

To the Question of Sounds in Radio Analysis

CARIN ÅBERG

GUY: You see...radio is a very special medium, because it stretches the imagination.

MAN: Doesn't television stretch the imagination?

GUY: Up to 21 inches, yes.

Textual content analysis has a long history, in which figures of speech and styles of rhetoric trace their roots back to ancient Greece. For the analysis of pictures there is also a generally accepted semiotic vocabulary (albeit with alternatives), applicable with or without narrative theory to the expression of films and television. For analysis of radio there is nothing of this kind. Although there have been a few attempts to analyze of radio content from semiotic and linguistic perspectives, the problems of using analytic tools developed for other forms of expression on radio is obvious – the lack of analytic tools for aural forms of expression.

Sound poses a problem in our visually oriented view of the world since there is no objectively usable vocabulary besides a purely acoustic or physiologic. Even research rests on the ability to present a phenomenon visually, and there are no ways to visualize graphically what we are actually *bearing* – sound does not come across in print.

To capture the essence of radio as a purely aural medium is an essential starting point for research on radio, in connection

with media use, comprehension and comparative content analysis, as well as for more aesthetically oriented studies.¹ Above all, it is important to create a deeper understanding of the intrinsic character of the medium, thus the search for knowledge of the communicative abilities of sound could be compared to basic research in other research areas. But where do we look, which lines of inquiry will provide theories and analytic tools directed towards the medium of sound – radio – perhaps applicable also on sound in the mixed audio-visual expression of television, not to mention the increasing interest in other audio-visual media gathered under the headline of "multi-media"?

A Forgotten Perspective

For some time in the early days of radio, sound as a phenomenon, together with the fact that for the first time in history there was a medium which establishes direct contact between executor and audience without direct *physical* contact, became a fundamental question. The possibilities of mediating already established forms of performance and genres, e.g., theatre and public lectures, without special adaption to a purely sound medium aroused considerable interest. The same focus was obvious in questions of effects on listeners and the possible roles of radio in building "the

good society". The essential question addressed communication via pure sound. The consciousness of differences between mediation exclusively through sound or pictures got further emphasis in relation to the film medium. But interest rapidly sank and became a question just for those directly involved, probably with the emergence of the sound movie and successful experiments in broadcasting pictures with sound – television.

Today, radio analysis consists mainly of written transcripts, i.e. written texts, analysed from a written bias sometimes with perspectives from grammar or even phonetics. As an alternative there are comparative measurements of time concerning the division between speech and music. Some rare studies try to address the aural dimension but end up in terms of a channel's or station's certain kind of "sound" expressed as musical style or the DJ's "personality".²

Sounding

From a scientific point of view "sound" has been comprehended mainly as a phenomenon of a physical character and has been described in terms of energy, pressure and intensity. Research on sound from a human perspective has adopted this ontology, and hearing is mainly described in a physiological or psycho-physiological vocabulary, i.e., as sound level and pitch, subdivided into tones and noise defined in physical terms. Research on hearing has been, and mainly is, concentrated on correlating the physically formulated parameters with the physiological, and hearing is regarded as a matter of thresholds, loudness and frequency detection and is eventually reduced to neurology.³

A more humanistic perspective on sound is more or less absent, which is reflected in attempts to address the total ex-

pressiveness of radio. The division into speech on the one hand and non-speech on the other viz music, sound and silence, reappears constantly in the mainly German studies of more aesthetically oriented radio genres. But the relation between those categories, their importance for the total expression remains a matter of controversy. Regarding radio, the debate between Friedrich Knilli and Heinz Schwitzke concerning the "real world sound" in German *Hörspiel* might be an exception, but as Mark Cory suggests, even here one discerns a confusion between perception and apperception in the descriptions of the art of sound and the comprehension of it (Cory 1974:3f).⁴ Above all, this deals only with one single type of programs – the soundplay.

