Toward a Structural
Psychology of Cinema

Approaches to Semiotics

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Toward a Structural Psychology of Cinema

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The forward movement of our epoch in art
must blow up the Chinese Wall that stands between
the primary antithesis of the 'language of logic'
and the 'language of images'.

We demand from the coming epoch of art
a rejection of such opposition.

Sergei Eisenstein 1929

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Acknowledgment

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Introduction

This book is about cinema theory, cognitive psychology, and semiology, probably in that order. The viewpoint adopted, and the fundamental thesis advanced, is that contemporary cinema theory can take seriously the 'film as language' metaphor presupposed by Eisenstein and other early cinema theorists. Further, it is argued that such a research orientation offers important and somewhat unique advantages to cinema theory by placing the study of cinema within the broader intellectual contexts of semiology and cognitive psychology: the study of cinema can be the study of human intelligence.

The slogan 'film is language' is as old as cinema theory itself. And its fundamental justification is purely intuitive: film sequences seem to have a syntax.[1] The same images scrambled into a different ordering would have an entirely different meaning, or no meaning at all. Thus, consider various orderings of the three images glossed in English below.

(i) A close-up shot (i.e. face only) of a man, A, smiling.

(ii) A medium-shot (i.e. from the waist up) of two men, A and B, engaged in conversation.

(iii) A long-shot (i.e. revealing both men completely) of the two men A and B parting; they wave to one another as they walk off.[2]

The order (i), (ii), (iii), suggests that the smiling gesture of A in (i) invited the conversation. The order (ii), (i), (iii), suggests that something in the conversation pleased A. The order (ii), (iii), (i), suggests A's overall satisfaction with meeting B. Each of these different orderings suggest a slightly different meaning for the sequence of images.

There are three other possible orderings of the three images: (i), (iii), (ii); (iii), (i), (ii); and (iii), (ii), (i). All of these three are incoherent in that A and B part just prior to their conversation.[3] Consider the sequence (i), (iii), (ii); A smiles (i), A and B wave as they part from each other (iii), and A and B converse (ii). This is visual nonsense.

Rather analogous things are routinely observed in language. The sentence:

Fred hit Sam.

is quite different from the sentence:

Sam hit Fred.

and totally different from the meaningless sequence:

* Hit Fred Sam.[4]

Film theorists very early on were impressed with the *prima facie* similarities between cinema and language, and sought to develop the analysis of cinema as a sort of filmolinguistics (e.g. Eisenstein 1949).

This book stands in that same tradition. The task we shall undertake is to apply the analytical techniques of modern generative linguistics to the theory of cinema.[5] Generative linguistics emphasizes the importance of characterizing the intuitive knowledge that all speakers of a language share. For example, speakers of English recognize the first of our two example sequences above as a bona fide sentence of English; and they recognize the second as a nonsentence. Speakers of English know that the declarative sentence:

Fred hit Sam.

is synonymous with, that is has the same meaning as, the passive sentence:

Sam was hit by Fred.[6]

What can such basic and obvious facts tell us about the structure of human language?

They can tell us much. Accounting for the systematic relation of declarative and passive sentence pairs, for example, has stimulated numerous theoretical elaborations in generative linguistics (Chomsky 1957: 43-48, 79; 1965: 103-106; 1970; Grinder and Elgin 1973: 144-145; Perlmutter and Postal 1977). And yet the fundamental empirical motivations for these elaborations of linguistic theory are not buried in obscurity, or jargon, or tortured chains of reasoning. For the most part, they are immediately

accessible to any speaker of English. Language, perhaps the most intricately structured human activity, gives up many of her secrets to us almost directly.

The same sorts of points can be made with respect to cinema. To continue with the synonymy example, most of us have noticed cinema sequences that remind us of other similar sequences; sometimes we have noticed that a sequence is repeated in a film, perhaps with a slight variation. Woody Allen's film *Play It Again Sam* contains many sequences that play on synonymy relations. Many of the sequences in this film are intentionally contrived to be synonymous (to some degree) with corresponding sequences in the film *Casablanca*.[7]

Surely we can all imagine filming the same scene from two different camera angles, and thereby creating a pair of synonymous sequences. Suppose our earlier example (i), (ii), (iii) substituted a long-shot for (ii): the two men are talking, but in a more inclusive view. Call this shot (ii'). What then is the relation of the sequence (i), (ii), (iii), to the sequence (i), (ii'), (iii)? One might ask whether accounting for such cases of synonymy in cinema might reveal underlying principles of structure. Does the fact that we agree on basic judgments of synonymy imply that we share a tacit knowledge of cinema structure (perhaps in just the sense that speakers of English share a tacit understanding of English syntax)?

