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PARALINGUISTIC QUALIFIERS: OUR MANY VOICES

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Prince Tsugu Akihito [. . .] on Aug. 15, 1945 [. . .] listened silently [. . .] as the ready voice of his father, Emperor Hirohito, crackled on the radio, telling a shocked Japanese people that he had decided to surrender (*New York Times*, 8 January 1989)

William Faulkner was a small man [. . .] His voice was soft and whispery but had carrying power and he spoke fast. His laugh was a chuckle, almost a snort (Morris, W., 'Faulkner's Mississippi', *National Geographic*, March 1989)

1. Introduction

Apart from the paralinguistic *primary qualities* (timbre, resonance, loudness, tempo, pitch (level, range, registers, intervals), intonation range, syllabic duration, and rhythm) that are always present in the human voice, what truly colors our speech is a complex series of voice qualities that should be identified as paralinguistic *voice qualifiers*. They modify from syllables to longer speech segments, or a whole deliverance, qualifying words, paralinguistic differentiators (e.g. strident laughter, muffled crying) and paralinguistic alternants (e.g. a laryngealized moan), and can also appear as permanent traits (e.g. a person's husky voice), their own determining factors being *biological* (e.g. normal or abnormal anatomical configuration of larynx, lips, etc.), *physiological* (e.g. type of vocal band vibration), *psychological* and *emotional* (e.g. shyness, anger, scorn) and *sociocultural*, that is, voice effects established universally (e.g. whispering of intimacy) and culturally (e.g. the creakiness and falsetto of British surprised and incredulous 'What!?'). They are, of course, intimately associated with facial and bodily expression, as with the voice and gesture of intimate whispering or harsh voice, becoming inseparable parts of the 'speaking face' and further proof of the audible–visual nature of speech (see Poyatos, 1991a; 1991b, Ch. 2).

We can differentiate 10 types of paralinguistic qualifiers: breathing control, laryngeal control, esophageal control, pharyngeal control, velopharyngeal control, lingual control, labial control, mandibular control, articulatory control, and articulatory-tension control. However, the scant literature on voice types—apart from the work of John Laver (mainly 1980) and certain speech pathology books—suggests some of the serious problems involving their study, namely: (a) the ambiguity of many of the determining labels, like 'harsh', 'hoarse' or 'shrill', because of insufficient knowledge of their anatomical basis and physiology and the inaccurate association (through neglect of its etymology) between the sign (i.e. the word) and its referent (i.e. the sound one believes it represents); (b) the frequent ambiguous use of many of the existing labels and the lack of others; (c) the frequent discrepancies in their physiological description and the application of two or more linguistic labels to the same voice type, not only by ordinary speakers and in literature but even by many specialists in, for instance, speech pathology; (d) the lack of needed transcription

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symbols; and (e) the lack of written representations of, for instance, falsetto (as we use [!]), moaning, huskiness, articulatory tension, etc.

The following brief discussion of the main voice types, for which transcription symbols are needed, acknowledges their typical kinesic correlates and their communicative functions, identifying the more common occurrences as speech disorders and acknowledging their importance in literature by providing some examples mainly from novels, thus trying to promote the sort of interdisciplinary approach that ought to be standard in this type of research. Readers whose native languages are other than English have been particularly kept in mind, since the identification of different voice types in English should suggest the need to carry out similar work in their own languages (making them aware of, for instance, the implications for the translation of literary or clinical discussions of voice) and the far-reaching consequences and numerous applications in whatever form of interaction they may be interested in. On the other hand, the present study actually zeroes in one important communicative subsystem within the 'basic triple structure' language–paralanguage–kinesics which earlier in this journal I identified as essential for a realistic analysis of 'the deeper levels of face-to-face interaction' (Poyatos, 1985).

2. Breathing control

While the direction of speech air is almost always egressive, the use of ingressive air is possible, first of all, in linguistic reflex-like verbal utterances of surprise, expectancy or fear (e.g. 'Oh!', 'My God!'), emotional questioning (e.g. 'What!?'), in the feminine Swedish, Danish and Finnish affirmation *Ja*!, and most typically the 'Yeah' and the 'No' heard in the Atlantic Provinces of Canada, particularly as a repeated affirmation or negation (e.g. 'Are you open until late today?'—'Oh yeah, we are! *Yeah*!'). Paralinguistically, ingressive air is used to utter, for instance, a reflex hiss when physically hurt, a contemptuous sniff, a single-pulse laugh or a fearful gasp.

The *channel* then is mostly the mouth, but it can also be the nasal cavity, or both combined; the *flow* (related to rate or speed) can be regular, irregular and out of phase with speech, as when speaking emotionally or in spasmodic laughter; and its *duration* must be differentiated between fast, as in a gasp or a panic-stricken 'Help!', and prolonged or slow, as in a long, anguished 'Aaaaah'.

'"Ah-h-h!" came her strange, intaken cry, as, on the reflex, she started, turned and fled' (Lawrence, 1921, Ch. I, p. 21).

3. Laryngeal control

Depending on the degree of opening between the vocal folds and how they vibrate, the following basic voice types should be identified as laryngeal control.

