Sound Studies Meets Deaf Studies

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[au]Michele Friedner and Stefan Helmreich

[bio] Michele Friedner is a postdoctoral fellow in Anthropology at MIT. She is writing an ethnography about how deaf young adults in Bangalore create spaces for “deaf development.”

mfriedne@mit.edu

Stefan Helmreich is Professor of Anthropology at MIT and author of *Alien Ocean: Anthropological Voyages in Microbial Seas* (California, 2009). He is writing now on underwater sound and music.

sgh2@mit.edu

[a]ABSTRACT

[abs]Sound studies and Deaf studies may seem at first impression to operate in worlds apart. We argue in this article, however, that similar renderings of hearing, deafness, and seeing as ideal types – and as often essentialized sensory modes – make it possible to read differences between Sound studies and Deaf studies as sites of possible articulation. We direct attention to four zones of productive overlap, attending to how sound is inferred in deaf and Deaf practice, how reimagining sound in the register of low-frequency vibration can upend deaf-hearing dichotomies, how “deaf futurists” champion cyborg sound, and how signing and other non-spoken communicative practices might undo phonocentric models of speech. Sound studies and Deaf studies emerge as fields with much to offer one another epistemologically, theoretically, and practically.

[key]Keywords: Sound studies, Deaf studies, vibration, sign language, cochlear implants, transduction, articulation

> [ep]Once upon a time there was a deaf coal miner. Like everyone at the mine, he had to be at work promptly at 5:00 AM. But he could not wake up on time. A kind neighbor agreed to help, tying to the miner’s foot a rope long enough to hang out the window. Every morning at 4:30, the neighbor came and tugged at the rope. The miner told a deaf friend about this arrangement, and his friend suggested another method: he could attach

an old-fashioned wind-up clock to a heavy iron. When the alarm went off, the iron would fall and the vibration would wake him up. He switched to this method and subsequently the shrill sound of the alarm clock became the sound everyone else in the village used to wake up. Instead of the deaf man depending on others, the villagers came to depend on the deaf man.

[rr]Retelling of common Deaf joke, from Ben Bahan's lecture "Deaf Ways: Extending Sensory Reach," held at MIT on April 29, 2009

[tx]How might scholars working in Sound studies, listening to the cultural meaning of the audible realm, join with scholars and activists in Deaf studies to wake up to new articulations between their common and uncommon senses of the world? At first perception, Sound studies and Deaf studies would seem to operate in worlds apart. Sound studies privileges attention to listening, hearing, and soundscapes in cultural experience, seeking to combat the primacy of vision as an organizing frame for social analysis (e.g. Schafer 1994[1977]: 3–12; Bull and Back 2003; Sterne 2003; Erlmann 2010; Samuels et al. 2010). In contrast, foundational work in Deaf studies argues that audist and phonocentric tendencies suffuse everyday interactions as well as cultural theory, which tune to hearing and voicing as key modes of discriminating human sociality (Lane 1992; Ladd 2003; Bauman 2004, 2008). Deaf studies has urged in response to sonocentrism a fresh consideration of the visual, particularly as a space of communicative and interactive possibility.[1]

[txt]Both Sound studies and Deaf studies, then, depend on something of a divide between hearing and seeing. So, while music historian Bruce Johnson makes a critical point when he writes that, "an auditory rather than a predominantly visual approach to the past produces a different cultural history" (2005: 259), such a phrasing risks posing the visual and auditory as at odds with one another. Deaf studies, meanwhile, often repeats and reifies the claim that Deaf people are "first, last, and all the time the people of the eye" (as George Veditz, President of the National Association of the Deaf, phrased it in 1910; Veditz 1912: 30).[2]

In both Sound and Deaf studies, a clean division is also often assumed between hearing and deafness. In Sound studies, for example, deafness becomes a ready (and audist) figure for critical inattention. Ari Kelman's "Rethinking the Soundscape: A Critical Genealogy of a Key Term in Sound Studies," suggests that "attending to sound can amplify critical aspects of social and cultural life that otherwise fall on deaf ears" (2010: 230). Hearing, deafness, and seeing operate as ideal types, which downplays continuums between and multiplicities of sensory capabilities (Keating and Hadder 2010: 119). Such framings obscure points of contact between Sound and Deaf studies. We wish here to explore zones of productive articulation.

