

## Hesitations in Speech Production in the Media

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**Abstract:** *Nowadays we are witnessing a substantial growth in the number of radio stations, as well as a simultaneous decline in the quality of the hosts' speech, particularly its fluency. Whereas people may be quite tolerant of various hesitations in everyday conversations, listeners often find dysfluencies in the speech of radio hosts distracting and irritating, expecting the hosts to be skilled in controlling their output. This research paper therefore offers a contrastive analysis of hesitations in the speech production of English and Croatian radio hosts, with the aim of determining whether the frequency of hesitation markers can be related to the formal training of hosts. If so, we can suppose that greater fluency of speech may be achieved through practice. To this purpose we have analyzed eight minutes (480 seconds) of speech of 32 radio hosts, 16 American and 16 Croatian, with an equal number of males and females in each group. Also, half of the hosts work at public radio stations, and the other half at commercial ones. In order to obtain the most objective results possible, the analyzed samples were taken from different episodes of talk shows on various subjects, as well as from different parts of the episodes (beginning, middle and ending). The results indicate that there is no correlation between gender and fluency since there was no relevant difference in the frequency of hesitations produced by male and female hosts, in spite of the generally accepted popular view that women are more fluent and verbal than men. More importantly, the results indicate that fluency is an aspect of speech that can be improved through practice and formal training. A surprisingly similar number of hesitations in the speech of American and Croatian hosts confirms the fact that speech fluency is a cognitive aspect of language, independent of language specific features.*

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## **Introduction**

Although speech is often associated with images that suggest continuity in sound production<sup>1</sup>, it does not fill time continuously, especially when it is spontaneous. Thoughts are often unstructured and need to be organized into a linear stream of speech. However, one idea may shift to another without any obvious connection. Some ideas are spoken out of turn, and some need to be corrected or elaborated upon (Fox Tree & Schrock, 1999). Therefore, it is not surprising that human speech is highly dysfluent (Clark & Fox Tree, 2002; Kendall, 2009; Rose, 1998). This characteristic separates spontaneous speech from prepared discourse.

We are witnesses today of a substantial growth in the number of radio stations, with an increased demand for hosts, which inevitably leads to a simultaneous decline in the quality of their speech, particularly its fluency. Whereas we as listeners can be quite tolerant of dysfluencies in everyday communication, we are less so when it comes to spontaneous speech in the media. The focus of this paper is therefore on the fluency of the speech of radio hosts. Given the fact that some hosts hesitate more than others, the aim of this paper is to see whether certain aspects of speech, such as its fluency, can be influenced, and whether the frequency of hesitation markers can be related to the formal education of the host. If so, we can suppose that greater fluency of speech might be achieved through practice.

This paper thus offers an analysis of hesitations in English and Croatian speech production on the radio, based on a research conducted on the speech of 32 American and Croatian radio hosts from private and commercial radio stations.

## **Theoretical background**

Spontaneous speech requires planning. More precisely, a speaker is continuously required to make three kinds of decisions while producing speech: a content decision, decisions of a syntactic nature and the selection of words (Goldman-Eisler, 1968). A content decision falls into the area of conceptualization and involves determining what to say. A speaker conceives an intention and selects relevant information either from memory or environment (Harley, 2001). The area of formulation comprises decisions about at least the broad outline of a syntactic structure, as well as the process of lexicalization. It also includes detailed phonetic and articulatory planning along with phonological encoding. Conceptualization and formulation are followed by articulation (Harley, 2001).

Harley (2001) points out that a number of authors, such as Henderson, Goldman-Eisler & Skarbek (1966), stress the role of cognitive cycles in the planning of speech.

According to them, phases of highly hesitant speech alternate with phases of more fluent speech. It is thought that most of the planning takes part in the hesitant phase, whereas in the fluent phase speakers merely say what they have just planned in the preceding hesitant phase. Field (2003) agrees with this assertion:

‘Research has suggested that speech proceeds in phases: a hesitant phase of about nine clauses is followed by a fluent one of about nine clauses. (...) If this is the case, it suggests that speech planning may take place on two levels. There may be short term planning, marked by relatively regular planning pauses and longer-term planning marked by a period of hesitant speech’. (p. 37)

Hesitations are therefore put into direct relationship with planning (Clark & Wasow, 1998; Goldman-Eisler, 1968; Rose 1998) and their analysis is concerned with the distribution of a variety of dysfluent features in spontaneous speech (Harley, 2001). In this research we follow Rose’s (1998) classification of hesitations into repairs (which include repeats, restarts and self-corrections), false starts, lengthenings and pauses.

