

## **Theory of the Film: Sound**

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### **The Acoustic World**

It is the business of the sound film to reveal for us our acoustic environment, the acoustic landscape in which we live, the speech of things and the intimate whisperings of nature; all that has speech beyond human speech, and speaks to us with the vast conversational powers of life and incessantly influences and directs our thoughts and emotions, from the muttering of the sea to the din of a great city, from the roar of machinery to the gentle patter of autumn rain on a windowpane. The meaning of a floorboard creaking in a deserted room, a bullet whistling past our ear, the deathwatch beetle ticking in old furniture, and the forest spring tinkling over the stones. Sensitive lyrical poets always could hear these significant sounds of life and describe them in words. It is for the sound film to let them speak to us more directly from the screen.

### **Discovery of Noise**

The sounds of our day today life we hitherto perceived merely as a confused noise, as a formless mass of din, rather as an unmusical person may listen to a symphony; at best he may be able to distinguish the leading melody, the rest will fuse into a chaotic clamor. The sound film will teach us to analyze even chaotic noise with our ear and read the score of life's symphony. Our ear will hear the different voices in the general babble and distinguish their character as manifestations of individual life. It is an old maxim that art saves us from chaos. The arts differ from each other in the specific kind of chaos which they fight against. The vocation of the sound film is to redeem us from the chaos of shapeless noise by accepting it as expression, as significance, as meaning. . . .

Only when the sound film will have resolved noise into its elements, segregated individual, intimate voices, and made them speak to us separately in vocal, acoustic close-ups; when these isolated detail sounds will be collated again in purposeful order by sound montage, will the sound film have become a new art. When the director will be able to lead our ear as he could once already lead our eye in the silent film and by means of such guidance along a series of close-ups will be able to emphasize, separate, and bring into relation with each other the sounds of life as he has done with its sights, then the rattle and clatter of life will no longer overwhelm us in a lifeless chaos of sound. The sound camera will intervene in this chaos of sound, form it and interpret it, and then it will again be man himself who speaks to us from the sound screen.

### **The Picture Forms the Sound**

In a sound film there is no need to explain the sounds. We see together with the word the glance, the smile, the gesture, the whole chord of expression, the exact nuance. Together with the sounds and voices of things we see their physiognomy. The noise of a machine has a different coloring for us if we see the whirling machinery at the same time. The sound of a wave is different if we see its movement. Just as the shade and value of a color changes according to what other colors are next to it in a painting, so the timbre of a sound changes in accordance with the physiognomy or gesture of the visible source of the

sound seen together with the sound itself in a sound film in which acoustic and optical impressions are equivalently linked together into a single picture.

In a radio play the stage has to be described in words, because sound alone is not space-creating.

### **Silence**

Silence, too, is an acoustic effect, but only where sounds can be heard. The presentation of silence is one of the most specific dramatic effects of the sound film. No other art can reproduce silence, neither painting nor sculpture, 'neither literature nor the silent film could do so. Even on the stage silence appears only rarely as a dramatic effect and then only for short moments. Radio plays cannot make us feel the depths of silence at all, because when no sounds come from our set, the whole performance has ceased, as we cannot see any silent continuation of the action. The sole material of the wireless play being sound, the result of the cessation of sound is not silence but just nothing.

### **Silence and Space**

Things that we see as being different from each other, appear even more different when they emit sounds. They all sound different when they do this, but they are all silent in the same way. There are thousands of different sounds and voices, but the substance of silence appears one and the same for all. That is at first hearing. Sound differentiates visible things, silence brings them closer to each other and makes them less dissimilar. Every painting shows this happy harmony, the hidden common language of mute things conversing with each other, recognizing each others' shapes, and entering into relations with each other in a composition common to them all. This was a great advantage the silent film had over the sound film. For its silence was not mute; it was given a voice in the background music, and landscapes and men and the objects surrounding them were shown on the screen against this common musical background. This made them speak a common silent language and we could feel their irrational conversation in the music which was common to them all.