Whispery voice. There are three main degrees of whispered speech in a scalar continuum: *soft whispered voice* (oversoft), used generally with a mouth-to-ear posture for utmost secrecy; *normal whispered voice,* although the speaker tends to apply excessive pressure intermittently, producing normal voice (e.g. in a theater); and *forced whispered voice* ('stage whisper'), used necessarily on the stage, but also while repressive anger, indignation, etc. Besides intimacy, secrecy or confidentiality (at times conveyed by the whispering itself more than by the topic), it betrays negative attitudes in general and it combines typically with breathy voice (e.g. sexual intimacy), trembling voice, etc. Related to it is *murmuring* or *sotto voce,* without the sighing quality of whispering but with some breathiness and more

tension. With normal whispering we usually see frowning, squinted eyes, light smiling, one hand shielding speech from possible overhearers, stretching the mouth toward the listener, etc. Its pathological occurrences are called 'aphonias', either as a complete loss of voice, as after shouting, or alternating with voicing in 'spastic' or 'hysterical aphonia', usually with added breathiness or hoarseness.

'"Look Nellie let's go in the other room," he whispered in a tiny trembling voice' (Dos Passos, 1925, Pt 1, Ch. III, p. 44); '"Yes; you love me, don't you?" she [addressing a small boy] murmured deep in her throat' (Lawrence, 1913, Ch. VII, p. 190).

Breathy voice. 'A sigh-like mixture of breath and voice' (Catford, 1977, p. 101) which is not quite full voice, breathy voice is associated with passionate speech, TV models advertising perfume or the 'smoothness' of fabrics, and in general with emotional reactions (often preceded by the inhaling phase of a sigh, as in 'Oh, I love you!'), but it appears also in situations of weariness, facing a difficult decision or question, etc., often combined with whisperiness.

Glottal stop and glottal catch. Among these increasing degrees of vocal fold closure from whisper through breathiness to full voice, glottal stop is the briefest instance of voice, either as a very brief, exploding h-like sound or as a slightly sharper and higher-pitched one, the term 'glottal catch' referring to a momentary minimal qualifier (not of continuous voice) when the voice 'catches', that is, when it is suddenly and uncontrollably interrupted by extreme glottal closure as a 'lump' in one's throat, caused by emotion or nervousness: *'Laura glances at him with a faint, apologetic smile. Her voice catches a little'* (Williams, 1945, Act I, Scene i).

Laryngealized or creaky voice (echoic ME. *creken,* to sound like geese, crows). In English it is referred to also as a 'glottal fry' because of its frying-like or bubbling-like quality. It is phonological in certain languages (cf. Laver, 1980, p. 126), but paralinguistically—besides being caused involuntary by physical exertion, pain or old age—it is used attitudinally to express boredom, reluctance ('Oh, not now!'), suppressed rage ('How can you!'), affectionate admiration or sympathy ('Oooh, just look at that sweet kitten!'), by children coaxing adults, and as the affectionate or babyish 'purring' voice. Many sophisticated female speakers in Madrid use a very low laryngealized pitch for emphasis *(¡Hombre, desde luego que sí!*), while French speakers use also typical low-pitched creakiness in *Mais oui!* or *Ooooo!*, and the British either a higher-pitched greeting 'Aaah!', or a very low 'How dare you!'. Naturally, laryngealization can blend in 'whispery creaky voice' (e.g. a woman admiring a baby), 'harsh creaky voice' (e.g. in suppressed rage), 'harsh whispery creaky voice' (e.g. in reluctance), etc.

'"The little dear," came the nurse's voice low and purry and reassuring, "he's been sitting and worrying all night and he never bothered us once"' (Dos Passos, Pt 1, Ch. IV, p. 69).

Falsetto voice. At the high end of the pitch scale, falsetto or 'light voice', associated with a young girl's innocence and with affectionate ways of addressing someone, is typical of Anglo-Americans in general—a little higher-pitched and spreading over longer utterances among black Americans—to express surprise (e.g. 'What?!'), emphatic affirmation ('Yeah!', Black 'Yeah, man!'), several forms of laughter, etc. Two extremely high varieties of falsetto

are 'ventricular falsetto' ('seal voice') and the one 'usually referred to as the "flute", "whistle" or "pipe" register [. . .] exhibited by a few women and children' (Hollien, 1974, p. 127), 'piping voice' being very close or equal to it. Falsetto is heard often in combinations like 'whispery falsetto' (e.g. crying women and children), 'creaky falsetto' (e.g. 'Eeugh!') and 'whispery creaky falsetto' (with similar functions). Abnormally, a high-pitched falsetto is known as 'eunuchoid voice'.

'He spoke in a drawling falsetto that was meant to be an imitation [. . .] "Like a sweet innocent girlie"' (Huxley, 1928, Ch. V, p. 72).

Harsh voice. Harshness, a well-known disagreeable, rough voice quality caused by laryngeal strain and tension, extreme vocal-fold contact and irregular vibration and low pitch, is referred to by different labels and disagreement crops up even in speech pathology books (e.g. 'intense', 'grating', 'metallic' 'raucous', 'rasp', 'rough', 'shrill', 'strident', 'throaty', even 'creaking'), let alone in ordinary conversation and even in literature, where sometimes it can be rather ambiguous: 'Mr. Sikes spoke in the very harshest key of a very harsh voice' (Dickens, 1838, Ch. XV, p. 104). In connection with this possible ambiguity, research should be done on the etymological origins (very often onomatopoeic) and use of the various labels in different languages, determining how they evoke the sounds they designate for the native speaker–listener in each language.

