

# Clitic doubling and information structure in Albanian<sup>1</sup>

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## *Abstract*

*Studies have established that clitic doubling in various languages is sensitive to a number of semantic features of the doubled objects. In the same spirit, an open question has been what specific distributional properties characterize clitic doubling in Albanian. The only generalization emerging from this literature maintains that while clitic doubling is obligatory with dative objects, it is dependent on the focus/topichood status of the accusative objects, with topical accusative objects always clitic doubled and the focused ones non-clitic-doubled. This article provides two experiments, a grammaticality judgment and an elicitation production conducted, that are designed to provide empirical support for the above observations as well as investigate whether the absence of clitic doubling is sensitive to two different types of foci, i.e., rheme and kontrast, present in natural language. The results are in agreement with the observations in the literature. They also refine these observations in that no significant systematic relation is found between (non)clitic doubling and the two interpretative categories of rheme and kontrast. Additionally, these two notions are not found to differentially realize through the syntax of clitic doubling in Albanian.*

## **1. Introduction**

Clitic doubling is the construction in which a clitic pronoun doubles a verbal argument inside the same clause, as illustrated through the Albanian example in (1) where *i* is the third person plural clitic pronoun and *lulet* is a full DP in the argument position:<sup>2</sup>

- (1) *Bora i                   bleu    lul-et.*  
Bora them.cl.dat bought flowers-dat  
'Bora bought the flowers.'

Clitic doubling has been observed in typologically and genetically diverse languages such as in Romance languages (Strozer 1976; Rivas 1977; Jaeggli 1982; Suñer 1988; Dobrovie-Sorin 1990; Sportiche 1996; Uriagereka 1988; Torrego 1988; Bleam 1999; Hill and Tasmowski 2008; Cornilescu and Dobrovie-Sorin 2008; Avram and Coene 2007), Semitic languages (Borer 1984), Slavic languages (Dimitrova-Vulchanova and Vulchanov 2008, Krapova and Cinque 2008), Greek (Philippaki-Warbuton 1987; Drachman 1983; Anagnostopoulou 1994; Tsakali and Anagnostopoulou 2008), Albanian (Kallulli 1995, 2000), and Pirahã (Everett 1987). Kallulli and Tasmowski (2008) in their review of most of the above studies conclude that to date there has not been a clear agreement about why clitic doubling appears at all and what accounts for its variation across languages.

As part of this research agenda, Kallulli (1995, 2000) observed that in Albanian clitic doubling occurs with both dative and accusative objects<sup>3</sup>. Dative objects are always clitic doubled, while accusative objects are only clitic doubled if they are outside the focus domain. If accusative objects appear inside the focus domain, they cannot be clitic doubled. Kallulli argues that, unlike what has been claimed for Romance languages, clitic doubling of accusative objects in Albanian is not governed by any of the following features: animacy, human, definiteness, or specificity;<sup>4</sup> clitic doubling of accusative objects is instead restricted to those that are [-focus]. Both (5) and (8), which differ in whether a clitic doubles the accusative object, are grammatical in Albanian and true in the same situations. However, they differ in whether their objects are topical or focused. Kallulli points out that in any given discourse context, only one is felicitous: the undoubled example in (5) is a felicitous answer to the questions in (3) and (4), which focus the VP or the direct object DP, but is not a felicitous answer to the questions in (6) and (7) which focus the subject DP. In other words, direct object clitic doubling is incompatible with direct object DPs that are contained in focused domains. Thus, (8) is a felicitous answer to both questions in (6) and (7), but not to those in (3) and (4). Unlike accusative objects, dative objects are always clitic doubled regardless of whether they are topical or focused, as in (2).

- (2) *Unë* \**(i)*                    *thërrita*    *motr-ës*.  
 I        3S.CL.DAT    called    sister-DAT  
 'I called (to) my sister.'
- (3) *What did Bora do?*
- (4) *What did Bora lose?*
- (5) *Bora* (\**e*)                    *humbi*    *dosj-en*.  
 Bora    3S.CL.ACC    lost        file-ACC  
 'Bora lost the file.'
- (6) *Who lost the file?*

- (7) *What did Bora do to|with the file?*  
 (8) *Bora \*(e) humbi dosj-en.*  
 Bora 3S.CL.ACC lost file-ACC  
 ‘Bora lost the file.’

As observed, the absence of clitic doubling with accusative objects in Albanian correlates with the presence of focus. This renders the phenomenon of clitic doubling in this language particularly interesting because it allows for the exploration of two distinct notions of focus recognized in the literature, i.e., rheme and contrast, present in natural language. It has been argued at least since Chafe (1976) that there is sufficient conceptual and experimental motivation to consider two different distinct categories within what is referred to in the literature as “focus”: rheme and *kontrast*. The concept of rheme belongs to the domain of ‘information packaging’ (Chafe 1976; Vallduví 1992), which is assumed to mediate between the linguistically conveyed information and the hearer’s mental model of the discourse (or context). Within this perspective, following Veltman (1990), contexts or stages of discourse can be viewed as *information states* whereas new utterances added to the discourse can be viewed as *information updates*. Information states model the hearer’s knowledge of the world at the time of the utterance and determine whether information updates are felicitous or not. The elements in the information update are the rheme, as in (9) below where *tomorrow* is the rheme:

- (9) *When is Linda coming?*  
*Linda is coming [<sub>R</sub> tomorrow].*

*Kontrast*, on the other hand, is the term that has been used to cover several operator-like interpretations of focus in the literature, such as identificational focus, contrastive focus, contrastive topics, and exhaustiveness focus. Following Rooth (1985, 1992), Vallduví and Vilkkuna (1998) take a focused constituent to be *kontrastive* when a set of alternatives is generated as an additional denotation. In the interpretation of (10) below, for example, the set of contextually bound alternatives,  $M = \{\text{salad, soup, main entree, dessert}\}$ , is crucial: (10) is true only if Linda ate the salad, and did not eat any member of  $M$  other than salad. In (10), *salad* is *kontrastive*.

