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Null Objects in Recipe Context

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ABSTRACT
In English, null objects are generally considered ungrammatical, except in certain registers such as recipes, user manuals, and sports reports. The present study examines null objects in the context of recipes using a corpus-based methodology, specifically focusing on five target verbs: *bake, let, place, put, and serve*. Utilizing a curated version of the FoodBase corpus and AntConc 3.5.9, the study investigates the syntactic features and limitations of these omissions. The findings demonstrate that null objects are significantly favored over direct objects (59.5%) and frequently precede prepositions. The results indicate that null objects avoid inflected verb forms but are relatively common in non-finite and participial constructions like *until serving*. Crucially, while null objects are predominantly tied to subjectless imperatives, the study identifies rare instances of co-occurrence with overt subjects (e.g., in *as you stir* constructions), challenging traditional syntactic assumptions. The study contributes to the understanding of argument omission in specialized discourse and underscores the role of corpus-driven analysis in refining theoretical models of English syntax.
Keywords: Null objects, zero anaphora, argument omission, corpus, recipe context.

Yemek Tarifi Bağlamında Boş Nesneler

ÖZ
İngilizcede boş nesneler (null objects), yemek tarifleri, kullanım kılavuzları ve spor raporları gibi belirli söylem alanları dışında genellikle dilbilgisine uymayan yapılar olarak kabul edilir. Bu çalışma, derlem tabanlı bir yöntem kullanarak yemek tarifi bağlamındaki boş nesneleri *bake, let, place, put* ve *serve* fiilleri bağlamında incelemektedir. FoodBase derleminin düzenlenmiş versiyonu veri olarak kullanılmış ve AntConc 3.5.9 yazılımı aracılığıyla boş nesnelerin sözdizimsel özellikleri ve sınırlılıkları incelenmiştir. Araştırma bulguları, boş nesnelerin düz nesnelere kıyasla belirgin şekilde daha fazla tercih edildiğini (%59,5) ve bu nesnelerin sıklıkla edatlardan önce geldiğini göstermektedir. Boş nesnelerin çekimli fiillerle birlikte çok az kullanıldığı, ancak *until serving* gibi eylemsi yapılarla birlikte görece yaygın olduğu görülmüştür. Ayrıca, boş nesnelerin genellikle gizli özneli emir kipleriyle ilişkilendirilmesine rağmen, nadir durumlarda açık öznelerle de (örneğin *as you stir* gibi yapılarda) bir arada kullanılabildiği saptanmıştır. Bu bulgu, geleneksel sözdizimsel varsayımlarını esnetmektedir. Çalışma, özel söylemde argüman eksiltimi konusunun anlaşılmasına katkıda bulunmakta ve dilbilim kuramlarının geliştirilmesinde derlem tabanlı analizin rolünü vurgulamaktadır.
Anahtar Kelimeler: Boş nesneler, sıfır anafor, argüman düşmesi, derlem, yemek tarifi bağlamı.

Introduction

Null objects refer to the phenomenon where an object of a transitive verb is omitted from a sentence without any overt indicator (Cole, 1987). Huang (1984) and Massam (1992) indicated that the possibility of null object occurrence is language-dependent and may be a 'side effect' of the existence of null topics in certain languages, such as Chinese. Cole (1987) also demonstrated that languages vary in terms of allowing null objects, categorizing them into three groups: languages licensing null pronominal objects (e.g., Mandarin and Portuguese), languages licensing null variable objects (e.g., Imbabura Quechua), or those licensing both (e.g., Korean and Thai). In contrast, English is identified as a language that allows neither null pronominal nor null variable objects.

(1) a. When he first arrived in New York, he didn't speak a word of English. (Cambridge Dictionary)
b. I'm simply expressing my opinion. (Cambridge Dictionary)
c. He bought me a camera for my birthday. (Cambridge Dictionary)

d. Heat a crepe pan over medium heat until hot. (FoodBase corpus)
e. Heat until butter melted. (FoodBase corpus)

The sentences in (1) are taken from the Cambridge Dictionary and the FoodBase corpus, illustrating different argument structures as described by Massam (1987). 'Arrive', identified as an intransitive verb, does not require an object, whereas 'express' and 'heat' in (1d), being transitive verbs, require an object. The ditransitive verb 'buy' takes both indirect and direct objects. However, 'heat', despite being semantically transitive, is used without an overt object in (1.e).

In 'standard' English, verb complements are specified by their argument structure (Bergs, 2021), and null objects are generally considered ungrammatical except in certain contexts (Cote, 1996; Culy, 1996; Massam and Roberge, 1989; Ruda, 2014). Recipe discourse is one such context that permits null objects. Unlike other registers, verb categories in recipes do not strictly dictate whether an object must be explicitly stated. While existing literature often cites the recipe context as a primary example of null object phenomena, empirical research focusing exclusively on this register remains relatively limited. Furthermore, while previous studies have laid a theoretical foundation, there is a need for more large-scale, corpus-based investigations to validate these patterns across diverse datasets. To address this gap, the present study employs a corpus-based methodology using the FoodBase Corpus (Popovski, Seljak, and Eftimov, 2019). By analyzing this extensive dataset, the study aims to provide a more nuanced understanding of null object distribution and to challenge existing assumptions regarding the co-occurrence of null objects and overt subjects.

