

DOI <http://dx.doi.org/10.3846/cpc.2015.234>

SOUND LETS YOU SEE: A PHENOMENOLOGY OF HEARING SCREEN MEDIA

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Received 17 August 2015; accepted 22 September 2015

This phenomenological investigation of ocularcentrism in screen media proceeds deductively. First, the significance of screen media is demonstrated. Next, synaesthetic merging of human senses is shown to begin with the body and to produce ready substitutions of seeing and hearing. The final deduction explores apperception – “seeing with” – a foundation of the phenomenological method. Sounds emanating from beyond the screen edge stimulate an expanded experience – a window to a wider world. This marginal consciousness has surprising power to dictate the audiovisual impact. In summary, off-screen sounds, combined with visual closure of objects partially hidden by the frame edge, stimulate in screen sense the apperception of a co-extensive world beyond the picture frame. Sound lets you see.

Keywords: hearing, media, ocularcentrism, phenomenology, screen, seeing, synaesthesia.

Introduction, or prelude

Imagine you are watching a video of ocean waving crashing on rocks. Your high definition display immerses you into the scene. The sound is full volume. Rocks glisten in the bright sun. Powerful undercurrents make the roiling water heave and churn. Forces erupt in a bone-jarring explosion of white mist with a deafening roar. High-pitched hissing reports the wave’s dissipation. The mist clears to reveal the scene unchanged. The next wave begins to build, and the cycle repeats (see Fig. 1).

Now imagine that you watch the video again, but this time with the sound muted. The same vision of a wave exploding on rocks greets your eyes, but this time its force is blunted. You feel strangely remote from the scene. Could the lack of sound make such a difference?

Now play the video yet again, but this time close your eyes with the sound full volume. The swelling waters and thundering explosion return, followed by the hissing spray. You can imagine the scene clearly. As strange as it may seem, sound does indeed let you see. You know this intuitively, but common sense tells you

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that hearing cannot dictate to seeing. Is this a psychological illusion, or does it demonstrate a principle of human perception?

Screen sense

We live in a post-linguistic, visualist age. Once-omnipotent words now yield to the communicative power of pictures. Harnessed by global telecommunications networks, mass-mediated pictures cross political, economic, and cultural borders. The cultural ascendancy of visualization has potential both for social good (inspire the masses, empower the individual) and social evil (propagandize, control the masses). Both science and philosophy are fascinated with visualization. However, focusing exclusively on seeing oversimplifies how visualization works. Such ocularcentrism overlooks the importance of hearing in mediated experience, especially in audiovisual screen media. This paper asserts that, not only does sound influence visual experience in screen media, but also sound dictates the visual experience, often without the spectator realizing it. Sound lets you see.

A. *The natural attitude toward seeing and hearing*

This central idea, “sound lets you see”, challenges the natural attitude about visualization. Most of us have forgotten the auditory lessons of our birth and early development, which grounded our psyches in the primordial silence. As infants, reaching fingers learned to sort out visual patterns and to connect them with felt objects. We have forgotten the importance of hearing and have fallen in love with seeing. We are told to see is to know. But the visual specter is all surface and no substance. Sound comes from deep within and fills out the hollow specter. Sound is vision made flesh.

B. *Investigating screen sense*

Visualization in screen media, which may be called screen sense, is found neither “in” the spectator-subject, nor “in” the screen-object, but “between” the two subject-object poles in mutual interplay – a dialectical spectator-screen system. The two poles circulate into each other



Fig. 1. *Sound lets you see*

in an organic whole and together “negotiate” the meaning of screen-mediated experience.

In addition to an experiential meaning, the “in-between” region also has an epistemological meaning for screen sense, which lies in an “in-between” region overlooked by the objective sciences, such as physics, sociology, and psychology. This is a philosophical region where the goal is meaning (not facts) and understanding (not explanations). Existential phenomenology has a well-established method for analyzing human experience to bridge the meaning gap left by the objective sciences (Pilotta, Mickunas 1990: 170). Phenomenological description and reduction is our best hope to understand sound’s role in screen sense.

C. Deductive analysis of screen sense

This investigation of hearing in screen media follows a deductive progression of nested frames of reference from general to specific. The analysis is like sound waves rippling out from the center (see Fig. 2). From the largest ring and broadest perspective, the field of all screen-mediated experience is defined and positioned among the objective sciences for phenomenological investigation. Second, the significance of screen technologies is shown in their widespread use and integration into everyday life. Third, the natural melding of hearing and seeing in human experience is context for analyzing how the two senses affect each other. Excluding hearing would leave a “blind spot” in our view of visualization in the media. Fourth, apperception of marginal consciousness in screen sense accounts for sound’s powerful influence on screen experience. The concentric rings of the deductive analysis converge on the core concept of sound itself and the final answer for how sound lets you see.