- (10) *Linda ate only [<sub>K</sub> the salad].*

Vallduví and Vilkkuna (1998) observe that *kontrastiveness* is orthogonal to rhematicity: *kontrast* can be coextensive with rheme or a subset of rheme, in which case, a given constituent can be “doubly focal” in the sense of being both rhematic and *kontrastive*. By using a feature-like notation expressing rheme as [rh+] and *kontrast* as [k+], they show that a given expression can be:

a) rheme only as in [rh+; k-], b) kontrast only as in [rh-; k+], c) neither rheme, nor kontrast, as in [rh-; k-], and d) doubly focal, both rheme and kontrast, as in [rh+; k+]. Examples of these configurations follow below. The words in all caps indicate a rheme. In (11) *airplane* is rheme only, but not kontrast, whereas *Tom* in (12) is only kontrast. In (13) ‘airplane’ is [rh+; k+], while in (14) ‘airplane’ is neither rheme nor kontrast, since ‘Tom’ is the sentential rheme.

- (11) *What did Tom buy?*  
*Tom bought an* [RH+ K- AIRPLANE].
- (12) *What did Tom and Jerry buy?*  
 [RH- K+ Tom] *bought an AIRPLANE.* (I do not know anything about Jerry.)
- (13) *What did Tom buy?* (from a choice of two vehicles)  
*Tom bought* [RH+; K+ ONLY THE AIRPLANE]. (not the boat)
- (14) *Who bought the airplane?*  
 TOM *bought the* [RH- K- airplane].

Despite the fact that the boundary between these two types of focus has often been blurred in the literature, Vallduví and Vilkuña (1998) and É. Kiss (1998) show that the distinction between them becomes manifest in a number of different languages. They argue that there is strong structural evidence in languages such as Catalan, Hungarian, Finnish, and even English for their separation. While in English, for instance, these different categories exploit prosodic structural resources, in Catalan, Hungarian and Finnish their correlates are syntactic.

Synthesizing this evidence, it becomes important to further understand whether non-clitic doubling of accusative objects in Albanian bears any correlation with rheme and/or kontrast. Is rheme or kontrast the determining factor that conditions the non-clitic doubling of these objects? Additionally, the investigation of the interaction between obligatory non clitic doubling and these two different notions of focus will also shed light on whether, in Albanian, rheme and kontrast are differentially expressed through syntactic structures (as opposed to prosodic, as in English). Are rheme and kontrast differentiated through the syntax of clitic doubling in Albanian? Besides providing experimental evidence for what Kallulli (1995, 2000) has observed, the two experiments presented here are designed to specifically address the above questions.

Experiment I, which used a grammaticality judgment task, and Experiment II, which featured an elicitation production task, were designed to address these issues both in the modality of comprehension and production for a full picture of the adult grammar. The specific research questions for each experiment are the following:

1. Does clitic doubling of dative objects depend on the topical and the rhematic/kontrastive status of the objects?
2. Does clitic doubling of accusative objects depend on the topical and the rhematic/kontrastive status of the objects?
3. Are rheme and kontrast differentially realized through the syntax of clitic doubling?

In what follows, I will present a few relevant facts about Albanian and the two experiments followed by their analysis, results and a discussion. A concluding remarks section will locate the results in relation to current research observations and findings.

## 2. Albanian: relevant facts

Albanian displays flexible word order. The unmarked order of constituents in a transitive construction is SVO, as illustrated in (15):

- (15) *Vajz-a       bleu       bilet-ën.*  
 Girl-NOM bought ticket-ACC  
 ‘The girl bought the ticket.’

Albanian is characterized by a rich case and agreement system in which subjects bear nominative case, direct objects bear accusative case, and indirect objects bear dative case. Table 1 provides the paradigm of Albanian pronominal accusative and dative clitics, which are marked for number, person and case. There is no gender agreement between a verbal participle and a clitic in Albanian.

Table 1. *Paradigm of Albanian pronominal object clitics*

	Dative		accusative	
	singular	plural	singular	plural
1st person	më	na	më	na
2nd person	të	ju	të	ju
3rd person	i	u	e	i

## 3. Experiment 1

### 3.1. Method

This experiment was designed to uncover the distributional properties of clitic doubling of dative and accusative objects in Albanian with particular attention

to the association between the obligatory absence of clitic doubling and the two distinct focal concepts of rheme and kontrast. Specifically, it is designed to uncover whether non clitic doubling of objects is dependent upon their rhematic and/or kontrastive status through the study of the judgments of a wider, randomly selected population.

### 3.2. *Participants*

The participants in this study were 27 native Albanian speakers aged from 24 to 64 years old. They were recruited in the city of Tirana where the experiment took place. None of them had a known history of neurological and/or learning disorders and their education level ranged from high school to master's level degrees. None of them received any credit or compensation for their participation in the study.

### 3.3. *Materials*

The experimental items varied along three dimensions: case, focus, and grammaticality.

Dative and accusative test items were constructed to test for the distinction and the effects of rheme and kontrast. As such, all items included one of the four configurations of focus discussed above, i.e., [rh+; k-], [rh-; k+], [rh+; k+] and [rh-; k-]. The 'grammaticality' variable presented a grammatical or an ungrammatical use of the targeted clitic doubling construction. Half of the thirty-two test items were grammatical, and the other half were ungrammatical. Ungrammatical items were structurally similar to the grammatical items; however, they differed lexically and were marked by an incorrect usage of the clitic, i.e., dative objects were not clitic doubled, accusative focused objects

Table 2. *Variables and tiers*

Variable	Tiers of the variable
case →	dative accusative
focus →	[rh+; k-] [rh-; k+] [rh-; k-] [rh+; k+]
grammaticality →	grammatical ungrammatical

were clitic doubled, and accusative topical objects were not clitic doubled. The test also included eight distractors, which served as controls to ensure that the participants were following the instructions of the task correctly. The distractors featured either ungrammatical or grammatical sentences and did not differ in structure from the test sentences. Their ungrammaticality resulted from case, number, and tense errors of different constituents in the sentence. Each of the sixteen conditions of the experiment had two tokens, thus making for a total of forty experimental items including the eight distractors. Table 3 presents the thirty-two conditions of the experiment (excluding the eight distractors).