Repairs usually consist of stopping the current flow of speech, inserting a pause or an editing expression, and providing new or modified information (Fox Tree & Schrock, 1999). It is important to mention that repairs often occur even when there is nothing wrong to start with. We should also keep in mind that many repairs are not correct themselves, so they might lead to the appearance of additional repairs (Levelt, 1983). When a speaker iterates a lexical item in mid-sentence, it is called a repeat. Usually, just one word is repeated (Rose, 1998). According to Clark & Wasow (1998), repeated words are among the most common dysfluencies in spontaneous speech. Furthermore, in the English language function words<sup>2</sup> are repeated far more often than content words (Clark & Wasow, 1998). If a speaker utters a few words and then suddenly returns to the beginning of the clause to iterate the same words, we are dealing with a restart (Rose, 1998). In order to make a self-correction, the speaker must notice that there is something wrong with the uttered word. The word is then followed by a replacement that is understood to constitute a retraction of that word (Rose, 1998). In other words, the speaker interrupts his own flow of speech and creates a new utterance (Levelt, 1983).

Sometimes speakers discard the first attempt at lexicalization. They make a false start by uttering a few words and then stopping in mid-sentence, which may be followed either by a revised attempt to lexicalize the same idea or by silence in order to release the conversational turn (Rose, 1998). Lengthenings, on the other hand, refer to a prolongation of syllables beyond their normal or expected length (Clark & Fox Tree, 2002).

Given the fact that there are various types of pauses, it is substantial to define them precisely and to determine which types of pauses will be taken into consideration for the purposes of this research. To begin with, we will distinguish four types of pauses: articulatory, respiratory, juncture and hesitation pauses.

Articulatory pauses are associated with the articulatory closure of stop consonants and range, according to Rose (1998), from 50 to 250 milliseconds. At this point it should be mentioned that the duration of pauses considered to pertain to this group depends on researcher's judgment. For example, Kendall (2009) argues that articulatory pauses are in fact shorter than 60 milliseconds. Whatever the case, articulatory pauses are short enough to pass unnoticed and not be counted as hesitations.

The second type of pauses is associated with respiration. At least to a certain degree, speakers coordinate their breathing with language planning processes (Kendall, 2009). According to Goldman-Eisler (1968), breathing appears to be "a passive process fitting into given breaks in speech irrespective of whether or not these occur at grammatical junctures" (p. 98). These pauses are therefore not relevant for this research, either.

Juncture pauses also do not imply hesitation. They are semantically determined and well integrated into the grammatical structure. These pauses occur at grammatical junctures, such as "natural" punctuation points (e.g. the end of a sentence, before a conjunction or relative and interrogative pronouns, when a question is indirect or implied, before all adverbial clauses of time, manner and place, and when complete parenthetical references are made (Goldman-Eisler, 1968). Pauses whose position cannot be explained by these rules are therefore non-grammatical and considered to be hesitations in speech. Such pauses are the object of our research.

### **Hesitation pauses**

Goldman-Eisler(1968) argues that the decisive factor in breaking up the linguistic groupings at non-grammatical places is hesitation. Such hesitation pauses may be silent (unfilled) or filled (voiced).Mead (2000) claims that silent pauses are not necessarily dysfluencies, while filled pauses can almost certainly be regarded as such, according to his opinion, in the context of professional public speaking. However, Mead's definition of silent pauses includes stops for breath and deliberate pauses for emphasis. We have already excluded these as respiratory and semantically determined pauses respectively. Therefore, non-grammatical silent pauses will be considered hesitations in this research.

Harley (2001) defines an unfilled pause as a moment of silence, emphasizing that its duration shows a wide range of variance. Kendall (2009) says the minimal cut-off point for silent pauses, according to Kowal & O'Connell (1980), is 270 milliseconds, whereas Goldman-Eisler (1968) adopts various low threshold values from 100 to 250 milliseconds, depending on the experiment.

Although speakers may use filled or voiced pauses in order to sound more fluent, they “generally serve as stalling acts to give speakers more time to prepare a near-future word or phrase” (Rose, 1998, p. 54). They can be unlexicalized or lexicalized. Unlexicalized pauses may be filled with any of the following phonetic combinations: /a/, /am/, /u/, /um/, /e/, /em/, /m/. By far the most common unlexicalized filled pause, according to Rose's research, was the short form of *er*, followed by the short form of *erm* (Rose, 1998).

