His period of work on news-reel shooting, from 1918 to 1923, was most fruitful and important in his development as a camera-man, and determined the specific features and methods of his work.

During the events of those years he travelled from place to place, taking a great variety of films of historical importance (holiday parades, anniversaries, congresses, films of living conditions, of economic reconstruction, travels with Kalinin, and so on), in the uneasy circumstances of film work on various fronts (Czechoslovakian, Polish, Wrangel and Denikin), in the territories of Latvia, the Crimea, the Ukraine, the Volga basin, Siberia, the Caucasus, and in 1921 in the famine districts of the Volga.

Work in the highly varied and difficult conditions of the early years of the Soviet regime developed in him, as in many other news-reel camera-men, sang-froid, swift orientation, and audacity. From time to time he was entrusted with direct military and other responsible tasks in addition to his film work.

A gift for ' editing ' construction of news-reel subjects, and for preserving the unity of the ' editing ' conception in filming heterogeneous material are the distinguishing features of Tisse's work. From 1923 onward he took up story-cinematography. His 'news' methods of work, compositional brevity and expressiveness of shot distinguish his work from that of the camera-men of the old school. When he joined the Eisenstein group he retained the positive qualities

f the news-reel reporter, and combined them with the craftsmanship of the camera-man artist. In the film " Strike ", which effected a genuine revolution and made a breach in the then far from outlived production traditions of the pre-revolutionary cinema, he representationally revealed the features of the distinctive trend which entered Soviet cinematography with that film (Fig. 106).

This trend confronted story-film cinema for the first time with the demand for a high level of representational culture. It sought new viewpoints, it sought expressive foreshortenings, it exploited dissolves and multiple exposures for the organic expression of the scenario task. And all these lines of discovery are inseparably associated with the work of E. Tisse.

Liberation from the self-contained bounds of the theatricalised interior, and an understanding of the shot as an inseparable element of editing, were the new features which this trend introduced into the camera-man's art.

The second film made by Eisenstein and Tisse, " The Battleship Potemkin ", was a brilliant example of accomplished unity in the creative attitudes of the director and camera-man, and here the results of the first creative researches revealed in " Strike " were consolidated (Figs. 107–109).

We cannot stop to analyse the compositional principles underlying the constructions of all Tisse-Eisenstein's work. But it is necessary to note certain features which characterised the creative rôle of the camera-man in making these works.

In " The Battleship Potemkin " the chief emphasis was laid on the construction of linear composition, but in " The General Line " [1] (Fig. 110), and especially in

FIG. 110.—Shot from the film " The General Line " (Eduard Tisse, cam.).

[1] Called " The Old and the New " in the U.S.S.R. and U.S.A.—*Ed.*
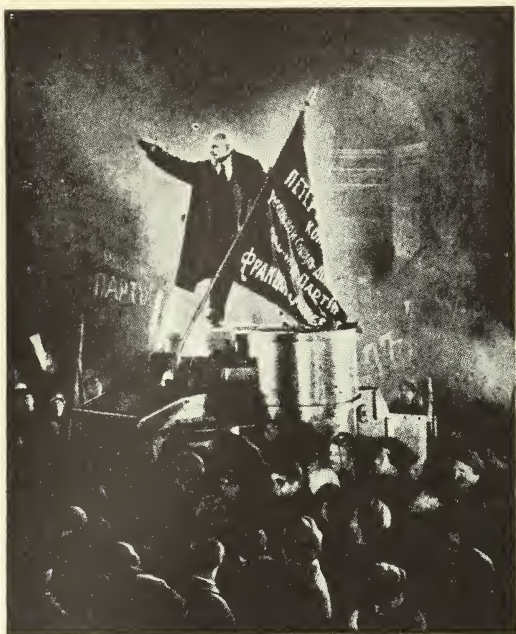
FIG. 111.—Shot from the film " October"
(Eduard Tisse, cam.).

FIG. 112.—Shot from the film " October " (Eduard Tisse, cam.).

October " (Figs. 111-112), Tisse paid especial attention to lighting composition. has to be emphasised that in the creative growth of almost every camera-man e mastery of linear-dimensional composition almost always precedes the resolu- n of light and tonal tasks. Only after mastering the methods of distributing jects in the shot does the camera-man begin to work on the problems of lighting, d this ' lag ' of light and tonal tasks is quite normal. It is so first and foremost cause linear construction is the starting-point from which lighting and tonal nstruction takes its beginning. And only after resolving the problem of linear nstruction in the form natural to him does the camera-man pass to the mastery the following stage, to the discovery of the compositional unity between the near scheme, tone, and distribution of light.

In " October " Tisse provides a partial instance of functional exploitation of ght, in the shots depicting Lenin speaking from the armoured car at the Finland ilway terminus. The directed flood of light, in continual movement, acts here an independent means of emotional and functional influence on the audience ig. 111). The exploitation of the shifting rays of the searchlight, introduced to the film as an historical detail in order to effect a sharp delineation of the gure of the leader, and picking out of the darkness faces burning with enthusiasm d readiness for struggle, acts as a light accent fulfilling a definite task.

In the picture " The General Line ", Tisse made an attempt at direct narrative ploitation of lighting. A milk separator is brought into the village. The easants watch and wait. ' Will it work ? ' A feeble light emphasises the gloomy istrustfulness of the faces. ' A trick—or prosperity ? ' The separator works, e first drop of milk falls from the spout. The lighting grows brighter, the faces e gradually lit up. A steady stream of milk begins to flow, the separator has istified itself. Confidence is established. Bright reflections play on the polished etal parts of the machine, and are reflected on the joyously laughing faces. The eams pass into a powerful flood of light as the joy of the peasants is transformed ito a turbulent outbreak of enthusiasm.

Such an understanding of the rôle played by lighting was a considerable step orward for the time, for it clearly demonstrated the stupidity of the old laws of aturalistic lighting, which demanded absolute logical justification for the direction f every light ray. At the same time Tisse introduced a new understanding of e unity of the general lighting treatment of a film. He changed his lighting ethods in dependence upon the function and emotional task of each separate ene. And this not only did not violate the compositional unity of the produc- on, but, on the contrary, conduced to an expressive exposition of the content.

As early as " Potemkin " we find him making a distinction also in the optical eatment of separate scenes, in accordance with a purely emotional motivation. he lyrical scenes of the morning mists are given softened optical treatment. ut all the other scenes are given sharp, distinct optical transmission. Here also ere is no violation of stylistic unity, for that unity is determined by more complex nsiderations than the simple unity of technical methods. We maintain that even his earliest works Tisse revealed a genuine understanding of style as distinct om an understanding of the method of shooting.

Tisse's work is distinguished by its expressiveness in exploiting the optical sources of the shot. In certain cases the expressiveness passes into the gro- sque, and so manifests the distinctive features of a great master who can finely nse a subject situation, and can link up the task of each shot with the basic idea f the work as a whole.

Tisse has no tendency towards a contemplative pictorial treatment of a

FIG. 113.—Shot from the film " Thunder over Mexico " (Eduard Tisse, cam.).

Fig. 114.—Shot from the film " Thunder over Mexico " (Eduard Tisse, cam.).

hot. He almost always works ' inside the *mise en scène* ', finding internal justifica-
tion for the chosen viewpoint of the object. His creative work is closely bound
up with that of Eisenstein. His striving towards unequivocal, laconic composi-
tions, towards sharp exposition of the character of the object filmed, towards
shots saturated with ideas, is to a large extent determined by Eisenstein's theoretical
conceptions. In collective collaboration with Eisenstein, Tisse found means of
expression organic to the scenario and directorial requirements.

To Tisse belongs the honourable rôle of being one of the founders of the
Soviet camera-man's art. His latest works " Women's Weal and Women's Woe "
(independent production in Zürich in 1930),[1] and " Thunder over Mexico " (made
jointly with Eisenstein and Alexandrov), have earned great praise even from
Western critics. Concerning the camera work in " Thunder over Mexico " we
read the following remarks in the American camera-men's professional journal :

" Thunder over Mexico " is . . . the triumph of M. Tisse and the results that he has
achieved should give him unquestioned rank as one of the great cinematographers of the
world . . . Tisse has achieved one of the most superbly beautiful examples of exterior
cinematography ever made.[2]

At the All-Union Story Conference of 1933, Professor A. F. Shorin, who
saw the film " Storm over Mexico " in America, spoke of the camera-man's work

[1] Produced by Wechsler (Praesens Film) and directed as well as shot by Tisse.—*Ed*.
[2] *The American Cinematographer*, July 1933.—N

as a brilliant achievement of Soviet camera art. " If all films were taken as ' Storm over Mexico ' has been," he said, " I see no necessity for stereoscopic photography " (Figs. 113–115).

In Tisse's work the positive influence of the Soviet news-reel is clearly discernible. A second line of development has its beginning in the creative strivings of the young camera-men who were given theoretical training in the Moscow Institute of Cinematography and entered production in the years 1924–25.

Educated in the new conditions, these young men were largely free from the traditions of the pre-revolutionary Russian cinema. From the earliest days of their work they were interested in the creative expressive possibilities of the technique of camera-man's work, and tried to find independent methods of representation emancipated from the compositional canons of the pre-revolutionary Russian cinema. Possessing adequate theoretical preparation, but deprived of practical experience, these young men were to overcome the influence of the representatives of the old camera-men's school, and at the same time were to borrow their technical culture.