In English, complements are governed by their respective verbs. Verbs are typically divided into four subcategories based on their transitivity: intransitive, monotransitive, ditransitive, and complex transitive. Intransitive verbs, such as *sleep*, *smile*, or *cough*, do not take an object, while monotransitive verbs require one object complement. On the other hand, ditransitive verbs require both a direct and an indirect object complement. Yet, some verbs can be categorized under two or more subcategories, such as *walk*. *Walk*, being an intransitive verb in certain contexts (1a), can also function as a transitive verb in others (1b) (Bergs, 2021).

(1) a. I can walk when it's nice. (COCA, 2012, written)
b. I'll walk the dog for them. (COCA, 2012, written)

Moreover, a complex transitive verb requires two elements to complete its meaning: a direct object and an object complement (a noun, pronoun, or adjective that provides additional information about the object) (2).

(2) a. She named him Asher. (COCA, 2012, written)
b. I consider him a friend. (COCA, 2012, written)

While certain verbs typically do not license null definite objects in standard English (Ruda, 2016), others are licensed for missing definite objects (Allerton, 1975; Cole, 1987; Fillmore, 1986). Allerton (1975) categorizes omission under four headings, distinguishing between obligatory and optional deletion (ellipsis). Obligatory ellipsis occurs when an item is grammatically prohibited from appearing in certain structures (e.g., "*I agreed to (me) to go" becomes "I agreed to go"). In contrast, optional deletion occurs in two forms: contextual and indefinite deletion. In contextual deletion, the omitted item can be reconstructed using contextual clues (3).

(3) a. We'd already eaten before we left. (COCA, 2012, written)
b. They did not interrupt so I assumed they had nothing to say. (COCA, 2012, written)

Allerton (1975) asserts that in indefinite deletion, the object is not recoverable, a phenomenon also observed in Spanish (Campos, 1986). For instance, in example (4), the reader understands that a vehicle was driven, but the specific type of vehicle is irrelevant to the discourse.

(4) a. So, we drove to the Mall and parked at Sears. (COCA, 2012, written)

Fillmore (1986) made a distinction between two types of optional deletion and coined the terms Indefinite Null Complements (INC) and Definite Null Complements (DNC). The missing element in definite null complements (DNC) can be restructured within the given context, while the element in indefinite null complements (INC) is unknown or not a matter of interest. He concluded that some verbs like *demand* or *vow* do not allow DNC, while others like *insist* or *promise* do. He argued that DNC was not limited to certain sets of verbs but to certain senses; that is, one sense of the verb may allow DNC while others do not, as seen with the verb *lose* (5).

(5) a. He lost the election.
He lost.
b. He lost the keys.
*He lost.

Others (Haegeman, 1987; Groefsema, 1994; Keller and Lapata, 1998) challenged Fillmore's lexical approach to deletion and emphasized the role of contextuality. Massam (1987) states that each verb has a predicate argument structure that maps the possibilities of agents and themes in the lexicon. For example, ergative verbs might require an object or not, depending on the subject, as do some non-affecting verbs. Huang (1991) argued that null objects cannot be null pronominals (*pro*) because they do not meet the identification requirements of *pro*. On the other hand, Cummins and Roberge (2004) state that object projection is not purely bound to the lexical characteristics of the verb. They asserted that null objects can also occur depending on the construction or discourse context. Similarly, Sigurðsson and Maling (2007) expressed that null objects are referential and could be best understood within the utterance context. Moreover, Sigurðsson (2011) concluded that while deleted arguments were still universally available in syntax, linguistic factors constrained their distribution. Later, Ruppenhofer and Michaelis (2014) argued that null arguments were licensed by certain constructions and lexical constraints rather than by the general context, stating that making broad generalizations about null instantiation would be narrow in scope. Thus, the conditions for object deletion have not been fully uncovered yet (Yankes, 2021).

Martínez-García, Rinke, and Kerezova (2025), on the other hand, examined indefinite null objects in Spanish and Portuguese. As they suggest, Portuguese allows for both definite and indefinite null objects, whereas Spanish licenses only indefinite null objects. Indefinite null objects do not occur without an object bare noun antecedent. Yet, Portuguese acts more freely compared to Spanish, as it is also less restrictive in terms of bare nouns, which, as they suggest, is an implicational universal in linguistic typology.