Filled (voiced) pauses may be lexicalized with expressions such as *so*, *okay*, *let's see*, *like*, *well*, *you know* and *I mean*. The terminology differs when it comes to this kind of pauses. Harley (2001) calls them *parenthetical remarks*, whereas Fox Tree & Schrock (1999) categorize them as *discourse markers*. They may also be called *editing expressions* (Clark & Wasow, 1998). Clark & Fox Tree (2002) refer to them as part of *performance additions*. Their presence is one of the ways spontaneous speech differs from planned speech. Unlike spontaneous speech, prepared speech allows advance planning and extensive revision time, so the speaker does not need additional time or help in organizing and expressing ideas (Fox Tree & Schrock, 1999), which is the general purpose of filled pauses.

### **The speech of radio hosts**

Although dysfluencies frequently appear in spontaneous speech and sometimes even go unnoticed, radio hosts are expected to show no hesitation on the air. Despite the fact that hesitations do not necessarily imply poor communication skills<sup>3</sup>, listeners often find them distracting and irritating (Rose, 1998). Goffman (1981) notices that “faults we would have to be trained linguistically to hear in ordinary talk can be glaringly evident to the untrained ear when encountered in broadcast talk” (p. 240). Furthermore, he argues that the skill of radio hosts is to control output; moments of doubt or distraction are expected to stay hidden from the listeners. By using fillers, professional speakers do exactly the opposite –they indirectly announce that they are having preparedness problems. This can seriously undermine their authority, given the fact that professional speakers are expected to be knowledgeable and competent. In Goffman's (1981) opinion, an accomplished public speaker should not exceed “acceptable limits for pauses, restarts, repetitions, redirections (...)” (p. 172), and Mead (2000) explicitly emphasizes the importance of fluency as a determinant of interpretation quality.

## A research into hesitations in speech production

This paper focuses on the frequency of hesitations in the speech of Croatian and American radio hosts. It is easy to notice that the frequency of hesitations varies substantially from host to host, especially in the past decade or so, due to a rapid growth of the number of radio stations, followed by a simultaneous decline in the quality of hosts' speech and in particular its fluency. Our main assumption is that the frequency of hesitation markers can be related to the formal education of the host, which would lead us to the conclusion that this aspect of speech can be influenced by increasing one's awareness of the dysfluencies, and by practice.

Throughout this research we rely on the differences between public and commercial stations, starting from the fact that the latter tend to hire less skilled persons with little or no professional training. The main fact about these two types of stations are shown in Chart 1:<sup>4</sup>

	Public radio	Commercial radio
Station ownership	Independent local stations that are members of a national organization.	Private/corporate owned stations and affiliated stations.
Tax Status	Non-profit.	For profit.
Revenue	Revenue from individual members, corporations, foundations, and government sources.	Revenue from advertising.
Programs	Programmed at the local level, with national program offerings as well as local news and other programs.	Varies; some local autonomy but show tendency for centralized programming.

*Table 1.* An overview of radio station status

One of the main areas, thus, in which radio stations differ significantly is the politics of the employment of radio hosts. Alongside the higher criteria that their future hosts have to meet, public radio stations provide formal education for their employees.

Croatian Radio-Television (HRT) is a Croatian public broadcasting company that comprises both Croatian Television and Croatian Radio. In 1991, the Department for Language and Speech was founded at this broadcasting company, consisting of highly professional proofreaders and phoneticians who train HRT's hosts and journalists. The employees are obligated to cooperate with the Department on a regular basis. The professionals employed at the Department are highly qualified and

experienced announcers with a college degree in the relevant field. Novice hosts are always mentored for several months by professionals at the Department, whereupon they assist in the program until their supervisors decide they can start working on their own. Given the fact that the job in question is highly demanding, the hosts' skills are checked on a daily basis.

The situation in the US is somewhat different, but the importance of formal education can also be noted. Although radio hosts are not required to have any formal education beyond a high school diploma in order to get a job at a public radio station, they should have a bachelor's degree in a related field to be competitive for entry-level positions. Short-term on-the-job training is required upon being hired, according to the Bureau of Labor Statistics<sup>5</sup>. The Bureau defines it as "additional training needed (postemployment) to attain competency in the skills needed in this occupation". Moreover, hosts are often required to complete long-term on-the-job training: trainees usually must have several years of experience in the industry before receiving an opportunity to work on the air.

When it comes to commercial radio stations, the situation is radically different. These stations are more inclined to hire beginners, and new, inexperienced employees are immediately given host positions, so they face difficulties in hosting a show without any prior training. These systems are not as developed as public ones, so the advancement within the same station is unlikely. It usually takes place when a host relocates to a larger, public station. Furthermore, if unskilled employees continue hosting without becoming aware of their deficiencies, their progress over the years may become questionable.