In this struggle for functional creation, for the right to participate actively from beginning to end in the creation of the story-film, a considerable part was played by Anatoli Golovnya, one of the most outstanding camera-men in Soviet cinematography.

Golovnya's creative individuality was developed in close collective collaboration with V. I. Pudovkin, jointly with whom Golovnya made such works as " Mother " (Fig. 116), " The End of St. Petersburg ", " Storm over Asia ", and " The Deserter ".

It is interesting to note that, as in Tisse's case, so in Golovnya's earliest work his main creative activities took the form of investigations into the constructive form of the shot, into finding the forms of linear composition. In the films " Mother " and " The End of St. Petersburg " this tendency to find expressive foreshortening, to find a viewpoint for the object compelling the spectator to see it anew, to perceive it anew, is clearly evident. The shot of the policeman in " Mother " became a ' classic ' example of one of the possible expressions of monumentalism by means of foreshortening construction. In " The End of St. Petersburg " the foreshortenings of the Alexander III monument evoke an ironical attitude towards it. The element of caricature is manifested by the viewpoint, emphasised by the foreshortening, and accented by the limits of the image cut out by the frame. In the Stock Exchange scenes Golovnya shifts the frame limits in relation to the horizontal, and so achieves a stronger feeling of dynamism, based not only on the directly representational movement, but also on the dynamic quality of the compositional forms. The audacious turning round of the crowd, the methods of optical deformation, the sharp working up of the texture, all to a large extent broke with and discredited the old conceptions of ' artiness ' in the camera-man's art, and at the same time expressively revealed the idea of the shot, created a new ' view of the object ', and manifested the camera-man's creative attitude towards it.

While in Golovnya's earliest work the search for the linear-dimensional form of the shot thrust work with lighting into the background, in " Storm over Asia " the problem of lighting occupied the chief place. His work in this film was mainly directed towards manifesting the texture of the object filmed, and towards special lighting effects, in the creation of which his pictorial experience played no small part. In the attempt to convey local colour he arrived at an understanding of the bases of realistic treatment, as is specially manifested in the representational

FIG. 115.—Shot from the film " Thunder over Mexico " (Eduard Tisse, cam.).

FIG. 116.—Shot from the film " Mother " (Anatoli Golovnya, cam.).

characterisation of individual persons and situations (the scene in the market, the Mongols, the Partisans). These same elements emerge to the highest degree in " The Deserter ", in which the search for realistic conviction brought Golovnya to news-reel methods of work.

In " The Deserter " he was able to exploit the specific methods of news-reel exposition, raising them to the height of the needs of artistic generalisation. The shots of the demonstration, the presentation of the banner, preserve the convincing power of the news-film, but at the same time it is more than a simple news filming, for each shot reveals compositional finish, and so witnesses to special construction, to the confident work of a mature master.

Anatoli Golovnya's creative path provides a clear example of the importance to the camera-man of having uninterrupted creative contact with one and the same director. The creative association of Pudovkin and Golovnya has proved to be a fruitful union of two great masters, each of whom has found his own line of logical development.

Andrei Moskvin occupies a special place among Soviet camera-men. A number of pictorial, including expressionist, influences can be clearly traced in his work. Creatively associated with the directors G. Kozintsev and L. Trauberg, he has together with them made a protracted evolution from the extreme expressionism of the representational treatment in " Soldier's Coat " to the realistic tendencies manifested in his work in the picture " Alone ".

Andrei Moskvin is a talented camera-man with a great creative range. His work cannot be estimated from the standpoint of superficial, purely imitational tendencies. In " Soldier's Coat " we find shots constructed on schematic camera-angles, on closed space, on non-natural methods of lighting, but these are by no means to be regarded as superficial imitation of the tricks of expressionism. The representational treatment in this film was undoubtedly conditioned by Moskvin's own creative approach, which was organically bound up with the creative tendencies of the director's group F.E.K.S.

In the brochure " Eccentricism " published in 1922 is the following declaration of the F.E.K.S. group, which helps considerably to elucidate the sources of the creative attitude of this group as a whole, and of the camera-man Moskvin in particular.

ART WITHOUT A CAPITAL A, PEDESTAL, OR FIG LEAF

Life demands art
hyperbolically coarse, scratching, beating at the nerves, openly utilitarian, mechanically exact, instantaneous, swift.
Otherwise they hear not, see not, stop not.
All this in sum is equal to : the art of the XXth century, the art of 1922, the art of the last second.

ECCENTRICISM

OUR PARENTS
Parade allez !
In words—chansonette, Pinkerton, the snout of the auctioneer, the invective of the street.
In pictorial art—the circus poster, the wrapper of the boulevard novel, in music—the Jazz-band (the negro orchestra rumpus).
In ballet—the American tap dance.
In the theatre—the music hall, cinema, theme song, boxing.
The old pictorial art has died of itself. THE ECCENTRIC POSTER WILL ANNIHILATE PICTORIAL ART GENERALLY.
WE PROPOSE :
1. The boulevardisation of all forms of yesterday's pictorial art. Cubism—futurism—expressionism through the filter : laconism—precision—unexpectedness.

2. The maximum exploitation of the forms of cheap prints, posters, wrappers, street publications, advertisements, type founts, labels.

3. The eccentric poster ALL SEE—ALL KNOW !
Exploitation of pictorial methods for the purpose of agitation and propaganda. The latest inventions, novelties, fashions.

4. The stimulation of the genre of lightning-artists.
Sketches, caricatures. . . .

5. Study of locomotives, motor-cars, steamships, motors, mechanisms.

We shall not stop to elucidate the social roots of the early creative attitudes of the F.E.K.S. group, as it is outside our subject. Sufficient to note the sharp manifestation of these attitudes in the representational treatment of " Soldier's Coat " and, in part, of the film " C.B.D ". (Fig. 117).

The truest estimate of Moskvin's creative tendencies is to be obtained by considering them in the light of the valuable struggle against vulgar cinematographic naturalism, the struggle for the cinema shot to achieve genuine artistic expressiveness, which the F.E.K.S. group waged in regard to cinematography for a number of years.

In " Soldier's Coat " Moskvin worked with extraordinarily expressive and schematically representational methods; these, though characterised by the utter bareness of extreme expressionism were, strictly speaking, a manifestation of the same process of break with established naturalistic canons which is clearly revealed in the work of Golovnya and Tisse. But from the beginning Moskvin went his own way, deliberately eliminating from the shot all that might even distantly

FIG. 117.—Shot from the film " Soldier's Coat " (Andrei Moskvin, cam.).

Fig. 118.—Shot from the film " New Babylon " (Andrei Moskvin, cam.).

Fig. 119.—Shot from the film " New Babylon " (Andrei Moskvin, cam.).

call the former pictorial qualities of pre-revolutionary art-photography. But in " C.B.D. ", and still more in " New Babylon ", the considerable evolution the group had made is evident. From complete rejection the significance of the artistic legacy of pictorial art in representational treatment of the film, he turned to thorough exploitation of pictorial experience, and particularly set himself to master various methods of impressionist lighting treatment.

When we came to work in the Soviet cinema [said the director, G. M. Kozintsev, in a speech at a conference of Leningrad camera-men], we found the Leningrad cinema factory full of historical pictures taken on a naïvely naturalistic principle.

All the generals, Tsars, soldiers, etc., were shot primarily in order to emphasise the products of the costume department of which the factory was so proud. They shot the costumes, with the actors inside them. That was the basic attitude of the time.

Now we wanted primarily to replace this parade of historical costumes in the surface parts of the films by a feeling of the epoch, in other words purposively to replace it with a general style, and not the naturalism of details. From the camera-man's viewpoint we were interested in obtaining photography that should be extremely picturesque. We wanted to get away as far as possible from the external form of the costume, we wanted to convey to the audience the atmosphere of the epoch. It was on this basis that we made " Soldier's Coat ", " C.B.D. ", and " New Babylon ". We spent a good deal of time over the photography. The false aspect of the costumes, the feeling of costumed, unreal people began to creep into the foreground. To dispose of this we began to apply softening lenses. Moskvin even photographed long-shots with portrait lenses.

In planning those tasks which confronted us, we succeeded in getting rid of ' cos-tumery ' and in revealing the atmosphere of the epoch. At once spots appeared instead of lines. The spot became the basic element at the expense of the graphic. The graphic element was eliminated entirely.

FIG. 120.—Shot from the film " The Youth of Maxim " (Andrei Moskvin, cam.).

This is essentially the same process which is to be observed in pictorial art, when the impressionists' pictures first appeared to replace the studies in the nude that filled the exhibitions. The impressionists exhibited not so much the object which was the main one in the particular picture, as the atmosphere around that object. And this Moskvin introduced into photography. Our chief error consisted in the fact that we sought for style in the pictorial material of the given epoch, and not as the result of an analysis of the reality of that epoch. This is a very serious problem, one which affects the general problems of cinematography. But I wish here to concentrate attention only on the problem of photography.

Hence arose our over-estimate of the pictorial legacy, hence all the traditions, all the knowledge which we could gain from the pictorial arts hung, perhaps as a very light, but later as a very heavy burden around the neck of our camera art.[1]

This transition to exploitation of pictorial experience, with the aid of which the camera-man endeavoured to manifest the character of the epoch, partially determined the representational treatment of the film " New Babylon ", which in respect to its purely formal achievements is one of the most perfect examples of the camera-man's art (Figs. 118, 119).

