THE INTONATION OF RHETORICAL QUESTIONS IN ITALIAN

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1. INTRODUCTION

The rhetorical question (henceforth RQ) is a marked sentence type that has not a prototypical function in that it does not satisfy the essential condition of the interrogative speech act. Although it has the surface form of a question, it does not have the function of requesting something, nor does it elicit an answer. RQs are not a homogeneous category. Within this category there are different typologies, some distinct by structure, while others by function.

Some RQs are identifiable in their syntactic form by the presence of Negative Polarity Items (NPIs), i.e. lexical elements of negative polarity. These include perhaps, not, ever, you want, after all, lift a finger, which act as linguistic cues by directing the hearer towards the rhetorical interpretation of the question, (1) Have you ever noticed that we don’t go to the cinema? In many languages, including Italian, the syntactic structure of wh- or polar RQs may resemble that of information-seeking questions (from now ISQs), in terms of word order and lexical choices, (2) Can you drive?, (3) What’s the problem? In these cases, reference to the situational context is necessary to disambiguate the questions. To this purpose, Ilie (1994: 5) assumes that RQs should be considered <a special use of the question and not a special category>, while Frank (1990: 737) writes that <context may be the most salient determiner of frequency and function of RQ’s>. Similarly, Jung & Schrott (2003: 360) believe that it is only the context that decides the illocutionary value of the question. The pragmatic ambiguity between identical RQs and ISQs also produces potential consequences on the prosodic level. This aspect has recently been focused on for the construction of specific methodological protocols aimed at identifying phonetic cues able to discern the sentence-pairs (ultra).

Nevertheless, the role of context is just one of the crucial issues regarding RQs. Another recurrent point of discussion in the theoretical debate concerns the pragmatic and semantic interpretation of RQs. The general assumption is that RQs are hybrid sentences with a complex pragmatic structure in which traits of the interrogative and traits of the assertive sentences coexist. In simple terms, unlike ISQs, RQs do not ask for information, but at the same time, unlike assertions, they do not provide relevant information. This debate has raised conflicting viewpoints, as it is well documented in the literature on the topic.

Over the years, RQs have been studied from different research perspectives, even if the semantic-pragmatic approach provided convincing results showing different angles of interpretation. Due to the pragmatic contradiction between the literal meaning, which is that of a question, and the discursive function, which is mostly that of an emphatic assertion, there is a broad agreement that RQs are indirect speech acts. Deprived of their interrogative function, RQs do not require an explicit answer. These sentences are minimally informative. Most of the time, they are not intended to elicit an explicit verbal response: what is said is already implicitly known by both the speaker and the addressee.

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However, especially in spontaneous dialogues, the hearer might answer the question. In this case the response is generally self-evident (Ilie, 1994; Rohde, 2006).

Within different positions, it is possible to identify three theoretical macro-approaches. The first of these assumes that RQs behave as negative assertions. According to Sadock (1971), RQs are diagonal statements, as they have the form of a question (structural equivalence with interrogatives), but the function of a strong assertion of opposite polarity of what appears on the surface structure (semantic equivalence with assertions). Similarly, Han (2002) points out that RQs share the properties of assertions (including the absence of an answer) rather than those of questions².

The second and third approaches posit, with some different interpretative positions, that RQs behave as ordinary questions characterised by strong restrictions regarding the possibility to have an answer³. Gutièrrez-Rexach (1997) claims that RQs cannot receive any form of answer, while van Rooy (2003) and Rohde (2006) allow the chance that RQs, at least in certain circumstances, may be answered, even though the range of replies is very restricted. This possibility, which is never admitted for assertions, sets these approaches apart from the first one.

In fact, in spontaneous speech the issue regarding answers is quite intricate: not only can RQs be followed by either an explicit or implied answer, but the answers can be produced by the addressee, akin to ISQs, and even by the speaker himself (self-answered question).

From a broad pragmatic perspective, RQs are indirect acts that convey an obvious meaning that goes beyond their locutionary structure. Nevertheless, neither Austin (1962) nor Searle (1969) included RQs among indirect acts. Some years later, Brown & Levinson (1978) considered them as one of the 15 off-record strategies aimed at reducing the face-risks. The authors observed that the RQs are used to perform specific linguistic acts such as apologies, mitigating criticisms or sarcastic comments. However, according to Frank (1990) this is a limited interpretation, for which RQs perform not only a mitigation function of the potential face-threatening speech acts, but also a strengthening function of the assertive meaning.