Other aesthetically focused studies of mainly radio drama, soundplay and (electro acoustic-) musical art have also failed to come up with analytic concepts of sound which are useful outside the merely aesthetic field of interest. The inquiry halts with the question of whether or not music have meaning, or with the question of the relative place of speech in the artwork of sound – a continuation towards the possibility of different kinds of meanings in different forms or combinations of sound is left untouched.

Andrew Crisell's promising attempt to describe the expression of radio in a semiotic vocabulary for other genres than solely aesthetic ones ends up in a complex terminology, where the Piercean trichotomy of a sign's firstness, secondness and thirdness loses its pregnancy since the question of what a sound sign might be is never asked.⁵

In radio studies focused upon speech the key concepts and tools for analysis of prosodic features on a supra-segmental level is rather rudimentary and oriented es-

pecially towards speech perception on a phonetic level, which can be seen as a result of the status of the guiding disciplines – physiologically oriented linguistics. The problem of studying and reproducing sound as a non-visual phenomenon is valid for science as a whole. Efforts directed towards a view of sound as an occurrence of its own often draw on some physically oriented area (probably for lack of alternatives) and appears, from a humanistic point of view, as incomplete, not to mention empty, without the essential human capacity – meaningfulness, intentionality.

The humanistic perspective on people and their societies now making its way into the former social psychologically and sociologically dominated area of media and communication studies ought to contribute with a view of characteristics, experience based gestalt, i.e., a qualitative perspective on radio and radio use – serving as a fundament in studies like the today so popular media ethnography, frequently occurring in research on television – but the question seems to have been overlooked. Radio as a medium is still regarded as having one single form of expression where the discriminations made are those between speech versus music, where programmes, channels and listeners or the distribution of listeners between different programmes or channels are *the* questions asked. In the few attempts starting from a more humanistic perspective the lack of a fundamental analysis of the medium's form of communication is obvious – the lack of a theory of *sound* radio.⁶

A Practical Dimension of Communication: Situation

One of the premises of communication is that we share a conception of the world around us as being divided into more or

less commonly held units to communicate about, and that we are able to express this. Thus it takes a codification of the world and manifest expressions able to "point to", to signify, in order to accomplish this. Our languages are the most obvious example of means of communication of this kind, and perspectives drawn from linguistics and philosophy of language are frequently used in studies of mediated communication.

In the philosophy of language the question of meaning is of central importance and in *Philosophical Investigations* Ludwig Wittgenstein criticizes a classical philosophical view of language and language use as mainly referential. Words are more than "names of objects" and the focus on logical truth conditions in semantics ignores the main use of language – ordinary use in everyday life. Wittgenstein also devotes some effort to language acquisition and the connection to mind and world, and he stresses the social dimension of language. His concept of "language-game" sometimes appears in theoretical considerations of media use and has come to stand for the essential relativity of different people's interpretations of situations and media content (cf Höijer 1992, i a).

Wittgenstein's use of the concept language-game is as an analogue to how to play different games conceived of as the following of rules without any meta-rules for game-playing (cf his "family resemblance") or as the making of rules as we go along (cf his stress on the word "play"). In the same way, Wittgenstein seems to say, we use language with different purposes where the "rules for usage" are bound up with the situation (cf, Garfinkel 1967). But Wittgenstein does not lose the connection to the world as is the case in most of the post-modern analysis – language does not lack reference, Wittgenstein rather points

to a fact that it is the actual situation of use that determines the referent or whether there is one.⁷ To inquire after a referent or a meaning is adequate in some situations, but not necessarily all.⁸ To state simply that signs are mutually dependent of each other is to isolate the language from the language users and the society and situation in which the language is used. If Wittgenstein shows the awkwardness in analysing language as an independent system of its own, different ethnomethodological studies drawing on Schutz' theory of natural attitude and taken-for-grantedness point towards a conception of meaning and meaningfulness founded in the projects of ordinary everyday life (Schutz 1962/1990, 1964/1976).