However, Martinez-Garcia (2025a), examining the generic null objects in Spanish, argued that non-anaphoric (without a previous antecedent) null objects occur in three contexts: with a psychological predicate as an experiencer, in causative constructions, and when a null object acts as the controller of the subject. Furthermore, there are some conditions for the occurrence of non-anaphoric null objects. They occur in generic sentences with generic interpretations, with a human interpretation, and they must be affected by the described event (6a).

(6) a. Este sonido deja ∅ sordo. (This noise deafens) (Martinez-Garcia, 2025a)

Nonetheless, it is established that null objects are considered ungrammatical except in certain contexts in English (Cote, 1996; Culy, 1996; Massam and Roberge, 1989; Ruda, 2014). Bender (1999) states that null objects can occur in navy message narratives, spoken language, and user manuals, while Ruda (2014) adds sports match broadcasting contexts (7a.). Ruppenhofer and Michaelis (2010; 2014) also reported five genre-sensitive object omissions: instructional imperatives (such as recipes and product user manuals), diaries, labels, match reports, and quotative clauses. Ebeling (2021) investigated football match contexts using corpus linguistic methods and concluded that football-related verbs were

more prone to object omission than general verbs. Additionally, Glass (2022) asserted that verbs often drop their objects when they are linked to routines.

(7) a. Use ∅ in a well-ventilated area. (HP printer user's manual)

Culy (1996) suggested that zero anaphors could be the finished product or what is being worked on. Massam and Roberge (1989) argue that null objects in recipes do not have arbitrary reference but possess a specific interpretation. This interpretation does not require a prior reference; it could be contextual. They also state that the interpretation in recipes is contextual, while for other registers, the interpretation is arbitrary. Massam (1987; 1992) indicated that null objects in recipe contexts do not receive arbitrary interpretations. Furthermore, they noted that using null objects would be ungrammatical when "the null object is too far from the identifying subject." On the other hand, Culy and Ohara (2007) proposed that not all missing direct objects are zero anaphors, and the use of zero anaphors in transitive verbs (e.g., "I just ate") is different from the zero anaphors in recipes. However, Ruda (2014) asserted that it was possible to see null objects without any antecedent in recipes. Similarly, Ruppenhofer and Michaelis (2010) stated that there was no reference to the final product in the recipes other than the recipe title. It remains a controversial issue. In addition, Martinez-Garcia (2025b) examined null objects in Spanish recipes and concluded that even though Spanish does not allow null objects, null objects are licenced in recipes under four conditions. Firstly, the null object requires a definite and specific interpretation; its reference should be pragmatically available. Secondly, it can be replaced with a null pronominal object while preserving the same reading. Thirdly, it must occur in imperative forms, and finally, it must be affected by the described action. Yet, Martinez-Garcia (2025b) asserts that the occurrence of null objects in recipe and imperative context and their featuring as pronominals require further investigation.

Considering the debate on the occurrence of null objects and little study investigating the conditions for null objects to occur specifically in the English recipe context using a corpus study, the current paper aimed to investigate the features of null objects in the recipe context and how they were elaborated in the previous studies, and to put forward the similarities and differences among the studies using a corpus-based approach.

Methodology

The present study adopts a corpus-based methodology to systematically analyze null objects within the context of recipes. Corpus linguistics provides a data-driven framework for studying language patterns in authentic texts, enabling empirical observations and quantitative analysis. To distinguish the unique syntactic features of recipe discourse from standard usage, this study acknowledges the Corpus of Contemporary American English (COCA) as a benchmark for General English. COCA is the largest freely available corpus of English, containing over one billion words across diverse genres such as spoken language, fiction, popular magazines, newspapers, and academic texts. While COCA represents the "standard" or "neutral" register where null objects are typically restricted, this study utilizes a curated version of the FoodBase corpus to examine how argument omission functions within a specialized, instructional register.

By utilizing FoodBase, this study ensures a controlled yet representative dataset of recipe discourse. The application of AntConc 3.5.9 for data extracting and concordance analysis enables an in-depth examination of verb usage, facilitating a structured investigation of argument omission patterns. This methodological approach allows for both precise frequency analysis and qualitative insights into the syntactic and semantic properties of null objects in instructional texts.

Data Selection and Data Analysis

The present study utilized the curated version of FoodBase Corpus, developed by Popovski, Seljak, and Eftimov (2019), which focuses on food entities. The recipes were sourced from allrecipes.com, currently the largest online recipe database. The corpus encompasses five distinct

categories: appetizers and snacks, breakfast and lunch, desserts, dinner, and drinks. Notably, the semantic tags within the recipes were derived from the Hansard corpus. FoodBase is available in two versions: curated and uncurated. The curated version consists of 1,000 manually evaluated recipes, whereas the uncurated version contains 21,790 recipes. For this research, the curated version was selected to ensure a high level of data reliability and precision, which consists of 12844 food entity annotations describing 2105 unique food entities.

