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Experimental evidence on contrastive focus position in Greek

Michalis Georgiafentis | ORCID: 0000-0002-3114-6331
National and Kapodistrian University of Athens, Athens, Greece
michgeo@enl.uoa.gr

Anna Sfakianaki | ORCID: 0000-0001-6648-6865
University of Ioannina, Ioannina, Greece
asfakianaki@uoi.gr

Angeliki Tsokoglou | ORCID: 0009-0002-5220-2790
National and Kapodistrian University of Athens, Athens, Greece
angtsok@gs.uoa.gr

Mary Baltazani | ORCID: 0000-0002-0433-9357
University of Oxford, Oxford, UK
mary.baltazani@ling-phil.ox.ac.uk

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Abstract

We examine utterances that contain merely contrastive, corrective, confirmative, and mirative focus structures in Greek. Through a perception experiment, we provide evidence regarding listener preferences about the syntactic position ('high' vs 'low') of the contrastively focused objects in SVO vs OVS patterns. The results suggest that listeners consider utterances with all four focus types acceptable, regardless of whether the sentential object appears in a 'high' or 'low' position in Greek, unlike other languages. Moreover, specific listener preferences are brought to light for each focus type: there is a clear preference for a 'low' position for mere focus, versus a 'high' one for corrective, while there is almost equal preference for both positions in the mirative and the confirmative structures. These findings support the distinction among the different types of contrastive focus with their respective (semantic, pragmatic, syntactic, and intonational) properties.

Keywords

contrastive focus – syntactic position – intonation – semantics-pragmatics – perception – Greek

1 Introduction

We examine[1] how Greek listeners perceive various components of information structure and explore different interpretations of a contrastively focused sentential object, including contrastive, corrective, confirmative, and mirative meanings. Additionally, we present experimental evidence on listener preferences regarding the syntactic positioning of the sentential object (fronted versus *in situ*) for each of these focus types.

Information structure, first introduced by Halliday (1967) and further developed across various linguistic frameworks (e.g. Chomsky 1972; Guéron 1980;

1 This study is part of a larger project in which we examine different types of contrastive focus structures in Greek, i.e. merely contrastive, corrective, confirmative, and mirative focus. An earlier version of this paper was presented at the workshop 'Information Structure in Greek: Interface and comparative studies' at the 16th International Conference on Greek Linguistics (ICGL16), Aristotle University of Thessaloniki (14–17 December 2023) (see Baltazani et al. submit.). We thank the audience for stimulating discussions. We also wish to express our gratitude to the anonymous reviewers as well as to the guest editor Stavros Skopeteas for their constructive and useful comments. All inadequacies remain our own.

Kiss 1998; Zubizarreta 1998; Steedman 2000; Erteschik-Shir 2007; Büring 2007, 2009; Krifka 2008; Fanselow 2008; Skopeteas & Fanselow 2011), describes the formal organisation of information within an utterance. It divides content into constituents conveying old or new information and involves interactions across semantics, pragmatics, syntax, and prosody.[2]

In these frameworks, an utterance is divided into components such as theme-rheme, topic-comment, or topic-focus. The way information is structured within a sentence can yield different pragmatic interpretations: a specific partition may suit one context but be inappropriate in another. The literature on focus introduces various terms to describe categories, functions, and interpretative properties of focus. Key distinctions include 'broad' focus, where all sentence elements are new, versus 'narrow' focus, where only the focused element is new (Ladd 1980). Narrow focus can be further divided into information focus, which conveys new information, and contrastive focus, which highlights a member of a set (of alternatives) that makes the sentence's assertion true.[3]

Recent studies on focus (Dik 1997; Molnár 2001; Repp 2010, 2016; Bianchi et al. 2016; Cruschina 2021, 2022; Cruschina et al. 2022) further distinguish among different types of contrast, i.e. merely contrastive focus, corrective focus, confirmative focus, and mirative focus, which are differentiated with respect to their semantic-pragmatic, prosodic, syntactic properties.[4] Based on experimental data, Bianchi & Bocci (2012) show that merely contrastive focus in Italian behaves differently from the other contrastive types. In addition, Bianchi et al. (2015) and Bocci (2013) claim that the prosodic properties of the various types are distinct (see section 2.3). Such evidence has not been provided for Greek so far.

In what follows, in section 2, we describe the contexts in which different types of contrastively focused elements appear in Greek, i.e. the semantic-pragmatic, intonation-pragmatic, and syntactic properties they bear, drawing attention to the mechanisms (namely fronting) involved in their realisation. In section 3, we present the results of a perception experiment investigating

2 See, for instance, Molnár & Winkler (2006) for an overview of the interaction between focus and the linguistic levels.

3 In many analyses both information focus, which answers wh-questions, and contrastive focus, are interpreted as excluding alternatives (Krifka 2008). See also Molnár (2006) on different types of focus and Skopeteas & Fanselow (2011) on the relationship between exhaustivity and focus-fronting in Hungarian, German, Spanish, and Greek.

4 Dik (1997) is the earliest work that clearly introduced the different subtypes of contrastive focus (originally confirmative, selective, rejective, and parallel).

Greek listener preferences for focus position according to contrastive focus type. Finally, in section 4, we summarise and discuss the main conclusions of the study.

2 Contrastive focus types

Aspects of information structure in Greek as well as respective features/properties and components (e.g. focus) have preoccupied a number of researchers within different frameworks for a number of years (see Philippaki-Warburton 1985; Agouraki 1990; Tsimpli 1990, 1995; Georgiafentis 2004; Gryllia 2008; Skopeteas 2016, Stavropoulou & Baltazani 2021, among others).

It appears that, in Greek, a contrastively focused object can be realised either by means of movement to a left-peripheral position or *in situ*, i.e. it can surface in both a 'high' (H) and a 'low' (L) position (see Georgiafentis 2004 for discussion), as in (1a) and (1b), respectively:

(1) a. [***ti ma'ria*** *aya'pai o 'jani-s*][5]
the Maria:ACC loves the Janis-NOM
b. [*o 'jani-s* *aya'pai* ***ti ma'ria***]
the Janis-NOM loves the Maria:ACC
'It is Maria that John loves.'

Recently, the different types of contrast[6] have been examined in Georgiafentis & Tsokoglou (2023, 2024). In what follows, the semantic and pragmatic differences in four types of contrastive foci are explicitly delineated, namely merely contrastive focus, corrective focus, confirmative focus, and mirative focus.

2.1 *Semantic-pragmatic properties*

The following types of contrastive focus can be distinguished on the basis of their semantic-pragmatic properties:

(a) **Merely contrastive focus**, which simply conveys that one focus alternative is salient in the context, but it does not associate any particular presupposition to this alternative (Rooth 1992), i.e. the contrastively focused element is selected from an open set of alternatives.

5 Contrastively focused items are marked in bold.
6 See also Georgiou (2020) for contrastive topics in Greek.

(2) A: [*ˌja sas ‖ ˈprepi na ˈpao ˈspiti*]
bye must to go home
'Bye. I have to go home.'

B: [*ˈtetça ˈora ˈprepi na ˈparis* ***taˈksi***]
B': [*ˈtetça ˈora* ***taˈksi*** *ˈprepi na ˈparis*]
such hour taxi:ACC must to take
'At this hour you have to take a taxi.'

(b) **Corrective focus**, by contrast, requires that the alternatives necessarily include the focused element. It functions to deny and replace part of an utterance, effectively correcting something previously expressed or narrowing the options to just two alternatives. Corrective focus inherently entails addressing an incorrect message—such as an erroneous claim—and providing a corrective response. In everyday conversation, these two elements often involve different participants (Ouyang & Kaiser 2021). Corrective contexts, therefore, are those where a reply containing the focus element rectifies part of a prior assertion (Bianchi & Bocci 2012; Bianchi 2013; Bianchi et al. 2015). The corrective import arises because one alternative proposition, already present in the context, is incompatible with the proposition in the corrective statement (Bianchi et al. 2015: 9).

(3) A: [*ˌja sas ‖ ˈprepi na ˈpao ˈspiti ‖ ˈmalon prolaˈveno to meˈtro*]
bye must to go home probably catch the metro
'Bye. I have to go home. I may be able to catch the metro.'

B: [*ˈtetça ˈora ˈprepi na ˈparis* ***taˈksi*** *| ˈoçi to meˈtro*]
B': [*ˈtetça ˈora* ***taˈksi*** *ˈprepi na ˈparis | ˈoçi to meˈtro*]
such hour taxi:ACC must to take not the metro
'At this time you have to take a taxi, not the metro.'

