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Adapting Peircean semiotics to sound theory and practice

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Abstract

This paper argues that the semiotic model proposed by C.S. Peirce (1839-1914) has the potential to be adapted to sound in order to provide a comprehensive conceptual framework and meta-language for describing sound both as product and as practice. The flexibility of the Peircean model means that it is ideally suited to the analysis of sound and sound/image combinations and to the analysis of audio-visual media.

*The starting point of the decision-making process for sound producers and designers can be framed by some fundamental questions: (a) What does the audience need to know? (b) How should the audience feel? And (c) what should they think? With the overall goal of the soundtrack being to 'serve the needs of the story', the choices in the soundtrack are geared around creating these understandings or emotional responses. The opening sequence from *The Conversation* (Coppola, 1974) is examined to illustrate the Peircean model as it is applied to sound in the audio-visual soundtrack. Viewed in this way the soundtrack can be thought of as a kind of trail of breadcrumbs, a part of the narrative which allows the audience to search for cause and consequence for themselves. A Peircean semiotic approach can then be used to inform the process of designing the soundtrack as well as aid in the analysis of the finished work.*

Keywords

sound design, film sound, theory and practice, semiotics, Peirce

Introduction

While Peirce is acknowledged as one of the two founding fathers of modern semiotics, along with Ferdinand de Saussure (1960), his model of semiotics has not been as readily adopted by sound scholars. This paper will suggest that the breadth and scope of Peirce's model does not just make it a highly flexible and powerful model, but one which is ideally suited to sound as an analytical tool, as a pedagogical method and as aid in the practice of sound design. While others have used elements of Peirce's semiotic model in analysing the artistic use of musical sound (e.g. Monelle, 1991; Enriquez, 2012) or have adapted elements of Peirce's division of sign-object relations to the product design process (Suied et al., 2005), this paper argues that Peirce's model can be employed to analyse any type of sound or sound-image relationship. It can be seen that the Peircean model is therefore useful in describing and analysing both the product and the implicit process of designing sound for audio-visual productions.

In 'Some Consequences of Four Incapacities' (Pierce et al., 1982 [1868], 2:211) Peirce indicated the importance he attached to signs and, therefore, his study of signs. Taking each of the incapacities in turn:

1. *We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of external facts.*

This suggests the fundamental importance of the work of hypothesis in making sense of the world, rather than the Cartesian model that considers the thought as immediate perception. Instead, for Peirce, thought comes from an interpretation of the external world.

2. We have no power of Intuition, but every cognition is determined logically by previous cognitions.

For Peirce, there is no completely new cognition. Instead every cognition is one of a series of cognitions with which we make sense of the world. Cognition is a process. Peirce used the analogy of a 'train of thought' to describe the continuous process wherein 'each former thought suggests something to the one which followed it, i.e. is the sign of something to this latter' (Peirce, Hartshorne and Weiss, 1960, p. 5.284).

3. We have no power of thinking without signs.

Here Peirce explicitly states that signs are absolutely fundamental to thinking, and that instead of directly experiencing external reality we ourselves mediate it. Our eyes give us a sign, as do our ears and all other sensory organs through which we conceive our world.

4. We have no conception of the absolutely incognizable.

For Peirce, not only are meaning and cognition directly related, but the incognizable can have no meaning because it cannot be conceived.

Firstness, Secondness and Thirdness in sound

Peirce's Universal Categories of Firstness, Secondness and Thirdness proposed in the paper 'On a New List of Categories' (Peirce, 1998 [1868], pp. 3-10) are particularly relevant to sound, since sound only ever exists as a stream, and not as a constant or static object. Our awareness of the sound develops as the sound develops. We can stare at a photograph and the photograph will remain the same, although our

interpretation of it may change as we dwell on it. Three stages can be thought of as illustrating the Universal Categories as they apply to sound. We may initially only notice that we hear a sound (Firstness). Then it may become a sound with respect to some other sound or some physical thing (Secondness), and thereafter some mediation and attribution of meaning (Thirdness), if the process gets that far.