Below are two examples of test conditions: one shows the grammatical [rh+; k-] dative condition where clitic doubling yielded grammaticality and the other shows the ungrammatical [rh-; k+] accusative condition where clitic doubling yielded ungrammaticality. The participants were asked to read each experimental item (which was in Albanian) and indicate whether Toni’s response to Besa’s question “sounds like Albanian.” Besa, an Albanian woman, was the one who was never present at any of the activities described in the context and Toni, a British man, who had just arrived from England and was learning Albanian, had to tell her what had happened by using his knowledge of the Albanian language (in other words, he had to tell Besa what she had missed). As a second language learner, Tony made mistakes.

3.3.1. *Example 1: dative [rh+; k-] grammatical.* In the ‘dative [rh+; k-] grammatical’ condition, Besa’s question is intended to set up an update potential to the information state by means of an answer/sentence that contains a [rh+; k-] object. Note that the object in Toni’s answer is not mentioned in the preceding discourse (necessary to create the [rh+] condition). This condition establishes whether the participant accepts a clitic that doubles a [rh+; k-]

Table 3. *Experimental conditions*

grammatical		ungrammatical	
dative	+/-clitic	dative	+/-clitic
[rh+; k-]	+clitic	[rh+; k-]	-clitic
[rh-; k+]	+clitic	[rh-; k+]	-clitic
[rh-; k-]	+clitic	[rh-; k-]	-clitic
[rh+; k+]	+clitic	[rh+; k+]	-clitic
accusative		accusative	
[rh+; k-]	-clitic	[rh+; k-]	+clitic
[rh-; k+]	-clitic	[rh-; k+]	+clitic
[rh-; k-]	+clitic	[rh-; k-]	-clitic
[rh+; k+]	-clitic	[rh+; k+]	+clitic

dative object. The expected judgment is that Toni's answer is correct. In the ungrammatical equivalent of this condition, Toni's answer does not contain a clitic (*Beni ra topit*), and the expected judgment is that Toni's answer does not sound like Albanian.

Context: *Beni, Vera, Goni and Eda were playing soccer. Vera was the goalkeeper. When Beni was in front of the net, Vera fell down.*

Besa: *So, what did Beni do?*

Toni: *Beni i ra top-it.*  
 Beni it-DAT kicked ball-DAT  
 'Beni kicked the ball.'

Question to participant: *Does Toni's answer sound like Albanian?*

3.3.2. *Example 2: accusative [rh-; k+] ungrammatical.* In the "accusative [rh-; k+] ungrammatical" condition, Besa's question is intended to set up an answer/sentence that contains a [rh-; k+] object. This condition, which is ungrammatical, establishes whether the participant rejects a clitic that doubles a [rh-; k+] accusative object. The expected answer is that Tony's answer does not sound like Albanian because the kontrasted object is clitic doubled (and it should not be). In the grammatical equivalent of this condition, Toni's answer does not contain a clitic and the subject's expected judgment is that Toni's answer sounds like Albanian.

Context: *All the girls had decided to clean the apartment and were throwing out unused things. One of them felt bad about throwing out everything, so she threw out only the old radio.*

Besa: *Oh, who did this?*

Toni: *Ana e hodhi vetëm radio-n e vjetër.*  
 Ana 3S.CL.ACC threw only radio-ACC old  
 'Ana threw out only the old radio.'

Question to participant: *Does Toni's answer sound like Albanian?*

### 3.4. Procedure

The materials described above were used in a Grammaticality Judgment Task inspired by Schütze (1996). In this task the elicitation response was in the form of an assessment wherein native Albanian speakers determined whether or not a particular stimulus was grammatical in a given context. Item ordering effects were controlled for by counterbalancing the order of experimental items across different participants as suggested by Greenbaum (1973). The number of grammatical and ungrammatical items (including distracters) was equal in order to avoid influencing participants' judgments. The task consisted of two parts: a training/practice session and a test session, and took approximately 25



minutes to complete. The participants wrote their answers down in their own test booklet for later coding and analysis. If the participant did not follow the directions, specific experimental items were excluded from the analysis (see *Test Session* section below for directions).

3.4.1. *Training/Practice session.* The participants were presented with scenarios similar to those in the experimental items and explicitly shown the type of judgment they were required to make to complete the task successfully. During this session, they were given three training items (with answer keys) to read which were structurally similar to the experimental items described above so as to introduce them to the nature of the task and make the training session as relevant to the actual experimental task. Participants were instructed that the task involved reading and judging several scenarios where the two friends, Besa and Toni, were having a conversation about an event that had already occurred. At the end of their conversation, the experimenter explained to the participants why ‘Toni’s sentence did not sound like Albanian’ or why ‘Toni’s sentence did sound like Albanian.’ In the former case, the experimenter underlined the section of Toni’s sentence which did not sound like Albanian. The mistakes Toni made in the training/practice session were not based on clitics, but rather on noun/adjective gender, noun/adjective case, or article usage.

After training, each participant was given a practice session wherein they were asked to read four practice items in their individual booklet: two of these items were grammatical, while the other two were ungrammatical. The ungrammaticality in these items did not result from violations in clitic usage, but rather from noun case, and pronoun number. This time, participants were required to make their own judgment about whether Toni’s sentences sounded like Albanian. The participants had to answer correctly on all four and underline the section that ‘did not sound like Albanian’ in order to participate in the experiment. None of the participants was excluded based on their performance on the training/practice session.

3.4.2. *Test session.* During the test session, participants received the same task, only this time Toni’s errors resulted from his clitic usage. The instructions given during the test session were similar to those given during the practice session. At the end of Toni and Besa’s conversation, the participants were asked to judge whether ‘Toni’s sentence sounds like Albanian.’ If ‘yes’, then they were asked to circle ‘yes’ in their test booklet. If ‘no’, they were asked to circle ‘no’ and also underline the section of Toni’s sentence which did not sound like Albanian. Failure to underline a section constituted not following the instructions, and in such cases, these items were excluded from the final analysis. This was done because, in the absence of underlining, it was not possible to be certain that the error was tied to the presence or absence of a

clitic in the sentence. Items where participants underlined something other than the clitic were also excluded from the analysis. Each participant was required to judge 40 items that were constructed to be as semantically and grammatically parallel as possible.