Harshness adds to verbal languages or paralinguistic alternants the meanings of negative attitudes and feelings like anger, ridicule, rejection, scorn, contempt, cruelty, etc., and violent emotions such as we can imagine when O'Neill (1924) makes Eben, in *Desire Under the Elms,* speak 'harshly', 'fiercely', 'vengefully', 'scornfully' and 'violently'. On the other hand, it blends with other qualities in combinations we can easily assume in that character, such as 'harsh creaky voice' ('fiercely') and 'harsh whispery voice' ('vengefully' or 'scornfully'), as it blends in 'harsh falsetto' (e.g. a harshly expressed indignant surprise), 'harsh whispery falsetto' (e.g. the same reaction, but whispered), 'harsh creaky falsetto' (e.g. the same one uttered by an elderly person) and 'harsh whispery creaky falsetto' (e.g. the same one uttered in a whisper). Laver (1972, p. 197) refers to 'whisky voice', 'ginny voice' and 'rummy voice' as 'popular labels for the deep, harsh, whispery voices than tend to signal one result of excessive habitual consumption of alcohol'. Groaning (discussed below) is, of course, another type of harshness, as is, 'extreme ventricular voice or severe harshness', that is, when the ventricular folds press down on the true vocal folds due to great muscular tension, to which Laver (1980, p. 13) refers as 'ventricular dysphonia', 'a groaning, animal quality [. . .] the words sound as if they are being chopped off'.

'He [the Jew Zerkow] muttered in his rasping, guttural whisper, his finger-tips wandering over his thin, catlike lips' (Norris, 1899, Ch. III, p. 41).

Strident voice and shrill voice qualities. Stridency (from Lat. *stridere,* 'stridulation' being the sound made by crickets), is usually identified as 'grating', 'rasp', the sound made by hinges, etc., 'having been described as harshness, harshness with high pitch, harshness with high intensity, and hoarseness with high pitch' (Perkins, 1971, p. 497), while we think of *shrillness* as a disagreeable high-pitched and more piercing quality of the voice, used also to refer to the sound of cicadas or loud speakers.

'How that refined and drawling shrillness of hers got on his nerves!' (Huxley, 1928, Ch. I, p. 10).

Squeaking, squealing, screeching, squawking. These four voice types share a shrill quality. *Squeaking,* a high-pitched, thin, sharp, and penetrating sound, is one of those mysterious and eloquent 'quasiparalinguistic' sounds (Poyatos, 1988) that surround us in everyday life. *Squealing* is shrill, sharp and more prolonged, as in anger, fear or pain, but pigs also squeal, as does chalk on a blackboard sometimes (referred to more as screeching). *Screeching* is a high, shrill, piercing cry, as in terror or pain, but the night owl and the brakes of a car are said to screech also. *Squawking* is also harsh, but abrupt, less piercing and not so long as squealing, as frightened hens sound.

'Doris' voice squeaking like a breathless mouse' (Laurence, 1968, Ch. III, p. 94); '"Then why did you come back at all?" cried Halliday, his voice rising to a kind of squeal' (Lawrence, 1921, Ch. IV, p. 73); 'The woman's voice shrilled [. . .] like the screech of chalk on a blackboard' (Dos Passos, 1925, Pt 2, Ch. III, p. 142); '"Now wait a minute", Doris says, a high hurt squawking, like an unwilling hen the rooster treads' (Laurence, 1968, Ch. I, p. 36)

Metallic voice. Metallic voice, which sometimes is mentioned along with stridency as another term for harshness, has been described also as 'sharp', 'grating', 'brassy', 'bright', 'clear', 'clean', 'keen', 'piercing', 'penetrating', 'ringing', even 'strident', but, as with some other qualities, defies a true consensus simply because the unclear borderline between the terms that seem to partake of harshness depend on physiological and acoustic nuances much too difficult to identify.

Voice roughness: husky, hoarse. While many specialists in voice disorders use the term 'rough' as an all-inclusive label, others speak of 'hoarse', 'husky', 'rasp', or 'coarse', 'hoarse' including certain subtypes identified below.

A *husky* voice, defined by dictionaries as 'dry', 'rough' and 'hoarse', can be perceived positively as seductively sensual in women, even equated to breathiness (as the American actress Lauren Bacall's huskiness), or as reflecting a husky body, but also a negative quality if, for instance, it is judged as mannish. For practical purposes, it could be associated with the more normal 'deep, soft, whispery voice' (Laver, 1972, p. 195)—while hoarse voice could be applied to pathological forms of rough voice—but it can denote also a deterioration of normal voice.

'She said huskily, "Darling, which pair will you be wearing tonight?" The feminine question sounded oddly in Miss Warren's deep masculine voice' (Greene, 1932, Pt 2, Ch. I, p. 3).