"The commonly held" is evident partly in the meaningfulness in conversation – most of the time we understand each other due to the situation we are in – and partly in the "incompleteness" explicit in analyses of ordinary conversations. In some areas of pragmatics this "incompleteness" – implicitness – is seen to be due to the "given" in a certain situation, more or less well circumscribed. And there is no reason to think that these conditions of meaningfulness in language are restricted to conversation only – they include mediated communication as well, e.g., speech mediated through radio. But radio differs in a crucial respect as the situation of listening to radio is not the same situation used to gain the meaning in the message transmitted. The question is how to create a "situation" merely with the help of sounds since the participants in the reconstructed communication are separated in space and sometimes even in time. In radio the substantial "situation" – perhaps totally determining the very *possibility* of communication – has to be not only *re-created*, but also explicitly constructed with the means of sound,⁹ at

the same time as the intended *message* also is to be formulated solely in sound.

To avoid the risk, recognized by Wittgenstein, of turning into a idealized and isolated analysis parallel to the theories of philosophy of language he is criticizing, an analysis of the expression of radio, too, has to be founded in praxis – in this case the uses of radio. To put it analogically, the "meaningfulness" of radio performance is *partly* to be found in the praxis of radio use.

Uses of and Structures in Radio Output

The first generation of radio researchers were highly conscious of the special characteristics of radio as a continuous flow – not as discrete units – and they tried to adapt their analysis to that (see, for example, Allport & Cantril 1935, Arnheim 1936, Hollonquist & Suchman 1944, Pear 1931).¹⁰ Among the descriptions of radio use three basic facts recur: that listening to radio is mainly a secondary activity, that it is a domestic activity, and that listener's attention varies and wanders between listening and other activities.

Drawing on some more contemporary studies it is possible tentatively to divide radio listening into three main categories:

- listening as a primary activity
- listening as a secondary activity
- "non-listening"

The last category may seem a bit odd but has the ability to cover a type of radio use where the actual listening falls into the background and helps shape a distinct kind of "mental room", in order to facilitate concentration or to emphasize a certain feeling or state of mind, etc.

Listening as a secondary activity is not "non-listening", but a way of radio use where the attention alternates between lis-

tening and other tasks. It is not a question of diversion, but of active choice of radio output structured so as to fit the tasks at hand (cf Alasuutari 1993, Steeg Larsen 1995, Nordström 1986).

Listening as a primary activity is an activity where the radio output is chosen for its own sake and where the radio listening in itself is the main purpose (cf Nowak 1981, 1987, 1990, Nordberg & Nowak 1985, Nordström 1986). Listening to the radio as a primary activity is often done while doing something else, but where these activities are chosen so as not to interfere with the listening.

What then, does a listener pay attention to or "know" that can correspond to the "situation" in a face-to-face conversation? Or more precisely, where is the codification to be sought? A comparative look at other forms of mediated communication shows that comprehension of a certain content in a text, is not unequivocally attributable to a given level, i.e. in a clause, sentence, paragraph or section, but rather involves a dynamic exchange between several levels (Källgren 1979, Horne et al 1994). And as different types of texts demand different levels of concentration and attention for their decodification, in a similar way radio programmes may be differentiated according to the burden of concentration and attention put on the listener.

The rough categorisation of different forms of radio listening could serve as a first step in the search for the level where the construction of "situation" takes place in radio. It is plausible that the construction of "situation" partly is to be sought among the conditions pointed at by the practices of radio listening and corresponding to different kinds of structures in the programmes themselves.¹¹ These structures, in turn, could serve as an expression of anticipated listening praxis – in

the absence of studies of intentions and praxis on behalf of the producers. The conditions for "listening in a meaningful way" differ radically between a radio drama, a reading of a short story, etc, and radio material divided into short, more or less separated, sequences in "magazines", current affairs and longer newscasts, concerning the time span the listener devotes to the radio. These types of programmes, in turn, differ radically from increasingly prevalent radio forms called musical mixes.¹²

Drawing on a material covering about twenty-seven hours of radio output gathered from altogether fourteen radio channels, it is possible to classify radio output into three different types (Åberg 1996):

- genre programmes
- sequential radio programmes and
- radio programmes of flow.¹³

Decisive for the categorisation are the interplay between units of "meaningful listening" and the durational structuring of the material.