Therefore, the hosts included in this research were chosen on the basis of their workplace; hosts working at public radio stations comprise one group, as opposed to those who host shows at commercial radio stations. In this way, we have divided hosts into two groups: those who have some formal training, and those who do not.

## **Method**

Given the fact that we listen to radio hosts without being able to see them, it is sometimes difficult to determine whether their speech is spontaneous or whether they read some previously prepared material. To make sure that the analyzed speech is indeed spontaneous, the material included in this research consists of dialogues (interviews). Unlike monologues, dialogues cannot be prepared in advance. A host may have (and usually does have) some questions prepared for their interlocutor prior to the interview. However, in live conversations linguistic decisions are made on the spot.

We have therefore analyzed eight minutes (480 seconds) of each host's speech. In order to obtain objective results, the analyzed samples were taken from two to five episodes, in case there were some external factors momentarily influencing spontaneous speech<sup>6</sup>, as well as from different parts of episodes (beginning, middle and ending), given the fact that the level of concentration and stage fright changes during the show. We analyzed the speech of 32 radio hosts, both at public and commercial radio stations, 16 of them American and 16 Croatian. To be as objective as possible, half in each group were female, and half were male. Moreover, 16 hosts (50 % of the total number) work at public radio stations, whereas sixteen of them work at commercial radio stations.

Each recorded sample was analyzed and the dysfluencies were categorized according to Rose's (1998) classification as different types of repairs or as hesitation pauses (see sections 2 and 2.1). The results were then statistically analyzed. The overall detailed results are presented in Table 2.

### **Radio stations/networks and radio shows included in the research**

The American public radio stations/networks whose official websites were used in this research in order to find podcasts of American radio talk shows are WNYC, American Public Media and NPR. They produce and distribute public radio programming. WNYC 93.9 FM and AM 820 are "New York's flagship public radio stations, broadcasting the finest programs from NPR, American Public Media, Public Radio International and the BBC World Service, as well as a wide range of award-winning local programming"<sup>7</sup>. American Public Media is "the largest owner and operator of public radio stations and a premier producer and distributor of public radio programming in the nation"<sup>8</sup>, whereas NPR is described on its official website as "a thriving media organization at the forefront of digital innovation", which creates and distributes award-winning news, information and music programming to a network of 975 independent stations<sup>9</sup>.

As for the Croatian stations/networks, Croatian Radio (HR), as part of the national broadcasting corporation, runs three national, one international and eight regional stations<sup>10</sup>. We have included in this research two national (HR 1 and HR 2) and three regional stations (Radio Sljeme, Radio Rijeka and Radio Osijek). Given the fact that HRT's official website contains podcasts of many talk shows that are broadcast on the previously mentioned stations, we have used them as the main source for this category of radio stations. We have also recorded some of the episodes via live streaming prior to the analysis.



For the purposes of this research we have used podcasts from two American commercial radio networks: TogiNet and BlogTalkRadio. TogiNet is an Internet talk radio network that streams live web radio programming and provides podcasts that can be downloaded<sup>11</sup>, whereas BlogTalkRadio is described on its official website as “the world’s largest and most influential social radio network with thousands of talented experts hosting shows on every kind of topic”, attracting “a very significant audience of more than 21 million unique visitors per month”<sup>12</sup>.

The program of a great number of Croatian commercial radio stations is also available via live stream. Eight talk shows broadcast on eight commercial radio stations from different parts of Croatia were recorded and analyzed. The stations included in the research were Petrinjski radio, Radio Jaska, Radio Martin, Radio Ritam, Radio Eurostar, Radio Šibenik, Free For Radio Hvar and Pomorski Radio Bakar.

The radio shows analyzed in the research are characterized by a wide range of topics. They cover sports, religion, economics and business, art, ecology, entertainment and music, as well as politics and society.