In order to investigate null objects, the study examined a specific set of cooking verbs. Five target verbs were chosen based on their frequency, semantic relevance to the recipe context, and argument structure: *bake, let, place, put,* and *serve*. These verbs represent core culinary actions, preparation (*place, put*), processing (*let*), and finishing (*bake, serve*), making them representative of the instructional sequence found in recipe discourse. Moreover, these verbs exhibit diverse syntactic features in standard English, providing a spectrum of transitivity. While *bake* and *serve* can function as either intransitive or transitive verbs, *let* typically functions as a transitive verb. Furthermore, *place* and *put* are often used as transitive verbs requiring a prepositional phrase; however, *put* is also characterized as a ditransitive verb requiring a noun phrase followed by either another noun phrase or a prepositional phrase. This contrast is essential for testing whether recipe discourse forces object omission even in verbs that grammatically require an object in standard registers.

The curated version of the FoodBase corpus was processed using AntConc 3.5.9, a concordance and text mining program used to identify word clusters and their frequency of occurrence. Each of the five target verbs (*bake, let, place, put, serve*) was queried to extract all available instances within the curated FoodBase dataset. No syntactic filters were applied at this stage to ensure a comprehensive initial dataset. Following the automated extraction, every result was manually examined within its concordance environment. While the primary goal was to identify the frequency of null and overt objects, this qualitative review revealed a recurring and distinct pattern: the use of null objects within subordinate clauses (e.g., temporal or conditional clauses). Recognizing the significance of this pattern, the researcher expanded the coding framework to categorize instances by clause type (main vs. subordinate) and subject type (null vs. overt).

The selection of these specific instances was further refined based on their frequency and their functional role within the recipe discourse. Moreover, the concordance environment of the chosen verbs was systematically investigated to identify patterns of argument omission and null object usage. This manual "bottom-up" approach allowed for the identification of rare syntactic combinations, such as null objects co-occurring with overt subjects in subordinate structures (e.g., *"as you stir Ø"),* which might have been overlooked by a purely automated or top-down search strategy. Finally, to ensure the reliability of the data annotation process, a PhD candidate on ELT, with experience in corpus annotation, concucted an analysis of 10% of the data. This process yielded a high percentage agreement of approximately 91% across primary categories such as object type and subject presence, indicating strong inter-rater reliability.

Ethical Considerations

The present study adheres to all ethical standards required for linguistic research. Since the research is based on the analysis of a publicly available, open-access dataset, the FoodBase Corpus (Popovski, Seljak, and Eftimov, 2019), it does not involve any human participants, animal subjects, or clinical trials. All data utilized in the study were retrieved from open-source repositories and consist of anonymized instructional texts (recipes) that do not contain any personally identifiable information.

Furthermore, the analysis was conducted using AntConc 3.5.9, a standard, open-source software tool for corpus linguistics. Because the study relies exclusively on pre-existing, non-sensitive, and publicly accessible textual data, it does not require approval from an ethics committee.

Findings

The five target verbs, *bake, let, place, put,* and *serve*, were analyzed regarding their distribution and syntactic behavior within the recipe corpus. The analysis focused on several key features: the choice between an overt object and a null object; the co-occurrence of null objects with prepositions; the presence of an overt subject; verbal inflection; and the occurrence of these verbs within subordinate clauses. The quantitative results are summarized in Table 1.

Table 1.
Distribution of Verbs and Their Syntactic Environments

Feature	place	bake	serve	let	put	Total
Overt Object	441	36	15	35	27	551
Null Object	101	373	234	95	2	805
Null + Preposition	97	343	87	1	2	530
Subject Presence	0	0	0	0	0	0
Inflected Form	0	0	0	0	0	0
Subordinate Clause	0	0	11	0	0	11
Total	542	409	249	130	29	1,359

As illustrated in Table 1, the verbs, ranked by their overall frequency in the recipe context, are: *place* (n=542), *bake* (n=409), *serve* (n=249), *let* (n=130), and *put* (n=29). Regardless of their inherent lexical features in standard English, all five verbs licensed null objects. Notably, in this cross-section of the corpus, 59.5% of the entries favored null objects over overt direct objects (805 null vs. 551 overt). Furthermore, a strong correlation was observed between null objects and the following prepositions, with 530 instances of this pattern.

Regarding syntactic constraints, the analysis revealed a rigid adherence to the imperative structure characteristic of recipe discourse. Within the primary target set, overt subjects were exceptionally rare and never co-occurred with null objects. Furthermore, the type of clause strictly determined the verb's form whenever an object was omitted.

Moreover, while no overt subjects co-occurred with null objects for the five target verbs, three rare instances (*simmer, cut, roll*) were identified in the broader corpus and are analyzed in the Discussion section.

Within main clauses, no instances were found where null objects co-occurred with inflected verb forms; rather, the verbs exclusively appeared in their base (imperative) form. The only inflected forms observed to license a null object (e.g., the gerund *serving*) were strictly confined to subordinate or prepositional structures.