There is general agreement that RQs perform multiple functions in written and spoken speech (Ilie, 1994). Due to their multi-functionality, RQs are used to present one’s own opinion or argument, since they present a useful discursive strategy for achieving persuasive goals. RQs act as a subtle strategy of persuasion that induces some kind of reaction from the listener, such as agreement or disagreement, even if this reaction is often only at a mental level. Consequently, RQs are prevalently used in literary prose, including monologues and journalism, as well as in contexts like political debates, courtrooms and advertising discourse.

2. THE INTONATION OF RQS

Most pre-existing studies focused on the semantic and pragmatic aspects of RQs, drawing insights primarily from the examination of written samples. For many years, the

² A positive RQ usually has the illocutionary force of a negative assertion. Conversely, that of negative polarity has the illocutionary force of a positive assertion. For example, the following sentence (4) Will you stop talking nonsense? is formally positive, but contains an implicit negation, i.e. You don’t stop talking nonsense, while (5) Who lifted a finger to help Mary? is interpreted as No one lifted a finger to help Mary (Han, 2002: 205).

³ Along this line, Rohde (2006) highlighted that RQs behave like redundant interrogatives and not as assertions. They have a special status, since they are uninformative and obvious and serve as a strategy to synchronise the beliefs of the speaker and the addressee. By virtue of this conversational dynamic, which is only appreciable in the situational context, RQs may receive positive or negative answers, null or multiple answers, as Rohde noticed during the analysis of The Switchboard corpus.
interest towards the prosody of these questions was rather low and experimental research conducted from a prosodic perspective is still sparse. Therefore, knowledge of this particular area is in many respects fragmented and incomplete. To date, two research approaches can be identified. The first one investigated RQs using impressionistic survey methods and yielded consistently uniform outcomes: all studies associated RQs with a final falling contour (Bolinger, 1957; Anzilotti, 1982; Frank, 1990; Ilie, 1994; Gutiérrez-Rexach, 1998; Han, 2002).

The second line of research is more recent: the prosody of the RQs was investigated from a spectro-acoustic perspective by analysing corpora built with fully controlled methodologies, including the comparison of RQ and ISQ sentence-pairs. The results achieved thus far are conflicting: RQs can exhibit either a final falling contour or a rising one, while the impact of duration remains a topic of debate, likely influenced by language-specific characteristics. Going into more detail, in Japanese, the most significant cue distinguishing RQs from ISQs was found to be duration (Miura & Hara, 1995), a trend that has recently been reaffirmed for Estonian (Asu et al., 2020) and Italian (Sorianello, 2018, 2020) as well. In the English language (telephone speech corpus), Banuazizi & Creswell (1999) observed that polar RQs were final falling in 44.1% of cases, whereas ISQs were mainly final rising (89.7%). In German (Wochner et al., 2015), Icelandic (Dehé et al., 2018) and English (Braun et al., 2019) the presence of a falling contour (1%) was dominant in both ISQs and RQs regardless of their syntactic structure. This result does not allow to distinguish between the two types of questions, although different nuclear pitch accents, typically a rise-fall pattern, helped to differentiate them.

As far as Italian is concerned, the research on RQs was for many years based only on auditory assessments. Specifically, in a study focused on the uses of non-institutional questions, Crisari (1974) wrote that RQs always have a final falling intonation, except for some particular cases. Likewise, in a very short comment, Lepschy (1978) associated RQs with the group of sentence typologies characterised by a falling intonation (Tone 1), together with assertions, wh-questions and exclamatives. The pragmatic function of Italian RQs was analysed by Stati (1982). He observed that RQs have a different intonation from both statements and questions; unfortunately he did not delve into this assumption, thus not allowing the reader to grasp the differences between these groups of sentences.

The presence of a certain prosodic variability concerning intonation contour, pitch range and duration was also detected in a study conducted on Italian string-identical RQs and ISQs (yes/no and wh-structures) with young subjects from the city of Bari (Southern Italy) during a reading task (Sorianello, 2018). Overall, yes/no RQs were more often characterised by a falling intonation pattern (62%) than ISQs (42%), although in wh-RQs this difference is lower (56%). The contribution of other acoustic parameters provided more information; if pitch range was distinctive only for wh-questions (+3 ST), a longer duration of nuclear stressed vowels featured RQs. The normalised mean duration of nuclear vowel was in fact greater in both wh- (+15%) and yes/no RQs (+25%), (Sorianello, 2018). Two perceptive tests performed with both natural and synthetic stimuli confirmed the relevant role played by duration. The experimental findings showed that the temporal manipulation of nuclear vowel (long vs. short) triggered a rhetorical

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4 The pitch range is the distance (measured in Hz or more often in semitones) between the lowest and highest f0 values found in an intonation curve. The nuclear pitch accent refers to the most prominent accent in an intonation tone unit and is always associated with a stressed syllable.