In the film " Alone ", and in Moskvin's latest work, " The Youth of Maxim ", a transition to new creative positions on the part of the camera-man is to be discerned. These films provide examples of deeper work on natural material, on manifesting the characteristics of the actor's image. They reveal his endeavour to make the dramaturgy of the scenario and the study of the real setting in which the action of the film develops the starting-point in his work.

These features are especially manifested in the later of these two works of Moskvin, " The Youth of Maxim ", where they receive their most advanced development. (Fig. 120.)

Moskvin's creative road and the course of his evolution are characteristic of the main motive tendencies in the Soviet camera-man's art. They are a departure from the influence of Western cinematography, a departure from the mechanical imitation of pictorial art, towards the study of living reality and the definite circumstances and style of the epoch finding reflection in the given film.

The same tendencies are to be noted in the work of the camera-man I. Martov, in the films " Golden Mountains " and " Counterplan ". These are particularly interesting from the aspect of creative movements in the camera-man's work. Martov is trying to approximate to a realistic transmission of the images of the film without superficial æstheticisation and ' decorative formulation ' of individual shots. The heightened tone in " Counterplan ", the harsh optical treatment, the absence of compositional pretentiousness and false stylisation are all manifestations of the latest tendencies in the camera-man's art (Figs. 121, 122).

In 1927–8 a school of camera-men emerged in the Ukraine which found outstanding expression in the works of the great master A. Dovzhenko.

This school is one which also has its basis in pictorial tendencies, especially strongly manifested in cinematographic ' paysages '. In the films " Arsenal ", " Earth ", and " Ivan " the light-plastic treatment of the material is the predominant one, which still further witnesses to the pictorial resources of this tendency.

The films of the most recent period, the work of Feldman, L. Kosmatov, V. Gordanov, V. Pronin, Shelenkov, A. Galperin, A. Kaltsaty, M. Gindin, B. Volchek and many others mark the general growth of artistic culture among the ranks of the camera-men. They are no longer content with reproduction of individual pictorial compositions and the methods of pictorial art ; they are consciously applying all that can help them expressively to reveal the content

[1] Shorthand report of the Leningrad Conference of Cinema Camera-men, 1933.

FIG. 121.—Shot from the film " Counterplan " (I. Martov, cam.).
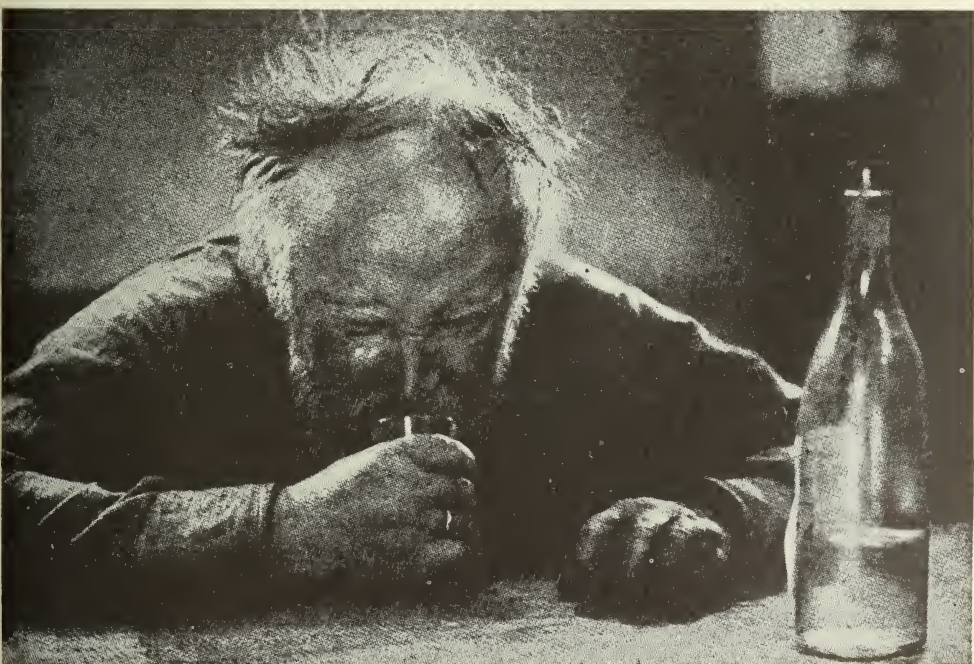
FIG. 122.—Shot from the film " Counterplan " (I. Martov, cam.).

FIG. 123.—Shot from the film " The Conveyor of Death " (M. Gindin, cam.).

FIG. 124.—Shot from the film " The Conveyor of Death " (M. Gindin, cam.).

FIG. 125.—Shot from the film "The Conveyor of Death" (M. Gindin, cam.).

FIG. 126.—Shot from the film " The Conveyor of Death " (M. Gindin, cam.).

of the shot, all that can serve as material for artistic generalisations by means of intra-shot composition.

In the " Conveyor of Death " Gindin has taken as basis a study of the German revolutionary artists Gross, Zille, Kollwitz and others, and a detailed acquaintance with German documentary photography, and on that basis has made shots noteworthy for their saturation with ideas and their logical composition. What would there appear to be in common between the documentary photographs of Kurt Tukholsky or the Berlin ' A.I.Z.' and the camera-man's tasks in the film " Conveyor of Death " ? Yet study of this material and its intelligent exploitation have aided Gindin in the compositions of this film to catch and recreate the characteristic features of Berlin working-class districts, the circumstances of the workers' quarters, etc.   Here we undoubtedly have a sound method of exploiting documentary material—a method witnessing to the camera-man's correct understanding of his creative tasks (Figs. 123–127).

FIG. 127.—Shot from the film " The Conveyor of Death " (M. Gindin, cam.).

If you study the various shots taken by Gindin in " Conveyor of Death " you become convinced of his correct understanding of the principle of editing composition. Take in their editing context the close-up of the Fascist and the close-ups of the hungry workers, for example. Every shot individually reveals independent perfection of finish, while preserving the distinguishing features of the unit, the link of the editing composition. The theme of ' Fascism ', clearly expressed by the foreshortened representation of the Fascist in close-up, gives this shot a functional singleness of content, but this same theme is developed further in the compositional construction of the shot with the four Fascist standard-bearers and in the mass scenes of the Fascist demonstration.

Within the limits of the same compositional theme, Gindin maintains the same foreshortenings throughout the entire episode, which he treats satirically.

The ' hungry ' are taken in a different construction, in harsh optical treatment and a news-reel style. The compositional theme is again maintained throughout the entire editing episode.

To show the yard in which the barrel-organ man is playing, Gindin finds a viewpoint which transforms it into a genuine stone cul-de-sac. And in consequence the lyrical motive at the basis of this scene is demonstrated all the more strongly.

Owing to such thorough compositional treatment, linked up with demonstration of the social element, in Gindin's work the shot acquires a perfection of finish allowing only one functional interpretation of the subject, and this circumstance actively directs the spectator's perception along the road required by the scenario.

In the shots of the suicide of the workers' family, Gindin uses an original method of lighting which, in combination with the dead statics of the symmetrically distributed figures, heightens the expressiveness of this scene. The dark room with bright patches of sunlight penetrating through closed shutters, the softly lit, almost silhouetted figure in the foreground give a completely different character to the perception, and operate more convincingly than the traditional manner of presenting terrible scenes in a completely darkened interior. Obviously it is not in the least a question of whether there is bright light on the face or not, but of how the light ray is functionally justified and exploited.

The splendid and moving shots of the " Conveyor of Death " [said Bela Balasz, in his review of this film] are like the flaming, feverish dream of a naïve man, who has heard something of this reality. But that dream is represented with strong cinematic fantasy, with cinematic temperament. The camera-man M. Gindin is a great master.

An interesting example of the way in which the expressive possibilities of pictorial treatment of the shot can be exploited is given in D. Feldman's latest film, " Petersburg Nights ". For this film, which suffers from a number of dramaturgic defects, pictorial treatment was chosen by the camera-man as the only sound way of resolving the representational tasks : a way conditioned by the scenario and the directorial prerequisites.

In our opinion the picture suffers from two organic defects, which arise out of the actual scenario of the film. These are : a weakening of the dramaturgic core of the scenario, and the protracted development of the narrative. The immediate result of the vicious quality of the scenario construction is a lack of clarity in the editing composition as a whole, which hinders the dynamic development of the narrative, and therefore the dynamism of the compositional construction of the individual shots. Static, contemplative elements predominate in the picture, which fact naturally drives the camera-man also along the road of illustrative exposition of the scenario content, and not its dynamic revelation, which would be a genuinely cinematographic method of resolving the task.

Such clashes between the camera-man and the scenario requirements, especially when historical films are in question, usually lead either to a reproduction fixation of the filmed object, or to a purely formalistic decision based on the external, decorative picturesqueness of the various shots. In the first case the camera-man's primitive ' photographism ' creates the finished ' living photography ' of a theatrical staging of the scenario. In the second case we get ' shots of genius ', formulated in accordance with the principle of mechanical imitation of models drawn from pictorial art.