As in the case of language, there is no shortage of clear, intuitively accessible facts about cinema. However, in contrast to the case of language, there is presently no systematic theoretical analysis of these facts. Cinema theorists have typically looked far beyond simple structural relations like synonymy in favor of analyzing complex aesthetic or political relations. These more complex levels of analysis are, of course, necessary for a comprehensive theory of cinema. However, any theory of cinema will be fundamentally inadequate if it does not analyze basic and intuitively apparent structural relations, like synonymy.

This constitutes the initial motivation for the present study of cinema. A generative grammar of cinema borrows its methodology and theoretical vocabulary from linguistics. The aim of such a cinema grammar is to provide an analysis of the intuitive knowledge people have about the structure of cinema sequences. Such an analysis can provide a foundation for coherent investigations of

the more typical concerns of cinema theorists. Later (Chapter 8), we will consider a specific proposal as to how cinema grammar might provide some necessary theoretical foundation for theories of cinema aesthetics.

However, the most fundamental motivation for a linguistic program of cinema theory is not merely that it provides foundation for traditional questions. Rather, it is that a linguistic approach raises new issues and possibilities. For example, when we analyze two complex symbolic modes, like language and cinema, within the same formal framework (in this case generative grammar), there is a possibility that certain intermodal generalizations will become apparent (Chapters 6, 7, and 8). Such generalizations might reflect basic properties of human intelligence. That is, perhaps the human mind defines and manipulates the structure of complex sequences of symbols in narrowly proscribed *universal* ways.

This proposal is hardly novel, in fact it offers the only tenable account of the underlying samenesses of human behavior and experience. What may seem novel is the belief that the analysis of cinema can provide further empirical and theoretical elaboration of the nature of human intelligence. Yet, this assumption was routine in the writing of early cinema theorists like Eisenstein (1949). If the proposal that the study of cinema can contribute to the study of human intelligence strikes us as novel, it is because modern cinema theory has failed increasingly to confront these issues.

In the present study, these matters are of paramount concern. In Chapters 2 and 3, certain historical issues are presented. Chapter 2 considers, in overview, some of the problems that have prevented cinema writing from truly becoming cinema theory, in the sense science uses the term theory. Chapter 3 turns specifically to the film-as-language metaphor and the problems and confusions regarding its continued use in discussions and analyses of cinema. These two chapters are intended to develop two points: first, many of the chronic problems of cinema theory stem from a failure to deal with cinema systematically as a problem in the study of human intelligence. Second, many of the problems in studying film as if it were a language stem from basic confusions about what it means to study film *as* language. These chapters

are, therefore, remedial; they attempt to clear ground for a new linguistic approach to cinema theory.

Chapters 4 and 5 develop a generative linguistic approach to cinema theory. Chapter 4 defines phrase structure grammar as an approach to the description of cinema structure. Chapter 5 elaborates the phrase structure approach and defines transformational grammar. These chapters present an introduction to and a handbook for a particular linguistic approach to the study of film. They characterize cinema grammar as the central component in a structural psychology of cinema.

Chapters 6, 7, and 8 explore the implications of cinema grammar. Chapter 6 explores deletion as a case study in grammatical analysis, and considers the implications of the analysis for the study of universals. Chapter 7 reviews some studies of cinema perception and the role of the grammatical structure of cinema sequences in organizing their perception is considered. Chapter 8 explores how cinema grammar might be embedded in a comprehensive theory of cinema, focusing on the relations between both grammar and perception, and grammar and aesthetics. These final chapters work outward from cinema grammar toward the goal of describing a comprehensive structural psychology of cinema. They attempt to connect cinema grammar to traditional questions: how do we understand cinema sequences?, what is the basis for cinema aesthetics?, etc.