5 The relationship between the prosodic realisation of RQs and their pragmatic function was explored in Sorianello (2019) to whom we refer for further information. Following Frank (1990), the study divided RQs into two groups: amplifiers and mitigators. Achievements revealed that RQs functioning as amplifiers of the illocutionary force show, in the most cases, a falling contour (L%), while RQs used as mitigators have a final rising contour (H%).

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interpretation of questions more often than the manipulation of the final intonation contour (falling vs. rising), (Sorianello, 2020).

3. The Research

The research conducted so far into Italian RQs focused on speech material elicited by means of controlled experiments. It is possible that the prosodic variability found until now might also be attributed to a conditioning effect caused by the participants’ reading style. In order to overcome this methodological limit, the present study explored the intonation of RQs in a spontaneous corpus of Southern Italian variety. In particular, we collected a radio corpus concerning both outside and indoor broadcasts made by male and female participants of various ages mostly belonging to the urban community of Bari. As a consequence, the linguistic variety of reference is the Italian spoken in Bari.

The study aims at providing wider knowledge of the intonation of rhetorical wh-questions (from now wh-RQs) produced in a spontaneous way. In order to grasp any possible differences, data obtained will be compared with those gathered for wh-RQs produced by reading (Sorianello, 2018) and those referred to the information seeking wh-questions (from now wh-ISQs) extracted from the same radio corpus (Sorianello, 2023).

Speech samples were acquired in .Wav format (Hz 22050, 32 bit, stereo) directly from the website of the radio stations through the software Audacity. The corpus shows many traits of spontaneous speech such as low degree of planning, overlap of dialogic turns, interruptions, disfluencies, silent and non-silent pauses, slang expressions as well as frequent interferences determined by background noise. The corpus consists of 100 direct wh-RQs.

The portions of text containing RQs were extracted and annotated by means of the software PRAAT (Boersma & Weenink, 2013); two different text-grids were created in order to label prenuclear and nuclear pitch accents (PA) and boundary tones (BT); the prosodic annotation was made using the standardised ToBI transcription protocol elaborated within the AM model of intonational phonology. The statistical differences were tested by means of a Mixed-Effects Logistic Regression Model with question types as fixed variable and tonal configurations as factors (IBM, SPSS Statistics, ver. 20.0).

In this phase, we focused only on the phonological characteristics of the intonation contours of spontaneous RQs, reserving the discussion of phonetic aspects for future research.

3.1. The speech corpus

Preliminarily, we classified RQs by structure, wh-word choice, polarity, presence of NPIs and length. Overall, in our corpus, RQs have simple positive structures of medium length, with few NPIs. The corpus is highly representative of spontaneous speech, the questions analysed do not show that degree of artificiality often detectable in elicited speech corpora. Nevertheless, since material was gathered during spontaneous dialogues,
the corpus has an unbalanced structure. All questions considered for the present study have a wh-structure, but the most frequent wh-word is *cosa/che cosa/che* (what, 36.4%) followed by *come* (how, 21%) and *perché* (why, 13.9%). Most of the time, the wh-word is in a sentence-initial position (83.2%), while in the remaining cases it is in the mid position. In addition, the polarity of sentences and NPIs are unbalanced too: only few questions have a surface negative polarity (10.2%), e.g. (8) *Perché il sindaco non fa niente?* (‘Why doesn’t the mayor do anything?’) or contain a NPI inside, e.g. (9) *Va bé, che altro puoi fare?* (‘Okay, what else can you do?’). It is reasonable to assume that questions with NPIs are more frequent in other specific textual types, such as marketing and advertising, journalism, courtroom debates and political speech, than in spontaneous oral dialogues made during talk radio. As regards the length, medium-length RQs prevail, (more than 7 syllables, 62.2%), while the percentage incidence of short questions is reduced (37.8%).