### 3.5. *Analysis*

The participants' answers were coded for correct and incorrect judgment. For the dative constructions, a subject's response was coded as correct either when the sentence contained a clitic double and the subject accepted it, or when the sentence lacked the clitic double and the subject rejected it. Both cases when a clitic doubled dative object was not accepted or when a non-clitic doubled dative object was not rejected were coded as incorrect.

In the accusative object constructions, the correct response varied with the context. With topical objects, a correct answer was acceptance of items with a clitic and rejection of items without a clitic. Rejecting the items with a clitic and accepting the items without one counted as incorrect. With focused objects, a correct answer was acceptance of non-clitic-doubled items and rejection of a clitic doubled items. Acceptance of focused clitic doubled items and rejection of non-clitic doubled ones counted as incorrect in this case. Percent correctness was calculated for all conditions of the task.

Data from 4 participants were omitted from the analysis because they performed below chance (varying from 10–36% correct). The rationale behind this was that subjects that do abysmally on the test items are quite likely not actually performing the task being tested for and as such they must not be considered when trying to form generalizations about how people perform on that specific task. In addition, one item pertaining to the [rh–; k+] ungrammatical accusative condition was excluded from the analysis because the item was concluded to be ambiguous with respect to the information structure being set up for the target sentence.

One whole condition (consisting of 2 items), the ungrammatical [rh–; k–] accusative condition, was also excluded from the analysis since the depressed performance rate turned out to be an item effect and so it was not testing what it was designed to test. Specifically, it was designed to test whether subjects would reject as ungrammatical non-clitic doubling of topical objects. However, it appears to have been treated by subjects as a non-clitic doubled rhematic object. A careful investigation into the performance rates of the ungrammatical [rh–; k–] accusative condition revealed that the context needed to be set up in a way that it would avoid 'giving away' the correct usage of the clitic (hence, 'ungrammatical condition'), but still manage to mention the object that needed to be doubled (hence 'topical condition'). In both of these items, as a result of their ambiguous design, Besa's question (the more immediate context

to the target sentence) set up an information update potential that allowed for an all-focus interpretation of the target sentence, leading to much more variable judgments than intended.<sup>5</sup> However, the exclusion of this condition from the experiment does not pose any serious problems in the interpretation of the results regarding topical accusative objects. Data from the grammatical equivalent of the same condition were available and conclusions were drawn based on participants' performance on those items.

### 3.6. Results

This section presents the results of the acceptance rates for grammatical conditions as well as the rejection rates for the ungrammatical ones. Table 4 and Figure 1 summarize the findings for the acceptance rates for both the grammatical dative and accusative constructions broken down by the focus/topichood conditions. Note that, as specified earlier, the three focus conditions were [rh+; k+], [rh-; k+], [rh+; k] and the topical condition was [r-; k-].

An examination of the results reported in Table 4 leads to several conclusions. First, it is clear that the rate of acceptance of clitic doubling for dative objects is high. Chi square tests indicate that there are no significant differences between the rates of acceptance of correct clitic usage for the focused dative conditions and the topical dative condition. In other words, adults judge clitic doubling of all dative conditions, whether focused or topical, as correct. Second, it is also clear that the rate of acceptance of the correct clitic usage in the accusative constructions is high. Again, chi square tests show no significant differences across all accusative items. Third, rates of acceptance for accusative items appear to be lower than those for the dative items; however, chi square tests show no significant differences between them. In other words, acceptance rates for both dative and accusative items are not significantly different from one another. Lastly, chi square tests indicate that no distinction was made between rheme and kontrast; there were no significant differences between the rates of acceptance of clitic usage for rhematic and kontrastive accusative conditions for both dative and accusative cases.

Table 4. Acceptance rates for grammatical constructions broken down by case and focus construction

	dative			accusative		
	+/-clitic	raw	percentages	+/-clitic	raw	percentages
[rh+; k+]	+clitic	43/46	94%	-clitic	44/46	95.6%
[rh-; k+]	+clitic	45/46	98%	-clitic	42/46	91.3%
[rh+; k-]	+clitic	43/46	94%	-clitic	39/46	84.7%
[rh-; k-]	+clitic	46/46	100%	+clitic	42/46	91.3%

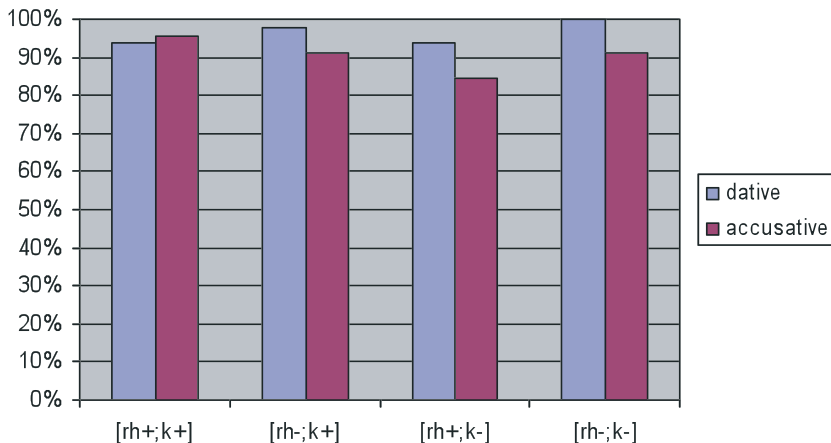


Figure 1. Acceptance rates for grammatical constructions broken down by case and focus construction

Table 5. Rejection rates for ungrammatical constructions broken down by case and focus construction

	dative			accusative		
	+/-clitic	raw	percentages	+/-clitic	raw	percentages
[rh+; k+]	-clitic	45/46	97.8%	+clitic	41/46	89.1%
[rh-; k+]	-clitic	45/46	97.8%	+clitic	45/46	97.8%
[rh+; k-]	-clitic	45/46	97.8%	+clitic	22/23 <sup>6</sup>	95.6%
[rh-; k-]	-clitic	46/46	100%	-clitic	—	— <sup>7</sup>

Table 5 and Figure 2 summarize the findings for the rejection rates of the ungrammatical dative and accusative items broken down by the focus/topichood conditions.