NOTES

1. The term syntax is a technical term from linguistics. It refers to the fact that the particular ordering of words in a sequence significantly determines various properties of the sequence; such as whether or not it can be recognized as a sentence, and if it is so recognized, what meaning it will be recognized as having. Consult Grinder and Elgin (1973) for a review of basic terminology and theory in generative linguistics. Linguistic terminology, as well as cinema terminology and terminology from psychology and semiotics, has been minimized whenever possible. Some familiarity with the terminologies of these areas will, however, certainly be helpful to the reader.

2. This discussion focuses exclusively on the analysis of narrative cinema, and principally on the narrative of the classic Hollywood period. Starting from a corpus of clearly and homogeneously structured films seemed prudent for both scientific and didactic purposes. Terms like close-up,

medium-shot, and long-shot, are used in their standard senses (e.g. Reisz 1953).

3. There are surely ways to interpret these sequences such that they are not incoherent, e.g. in the order (iii), (i), (ii), (ii) might be a flashback memory for A: he parts from B (iii), he smiles reflectively (ii), and then recalls their pleasant conversation (i). The remarks in the text presuppose a simple linear interpretation for the various possible orderings of (i), (ii), and (iii). (See Chapter 4 for comments on flashback constructions.)

4. By convention, an asterisk will be used to indicate that a given linguistic sequence is recognized by native speakers as a nonsentential sequence. This is the standard symbology in linguistics (Grinder and Elgin 1973).

5. Most cinema viewers are not filmmakers as well. At first this may seem to contrast significantly with the situation for language, where virtually all hearers are speakers as well. Since there *are* filmmakers, however, cinema as a form would, like language, be expected to be structured both by its production and its perception -- even if this is not always true for particular viewers.

Grinder and Elgin (1973), and many other recent introductions to linguistics, provide an elementary discussion of generative linguistics. Some background material is incorporated into Chapters 4 and 5, where we will consider film grammar at a more mechanical level.

6. It is possible to characterize *differences* between the declarative and passive versions that one might want to call meaning differences. We certainly do not mean to suggest otherwise: a successful account of the relation between declarative and passive forms will obviously have to describe *both* the sameness, what we have called synonymy, and the difference. These are technical questions, however, that clearly go far beyond the point of the example in the text.

7. Synonymy in cinema is discussed in greater detail in Chapter 5.

Recurrent Problems in Cinema Theory

1. THEORIES OF CINEMA

This chapter briefly reviews some historically important positions in film theory, and attempts to characterize some of the problems that have chronically hampered analyses of film. One goal of the cinema theory which will be developed later in this book will be to confront and resolve each of these traditional difficiencies within a systematic theoretical framework. The unfortunate, but understandable, lack of systematicity with respect to goals and methods in the work of early cinema theorists, has been virtually institutionalized in the study of cinema. It is not the case that we are faced with choosing between three or four conceptions of what a cinema theory is a theory of, rather it is the case that we presently have no choices at all.

Tudor (1974) has recently advocated a position that, in the context of the study of cinema, seems almost novel: he argues that a theory of cinema should be a theory in the usual scientific sense of the word. He enumerates three requirements for scientific theories in general: (1) they should make generalizations about that which they describe, (2) they should be systematic, and (3) they should have a creative aspect, that is, they ought to lead to new questions and predictions. When a set of systematically related statements analyzes a coherent fragment of the world, we call that set a theory. If the theory captures significant generalizations about the world-fragment which it describes, it may ultimately be thought of as an *explanation* of phenomena pertaining to that world-fragment.

The criteria outlined by Tudor certainly do not seem to be too severely restrictive or idiosyncratic. In film, however, theories do

not accommodate these three requirements. a view earlier considered by Spottiswoode (1950 [1933]: 154-159).[10] Tudor argues that most of what is called film theory in fact consists of examinations of the assumptions underlying film criticism (1974: 11).[1] He gives as examples the work of Bazin, Kracauer and the proponents of the auteur school. Of course, as Tudor points out, we can still learn a great deal from the consideration of a particular critic's worldview as it interacts with, and in part determines, his appraisal of given films. However, we should not confuse the critic's worldview with a theory of film. Other works of so-called film theory consist almost entirely of descriptive anecdotes (e.g. Balázs 1970 [1945]).