3.2. The intonation contour

In this phase of research, nuclear pitch accents and boundary tones were examined. Results show a clear tendency towards the selection of a falling final intonation contour. As a consequence, high boundary tones (H% or L-H%) are scarcely represented. Notably, there are two noteworthy points that should be emphasised. The first emerges from the comparison with data obtained from a previous study focused on polar and wh-RQs and ISQs produced in the same regional variety under controlled conditions (Sorianello, 2018). Specifically concerning wh-RQs, the percentage frequency of final L% is significantly lower compared to the findings of the current study ($\beta = 3.08$, SE = 1.04, $z = 8.74, p = 0.003$), (refer to Figure 1).

This result confirms that the choice of the elicitation method produces a remarkable conditioning effect on intonation. More specifically, Sorianello (2018) found that wh-RQs were final falling (L%) only in 56.4% of the overall cases, whereas wh-ISQs were generally final rising (71%) ($\beta = 0.76$, SE = 0.51, $z = 2.25, p = 0.039$). This outcome is pivotal and gives rise to two distinct points for consideration. On the one hand, it becomes evident that, much like in fully planned speech, the final intonation pattern of wh-RQs differs from that of wh-ISQs: falling for the former question type, primarily rising for the latter. This divergence serves as a significant factor in distinguishing between these two illocutionary types.

On the other hand, there is a marked difference relative to the final intonation pattern of wh-ISQs which emerges when comparing the percentage of L% in read and radio speech samples ($\beta = 0.12$, SE = 0.43, $z = 0.88, p = 0.008$). This further confirms the relevance of the speech elicitation method.

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9 In a significant number of cases, the wh-word is preceded by the conjunction *ma* (‘but’), e.g. (6) *Ma di cosa stai parlando?* (‘But what are you talking about?’), (7) *Ma non sapete cosa fare?* (‘But you don’t know what to do?’), confirming the frequent function of criticising, complaining and disappointment that rhetorical questions hold in spoken speech.

10 A similar effect was also observed for polar ISQs in Bari Italian: the questions produced by reading were generally final rising, unlike those realised in a spontaneous way (Grice et al., 1997).
Another noteworthy aspect arises from the comparison of the intonation of wh-RQs with wh-ISQs extracted from the radio corpus. As the percentage values in Figure 2 show, boundary tones fail to differentiate RQs from ISQs: both question types are in fact characterised by a low edge tone (L%) with similar rates; all things being equal, L% cannot be taken as a distinctive element of the two illocution types, since in spontaneous Bari Italian RQs and ISQs share the same intonation final contour.

Other information comes from the analysis of nuclear configurations. Overall, the distribution of nuclear pitch accents is varied and allows to capture some differences between RQs and ISQs (Figure 3).
In the talk radio corpus, the most typical nuclear pitch accent for wh-RQs is the H+L* pattern (52%), sometimes accompanied by a down-stepped high tone (\langle H+L*\rangle). This pattern constitutes a falling bitonal sequence characterised by a high f0 target reached before the stressed syllable and a low target on the most prominently stressed syllable of the question (refer to Figures 4-5). In 29% of RQs, we found the L* pattern, always followed by L%. This is a flat intonation contour featuring a compressed pitch range and lacking in prominence (see Figure 6). Lastly, the high patterns H* and L+H* are infrequent and are predominantly produced in conjunction with final rising contours (H% or LH%). Rising pitch accents are not typical of RQs; they are only observed in those questions that carry a sense of challenge or provocation, for instance, (11) *Cosa vuoi da me?* (‘What do you want from me?’) and (12) *Su cosa devo rispondere?* (‘What should I answer?’).
The same nuclear pitch accents are also noticed in wh-ISQs, however the frequency rate is different. As evidenced by the percentage values shown in Figure 3, the PA H+L* is significantly higher in wh-ISQs, and this makes it a distinctive aspect that contributes to the differentiation of the two question types (β = 2.03, SE = 0.48, z = 17.1, p = 0.000). Likewise, the presence of the nuclear pitch accent L* seems to be typically associated more with RQs than with ISQs (6%), (β = 1.54, SE = 0.48, z = 9.9, p = 0.002). Some slight variations are found for rising (L+H*) and high tones (H*), but these are generally poorly represented nuclear PAs which, therefore, have less impact on the overall results picture. The difference does not reach the threshold of statistical significance.