A number of observations can be made about the results in Table 5 and Figure 2. First, the rejection rate for the incorrect omission of clitics with dative objects is very high and chi square tests indicate no difference between these rates. Second, chi square tests show that the rejection rates across ungrammatical accusative conditions were not significantly different from one another. Third, just as with the acceptance rates, the rejection rates for the ungrammatical accusative conditions appear to be slightly lower than those for the dative conditions, but chi square tests show no difference between the two. Fourth, no significant difference was detected between the rejection rates of the ungrammatical rhematic accusative conditions and the contrastive ones.

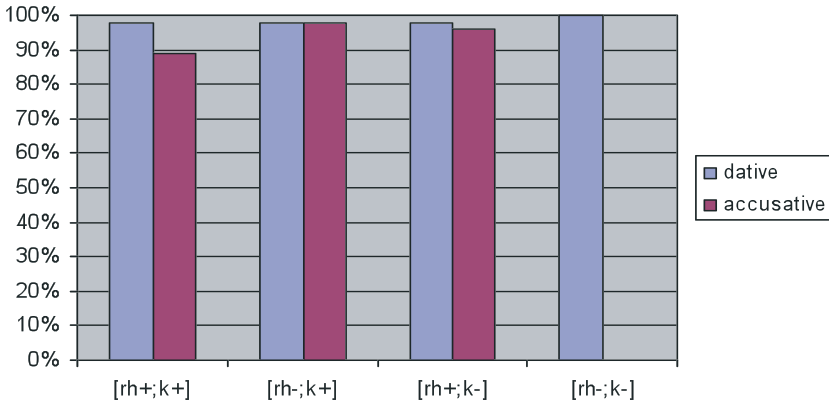


Figure 2. *Rejection rates for ungrammatical constructions broken down by case and focus construction*

Taken together, these results can be summarized into several important points. First, participants always judge dative objects to be clitic doubled without any sensitivity to their topichood/focus status. On the other hand, their judgments of topical and focused accusative objects differ: they judge as grammatical topical accusative objects which are clitic doubled and focused accusative objects that are non-clitic doubled. Lastly, participants make no distinction between rheme and kontrast; they judge both rhematic and kontrastive objects as grammatical only when they are non-clitic doubled.

#### 4. Experiment 2

##### 4.1. Method

This study is designed to experimentally evaluate the connection between clitic doubling and the two focal notions, rheme and kontrast, in adult Albanian through an elicitation production task.

##### 4.2. Participants

The participants in this study were 30 Albanian-speaking participants, aged 19.4 to 54.5.

They were recruited in the city of Tirana in Albania, where the experiment took place. None of them had any known neurological disorders and all had at least an undergraduate degree. Some were fluent speakers of foreign languages, but all were native speakers of Albanian.

Table 6. *Participants (n = 30)*

Male	15
Female	15
average age	30.2

Table 7. *Variables and tiers*

Variable	Tiers of the variable
case →	dative accusative
focus →	[rh+; k-] [rh-; k+] [rh-, k-]
prime →	grammatically primed ungrammatically primed

#### 4.3. *Materials*

Materials for the task consisted of forty-eight colorful illustrations<sup>8</sup> that depicted an action performed by recurring agents: Niku, Ana (main characters) or any of their animal friends. The pictures were arranged in three different books, which were counterbalanced across every three participants. Each book contained the same four blocks of items, but the order of blocks changed so as to control for any effect resulting from the order of the items. Each block contained the same items ordered in the same way across all books and contained one test item for each condition of the experiment. The experimental conditions varied along three dimensions: case, focus, and presence/absence of the clitic as shown in Table 7.

The items were either in the dative or in the accusative case. The accusative test items were designed to test for the effects of rheme and kontrast independently. The *focus* variable differed along the rheme, i.e., [rh+; k-], kontrast, i.e., [rh-; k+], and neither rheme nor kontrast, i.e., [rh-, k-], dimensions.<sup>9</sup> The *prime* variable distinguished items on the basis of whether the usage of the clitic in the prior context was grammatically used (grammatically primed) or ungrammatically used (ungrammatically primed), in order to test for effects deriving from the nature of the items. Ungrammatically primed conditions were structurally the same as the grammatically primed conditions; however, they differed lexically and were marked by an incorrect usage of the clitic. Each of the twelve conditions had four tokens, amounting to a total of forty-eight experimental items. Table 8 presents the twelve conditions of the experiment.

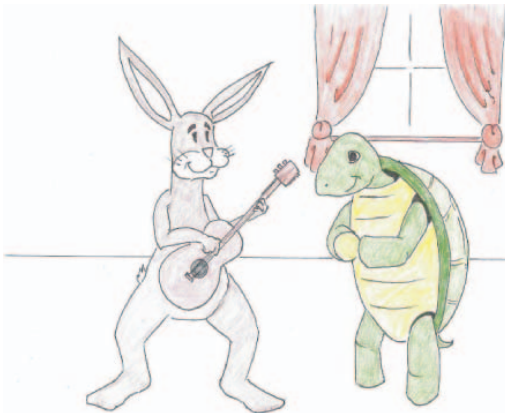
Table 8. *Experimental conditions*

grammatically primed		ungrammatically primed	
dative	+/-clitic	dative	+/-clitic
[rh+; k-]	+clitic	[rh+; k-]	-clitic
[rh-; k+]	+clitic	[rh-; k+]	-clitic
[rh-; k-]	+clitic	[rh-; k-]	-clitic
accusative	+/-clitic	accusative	+/-clitic
[rh+; k-]	-clitic	[rh+; k-]	+clitic
[rh-; k+]	-clitic	[rh-; k+]	+clitic
[rh-; k-]	+clitic	[rh-; k-]	-clitic

Each stimulus item had three important components (which are italicized in the stimulus examples below): a) the sentence with the prime, b) the immediately preceding discourse, c) the target sentence.

The sentence with the prime contained either the target sentence or a similarly constructed one with either the grammatical prime or the ungrammatical prime. The position of this sentence in the discourse differed depending on the condition (see individual conditions for examples of positions). The immediately preceding discourse referred to the sentence that preceded the target sentence. This was sometimes produced by the experimenter and sometimes produced by a puppet, a bear (*Arush Dudushi*, which is the equivalent of the Teddy Bear in the Albanian language/culture) and sometimes overlapped with the sentence with the prime. The target sentence, on the other hand, was always produced by the participant and contained the target clitic construction. Below are three examples of the conditions of the study.