The study also examined the occurrence of the target verbs within subordinate and non-finite clauses, an environment that emerged as highly relevant during the manual annotation phase. Among the five target verbs, only *serve* was found to be productive in these constructions, primarily appearing as a gerund following temporal prepositions or conjunctions. Specifically, the phrase *'before serving'* was detected 73 times; all 73 of these instances strictly licensed a null object. Additionally, the phrase *'until serving'* occurred 10 times, all of which also strictly licensed null objects.

Furthermore, when examining conditional and temporal conjunctions (such as *if* and *when*) strictly within the context of the five target verbs, these environments almost universally resisted null objects. While conjunctions like *if* and *when* appear frequently across the broader recipe corpus, they did not license null objects for *bake, let, place, put,* or *serve*, further highlighting that object omission in this register is heavily constrained by specific clause types and temporal markers.

Discussion

The main objective of this study was to investigate the null object licensing within English recipe discourse, specifically focusing on five high-frequency target verbs (*bake, let, place, put,* and *serve*). While there is a wealth of corpus-based syntactic research in general English, there remains a notable gap in studies specifically addressing the pragmatic and grammatical mechanics of recipe discourse. By analyzing authentic corpus data, this research aimed to determine how register-specific grammar operates independently of standard English syntactic rules.

Firstly, the quantitative findings revealed that all five target verbs licensed null objects in the recipe context, frequently favoring them over overt objects. Theoretical frameworks regarding zero anaphora provide critical context for this pervasive phenomenon. Null objects are rare in English, typically restricted to specific registers such as recipe discourse. Culy (1996) proposed a strong parallelism between zero anaphors and pronouns in English, suggesting they serve common functions. This is further supported by Ruppenhofer and Michaelis (2010), who demonstrated that null objects could be replaced by pronouns without loss of meaning, as illustrated in the comparison between (1a) and (1b):

(1) a. Place ice cubes into a … glass. Pour in vodka and … juice. Stir ∅ and serve ∅.
b. Place ice cubes into a … glass. Pour in vodka and … juice. Stir them and serve it.

While Culy (1996) argued that a verb's argument structure is defined in the lexicon, he noted that the lexicon does not specify whether these arguments must be overt or null. Although the verbs examined in this study (*bake, let, place, put,* and *serve*) are categorized as transitive or ditransitive in the *Cambridge Dictionary*, the findings in Table 1 reveal that they all license null objects in the recipe context, regardless of their standard categorization. In fact, some verbs even favored null objects over overt ones. This aligns with Culy's assertion that syntactic rules or the grammatical function of a verb are not absolute determiners in the licensing of zero anaphors. Instead, stylistic, semantic, and discourse factors, often referred to as the "lookback factor", lead to a preference for zeros over pronouns in recipes. Bender (1999) and Cote (1996) further confirm that the register itself entails a specific grammar that allows for such omissions. A representative example from the FoodBase corpus (2) demonstrates this density of null objects:

(2) ...combine flours...; mix ∅ into egg mixture... pat ∅ down... Bake ∅ in preheated oven... Remove ∅ from oven, and set ∅ aside... cut ∅ into 1/2 inch thick diagonal slices... bake ∅ an additional 5 to 7 minutes...

Secondly, the present study indicates that null objects frequently occur before prepositions (3a). Interestingly, while *bake* predominantly appeared before a preposition, the ditransitive verb put never occurred with both a null object and an overt direct object simultaneously. In the two instances where *put* occurred with a null object (3b), it was invariably followed by a prepositional phrase. This finding partially contrasts with Massam (1987, 1992) and Massam and Roberge (1989), who argued that null objects are generally prohibited after prepositions and in double object constructions. However, it aligns with Ruda (2014), who confirmed the possibility of indirect object omission in recipes, and Ruppenhofer and Michaelis (2010), who noted null objects in predications preceded by pre-clausal locative arguments.

(3) a. ...kneed into balls. Place ∅ on cookie sheet.
b. Scoop out seeds and put ∅ in bowl.

Thirdly, the current study demonstrated a strict syntactic constraint: none of the five target verbs in the FoodBase corpus licensed a null object when an overt subject was present (4). In fact, the use of overt subjects is remarkably rare in recipe discourse. Massam (1987) argues that null objects are primarily licensed in subjectless imperative sentences. She notes that while imperatives do not strictly require null objects, they typically lack overt subjects. Massam attributes this to the fact that imperatives

do not require a *pro* in the subject position; instead, this syntactic slot remains open to the primary thematic focus of the ongoing text. Similarly, Massam and Roberge (1989) asserted that the most critical aspect of null objects is their requirement for a null subject; in the English language, this environment is essentially provided by imperative sentences. They clarify, however, that while a null object necessitates a null subject, the reverse is not always true. In subsequent research, Massam (1992) and Ruppenhofer and Michaelis (2010) reinforced this dependency, positing that a null object requires a null subject. According to their framework, a construction in which only the object is null (while the subject remains overt) is not permissible in the recipe register.