It is old news that technologies of sound reproduction and relay have been bound up with hearing and hard-of-hearing people's attempts to ameliorate deafness, commonly understood as a condition to be "overcome." From Thomas Edison to Alexander Graham Bell, phonographs and telephones emerged in part from attempts to render the deaf hearing or to train deaf speech into alignment with the norms of the hearing world (Bragg 2001; Sterne 2003; Schwartz 2011). Mara Mills (2010) proposes the phrase "assistive pretext" to examine how the deaf have been at once the target of "improving" technologies as well as guinea pigs for technological investigations made primarily for the benefit of hearing persons. In the 1980s, the US-based Deaf Pride movement staked claims forcefully against such assistive pretexts, articulating a Deaf politics modeled on the civil rights, identity, and liberation movements of the 1960s and 1970s (Shapiro 1994).[3] Many followed sociolinguistics scholar and activist James Woodward, who in 1972 suggested writing "Deaf" with a capital D in order to mark Deaf people as a cultural group. Many scholars began to write of a distinctive Deaf culture, one forged within communities held together by sign language.[4] The move from "deaf" to "Deaf" marked a contestation of the naturalization of deafness (often as disability) and an affirmation of Deaf identity (sometimes "deafnicity"). In what follows, we slide between "deaf" and "Deaf" (not always consistently), flagging how deaf/Deaf, like sex/gender, makes use of, but

unsteadies divisions between nature and culture – though if "gender" in sex/gender underscored the malleability of gender, "Deaf" in deaf/Deaf asserts the coherence of Deafness as culture. As we will see, though, "Deaf" may also enable a diversity of Deafnesses, akin to what has happened with "queer" (cf. McRuer and Berube 2006; Friedner 2010).[5]

We consider four major practices that might prompt scholars in Sound studies and Deaf studies into new conversation. These practices ask how sound is inferred in deaf and Deaf practice, how reimagining sound in the register of low-frequency vibration can upend deaf-hearing dichotomies, how "deaf futurists" champion cyborg sound, and how signing, non-speech-based communicative practices, and listening might unwind phonocentric models of speech and move us away from "speech communities" (Gumperz 1962). Proceeding through an inventory of these trends, we ask how to move beyond ear and eye, waking up to rethinking the subjects of Sound and Deaf studies.[6]

[a]Inferred Sound/Informed Vision

[tx]Consider deaf people's inferences of sound worlds experienced by the hearing. There is a tradition of Deaf jokes involving use of sound to achieve Deaf ends (see the joke with which this article opens). An oft-told joke involves a Deaf couple on a honeymoon, staying at a motel one night. The husband goes out to the car to retrieve something, and then realizes he does not remember his room number. He thinks for a moment and then leans on the horn, letting out a steady honk. Eventually, every room in the hotel has a light on except for one and this, of course, is the room in which his new wife waits. Pleased with himself, the husband returns upstairs to the sole dark room. In such jokes, Deaf people use the tools of the hearing world, often against it, to achieve desired results – in this case, Deaf intimacy. Frank Bechter (2009) calls such jokes and stories "penetration narratives" as they refer to the ways Deaf people sometimes "penetrate" the boundaries of hearing worlds.