Hoarse, which seems to imply a quality acquired through some negative activities and give a poor image of the speaker, has been the subject of much disagreement in its definition, and Laver (1972, p. 195) identifies it as 'deep (loud), harsh/ventricular whispery voice'. For *WINID*[1] 'hoarse' is 'low', 'harsh', 'husky', 'often muffled', 'with little or no resonance (as when being with a cold, from too much talking, or speaking with emotion)', while *FWNSD* describes it as 'harsh', 'rough' and 'with grating effect (as when having a cold or speaking with fatigue)', and *SOED* links it to the voice of a raven or frog and to a storm. Hoarseness—which can be also momentary, marking periods of much strain or emotion—is considered a typical dysphonia (i.e. a laryngeal disfunction that impedes optimum vocal fold adduction) and for some it is different from huskiness in that the vocal folds vibrate in an irregular or haphazard way. It has low and narrow-range pitch, sometimes falling and rising suddenly, sometimes with moments of aphonia, and appears in three

different types: 'dry hoarseness', of increased intensity and breathiness, 'wet hoarseness', characterized by breathiness, low pitch and often creakiness, and 'rough hoarseness', with additional low-pitched sounds because the vocal folds vibrate at two points and voice is perceived as a two-tone one.

'. . . his voice sounded hoarse and awkward, like a rusty lock' (Stevenson, 1883, Ch. XV, p. 100); 'said the other, looking over the rails, and speaking in a hoarse whisper', (Dickens, 1838, Ch. XXVI, p. 186).

There are still several other synonymous labels, used both in literature and in conversation, to describe hoarseness, for example: *croaking* (from ME. *croken,* harsh, throaty and raucous), like the cry of a frog or a raven; *raucous* (from Lat. *raucus,* hoarse), described by *WINID* as 'disagreeably harsh and strident', and by *FWNSD* as 'rough, hoarse, harsh' and as 'the raucous voice of a frog'; *gruff,* defined as 'harsh', 'throaty', and 'hoarse', and identified by Laver as 'deep, harsh, whispery, creaky voice' that may involuntarily express anger and other negative interpersonal attitudes; and *growling* (describing also the growling animal's sound).

'His voice croaked tartly like a claxon' (Dos Passos, 1925, Pt 1, Ch. II, p. 22); 'My voice is gruff with suspicion' (Laurence, 1968, Ch. I, p. 30); '"Well, then, keep quiet," rejoined Sikes, with a growl like that he was accustomed to use when addressing his dog' (Dickens, 1838, Ch. XVI, p. 116).

Tremulous or quavering voice. The last voice quality caused by the form of vibration is 'tremulousness' (Lat. *tremulus, tremere,* to tremble) or 'quavering' (Lat. *quaveren,* shaking of the voice), caused by muscular tremor which produces an irregular or pulsating quality, as when one is nervous or overwhelmed by emotion ('There was a quaver in his voice').

'The youth, aghast and filled with wonder at the tall soldier, began quaveringly to question him' (Crane, 1895, Ch. IX, p. 96).

Tense voice and lax voice. There are two more types of laryngeal voice quality settings: 'tense voice' (often called 'metallic'), rather harsh (even ventricular), louder and higher-pitched and with higher air pressure, with raised larynx and constricted upper larynx and lower pharynx, with muscular tension visible both on the face and in the kinesic behaviors; 'lax voice' (often called 'muffled'), somewhat breathy or whispery, softer and lower-pitched, with lower larynx and unconstricted pharynx and moderate nasality, typical of relaxation, self-control, etc.

4. Esophageal control

Esophageal voice must be included within paralinguistic qualifiers because, apart from the esophageal speech caused by surgical removal of the larynx, esophageal (not pulmonic) air is used in eructation, with which about one whole word can be uttered. Otherwise, it occurs only as a belch, included then under paralinguistic alternants (i.e. along with moans, hisses, inhalations and exhalations, tongue clicks, 'Uh's', 'Mm's', etc.). The esophageal speech of laryngectomees is learned by belching voluntarily and gradually saying words and whole sentences.

5. Pharyngeal control

The pharynx, which, like the oral and nasal cavities, acts as a resonating chamber for the vocal band vibrations when it changes its shape during speech and becomes longer,

shorter, wider or narrower, produces various voice qualifiers that play important paralinguistic functions.

Pharyngealized voice (pharyngealization). Pharyngealization, one of the secondary articulations, is perhaps the most obvious pharyngeal qualifier, produced when the tongue root approximates the back wall of the pharynx, used paralinguistically, for instance, when speaking with mocking contempt, scorn, or aggressiveness and in some forms of ventriloquism.

Pharyngeal huskiness. This label denotes the sort of huskiness of varying pitch which appears when speaking under emotional stress or in many forms of laughter, the retracted tongue constricting the pharynx and sometimes causing nasality, differentiated from laryngeal huskiness by the tense narrowing and friction felt in the throat (the passing from one type to another being used for especial voice effects). The popular use of the terms 'husky', 'hoarse', 'throaty' and 'rasp' can often refer to either pharyngeal or laryngeal huskiness, the term 'throaty' (i.e. coming from the throat) being the more colloquial one for 'guttural' (Lat. *guttur,* throat), identified by *WINID* as 'heavy, thick, deep as if from low in the throat', and as 'rich voice'—ambiguous enough for the listener or reader of the term to imagine different types of pharyngeal speech.

