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On the Evolution of Speech: Singing as the Middle Term

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Burling’s [CA 34:25–37] categorization of human vocal
behaviors into two opposed systems, expressive sounds
and speech, overlooks an important and widespread hu-
mam vocal behavior that lies halfway between them:
singing. Much human singing involves the rhythmic
and melodic chanting of nonsense syllables; in fact, in
some cultures, such as the !Kung and the Mbuti, many
songs have no text. Singing is used to accomplish many
social, political, religious, interpersonal, and aesthetic
ends. It is hard to imagine a human society with no
lullabies, no nursery rhymes, no singing games, no politi-
cal anthems or religious hymns.

Burling says that the crucial difference between the
human expressive sound system and speech is that
sounds such as sob and laughs are analogous [i.e., directly
iconic of emotional states] and grade continuously one
into another, whereas speech is part of a system that is
digital and contrastive throughout. Where does singing
fit in? As far as vocal physiology is concerned, it seems
very much like speech in that rhythm and melody—
intonation—are essential to both. It does appear, how-
ever, that singing and speech are organized somewhat
differently: some people who stutter while speaking can
sing quite fluently. The rhythm and melody of speaking
are more improvised, and anxiety about taking the solo
speaking turn can lead to stuttering. As far as their pur-
poses and functions are concerned, singing and speech
seem very different, singing obviously does not convey
specific conceptual information as words and sentences
do. In addition, I suggest that singing is more directly
expressive of emotions than speech. Like shared sobbing
and laughing, group singing gives the participants a
strong, direct feeling of social cohesion and solidarity;
speaking together does not necessarily produce such a
feeling. The choral aspect of group singing is different,
however, from the choral aspect of sobbing or laughing:
whereas sobbing and laughing are merely socially infec-
tious and imitative, choral singing is rule-governed. The
rhythms and melodies of singing are highly articulated:
they are broken up into discrete and contrasting parts
(melodies being based upon contrasts of tones, rhythms
on contrasts of kinds of beats and time placements) and
organized sequentially according to those contrasts.

On Neanderthal Crania and Speech: Response to Lieberman

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In “On the Kebara KHM 2 Hyoid and Neanderthal
Speech” [CA 34:172–75], Lieberman quotes without per-
mission from an unpublished manuscript. Referring to
my work on the cranial base of Neanderthals and later
Europeans [p. 174], he cites an abstract in the AMERICAN
JOURNAL OF PHYSICAL ANTHROPOLOGY, but the issue he ad-
resses [the Welcker [sic] angle] and other details of his
criticism do not appear there, nor were they discussed in
my presentation of the research at the 1992 meeting
for which the abstract was prepared. The source for
these comments is a manuscript that I submitted to CA
a year ago and on which Lieberman served as a referee,
in which I said, “The Welcker angle is not comparable
to the basal profiles generated by Laitman, Heimbuch,
and Crelin [1979]. This is because the Welcker angle
crosses into the neurocranium and measures a different
aspect of craniobasal flexion.” The manuscript was
eventually rejected, and I now find myself associated in
print with ideas that I was not allowed to publish. I
would prefer to have had the opportunity to state my
own position.

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