BETWEEN EXCITEMENT AND TRIUMPH – LIVE FOOTBALL COMMENTARIES IN RADIO VS. TV

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ABSTRACT

For this study temporal and pitch characteristics in live football commentaries broadcast on television and the radio were studied with the focus on the situation after a goal where the speakers show the highest level of excitement. The most prominent feature of the 'goal roar' from the (usually male) commentators is the extremely high pitch of 400 Hz or more. The 'triumphalese' style is additionally marked by lengthening in comparison to commentaries with goals against the supported team. Although audio-visual and audio-only commentators show many phonetic similarities in the way goals are reported, they also show consistent differences in their use of pitch, pauses, articulation rate and amount of talk. The results are discussed with regard to the frequency code and speech styles.

Keywords: expressive speech, frequency code, speech style.

1. INTRODUCTION

Live commentaries of football world cup matches belong to the most popular types of text distributed as television (TV) and radio broadcasts. Typically, the speech style of the live commentariess covers a wide range of arousal levels and – should the occasion arise – moments of triumph. This study explores phonetic shapes of live commentaries from German radio and TV before and after goals. Of particular interest are, on the one hand, differences and parallels between TV and radio speakers and, on the other hand, how triumph or disappointement together with excitement are expressed vocally.

The text genre of live football commentaries can be described in terms of various sub-parts depending on the importance of information [3]. Background information is spoken either in a *narrating* or in an *elaborating* style, whereas *building up suspense* and *presenting a climax* has been characterised as *speaking dramatically*.

The most prominent feature of the latter speech style(s) is a dramatic change in fundamental frequency. However, commentaries of goals can vary greatly. Among other factors they depend on the relative importance of the goal (importance of the match, stage in the game, current score). Moreover, it makes a huge difference whether the goal is for or against the supported team. The commentator can be expected to convey this information vocally, not just verbally.

High arousal usually leads to a higher fundamental frequency and a faster speech tempo [1]. In a study with a different type of sports announcement, horse race commentaries [7] have been described with a continuous upshift of F0. However, the auditory impression of increasing tempo during the race was *not* reflected in an increased articulation rate but in a higher rate of audible intakes of breath.

In contrast to horse races, commentators of football matches with national teams demonstrate their affiliation and are allowed to show signals of triumph and dominance after a goal for their team; this has been called 'triumphalese' [6]. However, it is unclear how the vocal behaviour of combined arousal and triumph is manifested.

Unlike a high degree of arousal, a high level of dominance is linked with a *low* fundamental frequency. In the frequency-code framework, a main claim is that "high F0 (broadly) signifies smallness, non-threatening attitude, desire for the goodwill of the receiver, etc., and low F0 conveys largeness, threat, self-confidence and self-sufficiency" [4]. Obviously, live commentators find themselves in the dilemma of how to express their excitement on the one hand and their triumph on the other. This conflict also applies when they report goals against the own team, which should lead, among other phonetic features, to a depressed fundamental frequency.

Visual examples of signalling largeness in moments of excitement and triumph can be seen in Figure 1 where the left commentator is standing up

Figure 1: The live commentators for the Spanish television (right: professional commentator, left: former football professional as expert), five seconds after the decisive goal in three highly prestigious matches of the Spanish team at the football world cup 2010.

and both commentators open their mouths as far as possible during the articulation of [o:::] in *gol*. The latter observation is in contrast to the phonological features of roundedness and degree of openness required for Spanish /o/.

Apart from affective and social factors, cultural aspects can be seen to influence the phonetic and linguistic realisation of goal commentaries, such as in the reduplication of the word *goal/gol* or German *Tor*.

Another strategy is the extreme lengthening of the vowel in *goal/gol* which is typical for Latin American commentators (often substantially longer than 10 seconds). There is also evidence of diachronic change, in that TV commentaries of the 1970ies make extensive use of silent pauses, a phenomenon which is not usual today and which contrasts with virtually all radio commentaries. A further characteristic of the type of medium is that radio commentators rather than TV commentators will be remembered because they speak in a more lively style.