Significance of screen media

The audiovisual screen calls attention to itself like no other artifact of human history (see Fig. 3). In

little more than a century, screen media (such as film, video, electronic games, computer displays, smartphones, portable media players, etc.) have woven themselves into the fabric of our lives, at times reflecting back to us our mundane existence and at other times propelling us into magical surrealities. If it is true that modern life is a “visual society”, then it is equally true that we live in a “screen society”, given that most of what we know about the wider world is delivered to us via audiovisual screens.

A. Global proliferation of screen media

Screen media bind us together in the digital global village. India and Nigeria lead the world in feature film production. India leads in

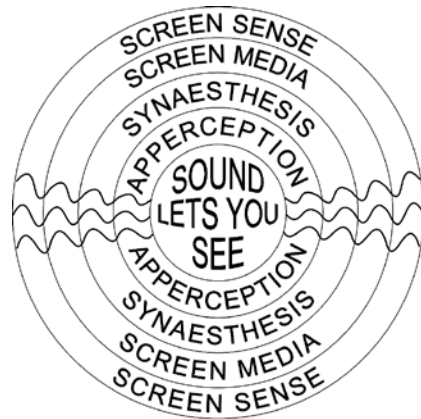


Fig. 2. Deductive analysis of hearing in screen sense



Fig. 3. The audiovisual screen

cinema admissions, while Icelanders purchase the most movie tickets per person, even though the United States has the most movie theaters by far. The Middle East region is second only to North Americans in time spent watching television, followed by Africa. The Asia-Pacific region leads in using smartphones to watch movies and television, a growing trend around the globe. Worldwide sales of video games totaled \$246.49 Billion USD in 2013, with online gaming increasing in popularity and making games accessible to all. The online video service YouTube currently claims in excess of a billion users (more than one-eighth of the world's population). YouTube operates in 75 countries and is translated into 61 languages. The number of hours spent watching YouTube goes up 50 percent per year. About 60 percent of views are from outside the country where it was posted. Half of all YouTube views are on smartphones and digital tablets, and YouTube's advertising revenue from mobile viewing more than doubles each year (United Nations Educational, Scientific and Cultural Organization 2015; iDate DigiWorld 2013; VidStatsX.com 2009–2015).

From morning to night, our screen devices are in our bags or pockets everywhere we go – at home, work, on the road, in stores and markets, at transportation terminals, on planes-buses-trains-ships, on billboards, in museums, at stadiums, in theaters-arenas-concert halls, in churches and synagogues, in schools and universities, in courts-police-fire stations, in hospitals and nursing centers, in lobbies-parks-playgrounds, plus anywhere else with cellular signal reception or wireless Internet service. We are equally likely to watch screens in Singapore as in São Paulo, in Mumbai as in Milwaukee, in Vladivostok as in Vilnius. In some places, we are more likely to find screen access via cellular telephone service than to encounter sanitation or safe drinking water¹.

Screen viewing thrusts upon spectators a new array of psychic requirements for processing virtual imagery. Our species has grown to rely increasingly on screen-borne entertainment and information, gradually replacing the older print media (handbills, books, newspapers, and magazines). Generations pass their sophisticated viewing skills and screen-centric cultural practices to their young. Children learn to interface with screen displays at a very young age, with seemingly far greater ease and comfort than did their parents.

Humans adapted to this new way of visualizing the world extremely rapidly since the invention of motion pictures in 1889. By comparison, the previous way of seeing – perspectival visualization – took more than two thousand years to develop, even though it was spurred along by optics and the printing press. Our screen use is evolving so rapidly that theory and research have not kept pace. How did we humans learn to understand screen images? What role did sound have in that development? The history of these technologies indicates that video and audio developed separately.

B. Praxis underestimates sound

The invention of sound recording (1877) predated cinema by twelve years, but the two technologies were not married until fifty years later. By that date, three decades of film storytelling during the so-called silent film era established a strong visual aesthetic². The film medium was considered to be essentially visual. Consequently, film and media theory have regarded the soundtrack of audiovisual media as mere accompaniment or embellishment to

sed on a global population of about 7 billion (UNICEF 2015; Central Intelligence Agency 2004–2014).

¹ Despite recent sanitation improvements in countries such as India and China, as of 2010, about 2.5 billion people or 35.6% of the world's population still lacked clean drinking water, whereas only 1.63 billion or 23.3% were without cell phones, ba-

² The term "silent film" refers to a filmstrip with no soundtrack. Experientially, there has never been a "silent" film showing, because viewers always hear some sort of sound, even if only the clatter of the film projector. Some early films had music scores played by musicians in the theaters.

the picture track. This condescension underestimates sound's importance in the film-going experience.