Example 1. *Dative [rh-; k-] grammatically primed*



Experimenter: *Oh, look, who is in this picture! Our friends, Mr. Rabbit and Mrs. Turtle! Do you see them? They seem to be having lots of fun. Hey, Arush Dudushi, who played the guitar here?*

Bear: *Oh, I know this one!* prime sentence  
*Breshk-a I ra kitar-ës!* and  
 Turtle-nom 3s.cl.dat played guitar-dat immediately  
 The turtle played on the guitar! preceding discourse

Participant: *Jo! [<sub>K</sub> Lepur-i] i ra* target  
 No Rabbit-nom 3s.cl.dat played sentence  
*kitar-ës.*  
 guitar-dat  
 No! [<sub>K</sub> The rabbit] played the guitar!

In the dative [rh-; k-] grammatically primed condition, the bear's answer (sentence with the prime) contained the correct object, but an incorrect subject. This was done in order to set up the condition of [rh-; k-] in the participant's utterance where, even though there is kontrast in the sentence, kontrast lies on the subject and not the object DP. The expected answer from the participant must contain a clitic. In the ungrammatically primed equivalent of this condition, the sentence with the prime did not contain a clitic, i.e., *Breshka ra kitarës*.

Example 2. *Accusative [rh+; k-] grammatically primed*



Experimenter: *Pa shiko! Ana po vizaton një lule.* prime sentence  
 Look! *Ana is drawing a flower.*  
*She is sitting at her desk in her room. Wow, look how big this table is and look at the lamp, too. Do you see it? Hey, Arush*



*Dudushi, can you tell us what is Ana doing here?*

- Bear: *I don't know. I forgot. Can you tell me? What is Ana doing?* immediately preceding discourse
- Participant: *Oh, I know. Ana [R po vizaton një lule].* target sentence  
*Ana prog draws a flower.acc*  
*Ana [R is drawing a flower].*

In the accusative [rh+; k-] grammatically primed condition, the bear does not provide an answer to the question asked by the experimenter. This is done in order to set up the condition for the [rh+; k-] clitic construction in the participant's utterance. It is important that for this condition the target clitic construction is not mentioned in the immediately preceding discourse. The expected answer from the participant must contain a clitic. In the ungrammatically primed equivalent of this condition, the sentence with the prime describing the action in the picture contained a clitic, i.e., *Ana po e vizaton një lule*. A topical interpretation of the ungrammatically primed sentence was avoided by ensuring that all of these sentences were 'out of the blue' sentences in the design of the stimulus.

Example 3. *Accusative [rh-; k+] grammatically primed*



- Experimenter: *Look, here is Ana again. Her mommy wants her to drink milk and cola. That's why she left them on the table for Ana, right? Hey, Arush Dudushi, what is Ana doing here?*
- Bear: *Oh, I know this one!* prime sentence  
*Ana po pi vetëm qumësht-in!* and immediately preceding discourse  
*Ana prog drink only milk-acc*  
*Ana is drinking only the milk!* discourse

Participant: *No!*  
*Ana po pi vetëm* target sentence  
 Ana prog drink only  
 [<sub>K</sub> *koka-kol-ën*]!  
 cola.acc  
 Ana is drinking only [<sub>K</sub> cola]!

In the accusative [rh-; k+] grammatically primed condition, the bear's answer contains the target clitic, but an incorrect object. This was done in order to set up the conditions for the [rh-; k+] clitic construction in the participant's utterance. The expected answer from the participant must not contain a clitic. In the ungrammatically primed equivalent of this condition, the sentence with the prime contained a clitic, i.e., *Ana po e pi vetëm qumështin*.

#### 4.4. Procedure

The materials described above were used in a hybrid form of a truth value judgment task and an elicitation production task, which tested for both comprehension and production. Participants participated in an introduction session, a practice session, and the actual test session.

4.4.1. *Introduction session.* The introduction session served to familiarize all the participants with the puppet, the bear (who was manipulated by a second experimenter) and some of "the things that made him special." Participants were told and/or shown, explicitly and through play, that very often the bear was inattentive to detail by erroneously naming objects in the surroundings (e.g., when the experimenter pointed to a prop such as a chair and asked the puppet to name it, the puppet answered "cherry").

4.4.2. *Practice session.* After having been introduced to the puppet, the participants were introduced to the task and trained individually before beginning the actual experiment. The practice session always began with a conversation between the experimenter, the puppet and the participant about different topics. Once the experimenter, the participant, and the puppet were all engaged in a conversation, the task was introduced by the experimenter. The session featured the puppet sometimes not knowing the answer and sometimes replying incorrectly to the experimenter's questions about the actions depicted in each illustration. The participant was asked to either tell the bear the answer or correct it (see Materials and Test Session sections for more examples and details). The training session consisted of six items; however, all subjects understood the task after the first item.

4.4.3. *Test session.* The experiment included a hybrid form of a truth value judgment task and an elicitation production task based on Schaeffer (2000). As described above, the task consisted of a conversation between the experimenter, the bear, and the participant about an illustration in the book. The experimenter engaged both the bear and the participant in talking about various elements of the illustration. Then she asked the bear a specific question about it. In the [rh+; k-] condition, the bear did not know the answer to the question. The participant was asked to tell the bear what the answer was. In the [rh-; k+] and [rh-; k-] conditions, the bear gave an answer that was incongruent with the picture. In this case, the participant was asked to correct the bear. The experiment took approximately 15 minutes to complete for each participant. The entire session was videotaped for later coding and analysis. If the participant did not provide a clear response after two or three attempts, the experimental item was excluded from the analysis.

#### 4.5. *Analysis*

The participants' answers were coded for 'expected' and 'unexpected' usage of clitic doubling. In the dative conditions, the subjects answered as expected if they used the dative clitic *i* preceding the verb. When the dative clitic *i* was omitted, the answer was coded as omission. When another clitic was used, e.g., the accusative clitic *e*, the answer was coded as substitution. In addition, the answer counted as irrelevant if the subject's answer did not match the scenario. Both substitutions and irrelevant answers were omitted from the analysis.<sup>10</sup>

In the accusative constructions, whether an accusative clitic counted as expected/unexpected depended on whether the accusative object was focused or non-focused in the context. For the non-focused accusative constructions, a clitic is needed, and the categories of possible responses were the same as for the dative clitic above. Expected usage was if the accusative clitic *e* precedes the verb. Omission, substitution, and irrelevant answers were counted in the same manner as outlined above for the dative conditions. Substitutions and irrelevant answers were omitted from the analysis.