Taking into account the thematic requirements of the scenario of " Petersburg Nights " and the specific character of the film, which is not without elements of romanticism, Feldman chose pictorial treatment. And in our opinion he committed no error. The scenario and the directorial treatment of the film afford the camera-man no justification for transferring the centre of gravity of the composition to the dynamics of intra-shot action, for the development of the narrative takes indirectly parallel roads, not infrequently shifting to the material of the background or to auditory clues. The active opening, which determines the activity of the chief hero, is at times completely overshadowed by the detail and interplay of secondary situations. But a harsh, linear optical transmission of the object always directs the perception to the active factor of the compositional dynamics. Obviously Feldman's only correct way of resolving the problem, therefore, was to exploit the possibilities of pictorial treatment, which would conduce to a generalised perception of the shot, and so would not disclose the definite passivity of the directorial treatment (Fig. 128).

With Feldman a general softening of the optical design, which demands tremendous creative flair and tact in its execution, never figures as a haphazard pictorial effect. Even a thoroughly hard-bitten spectator is scarcely likely to note anywhere any deliberate quality in the details compositionally introduced into the shot, or a strained character in the foreshortening, so plastic, and so imperceptibly constructed are the transitions from the main object to the surrounding background. Feldman also carries out his own lighting schemes to correspond with the optical transmission of the design of the shot. He

FIG. 128.—Shot from the film " Petersburg Nights " (Dmitri Feldman, cam.).

almost never uses contoural lighting ; the steroscopic quality of the shot is achieved not by a harsh isolation of the light contour, but by a softened transition from one tone to another. This, for instance, is the way he has taken almost all the close-ups in the picture, the relief quality of which is achieved exclusively by lowering or heightening the tone of the background, while the mid-shots and close-ups reveal no tonal distinction from the long-shots. At the same time the softening of the optical design, which is almost always associated with loss of detail in the working up of the texture, never passes beyond the limits of the necessary distinct visibility. An intelligent exploitation of lighting enables one always to see clearly on the screen the highly characteristic texture of silk, granite, and marble, or the very characteristic texture of the actors' faces.

We have already remarked that the absence of a definite editing composition worked out beforehand deprives the camera-man's work of its main and most valuable quality : its logical and true succession in the transition from one compositional form of shot to another. As an example of this in " Petersburg Nights " we may mention the episode of the parade, in which individual shots, filmed dynamically by the camera-man, did not give the necessary effect of dynamic growth when edited. For this reason the chief influence of the entire scene passed to the sound treatment, which, so to speak, bore the entire parade on its shoulders. The absence of general editing composition reacted to the same extent on the final scene of the convict transport, in which the main line of rhythm and tempo potentially introduced by the camera-man was completely lost during editing. Here the camera-man was faced objectively with the necessity of shooting individual

editing pieces without being given a clear compositional perspective, and this undoubtedly reacted on the efficacy of the scenes mentioned.

While during the early years of development of the Soviet camera-man's art his creative efforts tended mainly in the direction of seeking representational methods, it is now possible to speak of his active work on the art-images of the film as a whole, and here he most closely approaches a creative unity with the director.

From the aspect of this transition to new creative positions the ' first swallow ' was the film " Counterplan ", (camera-men, I. Martov, A. Ginsburg and V. Rapoport) and then Gordanov's work in the film " The Storm ". The representational treatment of " Counterplan " is built up of light, optimistic tones. The portrait close-ups are all treated realistically, without sharp abstract foreshortening and compositional pretentiousness. The camera-men's work is directed primarily towards manifesting the character of the actor's image. The same tendency is at the basis of the camera-man's treatment in " The Storm ".

FIG. 129.—Shot from the film " Boule-de-Suif " (B. Volchek, cam.).

FIG. 130.—Shot from the film " Boule-de-Suif " (B. Volchek, cam.).

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The work of the camera-man B. Volchek is of great importance because of his original resolution of the representational treatment of an historical film.

In the picture " Boule-de-Suif " he does not confine himself to the unity of compositional treatment of the film. In regard to lighting and optical treatment, foreshortening and speeds, every image of the film has its own individual representational characteristic. From this aspect the picture " Boule-de-Suif " repays the most attentive study, as it is characteristic of the new tendencies in the Soviet camera-man's art. B. Volchek has not only been able to resolve the task of camera-man's construction of an historical film stylistically correctly, but has indicated new roads in regard to the camera-man's work on the actor's image. And this, in our view, is the most valuable quality of his work (Figs. 129–130).

It is characteristic of the general growth of the ranks of camera-men that intensified attention is being paid to work on building up the theoretical bases of the camera-man's art. In 1934 a separate chair for the camera-man's craft was set up by the Supreme State Institute for Cinematography (V.G.I.K.).

The most recent period in Soviet cinematography has been characteristic not only for the growth in camera-men's creative activity, but also for their considerable advance towards technical perfection. They are now mastering the most novel methods of filming technique. In this regard we must refer to N. Renkov's interesting work on the film " New Gulliver ".

Renkov is perhaps the only camera-man who has successfully combined the qualities of a graphic artist with those of a brilliant technician with an exceptional gift for creative representation. The film " New Gulliver " is a genuine mine of technical inventions, and a true school for complex filming technique. Undoubtedly more than one generation of young camera-men will learn from the study of this film, which surpasses the finest achievements of western composite-shot puppet-film technique.

Before bringing our very general and schematic survey to an end, we consider it necessary to emphasise once more the main tendencies in the development of Soviet camera-man's art.

During the first period, to which belong the early works of Tisse, Golovnya, Moskvin and others, the development took chiefly the line of searching for new representational methods of linear construction of the shot. The new forms, which arose partly under the influence of the news-reel film, partly under that of Western cinematography, were in contradistinction to the frozen traditions of the pre-revolutionary school of camera-men. They were to a large extent constructivist tendencies, which not infrequently drove the camera-men to the other extreme, to formalistic absorption with self-sufficient linear-dimensional constructions. In isolated cases this formalistic absorption with constructivist constructions of the shot led to a severance between the functional task of the shot and its compositional resolution.

From compositional constructivism, which was of positive importance in the sense of recognising the varied representational possibilities of linear-dimensional composition and the accumulation of technological experience, the camera-men passed to assimilation of the artistic legacy of pictorial art. And here also we had a temporary period of extreme over-estimation of the importance of pictorial art in the camera-man's art.

On the basis of absorption with the formalistic problems of pictorial art, and especially of impressionist pictures, films were created in which individual shots presented finished perfect models of linear and lighting composition. But the films as a whole lost their compositional unity, and became a peculiar form of

photo-montage assembly of shots. These films are static on the whole, and the actor's image is abstract and statuesque (Figs. 131–134).

And only in the most recent period of the Soviet camera-man's art are considerable movements clearly indicated, movements which are conditioned by the ideological and artistic growth of the creative ranks of the Soviet cinema. The camera-man is beginning to overcome the closer limits of the 'specific properties of the cinema camera', is seeking close creative unity with the director, is becoming an active participant in all the creative process of work on the film. He is mastering methods of deeper work on the emotional and ideological expressiveness of the cinema image, realising it with all the fullness of the expressive resources of the cinema.

The principle of a collective group organically welded on the basis of a unity of creative approach is given general recognition in the Soviet cinematographic system. The creative group is the basic production link of the Soviet cinema factories. From experience of the work of Eisenstein-Tisse, Pudovkin-Golovnya, Trauberg-Kozintsev-Moskvin, Kuleshov-Kuznetsov and many others we can see how important is the creative group in the making of a highly artistic cinema production. The Soviet camera-man is given unchallenged recognition as a creative worker in cinematography ; his rôle and importance in the creative process are noted by the most outstanding directors of the Soviet cinema.

The ideas of the director, in his work on making expressive the film image [says Pudovkin], only receive concrete embodiment when the technical knowledge and the creative inventive faculty of the camera-man go hand in hand, or, in other words, when the camera-man is an organic member of the team and takes part in the creation of the film from beginning to end.[1]

This opinion of Pudovkin, however, by no means completely indicates the camera-man's creative rôle in the making of an artistic production. The following passages are from the report of a lecture by Eisenstein at the director's faculty of the Moscow Institute of Cinematography. The lecture was devoted to the question of the inter-relationship between the various members of the creative group.

Furious discussions are always arising around the question whether the camera-man's work can be regarded as an art, and whether it is creative.

As a rule the camera-man's creative rôle is denied whenever the cinematographic production has been made without previous compositional treatment of the editing and the shot. This occurs in all cases where production is restricted merely to a subject anecdotal exposition of the plot without taking into expressive account all the other elements which compose the aggregate of the artistic cinematographic production. Instead of this, such a production acquires only quotation marks, being known as a 'production.' It is quite obvious that in such cases doubt must also arise as to the extent to which the director's work can be regarded as creative. Unfortunately, it must be said that this is perfectly applicable to the great majority of the so-called average productions. When the director takes up such a position in regard to the light-plastic aspect of the filmed representation, in point of fact he does not even need a camera-man. All he needs is a straightforward technical photographer. But one doubts whether there is a single director who desires to take up such a position. And if he is trying to get away from that position, or avoid marking time, and is seeking instead to deepen and extend his craftsmanship in all spheres of cinematic representation, endeavouring to draw nearer to the fullness of cinematographic artistic production, he finds that he must adopt an estimate of the camera-man as first and foremost a creative individual and a fundamental creative colleague. And only

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FIG. 131.—Shot from the film " The Ghost that Never Returns " (Dmitri Feldman, cam.).

FIG. 132.—Shot from the film " The Ghost that Never Returns " (Dmitri Feldman, cam.).