We could say that sound can be classified in terms of the sign-object relations:

- Iconic (Firstness): the material qualities or characteristics of a sound, such as loudness, pitch, regularity, timbre and so on, without regard to anything else.
- Indexical (Secondness): facts about two objects, such as a causal link between sound and its origin.
- Symbolic (Thirdness): facts about several objects, which can be described as a synthetic fact or ‘general rule’, such as a spoken language or a learned association between a sound and an image.

While the Universal Categories are difficult to pin down, the idea behind them highlights some phenomena that can exist prior to our eventual understanding or before the process of semiosis is complete. There is a logical sequence from Firstness to Thirdness:

- *We notice something without conscious acknowledgement:* Imagine a sound X that one notices, but which is not recognised. It merely has vague characteristics, without pointing to any particular thing. This would be called Firstness, relating to the immediate properties or characteristics of a thing without reference to another.
- *Then we notice with respect to some other thing:* A sound that stops or starts does so in comparison to or with respect to silence. We may notice that sound X stops, or that it starts. We do not yet attribute any meaning to the sound, but notice that it exists or ceases to exist, as a result of some other object or action. This would be called Secondness, relating to a cause.
- *Finally we incorporate the knowledge into the broader understanding through reference to a third:* If we later notice sound X once more and realise a principle linking it with some action or otherwise describing it in terms of a general rule, then this would be called Thirdness, a synthesis of meaning or mediation.

Peirce’s sign

Peirce defined the sign as consisting of three interrelated parts: a representamen, an object and an interpretant. In Peirce’s own terminology, the word ‘representamen’ is used to describe the sign itself, as opposed to its signifying element or the object to which the sign refers. The representamen can be equated in some ways to the signifier from Saussure’s model or the sign vehicle from Charles Morris (1938):¹

A sign (or the Representamen [or the sign vehicle]) is anything which denotes an object.

An object is anything that can be thought.

An interpretant is the mental effect of the sign, the signification or interpretation of the sign. (Peirce, Hartshorne and Weiss, 1960, p. 8.184)

How then can we apply Peirce's model of the sign to the new or the unfamiliar? First, we revisit Peirce's ideas in 'Some Consequences of Four Incapacities' (Peirce et al., 1982, p. 2.213). The first three incapacities are:

1. We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of the world.
2. We have no power of Intuition, but every cognition is determined logically by previous cognitions.
3. We have no power of thinking without signs.

From these three incapacities it can be surmised that we must arrive at understanding from our own reasoning, based on our knowledge of the world, and that our reasoning is based on signs, since our thinking comes through signs and their associations. Therefore, any new sign is determined by previous cognitions, and we can only arrive at new thoughts through other signs. When confronted with new signs, we arrive at new understandings through hypothesis and reasoning, an example of Peircean abductive reasoning.

Peirce's definition of the symbolic representation largely coincides with Saussure's 'arbitrary signifier', in that there is neither similarity nor direct connection through cause and effect, nor other evidence: 'The symbol is connected with its object by virtue of the idea of the symbol-using mind, without which no such connection would exist' (Peirce, Hartshorne and Weiss, 1960, 2:299). For example, the word 'dog' has no natural connection with the concept of dog, but the order of the letters d-o-g creates the meaning for the concept of dog in English, just as the letters c-h-i-e-n create the meaning for the same concept in French. In this sense, it is a socially learned association, which points to a conventional link between the object and its sign (Chandler, 2007, p. 28). The system only works because it is recognised or has been agreed that the sign represents the object. Similarly, a violin appears to have little intrinsically or naturally to make it representative of a romantic moment between lovers or of the many other things it represents. Instead, some types of music can be said to have acquired a socially constructed meaning.