(c) **Mirative focus**, in which, according to Bianchi et al. (2016: 1), "the unexpectedness import conveys that the asserted proposition is less likely than one or more distinct focus alternatives." In such constructions, the second utterance expresses the surprise of the interlocutor and constitutes an evaluative commitment on his/her part. The focused element can be already introduced in the conversation and, thus, considered given information [+given] (4) or it can be inserted as new information [–given] (5) (see Georgiafentis & Tsokoglou 2023). Furthermore, mirative focus can either invoke alternatives (4) or not (5):

(4) A: [*ˈta-maθes* ‖ *oˈjani-s* *aˈɣorase* *ceˈnuɾjo* *aftoˈcinito*]
them-learn the Janis-NOM bought new car:ACC
'Did you hear? John bought a new car.'

B: [*ti* *les* ‖ ***aftoˈcinito*** *aˈɣorase* ‖ *ˈnomiza* *ˈoti* *θa* *ˈeperne*
what say car:ACC bought thought that will take
mixaˈni]
motorbike
'Really? He bought a car! I thought he would buy a motorbike.'

(5) A: [*o ˈjani-s* *ðen* *ˈeçi* *leˈfta* ‖ *mu* *ˈzitise* *ðaniˈka* *xθes*]
the Janis-NOM not has money to-me asked money yesterday
'John does not have any money. He asked me to lend him some yesterday.'

B: [*ti* *les* ‖ *ˈfetos* *ˈmono* *ˈeçi* *aɣoˈrasi* *ˈtria*
what say this-year alone has bought three
ciniˈta]
mobile phones:ACC
'What are you talking about? He has bought three mobile phones this year alone.'

(d) **Confirmative focus**, in which under Krifka's (2008) definition the presence of contrast depends on the content of the common ground, whereas under Neeleman & Vermeulen's (2012) account it depends on the intention to deny focus-evoked propositions. This element may constitute given information [+given], since the new utterance simply confirms the information already presented (6), or information which is implicit, part of the common ground (7), which does not deny its antecedent (contrary to corrective focus) (see Georgiafentis & Tsokoglou 2023).

(6) A: [*ti* *ˈakusa* ‖ *apoˈklistikan* ***s-to ˈsindaɣma***]
what heard trapped at-the Syntagma
'Is it true? Have cars been trapped at Syntagma?'

B: [*ne* ‖ ***s-to ˈsindaɣma*** *ˈeminan* *ˈores* *koliˈmeni*]
yes at-the Syntagma:ACC remained hours stuck
'Yes, it was at Syntagma that cars got stuck for hours.'

B: [*'eminan 'ores koli'meni* ***s-to 'sindaγma***]
remained hours stuck at-the Syntagma:ACC
'Cars were stuck for hours at Syntagma.'

(7) A: [*ti 'akusa* ‖ *apo'klistikan ce s-to 'cendro tis a'θinas*]
what heard trapped and in-the centre the Athens
'Is it true? Have they been trapped in Athens city centre as well?'

B: [*ne* | ***s-to 'sindaγma*** *'eminan 'ores koli'meni*]
yes at-the Syntagma:ACC remained hours stuck
'Yes, they got stuck at Syntagma for hours.'

2.2 *Intonation-pragmatics interface*

The term *intonation* refers to variations in fundamental frequency (f0) within an utterance, perceived as changes in pitch. These pitch variations, along with other acoustic cues such as segmental duration and intensity, convey pragmatic meaning in a linguistically structured way. Such cues can mark constituent boundaries or signal prosodic prominence within constituents. Tonal events at phrase boundaries are called *edge tones*, while those signaling prosodic prominence are referred to as *pitch accents*. The analysis of the experimental stimuli (section 3.1) draws on the prosodic and intonational structure of Greek (Arvaniti & Baltazani 2005) within the autosegmental-metrical framework of intonational phonology (Pierrehumbert 1980; Ladd 1996). In this framework, the interpretation of an utterance arises compositionally from the probabilistic integration of various factors: the meaning of intonational elements, syntactic structure, lexical meaning, and context (e.g. Calhoun 2010; Im et al. 2018).

In Greek declarative utterances, which typically end in a falling contour (L-L%; Arvaniti & Baltazani 2005), multiple pitch accent types can appear in the nuclear position, including L+H*, H*, and H*+L (Arvaniti & Baltazani 2005; Arvaniti et al. 2022). While not all four focus types examined here have been previously analysed in Greek, prior studies have noted intonational differences in the pitch accent between contrastive/corrective focus (L+H* accent; Figure 1) and new information focus (H* or H*+L; Figure 2; Arvaniti et al. 2006; Arvaniti et al. 2022; Gryllia 2008; Georgakopoulos & Skopeteas 2010; Stavropoulou & Baltazani 2021). Utterance position (final or non-final) also influences pitch accent choice (Gryllia 2008; Georgakopoulos & Skopeteas 2010; Stavropoulou & Baltazani 2021): L+H* is used in non-final positions, regardless of focus type, while accent selection in utterance-final positions depends on various factors, including focus type. As we show, speaker variability was also evident in the data recorded for perception stimuli in this study.

2.3 *Syntactic properties*

In Greek, which shows high degree of word order flexibility, it has been argued, in earlier analyses (e.g. Tsimpli 1990), that the focused constituent moves to SpecFocusP. This has been subsequently articulated within the cartographic approach of the left periphery (Rizzi 1997) by Alexiadou (1999) and Roussou (2000), as in the structure in (8), which illustrates the focus projection either preceding or following a topic projection, as shown in the respective patterns in (9) and (10):

(8) [ForceP [TopP [FocP [TopP [FinP ...]]]]]

(9) [ForceP [FocP [TopP [FinP ...]]]]
[***s-ti ma'ria*** *ta vi'vlia* *ta 'eðosa*]
to-the Maria:ACC the books:ACC them gave
'It was Maria that I gave the books to.'

(10) [ForceP [TopP [FocP [FinP ...]]]]
[*ta vi'vlia* ***s-ti ma'ria*** *ta 'eðosa*]
the books:ACC to-the Maria:ACC them gave
'It was Maria that I gave the books to.'

Recent analyses of contrastive structure suggest a dedicated syntactic projection for contrastive elements. On the one hand, Molnár (2001, 2006) introduces a KontrastP. According to her analysis (2001: 110), apart from intonation that contributes to the expression of contrastiveness, the syntactic position of constituents also plays a crucial role. In particular, the KONTRAST position is at the leftmost of the sentence, as in (11):

(11) [ForceP [KontrP [TopP [FocP [TopP [FinP ...]]]]]]

On the other hand, Bianchi et al. (2015) propose an FAI (focus-associated implicature) syntactic position for mirative and corrective focus, as in (12), where "YP_i" stands for the focused phrase, which can appear either in a low or in a high position:

(12) [FP Force ... [FaiP FAI_0[mir]/[corr] [FocP YP_i [+foc] Foc_0[+foc] ... [TP ... <YP_i > ...]]]]

Since our aim is to examine listener preferences with respect to the syntactic position, we do not favour either syntactic analysis, but we note that both proposals would work for Greek, given that a 'high' position is available.

What is relevant for the paper is research that shows that there is intralinguistic variation with respect to the position of the focused constituent in the various types of contrastive focus in Italian. It has been argued that a merely contrastive focus cannot appear in a 'high' position but only in a 'low' position, as in (13). On the basis of experimental data, Bianchi & Bocci (2012) claim that in a similar context, focus fronting is infelicitous/incompatible with this interpretation.

(13) *Merely contrastive focus*
A: Vi saluto, devo tornare a casa.
'Good bye, I have to go back home.'
B: A quest'ora, ti conviene prendere il taxi, non la metro.
'At this time of day, you'd better take a taxi, not the underground.' (Bianchi 2013: 205)

In addition, Bianchi et al. (2015) claim that focus fronting is compatible with corrective (14) and mirative focus (15), while, as illustrated in the examples, focused constituents can also appear in a 'low' / *in situ* position.

(14) *Corrective focus*
A: Hanno invitato Marina.
'They invited Marina.'
B: Giulia hanno invitato (, non Marina).
'They invited Julie (, not Marina).'
B': Hanno invitato Giulia (, non Marina).
'They invited Julie (, not Marina).' (Bianchi et al. 2015: 5)

(15) *Mirative focus*
[CONTEXT: Anna tells about a customer who complained for nothing.]
B: Pensa te! Col direttore voleva parlare!
'Guess what! He wanted to speak with the manager!'
B': Pensa te! Voleva parlare col direttore!
'Guess what! He wanted to speak with the manager!' (Bianchi et al. 2015: 6)

Furthermore, on the basis of experimental evidence it is argued that the prosody of mirative structures is different from that of correctives (Bianchi et al. 2015), while the prosody of corrective structures is the same no matter whether the focused constituent is fronted or *in situ* / in a 'low' position (Bocci 2013).