Results and discussion

	HOST	SHOW	RADIO STATION/ RADIO NETWORK		Overall duration of the analyzed samples	HESITATION ANALYSIS (number of occurrences in the analyzed sample)						Pauses		Overall number of hesitations	
			Croatian/ American	Public/ Commercial		Name	False starts	Repeats		Self -corrections	Lengthenings	Silent (unfilled)	Voiced (filled) pauses		
								Repeats	Restarts				unlexicalized		lexicalized
1	Jeff Greenfield	Morey Talking	American	Public	WNYC	480 sec	1	15	0	1	0	12	9	3	41
2	Leonard Lopate	Please Explain	American	Public	WNYC	480 sec	7	4	1	2	7	2	43	12	78
3	Krista Tippett	On Being	American	Public	American Public Media	480 sec	9	23	4	0	0	5	18	6	65
4	Neal Conan	Talk of the Nation	American	Public	NPR	480 sec	1	21	3	2	0	1	52	0	80
5	Tom Ashbrook	On Point	American	Public	NPR	480 sec	5	16	7	1	8	6	20	4	67
6	Terry Gross	Fresh Air	American	Public	NPR	480 sec	8	11	4	1	3	7	20	15	69
7	Michel Martin	Tell Me More	American	Public	NPR	480 sec	5	13	4	1	3	9	11	9	55
8	Susan Page	The Diane Rehm Show: Friday News Roundup	American	Public	NPR	480 sec	6	6	4	4	2	7	19	9	57
9	Elina Čandrić	U mreži Prvog	Croatian	Public	Hrvatski Radio 1	480 sec	2	1	0	1	8	1	41	9	63
10	Milena Šikantić	U mreži Prvog	Croatian	Public	Hrvatski Radio 1	480 sec	1	2	3	2	3	10	29	16	66
11	Jana Haluza	Diskografija	Croatian	Public	Hrvatski Radio 1	480 sec	1	1	2	1	12	4	27	7	55
12	Zlatko Turkalj	U pola dva, glazbene minute	Croatian	Public	Hrvatski Radio 2	480 sec	1	5	2	2	0	9	17	7	43
13	Sonia Šarunčić	Ništeneni sa Sonjom	Croatian	Public	Radio Sijenna	480 sec	2	0	0	2	44	1	21	1	71
14	Dorothea Brijak Šunalko	Platforma	Croatian	Public	Radio Sijenna	480 sec	1	1	0	2	22	5	26	5	62
15	Alen Čampajić	Čakvo	Croatian	Public	Radio Rijeka	480 sec	3	8	1	1	8	2	43	3	69
16	Zvonimir Mandić	Desetica	Croatian	Public	Radio Oštrik	480 sec	1	2	0	2	25	2	9	0	41
17	Jasminka Erleđ	Klub žena / Muzik	Croatian	Commercial	Radio Jaska	480 sec	0	1	0	2	35	3	103	22	166
18	Katja Vučićić	Interviews*	Croatian	Commercial	Free For Radio Hvar	480 sec	7	16	3	3	9	1	112	2	153
19	Ivana Mlaković	Tvoje polvorjenje	Croatian	Commercial	Patinski radio	480 sec	0	3	0	2	21	0	145	38	209
20	Rade Kristić	Štinski karol	Croatian	Commercial	Radio Šibenik	480 sec	4	15	5	3	59	8	45	30	169
21	Aleka Devona Mistačić	Ekološke teme i odlome	Croatian	Commercial	Pomorski radio Bakar	480 sec	0	0	0	2	55	1	56	16	130
22	Nikola Unkalo	Srdom u sriku	Croatian	Commercial	Radio Riam	480 sec	3	7	4	2	27	7	46	13	109
23	Denis Bakić	Drobljica	Croatian	Commercial	Radio Martin	480 sec	2	10	2	1	24	10	50	15	114
24	Vedrana Klčina	Istarski prvi	Croatian	Commercial	Radio Eurostar	480 sec	0	1	0	1	56	0	81	24	163
25	Mary Cmilica	Takšense Radio	American	Commercial	ToggleNet	480 sec	9	16	3	4	6	7	53	26	124
26	Michael E. Stern	Build a Better Photograph	American	Commercial	ToggleNet	480 sec	6	29	3	2	7	15	38	21	121
27	Brecc Bakman	Education2Excellence	American	Commercial	ToggleNet	480 sec	22	32	9	1	4	17	52	55	192
28	Bary Farber	Breakthrough	American	Commercial	BbgTalkRadio	480 sec	9	43	13	1	0	5	39	27	137
29	Andrew Woodson	The Drew Show	American	Commercial	BbgTalkRadio	480 sec	11	57	29	1	1	0	83	10	192
30	Helen Woo	Self Aid Success Stories	American	Commercial	ToggleNet	480 sec	10	17	1	1	3	9	50	35	126
31	Mary Beth Wells	The Mary Beth Wells Hour	American	Commercial	ToggleNet	480 sec	13	6	3	3	12	20	59	19	135
32	Pat Skann	American Patchwork and Quilting Radio	American	Commercial	ToggleNet	480 sec	12	24	0	0	7	14	40	49	146

Table 2. Detailed results<sup>13</sup>.