On the other hand, Cote (1996) proposed that simply identifying imperatives as the environment for null objects is insufficient. She argues that instructional imperatives motivate object omission. From this perspective, null subjects arise because recipes are not interpreted as direct commands but as instructional guides. Furthermore, Sigurðsson and Maling (2007) provided a cross-linguistic perspective, indicating that languages that allow null objects in recipes consistently prohibit overt subjects from occurring with them, even if those languages generally permit overt subjects in standard imperatives.

(4) Shake pot and let ∅ boil for 1 minute.

While Ruda (2014) identified rare instances where null objects occurred with an overt subject, specifically in constructions such as "as you ∅", the present corpus study confirms this rarity, yielding only three instances of overt subjects co-occurring with null objects (5a-c). Crucially, none of these exceptions involved the five primary target verbs, further securing their strict adherence to the null-subject constraint:

(5) a. Reduce heat to medium and simmer, crushing peach slices as you stir ∅, until sugar is dissolved, about 5 minutes.
b. Our family prefers the liver to just barely retain a pinkness on the inside when you cut ∅ to check.
c. Fold the sides of the tortilla in towards the center and roll up from the bottom, making sure to tuck in the sides as you roll ∅.

Another significant finding of the present study is that null objects did not occur with the inflected versions of the target verbs (6). This is consistent with Culy (1996), who stated that infinitives and inflected verb forms disfavor zero anaphors, while participles and imperatives favor them. From a linguistic standpoint, this avoidance is likely driven by processing economy; inflected verbs in main clauses signal a departure from the chronological, subjectless instructional sequence, making an explicit object necessary to maintain reader clarity.

(6) a. Remove foil and bake ∅ until edges are golden brown…

Even though Culy argued that zero anaphors never follow inflected verbs in authentic recipes (7a), Ruda (2014) provided examples of missing subjects with finite inflected verb forms, particularly with the verbs *serve* or *make*. However, an examination of the curated FoodBase corpus revealed only one case of an inflected verb with a missing subject (7b). Thus, while Culy's argument regarding the absence of null objects with inflected verbs was largely verified, it can also be concluded that using overt subjects in recipes remains highly unconventional, contrary to the implications of Ruda's findings (7c).

(7) a. *Mixes ∅ in raisins. *Cools ∅, and stores ∅ in an airtight container at room temperature.
b. Add cooked meatballs to the sauce... Makes eight servings.
c. Bring the mixture to a simmer, reduce heat, and simmer while you make the pockets.

Lastly, the study examined the occurrence of the target verbs within subordinate and non-finite clauses. As detailed in the findings, *serve* was the only target verb found to be productive in these

constructions, occurring 73 times with the temporal marker *before* and 10 times with *until*, strictly licensing a null object in every instance. On the other side, when conditional and temporal conjunctions such as *if* and *when* were examined strictly within the context of the five target verbs, null objects were universally resisted. This shows that while null objects are definitely possible (and even frequent) in certain temporal clauses, they are strictly controlled by the type of conjunction used. It's not just a universal feature across the whole recipe register.

As previously noted, Culy (1996) indicated that participles favor null objects, a proposition verified by the present study (8). Notably, Ruda (2014) claimed that the present participle with object drop is restricted to the fixed construction "if using." However, the current study broadens this observation, as productive null object usage was also prominently identified in other participial constructions, such as "until serving" (8), showing that this phenomenon isn't just limited to one rigid phrase.

(8) a. Mix in walnuts if using ∅.
b. Incorporate green food coloring at this point if using ∅.
c. Serve immediately, or chill until serving ∅.
d. Refrigerate until serving ∅.

Conclusion and Further Suggestions

This study provides a framework on the null object use in English recipes, demonstrating that object omission is a highly systematic grammatical feature governed by strict constraints rather than a random stylistic choice. The empirical data confirms that while recipes rely heavily on transitive and ditransitive verbs, these verbs systematically license null objects when they occur in base-form imperatives. Furthermore, the analysis reveals that object omission is highly sensitive to specific clause types; while certain temporal participial constructions (such as *until serving*) license null objects, conditional and temporal conjunctions (*if* and *when*) restrict their use.

While traditional frameworks have sometimes characterized null objects as anomalies or fixed idioms, the current findings indicate that the grammar of this register may be more systematic than previously assumed. By observing where these omissions frequently occur, such as before spatial prepositions and within specific temporal subordinate clauses, this study helps refine previous generalizations. The data implies that recipes might rely heavily on a principle of pragmatic efficiency; the chronological sequence and instructional setting seem to provide enough context to make overt pronouns less necessary. On a theoretical level, these findings help us better understand how practical communication needs can actually override strict grammatical rules in specialized contexts. To fully contextualize these insights, the following section will address the methodological limitations of the current research and propose avenues for future investigation.