An unfortunate consequence of the unsystematic usage of the word 'theory' as regards discussions of film is that a critic's worldview or a catalog of anecdotes, mislabeled as a theory of film, may then erroneously be taken as some sort of *explanation* of film. The roots of the problem can be traced to the earliest work in cinema theory. Theorists like Eisenstein, Pudovkin, and Balázs, wanted to establish a scientific program for cinema theory. Eisenstein especially attempted to integrate the scientific study of film with psychology, sociology, and linguistics. He believed that the scientific method could be, and indeed *had* to be, applied to the study of art: science and art could not be separated from each other. However, unclear and confusing statements in these early works have ultimately led to enterprises in film theory that are quite antithetical to principles such as those discussed by Tudor.

2. THE EARLY THEORISTS

2.1. *Eisenstein*

Most of the very early work in film theory was directed at an analysis of montage: the joining together of spatially and temporally continuous shots by means of cutting. To recall our example from Chapter 1, we see two men talking and then instantaneously we see them parting. What has happened? How do we make sense of this juxtaposition? How do we interpret the abrupt discontinuity bridging two relatively continuous shots? These are the questions that first intrigued cinema theorists.

Eisenstein viewed montage as the major formative element in cinema. Throughout his life he attempted to formally perfect a taxonomic classification of montage types and to understand its psychological basis. His first published article (Appendix 2 of Eisenstein 1947 [1923]) sketched an approach to theater direction that he called the montage of attractions. He argued that elements of a production could be arranged in a formally determinable order so that a viewer would be aroused ('shocked' in Eisenstein's terminology) in precisely the intended manner and to the intended degree. In the late 1920s Eisenstein generalized this notion of collisionary montage (or kino-fist) under the metaphor film grammar of conflicts. In this view, the contrasts within and between shots give rise to conflict or tension which renders a film sequence emotionally exciting, aesthetically pleasing, and even narratively coherent.

Eisenstein (1949: 60) argues that '... in regard to the *action as a whole*, each fragment-piece is almost abstract'. Something photographed in one montage-piece can only mininally reveal itself: it provides only the barest skeleton of information. Only when it is reconstructed via a montage of fragments can it be fully revealed — narratively, emotionally, and aesthetically. However, Eisenstein cautioned against a too-uncritical and too-simple conception of montage. His own initial proposal was a five-tiered analysis: he proposed five montage types which simultaneously coexist in any film sequence.

Metric montage refers to the absolute lengths of the montage-pieces. Patterns of cutting lengths may be repeated to establish a background measure, analogous to the notion of a musical measure. Lengthening the strips produces a calm measure, while shortening them creates tension. Alternatively, two juxtaposed sequences in a film, or two kinds of content within a sequence, can be contrasted by structuring each under a different metrical measure.

Eisenstein contrasts metric montage with rhythmic montage. According to the latter method, the piece lengths are determined not by a formula but by the visual content of the pieces, particularly the rhythm of actions in the shots. Eisenstein recalls the Odessa steps sequence in his film *Potemkin*. The rhythm of the soldiers' feet creates a counterpoint to the cutting which is basically metric montage. This counterpoint is then itself violated,

first by Eisenstein's switching to rhythmic cutting at key points in the sequence, and later by his changing the rhythm of the action from that of the soldiers' feet descending the steps to that of the baby carriage rolling down the steps. The original tension created by the contrast in the rhythm of the soldiers' feet and the metric cutting is compounded by the alternation of rhythmic cutting with metric cutting. The acceleration in the rhythm of the action when the baby carriage rolls down the steps even further compounds the counterpoint and therefore the tension.

Tonal montage is characterized by Eisenstein with a musical metaphor: it is the emotionally dominant chord of a sequence. The notion can be objectivized by reference to physical parameters, such as camera angles, grain, light tonality, etc., in relation to content elements of the shots, such as the shape of the objects photographed and the commonalities of their movements from shot to shot. Eisenstein gives as an example the fog sequence from *Potemkin* which repeats a tiny rocking rhythm in the motion of the water, the ships and buoys, the sea birds, and the rising mists.