Radio programmes of flow are characterized by the "music mixes" or by the mixing of speech and music where the musical genre, style or the tempo is essential. In this category the content as topic is left behind in favour of the music. More attentive listening to this kind of programmes does not seem to be meaningful. The category called genre programmes covers programmes that also thematically form a unit, e.g. radio drama, readings of short stories, serials, concerts, operas and lectures. A meaningful listening to these kind of programmes demands of the listener that s/he pay close attention. By sequential radio programmes I mean a type of programme consisting of topically coherent sequences in turn connected by a host, a super-theme or just a programme name. It is a frequently occurring form of radio pro-

gramme and subsumes "call ins", quizzes, sports, newscasts and magazines. The intended listener probably is assumed to listen due to real personal interest, but may also be occupied with other activities which the sequential form of the programme allows.

This meaningfulness circumscribed by situation and connected to the structure of radio programmes can be found on a very general level and consists from the listener's point of view of an expected use of the means of expression in a comparatively uncomplicated and rather conventional way.¹⁴ Although this general level can be seen as important in the interpretation of radio output, it is not that special kind of "situation for meaningfulness" referred to by Schutz, Garfinkel and Wittgenstein in their analyses. The structures to be found on this general level are more indicative of how deliberately non-verbal sounds are used in the creation of meaning in the programme as such (whether background noise is of importance for the message or just unavoidable, whether the exchange between music and/or sounds should be seen as intentional, whether voice quality is used to create personal characteristics, etc).

Roughly speaking, the codification of "situation" takes place at the general level by the choice of expressive means while the "situation of meaningfulness" is created by the actual use of these means (e.g. the lack of music in newscasts and more serious programmes of information versus the ubiquitous music in entertainment as well as the pieces of music used).

Comprehension on Two Roads: The Double Articulation of Language

An essential dichotomy in the analysis of language made by Ferdinand de Saussure is the distinction between a synchronic and a

diachronic dimension – a distinction he reiterates at every level, from phonetics to a programmatic dictum on the mission of linguistics (Saussure 1916/1970). Roman Jakobson seems to share this fascination, although he criticizes Saussure's view of the dimensions as mutually exclusive and rather regards them as mutually dependent or as two aspects of the same phenomenon (Waugh & Monville-Burston 1990). Jakobson uses this perspective, among other things, as an explanation on how meaning is created in language use, i.e., speech. Production and understanding of speech have to use two dimensions: easily put, a choice of speech sound in order to differ between words (cf bat-bit) and a combination of words in order to differ between different kinds of clauses (cf "he did run" versus "did he run"). This way of putting things could easily be seen as another path to a solution of the problem with the "situation" in mediated communication through radio: On the one hand a choice of means of expression to indicate the demands on concentration or attention in the listening activity and, on the other hand, a combination of different means of expression in order to create the situation essential for the communication of the intended message. If speech is regarded as the main carrier of meaning (as Crisell points out) then both the sounding dimension of speech (prosody) and the non-verbal sounds of radio can be seen as a compensatory way of expressing the absent "given situation" in radio, located on a programme sublevel.

A Teleological Dimension of Communication: Speech Functions

Like Wittgenstein, John L. Austin (1970/1962) criticizes the "copy theory" – that language represents the world on a 1:1 ra-

tio – and he focuses especially on those cases where a sentence is meant only to accomplish something. In sentences as "I name this ship...", "I do", etc, the referent is not easy to detect without a lot of reformulating into intentionality. All sentences in a language cannot be analysed as descriptions of something fitting into the true/false dichotomy, Austin says, (the descriptive fallacy) and ends up in the same sort of critique as Wittgenstein: a substantive analysis of language has to take the uses of language into account. Austin also stresses the force utilized in language.