Peirce emphasised an 'end-directed' process of inquiry rather than endless semiosis. The focus is then on the object as it stands at the end of the process, in light of collateral experience, as opposed to the object referred to in the signification. The first object is the immediate object, where the subsequent object is the dynamical object. The immediate object is the initial object, what it first appears to be, an

unmediated approximation. The dynamical (mediate) object is the result 'at the end of the line'. The term 'real object' would also be used if it were not for the fact that the object might not actually be *real*:

We must distinguish between the Immediate Object, – i.e., the Object as represented in the Sign, – and the Real (no, because perhaps the Object is altogether fictive, I must choose a different term, therefore:), say rather the Dynamical Object, which from the nature of things, the sign cannot express, which it can only indicate and leave the interpreter to find out by collateral experience. (Peirce et al., 1960, p. 8.314)

This differentiation between the immediate object and the dynamical object is useful in that it accounts for a modification of understanding dependent on experience and other information or qualities possessed by the interpreter of the sign.² It allows for the same object to be identified differently dependent on other external factors, such as the interpreter's experience.

Having divided the object, thereby moving away from the necessity of an infinite chain of signs, and thus infinite semiosis, Peirce instead offers a differentiation of types of interpretants: the immediate interpretant, the dynamical interpretant and the final interpretant.

The immediate interpretant can be thought of as a recognition of the syntax of the sign, including how to read it, a surface-level understanding, or 'the total unanalyzed impression which the sign might be expected to produce, prior to any critical reflection upon it' (Savan, 1988, p. 53). The dynamical interpretant can be thought of as 'the effect produced in the mind' (Peirce, Hartshorne, and Weis 1960, 8:343), which is reached in combination with collateral experience – or moving towards a final meaning. The final interpretant is the end of the process, once 'all the numbers are in', and can be thought of as the idealised end point. It is the interpretant 'which would be reached if a process of enriching the interpretant through scientific enquiry were to proceed indefinitely. It incorporates a complete and true conception of the objects of the sign; it is the interpretant we should all agree on in the long run' (Hookway, 1985, p. 139). The division of the interpretant allows for the gradual unfurling of meaning from the sign, although the sign itself need not change.

Sound as a sign

So how does this apply to the use of sound? How can sounds be interpreted as 'sound signs'? Take the example of the ticking sound of a clock. Its relationship to its object can be iconic, indexical or symbolic, depending on factors described as the context. The sound of the clock is iconic in the sense that it represents the clock through the characteristic metallic ticking sound of the clock. We can recognise the sound here

because of its iconic properties. The sound of the clock is also indexical, in that it is evidence of the clock that makes the sound. The sound of the ticking is also symbolically linked with the idea of time, which is a learned association.

Continuing with the ticking clock example, we can show where its meaning might change. Imagine the following three scenarios, where the only accompanying sound is the ticking of a clock:

- a) A shot of a man lying in a darkened room staring at the ceiling.
- b) A shot of a man racing through a crowded city street.
- c) A shot of an unattended package at a railway station.

In each case what is represented and therefore understood by the ticking (the origin of which may or may not be visible) differs depending on its contextual use. In a) the sound might represent time moving slowly for someone staring at the ceiling (unable to sleep, nothing to do?). In b) it might represent time moving quickly (running out of time?). In c) it might be an indexical or symbolic sign for a bomb that may be inside the package. In each case the object of the sign is the clock, but the interpretant of this sound sign is determined by its context.

In each case the interpreting mind must make sense of the sound in order to come to some understanding of what the sound might mean or represent. Peirce described this hypothesising, when faced with a sign, as a mode of reasoning which he termed abduction in which possibility is the basis for reasoning, rather than probability or necessity:

Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces any new idea; for induction does nothing but determine a value, and deduction merely evolves the necessary consequences of a pure hypothesis.

Deduction proves that something must be; Induction shows that something actually is operative; Abduction merely suggests that something may be. (Peirce, Hartshorne and Weiss, 1960 [1903], 5:171-172)

Abduction is therefore used to make a guess to explain some phenomena, distinct from deduction (necessary inferences) and induction (probable inferences) as other modes. The abduction stage is required to create new meaning through a new hypothesis, which is then tested, and is at work when we create meaning through comparison with another, allowing the incorporation of new signs into our schemata. The interpretation of the ticking sound in all the ways suggested requires a mind to interpret. The apprehension of the sound sign, prior experience and mental processing is required to create meanings. Indeed, different minds might well make different meanings from the same sound. Therefore, the role of the interpreter is fundamental not only in *whether* meaning is created, but also in relation to *which* meaning is created.