The notion that sound is second to picture is institutionalized. The industry still treats sound engineers and editors as less important than directors and cinematographers responsible for a film's look. In a typical movie production budget, sound commands a tiny fraction of the picture allowance. Training manuals and aesthetics texts give cursory treatment to film sound (Zettl 2014: 312–334). Television around the world copied the movies' disregard of sound. Most televised content relies heavily on the voice track, which does require broad reproduction of frequencies. Consequently, TV sound was weak and tinny. Digital technologies in the 1990s allowed sound to catch up technically with picture. Full frequency response and multi-channel mixing provide the sound designer a palette of subtle and complex aural environments. Hearing a digital cinema or television program now can be as rich and rewarding as watching it.

Sensory deprivation can teach us about how seeing and hearing contribute to consciousness. The loss of sight and the loss of hearing have very different consequences in mundane life. Visual blindness is debilitating, whereas deafness is only a nuisance. This distinction reveals that seeing is dominated by spatial understanding, especially in perceiving and guiding movement. In contrast, hearing is dominated by temporal understanding, one sound after another. To observers, blindness usually is more obvious than deafness. A blind person might wear dark glasses and have a walking stick or guide dog, whereas a deaf person's hearing aid escapes notice. Blindness invites sympathy, whereas deafness is greeted with impatience at having to speak louder and repeat.

The natural attitude's systemic devaluing of sound and pro-visual bias has been called ocularcentrism (Howes 1991). Vision dominates societies that have commercial film and television. One might speculate that ocularcentrism is a prerequisite for the emergence of

entertainment industries, as visualism instills into the public a lust for commercial trade in pictures³. The pro-visual bias disembodies knowledge by requiring visual evidence to function independently from the personal perspectives that originated it – knowledge for all. A false dichotomy codes seeing as rational, cerebral, and meaningful, while hearing is irrational, sensory, and meaningless (Schmidt 2011: 36).

C. Mutations of consciousness

The prevailing vision-centric worldview began with the ancient Greeks and led to what Jean Gebser calls the mental mutation of consciousness (Gebser 1986: 73–97). Mental consciousness meant thinking for one's self via visual perspectivity, which privileged an individual's point-of-view toward the world. Literally, to be a person was to see. The mental mutation shunned the grounded whisperings of the clan in the preceding spaceless, timeless chanting of the magic mutation, and the oral stories of the mythic mutation. However, magic and myth were not replaced by the mental mutation. They were merely forgotten in the presence of visualism's superficial spectacles. Mental consciousness spread to the rest of Europe, culminating in René Descartes' dualistic mind-body philosophy in the 17th century.

In a prediction made more than a half-century ago, Gebser (1986: 267–274) said that a mutation of consciousness in favor of the virtual is occurring. The sounds of magic and myth are re-erupting through the screen media to achieve a harmonious awareness that surpasses space and time. This new, integrating consciousness is known as the integral (see Table 1).

³ This is not to claim that sound recordings of voice and music are not commercially popular in their own right – only that still and motion pictures have far greater commercial value.

Table 1. *Jean Gebser's mutations of consciousness*

Structure	Dimensioning	Perspectivity	Emphasis
Archaic	Zero-dimensional	None	Prespatial Pretemporal
Magic	One-dimensional	Pre-perspectival	Spaceless Timeless
Mythical	Two-dimensional	Unperspectival	Spaceless natural Temporality
Mental	Three-dimensional	Perspectival	Spatial Abstractly Temporal
Integral	Four-dimensional	Aperspectival	Space-free Time-free

The natural attitude artificially separates the human senses. The old mental consciousness disregarded the co-presence of seeing and hearing (synaesthesia). Sensations merge into one another and enrich each other, nuancing the stream of consciousness. Any investigation of visual phenomena is incomplete without considering the natural co-presence of hearing through synaesthesia⁴.

Synaesthesia of screen sense

Now that sound has entered the picture of visibility in 21st century screen media, we need to understand hearing's synaesthetic co-presence with seeing in the body. Humans see and hear simultaneously. This is true even for persons with sensory impairments. A blind person "sees" something, an experience analogous to vision, though the sensation might be different from a sighted person's. Likewise, hearing impairments only alter perception of sound vibrations and do not stop them altogether. Thus, seeing and hearing always are partners in sensation.

We can begin to understand the seeing-hearing partnership through phenomenological description and reduction of our reflections on our sensory experience. First, the body is our only access to all sensations of the world, including sights and sounds of screen media. The senses are embodiment differently and complement one other. Second, because the senses are embodied differently, they help each other. Touching by extension becomes seeing, seeing makes hearing perspectival, hearing enriches felt textures, and so forth. Third, hearing comingles with seeing to make screen spectating multi-dimensional and much more expansive than seeing would provide alone. The seeing-hearing partnership is mutually beneficial.

A. Embodied senses

Maurice Merleau-Ponty's groundbreaking *Phenomenology of Perception* (2002) elucidates the corporeal nature of experience. The body is our access to the world and the origin of all perception, thoughts, memories, feelings, plans, and desires, including specific mental states directed toward screen media. Embodiment has at least four implications for screen sense.