[txt]Far from being peripheral, sound also penetrates deaf worlds. Carol Padden and Tom Humphries (1988) write about the ways Deaf children learn about the

significance of sound to the hearing. They tell of Deaf people being told to regulate and censor their own voices and of learning about the shame associated with some bodily noises. For Padden and Humphries, a “sound barrier” exists between Deaf and hearing people. Similarly, Haualand (2008) writes about the difference between hearing and Deaf worlds by arguing that communities of hearing people “hear together” and “hear same,” or have the same ability to hear. For such Deaf studies scholars, the way around sound is attending to Deaf peoples’ visual orientations (see Bahan 2005). In such an approach, Deaf people are, as Veditz put it, “first, last, and all the time the people of the eye.” One can find this articulation acquiring continued momentum in some online worlds, with the emergence of blogs such as “Deaf World as Eye See it” and “Deaf Eye for the Hearing Guy” (also see Lane et al. 2011). For much of Deaf studies, Deaf culture has a visual future – as evidenced by the National Science Foundation-funded Visual Language and Visual Learning Center at Gallaudet University, a major center for deaf undergraduate and graduate education where research is conducted on Deaf peoples’ visual learning practices. Such programs as the Michigan-based deaf music camp (deafmusiccamp.com) encourage deaf teens to experiment with music “through deaf eyes” which include “seeing” (in addition to “feeling”) music. Sound studies scholars might undo audist notions of “music” by examining such practices, expanding what it means to have an “acoustemology” (a sonic way of knowing and being in the world) that expands beyond a limited definition of the auditory (consult Feld and Brenneis 2004).

[a]Infrasound/Vibration

[tx]Emerging alongside strategies of inferring sound or valorizing the visual is a practice of tuning in to the zone of low-frequency vibration. This is a zone in the frequency spectrum where hearing and deaf scholars have recently been meeting in order to unsettle the ear-centrism of Sound studies and the visually centered epistemology of much Deaf studies.

[txt]One data point for thinking about this attention to “infrasound” (vibration lower than 20 Hz) is the work of artist and sculptor Wendy Jacob who in April 2009

organized a conference at MIT entitled “Waves and Signs,” a workshop on low-frequency vibration co-organized by faculty and students from Gallaudet University along with MIT’s Center for Advanced Visual Studies. The idea was to refuse a simple hearing/not-hearing binary by pitching the discussion, quite materially, down to a frequency register in which all parties could hear-by-feeling sound (cf. Connor 2004). For this event, Jacob built a raised 12 x 12 foot platform through which sound and infrasound was transduced:

> [ex]Acting as a silent speaker, a raised floor will be activated to insert low-frequency vibrations into the space of architecture. The floor will be used alternatively as a platform, instrument, and stage for an event in three parts. In the first the floor will be used as a platform for dialog [in speech and sign] between artists, designers, scientists, and students. In the second, the floor will be used as an instrument in a workshop on resonant vibrations. In the third, the floor will become a stage for performances and a silent dance party. This project is part of an investigation of the politics of experience. (http://cavs.mit.edu/artists.html?id=264,734)

[tx]A variety of material was played through the floor – elephant stomps, a low-frequency recording of a bike ride a Gallaudet student took that morning, and dubstep music (Figure 1). The workshop might be understood as an intervention in what Steve Goodman (a.k.a. dubstep artist Kode9), in *Sonic Warfare: Sound, Affect, and the Ecology of Fear*, calls the “politics of frequency” (2010). Goodman’s interest in very low sounds – sounds that edge from hearing into tactility – has him developing concepts such as “infrasound” or “bass materialism,” an intriguing place for new encounters of Sound studies and Deaf studies since it moves away from purely audiological conceptions of sound, torques notions of “shared experience,” and queries connections between mediation and experience. As Shelley Trower points out, “vibration appears to cross distances between things, between people, between self and environment, between the senses and society, promising (or threatening) to shrink or break down such distances” (2008: 133). Here vibration produces a social and

experiential space for hearing and deaf participants alike. Lest this way of phrasing matters appears to romanticize vibration as some proto- or infra-sensory force of unity across bodies and difference, however, we note, along with Trower, that vibration is itself in need of cultural and historical situating. As Trower writes, ever since nineteenth-century theories of electromagnetism, vibration has been "imagined to operate before being translated into sense-data (sound, light, heat), let alone language or image or sign" (2008: 135). The "Waves and Signs" conference made it clear that vibration is rather always already itself a kind of mediation. It may produce shared experience, but it does not therefore produce identical experience; even within "one" individual, sense ratios and relations may shift and mix synesthetically. Phenomenologies of vibration are not singular.[7]