Muffled voice. The voice sounds muffled when, unlike for pharyngealization, we push the tongue forward and away from the relaxed pharynx walls and faucal arches (which damps high frequency and produces a mellow tone, lower pitch and relaxed tension. We use other labels for it both in conversation and in literature [most of them listed by Laver (1980, p. 141) as opposed to metallic voice], such as: 'mellow' (thought of as opposed to harshness, stridency and metallicness), 'soft', 'dull', 'obscure', 'guttural'; and, often referring to full womanhood and masculinity, 'rich', 'full' and 'thick'. Besides being used to denote a sound (including voice) deadened by something, particularly cloth, the label 'muffled' has negative connotations regarding either the speaker's personality or attitudes or the voice itself.

'"Oh—I'm so sick. I feel so awful. My voice is husky and muffled, a retching of words"' (Laurence, 1968, Ch. VIII, p. 246); '"They are such beautiful shirts," she sobbed, her voice muffled in the thick folds' (Fitzgerald, 1933, Ch. V, p. 70).

Faucalization, an unrelaxed position caused by drawing the faucal pillars toward each other (as in the beginning of retching), produces faucalized voice, used for fun, for instance, to imitate the American hillbilly's speech.

Hollow voice. WINID identifies 'hollow' as a reverberating sound, as if made in a cave, and as muffled and 'sepulchral' (with which it is synonymous as an impressionistic label). It is produced by a maximum lengthening of the pharynx (even the oral cavity) as a resonating chamber, lower pitch and some breathiness, thus sounding 'resounding' and 'orotund' (from Lat. *ore rotundo,* round mouth, suggesting its concomitant gesture), two other terms for hollowness, typically the stereotyped quality of mysterious characters and somber situations in films and novels.

'"Who's that?" he [the dying man] cried, in a hollow voice' (Dickens, 1838, Ch. XXIV, p. 174).

Gulping. A qualifier of not more than one or two sounds (or just breathing) which occurs mostly in the pharyngeal area is gulping, caused by emotional tension, but also produced at will (e.g. in mock fear). It is a sort of strangulated articulation, when the tongue root touches the lower and upper pharynx, lending speech a tense postalveolar velic quality, the posterior faucal pillars (normally helping in swallowing) producing the effect of an Arabic faucal approximant, while the velum is pulled up, closing the velopharyngeal passage and causing a visible jerk of the neck.

'He could not speak accurately because of the gulpings in his throat' (Crane, 1895, Ch. IX, pp. 93–94).

6. Velopharyngeal control

Nasalization of language and paralanguage carry significant semantic differences based on sex, attitude and emotions, besides their abnormal occurrences as voice disorders, and one could identify about nine velopharyngeal qualifiers in addition to nasalized voice proper and some of its combinations with other laryngeal and pharyngeal qualifiers.

Nasal voice (nasalization). Nasalization (nasal voice) as a secondary articulation performs quite a few interactional functions as a paralinguistic voice modifier in every culture, though seemingly no particularly positive ones. Verbal nasal voice is characteristic of passionate speech, intoxication, laziness ('Oh, not now!'), coaxing (particularly by children), in courtship, when wanting to appear tough, when women imitate men, etc., and it can also modify many paralinguistic differentiators (e.g. laughter, crying) and alternants (e.g. a sensual sigh, a contemptuous 'Uh-uh!'). Nasal voice can of course be superimposed on some of the single or compound laryngeal and pharyngeal qualifiers, such as in 'deep harsh creaky nasopharyngeal voice' or groaning, 'hoarse nasalized voice' (e.g. a man in severe physical pain), 'husky nasal voice' (as in feminine sensual characters in films), or 'low/high-pitched nasalized voice', typically accompanied by tense nasolabial constriction (e.g. expressing rejection). As a voice disorder, 'hypernasality' is an excessive nasal resonance due to insufficient nasopharyngeal closure (e.g. in cleft palate), while 'denasality' is due to not enough nasal resonance for [m], [n] and [ŋ] (e.g. in adenoidal voice).

Whining voice and bleating voice. Whininess (from AS. *whinan,* the whizzing of an arrow), which dictionaries identify as peevish and low, as indicating contempt, distress, fear, coaxing, and as childish and undignified, has a nasality accompanied by a higher or (more typically) lower-than-usual pitch and tenser musculature of velum and pharynx and nasopharynx. Besides coaxing (e.g. 'Oooooh, mummy, buy me some candy!'), it can be used, for instance, by women to affect sensual innocence, and it constitutes a voice quality disorder when it is uncontrollable.

Bleating (from AS. *blaetan,* referred to the cry of a lamb, goat or calf) should be regarded as a subtype of whininess, its main characteristic being its quavery laryngealized quality and its high or low pitch.

'"Ma, ain't they go-wun to begin now-wow?" whined Owgooste [a little boy at the theater]' (Norris, 1899, Ch. VI, p. 74); 'Lennie [the half-wit] bleated with terror. He cried, "Make 'um stop, George" [when they are beating him]' (Steinbeck, 1937, Ch. III, p. 187).

Whimpering voice. We can switch from whining to whimpering—in a way a form of whining—by taking creakiness away and letting the verbal content flow more regularly.