But the silent film could reproduce silence only by roundabout means. On the theatrical stage cessation of the dialogue does not touch off the great emotional experience of silence, because the space of the stage is too small for that, and the experience of silence is essentially a space experience

How do we perceive silence? By hearing nothing? That is a mere negative. Yet man has few experiences more positive than the experience of silence. Deaf people do not know what it is. But if a morning breeze blows the sound of a cock crowing over to us from the neighboring village, if from the top of a high mountain we hear the tapping of a woodcutter's axe far below in the valley, if we can hear the crack of a whip a mile away- then we are hearing the silence around us. We feel the silence when we can hear the most distant sound or the slightest rustle near us. Silence is when the buzzing of a fly on the windowpane fills the whole room with sound and the ticking of a clock smashes time into

fragments with sledgehammer blows. The silence is greatest when we can hear very distant sounds in a very large space. The widest space is our own if we can hear right across it and the noise of the alien world reaches us from beyond its boundaries. A completely soundless space on the contrary never appears quite concrete, and quite real to our perception; we feel it to be weightless and unsubstantial, for what we merely see is only a vision. We accept seen space as real only when it contains sounds as well, for these give it the dimension of depth.

On the stage, a silence which is the reverse of speech may have a dramaturgical function, as for instance if a noisy company suddenly falls silent when a new character appears; but such a silence cannot last longer than a few seconds, otherwise it curdles as it were and seems to stop the performance. On the stage, the effect of silence cannot be drawn out or made to last.

In the film, silence can be extremely vivid and varied, for although it has no voice, it has very many expressions and gestures. A silent glance can speak volumes; its soundlessness makes it more expressive because the facial movements of a silent figure may explain the reason for the silence, make us feel its weight, its menace, its tension. In the film, silence does not halt action even for an instant and such silent action gives even silence a living face.

The physiognomy of men is more intense when they are silent. More than that, in silence even things drop their masks and seem to look at you with wide open eyes. If a sound film shows us any object surrounded by the noises of everyday life and then suddenly cuts out all sound and brings it up to us in isolated close-up, then the physiognomy of that object takes on a significance and tension that seems to provoke and invite the event which is to follow.

### **Sound Explaining Pictures**

Not only the micro-dramatics expressed in the micro-physiognomy of the face can be made intelligible by the sound which causes it. Such a close-up plus sound can have the inverse effect. The close-up of a listener's face can explain the sound he hears. We might perhaps not have noticed the significance of some sound or noise if we had not seen its effect in the mirror of a human face. For instance we hear the screaming of a siren. Such a sound does not acquire a dramatic significance unless we can see from the expression on human faces that it is a danger signal, or a call to revolt. We may hear the sound of sobbing, but how deep its meaning is will become evident only from the expression of sympathy and understanding appearing on some human face. Further, the acoustic character of a sound we understand is different too. We hear the sound of a siren differently if we know that it is a warning of impending deadly peril.

The face of a man listening to music may also show two kinds of things. The reflected effect of the music may throw light into the human soul; it may also throw light on the music itself and suggest by means of the listener's facial expression some experience touched off by this musical effect. If the director shows us a close-up of the conductor while an invisible orchestra is playing, not only can the character of the music be made

clear by the dumb show of the conductor, his facial expression may also give an interpretation of the sounds and convey it to us. And the emotion produced in a human being by music and demonstrated by a close-up of a face can enhance the power of a piece of music in our eyes far more than any added decibels.

### **Asynchronous Sound**

In a close-up in which the surroundings are not visible, a sound that seeps into the shot sometimes impresses us as mysterious, simply because we cannot see its source. It produces the tension arising from curiosity and expectation. Sometimes the audience does not know what the sound is they hear, but the character in the film can hear it, turn his face toward the sound, and see its source before the audience does. This handling of picture and sound provides rich opportunities for effects of tension and surprise.

Asynchronous sound (that is, when there is discrepancy between the things heard and the things seen in the film) can acquire considerable importance. If the sound or voice is not tied up with a picture of its source, it may grow beyond the dimensions of the latter. Then it is no longer the voice or sound of some chance thing, but appears as a pronouncement of universal validity. . . . The surest means by which a director can convey the pathos or symbolical significance of sound or voice is precisely to use it asynchronously.