The present study provides an analysis of radio and TV commentaries of goal scoring scenes from matches with the German team during the men's 2010 football world cup in South Africa.

2. METHOD

The German team played a total of 7 games, of which 6 games (up to the lost semi-final) have been considered.

2.1. Data

The radio commentaries were recorded while being broadcast. To our knowledge they were the only ones broadcast in Germany. Unfortunately, for one of the six selected games there is no radio data readily available. The games were broadcast on both state-funded and private channels. Only commentaries broadcast on state-funded channels (as published on a DVD set) are analysed here.

One important difference between our radio and TV data is that two commentators were active on the radio but only one on TV. In other countries and in other TV channels this may be different. The recordings are from 7 different commentators (4 radio, 3 TV). All commentators are male except one (ST). In total there were 16 goals (3 of which are against the German team). In general for each goal one radio and one TV commentary was available – except for 4 goals in one game without radio data, resulting in 28 goal commentaries in total.

2.2. Measurements

All acoustic analyses were performed with the standard Praat software. The sound quality of the recordings was far from optimal because they contained background stadium noise Despite the restricted sound quality, F0 and all temporal parameters could be reliably analysed. Octave jumps in the F0 measurements were corrected by hand.

A goal commentary was defined as the first 10 seconds after the goal. Although the exact moment of this goal cannot be determined in the radio transmissions, it was not problematic to determine the required audible onset. In this 10-sec after-goal section, the number of (phonological) syllables and the pauses (longer than 100 ms) were determined, giving pause time and articulation time, respectively. Articulation rate was calculated as syllables

per second (s/s) of articulation time. Measuring intensity was not possible due to the unknown distance to the microphone.

As a reference for each commentator, three clearly narrative parts were selected for F0 analysis in an inter-pause stretch (ips) of at least 3 seconds duration.

For the analysis of [±triumph] the 6 most important goals were selected (3 for and 3 against the German team) for which five commentators were involved in both conditions, i.e. presence and absence of triumph. This results in 10 commentaries analysed for [±triumph]. Directly after the goal the mean F0 was measured for the first ips of the goal commentary.

2.3. Hypotheses

The main expectation is that post-goal F0 is far higher than in less excited parts of the commentaries.

It is also to be expected that audio-visual commentators, whose task might be seen as complementing the pictures, produce fewer words and utterances in their goal commentaries than their audio-only colleagues.

In order to signal dominance, syllables in 'triumphalese' are expected to be lengthened and the opposite should hold for commentaries expressing defeat. However, there is no clear hypothesis regarding [±triumph] and F0. Arousal, especially arousal combined with a positive valency for German goals, should be marked with a higher F0. Arousal plus a negative valency should be produced at a lower pitch. However, dominant goal situations could theoretically also be marked with lowered F0 if we base our hypothesis on the frequency code.

3. RESULTS

3.1. Narrative vs. goal comment

The mean F0 values in Table 1 clearly show that each commentator uses a much higher pitch for the goal commentaries than for narrative parts of the commentary.

Maximum F0 values often exceed 400 Hz for the male commentators and 500 Hz was reached by the female commentator (ST). It must be noted that in narrative sections F0 is used in a quite different pitch register.

Table 1: Mean F0 values in Hz (standard deviation in parentheses) for inter-pause stretches in narrative parts vs. directly after the goal for each commentator (* = from TV). Number of goal comments (# comm) differs. ST is female.

speaker	MA	AB	EE	ST	BR*	TB*	STS*
# comm	3	3	3	3	9	2	5
narrative	169	150	169	257	126	109	172
	(23)	(20)	(18)	(42)	(18)	(9)	(23)
after	393	365	372	484	361	337	347
goal	(38)	(33)	(35)	(47)	(32)	(52)	(32)

3.2. TV vs. radio

The mean values for the temporal structure in the section after the goal (see Table 2) show that TV commentators talk less than their radio colleagues: they produce fewer utterances (ips) and fewer (but longer) pauses. They produce fewer syllables, resulting in less articulation time.

Our TV commentators also articulate faster than our radio commentators. But it must be noted that in both media the global rate values for the 10-second section hide large local tempo changes. It is not unusual to have an extremely lengthened *Tor* (= *goal*) with the rest articulated at nearly 9 s/s.