In view of the discussion in this section and abstracting away from the syntactic analysis, we need to point out that, contrary to other languages (see Bianchi & Bocci 2012, Bianchi 2013, Bianchi et al. 2015 for Italian), in Greek the focused constituent is available both in a 'low' and in a 'high' position (see Skopeteas 2016; Georgiafentis & Tsokoglou 2023),[7] i.e. it can be stressed *in situ* or it can be fronted in all contrastive focus types (as illustrated in examples (2)–(7) in section 2.1 and (16)–(19) in 3.1.1 where L indicates the 'low' syntactic position and H the 'high' one). The following experiment aims at elucidating position preferences in Greek.

3 Perception experiment

Previous studies (e.g. Skopeteas 2016; Georgiafentis & Tsokoglou 2023) have argued that in Greek both 'high' and 'low' positions for a focused sentential object are acceptable for all four focus types. This contrasts with languages like Italian, where only certain focus types can appear in both positions. However, this claim has not been examined experimentally for Greek. Our experiment addresses this gap by investigating listener preferences for 'high' versus 'low' positions across the four focus types. In the perception experiment, participants were presented with dialogues consisting of a context question followed by two answers differing only in the position of the focused object and were asked to choose their preferred answer (for details, see 3.1.2).

3.1 *Methods*

In section 3.1.1 we informally describe the intonation patterns associated with the different focus types observed in the utterances used as experimental stimuli, along with details on the stimulus selection process and participant recruitment.[8] Section 3.1.2 outlines the experimental setup, and section 3.1.3 details the statistical analysis method.

3.1.1 Stimuli and participants

We designed four target sentences, each comprising a subject (S), a verb (V) and an object (O), where the syntactic object served as the focus. For each target sentence, four distinct contexts were developed, all within a larger con-

7 In Greek, contrastive focus, in all types, also appears in a 'medial' sentence position (see Georgiafentis & Tsokoglou 2024).

8 A follow-up study involving a quantitative investigation of these intonation patterns is currently in preparation.

text of preparations for a party, in the form of short dialogues (4 Q&A groups), to evoke different pragmatic interpretations of focus: merely contrastive, corrective, confirmative, and mirative (one Q&A group is shown in 16–19; for the whole set, see Appendix). Two constituent orders were created for each sentence: one with the object in a 'low' position, SVO, and another with the object in a 'high' position OVS,[9] thus generating 8 strings to be uttered by each speaker (Table 1).

(16) *Merely contrastive focus*

Q1: [*'exete pi se 'olus ja to 'parti 'avrio*]
have told to everyone about the party tomorrow
'Have you told everyone about the party tomorrow?'

L: [*sçe'ðon* | *i e'leni ϑa 'pari* ***to ma'noli*** | *i i'polipi*
almost the Eleni:NOM will call the manolis:ACC the rest
to 'kserun]
it know

H: [*sçe'ðon* | ***to ma'noli*** *ϑa 'pari i e'leni* | *i i'polipi*
almost the Manolis:ACC will call the Eleni:NOM the rest
to kserun]
it know
'Almost. Eleni will call Manolis. Everyone else knows about it.'

(17) *Confirmative focus*

Q2: [*'exume apofa'sisi pçon ϑa 'pari s-to a'maksi i e'leni*]
have decided who will take in-the car the eleni
'Have we decided which one of us Eleni will give a lift to?'

L: [*ne* | *i e'leni ϑa 'pari* ***to ma'noli***]
yes the Eleni:NOM will take the Manolis:ACC

H: [*ne* | ***to ma'noli*** *ϑa 'pari i e'leni*]
yes the Manolis:ACC will take the Eleni:NOM
'Yes, Eleni will give a lift to Manolis.'

9 An object in a high position can also appear in an OSV order in Greek. Given that OSV is more marked than OVS, in this paper we purposely consider only OVS orders. The different word order patterns have been experimentally investigated in various papers, e.g. Haidou (2000), Keller & Alexopoulou (2001), Georgiafentis & Sfakianaki (2004), Georgakopoulos & Skopeteas (2010), among others.

(18) *Corrective focus*

Q3: [*ma ðen ˈipes exˈθes ˈoti i eˈleni θa ˈpari to ˈstefan-o*]
but not said yesterday that the Eleni:NOM will take the Stefanos-ACC
'But, didn't you say yesterday that Eleni would give a lift to Stefanos?'

L: [*ˈoçi* | *i eˈleni θa ˈpari* ***to maˈnoli***]
no the Eleni:NOM will take the Manolis:ACC
H: [*ˈoçi* | ***to maˈnoli*** *θa ˈpari i eˈleni*]
no the Manolis:ACC will take the Eleni:NOM
'No, Eleni will give a lift to Manolis.'

(19) *Mirative focus*

Q4: [*simfoˈnisame ˈpandos na ˈimaste ˈmono ʝiˈneces s-to ˈparti*]
agreed however to be only women in-the party
'We agreed, anyway, that only women will come to the party.'

L: [*ne kaˈla* | *i eˈleni θa ˈpari* ***to maˈnoli***]
yes right the Eleni:NOM will take the Manolis:ACC
H: [*ne kaˈla* | ***to maˈnoli*** *θa ˈpari i eˈleni*]
yes right the Manolis:ACC will take the Eleni:NOM
'Yeah, right! Eleni will bring Manolis.'

We recorded six speakers[10] (3 females, 3 males; mean age = 52.17, SD = 7.95), each producing 32 declarative utterances. These utterances varied according to focus type (mere, corrective, confirmative, mirative), syntactic position of the focused noun ('high' or 'low'), and context corresponding to each focus type (4 focus types × 2 syntactic positions × 4 contexts). Before selecting stimuli, we conducted an informal analysis of the data to assess whether distinct intonation patterns were produced for the four pragmatic context types.

Figure 1 illustrates representative examples of focus in 'high' positions as produced by two different speakers, F1 (top) and F2 (bottom), in both a mirative (left) and confirmative context (right). In all four examples, the noun "manoli" carries a L+H* nuclear pitch accent in its stressed syllable (highlighted with a rectangle), characterised by an initial dip (the L tone) followed by a peak (the

10 Four of the speakers were the authors themselves. Despite being aware of the experimental goals, their utterances showed variability in intonation. This highlights the inability of speakers to consciously control intonation.

TABLE 1 The four target sentences and two word orders used in the production experiment

SVO	OVS
[i eˈleni θa ˈpaɾi **to maˈnoli**] the Eleni:NOM will take the Manolis:ACC 'It is Manolis that Eleni will give a lift to.'	[**to maˈnoli** θa ˈpaɾi i eˈleni] the Manolis:ACC will take the Eleni:NOM
[o miˈxali-s θa kaˈlesi **ti ˈðafni**] the Michalis-NOM will invite the Dafni:ACC 'It is Dafni that Michalis will invite.'	[**ti ˈðafni** θa kaˈlesi o miˈxali-s] the Dafni:ACC will invite the Michalis-NOM
[o ˈnik-os θa ˈfeɾi **ˈbiɾes**] the Nikos-NOM will bring beers:ACC 'It is beer that Nikos will bring.'	[**ˈbiɾes** θa ˈfeɾi o ˈnik-os] beers:ACC will bring the Nikos-NOM
[o ˈpetɾ-os θa foˈɾesi **kuˈstumi**] the Petros-NOM will wear suit:ACC 'It's a suit that Petros will wear.'	[**kuˈstumi** θa foˈɾesi o ˈpetɾ-os] suit:ACC will wear the Petros-NOM

H tone), while the subsequent material is de-accented (see e.g. Arvaniti et al. (2006) and Arvaniti et al. (2022) on the realisation of the L+H* accent in Greek; Baltazani (2002, 2003); Arvaniti & Baltazani (2005); Gryllia (2008) on post-focal deaccentuation in Greek).

As noted in section 2.2, we observed considerable variability in the productions, illustrated in Figure 1. Although the accent type is consistent across all four examples, there are notable phonetic differences in the confirmative contexts (right panels). Specifically, the accent in the bottom right example (produced by F2) features an earlier and lower peak (H tone) compared to the top right example (produced by F1), as well as differences in the alignment (position) of the initial dip (L tone). In contrast, the phonetic realisations of the mirative contexts (left panels) show no variation in the H tone but exhibit variability in the alignment of the L tone.