[fig 1 near here]

[txt]Deaf presenters at the "Waves and Signs" workshop, in discussing affinities for music, resisted dichotomies of sound and silence. In "Re-Defining Music Through a Deaf Lens," Summer Crider recounted attending rock concerts while holding balloons to capture the vibration of music. Kindred Deaf artistic productions include the work of Rathskellar (www.rathskellar.com/), a Deaf performance group that employs sounds in the form of heavy bass and drumbeats at such intense volumes that hearing audience members are offered earplugs for comfort. The UK-based "deaf rave movement" (www.deafrave.com/) delivers similar experiences. These examples define "sound" as a vibration of a certain frequency in a material medium rather than centering vibrations in a hearing ear; sound therefore plays a role in these experiences – and this troubles the pronouncement that deaf people are "all the time people of the eye."[8]

[a]Cyborg Sound/Utopian and Dystopian Visions

[tx]Technologically mediated – transduced – vibration might recall to us a device at the heart of debates about deaf relations to sound: the cochlear implant. Deaf scholars and activists have in the last decades participated in an impassioned debate about this technology. A cochlear implant consists of a tiny receiver

placed under the skin behind the ear. The receiver has a probe with electrodes that is implanted into the cochlea, a spiral-shaped portion of the inner ear filled with liquid that transmits vibration to cilia ("hair-cells") attached to the interior of this coiling structure. A person with a cochlear implant wears a hearing-aid-like device that features a microphone, a processor, and a transducer. The processor manipulates what the microphone captures and sends a signal to the transducer, usually worn just behind the ear. The transducer changes the signal from electrical to a magnetic, a signal that can be received through the skin by the implanted receiver. The receiver then stimulates the probe in the cochlea, causing "hearing" (cf. Helmreich 2007 on the making of self "presence" through transductive processes that, when they operate seamlessly, become invisible, inaudible, intactile supports for imagined "unmediated" experience). Where some envision cochlear implants bringing deaf people into the hearing world by providing sound through electromagnetic interface, others worry the technology may contribute to the attenuation of signing and to the valorizing of speech, and therefore, more calamitously, to the death of Deaf culture. The most heated debates around this technology center on whether it is acceptable for parents to choose implant surgery for deaf children (Blume 2010).

[fig 2 near here]

[txt]Some users of cochlear implants, however, have lately been staking out another position, one Mara Mills (2011) calls "deaf futurism." Mills suggests that the standard terms of the debate – are implants devices that support audist and oralist supremacy or are they heralds of liberation for the deaf into the hearing world? – have recently been joined by a position that poses implants as cyborgian elements that are more than just devices that make deaf people "hear." Here, cochlear implants are technologies that betoken new human–machine interfaces, with the deaf at the vanguard of a networked post-humanism. If cochlear implants, for example, can be used to port into virtual worlds, then people with implants are at the forefront of sonic cyborgian embodiment, with hearing people left behind in an unaugmented state. In "deaf

futurist" readings of implant technology, neuro-enhancement is ultimately the goal. Michael Chorost, a well-known public face of cochlear implantation, in his autobiographical 2005 book *Rebuilt* celebrates what he experiences as the emancipatory capacities of his implant. His 2011 book, *World Wide Mind: The Coming Integration of Humanity, Machines, and the Internet* extrapolates into a fully web-worked cybernetic sensory future in which virtual and actual sensory worlds intertwine.

It should be stressed that the discourse of post-humanism has only been adopted by a few. Many implant recipients have ambivalent relationships with what this technology means for their identities and abilities, especially since, through implantation, they become biomedical subjects and consequently are more likely to identify as being disabled (see also Guillemin et al. 2005). More, the question remains as to what kind of relation a cochlear-implanted cyborg might have to the sociality of sign language and other Deaf social forms. Cochlear implantation may betoken the rupture of some key kinds of Deaf sociality.