Figure 1 - opening shot of the city square

Example – *The Conversation*

The opening sequence in Coppola's *The Conversation* (1974) is a good illustration of some of the elements of the model and how it can be applied to both sound, sound/image combinations and their role in the developing narrative. The long opening title shot (Figure 1) is a very long slow zoom of a busy city square accompanied by an echoey musical performance, and gradually some very peculiar metallic noise also becomes audible. We do not see the origin of the music or hear anything that we can see happening in the (still very long) shot. The picture cuts to a man observing the scene below from the roof of a building (Figures 2 and 3 (see pg. 63)), with another picture cut showing his POV (point of view) of the square below through a telescopic sight (Figure 4 (see pg. 64)). Accompanying this POV shot is the strange metallic sound.

Gradually the picture and sound begin to align, and a couple is now both visible (in a long telephoto shot) and audible (with some occasional accompanying metallic distortion). As the peculiar sound appears to be synchronised with the visual images of the people talking, we gradually become aware that there is some link between the two. Not until we see Harry Caul (played by Gene Hackman) climb into a parked van (Figure 5 (see pg. 64)), where his associate monitors the conversation through recording equipment, while we continue to hear the couple's conversation, do we realise that the 'sniper' on the roof is actually pointing a microphone rather than a gun. Harry asks his associate how the recording is going, while the images show each microphone position in turn.



Figure 2 – the rooftop position



Figure 3 – the rooftop 'sniper'

We can apply several of the Peircean concepts under discussion to the opening minutes from *The Conversation*. Examples of icon, index and symbol, abduction, initial and dynamical objects and interpretants are all exhibited in order to create an intriguing and narratively inventive opening scene – the creative way the scene is constructed, the deliberate withholding of information and an implicit under-

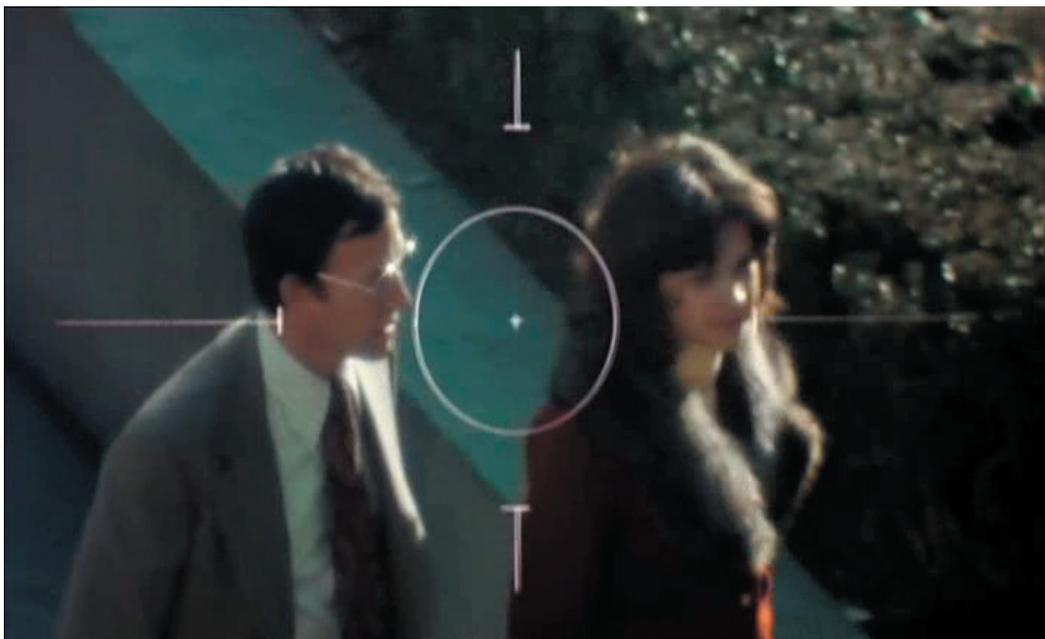


Figure 4 - The couple seen from the rooftop sniper POV through the telescopic sight



Figure 5 - Harry Caul goes to the parked van

standing of the way sound and image combinations can be set up to deliberately manipulate or obscure the way they will be understood or interpreted.