First, sense data, be they visual or aural, can never be separated from their body situation. The body imprints sensations with a style all its own. Indeed, a bodiless sensation would have no meaning at all and is not comprehensible. Likewise, a body without sensation is incomprehensible. Experientially speaking, our bodies are our responses to the world, nothing more and nothing less.

Second, we do not experience sights or sounds of the world in the manner of data processing machines, as psychology or neuroscience would have us believe. The sensations must add up to something for us to take notice. That something is an essential possibility that our stream of consciousness implies... the house that we enter, the person that we talk with, the video game that we play – all essential outcomes of the fragmentary streams of sense data we

⁴ All six senses familiar to European culture are present in screen sense, including smelling, tasting, and balancing. However, this investigation is primarily about the three most vital for spectating – seeing, hearing, and touching.

collect. The objects that our senses behold cannot be taken in completely. Even our memories or imagination will always hold back hidden facets, precisely because horizons limit our bodies' access to experience. The hidden sides of things are inner horizons. The far limits of experiential fields are outer horizons. Curiously, we are marginally conscious of what lies beyond these horizons (Gurwitsch 1985: 35). As we shall see, the margin has great implications for screen sense.

Third, in their yearning for the essential possibilities of life, our senses do not respect the body organ categorization we impose on them (eyes are for seeing, ears for hearing, and so forth). The many simultaneous sensations are taken in whole, "of a piece". Our senses desire to be gratified. Jean-Paul Sartre expressed our sensory captivation as "a surreptitious appropriation of the possessor by the possessed" (1956: 609). Possessed by our sensations, we follow wherever our body leads us to a multitude of interpretive possibilities. The red color is hot to the touch. The whistling sound cuts like a knife. The crispy crunch tastes like an apple. Our bodies assure that every sensation is related to qualities associated with other senses through co-presence⁵.

And fourth, because of the body's network of meanings, things of the world are not neutral objects to be surveilled by our senses. Things trigger our associations, moods, likes, dislikes, and particular ways of behaving. The virtual nature of screen experience represents a special case of embodied sensation that will require careful phenomenological description and analysis to decipher. If our bodies are what we sense of the world, what sort of bodies has screen sense?

B. Merging of the senses

The merging of the human senses (synaesthesia) is the mechanism for how sound lets you see. Merging is possible because our senses are united in embodiment, so linkages among sensations invariably occur. The merging occurs because the senses never turn "off", even when we close our eyes or muffle our ears. The senses always work and always work together.

Vision is well known to be a developmental extension of the sense of touch (see Fig. 4). An infant's visual field gradually becomes populated with objects as the maturing mind correlates felt textures and contours with their visual apparitions. An infant's reaching and crawling extends the range of investigation. Eventually, the pattern of touching and looking takes hold of the visual field, so that the infant no longer needs tactile confirmation in order to behold objects with the eyes. The visual field is fully differentiated with objects in spatial relationships well before the child is ready to walk.

Merleau-Ponty (2002: 258–160) noted that adults who are able to see for the first time because of a surgical procedure are amazed by their new visual world. At first they do not know what objects they see. To distinguish a circle from a triangle, for example, they must run their eyes round the outline of the figure, as they might their hands. While adapting to seeing, they tend to grab things with their hands



Fig. 4. An infant touches to learn how to see

⁵ Embodiment is philosophy's greatest lesson to teach psychology about the merging of the senses. Psychology regards the merging of senses as malfunctioning perception or "crossed wires". The term for this malfunctioning is a neurological disorder known as synaesthesia.

to confirm their visual impressions. Eventually, the visual space takes hold because seeing is so much quicker and far-reaching than touching. Seeing begins to make touching seem like an inadequate approximation. This is how touching communicates with seeing.

What does seeing communicate to touch, and *vice versa*? The two sensations have different stories to tell one another, because they are structured differently in space-time. Touching is localized in the body and its instruments, so it is confined to comparing surfaces that are spatially close. Because tactile sensations are temporal performance of the moving body, they are difficult to hold in memory for comparison with touches at other times. However, touches at all times give equal richness (Ströker 1987: 163). Seeing has a different temporal structure. Seeing can behold near and far objects simultaneously, affixing their relative positions. However, the view of the far object is not as good as the close one (unless technologically mediated). This is vision's inherent perspectival distortion. In this way, seeing and touching complement each other. Seeing gives the ability to compare close and far simultaneously, while touching's uniform richness overcomes seeing's perspectival distortion.

