Film Theory and Synchronization

Joanna Bailie

> We never see the same thing when we also hear; we don't hear the same thing when we see as well.
>
> (Chion 1994, xxvii)

I LOOK OUT OF THE WINDOW AND OBSERVE HOW SONIC AND VISUAL information come together in real life. In fact, the first thing to notice is that they do not come together in acts of appreciable synchronization terribly frequently. A noticeable exception is the rustling of some foliage on a balcony opposite, though admittedly, the synchronization is a bit fuzzy and general in nature—I cannot tell exactly which movement of which leaves creates any one grain of noise. A comparable situation arises when I see two older gentlemen speaking in Arabic, or at least I think I do. I am unable to see their lip movements and whether they correspond exactly to what I hear because they are too far away, but my sense of sound localization and that they are dressed

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in a more traditional North African way makes me fairly certain that it is them that I hear. Some expressive hand gestures on the part of one man at what sounds like a heated moment in the conversation confirm the match. A rare point of punchy synchronization occurs when a little girl, running flat-footed down the street and making a resonant slapping sound on the pavement, suddenly drops the baguettes she is carrying and a dull thud is emitted. For the most part, though, sound and image either do not hook up at all, or at the very most, they barely graze each other. The sound of the cars that I see passing at the T-junction 150 meters down the street is almost entirely masked by cars that are nearer by. A man carrying his shopping seems to make almost no sound at all, except for one or two footfalls from his soft-soled shoes. The loud sound of close-by cars is ubiquitous, but at the angle I am sitting I cannot really see them, except for the brief moment when they are reflected in a mirrored door on the other side of the road. In fact, this universe seems to be full of things that I cannot see but I can hear—the slam of a door somewhere in my building, the braking of a car, and the tweeting of some birds—and of things that I can see but cannot hear—strangely silent people and things.

My experience of the real world seems like an avant-garde film in comparison to the carefully constructed arrangements of synchronization to be found in mainstream movies, and it is this gap between messy real life and highly crafted audio-visual renderings of it that interests me as an artist. The theory of synchronization is not only important to composers working with film and other visual media; I believe that an understanding of the alchemy that occurs when two things happen at the same time is valuable to all artists working in time-based media.

For Donnelly, acknowledging film sound's drive toward simplicity is the key to understanding the way that the brain responds to audio-visual input, and he uses aspects of Gestalt psychology to support his ideas. Gestalt psychology proposes a model of human perception where the different senses process their input in parallel, and perceived items are organized into coherent patterns to form whole percepts, which are somehow different to (or more than) the sum of their parts. The mind desires clarity over the complexity that constitutes the real world, and "we attempt to order the stimuli we perceive in as simple and regular form as possible" (Donnelly 2014, 20). Donnelly links this

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tendency of perception as described by Gestalt psychology to the relative simplicity provided by the "limited repertoire of standardized shots in standardized relationships, with highly focused and structured sound" found in mainstream film (23). It is as if cinema of this kind hands us the "good gestalt" on a plate and explains the reason why "representational cinema seems like reality . . . we ask no further questions of it" (23). There is something inherently problematic about the fact that we are so easily duped by cinema, that we do not notice when we stop doing the work we normally do when apprehending the real world. Taken within this context, Marshall McLuhan's designation of film as a "hot medium" quite clearly makes sense in terms of the low level of participation required of its audience (1964, 22).

In a well-known scene from the 1952 Hollywood musical *Singin' in the Rain*, we are reminded of what can happen when soundtrack and image are badly matched and the mind's ability to make good gestalts obstructed. During a screening of *The Duelling Cavalier* (the film within the film), we observe the historical romance being turned unwittingly into a comedy by its use of inappropriately loud sound effects and poorly miked dialogue. Later on during the screening, the sound becomes desynchronized from the image, women's voices are accidentally attached to images of male actors speaking, and the cinematic illusion is broken entirely for the audience, who find the experience hilarious and the film ridiculous. The sequence is an illustration of the idea that synchronization in sound film is only something we notice when it goes wrong. The way that sound and image are carefully knitted together is referred to by Michel Chion as "added value." Its successful functioning is dependent on the audience neither apprehending nor appreciating its importance:

> Added value is what gives the (eminently incorrect) impression that sound is unnecessary, that sound merely duplicates a meaning which in reality it brings about, either all on its own or by discrepancies between it and the image. (Chion 1994, 5)

Kevin Donnelly goes one stage further by referring to the synching of sound and image as an occult practice, not only because its workings are kept secret from the audience but by virtue of the process's technical wizardry, "where

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two radically different media can be fused in perception, generating something that is infinitely more than the sum of its parts" (2014, 3).[1]