The differences found in the temporal structure are very robust since they hold for all analysed parameters for *all* 12 goals for which we have both TV and radio data.

Table 2: Temporal parameters of the 10-sec sections after the goal as mean values (standard deviation in parentheses).

	TV	Radio
articulation time (in sec)	4.96 (1.2)	7.70 (1.2)
articulation rate (in s/s)	4.2 (1.2)	3.2 (1.2)
no. of syllables	20 (1.2)	25 (1.2)
no. of ips	2.3 (0.9)	4.6 (1.1)

3.3. 'Triumphalese' vs. disappointment

With the two radio announcers the sole content of the first ips after the goal is *Tor*. This monosyllabicity leads to very low articulation rates (see Table 3). As expected all five commentators articulate slower when the German team scores, with up to 3-second vowel durations for some speakers.

For the three TV commentators, F0 mean is considerably higher for 'triumphalese' than for commentaries after counter-goals. However, the two radio commentators do not differentiate the mean pitch as clearly, and speaker AB even has the same F0 mean in both conditions.

Table 3: The mean values in the first ips directly after the goal for commentators (* = from TV). Values for 'triumphalese' are in bold. 'pau' stands for 'pause'.

	articulation rate (in s/s)		F0 mean (in Hz)		no. of syllables	
AB	**0.3**	1.3	**381 (16)**	381 (27)	**1**	1
EE	**1.8**	2.8	**395 (39)**	360 (26)	**1**	1
BR*	**4.8**	5.4	**361 (39)**	282 (11)	**6**	pau+5
TB*	**0.9**	4.8	**384 (58)**	289 (46)	**1**	13
STS*	**2.2**	3.7	**405 (23)**	246 (39)	**3**	pau+8

There are also substantial differences between TV and radio in the amount of articulation for the counter-goal: two TV commentaries start with several seconds of silence after the goal, whereas the third TV commentator (TB) starts with a longer utterance.

4. DISCUSSION

4.1. Unusual pitch height

The male voices in live football commentaries reach an extremely high pitch when goals are announced. The 'goal roar' is particularly high when the German team scores, comparable in pitch to the cry of a newborn baby [8].

This observation contradicts the frequency code, which associates high F0 with smallness. Perhaps pitch control is decoupled from other vocal signals of dominance. The highest pitches were produced in 'triumphalese', where, among other affective dimensions, dominance over the rival finds expression.

Obviously, in this spoken text genre, taken from the 'real world', the fundamental frequency depends on the high level of arousal and, in cases of triumph, also on the high degree of positive valency. It might be that the largeness for the 'triumphalese' style (cf. Fig. 1) is expressed phonetically by lengthening (as is the case here). Further cues which are in line with the frequency code (but not studied here) could be acoustic reflexes of 'o-faces' and particular voice qualities.

4.2. Styles

The data from the 'real world' studied here differ substantially from data recorded under controlled lab situations. Thus, new insights can be provided about extreme phonetic behaviour which is socially expected for special situations.

Although our live commentary data are taken 'from the wild' and serve real communicative purposes (in contrast to most lab speech) stylisation can be observed in our radio and TV commentators. A typical example is the 3-second *Tor* – although it might appear more like a short vowel when compared with the even longer *goool* productions of many South American commentators. This suggests that there is always a certain amount of acting in these 'real world' commentaries.

Sports announcer talk has been analysed as a register featuring certain typical syntactic structures [2, 5]. Horse race commentary and football live commentary may thus be seen as different *sub-registers* of sports announcer talk [5]. Differences may be linked to the question of how to build up suspense (not treated here). Live football commentary on TV and the radio are very similar with respect to syntactic preferences (e.g. ellipses), lexical choice and prosodic particularities such as high accent and high boundary tones. But although TV and radio commentators focus on the same goals they reveal several *phonetic* differences resulting in different *styles*.

It can be assumed that in these commentaries, which can be seen as very listener-oriented speech production, phonetic stylisation helps listeners to decode the important information (goal or not, goal for or against the supported team) more quickly.

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