In the focused accusative constructions, expected usage was if no clitic precedes the verb. Therefore, there is no "omission" category in this case, but instead an "insertion" category for when the subject provided an accusative clitic (syntactically correct, but not in the provided context). The "substitution" category in this case is interpreted as providing a non-accusative clitic. The irrelevant answers and the "substitutions" were omitted from the analysis.

Statistical significance of the results was estimated by determining odds ratios using maximum likelihood estimation procedures, more specifically Generalized Estimating Equations (GEEs). GEEs provide a versatile method

Table 9. Variables in GEE models

subject variable	subject ID
independent variables	time block presence/absence of clitic case focus rheme kontrast
dependent variable	performance

of analysis that estimates models in which the outcome variable is binary or categorical and account for hierarchically organized or clustered data in repeated measures designs (Ziegler et al. 1998).<sup>11</sup> It is common in language research to use ANOVA or logistic regression to answer research questions similar to those posed here, but neither of these analyses is suitable for analyzing categorical hierarchically organized data (for discussions of the issues raised by these methods see Hog and Graig [1995]; Agresti [2002]; Jaeger [2008]).

All the GEE models computed for the analysis of this study included *subject ID* as the subject variable and *performance* (correct response/incorrect response) as the dependent variable. The independent variables differed for each model depending on the question being asked. All the models accounted for an effect of *time*, *block*, the interaction of *time\*block*, as well as an effect of *prime*. *Time* was the variable that represented the order of the blocks in the experimental book, while *block* represented one of the four blocks in the book. The interaction of *time\*block* was considered in order to test for the possibility that subjects' performance could have been affected by the relative order in which each subject received each block. Table 9 summarizes the variables used in the GEE models.

#### 4.6. Results

Table 10 summarizes the findings for the dative and accusative cases broken down by the focus/topichood conditions. Note that the two focus conditions were [rh-; k+] and [rh+; k], whereas the topical condition was [r-; k-]. Since the prime did not have an effect on participants' performance ( $p = .907$ ), it is not included in the breakdown results. It is, however, always accounted for in the analysis. Also, an item and subject analysis revealed no outliers.

Several conclusions can be drawn from the data presented in Table 10. First, it is clear that the rate of clitic doubling of dative objects is perfect for all

Table 10. *Rates of expected response broken down by case and focus*

	dative			accusative		
	+/-clitic	raw	percentages	+/-clitic	raw	percentages
[rh+; k+]	+clitic	239/239	100%	-clitic	233/240	97.1%
[rh-; k+]	+clitic	240/240	100%	-clitic	236/240	98.3%
[rh-; k-]	+clitic	240/240	100%	+clitic	233/240	97.1%

conditions. In other words, participants use the dative clitic *i* to double dative objects. This serves as evidence that participants clitic double these objects irrespective of their informational structure status: they clitic double all topical, rhematic and kontrastive dative objects.

Second, it is apparent that the rate of the correct clitic usage in accusative constructions is quite high which, broadly speaking, means that participants use the accusative clitic *e* with the topical accusative objects, and do not use any clitic at all with the rhematic and kontrastive objects. Even though these rates are slightly lower than the rates for the datives, GEE models do not indicate a significant difference between the dative conditions and the accusative conditions.

Third, GEE models do not indicate a significant difference between the rate of correct clitic doubling for different conditions within the accusative case; participants do not clitic double rhematic and kontrastive objects vs. topical objects at significantly different rates. Also, crucially, this result means that there is no significant difference between the rates of non-clitic doubling of rhematic accusative objects and kontrastive accusative objects ( $p = 0.823$ ).

Thus, the main findings of the current experiment were as follows. First, participants clitic double dative objects regardless of whether they are rhematic, kontrastive or topical. This result is consistent with Kallulli's (1995, 2000) observation that dative objects are invariably clitic doubled. More interestingly, participants always clitic double topical accusative objects, while they do not clitic double accusative objects that are rhematic or those that are kontrastive. Overall, these results provide evidence for a systematic relation between clitic doubling and the topical vs. rhematic/kontrastive status of the object they double. Further, (non-)clitic doubling of accusative clitics is not differentially affected by their rhematic and/or kontrastive status: both types of objects are non-clitic doubled.

## 5. Discussion

Taken together, the results of these studies make three different contributions to the field. First, they confirm and refine the specific distributional properties

of clitic doubling in adult Albanian. Second, they show that clitic doubling in the language is not an optional phenomenon, but rather obligatory in some cases and obligatorily inapplicable in others. Third, the results of this study show that the interpretive categories of rheme and kontrast are not differentially realized in the language through the syntax of clitic doubling. Let's consider each point one by one.

These findings are in general agreement with Kallulli's (1995, 2000) generalization, which attributes the distributional properties of clitic doubling of accusative objects to their topical status and the properties of non-clitic doubling of accusative objects to their focused status. Specifically, these results extend Kallulli's observations to show that non-clitic doubling of accusative objects is directly associated with both the rhematicity and kontrastiveness status of the doubled object in that both types of objects are non-clitic doubled. In addition, dative objects are always clitic doubled whether or not the doubled object is topical, rhematic or kontrastive. These findings complement and extend the crosslinguistic variation of clitic doubling properties proposed for other languages. Different languages have been reported to display strong sensitivity towards semantic features, such as [+human], [+animate], and [-definite]. For instance, in Romanian, clitic doubling is sensitive to the [+human] feature (Borer 1984; Dobrovie-Sorin, 1990). In Spanish, clitic doubling systematically interacts with the [+animate] feature of the objects (Jaeggli 1982; Borer 1984; Suñer 1988), and for Greek, Anagnostopoulou (1994) proposes that clitic doubling is restricted only to [+definite] objects. In the same spirit, the results from the present study indicate that clitic doubling in Albanian is sensitive to the topical, rhematic or kontrastive status of the doubled argument.