As well as being a necessary condition for creating the illusion of cinematic pseudoreality, the knitting together of sound and image in film is a source of a different kind of creative potential that may not be directly apprehended by the viewer, whose attention is taken up by the "main" content of that film. For both Chion and Donnelly, moments of strong audio-visual synchronization are what fix the image to the sound in film, and these moments offer "a form of repose, moments of comfort in a potentially threatening environment that is overwrought with sound and image stimuli" (Donnelly 2014, 8). Around these points of attachment exists asynchrony, and with it a sense of chaos, and unease, that somehow needs to be resolved. Beginning with Sergei Eisenstein, musical metaphors had always abounded when talking about the intricacies of the relationship between sound and image, and it is not surprising to read Donnelly referring to the movement from asynchrony to synchrony as an "audiovisual cadence" (2014, 113).[2]

Moreover, studies have shown that a synchronized bang and flash produce a response in the brain that goes beyond what might be predicted by simply adding together the activity that would be produced separately by these sensory inputs (Cytowic and Eagleman 2009, 106). These findings correspond to the central tenet of Gestalt psychology—that the whole is more than (or different from) the sum of its parts—as do illusions, such as the McGurk effect, whereby footage of different mouth movements causes our perception of the same audio recording to change (Austin 2010). I have certainly tried to resist the McGurk effect and cannot—it always works even after reading the explanations and bracing oneself before watching/hearing it. Donnelly believes that such phenomena show us that "there is no such thing as 'pure music' or a pure visual discourse" and that audio-visual culture itself is "a radical object . . . a mixture of the exploitation of cross-referencing and the synergy of the human senses" (2014, 6). I like the idea that there might be some redemption for audio-visual culture, and that beyond its tendency to manipulate and standardize, it is also capable of providing the space for perceptual magic and potential creativity. Chion has given a name to instances of audio-visual magic: he calls it synchresis, which he defines as "the

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spontaneous and irresistible weld produced between a particular auditory phenomenon and visual phenomenon when they occur at the same time." What I also find appealing is the potentially huge number of audio-visual objects that could be made, some more convincing than others, or funnier, or stranger. According to Chion, even within the "convincing" category, there are more sonic accompaniments to an image that would be believable to an audience than might be expected (1994, 63). In the end, synchresis (much like creativity) is about making connections between things. Granted, the connections are a bit of a fait accompli on the part of the sound editor—by presenting a synchronized sound and image, he or she taps directly into the involuntary magic-making, multisensory mechanisms of the spectator's mind. However, perhaps we as viewers of audio-visual media have a choice, once we understand the nature of the perceptual forces and technical artistry that we are confronted with, to perceive film using a different kind of attention, one that focuses on the nature and variety of objects produced by synchresis and willingly gives in to the irresistible.

As a musician, one takes synchronization for granted—it is built into the system of traditionally notated music, which more often than not also involves a dramaturgy of things either happening or not happening at the same time. Of course, rhythmic unison is not the same as the synching of a sound effect to the image of someone putting a coffee cup on a table—music without a composed visual element has no obligation to try to imitate the cause-and-effect relationships of reality. I am intrigued by the idea that there might also be a music-on-music version of Chion's synchresis—and that having things happen at the same time in music produces something that exceeds the sum of its parts. However, unsurprisingly it is when working with image and audio together that synchronization becomes most pertinent to me as a composer. I am currently working on my third piece for sound and film and have been confronted with the way in which the inclusion of the visual dimension fundamentally alters my creative practice.[3] In particular, I have observed the degree to which synchronization stealthily becomes the dominant parameter of the work and how, just by moving the alignment of audio and image by only a fraction of a second and increasing the level of togetherness, I can create an audio-visual event where none had existed before. The opportunity to conjure up moments of synchresis ex-

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pands the creative palette of the composer enormously, while at the same time presenting him or her with a myriad of potential pitfalls brought about by the effectiveness of such link making. As a composer with a background in contemporary art music, comfortably at home with an array of sonic materials I might rather complacently consider to be "abstract," I have been taken aback by the extent to which these very materials, when synchronized with an image, can turn into a moment of sentimentality, nostalgia, bombast, horror, or even clumsy pretension without me intending it at all. Navigating the hyperconnected landscape of audiovisual relationships and dealing with the meaning that may be produced within it are new skills that I am slowly attempting to acquire.

NOTES

1. Examples of this could be a gesture in a movie and its accompanying sound design, a sound on prerecorded electronics and a note played by a live musician, or even simply a musical rhythmic unison.
2. An interesting account of Eisenstein, film, and musical metaphor can be found in Kahn (1999, 144–56).
3. This piece for string quartet with video and soundtrack is entitled "Radio-Kaleidoscope" and had its first performance on November 17, 2017 at the Bludenzer Tage zeitgemäßer Musik, Austria.

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