Through dialog with seeing and touching, hearing can share in the knowledge of surface textures, giving both seeing and touching a special appreciation of “ringing” hardness and “raspy” roughness. An exploratory knock on stone, concrete, or metal solidifies both the image and feel of a thing. A scraping sound lets the eyes and fingers know coarseness or fineness intimately, viscerally. Squeaking fingers say that a surface is as hard and smooth as it looks and feels. In return for sharing its sonorous gift, hearing receives sight's spatial understanding of the world and touch's pre-cognitive awareness that the environment reflects sounds back to the listener in the form of echoes. Sounds also register with the listener in the form of vibrations felt by the body.

The natural attitude learns to associate certain sounds with particular visions, and by

extension, with particular felt surfaces – the percussive honking and hissing of the city, the gurgling of rushing water, the crunching of leaves, and chirps of forest birds. The absence of these familiar sounds is disturbing. The city is eerily quiet in the early morning. Rushing water without gurgling is unimaginable. (During a camping trip, I was startled to realize that the forest I inhabited was totally silent – no chirps or rustling wind – no sound of any kind. Where were the birds?)

What hearing receives in return for its blessings is the eye's spatial perspectivity. The ear normally hears only close or far, not how far. Sound is essentially vibration (movement) that compels the ear to register the sensation⁶. The flux of sound makes upsurging time dramatically present, as numerous philosophers have noted (Ihde 1976: 56). Sound is spatial but not perspectival (having a point-of-view that establishes distance). If you were blindfolded and listened to your surroundings, you could identify the direction of a sound source and whether it was close to you; but you would need to remove the blindfold to know its distance and perhaps to confirm what made the sound.

Hearing and touching are compatible senses because they share vibration's temporal succession of movements. Thus, seeing, hearing, and touching constitute a close, mutually beneficial network of impressions, so that screen sense may have a synaesthetic tactility, even though the sense of touch is not mediated by the picture screen and sound speakers of audiovisual technology. Tactility is virtual in screen sense.

C. Substitutions of seeing and hearing

The co-mingling of seeing and hearing in synaesthetic experience leads to an interesting

⁶ The body's aural range of receptivity is roughly 20 to 20,000 vibrations per second, with variation among hearers. As far as the body is concerned, slower or faster sounds do not exist, though your dog might complain otherwise.

phenomenon of substitution of the senses. For example, a spectator does not need to see the source of an off-screen bark to have an image of the dog, or see a glistening trumpet to register its fanfare. One sensory channel easily can suggest the other to produce a multi-sensory, embodied experience. Such one-channel multi-sensations occur naturally. They are especially prevalent in screen media praxis, owing to manipulations of picture and sound in the preparation of media programs. Typically, the digital movie apparatus, such as a smartphone or video camera, simultaneously captures both video and audio of an event. The media editor then can manipulate the video track or audio track at will, at times muting the sound or hiding/substituting the picture. This ability to rearrange the original picture/sound pairing gives creative flexibility and opens the spectator to new experiences unattainable except through such mediation. It is a striking fact that the typical spectator of modern media is not disoriented by media manipulations of picture-sound, even those manipulations incongruent with natural experience. Are such spectating skills learned, or is there an experiential explanation for the audience's perceptual dexterity?

Hearing and seeing constitute different lived spaces, which determine how they function together in screen sense. Hearing without seeing is a feeling, not a thought. Blind hearing knows nothing about distance and very little about direction. Soundless seeing keeps an alienating distance from objects in the visual field – a body style of peering omnisciently without participating. A seer who cannot hear takes in contours of things without a sense of their substantiality, their heft. When hearing is restored, the contours are filled in and seem concrete, visceral. Elisabeth Ströker's phenomenological reduction of these two phases of lived space can help us to understand how sound and picture work together in screen sense.

Hearing without seeing in screen media is commonplace and enriches the visual experience. Often, audio content that was not

captured with the picture is added to the edited program, such as talking, music, or environmental sounds. Such sounds expand the world of the screen beyond the edges of the picture frame. As spectators, we do not need to know “where” the sounds are to have an expanded screen experience. The vibrations create in us a spatial attunement, which is not a location but a corporeal style being moved or affected. Attuned space is similar to the way we feel when at “home” (Ströker 1987: 19–21).

Seeing does not facilitate attuned space; quite the contrary, it shatters attunement by affixing the subject's perspective on specific objects. Why does sound bring attunement, but vision does not? Visual qualities such as light, color, and shape are attached phenomenally to the objects that carry them – a bright thing, a colored thing, a rounded thing, whereas sound detaches from its source. We might say “a loud thing”, intending the descriptor “loud” to point to the source, such as this loudspeaker or that. The quality of loudness actually belongs to the sound emanating from the source. A sound is not a property of a thing but rather an event. Within aural experience, sound draws near and recedes. The more a sound event changes over time, the more it detaches from its source and lives on its own, so to speak. Brief noises are perceived as emanating from this or that source, but even they detach from their sources as our memories of them dissolve over time, while their corresponding visual images persist.