Unfortunately Austin restricts the scope of his theory to "utterances ... understood as issued in ordinary circumstances". By that he excludes not only all forms of mediated communication, but also all kinds of literary performance, which he regards as "*in a peculiar way hollow or void*" (Austin 1970/1962:21, italics original). His speech-act theory thus cannot be applied to fiction, poetry or monologues, i.e., it is not applicable to radio output. His perspectives on a speech act with its locutionary, illocutionary and perlocutionary forces is reminiscent of Jakobson's six functions of language¹⁵ and the six factors of a speech event¹⁶ which are directly aimed at mediated communication.

According to Jakobson, it is possible to trace the functions of language in the expressed message (Waugh & Monville-Burstion 1990:69ff). And – speaking against Austin – it is possible to argue that speech and language in mediated communication also could be analysed as speech acts regardless of status of performance (see also Petrey 1990). It would thus be possible to apply a pragmatic view founded in ordinary everyday face-to-face communication to mediated forms of communication and to see radio output as a chain of deliberate "speech acts" in a somewhat abstract way,

where also the prosody and the non-verbal sounds of radio have to be considered. A starting point could be a search for the manifestations of the functions of language in the different means of expression used in radio.

The very shaping of radio content could point to specific deliberate "functions of language" and as such contribute to the above-mentioned combination of means of expression. From the more general level the focus can be relocated to a kind of "speech act level" and a real challenge in building a theory of radio communication and analysis can be formulated: to demonstrate how sound used in a systematic way can communicate.

Some results from the above-mentioned analysis of radio material from fourteen different radio channels points towards recurrent features within each category. In radio programmes of flow non-musical sounds occur foremost as parts of jingles, trailers and commercials. An intention in the choice of both music and sound effects reveals itself when conducting a commutation test of genre programmes that in themselves are not musical units, e.g. radio drama or short stories illustrated in sound. A more complex and unpredictable composition of sound is found in sequential radio programmes although some kind of systematics can be discerned in different types of sequences. Another point worth of mention is the use of different kinds of speech styles in different kinds of sequences, especially to accomplish a certain function, presentation, reporting, acting, etc.

The Sounds of Radio

Writing on the units of analysis in conversation analysis, Erwin Goffman stresses an overall difficulty to decide the limits for,

for instance an adjacency pair. As I understand him, Goffman conceives of a "conversation" as an forever ongoing process, in as much as an utterance can refer to something – or have its meaningful origin – much earlier in time without explicit (verbal) reference (Goffman 1981). Goffman also addresses unfortunate communication and points to the fact that misunderstanding (as well as understanding) in verbal communication seldom involves grammatical, indexical or elliptical features, or is due to complications within an adjacency pair. Instead, the phenomenon of articulation, pausing, intonation, rhythm, tempo and stress can cause problems (cf the problems in understanding an immigrant or a hearing impaired person who uses prosodic elements in an unexpected, unconventional way). By bringing these features in focus he stresses a condition for communication – that we have to be able to make distinctions into meaningful wholes in the continuous stream of sound – which implies a significant difference between written and spoken use of language.

Since radio, from the point of view of the listener, perceptually draws on participation in an ordinary everyday face-to-face conversation, the above-mentioned features of articulation, intonation, etc. can play a crucial role in an analysis of radio. But the mediation through radio also has to compensate for not being an ordinary, everyday face-to-face conversation i.e., there has to be identifiable and interpretable signs signifying the "situation of meaningfulness". The focus of analysis must therefore also be directed to the question of what these signs consist of and the category of non-verbal sounds comes to mind. Investigations in both these areas, the sounding codification of speech and the use of non-verbal sounds may show

some of the essential features of communication through radio.

Summary

A lack of awareness surrounding the most essential means of communication through radio and the explicit use of these in different functions – formulated from a humanistic perspective – results in an analysis of radio output as an undifferentiated whole, conducted with tools of analysis developed for other forms of communication. The recognition that radio, like other forms of communication, uses different means to accomplish different forms of communicative functions, in addition to a broadened awareness of radio as a *sound* medium, could lead to a more diversified discussion and more discriminating analysis of radio as a mostly useful medium.