In Peircean terms the metallic sound was initially purely iconic – it contained no indexical link to anything in the story – and was also devoid of symbolic meaning. Our understanding of the initial object of the ‘sniper’ is modified in light of the new

information and becomes a different dynamical object: a man pointing a microphone. The initial object of the metallic noise, once associated with what is picked up via the long range microphone, becomes a dynamical object in light of this new information. Similarly, each of these dynamical objects now suggests something different – and so creates a new dynamical interpretant which in this case is the imperfect result of a covert microphone recording. The initially iconic sound gradually attains an indexical link to its origin (the microphone) and thereafter becomes symbolically meaningful as a surveillance recording of the couple we have been watching. The abductions we make as the scene develops, concerning the origin or meaning of the echoey music, the strange metallic sound, the ‘sniper’ and the two people talking, have to be modified in light of the new experience or new information. As we are given more information our assumptions and guesses are either supported or have to be modified in light of collateral experience.

Symbolic representation in film music

Music has been referred to as primarily an iconic sign (e.g. Lomuto 2003, Kruse 2007). This does not preclude its ability to be co-opted for its indexical and symbolic potential. The symbolic relationship between signifier and object, leading to the principle that a signifier and its object need no natural connection whatsoever, can be illustrated in the film soundtrack. Once the simple association of sound and image has been made, one can later be used to imply the other. Music is used in this way in Fritz Lang’s *M* (1931) in which Peter Lorre’s character whistles two bars of a piece of music (Grieg’s *Troll Dance*). The music is thereafter used to indicate and symbolise the murderer of the film:

I seem to recollect quite clearly that this harmless little tune became terrifying. It was the symbol of Peter Lorre’s madness and bloodlust. Just a bar or two of music. And do you remember at what points (toward the end) the music was most baleful and threatening? I do. It was when you could hear the noise, but could not see the murderer. (Cavalcanti, 1985, p. 108)

Similarly, the double basses in *Jaws* (Spielberg, 1975) are associated with the shark through the synchronisation of a moving underwater shot in the opening title sequence, and later during the first shark attack. The image takes the shark’s POV and is used to indicate the shark rather than physically showing the shark itself in the first part of the film. Both times we are given the POV shot of the shark we hear the accompanying double basses. By the second double basses/POV shot an *abduction* can be made that one symbolises the other, or when one is heard the other is present and an attack is imminent. By the time the double basses are heard later in the film, the audience can *induce* (correctly) that another shark attack is likely, although

visually nothing more than a calm ocean need be shown. The double basses now represent the shark without having to show either the shark itself or the shark's POV. The visual image is therefore liberated from a simple functional representation. A sense of anticipation is created while showing little in the *mise-en-scène*, and the desired cinematic effect is produced in the most efficient manner possible.

In semiotics generally the definition of the icon often used is one which uses the concepts of similarity or resemblance, such as this one: 'the first is the diagrammatic sign or *icon*, which exhibits a similarity or analogy to the subject of discourse' (Peirce et al., 1982 [1885], 5:243), or this one from the same year:

The third case is where a dual relation between the sign and its object is degenerate and consists in a mere resemblance between them. I call a sign which stands for something merely because it resembles it, an icon. Icons are so completely substituted for their objects as hardly to be distinguished from them. (Peirce, 1998, 1:226)