Before presenting a detailed analysis of the results of this research, two very important conclusions must be made. First, the results have confirmed that spontaneous speech is highly dysfluent; on average, one radio host made thirteen hesitations per minute.<sup>14</sup> Secondly, it should be noted that the number of hesitations varies substantially from host to host – they made from 41 to 209 hesitations in 480 seconds (on average, five to 26 hesitations per minute). The factors potentially influencing the frequency of hesitations are discussed in this chapter.

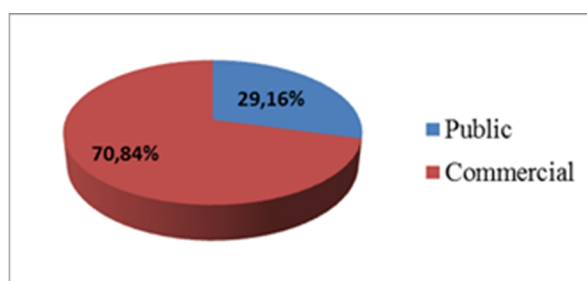
Our research involved an equal number of male and female radio host (16 male and 16 female, 32 in total). However, although women generally tend to be considered more fluent than men, the results indicate that there is no relevant difference in fluency, i.e. in the overall number or frequency of hesitations produced by male and female hosts (1728 and 1640 respectively).

### Public vs. commercial radio stations

As expected, the number of hesitations made by radio hosts working at commercial radio stations was substantially larger than the number of hesitations made by hosts at public radio stations. These data are presented in Table 3 and Chart 1.

	Overall number of hesitations	Average number of hesitations per host in one minute
Public	982	7,67
Commercial	2386	18,64

*Table 3.* The number of hesitations made by all hosts included in the research at public and commercial radio stations.



*Chart 1.* The ratio between the number of hesitations made by hosts working at public and commercial radio stations.

We have already explained that public radio stations provide formal education for their employees so that they become aware of dysfluencies, and then aim to eliminate

them as much as possible. Commercial radio stations mostly do not offer this opportunity, leaving their employees to improve their skills themselves. Based on the results of this research, we can conclude that the frequency of hesitations in the speech of radio hosts depends on their formal education. Fluency is, therefore, an aspect of spontaneous speech that can be influenced by formal training and practice.

When it comes to potential differences in fluency with regard to English and Croatian, the number of hesitations made by American and Croatian radio hosts was surprisingly similar – 1685 and 1683 respectively. This proves that fluency is a universal and cognitively based characteristic of human speech.

### Individual types of hesitations

The total number of different types of hesitations, based on Roses's (1998) classification is given in Table 4 and Chart 2.

		Public	Commercial	American	Croatian	Overall
False starts		54	108	134	28	162
Repairs	Repeats	129	277	333	73	406
	Restarts	35	75	88	22	110
	Self-corrections	25	29	25	29	54
Lengthenings		145	326	63	408	471
Silent (unfilled) pauses		83	117	136	64	200
Filled (voiced) pauses	Phonetic (unlexicalized)	405	1,052	606	851	1,457
	Lexicalized	106	402	300	208	508

Table 4. The number of hesitations in the research by type.