With perspectives from linguistics and philosophy of language it is possible to create a theory for a deeper analysis of radio as a special kind of medium of communication. Adding results from studies on radio use and radio output with sound in focus, there are possibilities of constructing models for analysis of radio as a medium different from other mainly visually oriented media.

From this point of view an analysis of radio might tentatively take its starting point in sequences, delimited as temporally defined meaningful wholes. Thus, *one* delimitation would be the scheduled programmes, while the factors of the speech events are mainly connected to particular programmes or units within those programmes. Put in this way it seems also close at hand to connect these factors to the function often attributed to the medium of radio in our society: to inform, educate, entertain, etc.

One major difficulty rests in the lack of a humanistic vocabulary of sound, a topic not further addressed in this article. But as the ontology of physics serves as a foundation for a physical description of sound, a phenomenologically communicative, or perhaps semiotic ontology à la Peirce

might serve as a foundation for a humanistic description of sound. The task would thus be a more fundamental investigation into a phenomenological or semiotic analysis of radio, the only form of mediation that uses all kinds of sounds and that is directed solely to the ear.¹⁷

Notes

1. For a more substantive discussion see Åberg (1996).
2. There are however some attempts to describe the experience of listening to radio news broadcasts from a phonological point of view, see, Gustafsson (1991) and Strangert (1991) i a.
3. For an overview see for example Moore (1989).
4. The critique of Knilli formulated mainly by Schwitzke concerns the question whether the *Hörspiel* is an art of its own kind or should be considered a derivative of literary art where the expressiveness of speech is fundamental. (see e.g. Knilli 1959, 1961, Schwitzke 1963). The confusion noticed by Cory among others consists in the absence of a clear line between the work of art, the *Hörspiel*, the mediation via radio as a form of communication through merely acoustic signals (a question of perception) and the listeners interpretation of these acoustic signals as meaningful messages (a question of apperception).
5. Crisell uses the same subdivision of radio sound into speech, music, sound effects and silence as Cory. See Crisell (1986).
6. For a more substantive discussion see Åberg (1994, 1996).
7. Or to put it in other words: Wittgenstein criticizes philosophers who try to find a solution to difficult problems of reference by re-formulating the sentence. See for example, Russells attempt at re-formulation into "definite descriptions". Wittgenstein seems to say that no philosophical analysis of language can neglect the actual use of language (Wittgenstein 1958).
8. Cf Harold Garfinkel's somewhat strange experiment in Garfinkel (1967:24-53).
9. The comprehension and creating of time besides pure physical time is a most interesting and somewhat problematic theme not only in radio theory and in connection to listening, but will not be addressed further in this article.
10. Raymond Williams rediscovers the term "flow" but in connection with television distribution, see Williams (1990).
11. It is probably not the case that the structuring of radio programmes in a conscious way is caused by knowledge of the actual listening practices – it is rather the other way around – that different forms of programmes fit into different types of listening activities.
12. The impact of different forms of financing on forms of radioprogrammes, as well as the influence of forms of expression originating from other media, I leave behind in this article.
13. For a more explicit discussion see especially section 1.3, 2.1 and 3.1-3.2 in Åberg (1996).
14. Development of this theme could also be useful in creating a more useful categorisation of radio output for comparative quantitative analysis of different radio channels (see Åberg 1996).

15. Emotive, referential, poetic, phatic, metalingual and conative (Jakobson in Waugh & Monville-Burston 1990:77).
16. Addresser, context, message, contact, code och addressee (Jakobson in Waugh & Monville-Burston 1990:73).
17. These questions are among the central ones in my dissertation project *Forms of expression in radio*. Some results from a subproject are referred to in the section "Uses of and structures in radio output". The article as a whole presents some of my theoretical discussion. As to the question of tools, I have constructed a computer program aiming at a more differential analysis of radio output, which was tested in this subproject.

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