Second, these results have shown an important characteristic of clitic doubling in Albanian. That is, (non-)clitic doubling is not an optional phenomenon: it is either *obligatory* in some contexts or *obligatorily inapplicable* in other contexts. Specifically, clitic doubling is obligatory with all the types of dative objects investigated here, i.e., rhematic, kontrastive, and topical. It is also obligatory with topical accusative objects. Clitic doubling is, however, obligatorily inapplicable with focused accusative objects. The non-optionality of clitic doubling in Albanian contrasts cases reported for Greek, where doubling takes place optionally with genitive indirect object DPs (Anagnostopoulou 1999), cases reported for Spanish, where cliticization is optional with accusative objects marked by a dative preposition (Torrego 1988), and for Galician, in which cliticization is optional with determiners that produce overt NPs (Uriagereka 1988).<sup>12</sup> Its obligatoriness, on the other hand, is similar to cases found in other environments within some of the same aforementioned languages such as Greek, Spanish, and French. Jaeggli (1982) argues that clitic doubling and simple cliticization is obligatory in possession constructions and

constructions with strong objects pronouns in both Spanish and French. In addition, it has been reported that in Greek doubling of a goal or an experiencer is obligatory in passives, unaccusatives, and raising constructions (Anagnostopoulou 2006). Adding to the experimental discovery of these two typological options (obligatory/optional) for clitic doubling constitutes significant evidence bearing on proposals which treat dative and accusative clitic constructions across languages as either having a similar or a different syntax (e.g., Uriagereka 1988; Blears 1999; Sportiche 1996; Demonte 1995; Torrego 1988).

Third, an important outcome derived from the present study is that non clitic doubling is not differentially sensitive to the rhematic and kontrastive status of objects. That is, objects that are rhemes as well as objects that are kontrasts are obligatorily non-clitic doubled if they are accusative and obligatorily clitic doubled if they are dative. In other words, rheme and kontrast do not have a differentiated effect on any object type. This shows that these two subtypes of focus are not differentially realized in the language through the syntax of clitics. However, the results from the present study are not necessarily in disagreement with the view that rhematicity and kontrast are two distinct interpretative categories in human language. As Vallduví and Vilkuna (1998) suggest, structural resources (syntax, prosody, and morphology) in natural language through which different interpretative categories (not just information structure, but also argument structure, grammatical role, quantificational relations, to name a few) are realized, are in fact limited. In light of this limitation, a given language might realize two interpretative categories using the same mechanism, or might fail to successfully realize one or another interpretative category at all. The fact that two distinct interpretative categories (here, rheme and kontrast) share the same realization does not intrinsically argue against the separate existence of the two interpretative categories. It shows that language has its own structural limits and that languages differ with respect to how they map interpretative categories with their limited structural resources: at times it is a neat one-to-one map, but at times it is not. Concretely, the results from this elicitation production task are simply evidence that Albanian does not distinguish the two focal notions through the syntax of clitic doubling. More generally, these results show that not all languages make use of the distinction between rheme and kontrast syntactically and, as a result, speakers are not sensitive to it in observable ways.<sup>13</sup>

## **6. Conclusion**

In conclusion, the present study confirms and extends previous results about clitic doubling of dative and accusative objects in adult Albanian through two

original experimental studies. Highlighting its obligatory nature, these studies show that dative objects in Albanian are always clitic doubled, whereas clitic doubling of accusative objects is reliant in the informational structure status of the doubled DP. Importantly, these studies offer possible evidence for the limited structural resources that language makes available for the realization of its interpretive categories. Specifically, it is shown here that two distinct categories of focus, rheme and kontrast, are realized through the same syntactic means, and speakers do not differentiate between the two in the syntax of clitic doubling. Finally, these studies show the successful use of GEEs as the means of data analysis for binary dependent clustered data in resolving several persistent issues with the more widespread methods such as ANOVAs and logistic regressions.

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## Notes

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2. Note that in simple cliticization constructions the clitic occurs without the object DP, as illustrated in the example from Albanian in (1):

- (1) *Bora i                   bleu.*  
 Bora them.cl.dat bought  
 'Bora bought them.'

The studies in the present paper will focus on the phenomenon of clitic doubling and not on that of simple cliticization (Albanian allows both constructions). In this work, I adopt Sportiche's (1996) analysis of clitic doubling which argues that the difference between the two constructions is that in a clitic doubling construction there is an overt object that co-occurs with the clitic, while in a simple cliticization construction there is only a *pro*. This view maintains that the machinery for clitic production is the same for clitic doubling constructions and simple cliticization constructions.

3. This paper will deal with only clitic doubling of third person accusative and dative DPs. In other words, whenever I refer to 'dative objects' and 'accusative objects', I mean third person dative objects and third person accusative objects unless otherwise specified.
4. See the *Discussion* section for a discussion of this.
5. Example: *When they were at the park, Eda accidentally let her kite fly off her hands. Luckily, one of the guys caught it.*



Besa: *Really? Who was this hero?*

Toni: *Beni kapi balon-ën.*  
 Beni caught kite-acc  
 'Beni caught the kite.'

Question to participant: *Does Toni's answer sound like Albanian?*

YES NO

6. As discussed in the *Analysis* section, one of the items in this condition was excluded from the analysis because it was ambiguous with respect to the information structure set up for the target sentence.
7. As discussed in the *Analysis* section, this condition (consisting of two items) was taken out of the analysis since the participants' performance rate was below chance.
8. Pictures for the book were drawn by two professional artists. The depiction of all the main characters of the book was uniform.
9. Even though there were four possible configurations of rheme and kontrast, the condition where an object DP is "doubly focal," in the sense of being both rhematical and kontrastive, was not included in this study in order to reduce the length of the test. This exact same test is intended to be used with children in a future study.
10. No dative or accusative items were excluded from the analysis based on these criteria.
11. Detailed reviews of these models can be found in Diggle et al. (1994), and Ziegler et al. (1998).
12. Anagnostopoulou (2006) presents a thorough review of various crosslinguistic environments where simple cliticization and clitic doubling are optional and obligatory.
13. For a more extreme position, which argues that the distinction between rheme and kontrast is illusory, see Brunetti 2004.

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