The present study offers an empirical analysis of null objects within the specialized register of recipe discourse, revealing how specific syntactic environments allow for argument omission that is otherwise prohibited in standard English. While these findings clarify the role of the imperative register and participial constructions, they also point to several critical issues for future research that require deeper investigation.

A primary area for further research concerns the lexical and corpus-based scope of the research. While this study analyzed five representative verbs (bake, let, place, put, and serve), the findings cannot be generalized to represent the entire culinary lexicon. Future research should expand this selection to determine whether null object licensing is a universal feature of the recipe register or if it is strictly tied to the semantic properties of specific verb classes. Moreover, the present study does not include any inferential statistics, thus the findings are descriptive in nature.

Furthermore, comparing the curated version of the FoodBase corpus with its much larger uncurated counterpart (which is 21 times larger) is essential. Such a comparison would provide a more

robust statistical baseline, helping researchers distinguish whether rare syntactic patterns are consistent features of the genre or merely peripheral variations found in massive datasets.

The present study did not identify any co-occurrence of null objects with overt subjects (e.g., in "as you stir ∅ constructions) with the five target verbs. However a broader examination of the corpus reveled three occurences of this case. This finding contradicts with the traditional view, held by most scholars except Ruda (2014), that null objects in English are strictly confined to subjectless imperatives. Future research might broaden the scope of the study to explore the this phenomenon.

This study also did not focus on the the evolution of null objects, which also requires a more grounded investigation. While Walkden (2013) identified instances of object drop in Old English recipes, Culy (1996) suggested that the use of zero anaphors has evolved significantly over time. Future studies should examine this historical development to understand how the rules for argument omission have adapted to changes in English morphology. In connection with this, the rarity of inflected verbs in recipes, as confirmed by this study, merits further analysis. Investigating why inflected forms generally disfavor null objects while imperatives favor them could uncover deeper truths about the relationship between verbal morphology and syntactic "emptiness."

Furthermore, the current study only focused on five culinay verbs in recipe context, yet the semantic boundaries of verb selection in this register remain a compelling puzzle. As Massam and Roberge (1989) noted, the recipe register appears to exclude certain classes, such as "psych" or perception verbs (e.g., the contrast between the acceptable "enjoy ∅ and the ungrammatical "*like ∅. Future research should move beyond simple observation to ask *why* the action-oriented nature of recipes licenses certain state-oriented verbs while rejecting others. This would clarify whether the "economy of language" in recipes is purely functional or deeply rooted in the semantic structure of the verbs themselves.

Beyond its theoretical contributions, the findings of this study offer significant analytical insights for English Language Teaching (ELT), particularly within the Turkish academic context. Even though the present study revealed the empirical constraints of null objects in English, they are almost exclusively licensed in subjectless, instructional imperatives. Without this specific understanding, Turkish learners may overgeneralize the use of null objects, leading to ungrammatical omissions in formal English writing. Considering this, providing learners with a corpus-based genre-specific instuction might help students build necessary register awareness. Specifically, for students in English for Specific Purposes (ESP) fields such as culinary arts or tourism, mastering these rules allows for more authentic and professional communication.

Moreover, highlighting the significance of input, Chang and Zheng (2018) argued that the use of null objects is not a simple developmental stage or a feature easily transferred from an L1, but is heavily reliant on exposure to specialized registers like recipes. This is especially relevant given that Zengin and Dinar (2023) found zero anaphora in Turkish to be a pervasive feature across most registers. Because Turkish is a pro-drop language, learners often struggle with the rigid Subject-Verb-Object (SVO) requirements of standard English. By introducing the authentic data from this study, instructors can demonstrate that English syntax is a flexible system that adapts its structure to functional and communicative needs.

Furthermore, as research expands cross-linguistically, we gain a clearer picture of these challenges. Li (2025) found that learner background, proficiency levels, and the animacy of the object significantly affect how null objects are used by L2 learners. Such cross-linguistic insights, as suggested by Martín-Villena, Gharibi, and Rothman (2024), help clarify whether these instructional rules are universal or language-specific. By grounding the study of recipes within a broader family of directive registers, such as user manuals, food labels, or technical reports, we can help learners navigate a wide variety of real-world instructional contexts.

Author Contribution Rate

The author contributed 100% to this article.

Conflict of Interest

There is no conflict of interest in this article.

Declaration of Generative AI Use

The author used generative AI to improve the language and readability of this manuscript. All AI-generated suggestions were reviewed and edited by the author, who maintains full responsibility for the final content of the work.