### **Intimacy of Sound**

Acoustic close-ups make us perceive sounds which are included in the accustomed noise of day-to-day life, but which we never hear as individual sounds because they are drowned in the general din. Possibly they even have an effect on us but this effect never becomes conscious. If a close-up picks out such a sound and thereby makes us aware of its effect, then at the same time its influence on the action will have been made manifest.

On the stage such things are impossible. If a theatrical producer wanted to direct the attention of the audience to a scarcely audible sigh, because that sigh expresses a turning-point in the action, then all the other actors in the same scene would have to be very quiet, or else the actor who is to breathe the sigh would have to be brought forward to the footlights. All this, however, would cause the sigh to lose its essential character, which is that it is shy and retiring and must remain scarcely audible. As in the silent film so in the sound film, scarcely perceptible, intimate things can be conveyed with all the secrecy of the unnoticed eavesdropper. Nothing need be silenced in order to demonstrate such sounds for all to hear and they can yet be kept intimate. The general din can go on, it may even drown completely a sound like the soft piping of a mosquito, but we can get quite close to the source of the sound with the microphone and with our ear and hear it nevertheless.

Subtle associations and interrelations of thoughts and emotions can be conveyed by means of very low, soft sound effects. Such emotional or intellectual linkages can play a decisive dramaturgical part. They may be anything the ticking of a clock in an empty

room, a slow drip from a burst pipe, or the moaning of a little child in its sleep.

### **Sound Cannot be Isolated**

In such close-ups of sound we must be careful, however, to bear in mind the specific nature of sound which never permits sound to be isolated from its acoustic environment as a close-up shot can be isolated from its surroundings. For what is not within the film frame cannot be seen by us, even if it is immediately beside the things that are. Light or shadow can be thrown into the picture from outside and the outline of a shadow can betray to the spectator what is outside the frame but still in the same sector of space, although the picture will show only a shadow. In sound things are different. An acoustic environment inevitably encroaches on the close-up shot and what we hear in this case is not a shadow or a beam of light, but the sounds themselves, which can always be heard throughout the whole space of the picture, however small a section of that space is included in the close-up. Sounds cannot be blocked out.

Music played in a restaurant cannot be completely cut out if a special close-up of say two people softly talking together in a corner is to be shown. The band may not always be seen in the picture, but it will always be heard. Nor is there any need to silence the music altogether in order that we may hear the soft whispering of the two guests as if we were sitting in their immediate vicinity. The close-up will contain the whole acoustic atmosphere of the restaurant space. Thus we will hear not only the people talking, we will also hear in what relation their talking is to the sounds all round them. We will be able to place it in its acoustic environment.

Such sound pictures are often used in the film for the purpose of creating an atmosphere. Just as the film can show visual landscapes, so it can show acoustic landscapes, a tonal milieu.

### **Educating the Ear**

Our eye recognizes things even if it has seen them only once or twice. Sounds are much more difficult to recognize. We know far more visual forms than sound forms. We are used to finding our way about the world without the conscious assistance of our hearing. But without sight we are lost. Our ear, however, is not less sensitive, it is only less educated than our eye. Science tells us in fact that the ear can distinguish more delicate nuances than our eye. The number of sounds and noises a human ear can distinguish runs into many thousands far more than the shades of color and degrees of light we can distinguish. There is however a considerable difference between perceiving a sound and identifying its source. We may be aware that we are hearing a different sound than before, without knowing to whom or what the sound belongs. We may have more difficulty in perceiving things visually, but we recognize them more easily once we have perceived them. Erdmann's experiments showed that the ear can distinguish innumerable shades and degrees in the noise of a large crowd, but at the same time it could not be stated with certainty whether the noise was that of a merry or an angry crowd.