Whining is more typical of women and children, but whimpering can be shown also by men when complaining or grieving, while women and children may whimper also out of fear, and both sexes use it in mock fear, coaxing, etc.

'Francie began to whimper. "But Dutch what are we going to do, what are we going to do?"' (Dos Passos, 1925, Ch. IV, p. 276).

Twangy voice. Anyone can produce twangy voice by pinching the nostrils and 'talking into the nose'. But it can be caused by 'the combination of an anterior blockage in the nose and an open velopharyngeal channel or by a small velopharyngeal orifice and normal nasal passage' (Moore, 1971, pp. 538–539), the anterior blockage making the nose act as a resonator and emphasizing nasal sounds while the oral cavity and the pharynx have normal resonance. It is 'a piercing sound often used intentionally by news vendors and others to hawk their wares' (Moore, 1971, p. 539), which, when uncontrollable, becomes a disorder of resonance, that is, of nasality.

Moaning voice. Just as with the quality of a whine, a whimper, a groan or a grunt (paralinguistic alternants), that of a moan can override speech (and even a differentiator like crying), distinguished from whining by a definitely low pitch, prolonged nasality (as one speaks in grief, distress or out of physical or psychological pain) and muscular laxness, being rather like a soft, feeble and mournful groaning. That is why the term is used poetically to refer to the mysterious language-like quality of the wind, as in 'the wind moaning in the trees' |one of those environmental quasiparalinguistic sounds (see Poyatos, 1991b, Ch. 1 and 8)|.

'The girl moaned out some half intelligible reply [. . .] and seemed, from the smothered noise that escaped her, to be crying' (Dickens, 1838, Ch. XXVI, p. 187).

Groaning voice. As compared to moaning, groaning voice is actually a tense, deeper nasopharyngeal harsh creaky quality whose groaning effect may appear intermittently, beginning and ending abruptly and often impeding proper articulation. It is interesting that OHG. *grinan* means 'to distort the face', which often corresponds to the internal distortion of the speech organs, as when straining oneself while speaking, lifting something heavy (then added to laryngealization or creakiness), under physical or intense psychological pain, expressing grief, strong disapproval or annoyance, or strong desire or longing. It is also interesting that in many languages the groaned verbal expression 'cries up' to God, as in the examples below.

'The children of Israel groaned [. . .] and their cry came up to God [. . .] so God heard their groaning' (*Exodus* 2: 23–24); 'he flinched and began to cry "Oh, my God!" again in his groaning voice' (Fitzgerald, 1933, Ch. VIII, p. 119).

Grunting voice. A grunt imitates the deep, gruff sound in the throat made by a hog, shorter than a groan, and its intermittent occurrence along the speech stream with very short intervals qualifies the whole deliverance, its acoustic effect gaining continuity because the grunting usually correlates with a sour facial expression, as when speaking in strong disapproval, with contempt, etc.

Head-cold voice. It is denasalized voice which can be voluntarily produced for paralinguistic effect by speaking with a lowered velum, open mouth and not forming articulations fully.

Adenoidal voice. As a voluntary paralinguistic behavior, adenoidal voice (for which the Liverpool accent is often given as an example in phonetics) is characterized by the 'adenoidal-gape' posture (cf. 'We can't park here in the driveway like a couple of adenoidal tourists', quoted by *WINID* from Ellery Queen).

'She breathes noisily and adenoidally when agitated' (Laurence, 1968, Ch. II, p. 55).

Nasopharyngeal voice. This is a double quality consisting of a clearly audible oropharyngeal friction, caused by constriction, and nasalization, a kind of pharyngeal harshness whose unpleasant effect is enhanced by nasality. Paralinguistically, it is used when expressing harshness as an attitude or when negating scornfully, and it is accompanied usually by an equally harsh facial expression.

7. Lingual control

The tongue can produce as a modifier as many abnormal voice qualifiers as it does normal ones, all of them affecting language and paralanguage, and although some are very short they have a more durable effect on the listener.

Retroflex voice. Actually a secondary articulation, the typical 'r-coloring' of general American English for *t, d, n, l, s,* and *z,* although not continuous over long speech segments, makes the listener perceive speech as retroflex because its effect, as that of American nasality, seems to pervade it.

Velarized voice, palatalized voice, alveolarized voice. These are three qualities that can affect speech paralinguistically. If we raise the back of the tongue toward the soft palate our 'velarized voice' will sound as if colored with a sort of tense, back 'gya-gya-gya', easier to superimpose on certain articulations than on others. If the tongue front tends continually to approximate the hard palate in 'palatalized voice' the overall effect would be more like the rather babyish 'dya-dya'. And if the tongue blade goes further front toward the upper teeth ridge, the resulting 'alveolarized voice' will be a little lispy. The three can be used for fun, to mock speakers of other languages, or to adopt a tone of jocular innocence.