[a]Articulation

[tx]Studies of sign language would seem to offer little intersection with Sound studies, since here questions of visuality are paramount and sound has no clear relevance. We would like to experiment, however, with the notion that spoken and signed language both concern *articulation*. For phoneticians who make their living tracking the sounds of speech, articulatory phonetics details the physiological motion of parts of the vocal tract in the production of speech. Sign language also operates through a process of articulation, though here not of bodily managements of the flow of air via the larynx, glottis, tongue, and teeth, but rather through the positioning of fingers, hands, and facial expressions in space and time. But by articulation, we also wish to move beyond the bodily mechanics of speech and sign, attending to the ways language and sociality are entangled with one other in fashioning phenomenological and cultural worlds (Hall 1980). Sound studies' sometimes phonocentric approach and Deaf studies'

often oculocentric epistemology can miss shared interests in articulations of communicative practices with lived experience.[9]

[txt]But Sound and Deaf studies have also both been interested in transcending spoken language as a starting point in creating social worlds, an interest evidenced in some recent ethnography and cultural history. Ethnographers of music such as Steven Feld (2010) examine the making of *relational ontologies* – practices that call anthropologists, their interlocutors, and many others into co-presence through sound and vibration not always spoken (and not always only human; Feld's recent work on recordings of toads in Ghana adds a multispecies dimension to his dialogical anthropology of sound). Bauman (1983) discusses the ways that Quaker meetings, constituted through silent worship, create a shared sense of purpose and community. Friedner (2011) examines how deaf young adults in India engage in "sameness work" through which differences such as class, caste, and religious belief are backgrounded in order to create a cohesive deaf sociality. Members of this deaf sociality learn deaf practices and norms from each other, in addition to learning sign language.

Sign language, then, is not only a language; deaf social practices and aspirations are articulated within its transmission. Studies of signing and sign-language-using communities analyze Deaf poetics and narrative (Bechter 2009), the formation of Deaf social and political organizations (Nakamura 2005), integrated Deaf and hearing sign language communities (Kisch 2008), myths surrounding "utopic" integrated sign language communities in which both hearing and Deaf people are purported to sign (Kusters 2009), or ideas of "deaf development," the emergence of Deaf administered structures and institutions that are premised upon valuing sign language, helping other deaf people, and sharing and working collectively (Friedner 2011).[10] Learning sign language means becoming a specific kind of deaf person who is always oriented towards other deaf people and deaf development (Bechter 2008; Friedner 2008, 2011). Such articulations of language, culture, and sociality foster new forms of affiliation as well as new senses of self and belonging.[11]

[a]Unsound, Unseen, and Beyond

[tx]In Deaf studies, a focus on sound through the visual may erase deaf experiences of sound. Scholars in Sound studies, meanwhile, may miss deaf and Deaf experiences of sound through similar oversights. Attending to different degrees, kinds, genres, and articulations of hearing and perceiving sound, however, can open up new ways of "hearing with" and "being with," complicating Deaf studies' focus on "deaf-deaf same," or deaf similitude. Such challenges can build on those in motion from studies on Deaf-Blind communication. Deaf-Blind studies challenge the hegemony of the visual and auditory by centering attention on the possibilities and politics of tactile sign language. A new bumper sticker reading "Pro Tactile," found on cars in Seattle, Washington, home of America's largest Deaf-Blind community, and exhortations, also found mostly in Seattle, such as "Tactile love" remind us of the centrality of something other than sound or vision in many peoples' social worlds (Smith 1994; Edwards 2011).