There is a very considerable difference between our visual and acoustic education. One of the reasons for this is that we so often see without hearing. We see things from afar, through a windowpane, on pictures, on photographs. But we very rarely hear the sounds of nature and of life without seeing something. We are not accustomed therefore to draw conclusions about visual things from sounds we hear. This defective education of our hearing can be used for many surprising effects in the sound film. We hear a hiss in the darkness. A snake? A human face on the screen turns in terror toward the sound and the spectators tense in their seats. The camera, too, turns toward the sound. And behold the hiss is that of a kettle boiling on the gas ring.

Such surprising disappointments may be tragic too. In such cases the slow approach and the slow recognition of the sound may cause a far more terrifying tension than the approach of something seen and therefore instantly recognized. The roar of an approaching flood or landslide, approaching cries of grief or terror which we discern and distinguish only gradually, impress us with the inevitability of an approaching catastrophe with almost irresistible intensity. These great possibilities of dramatic effect are due to the fact that such a slow and gradual process of recognition can symbolize the desperate resistance of the consciousness to understanding a reality which is already audible but which the consciousness is reluctant to accept.

### **Sounds Throw No Shadow**

Auditive culture can be increased like any other and the sound film is very suitable to educate our ear. There are however definite limits to the possibilities of finding our way about the world purely by sound, without any visual impressions. The reason for this is that sounds throw no shadow in other words that sounds cannot produce shapes in space. Things which we see we must see side by side; if we do not, one of them covers up the other so that it cannot be seen. Visual impressions do not blend with each other. Sounds are different; if several of them are present at the same time, they merge into one common composite sound. We can see the dimension of space and see a direction in it. But we cannot *hear either dimension* or direction. A quite unusual, rare sensitivity of ear, the so called absoluteis required to distinguish the several sounds which make up a composite noise. But their place in space, the direction of their source cannot be discerned even by a perfect ear, if no visual impression is present to help.

It is one of the basic form problems of the radio play that sound alone cannot represent space and hence cannot alone represent a stage.

### **Sounds Have No Sides**

It is difficult to localize sound and a film director must take this fact into account. If three people are talking together in a film and they are placed so that we cannot see the movements of their mouths and if they do not accompany their words by gestures, it is almost impossible to know which of them is talking, unless the voices are very different. For sounds cannot be beamed as precisely as light can be directed by a reflector. There are no such straight and concentrated sound beams as there are rays of light.

The shapes of visible things have several sides, right side and left side, front and back. Sound has no such aspects, a sound strip will not tell us from which side the shot was made.

### **Sound Has a Space Coloring**

Every natural sound reproduced by art on the stage or on the platform always takes on a false tone coloring, for it always assumes the coloring of the space in which it is presented to the public and not of the space which it is supposed to reproduce. If we hear a storm, the howling of the wind, a clap of thunder, etc., on the stage we always hear in it the *timbre* proper to the stage not in the *timbre* proper to the forest, or ocean, or whatnot the scene is supposed to represent. If, say, a choir sings in a church on the stage, we cannot hear the unmistakable resonance of Gothic arches; for every sound bears the stamp of the space in which it is actually produced.

Every sound has a space-bound character of its own. The same sound sounds different in a small room, in a cellar, in a large empty hall, in a street, in a forest, or on the sea.

Every sound which is really produced somewhere must of necessity have some such space quality and this is a very important quality indeed if use is to be made of the sensual reproducing power of sound! It is this *timbre local* of sound which is necessarily always falsified on the theatrical stage. One of the most valuable artistic faculties of the microphone is that sounds shot at the point of origin are perpetuated by it and retain their original tonal coloring. A sound recorded in a cellar remains a cellar sound even if it is played back in a picture theater, just as a film shot preserves the viewpoint of the camera, whatever the spectator's viewpoint in the cinema auditorium may be. If the picture was taken from above, the spectators will see the object from above, even if they have to look upwards to the screen and not downwards. Just as our eye is identified with the camera lens, so our ear is identified with the microphone and we hear the sounds as the microphone originally heard them, irrespective of where the sound being shown and the sound reproduced. In this way, in the sound film, the fixed, immutable, permanent distance between spectator and actor is eliminated not only visually . . . but acoustically as well. Not only as spectators, but as listeners, too, we are transferred from our seats to the space in which the events depicted on the screen are taking place.