In summary, detached sounds bring screen sense into attuned space, a style of being unbounded by the visual frame. Sound detachment reaches its completion in music and spoken language, which absorb the listener in the evolving aural dimension. Screen sound's attuned space is free from any particular orientation and envelops the attuned listener in expressive movement (sound vibrations). The listening body sways with the vibrating expressivity. The diagram of attuned space (Fig. 5a) shows the receptive listener seated (immobile) in the center of the experience.

Fixating on visual objects disrupts attunement and moves the subject into the space of action (Ströker 1987: 48–51), the place of planning and doing. The body is poised to spring forward. Hearing is of little use in this space, so seeing takes over the field of action spread out before the spectator. The visual field is frontal, so backspace is shallow and weak, amounting to only one tentative backward step. The subject's whole impetus is the visual object of attention in front of the subject – the “ready-to-hand” instruments of action (Heidegger 2010: 68–69). Sounds are of little interest and only help to make action keen. Moved from attunement to action, the spectator no longer is at the center of the experience. The body and eyes are oriented toward the visual focus of attention, ready to be redirected as action dictates. Consequently, the diagram of the space of action (Fig. 5b) shows corporeity near the edge of the experience and oriented toward the motivating visual object in the center of the space.

Substitutions of seeing and hearing in screen sense reveal contrasting spatial experiences. The audiovisual media present a fluctuating balance of attuned space (aural) and the space of action (visual). At certain moments of receding action, attunement envelops the subject. At other times, action's perspectival focus overwhelms attunement. During periods of transition, attunement and action can blend harmoniously. From this analysis of lived space in screen sense, it appears initially that seeing dominates the visual space within the media frame, while hearing dominates the aural space outside the frame (see Fig. 6). As we shall see in the next section, both seeing and hearing contribute to the total experience inside and outside the media frame through apperception of a unity lying beyond the horizons.

Apperception in screen sense

Edmund Husserl had a great deal to say about the role of apperception in lived experience. He

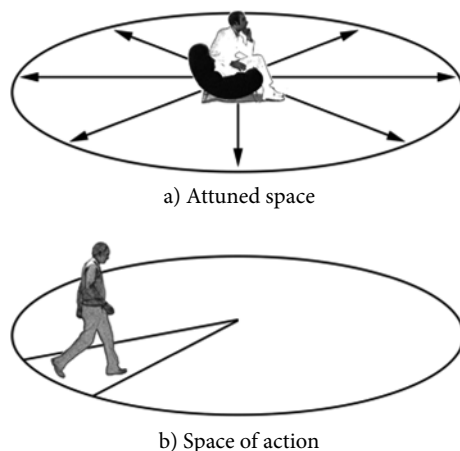


Fig. 5. *The spectator in two modes of lived space*

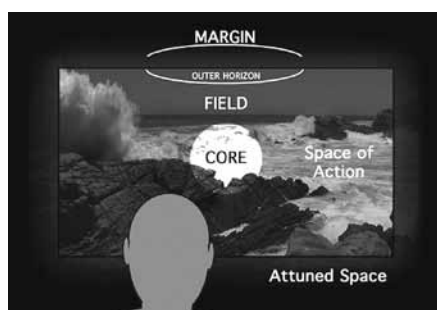


Fig. 6. *Attuned space and space of action in screen sense*

often used the expressions “seeing with...” and “presence-in-absence” to represent how the core of experience can contain within itself impressions of the field that surrounds it. According to Husserl, pre-reflective consciousness uses apperception to tie together a stream of sense impressions (perspectival adumbrations) in order to have a perceived thing (1962: sec. 41). In everyday language, we might refer to such over-determined sensations as “contextual”. To see the side of a coin as “heads” is a vision embedded with the “tails” side, both sides comprising the unity of the coin. To see a color “red” has within it the other hues of the unified color spectrum, such as “green” or “blue”. To hear any

aural frequency or tone has within it the experience of all other contrasting notes. To hear any bold sound has behind it the silence that was punctured. Screen sense is apperception of a whole screen event. Describing how the spectator apperceives the screen experience will help us to understand how sound lets you see⁷.

A. Screen sense horizons

Screen perception can be conceived visually within the familiar core-field-horizon structure of experience. On the fringe of the outer horizon is the margin, a sector beyond perception that nevertheless impinges upon experience as presence-in-absence (see Fig. 6). This phenomenon is called marginal consciousness (Gurwitsch 1985: xliii–xlv).

The outer visual horizon of screen sense is the picture frame. The frame typically has a horizontal format because the natural attitude is weighed down by earth's gravity, compressing the vertical dimension. Even more than gravitational pull, the media screen is horizontally oriented because of instrumental human affairs circulating on the horizontal plane. Everyday events require little looking or moving up or down. Even when climbing stairs or riding a lift, we face forward.