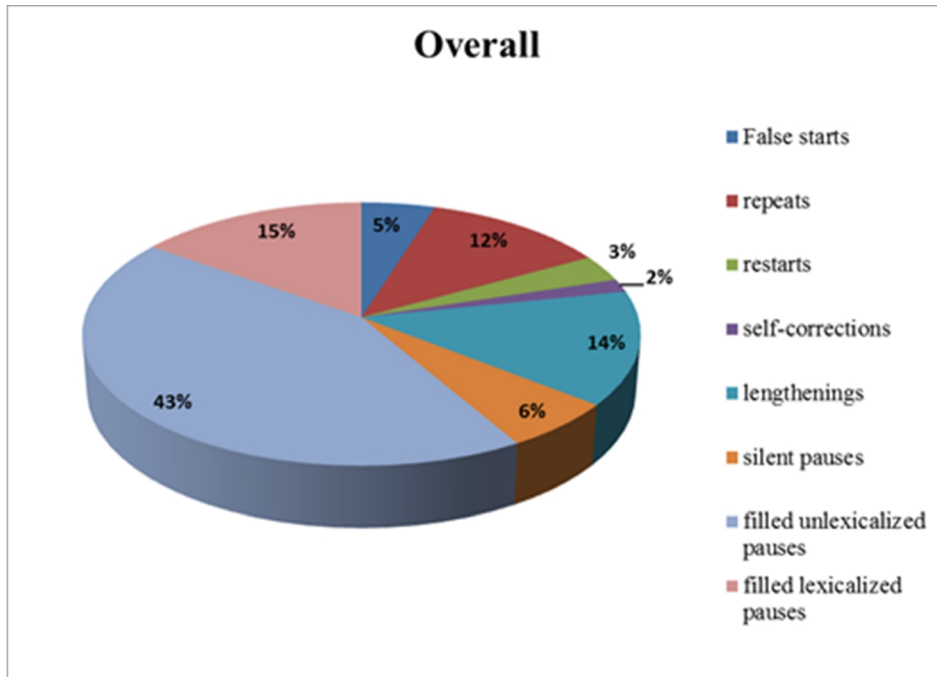


Chart 2. The ratio between the frequency of different types of hesitations.

### ***Pauses***

We can see that silent pauses comprise only 6% of all hesitations in the analyzed samples. Taking into consideration the fact that filled pauses account for a relatively high 58% of the total, it can be argued that speakers consider silence to be the most inconvenient option because it implies a complete rupture in communication. As Brennan & Williams (1995) claim, when speakers use filled pauses, they create the illusion of greater continuity: a delay containing a filler is subjectively shorter than the same delay with dead silence. However, the research showed that American hosts are more prone to silent pauses than Croatian hosts, and use them around two times more often than Croatian hosts.

As can be seen in Chart 2, filled unlexicalized pauses comprise 43% of all hesitations registered in the research. Without any doubt, we can claim that they are the most common type of hesitations. The research has confirmed the statement that the most common unlexicalized filled pause is, by far, the short form of *er* (Rose, 1998). This applies not only to the speech of American, but also of Croatian radio hosts. On the other hand, filled lexicalized pauses comprise 15% of all hesitations, occupying the second position when it comes to frequency. We can conclude that it is easier for a

speaker to fill a potentially empty space in speech with an unlexicalized pause, given the fact that it requires less planning than a lexicalized one.

The most frequent lexicalized pauses in the research among American hosts were filled by *you know* and *I mean*. *Well, so* and *like* also occurred often. Croatian hosts included in the research mostly used *dakle* and *evo*. Fillers that also occurred, but were not nearly as frequent, were *ovaj, ovoga, ono, onako, zapravo, znači, recimo, eto* and *pa*. Furthermore, filled lexicalized pauses were more frequent at commercial radio stations: they occupy the second position when it comes to the most frequent hesitations made by hosts at commercial radio stations (17% of all hesitations), and fourth position among hesitations made by hosts at public stations (11%). Moreover, the research showed that American hosts use filled lexicalized pauses more often than Croatian hosts. Pauses therefore comprise 64% of all hesitations made in the research and therefore occupy the highest position on the ladder of the most frequent hesitations of radio hosts.

### ***Lengthenings***

Although not nearly as frequent as filled unlexicalized pauses, lengthenings occurred very often in the research as well: they comprise 14% of all registered hesitations. Women appear to be more prone to lengthenings (they make 17% of all the hesitations female hosts committed in this research, in comparison with male 11%). Furthermore, lengthenings can be considered a prominent characteristic of the spontaneous speech of Croatian radio hosts: they comprise 24% of all hesitations, occupying the second position on the ladder of the most frequent hesitations made by Croatian hosts. On the other hand, among the hesitations of American hosts they occupy the penultimate position, comprising only 4% of all hesitations. The only type of hesitations that Americans used less were self-corrections (1%).

### ***Repeats***

As lengthenings have marked the spontaneous speech of Croatian hosts, repeats turned out to be the most prominent feature of the speech of American hosts, second to filled unlexicalized pauses, which were the most frequent type of hesitations among both American and Croatian hosts. This confirmed Clark & Wasow's (1998) assertion that repeated words, in the English language, are one of the most common dysfluencies in spontaneous speech. Repeats thus comprised 12% of all hesitations registered in the research. Men tended to repeat words more frequently than women; repeats comprised 16% of hesitations made by male radio hosts, and only 8% of hesitations committed by female hosts.

Furthermore, Clark & Wasow (1998) claim that function words in the English language are repeated far more often than content words. This research confirmed their assertion; the words that were repeated most frequently were function words such as conjunctions (*and, or*), prepositions (*of, to, on*), auxiliary verbs (*has, are*), pronouns (*I, it, that*) and articles (*the, a*). Function words establish a relationship between content words; they are short and easier to pronounce, so they make a perfect candidate for repetition. Repeats comprised 20% of all hesitations made by American hosts and only four percent of hesitations made by Croatian radio hosts. The explanation for such a difference may lie in the fact that English, unlike Croatian, has the category of articles, which are extremely frequent and contribute to a much higher ratio of repeats by American hosts. As we have already concluded, function words are repeated far more often than content words, so the difference in the frequency of repeats in English and Croatian may not be as surprising as it seems at first glance.