Goodman (2010) proposes the notion of "unsound" to refer, among other things, to "that which is not yet audible," to "sonic virtuality," and to "the nexus of imperceptible vibration" (ibid.: 191). He means primarily to attend to the infrasonic and the ultrasonic as zones at "the fuzzy periphery of auditory perception, where sound is inaudible but still produces neuro effects or physiological resonances" (ibid.: 198). In so doing, he stays near the realm of "sound," canonically conceived. But he also opens up space to think about the not-yet-articulated. Sound studies and Deaf studies have points of articulation – points of common concern about sensory socialites in their shared desire to carve out analytical and experiential spaces for contemplating what is unheard and unseen. In such spaces, and in focusing on how diversities of sensory socialities emerge, we can join with George Veditz (1912: 30) who said of deaf people what we might say of anyone seeking to think anew about and from embodied circumstances: "They are facing not a theory but a condition." "Condition," as we read Veditz, is *experience* – and experience rarely fits into ideal types such as "seeing," "hearing," "signing," or "vibrating." What is called for

are more ethnographies of the places where the objects and subjects of Sound and Deaf studies meet, domains in which, as with the joke that opened this article, we can stir from our everyday senses of social relations.

[a]Acknowledgments

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[a]**Notes**

[nt]1. By “Sound studies,” we mean the interdisciplinary field of inquiry that has lately emerged at the intersection of cultural history, anthropology of music/speech/sound, science and technology studies, and media theory – inquiry dedicated to examining how humans give social significance to sound, whether experienced in small-scale, face-to-face communities of practice or in distributed, highly mediated networks linked together by technologies of sound reproduction and relay (e.g. Bull and Back 2003; Erlmann 2004). By Deaf studies, we mean the academic and activist field inaugurated with the publishing of James Woodward’s 1972 article, “Implications for Sociolinguistic Research among the Deaf,” in the first issue of *Sign Language Studies*. Woodward wrote about the importance of research on linguistic, social, and cultural aspects of Deaf communities. Deaf studies has largely been a Western-centered discipline, closely joined with the teaching of sign language, especially at such institutions as Gallaudet University in the USA and Bristol University in the UK.

2. Also consult Fjord (1999) for an anthropological report on how the Deaf community locates itself within the larger social world by defining itself in opposition to the Hearing world and to hearing; focusing on vision and visuality becomes a trope of resistance.

3. For discussion of American race politics in Deaf struggles, see Kristi Merriweather’s history of the National Black Deaf Advocates: http://www.nbda.org/history_NBDA.html.

4. For scholarship on international d/Deaf politics, consult Nakamura (2005) and Monaghan et al. (2003). Note that deaf politics outside the USA often do not follow identity or cultural models; indeed, the question of what constitutes a deaf "politics" or "public" in non-Western contexts is one with which social scientists and Deaf studies scholars struggle. In response to the hegemony of the concepts of Deaf culture and identity within Western deaf worlds, Ladd (2003) has put forth the concept of "deafhood" as a more inclusive category. Our section on "articulation," below, attempts to foreground work that analyzes different ways of relating to deaf and hearing others as well as to family, community, and nation.
5. Compare Rodas (2009) on varieties of "blindnesses" and the ways that "blindness is always a mediated experience, informed, even defined, by language and culture" (ibid.: 129).
6. This article represents an exploratory effort, based upon our reading of key works within Sound studies and Deaf studies. As anthropologists, we are aware that there are no speaking, signing, listening, or viewing subjects in this article (with the exception of our section on articulations, which explores anthropological works). We hope our theoretical ruminations are useful to future ethnography.
7. Our argument here departs from such universalizing psychoanalytic approaches as those advocated by Didier Anzieu and Edith Lecourt, who develop the notion of the "sonorous envelope" to describe motherly sounds surrounding a baby, sounds they hold to be essential for ego development (see Lecourt 1990).
8. And there are of course d/Deaf people who utilize hearing aids, cochlear implants, and/or residual hearing who have the experience of "hearing" music (e.g. Chorost 2005a).
9. Speech and sign share another feature: they are both ephemeral. And they are contemporaneous; we do not wish here to align our approach with speculations that speech "evolved" from gesture.
10. Also consult Senghas and Monaghan (2002) for an overview of ethnographic work on sign language and Deaf cultural practices.