The fact that nearly all media screens are rectangles is merely a technological convenience. Non-rectangular screen media formats are possible by natural masking within the picture frame, but this is rare. In general, the

horizontal orientation of media screens is meant to emulate the shape of the natural attitude's visual field – a horizontal ellipse with fuzzy edges. Smart-phones recently have introduced video recording in vertical formats. It remains to be seen whether vertical format shooting will spread to commercial programming (see Fig. 7).

The hidden facets of objects within the picture frame constitute inner horizons of screen sense. Inner horizons give screen sense depth in several ways. Front-behind juxtaposition of objects powerfully cues screen depth. Another powerful depth cue is a production technique known as selective focus, which emulates the natural attitude's shifting of attention from one object to another. Yet another depth-enhancing strategy that simulates inner horizon-like limitations on the visual field is an editing technique known as point-of-view, in which the constructed stream of images synthesizes the visual experience of a screen character, to the exclusion of other images.

Phenomenology says all human senses are structured as core-field-horizon. This structure is specifically perspectival and fits the temporal nature of aural attunement only by analogy. This bias toward vision is typical in philosophy. Most of the phenomenological literature uses seeing as the prototypical human sense and disregards hearing and the other senses. For example, the movement's founder Husserl wrote that “really” seeing was the ultimate source of justification for all rational statements (1962: sec. 19). However, Merleau-Ponty, Ströker, and Don Ihde each have written specifically about hearing (see Merleau-Ponty 2002; Ströker 1987; Ihde 1976).

⁷ Merleau-Ponty rejected Husserl's “apperception” because he felt it cluttered the philosophical situation with a transcendental ego doing the apperceiving. Merleau-Ponty believed that adding the transcendental ego was unnecessary, because perception already is situated in the world and has the world as its context. Merleau-Ponty's synonym for a non-egoistic apperception is “being-in-the-world” (Merleau-Ponty 2002: 249). Whichever term is preferred – “apperception” or “being-in-the-world” – the significance for screen sense is that seeing and hearing are greater than a mere sum of their sensations.



Fig. 7. Media screen formats compared to the human visual field

Though “inner horizon” and “outer horizon” are spatial concepts, they also can name the limits of sound’s duration.

The analogous “outer horizon” of sound in screen sense is the silence. It limits the aural field in the same way that birth and death limit life itself. The everyday meaning of the word silence as a lack or emptiness does not apply. The silence is the primordial origin of all aural sensations in screen media, including environmental noises, speaking, and music. The silence as origin is the moment right before and right after hearing. It is a pregnant expressivity waiting to emerge – anonymous, universal, and incomplete. All felt, heard, and seen expressive movement is born there, including body gesture, utterance, music, and duration of images (Merleau-Ponty 2002: 250). The silence is both the temporal birth and death of expressivity.

There are two aural analogs of screen sense for “inner horizon”. One constitutes a narrowing of the core of experience, so that the center of the spectator’s listening at a given moment shifts from one sound to another. In this way, sounds can emerge from and recede into the aural background (field). This ability to pay attention to this or that sound has been called selective perception (Ihde 1976: 82). The second analogous “inner horizon” of screen sound is cacophony, an utter fullness of noise, speaking, and/or music from which distinct “core” sounds can emerge, and to which they can return to anonymity. In summary, the aural horizons of screen sense are the silence beyond the field of experience (outer horizon), competing core sounds (inner horizon), and cacophonous field sounds (inner horizon).

There is an important functional difference between seeing and hearing for apperception. Hearing is more susceptible to contextual influence of the margin than seeing because we do not have as much control over sound’s penetration. Ears do not have lids to be closed, and even when you turn away from a sound, it pervades your experience (Ihde 1976: 80–81).

With clarification of aural and visual horizons, our phenomenological reduction now can

take into account how spectator consciousness incorporates the margin of screen sense into the core of experience.

B. Marginal consciousness of the screen

The slogan, “the screen is weird”, succinctly expresses the fact that the outer visual horizon of the picture frame causes screen-mediated space-time to be radically different from un-mediated space-time in the natural attitude. The picture frame horizon affects both visual and auditory aspects of screen experience.

By eclipsing the normal visual field on both left and right, the picture frame forces the spectator to apperceive a co-extensive spatial world spreading out in the horizontal dimension (see Fig. 8), just as blinders remind a horse of what it cannot see. A typical media program shows objects appearing to extend beyond the edges of the picture frame. These partially obscured objects form a Gestalt with their off-screen complements. This visual closure is especially prevalent in the horizontal dimension (Zettl 2014: 122). It is a surprising, counterintuitive effect of the media screen that cropping its sides makes the mediated world seems broader. Screen space is wider.

Another consequence of screen apperception is that time is compressed. Screen movements must be sped up to account for apperception’s expansion of screen space. Faster motion



Fig. 8. *Apperception of a co-extensive world in screen sense*

equals compression of screen time. Time compression is commonplace in screen-mediated storytelling, which can depict an entire lifetime in one screen sitting. Screen time is faster.