Figure 2 illustrates another type of variability, in the realisation of focus in 'high'/early (left panels) and 'low'/late (right panels) nuclear positions, produced by the same speakers as in Figure 1. All four examples are produced in mirative contexts. As expected, deaccentuation follows early nuclei (left pan-

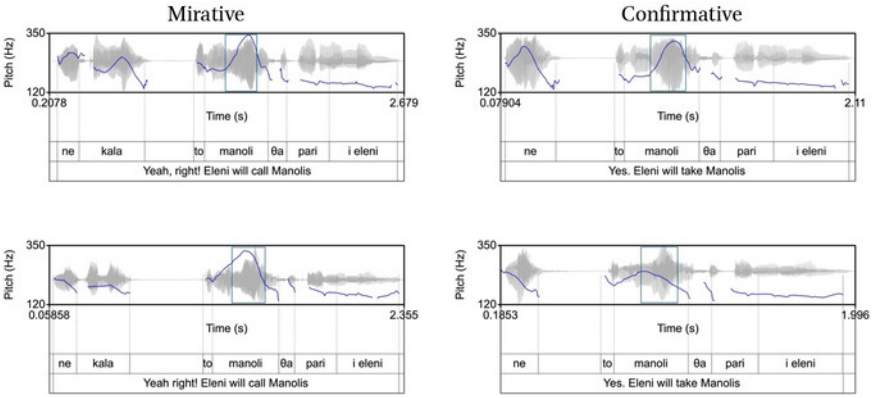

FIGURE 1 Variability in the *f*0 curves of utterances produced in mirative (left) and confirmative contexts (right) in the 'high' focus position (see text for details)

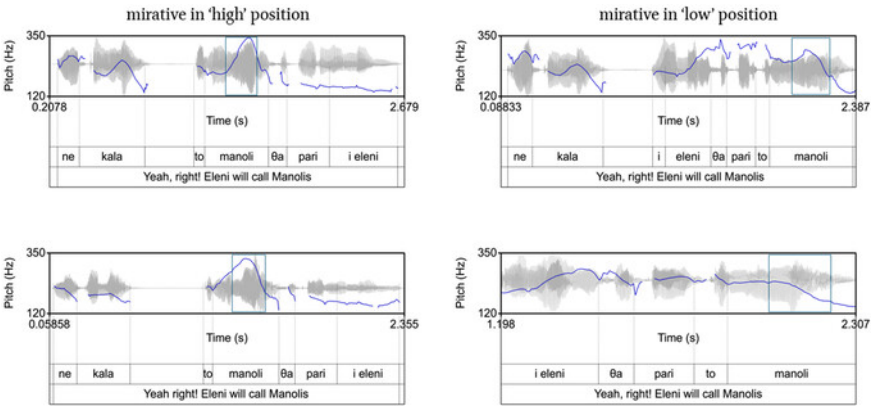

FIGURE 2 *f*0 differences in the utterances produced in mirative contexts between 'high' (left) and 'low' (right) focus positions (see text for details)

els). Additionally, for the early focus, a L+H* accent is used on "manolis" in both left panels. In contrast, the late focus utterances employ different types of accents: a H* accent in the top right panel and a H*+L accent in the bottom right panel (see Arvaniti & Baltazani 2005 for the detailed prosodic description of these accents). As noted in section 2.2, previous studies (e.g. Gryllia 2008; Georgakopoulos & Skopeteas 2010; Stavropoulou & Baltazani 2021) have reported differences in prosodic realisation between early and late nuclei in Greek. However, these studies did not examine all four focus types analysed here.

An informal quantitative examination of the stimuli was conducted, based on the limited number of recorded speakers, to illustrate some of the prosodic

TABLE 2 Illustrative quantitative data from two speakers. See text for details

		'High' syntactic position				'Low' syntactic position			
Measurement	**Speaker**	**Confirm.**	**Corr.**	**Mere**	**Mirat.**	**Confirm.**	**Corr.**	**Mere**	**Mirat.**
H tone from V	F1	63%	2%	4%	52%	1%	2%	10%	1%
	F2	before	82%	85%	8%	0%	47%	8%	90%
L tone from C	F1	2%	0%	No L	2%	No L	6%	No L	No L
	F2	before	5%	3%	before	6%	3%	No L	No L
H scaling	F1	235	282	233	238	197	251	170	212
	F2	374	356	290	337	282	298	297	263
L scaling	F1	213	184	No L	217	No L	184	No L	No L
	F2	228	187	200	237	238	172	No L	No L
f0 range	F1	22	98	n/a	21	n/a	67	n/a	n/a
	F2	146	169	90	100	44	126	n/a	n/a

variability observed in the data. Table 2 presents preliminary measurements for two speakers,[11] the same individuals shown in Figures 1 and 2. The measurements include the alignment of the H/L tone relative to the start of the vowel or consonant in the stressed syllable of the focused word (expressed as a percentage of vowel duration), the f0 value (in Hz) of the peak or trough corresponding to the H/L tone, and the f0 range, defined as the difference in Hz between the peak and trough.

These analyses revealed that corrective focus was produced with a more prominent accent. This prominence was achieved through a larger pitch range and a later alignment of the H tone, particularly in the 'high' syntactic position, compared to the other focus types. In contrast, mere focus was characterised by the shortest pitch range or, in some cases, the absence of an L tone altogether.

Notable differences were also observed between the two speakers. For instance, the H and L alignment occurred later for speaker F1 in some focus types but earlier in others compared to speaker F2, further emphasizing the variability in intonational patterns.

Following these informal observations, four out of the six speakers (2 female, 2 male) were chosen from the original dataset for the perception experiment,

11 A comprehensive production experiment, along with detailed quantitative data, will be presented in a forthcoming publication.

also based on the naturalness of their produced utterances auditorily determined according to our native speaker intuitions. Each speaker contributed 4 questions and 4 answers—one of each type of focus. The stimuli chosen were 16 questions and answers (Q&A) in groups of 4 dialogues. Each Q&A group, such as the one shown in (16)–(19), contained 4 types of Contrast (mere, confirmative, corrective, mirative). Each question had 2 possible answers, one with 'high' focus and one with 'low'.

Participants were recruited via email (NKUA and University of Ioannina current and graduate students). There were 123 valid online questionnaires, from which 7 were removed from further analysis (there were 4 cases of self-reported hearing problems and 3 cases reporting technical issues) resulting in a total of 116 questionnaires for analysis. Concerning participant sex and education, 100 participants (86%) were female, 40 were undergraduates (34%), 42 graduates (36%), and 34 MA/PhD students (30%). Regarding participant age, 82 participants (71%) were young adults (18–34 yrs) and 34 participants (29%) were adults (35–64 yrs). Finally, 60 participants (52%) were from Athens, and the rest from other Greek geographic locations.

3.1.2 Setup

The experimental setup consisted of two parts, training and main session. In the training part, the listeners were given a scenario of a trip, where a group of friends is embarking on an excursion and they discuss if everything is ready. There were 3 training items of different types of contrast in 'high' vs 'low' focus. As already mentioned, the overarching scenario in the main session was a party that a group of friends is organising and discusses (16–19). There were 16 items as targets featuring 4 examples of the 4 types of contrast in 'high' vs 'low' focus, and 4 filler items. All items in the main session were randomised.

In the online experiment (on SoSci Survey https://www.soscisurvey.de/), Q&As were only presented orally and participants could hear them as many times as they wished. Participants were asked to denote their preference to 'high' vs 'low' focus by moving a vertical line on a bar with their cursor (Figure 3), or leave the vertical line at the centre if they had no/equal preference.

3.1.3 Statistical analysis

We used a Mixed Effects Model ANOVA in Minitab (v. 21). The *dependent variable* was listeners' preference expressed as a number from 1 to 101 (1 = absolute preference for 'low,' 101 for 'high' focus). Contrast Type was a *fixed factor* with 4 levels corresponding to the four different types of contrastive focus. 3 *random factors* were included: (i) Context with 4 levels (4 Q&A groups),

FIGURE 3 Experimental screen viewed by listeners

(ii) Speaker with 4 levels, and (iii) Participant for the listeners in the perception experiment. The interactions Q&A group*Contrast, Speaker*Contrast, and Q&A group*Speaker were also examined and Tukey post-hoc pairwise comparisons were conducted between all factor levels and their interactions.

3.2 *Results*

Contrast type and Participant were found to be statistically significant factors (Table 3). The rest of the factors as well as their interaction with Contrast were not found to be significant.