Quality disorders of lingual voice. One should not neglect the paralinguistic-communicative possibilities of the tongue disorders, not only in their natural occurrences, but when imitating them. One is 'tongue thrusting', when the tongue protrudes between the teeth or presses against them, causing an interdental lisp. 'Macroglossia voice' (congenital in mongolism, cretinism, or because of too small a mandible) affects mainly apical *t, d, n* and sibilants, but gives also a peculiar audible and visual characteristic to speech in general. 'Microglossia voice', when the tongue is too small, prevents the speaker from making correct contact for many articulations

8. Labial control

Elsewhere (Poyatos 1991a, but especially 1991b, Ch. 2) I have elaborated on the visual–communicative significance of the lips and the great number of its possible kinesic and voice-modifying functions as part of the 'speaking face'. While all those postures should be regarded as instances of 'labialization', it is necessary to distinguish the following basic types of labial voice qualifiers (excluding those which would fall better under mandibular settings below):

Close-lip-rounding voice, that is, lip protrusion or 'labialization' proper, as when using baby talk speaking to children or pets or between lovers, with a typical tendency to articulate toward the front of the mouth and, due to the approximation of the tongue to the palate, with nasalization.

Horizontal lip-expansion voice, as when expressing irritation by speaking with bilateral mouth distension, usually with higher pitch ('I told you not to go, but you wouldn't listen to me!'), or when females combine crying and speech (crying speech).

Horizontal lip-constriction voice (including the so-called 'lip-rounding'), as in another form of irritated or angry speech, typically with harsh or slightly pharyngealized quality ('Oh, no, you couldn't do it because you were too proud to do such a thing, weren't you?').

Vertical lip-constriction voice, as one way of speaking with contempt or repressed anger, with accompanying nasalization.

Diagonal-upward lip-expansion voice, as in a typical bashful type of country folk in many cultures, with typical oral and nasal resonance, or when others imitate their speech.

Diagonal-downward lip-expansion (bilateral or unilateral) voice, as in the stereotyped speech of villains and thugs in films, which can produce sufficient muscular tension to intermittently cause nasal resonance.

Trembling lips, as from cold or emotion, must be mentioned too, as it affects labial articulations first of all.

9. Mandibular control

As with the lips, the visual changes of the mandible during speech, which naturally affect internal sound movements and resonance, can significantly influence our perception of the speaker, thus producing short-term or long-term paralinguistic qualifiers.

While *wide-open-jaw voice,* used often for comicality and special effects, distorts articulations, *half-closed-jaw voice* (clenched-teeth voice) is the posture for 'muttering' and 'mumbling', both identified as rather low-pitch, soft and indistinctive voice used to express anger, fear, complaint ('grumbling'), hesitation, 'murmuring', etc., often talking to oneself, while 'muttering' can denote also the poorly articulated voice of fatigue or sleepiness. In either type the costructuration of sound and conscious or unconscious kinesics is quite apparent, not only as regards the mouth but the general expressionof the face (e.g. rather squinted eyes and typically lowered or knitted brows).

'. . . an indistinct muttering, as of a man between sleep and awake' (Dickens, 1838, Ch. XII, p. 158); 'Her chin shot out. She jumped to her feet. "You git away from me [. . .]"') (Steinbeck, 1931, Ch. XXVI, p. 316).

There are two positions that can be permanent abnormalities, but also imitated paralinguistically: *protracted-jaw voice,* thrusting the lower jaw forward and causing the voice to resonate more nasally than orally when the nasopharynx is pulled against the velum, typically with very narrowly opened mouth, as in mock threatening or in the portrayal of villains, gangsters and thugs; *retracted-jaw voice,* caused by jaw recession, which again determines nasality and improper articulation, used also to portray the mentally retarded, the somber or abnormally shy, etc.

Two more mandibular qualifiers should be mentioned: *rotating jaw*—actually a combination of a side-to-side gesture with protraction and retraction in between, all in a half-closed posture—already identified as the stereotyped growling or muttering villain's speech gesture, sometimes the mentally abnormal character, typically coupled to nasality

and strained voice; *trembling jaw,* which modifies also labial articulations, as from cold, emotional tension, etc.

10. Articulatory control

There is a series of functional articulatory disorders (always susceptible to being imitated paralinguistically) due to 'faulty placement, timing, direction, pressure, speed, or integration of these movements' (Powers, 1971, p. 837), whose paralinguistic roles must be acknowledged.

Overarticulated voice, with consonants made longer and with more muscular effort, while the precision of lingual and labial postures for all sounds is visibly perceived on the tongue tip, labiofacial areas and mandible, as when we wish to emphasize the formation of every phoneme while addressing a child, a foreigner, a patient, or speaking in an irritated tone (e.g. 'Is that clear?'). It can of course be a permanent or quasipermanent characteristic developed as a habit, which is then socially perceived as affectation.

Other articulatory disorders, which speakers can also mock voluntarily to imitate either affectation or immaturity and childishness, are: *general oral inaccuracy,* that is, misarticulation, not always due to incorrect position but to slowness, weakness and little energy, which makes speech appear 'careless', 'confused', 'distorted' and 'unintelligible'. Sometimes it is rapid, slurring, with a jerky tempo, and phonemes are dropped, condensed or distorted, and then we refer to two types: *cluttered speech,* as in a state of intoxication, or as the well-known 'slurry voice' of the late film actor Humphrey Bogart, who seemed to glide from one syllable to another obscuring sounds by running them together, and on which in the 1960s Austin (1965, p. 34) reported: 'It is an affection among some teen-agers and "method actors"'; and *sluggish* or *slow* articulation.