In summary, apperception helps the spectator to see the picture frame as a window to a broad virtual world. The screen is weird thanks to the margin; screen space is wider and screen time is faster. With the margin's contributions fully appreciated, screen sense is ripe for understanding how sound lets you see in marginal consciousness.

C. Marginal consciousness of screen sense

The margin is a universal structure of perception in the natural attitude, including screen sense. If the field of perception surrounds the central core (theme or focus) of experience, and the horizons are perceptual limits of the field, then the margin contains the aspects of experience beyond perceptual limits. The margin is not perceived but nevertheless is experienced indirectly (Gurwitsch 1985: xliii–xlv). The spectator apperceives screen sights and sounds as having off-screen complements and is condemned to do so by the nature of experience itself. Such off-screen elements could be possible sights, sounds, feelings, ideas, plans, intentions, memories, or the negation of these, in limitless variation. Such possibilities always will represent richer and more varied experiences than the central perception to which they refer. They could move from the margin into full consciousness at any moment.

Off-screen sounds (seeming to emanate from invisible sources) are perhaps the most powerful mechanism of marginal consciousness for spectators to apperceive (to see with) the world outside the picture frame... a house whose barking dog is inside, a cityscape whose siren announces a fire truck in hot pursuit, a pond whose croaking proves the presence of bullfrogs amid the lilies, a game whose giggle betrays a child playing hide-and-seek. Musical

attunement likewise dwells beyond the visual frame and detaches from its source to envelop the listener. Music creates an aesthetic distance alienating the spectator from the screen, while expanding the experience. In summary, off-screen sounds let you see (more than what the screen shows).

A frequently used editorial technique called the “audio-split” transition facilitates apperception during scene changes. In the audio-split transition, sound associated with an upcoming event is introduced before it is shown. The mismatch of the new sound with the current picture stimulates the audience to anticipate the new scene. Editors employ the audio-split transition to “smooth” the flow of scenes, that is, to stimulate spectators to apperceive the current scene simultaneously with the upcoming, marginal event. The audiovisual experience is expanded by effective manipulation of marginal consciousness.

Conversely, on-screen images can suggest marginal sounds, not heard but implied... lips moving without speech, bowing on strings without violin music, an automobile accident without screeching tires and crunching fenders. Such visual cuing of sound, of course, relies on a spectator's learned associations of visual things with the sounds they make. A house vision is not going to cause an apperception of a dog barking, unless you know who lives inside. Pictures let you hear (sometimes).

In summary, off-screen sounds, combined with visual closure of objects partially hidden by the frame edge, stimulate in screen sense the apperception of a co-extensive world beyond the picture frame. Off-screen sounds that refer to their sources, such as environmental sounds or talking, greatly expand a spectator's lived virtual space. Music also will cause an expansion, not of the virtual space, but of the spectator's psychical distance from the scene. Counterintuitively, the closure effect for visual objects partially obscured by the frame edge is greater if the format of the screen is cropped horizontally.

Conclusions, or postlude

Imagine that you watch the same video of ocean waves crashing on rocks. The synaesthetic combination of sound and picture bring you the power of the crashing waves. You also apperceive the immensity of natural forces arrayed beyond your portal to this immersive world. You are thankful that sound lets you see, as you have never seen before... This replay with full sound and motion confirms the phenomenological reduction of screen sense and shows it to be a synaesthetic merging of hearing and listening that apperceives a co-extensive world exceeding mediated horizons.

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GARSAS, LEIDŽIANTIS MATYTI: GIRDIMŲJŲ EKRANO MEDIJŲ FENOMENOLOGIJA

Russell J. COOK

Šis fenomenologinis okularcentrizmo ekrano medijose tyrinėjimas apima tam tikrus aspektus. Pirma, jis perteikia ekrano medijų svarbą, paskui rodo sinestezinį žmogaus jauslių susiliejimą pirmiausia su kūnu, kad susidarytų regos ir klausos pakaitalai. Galiausiai nagrinėjama apercepcija – „matymas drauge“ kaip fenomenologinio metodo pagrindas. Garsai, sklindantys anapus ekrano, stimuliuoja išplėstinį patyrimą – langą į platesnį pasaulį. Ši ribinė sąmonė turi stebėtiną audiovizualinio poveikio galią. Apibendrinant teigtina, kad garsai anapus ekrano, suderinti su vizualiai išstobulintais objektais, iš dalies slypintys rėmo pakraštyje, stimuliuoja koekstensyvaus pasaulio anapus vaizdo ribų apercepciją jaučiant ekraną. Garsas, leidžiantis matyti.

Reikšminiai žodžiai: klausa, medijos, okularcentrizmas, fenomenologija, ekranas, matymas, sinestezija.