Overtonal montage, the fourth category, is rather elusive. Eisenstein again makes an analogy to music. He notes that accompanying the sound of any dominant tone are a range of related tones called overtones and undertones (1949: 66). The feeling of the shot must, then, be some complex combination of the entire complex of overtonal and dominant aspects. Eisenstein exemplifies this montage method with sequences from his film *Old and New*, but his discussion is not clear. A sequence's overtones are apparently the partial contradictions of its dominant tone. Overtonal montage is an emergent quality, derived from the interaction of the other three montage types.

Eisenstein underscores this principle of conflict among montage types. He specifies that a method of montage becomes a montage construction only when placed in contrast to other methods. Rhythmic montage grows out of the conflict between metric montage and the movements within the shot. Tonal montage derives from the conflict of rhythmic montage and the tonal elements of the sequence. Finally, overtonal montage emerges from the conflict between the dominant tone and the overtones.

Eisenstein's fifth montage type is intellectual montage. This method, unlike the other forms, does not appeal directly to the

emotions but to more rational modes of experience. Intellectual montage juxtaposes elements which are similar in some thematic sense, forcing the viewer to abstract this similarity and to develop some comment upon it. Thus, in *October* Eisenstein presents a sequence of gods from various cultures. The spectator is encouraged to abstract from these images the notion god and the comment Eisenstein intends.

In the following decade Eisenstein broadened the notion of montage. Less emphasis was placed on conflict. In his book *The Film Sense* (1942), he makes an analogy between montage and aspects of word blending. Thus Lewis Carroll's blend word 'frumious' is not the sum of furious and fuming but rather, says Eisenstein, an entirely distinct word. The notion of conflict is entirely unnecessary for an account of the processes of creative neologism (Carroll and Tanenhaus 1975; Halle 1973).

By the early 1940s Eisenstein acknowledged that in his early work perhaps too much attention had been given to juxtaposition of shots, with too little attention given to the analysis of what was actually being juxtaposed. Even so, in *The Film Sense* he generally assumes the montage framework that he had previously developed — although avoiding any explicit use of the notion conflict. He elaborates the earlier five tiered montage taxonomy, including audio-visual interactions as a new montage type. The synthesis of the sound track and the image track is dubbed vertical montage. Finally, he introduces the term chromophonic montage in his discussion of the synchronization of music and color.

2.2. *The constructivists*

For Eisenstein, the montage construction and its constituent elements were indivisible. Kuleshov, Pudovkin, and Balázs, in contrast, maintained a conception of montage as a linkage of pieces. The view of montage they established was that of a conceptual glue that pasted together otherwise independent components. Shot by shot, and brick by brick, as it were, a concept is built out of a sequence of elements. In his 1929 textbook, *On Film Technique*, Pudovkin describes three experiments by Kuleshov and himself performed in 1920.

In one experiment, they joined a neutral close-up shot of the actor Mosjukhin to three other shots. In the first version, they spliced in a shot of a plate of soup standing on a table. In the second version, they followed the shot of Mosjukhin with a shot of a coffin containing a (dead) woman. Finally, in the third sequence the shot of Mosjukhin preceded a shot of a little girl playing merrily with a toy bear. When they showed the sequences to viewers they found that Mosjukhin's expression was rated as pensive in the first case, deeply sorrowful in the second, and happy in the third. Viewers apparently constructed a concept of the sequences and then attributed an appropriate emotion to the neutral expression of Mosjukhin's face (see Pudovkin 1958 [1929]: 168).

In another experiment, Kuleshov photographed the hands, feet, eyes and heads of several different women in motion. Edited together these parts gave the impression of the movement of a single person (see Pudovkin 1958 [1929]: 145). In a third experiment, Kuleshov joined the following five shots into a scene:
   (1) A young man walks from left to right.
   (2) A young woman walks from right to left.
   (3) They meet and shake hands. The man points out of frame.
   (4) A large white building is shown, a broad flight of steps in
       front.
   (5) The two people mount the steps.
Viewers accepted the scene as representing a coherent, unified event transpiring in a real location. In fact, however, each of shots (1), (2), (3), and (5) was filmed in a different place in Russia — and shot (4) was of the White House! The juxtaposition created what Pudovkin calls a filmic space — what Kuleshov himself calls a creative geography (Pudovkin 1958 [1929]: 88-89).