Looking into focus preference ('high' vs 'low') according to contrast type, descriptive statistics visualised in Fig. 4 reveal that median values in all contrast types are below 51, denoting stronger preference to 'low' focus in all contrast types except corrective contrast. There is, however, considerable variability in participant preference except in mere contrast where preference to 'low' focus seems to be stronger. Pairwise Tukey post-hoc tests were conducted to confirm the above observations; a statistically significant difference was located only between mere vs corrective contrast. As Fig. 4 demonstrates, preference was lower, that is towards 'low' focus, in mere contrast. The difference was underlined when comparing median (8.00 vs 51.00) instead of mean (26.07 vs 53.15) values. No statistically significant differences among contrast types or levels of other factors were found.

We further examined the effect of context (Q&A groups) on variability in participant preferences. Although no statistically significant effect was found, certain trends emerged (Figure 5). In confirmative focus, preferences were

TABLE 3 Participant preference by contrast type (fixed factor), Q&A group, speaker and participant (random factors). Significant values are in bold and indicated with an asterisk ($p < .05$: [*]).

Fixed factors	**F-value**	**P-value**
Contrast Type	5.88	.033*
Random Factors	**Z-value**	**P-value**
Q&A group	.312	.377
Speaker	.227	.410
Participant	4.831	.000*
Interactions	**Z-value**	**P-value**
Q&A group*Contrast	.000	.500
Speaker*Contrast	.000	.500
Speaker*Q&A group	.000	.500

higher in Q&A group 4 than in the others, while in corrective focus, preferences were lower in Q&A group 2. In mirative contrast, listener preferences showed high variability, highlighting the influence of Q&A group. Future experiments with a greater number of Q&A groups may clarify patterns of focus position preferences across contrast types (see Appendix for specific Q&A items).

Although no statistically significant effect of Speaker was found, again certain tendencies were located in the data. Fig. 6 demonstrates that in confirmative contrast, focus preference is higher for responses produced by male speaker M1 (sp2 in the figure), while the opposite trend is observed in corrective focus with female speaker F2 (sp3 in the figure). In mirative contrast, sex differences seem to emerge, as focus preference is higher for the two female speakers (sp1 and sp3) as compared with that of the two male speakers (sp2 and sp4). However, the issue of speaker or speaker sex effects needs to be further investigated with more speakers.

Finally, Figure 7 shows the proportion of listener responses for 'high' (red) versus 'low' (green) focus position by focus type and Q&A group. The differences between mere and corrective focus is clearly illustrated here, with the 'low' position preference for mere focus being around 75% across Q&A groups, but lower than 40% for three of the four Q&A groups. Preferences for the other two focus types show more variability.

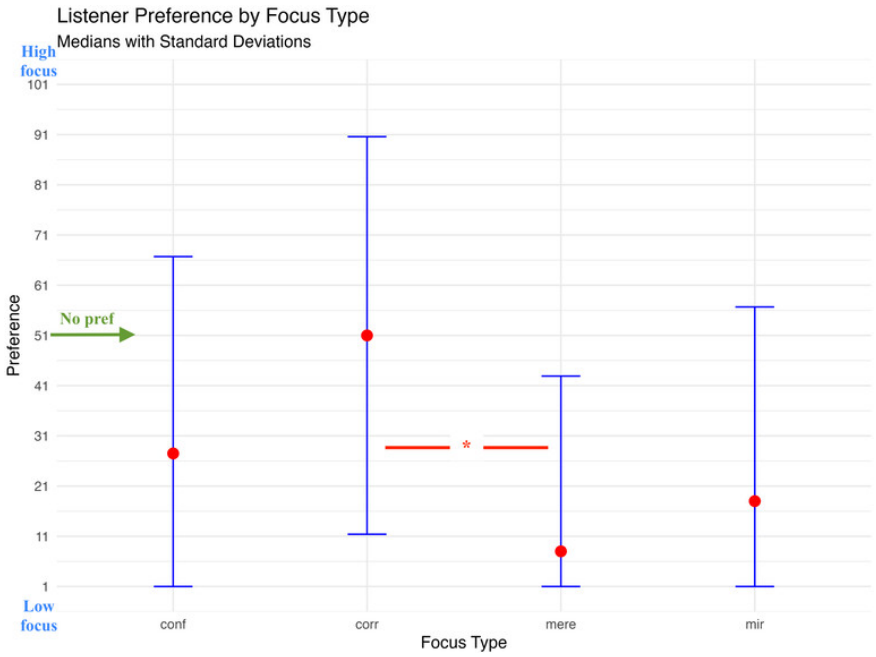

FIGURE 4 Focus preference (median and standard deviation) for the four types of contrast on the X axis. Focus position preference is shown on the Y axis from 1 (absolute preference for 'low' focus) to 101 (absolute preference for 'high' focus). A median value of 51 (indicated in the Figure with a green arrow) denotes no preference to either 'high' or 'low' focus. The asterisk [*] denotes statistically significant difference between contrast types ($p < .05$: [*]).

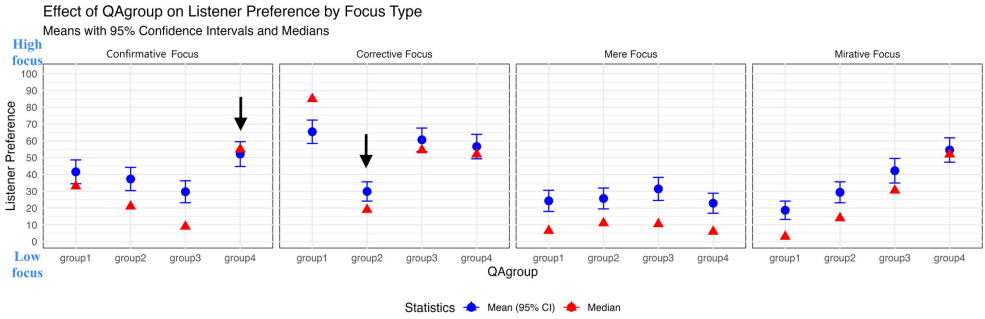

FIGURE 5 The effect of Question & Answer group on focus preference, showing mean (blue) and median (red) values. Black arrows indicate outliers within Contrast type.

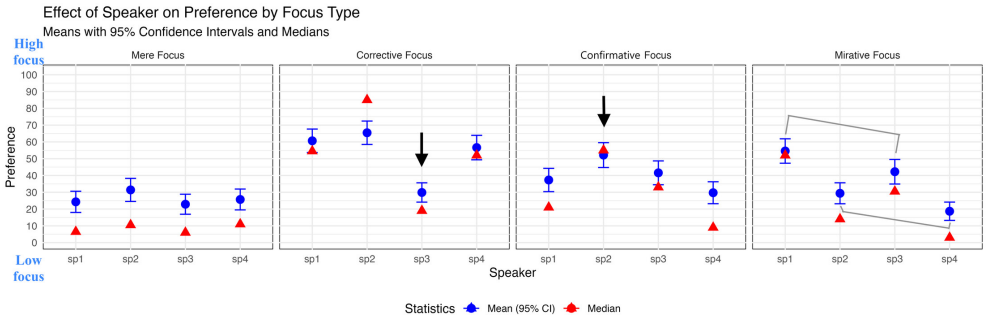

FIGURE 6 Speaker effect (sp1 = F1, sp2 = M1, sp3 = F2, sp4 = M2) on focus preference, showing mean (blue) and median (red) values. Black arrows indicate preference values either higher or lower for specific Speakers within Contrast type, while different lines have been used in mirative contrast to group focus preference in Speakers of the same sex and underline potential speaker sex effects.