Here the terms 'similarity' and 'resemblance' are potentially misleading for sound. Many examples of icons rely on this definition of the icon as resemblance. David Osmond-Smith (2012) in particular used Peirce's concept of iconicity for his work on musical semiotics. The idea of musical iconism, whether formal or informal, suggests a resemblance to another part of the same work, or to another work, and rests on this particular definition of the icon (Monelle, 1991). In 1903 Peirce gave an alternative and more generally useful definition for the icon: 'An Icon is a sign which refers to the Object that it denotes merely by virtue of characters of its own and which it possesses, just the same, whether any such Object actually exists or not' (Peirce, 1998, p. 2:291). In doing so he removed the concepts of similarity and resemblance, which is troublesome in defining the icon without reference to another. Musical definitions of iconism are not invalidated by this distinction, but rather it is instead a subtle shift which allows a broader definition about what constitutes iconicity. Raymond Monelle has applied the Peircean trichotomies to music (1991) and thus expanded the focus from the signifier-object relations of icon, index and symbol to include Peirce's signifier-interpretant relations: Rheme, when the constraints determine a qualitative interpretant; Dicent, when the constraints determine an existential interpretant; and Delome or Argument, when the constraints determine a law-like or conventional interpretant. The signifier-interpretant relations are obviously important to the study of all sound signs and to those interested in their production and reception, though it is beyond the scope of this particular article.

The direct narrative role of sound

The soundtrack can be described in terms of the roles the sound assumes, being composed of both overt narrative components, which need to be understood,

and other more covert narrative components, which provide emotional content (Holman, 2010, pp. xi-xii). Some of the sound signs must be clear, where others are necessarily more obscure or ambiguous. The soundtrack also relies on what Holman calls the 'grammar' of film, which is what the audience brings with them in order to make sense of the film. In conjunction with these codes and conventions the film may contain unfamiliar sound signs, which the audience must decipher for themselves using contextual information.

In production each element of sound and their individual properties may be manipulated individually. With dialogue, for example, its characteristics can be changed by pitch changing, filtering, equalisation and so on. For dialogue that replaces an original synchronous recording, the indexical link between any new dialogue recording and the object to which it can be synchronised is created artificially. For meaning to be created, the symbolic element of the dialogue is largely dependent on what comes before and what comes after, since language is sequential and dependent on sequence for meaning. Word order and sentence order are key, as is the context of the dialogue. By moving or removing particular words or pauses the meaning of dialogue can be manipulated.

However, it should also be noted that film sound practitioners are routinely in the business of both recording dialogue and also replacing the synchronous original dialogue with a different recording. Dialogue editors and ADR personnel each use the principles of iconicity and indexicality in recreating or re-recording the sound to create a more meaningful or clearer version of the original or missing sound.³ The iconicity of the sound is the key component that is changed. Its sonic characteristics can be sutured onto the images, provided the indexical link is recreated in such a way as to be both believable and undetectable.

Working in combination, sound sign and image act as their own proof of reality, each corresponding to what the other is also showing. However, ADR and foley allow the manipulation of the character's performance through a new synchronised sound with a seemingly causal (indexical) link to the images. By manipulating the iconic and indexical elements of the sound sign, sound practitioners can suggest a different meaning while presenting a realistic representation. Through this sleight of hand a new version can be created. The synchronisation of the new recording forges a new indexical link, allowing the new reading of the dialogue to provide a different meaning.

The subliminal narrative role of sound

While many of the sounds in the soundtrack have a direct narrative role they may also provide a second service to the narrative by presenting a less overt and direct contribution to the soundtrack which is not intended to be noticed. Subliminal nar-

rative sounds are sounds which enhance the creation of meaning in the mind of the audience. They are the objects which need not be immediately recognised or fully recognised. Whether through the addition of background sound effects or the use of music, the choices that govern the sound producers' use of such sounds rely on an implicit understanding of the symbolic meaning of such sounds and their combination, and their juxtaposition with the image. Peircean semiotic concepts can be used to illuminate the role of the sound practitioner in the process of creating these elements of the soundtrack.

