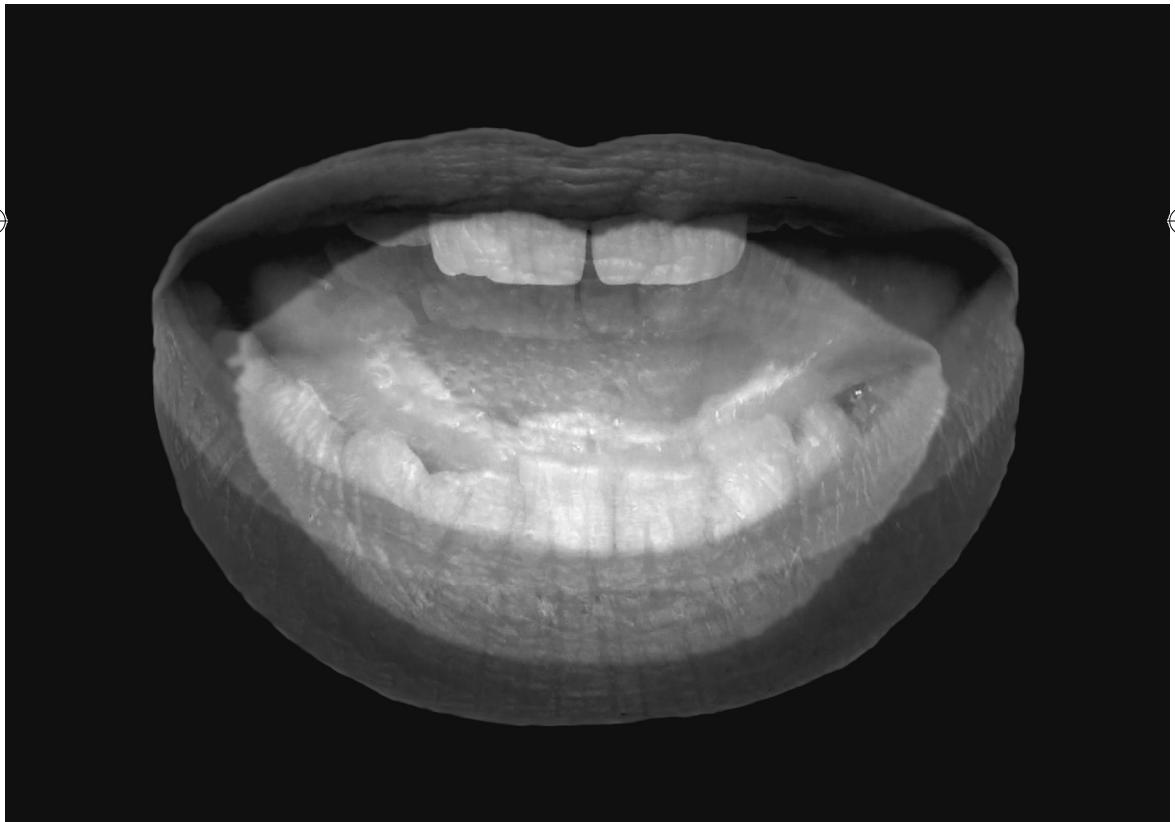


Jo Burzynska

MISHEARINGS

Exploring the multisensory
intersections of sound



What do you hear? Often something quite different from the actual sounds that enter the ear, filtered as they are through the multisensory environment in which they are produced. When hearing is crossed with our other senses the listener's perceptions can be intensified, confused or even completely altered, provoking sensorial, emotional and intellectual responses beyond that offered by a sound alone.

The way sound interacts with other sensory stimuli is something I investigated in my *Mishearings* exhibition at The Auricle Sonic Arts Gallery in June 2015. In this collection of multisensory installations, mishearings arise when our auditory focus is directed to the intersections with other senses, in the process revealing the complex way our senses combine when navigating our sonic environments.