FIG. 133.—Shot from the film " The Ghost that Never Returns " (Dmitri Feldman, cam.).

FIG. 134.—Shot from the film " The Ghost that Never Returns " (Dmitri Feldman, cam.).

in conscious and collective co-operation with the camera-man artist will he succeed in resolving this task.

Orientation in the problems of linear, lighting, and tonal composition demands that the creative group shall together possess an enormous visual-representational culture. And this demand is made first and foremost of the camera-man, since on him is laid the task of plastically realising the compositional intention.

And these considerations, primarily, are the basis on which we must make any analysis and estimate of the camera-man's craftsmanship, which once for all has outlived the idiotic formulation of such estimates summed up in the traditional phrase of purblind criticism: clear photography. . . .

We maintain that, in this definition of the camera-man's rôle, Eisenstein shows the fullest and soundest appreciation of the creative relationships between the director and the camera-man. Wherever the problem of the expressiveness of a film as an artistic production is raised to the height of a principle, wherever the problems of composition are resolved on the basis of a recognised creative approach, there the rôle of the camera-man as an artist increases incommensurably. But whenever the director does not rise above the level of an educated craftsman, the camera-man is compelled either to take the course of a self-sufficient formalistic resolution of the representational treatment of the film, or to confine himself to the rôle of passive technical photographer.

But if we are concerned with ensuring that a film shall be of the highest cinematographic art value; then we must regard the camera-man as a close creative collaborator with the director, as a master with full rights in his own sphere, who with the aid of his specific representational resources realises the single artistic function and content of the film.

7. ON CREATIVE METHOD AND STYLE IN THE ART OF THE CAMERA-MAN

In previous chapters we have considered the elements of the compositional construction of the shot ; the change of set-up, change of camera-angle, fore-shortening, lighting, optical design, margin or frame of the image, tone, and tempo of shooting in their significance for the expressiveness of the screen image. We have also established that the application of each of these compositional elements is dependent on the scenario and directorial requirements. Finally, we have come to certain conclusions as to the mutual interdependence of the editing composition of the film as a whole and the composition of the individual shot as an element of creative production.

When considering the tasks of composition of the shot in their organic con-nection with the theme and content of the film, we defined composition as the method of creatively organising the material, the method which enables us thor-oughly to reveal and demonstrate the ideal significance of the art-images created.

These basic assumptions lead us to an understanding and confirmation of the creative rôle of the camera-man, who, with the representational resources of cinema technique, realises the compositional purpose of the film. For us the choice of viewpoint, foreshortening, camera-angle and so on ceases to be a technical process, and becomes a creative process from the moment when the camera-man begins to consider the object to be shot in association with the ideological and thematic task of the scenario, and through the specific features of the compositional form expresses his creative attitude towards the ideological and æsthetic compositions and images of the given film.

In various theoretical works on problems of film art, and particularly in the works of Boltyansky (*Culture of the Camera-man*) and Pudovkin (*Film Director and Film Material*)[1] the authors, while recognising the camera-man's creative rôle, at the same time assume that all that is required of him is a certain level of visual culture. In their view a developed visual culture, understood as an innate or acquired quality with corresponding training, ensures all the necessary conditions for realising the representational treatment of the film.

When such is the approach to the analysis of the creative factors in the camera-man's work, the existing differences in representational treatment of individual films shot by various camera-men are usually explained as being due to the individual peculiarities of visual culture, in other words to the individual ' manner of seeing ', peculiar to each of these camera-men.

[1] See note p. 211.—*Ed.*

But are the reasons for the difference in perception and compositional treatment of the filmed material to be sought solely in the peculiarities of visual culture of this or that camera-man?

We maintain that visual culture, understood only as a biological, innate quality, or even as a quality developed by corresponding training, cannot be regarded as the sole factor in determining the stylistic differences in camera-men's art. In reality the camera-man's creation, connoted by the simple term ' visual culture ', is much more complex than appears at first sight.

By the experience of the work of those camera-men in whom we find intelligent creation, i.e. creation pre-supposing deliberate exploitation of the expressive resources and methods of cinema technique, we can trace the process of formation of visual ideas which afterwards are realised in the compositional construction of the shot. In the process of analysing the scenario, and penetrating into its content, the camera-man arrives at an understanding of the idea of the work and the principle of its construction. Then, coming into contact with the concrete material, in other words, with the various objects to be filmed, he organises that material, subjecting it to the idea of the work. Mentally comparing his idea of the image to be filmed with the representation he sees through the camera, he logically modifies the set-up, camera-angle, foreshortening, lighting and so on, until the representation seen through the camera approximates to his idea of the given image. Such should be the creative process of constructing a shot, and in the majority of cases the guiding element for the camera-man is the preliminary idea which arises from his analysis of the production scenario.

The mental ideas arising from analysis of the scenario and study of the concrete material of the film, like the subsequent associations accompanying all the stages of embodiment of the visual image, are the basic starting-points for the camera-man. His visual culture, understanding these words in their narrow sense, serves only as a condition enabling him to master the material and realise the conceived composition.

In order to represent an object in a shot the camera-man must first and foremost not only know the object itself, but must conceive it, must give it one or another treatment, must connect one or another group of associations with the exposition of that object. To choose the set-up for the object involves making a definite estimate of that object. Here the camera-man's creative attitude to the exposition of the object and the manifestation of its typical features and peculiarities of texture is revealed. It can be said with confidence that, if in the course of shooting the object the camera-man has found two set-ups, and both seem equally acceptable to him, then in reality he has not found the right set-up at all ; he does not yet possess a clear idea of the conceived picture. In the absence of such an idea ' visual culture ' will not save him from lack of clarity and the confusion of a fortuitously composed shot.

For me [says Henri-Matisse in his *Notes of a Painter*] all is in the conception—I must have a clear idea of the whole composition from the very beginning. I could mention the name of a great sculptor who produces some admirable pieces, but for him a composition is nothing but the grouping of fragments, and the result is a confusion of expression. Look instead at one of Cezanne's pictures ; all is so well arranged in them that no matter how many figures are represented and no matter at what distance you stand, you will always be able to distinguish each figure clearly and you will always know which limb belongs to which body.

If there is considerable order and clarity in a picture, it means that that order and clarity has existed in the mind of the artist from the very beginning, or that he has recognised their necessity.

The presence of a single conception clearly and thoroughly thought out, the presence of a profound understanding of the whole work, a genuine perception of the living actual images reproduced on the screen, is an absolute necessity to the camera-man. A cinematograph product, composed of many individual shots, only acquires unity when the individual shots composing it have been representationally resolved on the lines of a single directing conception, within the limits of a system with a single style. In cinematic production the conception of composition is immeasurably more complex than it is in the static product of pictorial art, for it includes not only dynamism, but the time category, which establishes its own special laws of perception of the image. Simple grouping of objects, ensuring good visibility and easy recognition on the screen, can be realised by the camera-man even though he has only a superficial acquaintance with the material of the scenario. But genuine artistry is achieved only provided he has a profound understanding of the idea and the images of the film being made.

So that in the process of determining the representational treatment of the film a specific idea of the given conception and images of the film is of decisive importance for the camera-man. But, as an artist, he is the product and expression of a definite social system. Just as much as the scenario writer and director, he possesses a definite attitude to the reality surrounding him, a definite philosophy, which sets its imprint on his creation. Consequently, if he be a true artist, by no means any conception, by no means any dramaturgic and directorial treatment of the given images can be acceptable to him. If his attitude to reality, his philosophy, his tastes and artistic predilections be in sharp antagonism to those of the dramatist and director he will never create a highly artistic and stylistically unified art product. That is why a close approach between the creative methods of the director and the camera-man is one of the most important and necessary conditions of the creative group's fruitful work in the cinema.

What is creative method and style in the camera-man's art ?

In critical analyses of his work one frequently comes across superficial definitions of his style as the unity of the technical methods applied in shooting. If, suppose, the camera-man shoot all his pictures with soft-focus lenses, not infrequently the conclusion is drawn directly from this that it is the characteristic of an impressionist treatment of the film.

Moreover, not infrequently many camera-men themselves strive mechanically to preserve a kind of unity in choice of representational resources, assuming that thus they create their ' style ', which determines their creative features. In the Western cinema such ' style ', based on a mechanically worked out representational method, is usually regarded as a positive quality. Independently of the theme and content of the film, independently of its ideological tendencies, the camera-man invariably retains his manner of shooting worked out once for all, his ' style ' of softened or sharp optical treatment. He does not penetrate into the content of the scenario, he does not trouble to analyse the images of the film, but works in his ' style ', which is his professional pride.

In the average European or American film, constructed on the simple cinematographic exposition of the subject, it is difficult to notice any antagonism between the directorial and the representational treatment, simply because the representational composition of such films is generally at a very primitive level. But in films of higher artistic quality this distinguishing characteristic of Western exponents of the camera-man's art is very noticeable.

