Singing in the Education of Children

Fleurette Sweeney
University of British Columbia, Canada

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In this paper my intent is to argue that it is to the advantage of children-as-learners that they sing songs together every day in the language of instruction. My focus will be threefold: first, to establish that a song is a "thing," an acoustic, prosodic event which retains a physical coherence and is perceived in its wholeness; second, to examine some challenges which face one who would transform a song into an "object of thought," particularly as these challenges arise from a song's temporality and its relationship to the singer; and third, to address some implications of these considerations for the child-as-learner. I make a distinction between "singing songs together" and "studying music" because these processes, though complementary, engage children differently. The one (singing songs together) can become a context for the other (studying music) but it is my belief that singing songs together (in and of itself) has value for children-as-learners whether or not it leads to the formal study of music. Throughout the entire paper I will suggest implications of the ideas that are developed as they pertain to children-as-learners.

A Song as a "Thing"

What is a song? I take the position that a song is a coherent wholeness, a thing, an acoustic, prosodic event. Each of these attributes (coherence, acoustic, prosodic, event) can be examined separately, but it is the interconnection among these attributes as this occurs in certain songs which creates an experience of sound that, in my opinion, is of particular significance to the child-as-learner.

We have little difficulty in identifying a chair as a "thing." Just last month I asked a class of university students who are preparing to become high school teachers, "Is a chair a thing?" Their response was a unanimous and unhesitating, "Yes." When I asked the same question about a song, their response was not only not unanimous, but even for those who could consider that a song is a "thing," their "Yes" was tentative, couched in several qualifiers. In describing a song in this manner I am referring to something that is a physical, acoustic wholeness, something that has clear boundaries both as to length and texture, something that has parts which are subsumed into its wholeness and parts that are inextricably related to each other. I am referring to a clearly differentiated physical, acoustic phenomenon.

That the song is a tangible, physical thing became clearer to me through the project of acoustic analysis I have been engaged in for the past several years. Using the computerized acoustic analysis program, *Computerized Speech Laboratory* (CSL) developed by Kay Elemetrics, I am able to produce snapshot-like images (as different from moving pictures) of various acoustic properties of the recorded sound of children singing and speaking the words of a song. The physical coherence of these static images reflect instants of the patterned movement of the molecules that were set in motion by children's singing and speaking. The visual patterns replicate in a one-to-one correspondence (both numerically and pictorally) the patterns of the sound of the song; they show a remarkable physical coherence. This patterned sound (however *we* experience it, whether by ear, or sight or other sensory experience) is, I

would argue, what makes a song a "thing." It is a thing which can be distinguished both from silence and other sounds; it has a beginning and an end, it has certain recognizable patterns of dynamics, rhythm and melody, certain groupings of parts and phrases within its wholeness.

In her text, *Body, Text, and Science: The Literacy of Investigative Practices and the Phenomenology of Edith Stein*, the author, Marianne Sawicki (1997), develops an interpretation of Edmund Husserl's early description of the process whereby we recognize physical coherence in something. She describes his ideas in the following words:

> [A thing] . . . is recognized by virtue of seeing that an essence has been fulfilled: that some possible way of fitting together does in fact obtain in the case at hand. Something clicks for the scientist. A pattern pops out. (p. 69)

> When something "clicks" . . . the instantiation of an ideal *form of coherence* has been recognized. Ultimately, the "click" is what can be shared. . . . Physical observations . . . are . . . felt-into . . . —that "click"—occurs for the scientist as he considers the observations or representations occupying his consciousness. . . . Why can this alive and self certifying experience of scientific discovery be shared? Because the forms of logical validity already are shared; they inhere in any I (subjectivity). . . . They are recognized as appropriate coherences because any i (subjectivity) already knows what a coherence is. (Any i (subjectivity) is such a knowing.) (p. 70) [italics are mine]

A Song as Prosody

Words and music in a song are in a relationship of interdependence similar to that of a song and singer and song and time. The words and music are like two sides of a piece of paper; you cannot cut the one without simultaneously cutting the other. A song *is* sung words, it is a form of oral language and as such, a song *is* a prosodic event.