Kuleshov and Pudovkin described the phenomenology of montage as being constructed by expectations, inferences, deductions, and associations. Similarly, Balázs (1970 [1945]: 119) argued that the viewer *presupposes* the existence of a typically human intelligence underlying any particular sequence of images displayed. Based on this presupposition, the viewer strives to unravel the relations that bind these images together and the meaning they are intended to convey.

Constructivist theorists like Balázs and Pudovkin explored the analysis of a far broader range of cinematic devices than had

Eisenstein. Balázs and Pudovkin examined mise-en-scène devices other than cuts: camera angle, camera distance, focus, distortion, pans, tracks, etc. Balázs notes, for example, that the use of very unusual camera angles is typically motivated thematically. He discusses the use of the subjective camera, the repetition of camera set-ups for effect, flashbacks, and expressionistic sequences (see below in section 3.4). He points out the conventional uses of dissolves, fades, irises, pans, and the close-up shot. However, while this exposition is full of interesting observations, to which we will have occasion to return in subsequent chapters, it does not attain a very high level of systematization.

Indeed, the only analysis that approaches any significant degree of systematization is Eisenstein's montage taxonomy. And the sense in which this taxonomy provides a cinema theory remains unclear.[2] The taxonomy classifies various cutting arrangements, and, at least in its early form, advises that conflict and contrast of various montage types enriches cinema presentation. But the later Eisenstein backed off somewhat from this categorical statement. And clearly, something must be said of a qualitative nature: the mere creation of conflict among montage types will never in itself guarantee a successful cinema construction. Even the early Eisenstein would not have claimed this. But how is optimal contrast to be achieved? All we have in answer to this is a series of anecdotal citations from Eisenstein's own films.

3. FOUR RECURRING PROBLEMS

Built upon this uncertain foundation of anecdote, cinema theory has tended to wander, in terms both of its aims and its methodologies. As a result, we have made very little progress toward cinema theory in Tudor's sense of the word: There is no comprehensive scheme available for the description of the structure of cinema sequences. And there is not even a ghost of a comprehensive theoretical analysis of the film medium. The questions which intrigued Eisenstein, how does the medium work?, how do we understand cinema constructions?, why are we pleased and stimulated by certain arrangements?, are still with us, and for the most part completely unanswered.

In the remainder of this chapter, we will try to define more specifically four problem areas that have chronically plagued studies in cinema theory. The linguistic approach to cinema theory which we will construct in later chapters has as one of its specific goals the successful confrontation of each of these problems. One of them is the failure of film theorists to distinguish between *de*scription and *pre*scription. Only the former can count as theory in the typical scientific usage (recall Tudor's three requirements). A second problem is that, even when film theory is *de*scriptive, no consistent distinction has been made between the structural operation of the film medium and the bases for judgments of quality. Both concerns are theoretically valid, of course, but neither can be significantly advanced if they are not distinguished from one another.

A third problem area is the role of psychological explanation in analyses of cinema. Characteristically, theories of film have been elaborated and justified by appeals to vague psychological principles. Many theorists, for example, have argued that film is experienced on analogy to real world experience. But the principle of analogy, whatever it in fact is, is certainly not in itself a comprehensive psychology of cinema. Fourth, and finally, the project of discovering and formalizing the intrinsic laws of the medium has simply failed to progress. It is generally paid lip service in cinema theory, but little more.

3.1 *Prescription versus description*

The distinction between prescription and description can be put succinctly: in the latter case we account for what *is* while in the former we outline what *should be*. As a first approximation, we might map the prescriptive function onto film critics, and the descriptive function onto film theorists. However, the mapping between prescription and description, on the one hand, and criticism and theory, on the other, is more involved than one might at first suppose and we will not bother to fully explore it here (see Tudor 1974: 10-11). The point is that film *theory*, as defined by Tudor, is fundamentally directed toward describing the formal properties, mechanisms, etc., of cinema, and not toward prescrib-