Such a method of ' superficial formulation ' of a film irrespective of any creative analysis of the scenario is a by no means fortuitous phenomenon in

bourgeois cinematography. And just as little fortuitous is the degradation of the creative group in the system of bourgeois film production. The formalism of the camera-man artist who is satisfied with superficial formalisation of the shot without attempting to analyse its content and thus to arrive at an organic, ideologically expressive construction, is to some extent explained by the social essence of the foreign cinema. The bourgeois art of the ruling class is infected with the spirit of ideological emasculation and decadence which characterises the epoch of decaying capitalism. Consequently the story cinema also, which in its rôle as entertainment is called upon to mask the unavoidable contradictions of the bourgeois system, cannot direct the cinematographer's creative tendencies along the road of demonstrating the filmed content in all its variety. All that remains to it is superficial pictoriality, and to conceal the intrinsic ideological poverty of its production under formalistic elucidation. With rare exceptions the artistic culture of the bourgeois camera-man is thus determined by his degree of perfection and craftsmanship in the purely superficial ' formalisation of the shot '. This æsthetic mannerism of superficial representational formalisation of the shot is one of the symptoms of the disintegration of style characterising present-day bourgeois art as a whole.

In camera-man's art genuine style is not determined merely by a simple unity of technical methods of shooting, since the representational treatment of the film cannot be considered in isolation from the theme and content of the artistic production, cannot be parted from the dramaturgical and directorial treatment. The picture might be shot from beginning to end with sharp focus lenses, so revealing the tiniest detail. And yet that might not mean that the film had been taken realistically.

In camera-man's art, as in other spheres of artistic creation, the conception of style is determined by a considerably more involved complex than the application of representational resources homogeneous in character. If the camera-man artist realises the art-images in one or another representational composition, that composition bears the imprint of his philosophy to the same extent that the entire film reflects the ideology and social attitude of the dramaturgist and director. The style of his work is determined by his understanding of the main ideas of the production, an understanding natural to the given artist, and by that form of expression of those ideas which is peculiar to him. And these are closely bound up with his philosophy.

We adduce several examples characteristic of a different understanding of style in the camera-man's art from that which predominates in bourgeois cinema.

In his note to the film " We from Kronstadt ", the camera-man N. S. Naumov writes :

In the picture " We from Kronstadt " the main emphasis in the camera-man's work should be put into endowing the film images with realisticness. We absolutely reject æsthetic decoration of the shot, pretentious compositional construction, studied effects and affectation in composition leading to emphasised pictoriality. We reject the favourite and already traditional foreshortening constructions against a background of sky, we reject all those methods which are usually introduced exclusively to achieve a superficial decorative quality of shot.

Maximum simplicity and naturalness without exaggerated compositional accents : such is our task in the representational treatment of the given film.

We do not predetermine any particular unity in exploiting technical methods. From our point of view shooting with soft or hard focus lenses throughout the length of this film is far from constituting the style of our work. On the contrary, we assume it to be possible to film certain scenes in a soft focus, and others with sharp focus transmission. This

lepends primarily on the motivation which we deduce from the ideological and artistic
ask of the various scenes. . . .

The waters of the Baltic are very different material in texture from those of the Black
Sea. Kronstadt is not Sevastopol. The Baltic coast is not the Black Sea shore. The
sky of the Gulf of Finland is not the cloud of the Black Sea coast. This determines the
difference in the optical treatment of the various episodes which develop with the Baltic
and not the Black Sea as background. . . .

In the picture " We from Kronstadt " the specific features of the local colouration
should be transmitted in plastic images. The mist, wind, dusk, granite, iron, the industrial
might of the vessels of war are the typical Kronstadt colouration, which to some extent
is in contrast to the sunlit surroundings of the Black Sea coast.

In the first part of the film the main emphasis is laid on the exposition of the setting,
which predetermines the sharp exposition of the texture of the material. But later on these
elements must be thrust into the background, since the emphasis is transferred to the
development of the narrative action.

. . . We shall strive for composition in numerous distantial planes, which will enable
us to reveal the space in the shot in all its variety, and to avoid impoverishing it with flat
constructions of two-plane composition, etc.

We shall not stop to analyse the essence of the foregoing excerpt, for we
only wish to emphasise the new conception of style which characterises the recog-
nised creative method of a Soviet camera-man artist. This new conception of
their creative tasks can be illustrated by another example from work by the same
camera-man.

In the picture " Woman " there is a scene in which a kulak attempts to per-
suade a collective farmer to leave the collective farm. He tells him of the joys
of pre-revolutionary life, of the fruitfulness of having one's own land, of the
satisfaction and rewards from ' genuine farm labour ', and so on.

The kulak's speech, which is given in sub-titles, is illustrated by a number
of shots which, edited on the principle of contrast, refute the whole argument,
and show the heavy, servile labour, the hunger and death of the poor villager,
working for the kulak, who exploits the fruitfulness of the earth.

These scenes were shot in a style of specially emphasised æstheticism, softly,
decoratively, exuberantly, with a certain sugary stylisation. Thus the methods
of shooting were in sharp contradiction to the content of the shots, and this con-
trast disclosed the hypocrisy of the kulak philosophy, which adorns reality and
represents it in rosy, captivating hues.

Thus the methods of shooting were on the one hand in organic connection
with the character of the kulak's speech, and on the other in sharp contradiction
to the content of the shots taken. By force of this contradiction, intelligent
application of camera-man's methods succeeded in emphasising the gloom and
oppression of the village poor simultaneously with the hypocrisy of the kulak.

For us, we repeat, the conception of style in camera-man's art acquires quite
a different significance from the mechanical schematism of choosing representa-
tional resources homogeneous in their character.

The style of Soviet art, the style of socialist realism, involving a just revelation
and reflection of reality in all its variety, dictates that the camera-man must have
a new understanding of his creative tasks and an active relationship to the thematics
and content of the filmed picture. This primarily connotes that he must be
actively included in the cognising process with which a genuine artistic creation
is inevitably associated. The task of the Soviet camera-man consists in finding
the guiding element in the aggregate of phenomena, in isolating the essential
from the unessential, in approaching his analysis of the content of the scenario
and the material of the film on a social basis, in generalising and expressing in

representational composition the elements most operative from the aspect of the given ideological content.

Can we claim that the Soviet camera-man's art has already mastered the method of socialist realism ? On the whole such a conclusion would be premature. But undoubtedly the elements of the new understanding, the new attitude to his creative tasks are present in individual productions of the Soviet cinema. And this sharply distinguishes the work of many Soviet camera-men from that of the Western cinematographer.

In this regard we should mention, once more the latest work of the camera-man B. Volchek, the film " Boule-de-Suif " (directed by M. Romm).

In this film, which reflects a definite historical period, Volchek was confronted with several ways of possible representational treatment of the material. He could have constructed his work in direct imitation of French pictorial art of the period to which the material of the film relates. In particular, he could have exploited the experience of the impressionist masters. Following the traditions of historical staging current in bourgeois cinematography, he could have exactly reproduced the compositional schemes of a number of pictorial productions belonging to the second half of the nineteenth century.

He chose a different way. In his work we see a new understanding of the images of Maupassant, and this new understanding emerges in the representational treatment of " Boule-de-Suif ".

A brief example. In the first part of the film, down to the moment when Boule-de-Suif yields to the arguments of the patriots, all the portrait close-ups are given in a single-plane optical transmission. Compositionally the close-ups are constructed so that the genuine features of the patriots are not revealed. Then, in full accordance with the development of the subject and the change in the patriots' attitude to Boule-de-Suif, there is a sharp change in the camera-man's treatment.

Volchek changes to asymmetrical diagonal constructions, to sharp foreshortening and harsh cut-offs of the close-ups. The lighting composition also changes, and thus the patriots' close-ups acquire the sharpness of satirical portraits. But the softened optical transmission is retained for Boule-de-Suif.

In other words, the motivation of the various camera-man's methods, which are directed to the demonstration of the true significance of the film images, is founded in the actual development of the action, in the actual ideological conception of the object. In " Boule-de-Suif " the realism of the camera-man's work is determined primarily by a sound understanding of type images, treated from the present-day, socialist-realistic aspect.

In all the films of Western cinematography we are hardly likely to find examples of such a differentiated approach on the part of the camera-man to the representation of the various personages in the film.

In American films we frequently find shots in which details of the circumstances are transmitted with extreme exactitude, and the texture of the shot material is splendidly manifested. But is this realism in our sense of the word ?

" Realism," says Engels, " in addition to accuracy of the details, implies a fidelity in the transmission of the typical characters in their typical circumstances."

Realism in camera-man's art is not exhaustively achieved by the photographic transmission of shot space, real lighting and texture.

The camera-man's work is consciously to manifest the characteristics of the living definite image. Like the director, in constructing the individual shot he should start from an integral understanding of the finished image. The

:mbodiment of an artistic conception involves a compositional comprehension of :very detail, accenting certain factors, suppressing others and excluding them 'rom the field of vision. In certain cases compositional generalisation presupposes listortion of the object filmed, and this also does not contradict the conception)f realism. From the following example one can judge of the importance that nethods of deliberate distortion of the object can have in achieving greater expres-;iveness.

Suppose we have to shoot the scene describing Tchitchikov's visit to 5obakevitch. We quote the whole of Gogol's text of this scene.