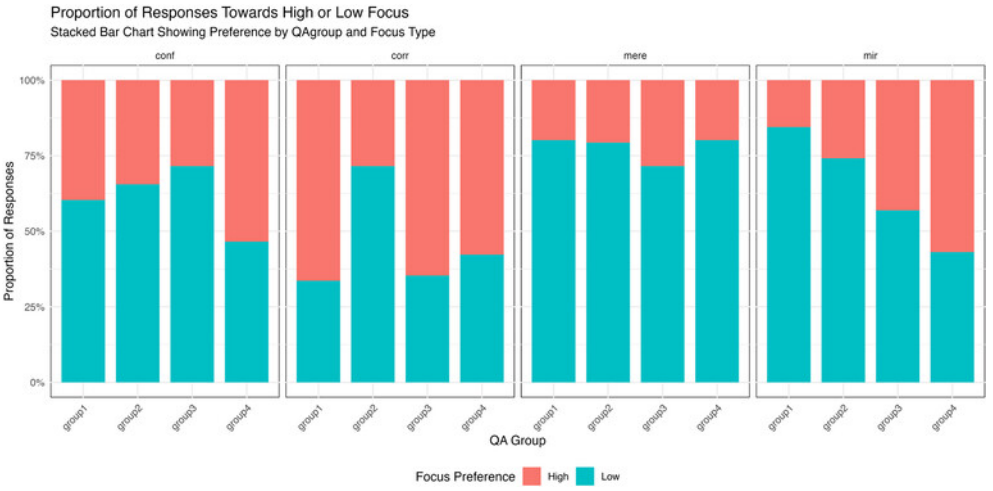

FIGURE 7 Proportion of listener responses for 'high' versus 'low' focus position by focus type and Q&A group

4 Discussion and conclusions

In the present study, listeners' preferences for either a 'high' or 'low' syntactic position of a contrastively focused object (i.e. in OVS or SVO sentences) were tested through a perception experiment using audio stimuli. As noted throughout the paper, our aim was to empirically establish listener preferences. The results support the proposed distinction among the different types of focus. Specifically, the variation in the acceptability of the perception data confirms

the existence of both a 'low' as well as a 'high' position in all contrastive focus types in Greek (see Skopeteas 2016; Georgiafentis & Tsokoglou 2023), unlike other languages (see Bianchi & Bocci 2012 and Bianchi 2013 for Italian).

The perception findings reveal distinct preferences among the four focus types. Listeners preferred corrective focus in OVS over SVO, while the reverse was true for merely contrastive focus. This aligns with their semantic properties: mere contrast selects from an open set of alternatives, with the contrastive constituent in a 'low' position, while corrective focus selects from a closed set, one being a correction of the other. This distinction supports both the differentiation of mere and corrective focus and the validity of mere contrast as a distinct category. No clear positional preference emerged for mirative and confirmative focus, with both 'low' and 'high' positions being nearly equally acceptable. This suggests a continuum of contrastive focus types: corrective > confirmative | mirative > merely contrastive.

The perception experiment results, which showed a statistically significant difference only between mere and corrective focus, align with the observed prosodic characteristics. As detailed in section 3.1.1, the preparation of the perception test stimuli involved a preliminary examination of their intonational features, revealing a clear distinction between mere and corrective focus. Corrective focus was marked by a prominent L+H* pitch accent, characterised by a larger pitch range and a later alignment of the H tone, particularly in the 'high' syntactic position. In contrast, merely contrastive focus exhibited either the smallest pitch range or a complete absence of an L tone.

The preliminary production data reveal intonational variation associated with different focus types and their realisation in both 'low' and 'high' syntactic positions, alongside individual speaker variability that merits further exploration. Such variation is consistent with previous findings (Calhoun 2010; Im et al. 2018) and reflects the complex many-to-many mapping between prosodic realisation and pragmatic interpretation (Arvaniti 2019; Cangemi & Grice 2016). This variability suggests that the utterances studied here can be realised with a range of intonational patterns, influenced by the interplay of focus types and syntactic positions. Additional factors, such as lexical choices, discourse context, and the interlocutors' shared knowledge, also contribute to shaping prosodic realisations.

At the end of the perception experiment, participants provided feedback that offered valuable insights. Some noted that focus position felt context-dependent, with remarks like, "both options were correct, but it depends on how one wishes to answer," or "one option sounded more correct depending on the listener." Others described their choices as "instinctive." Challenges with specific intonational patterns were also highlighted, such as "the intonation

seemed wrong" or "the emphasis on the keyword was wrong." Many emphasised the influence of intonation on their decisions, noting that "the tone of voice and emphasis greatly influenced my answers." These responses suggest that not all intonational patterns are equally suitable across contexts. Further research into the interaction between speaker intonation and listener preferences could shed light on these patterns.

Overall, the results presented above provide compelling evidence for the existence of a distinct category of Contrast in the linguistic system. However, the question of whether this category is syntactically realised in terms of a designated projection in the clause structure remains open. The answer to this question depends on the theoretical approach adopted. In one approach, the components of information structure are mapped onto the syntactic level through features assigned to the relevant constituents (see, for instance, Neeleman & Vermeulen 2012; Kratzer & Selkirk 2020). Alternatively, from a cartographic point of view, the Contrast category may be associated with a KONTRAST projection in the left periphery of the clause (as discussed in section 2.3), which licenses the respective features, allowing both positions in Greek.[12]

Further research is needed to explore the interaction between focus and contrast, determining whether one takes precedence over the other. Information structure involves a complex interplay of linguistic levels, influencing the interpretation of focus in context. The current findings should be validated with a larger sample of contexts and speakers. A systematic study of intonational patterns in response to contrastive focus could refine stimulus selection and clarify listener preferences. Additionally, exploring listener characteristics may reveal insights into how speaker productions and listener interpretations interact.

References

Agouraki, Georgia. 1990. On the projection of maximal categories: The case of CP and FP in Modern Greek. *UCL Working Papers in Linguistics* 2.183–200.

Alexiadou, Artemis. 1999. Greek word order patterns. *Studies in Greek syntax*, ed. by Artemis Alexiadou, Geoffrey Horrocks & Melita Stavrou, 45–65. Dordrecht: Kluwer Academic Publishers.

Arvaniti, Amalia. 2019. Crosslinguistic variation, phonetic variability, and the formation of categories in intonation. *Proceedings of ICPhS 2019*, ed. by Sasha Calhoun,

12 See Georgiafentis & Tsokoglou (2023, 2024) for discussion of the respective features.

Paola Escudero, Marisa Tabain & Paul Warren, 1–16. https://assta.org/proceedings/ICPhS2019/

Arvaniti, Amalia & Mary Baltazani. 2005. Intonational analysis and prosodic annotation of Greek spoken corpora. *Prosodic typology: The phonology of intonation and phrasing*, ed. by Sun-Ah Jun, 84–117. Oxford: Oxford University Press.

Arvaniti, Amalia, Stella Gryllia, Cong Zhang & Katherine Marcoux. 2022. Disentangling emphasis from pragmatic contrastivity in the English H* ~ L+H* contrast. *Proceedings of speech prosody 2022*. https://www.isca-speech.org/archive/speechprosody_2022/

Arvaniti, Amalia, D. Robert Ladd, Jr., & Ineke Mennen. 2006. Tonal association and tonal alignment: Evidence from Greek polar questions and contrastive statements. *Language and Speech* 49.421–450.

Baltazani, Mary. 2002. *Quantifier scope and the role of intonation in Greek*. PhD dissertation, UCLA.

Baltazani, Mary. 2003. Pragmatics, intonation, and word order in Greek. *Interfaces prosodiques* 2003, *Préactes*, 14–19.

Baltazani, Mary, Michalis Georgiafentis, Anna Sfakianaki & Angeliki Tsokoglou. Submitted. Intonational and syntactic properties of contrastive focus in Greek: Listener preferences. *Proceedings of the 16th international conference on Greek linguistics* (*ICGL16*).

Baltazani, Mary & Sun-Ah Jun. 1999. Focus and topic intonation in Greek. *Proceedings of the XIVth international congress of phonetic sciences*, vol. 2, 1305–1308.

Bianchi, Valentina. 2013. On 'focus movement' in Italian. *Information structure and agreement*, ed. by Victoria Camacho-Taboada, Ángel L. Jiménez-Fernández, Javier Martín-González & Mariano Reyes-Tejedor, 193–215. Amsterdam: John Benjamins.

Bianchi, Valentina & Giuliano Bocci. 2012. Should I stay or should I go? Optional focus movement in Italian. *Empirical issues in syntax and semantics* 9, ed. by Christopher Piñon, 1–16. Paris: EISS.

Bianchi, Valentina, Giuliano Bocci & Silvio Cruschina. 2015. Focus fronting and its implicatures. *Romance languages and linguistic theory 2013. Selected papers from 'Going Romance' Amsterdam 2013*, ed. by Enoch Oladé Aboh, Jeannette C. Schaeffer & Antonia Petronella Sleeman, 3–19. Amsterdam: John Benjamins.

Bianchi, Valentina, Giuliano Bocci & Silvio Cruschina. 2016. Focus fronting, unexpectedness, and evaluative implicatures. *Semantics & Pragmatics* 9(3).

Birner, Betty & Gregory Ward. 1998. *Information status and noncanonical word order in English*. Amsterdam: John Benjamins.

Bocci, Giuliano. 2013. *The syntax—prosody interface: A cartographic perspective with evidence from Italian*. Amsterdam: John Benjamins.