Another well-known disorder in articulation is *lisping,* which can also be paralinguistically imitated in each of its modalities: *frontal (interdental) lisping,* when sibilants [s], [z], [ʃ], [tʃ] and [dʒ] are replaced by [θ] or [ð], with the tongue tip against or between the teeth; *lateral lisping,* when, by too much air and saliva escaping over or around the sides of the tongue, sibilants sound like *sh,* producing a 'slushy' effect and often a visual effect as well when the mouth corners are intermittently pushed forward by the escaping air; and *nasal lisp,* during which, due to a relaxed velum, retracted tongue and lax lips, air escapes through the nose and often a snorted unvoiced [n] replaces sibilants. In all forms there is of course a kinesic component and 'sibilant distortion can be produced or accompanied by atypical lip movements [. . .] labial habits unattractive visually as well as acoustically' (Powers, 1971, p. 844).

The last lingual disorder to be mentioned is *lalling,* consisting in articulating with the tongue tip too low in the mouth (and its body flat and lax) sounds for which it is supposed to be placed high, mainly [r] (or [l] in what is called *lambdacism*) or both, or apical consonants like [t] and [d], resulting in a sort of [w] or central vowel sound because of the weakness and sluggishness of tongue movements.

11. Articulatory tension control

Apart from the tenseness and laxness of voice associated with raised and constricted larynx and lowered and unconstricted larynx, respectively (with higher and lower pitch in each case), there is another type of general tension of laxness of the articulatory organ, due to the combined action of the muscles in the larynx, pharynx, tongue and labiofacial area, involving, besides the face, the neck, the diaphragm and the pectoral muscles. It

perfectly correlates with tense kinesics (as in persuasive oratory, scolding someone or showing self-assurance and dominance), except when the speaker is trying to control himself and only the strictly articulatory muscle and facial muscles show his tension, the opposite being relaxed voice and musculature.

12. Objectual control

It would be easy to neglect the communicative consequences of those voice variations with which we consciously or unconsciously, voluntarily or not, affect our speech and its interpretation when we talk with our mouths full, while smoking a pipe or chewing gum, and yet those sounds acquire quasilexical value when they attitudinally modify verbal speech.

Food and masticatories can affect language and paralanguage because, if we talk while eating, we produce a series of labial smacks, dorsal clicks and other suction sounds and audible mouth inhaling and narial exhaling; further, they tend to modify stops (which may become affricates, interdentals and labiodentals) and retroflex and velar sounds, centralizing the higher vowels (e.g. [i] > [e], [e] > [ə] and causing intermittent nasalization from having to breathe mostly through the nose. From a paralinguistic-communicative point of view, the speaker may add to this poor articulation certain paralinguistic primary qualities, qualifiers, differentiators and even alternants (e.g. shouting, harshness, sobbing, laughter, moans, grunts, clicks) voluntarily or involuntarily expressing impatience, anger, amusement, pain, etc. At the same time, a proper or improper way of simultaneously eating and talking can carry social or clinical meaning (e.g. poor upbringing, lack of respect, depression), just as one can chew gum in a contemptuous way (with or without speech). In addition, from an esthetic point of view, these speech qualifiers can be evaluated by our cointeractants for their unesthetic audible and visual qualities, or because of the possible social incongruence of, for instance, the seemingly educated person or the good-looking one with rather unbecoming behaviors.

Conversational props can also be eloquent instruments of paralinguistic modification, sometimes voluntarily, as when someone consciously, for a desired effect in interaction, keeps a pipe in the mouth while talking (not unlike a 'security blanket' at times); other times they can act as task-performing qualifiers, as when talking while holding between the teeth a string, nails or pins; and others as emotional body-adaptors, as when holding a handkerchief or tissue against the mouth or the nose while talking or crying, the muffled, dampened sound enhancing the emotional situation and its general anxiety-creating quality.

13. Conclusion

The much-needed systematic work on paralinguistic voice qualifiers, which hopefully has been sufficiently discussed to at least incite others to further their research, presents many problems. It involves the identification, anatomical, physiological and phonetic description and functional classification of many more qualities than we are likely to suspect at first, which would differentiate the various linguistic–cultural repertoires along with many cross-cultural similarities. Another problem is that, just as we may ignore slight differences and treat as one what are actually several independent voice qualities, we may see different voice types in what is only one with several phonetic or impressionistic labels. In addition, even the average educated speaker often uses incorrectly the terms in certain 'clusters' (e.g. squeaking, squealing, screeching, squawking), which could be avoided by studying the various etymologies. But, besides providing a better criterion for daily usage, a clear formal and functional identification of paralinguistic voice qualifiers or voice types affords a

number of applications, such as in the literary analysis of character individualization and of physical and psychological realism (Poyatos, 1983, Ch. 9; 1991b, Ch. 8), for a more accurate interpretation of voice and record-keeping in psychotherapy, nursing, counselling, business interviewing, interrogation, court hearings, etc., in theater and film casting and direction, in social and cultural and cross-cultural studies of, for instance, development, aging, age-group repertoires, and socioeducational environments.

NOTE

[1] *FWNSD, Funk & Wagnall's New Standard Dictionary of the American Language; SOED, The Shorter Oxford English Dictionary on Historical Principles; WINID, Webster's New International Dictionary of the English Language.*

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