> Tchitchikov gave Sobakevitch a sidelong glance, and thought at that moment that he ieemed very like an average-sized bear. . . .
> . . . Tchitchikov looked around the room once more, and all that was in it : everything was stable, clumsy to the highest degree, and had a strange resemblance to the master of the house. In one corner of the reception-room stood a bellied walnut bureau on four extremely absurd legs—a perfect bear. The table, armchairs, chairs—all was of the heaviest and of disturbing quality ; in a word every chair said : ' And I'm also Sobakevitch ', or, ' And I'm also very like Sobakevitch ! '

In treating the foregoing scene we could observe the simplest principle of clear transmission of the texture of the furniture. But a deeper understanding of the physiognomy of the objects, arising out of the characteristics of Sobakevitch's image, dictates quite a special treatment of those objects. It would be advisable to choose a lower viewpoint, so giving them monumentalism and great ponderousness. It would be advisable to use an extremely short-focus lens, so giving the objects a sharply distorted twist. It would be advisable to seek a similar method of lighting for the close-ups of Sobakevitch and for the details of the furniture superficially resembling him.

Would all this be ' distortion of reality ', would it contradict the principle of realism ?

By no means. It would be a correct generalisation of the individual features, intended to emphasise the whole with the greatest completeness and expressiveness. It would be an active demonstration of artistic visualisation with the aid of the representational resources of camera-man's technique.

So that, when it is directed towards the expressive exposition of the artistic intention, the deliberate distortion of the object shot does not necessarily contradict the principle of realistic representation. But deliberate distortion of the object also has its limits. In cases where the specific quality of the material masters the camera-man, where a clear subject motivation yields place to an æsthetic delight in dimensions and texture, the bounds of real perception are obliterated, and we come up against formalistic treatment of the shot. By way of example we may adduce certain works of Dziga Vertov, in which, despite the presence of thematics which closely approximate to the views we entertain, the exposition of industrial might grows into the formalism of the exhibition of the machine as an end in itself, its æsthetic triumph. To many shots in his pictures the words of Buzzi, the poet of machinism, are applicable : " Glory to thee, machine—polished steel. . . . You force millions of people to live. Like an apparition you are set above the ant-heaps. Create machines which in their turn will create new machines—the sole heroines in the drama of the future."

The loss of real motivation for the content of the shot, the surpassing of the bounds of real subject perception of the material lead to the method as such acquiring self-suffing importance, and then the composition becomes a purely

formalistic combination of dimensions, planes, and light and shade, void of all intrinsic content.

In isolated cases formalism in representational treatment also arises when the camera-man completely neglects the specific features of the concrete material, and is guided only by his own subjective perceptions. Dead compositional allegories and the juxtaposition of details, symbolism which emasculates a definitely sensitive relationship to the artistic image, are the result of such a method of work. In the camera-man's decision of the compositional task his starting-point must be a vital, picturesque idea of real things in their variety of associations and relationships, and not a geometrical juxtaposition of dimensions and planes, introduced from outside as a rational scheme.

Thus, the creative method of the Soviet camera-man presupposes an active, socially informed relationship to the ideological conception of the scenario, and an analysis of the definite material of the film from the aspect of the governing criterion of realistic selection and organisation of the expressive elements. This governing criterion is socialist reality with its philosophy and stylistic system.

The Soviet camera-man may not construct his compositional generalisations only on the basis of his own subjective and isolated superficial perceptions, for such a method of cognising reality limits his understanding of the artistic purpose and images of the film. Neither may he construct his work on the simple borrowing of the styles of someone else's artistic school, for that would mean introducing organically alien elements from outside.

Does all this mean that we at all deny the importance to the camera-man's craft of a definite visual culture, understood as an individual ability of perception and estimation of what is seen ? Not at all. The specific features of the camera-man's art demand that he should possess a highly developed visual culture, an educated perception of form, dimension, space and light and shade.

An uneducated eye [says the painter Ferdinand Hodler] sees the form and light of things not as does an experienced eye. It does not understand all the value of the phenomenon, the rhythm of the form, engendered by movement, pose, and gesture. Most difficult of all is to trace the tempo of movement.

One may recognise a man's face, even though one has completely forgotten the shape of his head. Looking at a tree, you know it is a maple, and so on, that the tree is large or small. And that is all. Anyone who wishes to represent that tree must in addition have a perception of the proportion of each individual part of it. But the unprepared eye never can capture the proportion of an object distributed on a plane. It is not easy to discriminate the special rôle essential to each thing in a general vital arrangement. . . . To see, means ' to know.'

Deprived of an artistic perception of the form of an object, the rhythm of movement, the play of light and shade, the camera-man can never raise himself to the level of producing an æsthetically perfect composition, combining the ideological content with representational craftsmanship. A visually effective interpretation of the content is possible only provided there is an innate or educated perception of formal elements, and that is one of the necessary qualities of the camera-man artist.

In exactly the same way our understanding of the tasks of the Soviet camera-man's creative method in no way denies the importance of the artistic legacy of contiguous spheres of art. For example, can the camera-man exploit various methods of impressionist painting ?

In our view there is a fundamental difference between the critical exploitation of the experience of impressionist painting within the limits of a

ertain style system, and the direct adoption of the position of the impressionist chool.

The camera-man impressionist who concentrates all his attention on pictorial ight and air effects, and throws all his creative energy into the search for new xpressive lighting methods, transforming the lighting treatment of the shot into a creative end in itself, *ipso facto* entirely surrenders to the school of formalistic nvestigators, and excludes from his work the ' living spirit ' of all creation, its dea. He loses organic unity with the director, he ceases to be interested in the deological viewpoint of the scenario, and is locked in the circle of formal and echnical problems of artistic photography. Not infrequently he achieves genuine perfection in the realm of light and shade, and astonishes us with examples of exceptional formal craftsmanship, but at the same time those very examples may erve as models of an intrinsic lack of idea.

However, impressionism cannot be considered only from the aspect of the representational methods specific to the artists of this tendency. Impressionism arose in pictorial art as a tendency distinguished primarily by its philosophic attitude.

Though we cannot accept the philosophy of impressionism, we certainly do not think of rejecting the rich arsenal of expressive resources provided by that school. Thus exploited, an impressionist method ceases to be ' impressionist ', and acquires a different functional tendency and a different character.

In the film " The Battleship Potemkin " is a scene in which the morning mists are depicted in soft focus transmission and soft semi-tones, washed contours, and especial accentuation of the aerial perspective, i.e. in a manner entirely characteristic of the impressionist artists' methods. Does that mean that Tisse violated the stylistic integrity of " Potemkin " by changing his manner of filming for this scene ? Or perhaps these shots justify one in claiming Tisse as a perfect impressionist ! Tisse has not a trace of impressionism in his make-up, in the sense of philosophic outlook. Only a superficial estimate of his work, based on formalistic analysis of superficial methods, without taking their functional motivation into account, would allow such a superficial deduction.

A critical exploitation and mastery, in a new ideological and philosophic context, of the representational experience of old pictorial art is perfectly legitimate to the camera-man. A representational method of itself cannot have any absolute significance established once for all, even though it arise as the expression of a definite philosophy. To conceive the old method anew in the light of a new style system *involves giving it a different sense and different significance.*

It is this critical mastery and assimilation of pictorial experience that constitutes the task of exploiting the legacy of pictorial art in cinema.

Finally, one more point concerning the individual manner of work of the camera-man artist.

There is a single style of Soviet art, the style of socialist realism. But it by no means follows that a correct method of artistic representation of reality presupposes only one definite creative manner, obligatory upon all artists without exception. When A. Golovnya and E. Tisse, working in the genres of revolutionary emotion, applied the methods of news-reel filming, raising those methods to the height of artistic generalisation, that did not mean that the representational treatment of " Potemkin " or " The Deserter " had to become the sole determining manner of work for all Soviet camera-men.

Working on a given genre, every camera-man must preserve his own appropriate creative features, his individual manner of shooting. And this by no

means contradicts the conception of a single style. A simple comparison of the individual manner of work of various masters cannot serve as the starting-point for analysis, inasmuch as creative manners are not comparable.

In Tisse's work linear dimensional treatment, multi-plane compositions with great depth and clearly expressed expressionist tendencies predominate. And this is the peculiarity of his creative manner, which has just as much right to recognition as, say, the creative manner of Moskvin or Demutsky.

Moskvin's work, on the other hand, is distinguished by its tendency towards light-plastic treatment and two-distantial plane constructions. Emotional nuance is much more natural to his work than to Tisse's. Finally, Demutsky more clearly perceives composition in space than composition in time. This gives rise to monumentalism and a certain static quality in his group shots. But this is not to be regarded as a negative quality. When speaking of the creative manner of a camera-man artist we can only say to what degree the given creative manner satisfies the needs of the definite genre in which he works. The conception ' genre ' undoubtedly exists in the camera-man's art. We say that every genre ought to find its expression in the peculiarities of the representational treatment of the film.

So far Soviet cinema has not embraced all the variety of genres possible in cinema art. The genre of revolutionary emotion has predominated hitherto. Only now are we seeing the first beginnings of comedy, fantasy, slapstick, romantic drama and other genres. And the first works to show mastery of the new genres have shown that the very nature of each of them demands special representational treatment, and different manners of shooting. It is difficult to imagine, for instance, a successful lyrical comedy with shots taken in heavy, monumental distortions, with low, sombre tone and harsh effect lighting. The light, merry comedy should obviously be shot with the main motives taken into account. In this direction the camera-man is called upon not only to obtain a clear understanding of the physiognomy of the genre, but also to find corresponding representational resources, ensuring easy perception of the narrative. In essentials it would be correct to supply only such methods of composition as assist the narrative dynamic of the comedy.