Büring, Daniel. 2007. Semantics, intonation and information structure. *The Oxford handbook of linguistic interfaces*, ed. by Gillian Ramchand & Charles Reiss, 445–474. Oxford: Oxford University Press.

Büring, Daniel. 2009. Towards a typology of focus realization. *Information structure*, ed. by Malte Zimmermann & Caroline Fery, 177–205. Oxford: Oxford University Press.

Calhoun, Sasha. 2010. The centrality of metrical structure in signaling information structure: A probabilistic perspective, *Language* 86.1.1–42.

Cangemi, Francesco & Martine Grice. 2016. The importance of a distributional approach to categoriality in autosegmental-metrical accounts of intonation, *Laboratory phonology* 7.1.9. doi: https://doi.org/10.5334/labphon.28

Chomsky, Noam. 1972. Deep structure, surface structure and semantic interpretation. *Studies on semantics in Generative Grammar*, ed. by Noam Chomsky, 62–119. The Hague: Mouton.

Cruschina, Silvio. 2021. The greater the contrast, the greater the potential: On the effects of focus in syntax, *Glossa: A Journal of General Linguistics* 6.1.3. doi: https://doi.org/10.5334/gjgl.1100

Cruschina, Silvio. 2022. Focus and focus structures in the Romance Languages. *Oxford research encyclopedia of linguistics*, ed. by Mark Aronoff, 1–48. Oxford: Oxford University Press. doi: https://doi.org/10.1093/acrefore/9780199384655.013.649

Cruschina, Silvio, Ion Giurgea & Eva-Maria Remberger. 2022. Information structure. *The Cambridge handbook of Romance linguistics*, ed. by Adam Ledgeway & Martin Maiden, 784–814. Cambridge Handbooks in Language and Linguistics. Cambridge: Cambridge University Press.

Dik, Simon C. 1997. The theory of Functional Grammar, Part 1: The structure of the clause. *Functional Grammar Series 20*, ed. by Kees Hengeveld. Berlin: De Gruyter.

É. Kiss, Katalin. 1998. Identificational focus versus information focus. *Language* 74.245–273.

Erteschik-Shir, Nomi. 2007. *Information structure: The syntax-discourse interface*. New York: Oxford University Press.

Fanselow, Gisbert. 2008. In need of mediation: The relation between syntax and information structure. *Acta Linguistica Hungarica* 55.1–17.

Georgakopoulos, Thanasis & Stavros Skopeteas. 2010. Projective vs. interpretational properties of nuclear accents and the phonology of contrastive focus in Greek. *Linguistic Review* 27(3).319–346.

Georgiafentis, Michalis. 2004. *Focus and word order variation in Greek*. PhD thesis, The University of Reading, UK.

Georgiafentis, Michalis & Anna Sfakianaki. 2004. Syntax interacts with prosody: The VOS order in Greek. *Lingua* 114.935–961.

Georgiafentis, Michalis & Angeliki Tsokoglou. 2023. Εστίαση και αντίθεση στην Ελληνική [Focus and contrast in Greek], *Studies in Greek Linguistics* 42.75–85.

Georgiafentis, Michalis & Angeliki Tsokoglou. 2024. Η κατηγορία της αντίθεσης στην πληροφοριακή δομή της Ελληνικής—Συγκριτική ανάλυση. [The category of contrast

in information structure in Greek—A comparative analysis]. *Proceedings of ICGL15*. Vol. 1, Article 8, 150–165.

Georgiou, Renos. 2020. Information structure and contrastive topics in Greek. *Studies in Greek Linguistics* 40.93–104.

Gryllia, Stella. 2008. *On the nature of preverbal focus in Greek*. PhD dissertation, Netherlands Graduate School of Linguistics, Utrecht (LOT Publications 200).

Guéron, Jacqueline. 1980. On the syntax and semantics of PP extraposition. *Linguistic Inquiry* 11.637–678.

Haidou, Konstantina. 2000. Word order, DP-focusing and the PF interface: The case of Modern Greek. *SOAS Working Papers in Linguistics* 10.161–192.

Halliday, Michael Alexander Kirkwood. 1967. Notes on transitivity and theme in English, part 2. *Journal of Linguistics* 3.199–244.

Im, Suyeon, Jennifer Cole, & Stefan Baumann. 2018. The probabilistic relationship between pitch accents and information status in public speech. *Speech Prosody* 2018.508–511. https://doi.org/10.21437/SpeechProsody.2018-103.

Keller, Frank & Theodora Alexopoulou. 2001. Phonology competes with syntax: Experimental evidence for the interaction of word order and accent placement in the realization of information structure. *Cognition* 79.301–372.

Kratzer, Angelika & Elisabeth Selkirk. 2020. Deconstructing information structure. *Glossa: A Journal of General Linguistics* 5.1.113. doi: https://doi.org/10.5334/gjgl.968

Krifka, Manfred. 2008. Basic notions of information structure. *Acta Linguistica Hungarica* 55.3.243–276.

Ladd, Jr., D. Robert. 1980. *The structure of intonational meaning: Evidence from English*. Bloomington: Indiana University Press.

Ladd, Jr., D. Robert. 1996. *Intonational phonology*. Cambridge: Cambridge University Press.

Molnár, Valéria. 2001. Contrast from a contrastive perspective. *Workshop proceedings of the 13th European summer school in logic, language and information* (*ESSLLI 2001*), ed. by Ivana Kruijff-Korbayová & Mark Steedman, 99–114. Helsinki: The University of Helsinki.

Molnár, Valéria. 2006. On different kinds of contrast. *The architecture of focus*, ed. by Valéria Molnár & Susanne Winkler, 197–233. Berlin: De Gruyter.

Molnár, Valéria & Susanne Winker. 2006. Exploring the architecture of focus in grammar. *The architecture of focus*, ed. by Valéria Molnár & Susanne Winker, 1–29. Berlin: De Gruyter.

Neeleman, Ad & Reiko Vermeulen. 2012. The syntactic expression of information structure. *The syntax of topic, focus, and contrast* (*Studies in Generative Grammar*), ed. by Ad Neeleman & Reiko Vermeulen, 1–38. Berlin: De Gruyter.

Ouyang, Iris Chuoying & Elsi Kaiser. 2021. Tracking who knows what: Epistemic gaps and the prosodic realization of corrective focus. *Linguistics* 59.2.481–512.

Pierrehumbert, Janet. 1980. *The phonology and phonetics of English intonation*. dissertation, Massachusetts Institute of Technology. Distributed by the Indiana University Linguistics Club, Bloomington, Indiana.

Philippaki-Warburton, Irene. 1985. Word order in Modern Greek. *Transactions of the Philological Society* 83.1.113–143.

Repp, Sophie. 2010. Defining 'contrast' as an information-structural notion in grammar. *Lingua* 120.1333–1345.

Repp, Sophie. 2016. Contrast: dissecting an elusive information-structural notion and its role in grammar. *The Oxford handbook of information structure*, ed. by Caroline Féry & Shinichiro Ishihara, 270–289. Oxford: Oxford University Press.

Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1.75–116.

Roussou, Anna. 2000. On the left periphery: modal particles and complementisers. *Journal of Greek Linguistics* 1.65–94.

Skopeteas, Stavros. 2016. Information structure in Modern Greek. *The Oxford handbook of information structure*, ed. by Caroline Féry & Shinichiro Ishihara, 686–708. Oxford: Oxford University Press.

Skopeteas, Stavros & Gisbert Fanselow. 2011. Focus and the exclusion of alternatives: On the interaction of syntactic structure with pragmatic inference. *Lingua* 121.1693–1706.

Stavropoulou, Pepi & Mary Baltazani. 2021. The prosody of correction and contrast. *Journal of Pragmatics* 17.76–100.

Steedman, Mark. 2000. Information structure and the syntax-phonology interface. *Linguistic Inquiry* 31.4.649–689.

Tsimpli, Ianthi-Maria. 1990. The clause structure and word order in Modern Greek. *UCL Working Papers in Linguistics* 2.226–255.

Tsimpli, Ianthi-Maria. 1995. Focusing in Modern Greek. *Discourse configurational languages*, ed. by Katalin É. Kiss, 176–206. Oxford: Oxford University Press.

Zubizarreta, Maria Luisa. 1998. *Prosody, focus and word order*. Cambridge, MA: MIT Press.

Appendix

The Appendix includes all training, experimental and filler items (in Greek orthography) that were recorded and utilized in the perception experiment. The items are questions and answers (Q&As) and were designed to fit two different communication scenarios, i.e., the trip and the party. The main experiment contains 4 different Q&A groups.