The particular interpretation of prosody that best coincides with this perspective is described in the text *The Acoustic Analysis of Speech* by Kent and Read (1992):

> prosody will be defined as the suprasegmental features of speech that are conveyed by the parameters of fundamental frequency (perceived primarily as vocal pitch), intensity (perceived primarily as loudness), and duration (perceived primarily as length). The term suprasegmental indicates that the phenomena of interest are not confined to phonetic segments. In fact, they often are observed over much larger intervals—syllables, words, phrases, sentences, and even discourses. (p.152)

For my purposes, I am including *a song* in this list of "larger intervals." When words are sung, as in a song, we usually perceive the parameter of fundamental frequency within the context of melody. We perceive duration, within the context of rhythm, and intensity, within the context of dynamics. The song itself establishes the parameters within which these phonetic features of speech interact suprasegmentally; the song becomes a live prosodic event in which we can focus on the features of speech in a new phonetic context.

Challenges to Perception

Temporality

Our perception of the "thingness" of a song is blurred by its temporality. It is much easier for us to acknowledge a physical coherence in a chair, whereas a song appears before our senses as something that passes us by. A chair conveys a certain stability; it is out there and away from us. This permanence gives us time to relate to it consciously and time to relate to it with several of our senses; we have time to re-cognize, to re-know it, when we see it again. Physicists tell us, however, that for all its apparent stability, the molecules in a chair are constantly moving; they even say that there is more space between the molecules than there are molecules themselves. Just as technology helped me see physical permanence in the perceived transience of a song, so also, technology has helped physicists see transience in what appears to be permanence in a chair.

The Song and Singer

Another characteristic of a song which causes our perception to become blurred when it comes to thinking of it as a "thing," is its symbiotic relationship with the singer. In many ways a song is like a fetus; it cannot exist on its own as a physical, acoustic entity, except as it is sung. The umbilical cord connecting song and singer can never be cut during the live experience of a song. Yet we know that the song is an entity unto itself; we know that it is something "other" than the singer. This total dependence of a song on its singer has far reaching implications for the child-as-learner. There are few experiences other than speaking itself, which demand that a child sustain such flexibility of physical response and for such prolonged periods of time as does a song require of its singer.

Song as Event

Just as a song can never be independent of its singer, nor its temporality, neither can it be independent of its character as event. We cannot *hear* a song except as it occurs in time and is produced by a singer. A chair, or other spatial things, is like a child born. Although a chair is shaped and produced by human activity, once it is assembled, it sustains its own coherence; it is a thing that can endure as such even beyond the span of time given to the one who made it. We cannot *hear* a song, however, except as it is an acoustic event, created anew and sustained afresh each time it is repeated.

Time constraints make it impossible for me to explore in depth the implications and the importance for children-as-learners to engage with the song as prosodic event. Prosody puts the focus on *sound*. Event puts the focus on *actualized* sound. The song as context puts the focus on the *meaning of the sound* itself. Inherent acoustic coherences establish the song as a thing, similarly within the song, sub-systems of acoustic coherences inhere in both the words and the music. When children are given the opportunity to explore the physical acoustic coherences within a song, they learn of a *meaning* quite different from that usually attributed to words and music. It is a meaning other than the referential, dictionary meaning of the words; and it is certainly different from the imposed meaning often given to the music, for example, that major means happy and minor means sad. Acoustic coherences within the context of a song create meaning in the sound itself.