The fact that the audience is seldom aware of any replacement or augmentation of sound allows enormous scope in the treatment of each element of the soundtrack. For example, in representing a door, augmentation could be used to suggest more substantial weight, such as when a prop door or otherwise flimsy door is used; or some other characteristic such as squeaking or rattling is used to indicate a sense of dilapidation. Used in conjunction with the remaining soundscape, the silence that follows the sound of the door closing could also be used to suggest a feeling of finality or of a turning point. The augmentation of sounds allows for figurative use of sound, as with sound metaphors. It also allows the layering of sounds with different iconic and symbolic properties to build more depth or substance to a sound to lend it emotional weight or to create a symbolic link to a desired interpretation of the sound.

The sounds used for augmentation may be taken from combinations of sounds, each of which has a desired characteristic and whose individual meaning contributes to the feel of the new composite sound. The different sounds may each possess characteristics that the audience will ascribe to the object, for example a low-pitched sound to indicate a door's weight or a rattle to indicate its weatheredness. In this way, these iconic properties contribute to the overall effect. The augmentation need not strictly match the reality, but merely be close enough to render the augmentation undetectable.

The emotional potential of the sound in film is not solely determined by the emotional content of the soundtrack, the emotional content of the images or their combination. It is also dependent on the preconceptions and experiences of the audience. Leaving space to allow for meaning to be created allows for engagement by the audience. Peircean semiotics takes into account the role of the interpreter of the sign. In cases where a particular emotion is desired, due to a particular scene or moment, sound practitioners understand that the emotional potential of the sound is only one component that will determine whether or not the result is achieved. The choice of the sound signs that are required to help produce an emotional response may be associated with particular emotions. For example, music allows the prior knowledge of the audience to help create the emotional meaning, with the dynamical object being a particular sound sign (a musical motif played on strings or the

sound of a train whistle), which by association then produces a different meaning, the dynamical interpretant, such as a feeling of longing or loss or romance. Indeed old-fashioned or overused representations can only happen with the prior knowledge of the audience, who have experienced the same or similar signs before, and whose novelty or value has worn off. This also illustrates how the same sign can produce different meanings for different audiences, where the sign itself produces a different interpretant.

The grammatical role of sound

While films may contain explicit language and seemingly unambiguous representations, we can say that all films create a framework in which sound and images are interpreted by the audience to create meaning. The audience brings with them pre-existing understandings or codes which they combine with new sound and image elements to create new meanings. Familiar film techniques such as theme music or voiceover narration will be understood and assimilated into the understanding of how to read the film.

We are able at one and the same time to expect a realistic portrayal of events on screen, while accepting music or narration that is obviously not coming from the world depicted in the film. Filmmakers may use familiar techniques or new or unfamiliar ones, which require the process of making meaning to be modified. In Peircean terms the making of meaning is seen not as a finite process, but as a process that takes place over time. We may have an existing understanding which will be modified in light of contradictory or supplementary information. The tripartite model of the sign – object, sign vehicle and interpretant – allows for the object being referred to in the sign to actually mean something else. A telephone ringing does not only mean that an electrical signal is causing the bell to sound: It also means that someone is trying to make contact.

Peirce's different kinds of reasoning – abduction, induction and deduction – can be applied to the way sound practitioners go about creating sound signs from which meaning will be created. Our prior knowledge of existing codes and conventions of film sound allows us to make sense of what we hear in the soundtrack – theme music, score music, narration, character dialogue, continuous background sounds across picture edits – so that we can deduce or induce some meaning from them. Abduction is the process which takes place in the absence of such information. It is a form of guesswork through which the audience is forced to actively suggest or create meaning for themselves. A first guess at some phenomenon might be slightly off target and so may require some fine tuning. The initial object in the sign is modified to become a dynamical object. As the object changes, so does its interpretant, and so the initial interpretant changes to become a dynamical interpretant.