Much like what has been previously observed for the boundary tones, the comparison with the nuclear PAs of the controlled corpus reveals further differences (Figure 7).
For both questions the most typical pitch accent is H+L*, although it is more frequent in the radio corpus than in the controlled one, ($\beta = 0.55$, SE = 0.21, $\xi = 6.86$, $p = 0.009$). As regards the low tone (L*), no percentage change is observed ($\beta = 0.58$, SE = 0.84, $\xi = 0.47$, $p = 0.490$). The most significant difference indeed pertains to the rising PA L+H*, which is nearly absent in the radio sample, but is accounted for at a rate of 28% in the controlled speech. Similarly, the pitch accent H* is exclusively present in the radio corpus, though its occurrence is not substantial (12%).

4. CONCLUSIONS

The study focused on the intonation of RQs with wh- structure extracted by online radio stations in the area of Bari. The corpus consists of dialogic conversations and informal interviews mainly conducted during outside broadcasts. Consequently, it is characterised by a low degree of speech planning. This methodological choice meets the need to have, for the first time, a corpus of Italian rhetorical questions produced in a spontaneous way. The intonation of the wh-RQs was in fact compared on the one hand with the questions uttered during a reading task and, on the other, with the wh-ISQs extracted from the same radio corpus. This dual comparison unveiled several noteworthy differences arising from both the speech style (reading vs. spontaneous) and the question type (RQ vs. ISQ). This provided a clearer insight into the prosodic characteristics of rhetorical questions.

In summary, the experimental results in this study exhibit a high level of consistency and demonstrate a distinct tendency towards adopting a final falling intonation pattern for wh-RQs. This inclination is more pronounced than in previous findings. The application of a controlled elicitation method has probably also induced the presence of L+H*, given that this PA is almost always followed by a rising BT (Sorianello, 2018: Tab. 6). The conditioning effect of speaking style is thus fully confirmed.

In radio corpus, only a few RQs have a final rising intonation; the pattern is not due to particular structures, but rather to the function that they play in discourse. These
questions are never neutral: usually they convey a sense of challenge or a feeling of anger and disappointment (13) *Chi può darti un lavoro così?* (‘In these conditions, who can give you a job?’), (14) *Ma cosa vuoi da me?* (‘But what do you want from me?’) and normally show higher intensity and pitch level. A final rising intonation seems to bring about a reaction in the listener much more frequently than falling RQs. This is proven by the fact that the RQs with a rising configuration seem to favour an explicit verbal answer from the listener and not only a mental reaction.

When comparing the data of wh-RQs with wh-ISQs, the results are less straightforward. Despite sharing the same context and speech conditions, the intonation patterns of RQs and ISQs seem to be quite alike. There are no notable distinctions in the choice of boundary tones, with a prevailing usage of final falling tones in both cases. The dissimilarities in nuclear pitch accents are primarily confined to the differing frequency rates of H+L*, which is more prevalent in ISQs, and the nearly exclusive occurrence of L* in RQs. The analysis of phonetic features, which is still running, reveals some noteworthy aspects: RQs show a narrower pitch range and a longer duration than ISQs. This trend seems to reinforce the condition of mutual beliefs and shared knowledge that is intrinsically present in the pragmatic nature of RQs. The same phonological intonation configurations seem therefore associated with different phonetic substances, with obvious repercussions on the perceptual level.

Furthermore, the distribution of prominence appears to also be different. In ISQs the phrase containing the wh-word and the inflected verb are always marked by a salient pitch accent. On the other hand, in RQs the wh-word often shows scarce prominence, with the initial part of the sentence usually having a lower f0 than ISQs. This aspect is worth exploring in the future. This is consistent with the fact that RQs do not convey a real interrogative meaning, since they are redundant questions that do not expect a verbalised answer. It is reasonable to believe that this weak degree of interrogative also triggered the presence of low nuclear configurations (L*L%), a pitch accent which was only observed in the post-focal region of wh-ISQs, but never in the nuclear function.

Broadly speaking, the findings concerning RQs are consistent with the results obtained in studies conducted in other languages. Moreover, the prevalence of a final falling intonation pattern aligns with the inherent meaning of obviousness associated with RQs. The underlying assertive nature of RQs, coupled with the fact that they are rhetorical and not intended to elicit answers, proves their coherence with the presence of a falling nuclear configuration (both pitch accent and boundary tone).

Much remains to be done in this direction. At the phonological level other useful information can be obtained from the analysis of the possible differences in the distribution of prenuclear and nuclear pitch accents in both RQs and ISQs. In parallel, the phonetic data, which is still being extracted, could provide further evidence on the function of pitch range and the role of duration in these two illocution types.

**REFERENCES**