Training items

Σενάριο: Εκδρομή

Μια παρέα φίλων ετοιμάζεται να πάει εκδρομή. Συζητούν και ελέγχουν να δουν αν είναι όλα έτοιμα. Ακολουθούν οι παρακάτω διάλογοι:

[1] ***mere***

Q: Είμαστε έτοιμοι για αύριο;

H: Σχεδόν. Τον ΠΕΤΡΟ θα ειδοποιήσει η Δάφνη. Οι υπόλοιποι είναι εντάξει.

L: Σχεδόν. Η Δάφνη θα ειδοποιήσει τον ΠΕΤΡΟ. Οι υπόλοιποι είναι εντάξει.

[2] ***confirmative***

Q: Θα πάμε τελικά κάπου πιο κοντά στην Αθήνα;

H: Ναι, την ΑΡΑΧΩΒΑ προτιμάμε όλοι.

L: Ναι, όλοι προτιμάμε την ΑΡΑΧΩΒΑ.

[3] ***corrective***

Q: Μα, δεν είπαμε να αποφύγουμε το βουνό;

H: Όχι, τη ΘΑΛΑΣΣΑ δεν ήθελαν οι πιο πολλοί.

L: Όχι, οι πιο πολλοί δεν ήθελαν τη ΘΑΛΑΣΣΑ.

Experimental items

Σενάριο: Πάρτι

Μια παρέα φίλων οργανώνει ένα πάρτι. Συζητούν μεταξύ τους. Ακολουθούν οι παρακάτω δυνητικοί διάλογοι:

Q&A group 1

[1] ***mere***

Q: Έχετε πει σε όλους για το πάρτι αύριο;

H: Σχεδόν. Το ΜΑΝΩΛΗ θα πάρει η Ελένη. Οι υπόλοιποι το ξέρουν.

L: Σχεδόν. Η Ελένη θα πάρει το ΜΑΝΩΛΗ. Οι υπόλοιποι το ξέρουν.

[2] ***confirmative***

Q: Έχουμε αποφασίσει ποιον από μας θα πάρει στο αμάξι η Ελένη;

H: Ναι, το ΜΑΝΩΛΗ θα πάρει η Ελένη.

L: Ναι, η Ελένη θα πάρει το ΜΑΝΩΛΗ.

[3] ***corrective***

Q: Μα, δεν μου είπες χθες ότι η Ελένη θα πάρει τον Στέφανο;

H: Όχι, το ΜΑΝΩΛΗ θα πάρει η Ελένη.

L: Όχι, η Ελένη θα πάρει το ΜΑΝΩΛΗ.

[4] ***mirative***

Q: Συμφωνήσαμε, πάντως, να είμαστε μόνο γυναίκες στο πάρτι.[13]

13 For male speakers the question is: "Συμφωνήσατε, πάντως, να είστε μόνο γυναίκες στο πάρτι."

H: Ναι καλά! Το ΜΑΝΩΛΗ θα πάρει η Ελένη.
L: Ναι καλά! Η Ελένη θα πάρει το ΜΑΝΩΛΗ.

Q&A group 2

[1] ***mere***
Q: Ξέρουν όλοι για το αυριανό πάρτι;
H: Ναι. Τη ΔΑΦΝΗ θα καλέσει ο Μιχάλης. Οι υπόλοιποι είναι εντάξει.
L: Ναι. Ο Μιχάλης θα καλέσει τη ΔΑΦΝΗ. Οι υπόλοιποι είναι εντάξει.
[2] ***confirmative***
Q: Είμαστε σίγουροι ότι θα καλέσει τελικά τη Δάφνη;
H: Ναι. Τη ΔΑΦΝΗ θα καλέσει ο Μιχάλης.
L: Ναι. Ο Μιχάλης θα καλέσει τη ΔΑΦΝΗ.
[3] ***corrective***
Q: Μα, δεν είπαμε να μιλήσουμε πρώτα με τον άντρα της;
H: Όχι. Τη ΔΑΦΝΗ θα καλέσει ο Μιχάλης.
L: Όχι. Ο Μιχάλης θα καλέσει τη ΔΑΦΝΗ.
[4] ***mirative***
Q: Α, μάλιστα! Δεν είπαμε να μην έρθει το ζεύγος, τελικά;
H: Ναι καλά! Τη ΔΑΦΝΗ θα καλέσει ο Μιχάλης.
L: Ναι καλά! Ο Μιχάλης θα καλέσει τη ΔΑΦΝΗ.

Q&A group 3

[1] ***mere***
Q: Τα έχουμε πάρει όλα για αύριο;
H: Σχεδόν. ΜΠΥΡΕΣ θα φέρει ο Νίκος. Τα υπόλοιπα είναι έτοιμα.
L: Σχεδόν. Ο Νίκος θα φέρει ΜΠΥΡΕΣ. Τα υπόλοιπα είναι έτοιμα.
[2] ***confirmative***
Q: Σίγουρα θα φέρει ποτά ο Νίκος;
H: Ναι, ΜΠΥΡΕΣ θα φέρει ο Νίκος.
L: Ναι, ο Νίκος θα φέρει ΜΠΥΡΕΣ.
[3] ***corrective***
Q: Μα, δεν είπε ότι θα φέρει φαγητά ο Νίκος;
H: Όχι, ΜΠΥΡΕΣ θα φέρει ο Νίκος.
L: Όχι, ο Νίκος θα φέρει ΜΠΥΡΕΣ.
[4] ***mirative***
Q: Τι λες; Αφού λέει ότι δεν πίνει αλκοόλ ο Νίκος.
H: Ναι καλά! ΜΠΥΡΕΣ θα φέρει ο Νίκος.
L: Ναι καλά! Ο Νίκος θα φέρει ΜΠΥΡΕΣ.

Q&A group 4

[1] ***mere***
Q: Συμφωνήσαμε να ντυθούμε πρόχειρα στο πάρτι.
H: ΚΟΥΣΤΟΥΜΙ θα φορέσει ο Πέτρος. Οι άλλοι δεν ξέρω.
L: Ο Πέτρος θα φορέσει ΚΟΥΣΤΟΥΜΙ. Οι άλλοι δεν ξέρω.
[2] ***confirmative***
Q: Πράγματι θα εμφανιστεί με κουστούμι ο Πέτρος;
H: Ναι, ΚΟΥΣΤΟΥΜΙ θα φορέσει ο Πέτρος.
L: Ναι, Ο Πέτρος θα φορέσει ΚΟΥΣΤΟΥΜΙ.
[3] ***corrective***
Q: Εγώ νόμιζα ότι θα βάλει το τζιν του ο Πέτρος.
H: Όχι. ΚΟΥΣΤΟΥΜΙ θα φορέσει ο Πέτρος.
L: Όχι. Ο Πέτρος θα φορέσει ΚΟΥΣΤΟΥΜΙ.
[4] ***mirative***
Q: Αφού ο Πέτρος ντύνεται πάντα απλά.
H: Ναι καλά. ΚΟΥΣΤΟΥΜΙ θα φορέσει ο Πέτρος.
L: Ναι καλά. Ο Πέτρος θα φορέσει ΚΟΥΣΤΟΥΜΙ.

Filler items
Σενάριο: Πάρτι
Μια παρέα φίλων οργανώνει ένα πάρτι. Συζητούν μεταξύ τους. Ακολουθούν οι παρακάτω δυνητικοί διάλογοι:

[1] ***mere***
Q: Τι γεύση προτιμάς για την τούρτα;
H: ΣΟΚΟΛΑΤΙΝΑ είναι η αγαπημένη μου τούρτα.
L: Η αγαπημένη μου τούρτα είναι ΣΟΚΟΛΑΤΙΝΑ.
[2] ***confirmative***
Q: Πιστεύεις θα 'ναι ωραία στο πάρτι;
H: Ναι. ΚΑΤΑΠΛΗΚΤΙΚΑ θα περάσουμε όλοι.
L: Ναι. Όλοι θα περάσουμε ΚΑΤΑΠΛΗΚΤΙΚΑ.
[3] ***confirmative***
Q: Θα έχουμε καθόλου έτοιμο φαγητό;
H: Ναι. ΠΙΤΣΕΣ θα παραγγείλουμε.
L: Ναι. Θα παραγγείλουμε ΠΙΤΣΕΣ.
[4] ***confirmative***
Q: Θα το τραβήξουμε μέχρι αργά;
H: Οπωσδήποτε. ΞΗΜΕΡΩΜΑΤΑ θα το διαλύσουμε.
L: Οπωσδήποτε. Θα το διαλύσουμε ΞΗΜΕΡΩΜΑΤΑ.