### ***False starts and restarts***

False starts and restarts belong to hesitations that do not occur often. False starts comprised only 5% of the hesitations committed in the research. American radio hosts tended to be more prone to making false starts than their Croatian counterparts (83% as opposed to 17% respectively). Restart, on the other hand, comprised only 3% of all hesitations. However, there is a considerable difference in their usage between male and female radio hosts; for an unknown reason, male hosts used them three times more often than their female counterparts. This difference is even more prominent when it comes to the use of restarts in English and Croatian: American radio hosts use them four times more often than Croatian hosts.

### ***Self-corrections***

Self-corrections occupy the lowest position on the ladder of frequency of hesitations, comprising only 2% of all hesitations made in the research. Such a low percentage may be understandable if we take into consideration the fact that, by using self-corrections, we admit in a very conspicuous way that we have made a mistake. As Goffman (1981) argues, moments of distraction are expected to stay hidden from the listeners. Otherwise, a speaker's authority may be seriously undermined, given the fact that professional speakers are expected to be knowledgeable and competent (Goffman, 1981).

## **Conclusion**

This research examined the frequency of hesitation markers in the speech of American and Croatian radio hosts, starting from the assumption that fluency is an

aspect of speech that can be influenced, primarily by formal training. The results showed a surprisingly similar number of overall hesitations committed by American and Croatian hosts. As for the correlation of gender and fluency that has also been examined in this paper, the results indicate that there is no relevant difference in the frequency of hesitations produced by male and female hosts, in spite of the generally accepted view that women are more fluent than men.

The most frequent type of hesitation with all hosts was filled unlexicalized pauses because they require least planning and effort while bridging a potential silent gap on the air. Croatian hosts were more prone to lengthenings as the second most common type of hesitation, as opposed to American hosts who had repeats in this position. This may be related to the fact that function words are repeated far more often than content words, and the presence of articles increases significantly the frequency of function words in English, as opposed to Croatian that doesn't have this category.

One of the major differences, however, between the radio hosts involved in our research is not related to their respective languages but to their formal training. Hosts who have had substantial training by professional phoneticians and other trained experienced announcers showed fewer hesitations and improved fluency. This speaks in favor of two of our initial claims – that fluency is a cognitive rather than a language-specific aspect of speech, and that it can be improved through professional training. This indicates that such training is very important for speech production in all types of audio-visual media, and it concerns not only fluency and good articulation, but other aspects as well, ranging from the choice of appropriate vocabulary and syntactic structures, to the choice of appropriate style.

<sup>1</sup> Goldman-Eisler (1968) mentions the even flow, fluency in speech, a flood of language, as well as gush, spout, stream, torrent and floodgates of speech.

<sup>2</sup> Function words are used largely to express the relations between elements of sentences, or to indicate their discourse functions. They comprise articles, prepositions, conjunctions, auxiliary verbs and pronouns (Clark & Wasow, 1998).

<sup>3</sup> Some hesitations may serve a communicative purpose, for example avoiding embarrassing situations or drawing the interlocutor's attention (Rose, 1998).

<sup>4</sup> [www.isu.edu/kisufm/differences.html](http://www.isu.edu/kisufm/differences.html)

<sup>5</sup> [www.bls.gov/ooh/media-and-communication/announcers.html](http://www.bls.gov/ooh/media-and-communication/announcers.html)

<sup>6</sup> For example, fatigue or illness.

<sup>7</sup> [www.wnyc.org](http://www.wnyc.org)

<sup>8</sup> [americanpublicmedia.publicradio.org](http://americanpublicmedia.publicradio.org)

<sup>9</sup> [www.npr.org](http://www.npr.org)

<sup>10</sup> [radio.hrt.hr](http://radio.hrt.hr)

<sup>11</sup> [toginet.com](http://toginet.com)



<sup>12</sup>[www.blogtalkradio.com](http://www.blogtalkradio.com)

<sup>13</sup>The information about the podcasts found on the official website of the radio station Free For Radio Hvar is limited due to the closure of the station in 2013. The name of the analyzed show was therefore not available.

<sup>14</sup>The overall number of hesitations in this research, made by 32 radio hosts, is 3,368. As mentioned in the previous chapter, the duration of each host's speech sample was eight minutes (480 seconds).

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