Transforming a Song into an Object of Thought

Up to this point I have been developing the notion of a song as a "thing'---a gathering of acoustic properties into one coherence. Husserl, that great theorist of understanding, would have it that a subjectivity is able to follow the flow of coherences in something because of empathy. Sawicki (1997) writes of this in the following quotation:

> the possibility of any science depends, for Husserl, on recognizing *series* of various kinds: causal series (of physical events) . . . and serial appearances (of things). Therefore it (this recognition) also depends on the psychic ability to follow, to follow along after or simulate, and to re-follow or replicate one's own former followings. Empathy features structurally in all of this. (p.71) [italics are mine]

The sentences, "I sing a song" or "I hear a song" express grammatically a form of subject/object relationship. In the moments remaining, I will explore briefly Husserl's explanation of how we come to experience this relationship. Sawicki (1997) interprets his words in the following quotation:

> The physical entity, by nature appearing as knit up within a causal web, appears to us in a series of partial showings and concealings of its aspects. Those moments *of showing* are also the moments *of looking* by someone moving around the thing. The observer, as a psychic entity, is able to fold back and gather up those looking/showing moments in memory, and render all the showings simultaneously present (albeit virtually) *in knowledge* of the thing as many-sided. (p. 71)

Notice that this quotation refers to two different modes of the subject/object relationship; two different forms of "showing" and "looking." The first form is the live moving around the thing; the second is the folding back, the gathering in memory, transforming the live experience so that it becomes *virtually* present in knowledge of the thing. Although the quotation is couched in visual terms, it can apply equally well to the aural. It can be rephrased to read: "The hearer, as a psychic entity, folds back and gathers the moments of singing/hearing in memory and renders the song *virtually* present in knowledge of it." The child *knows* the song in thought. This parade of *virtual* acoustic "showings and concealings"; this *virtual* knowing the song is what I am referring to when I say that the song becomes an object of thought. How does this happen?

Empathy

According to Sawicki, Husserl in his writings prior to the *Ideen* of 1913, attributes this act of "folding back," to "ablative empathy" that principle by which the subjectivity enacts every originary conscious move. She writes:

> Ablative empathy, which enables memory, figures importantly into that synthesizing act of scientific knowledge. Moreover, the possibility of sharing knowledge of physical things among different observers is based in their capacities for empathy as well, for through it they have the sense of how any "thing" must come to be. (Sawicki, 1997, p. 71)

Examples of such "originary conscious moves" enacted by children, I would suggest are the live experiences of their *actually singing* and *actually thinking* a song. Many of the same charactistics obtain in both the song as "object-of-thought" and the song as "thing." The song as object of thought, as a psychic acoustic event, is totally dependent on the singer/thinker. Its relationship to time is the same as that of the song as "thing"; it takes as long to think a song as it does to sing it. When several children sing and/or think a song together, they enact that other dimension of empathy referred to in the quotation cited above: "Moreover, the possibility of sharing knowledge of physical things among different observers (in this case, singers) is based in their capacities for empathy as well, for through . . . (empathy) they have the sense of how any 'thing' must come to be" (p. 71).

The Importance of Singing Songs Together for Children-as-Learners

What is important for children -as-learners is that they be given opportunities to hone their auditory perceptual skills by interacting bodily with the physicality of a song; they also need to be given opportunities to develop the cognitive and imaginative skills whereby they learn to transform temporal and acoustic things into "objects of thought." They need to develop skills which enable them to "think a song" as well as to "think about" a song. They need to develop skills which enable them to construct the part/whole relationships which occur acoustically in a song; each new singing of a song requires that it be created anew. This means that in order for children to repeat a song they must be able to retain the structural patterning of something which has long since disappeared from their live, immediate sensory experience of it.

Surely as I list these skills, you are making connections to areas of curriculum other than music and language. Skills enacted within the field of "developed awareness" (which is empathy) are retained; they are there, waiting and ready to be used by the children in one forum of learning or another.

Reference List

Kent, R., & Read, C. (1992). *The acoustic analysis of speech*. California: Singular Publishing Group, Inc.

Sawicki, M. (1997). *Body, text, and science: The literacy of investigative practices and the phenomenology of Edith Stein*. The Netherlands: Kluwer Academic Publishers.