The relative invisibility of the mechanics of the soundtrack and its manipulation, and the consequent difficulty of detecting manipulations where they exist, give sound practitioners a great deal of scope to shift, clarify, suggest and manipulate meanings in the film soundtrack and are often able to hide their work ‘in plain view’. They may manipulate the sound without leaving any trace of its manipulation, as is the case with much dialogue editing: Simply satisfying the appearance of synchronisation to the image is sufficient for the rendering to be understood as the necessary and self-evident sound of the events on screen. The sounds, and therefore the sound signs, may achieve their purpose without conscious attention. The objective of much of the work of sound practitioners is to create signs, while hiding the artifice. That this outcome is so successfully achieved does not indicate that no work is being done, but only that the sign is hidden.

Summary

We may seek to apply the model to the practice of sound to see if it helps elucidate the actual processes and thinking behind the processes. For those working in film sound, there is an implicit acknowledgement that their decisions, while often technically based, are made in the interests of the film as a whole. It is a two-part process that begins with the question: What should the audience know, think or feel? Once this is determined, the second part of the process is answering the question: How best to go about achieving this end? The decisions that film sound practitioners make, for example, can be viewed through this ‘semiotic lens’ in order to describe the particular choices which underlie particular approaches, manipulations and decisions about such things as:

- Which particular sound signs to use, to augment or to replace to achieve the desired end.
- How they should be manipulated for better effect.
- What such a sound sign might mean for the audience.
- How well they fit into the existing schema or code.
- How quickly the sound signs will be understood.
- What particular sound-image combinations will mean.

Applying the Peircean concepts to the actual practices of sound practitioners can help to describe some of the ways the soundtrack is used as well as illuminate the theoretical basis and rationale that underpin the work of sound producers. The Peircean model has a number of strengths which allow it to be co-opted into the language of film sound. It is a flexible and powerful means of describing the way that sounds are used as signs, taking into account the characteristics of sounds,

their links to objects and their symbolic meanings and associations. It also takes into account that sounds can fulfil multiple simultaneous roles, that sounds may represent multiple things, and that those things may change as a result of this fluidity. It takes account of the role of the audience in the creation of meaning, which is described through the process of abduction as well as deduction and induction, while incorporating pre-existing experience and cultural interpretations that audiences bring with them.

As a means of deciphering the meanings in films, Peircean semiotics is singularly useful since it 'allows us to separate ideas from their representation in order to see how our view of the world, or a film, is constructed' (Turner, 1993, p. 48). The seemingly different elements of the soundtrack may appear at first glance to be difficult to analyse in the same way that a written text or a photographic image can be analysed. Yet, just as a moving image can be analysed using tools adapted from areas of Saussurean semiotics, Peircean semiotic tools can be turned towards the soundtrack in order to uncover some of its uses, its strengths and its abilities to represent in ways that are too difficult, too obvious or too cumbersome to be done through other means. In addition, the analysis can inform the sound design process, rather than simply the reception and analysis by the audience. Producers can then get closer to harnessing the abilities and peculiarities of the visual and aural senses. Using Peircean semiotics as a theoretical tool, the traditional practices, artistic hunches or techniques that are passed down through generations of practitioners can be examined to determine the fundamental theoretical underpinnings for their practical use.

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Notes

- 1 Morris (1938, 6-7) adapted Peirce's tripartite sign and focussed his view of semiotics around semantic, syntactic and pragmatic levels of signs. Semantics relates to the comprehension of the preferred reading of the sign, with the syntactic level being the recognition of the sign and pragmatics being the interpretation of the sign. Morris used the term sign-vehicle in place of the Peircean representamen.
- 2 It is important to note the distinction between the interpreter and the interpretant. The interpreter is the person, where the interpretant is the 'effect produced in the mind' of the interpreter.
- 3 ADR (Automatic Dialogue Recording) is the process of re-recording lines of dialogue in postproduction to replace dialogue recorded during filming. It is a specialist field with ADR recordists and editors, where the ADR supervisor works with the actor who may be required to recreate an original performance or create an entirely different one which will replace the original sync recording (Purcell, 2007, pp. 267-293).