"The ear subtly and actively connives to make what it takes to be sense out of what it hears, by lifting signals clear from noise, or recoding noise as signal," suggested literary and cultural theorist, Steven Connor in *Earslips: Of Mishearings and Mondegreens*¹. "In other words, listening is full of replay, relay and feedback, the ear monitoring or listening in on, and out for, its own operations. Perhaps, in this sense, all hearing is mishearing, and a kind of deterrence of sound."

Over the clamour of everyday life, the brain regularly manages to construct meaning through noise, making fairly accurate judgements from snatches of conversation heard above the din. However, replace this noise with silence and it struggles to make sense of what it's hearing. This phenomenon was employed in the work "Poetry as I need it" in *Mishearings*, an interrogation of sound, silence, form and time using John Cage's "Lecture on Nothing". A reading of the text is cut with blasts of white noise, through which much meaning can still surprisingly be discerned. However, when passages are interspersed with silence, disorientation ensues.

"Hearing perception is interception, the making out of sounds – not least by making them out as distinct and separate 'sounds' – as what they will have been before they have a chance to resound as what they might be," Connor states. "Without such systematic mishearing, there can be nothing to be heard, but only

1 Steven Connor, "Earslips: Of Mishearings and Mondegreens," Paper presented at Listening In, Feeding Back, Columbia University, February 14, 2009

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the raw and amorphous racketings of noise.”².

Individuals will always arrive at their own and often diverse interpretations of raw sound. However, mix the cues and the individual can be faced with multiple and potentially conflicting meanings, a concept at the heart of “Hearing Lips and Seeing Voices”. This audiovisual poem created for the exhibition in collaboration with the British psychologist, Paul Hibbard uses the McGurk Effect³, an illusion that occurs when the auditory component of a word is paired with the visual component of another. The visual information overpowers what we actually hear, resulting in the viewer hearing a completely new word, which in this work is used to transform a poem that sounds innocent when simply listened to into something more sinister when the lips are watched.

Audio poem	Visual poem	McGurk poem
With a grin I veer, neat and pale.	With a grip I gear, peat and nail.	With a grim idea (meat and tail),
I ran and lay my bait in the bay.	I rap and lay my gate in the gay	I ram and lay my date in the day.

A mishearing such as this highlights the overpowering and often powerful influence the senses have over one another. These crossmodal correspondences have been the subject of a growing body of research in recent years, which includes my personal investigations⁴, as well as psychological studies.

Through hosting workshops, creating works that combine sound and taste and curating wine lists for The Auricle’s wine bar around the exhibitions in its gallery, I have observed how sound can radically change a person’s perception of the flavours and textures of what they are tasting. For example, in the case of wine, I have discovered that harsher timbres harden acidity, reduce aromatics and emphasise tannins, while lower frequencies enhance the perception of body and

2 Ibid

3 Harry McGurk and John MacDonald, “Hearing lips and seeing voices,” *Nature*. (1976)

4 Jo Burzynska, “Wine and Music: the synergies between sound and taste,” *Food design on the edge: Proceedings of the International Food Design Conference and Studio*, Ed. by Richard Mitchell (Otago Polytechnic, Dunedin)

high frequencies have synergies with acidity. Synchronise the characters of the wine with the sound/music in the environment and the experience of both is enhanced.

While my own studies to date have been informal, more rigorous scientific experiments have been conducted by experimental psychologists. A review of current research in the area by Knöferle and Spence (2012) concluded that there "...is now a solid body of experimental research to show that neurologically normal individuals map tastes (and other aspects of flavor/oral-somatosensation) and both musical and nonmusical sounds in a nonrandom manner".⁵

Sensory synergies

I have used findings from this research as tools in the creation of the conceptual as well as the sensorial elements of the multisensory works of *Mishearings*, such as "Bittersweet", an installation for eight speakers and chocolate.