11. In these ethnographic examples, neither deaf subjects nor researchers take language for granted.

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Figure 1

Participants at MIT's "Waves and Signs" workshop, reclining on Wendy Jacob's transducing floor in order to experience low-frequency vibrations (http://cavs.mit.edu/artists.html?id=264,734).

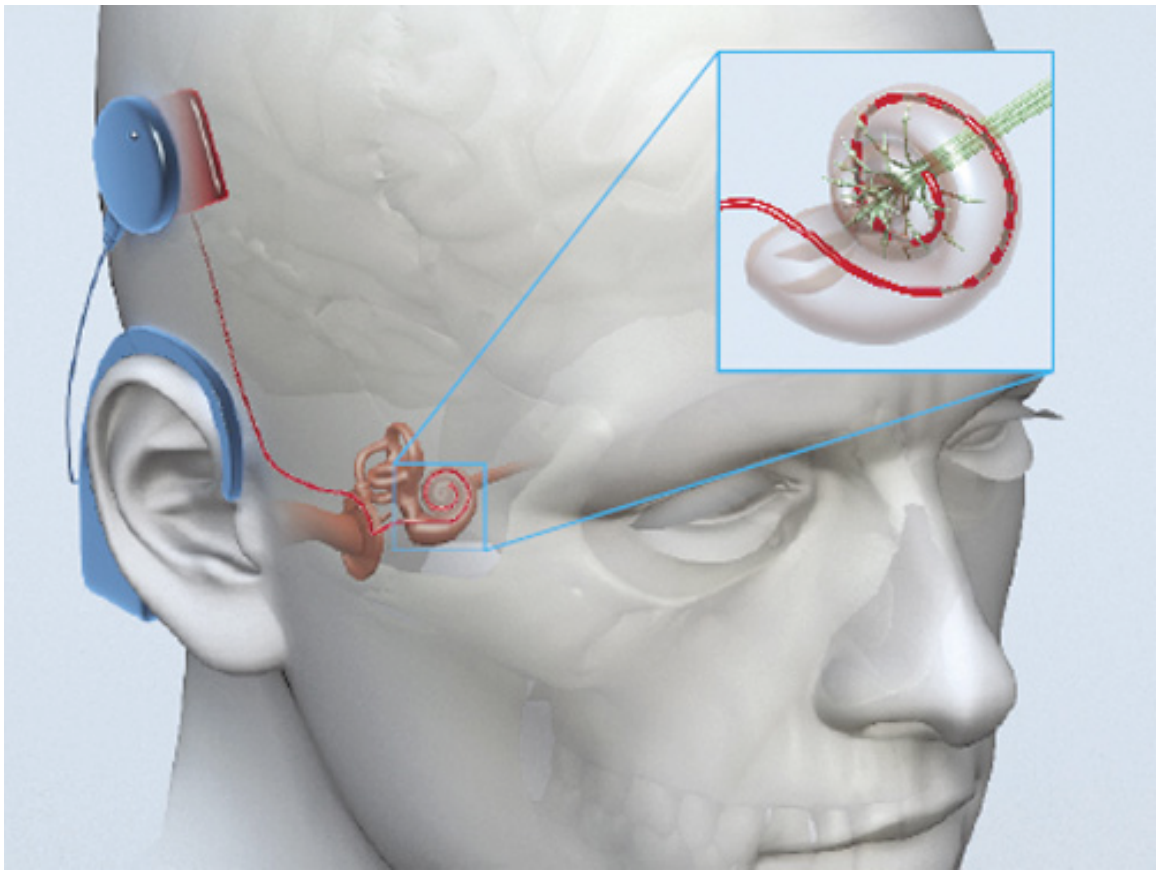

Figure 2

Bryan Christie's visualization of a cochlear implant. From Chorost (2005b).