It is highly important for the camera-man to have a perception of the difference in genres. Generally speaking, the most correct of all methods would be for him to be educated in a definite genre. Of course that does not mean that every camera-man should work in one genre chosen once for all. But, given the presence of an established creative method, a predominant tendency towards one or another genre reveals itself.

The greater the development of varied genres in Soviet cinema, the more sharply will the problem of genre confront us in the camera-man's art. In fact, the same landscape can be optically and tonally treated in quite different ways. By applying a dense light filter we can give it a pessimistic tinge, thickening and lowering the tone. Or it may be rendered as sunlit landscape with a broadly deployed depth of perspective, or, finally, elements of aerial perspective can predominate, which will completely change the character of the perception once more. Such distinctions are especially striking in the treatment of a portrait where, as we have already remarked, essential modifications in the transmission of the facial proportions can be optically achieved.

We get one or another visual effect in dependence on the camera-man artist's creative perception and manner of work. And here we have to decide the extent to which the genre characteristics of the given representational treatment correspond with the genre of the film as a whole.

We have already said that the camera-man must not be limited in his choice of representational resources and methods of shooting. He has the right to exploit all expressive resources without exception in order to reveal the content and the artistic function of the film, treated from the standpoint of our socialist reality. But this raises a fundamental problem. Will not such an attitude lead in practice to compositional eclecticism, to the violation of the æsthetic integrity of the shot-editing system?

The question is highly important not only in principle, but in practice. Think of a film in which the various episodes and even shots are taken in very different styles. Let us suppose that there are action sections given sharp optical treatment, then editing cut-ins consisting of optically softened landscape shots. Even a primitive editing assembly of these shots, so sharply different from one another in texture, will reveal the lack of compositional harmony. In technical language, these shots cannot be cut together, and that means that the style of the editing ' phrase ', which has its own special laws, has been violated. It means that the cutting transition from one shot to another becomes visible to the audience, and the continuity of the visual perception of the film is broken. Here the visual factors of the cutting-joins follow the line not of a functional sequence, but of a representational one.

And this highly essential factor demands that the camera-man should possess tremendous creative sensitiveness, for the maximum intensification of the image-links of all the shots in a representational system is one of the most important tasks of composition. In a film the editing-join ought to exist only technically, and should never be perceptible to the spectator. When the camera-man begins to film a single episode or scene he must have a clear idea of all the consequences of logical transition from one method to another. Where the editing compositional scheme is worked out in advance, fortuitously cut-in editing interruptions, taken with methods fundamentally inapplicable in the limits of the given scene, cannot occur. While the method must be theoretically conceived from the aspect of the general conception of the film, it is also necessary to determine what significance that method will have in the stylistic system of the particular episode of the film. Otherwise the rhythmic and image link of the episode is violated, which leads to an eclectic assembly of shots heterogeneous and forcibly divorced from one another.

Thus the method should be conceived not only from the standpoint of the stylistic construction of the film as a whole, but also from that of the stylistics of the individual episodes. However, even that is not sufficient. When making a film based on a scenario written up from material of a literary classic the camera-man is confronted with a new demand. In the representational treatment of such a film he must catch and manifest the characteristic peculiarities of the literary composition, and the style which will distinguish it from a ' free screen adaptation '. We recall Pushkin's " Postmaster " and compare this work with the film of the same name. What space does Pushkin give to landscape, what is the character of his description of it, and how are the landscape shots reproduced in the film? We can find not only no compositional correspondence whatever, but not even the minimum of approximation to the original. Although from the aspect of the social treatment of the theme and narrative such a contradiction is sometimes quite suitable, on the representational plane such a contempt for the original material can hardly be regarded as desirable.

This example testifies to the importance of the camera-man having acquaintance not only with the scenario of the film but also with the literary sources which

not infrequently, on attentive study, provide far more valuable material than the scenario itself.

We especially note that it is essential that the camera-man should have not only an exact knowledge of the text of the literary source, but also a profound understanding of the actual style of the work, its school, and dramaturgic methods. In Gogol's " Inspector-General ", for instance, the exposition of the actors and the subject situation is conveyed in the course of the very first phrase uttered by Gorolnitchi :

" I've invited you, gentlemen, in order to communicate some unpleasant news. An Inspector-General is coming."
Ammos Fedorovitch : " What Inspector-General ? "
Artemi Filipovitch : " What Inspector-General ? "
And so on.

If we were making a film based on the " Inspector-General " the retention of Gogol's compositional form would entail very special methods of shooting the very first close-ups in the picture. There is an enormous difference between a close-up of an acting character, and a portrait close-up which gives merely an exposition of the actor's features. Perhaps Gogol's " Inspector-General " is the only work in all drama in which the exposition is given in such a short phrase. The action begins to develop immediately afterwards, and the representational treatment of the personages must change in the direction of revealing the narrative plot factors. In order to understand such a transition the camera-man must imagine the film not in the form of separate close-ups and mid-shots, but in that of a system of integral images in their complex dramaturgic inter-relationships. This means that he must take an author's part in making the film from the very moment that its artistic function is engendered, and this is the guarantee of the creation being of full value and saturated with ideas.

Holding this attitude as we do, we are justified in making such demands of the Soviet camera-man as we make of the cinema director in his sphere, for which purpose we must BRING THE CAMERA-MAN INTO THE CREATIVE PERIOD OF PREPARA-TORY WORK ON THE FILM, AND INTO PARTICIPATION IN THE CREATIVE PROCESS OF MAKING THE FILM FROM BEGINNING TO END.

This is the sense in which the question of inter-relationships between the director and the camera-man arises. A correct understanding of the camera-man's functions, his conscious participation in the process of work on a picture, and the unity in the creative attitudes of the entire group, which unity must pass through all the processes of work on the film, force us to regard the camera-man not as a technical executant, BUT PRIMARILY AS A CO-DIRECTOR.

The creative group, welded by the organic unity of the director's and camera-man's creative attitudes, must become THE BASIC PRODUCTION LINK IN THE SOVIET CINEMA SYSTEM.

From the position of technical executant the Soviet camera-man has raised himself to the level of a creative worker, fully entitled to claim an author's participation in making the film. Viewed from this angle the present position of the Soviet camera-man is on the road to full recognition, but that of the Western camera-man must be regarded as wholly unsatisfactory.

Theoretically called a ' creative worker ', he not infrequently is still placed in the working conditions of a technical photographer, being administratively transferred from picture to picture, from one director to another, without taking into account his creative attitude and desires, and irrespective of whether the

epresentational treatment of the film is concretely realisable by the creative endencies of the given camera-man.

Administrative transfers of camera-men from one director to another without aking their creative peculiarities into account should be resolutely condemned in ood production practice, for they lead to the degradation of the creative group, nd, in the first place, TO THE DEPERSONALISATION OF THE CAMERA-MAN AS A REATIVE WORKER.

At the same time, on its way to the mastery of creative methods of the utmost alue, the art of the Soviet camera-man is faced with the necessity to overcome till greater specific difficulties. The main barrier along that road is the inability f many present-day camera-men theoretically and practically to conceive all the ariety of representational possibilities in cinema technique.

There are still strong vestigial tendencies towards passive reproductionalism n Soviet camera-man's art, and these have found their expression in the ' theory f documentalism '. And vestiges of formalistic æstheticism are strong also. Rejection of deliberate expressive organisation of the material with the aid of compositional resources, under the plea of ' greatest approximation to reality ', and the replacement of truth in the representational treatment by superficial verisimilitude, are a great obstacle to the development of a methodology of Soviet camera-man's art constructed on the new principles.

Even in the work of certain leading Soviet camera-men we not infrequently find artificial separation of the rationalistic from the emotional, concretely sensitive element. The achievement of an organic unity in composition in which the rationalistic and emotional elements exist as an indivisible whole—that task of art is correct and confirmed by life itself. And it is achievable only in Soviet art.

The cinema is an art of enormous potential possibilities. It is an art created by a group, and the camera-man is entitled to a responsible and honourable rôle in that group. At the same time, by its very nature the cinema is a representational art, and this must never be forgotten. The cinema has acquired sound, but it has not ceased to be visual because of that. The cinema film exists only in visual images, and these images cannot be created without the organic participation of the camera-man.

" The property of genuine form," wrote Heinrich von Kleist, " is directly, immediately to transmit the thought. A weak form distorts it like a bad mirror, and reminds one of nothing except itself."

We stand for a form in cinematographic production which shall be of the fullest value and saturated with ideas.

We stand for the recognition of the camera-man as a true artist who in close co-operation with the creative group is engaged in creating the art of Soviet cinema.

$2.95

The Cinema as a Graphic Art

by VLADIMIR NILSEN

This pioneer study on the use of the camera in film making is still one of the most important works on the subject, covering both the technical and creative processes that a camera-man must employ to produce a fusion of image and meaning.

S. M. Eisenstein writes in an Appreciation included in this book: "I appreciate your effort to make the first steps towards clarification of the specific problems in the work of the camera-man considered as problems of art—that light, indeed, in which they should be faced and considered. In this way you are successfully profiting from the great experience you gained during your work as second to so great a master as Eduard Tisse on my productions 'October' and 'The General Line,' and also from your own successes as first camera-man during the last two years.

"This experience, together with the serious and scientific approach we have introduced and are trying to cultivate in our Film University—the first in the world—is what renders your book of real value and interest to everyone concerned with the work of the camera-man as an artist. Regarding him—the 'man who turns the handle'—as such is the only fair, right and useful way of looking at him."

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