This draws directly on the research paper, "A Bittersweet Symphony"⁶, which provided "...the first convincing empirical demonstration that the crossmodal congruency of a background soundtrack can be used to modify the taste (and presumably also flavour) of a foodstuff". In this, a toffee was tasted with two different soundtracks, each employing previous findings of a crossmodal correspondence between sweet tastes and high-pitched sounds and bitter tastes and low-pitched ones. Participants rated the toffee as being significantly sweeter when sucked on with the higher pitched soundtrack designed to complement sweet flavours and more bitter when consumed with the lower 'bitter' track.

In "Bittersweet", these correspondences are used to intensify and add ambiguity to a soundscape created from field recordings made in the Italian region of Irpinia, a rural district in which food and wine production embrace both tradition and technological innovation. The work cycles between the low drones of modern equipment in the region's wineries and the high pitched tinkling of the traditional

- 5 Klemens Knöferle and Charles Spence, "Crossmodal Correspondences Between Sounds and Tastes," *Psychonomic Bulletin & Review* 19 no. 6 (2012), 992-1006
- 6 Anne-Sylvie Crisinel and others, "A Bittersweet Symphony: Systematically Modulating the Taste of Food by Changing the Sonic Properties of the Soundtrack Playing in the Background," *Food Quality and Preference* 24, no. 1 (2012), 201-204

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bells worn by dairy cows that roam its mountains. The fluctuations between pitches change the perception of the chocolate's taste from bitter to sweet, shifting perspectives that reinforce difference while suggesting the pleasures of both approaches.

Despite experience involving complex interplay of the senses, this is not something reflected in the majority of Western art. The senses are separated out, with the visual given preference. Sound is typically considered to be of secondary importance and only starting to resonate in the gallery, while taste and smell are often scorned, despite their ability to connect with vivid and emotionally charged memories.

Recent developments in psychology and neuroscience are now proving what philosopher, Merleau-Ponty proposed seventy years ago in his *Phenomenology of Perception*: that the senses are not separate but inextricably intertwined. He suggested, "...my body is not a sum of juxtaposed organs, but a synergic system in which all the functions are taken up and tied together in the general action of being in the world, and insofar as it is the congealed figure of existence".⁷

Mishearings endeavours to utilise these synergies, combining sensory stimuli to produce strong and often subconscious sensory associations and heighten experiences. It builds on the earlier investigations of my site specific wine and sound work, *Oenesthesia*, whose three parts - made from recordings of the vineyards and wineries around the Southern Italian wine village of Tufo - were designed to enhance the positive attributes of three different local wines when it was presented at the FARM2012 Festival in Tufo itself.

The work, "Carbonic Oscillation" in *Mishearings* is an evolution of "Oenesthesia", an immersive chamber that embodies effervescence and in which sparkling wine forms the focus of a fusion of all the senses. An effervescent environment is created through a sound work created from recordings of fizzing wine reinforced by a bubbling light projection and the taste and tactile elements of the sparkling wine consumed within it. A work such as this aims to blur the boundaries between the senses and the art and its audience, breaking down the limiting Cartesian dualism

⁷ Maurice Merleau-Ponty, *Phenomenology of Perception*, translated by Donald A. Landes, (Abingdon: Routledge), 330

between body and mind.

“Our body has difficulty in knowing where one sense, place or part begins and where another sense, a second place or nearby patch ends,” declared Serres (2008) in his multisensory treatise, *The Five Senses*⁸. “The striped, mingled body is made up of the proximities between gradations. It moves from one sense to another, imperceptibly.”

In *Mishearings*, hearing mingles with smell, taste, sight and touch, intensifying perceptions and creating new meanings. What is heard is rarely identical to what is actually being played into the space, but is the product of complex connections that have the potential to create something more profound than that perceived by one sense on its own.

8 Michel Serres, *Five Senses: A Philosophy of Mingled Bodies*, (London and New York: Continuum, 2008), 228-229