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Genişletilmiş Özet

Giriş

Genel dilbilimsel perspektifte İngilizce, nesne düşürme (object omission) konusunda oldukça katı kurallara sahip bir dildir. "Boş nesne" (null object) olarak adlandırılan olgu, geçişli bir fiilin nesnesinin herhangi bir açık gösterge olmaksızın cümleden çıkarılmasıdır. Standart İngilizcede bu durum genellikle dilbilgisi dışı (ungrammatical) kabul edilmesine karşın, yemek tarifleri, kullanım kılavuzları, donanma mesajları ve spor müsabakası raporları gibi "telgraf üslubu" (telegraphic register) olarak adlandırılan özel söylem alanlarında bu kuralın esnediği görülmektedir.

Bu araştırmanın temel problem durumu, yemek tariflerinde boş nesne kullanımını belirleyen sözdizimsel ve anlambilimsel sınırların tam olarak neler olduğudur. Alanyazında Massam (1987), Culy (1996) ve Ruda (2014) gibi isimler bu konuyu tartışmış olsa da boş nesnelerin hangi durumlarda zorunlu, hangi durumlarda imkânsız olduğu ve bu yapıların açık öznelerle (overt subjects) veya çekimli fiillerle (inflected verbs) nasıl etkileşime girdiği konusunda hâlâ bir görüş birliği yoktur. Bu çalışmanın temel amacı, derlem tabanlı (corpus-based) bir metodoloji kullanarak yemek tarifi söylemindeki boş nesne özelliklerini sistematik olarak analiz etmek ve mevcut kuramsal tartışmalara ampirik verilerle katkı sağlamaktır.

Yöntem

Bu çalışma, dil kalıplarını gerçek metinler üzerinden incelemeye olanak tanıyan derlem tabanlı bir araştırma desenini benimsemiştir. Araştırmada veri kaynağı olarak Popovski, Seljak ve Eftimov (2019) tarafından geliştirilen ve *allrecipes.com* adresinden alınan tariflerden oluşan FoodBase Derlemi kullanılmıştır. Analiz süreci için bu derlemin uzmanlar tarafından manuel olarak doğrulanmış ve yüksek güvenilirliğe sahip olan düzenlenmiş (*curated*) versiyonu (1.000 tarif) tercih edilmiştir.

Veri toplama aracılığıyla, derlem içindeki sözdizimsel örüntüleri belirlemek amacıyla AntConc 3.5.9 dizinleme (*concordance*) ve metin madenciliği programı kullanılmıştır. Araştırma kapsamında kullanım sıklıkları, yemek tarifi bağlamına uygunlukları ve argüman yapıları (geçişli, geçişsiz, çift nesneli) göz önünde bulundurularak beş hedef fiil seçilmiştir: *bake, let, place, put ve serve.* Bu fiillerin dizinleme ortamındaki her bir kullanımı nesne türü (açık/boş), edat varlığı, özne kullanımı ve fiil çekimi gibi kategorilere göre kodlanarak analiz edilmiştir.

Araştırma etiği kapsamında kullanılan veri seti, genel kullanıma açık olup anonimleştirilmiş bir şekilde sunulmuş olması sebebiyle, bu çalışmada herhangi bir kişisel veri ihlali söz konusu değildir ve insan denek içermeyen bir çalışma olduğu için etik kurul izni gerekmemiştir.

Bulgular

FoodBase derleminin düzenlenmiş versiyonu üzerinde yapılan analizler, yemek tarifi söyleminin standart İngilizceye kıyasla oldukça özgün bir sözdizimsel yapı sunduğunu kanıtlamıştır. Beş fiilin (*bake, let, place, put, serve*) incelenmesiyle elde edilen veriler, boş nesne (*null object*) kullanımının yemek tarifi bağlamında sadece bir seçenek değil, aslında baskın bir tercih olduğunu göstermektedir. Toplam 1.359 kullanım örneği içinde boş nesne oranı %59,5 olarak saptanmıştır. Bu yüksek oran, yemek tariflerinde eylemin nesnesinin bağlamsal olarak oldukça belirgin olduğunu göstermektedir ve böylece standart kullanımın aksine, dilbilgisel olarak nesneyi açıkça telaffuz etme ihtiyacını ortadan kaldırmaktadır.

Bulgular fiiller bazında incelendiğinde, kullanım sıklığı bakımından *place* (n=542) ilk sırada yer alırken, onu *bake* (n=409) ve *serve* (n=249) takip etmektedir. Ancak asıl analitik fark, fiillerin boş nesne alma *(licensing)* kapasitelerinde ortaya çıkmaktadır. *Bake* ve *serve* fiilleri, boş nesne kullanımına en yatkın eylemler olarak öne çıkarken, karmaşık bir argüman yapısına sahip olan ve genellikle bir yer

tamlayıcısı gerektiren *put* (n=29) fiili derlemde en az sıklıkla görülen ve boş nesne almaya karşı en dirençli fiil olmuştur. Bu durum, fiilin anlamsal derinliği ve nesnesiyle olan sözdizimsel bağının boş nesne oluşumu üzerinde doğrudan belirleyici olduğunu göstermektedir.

Araştırmanın bir diğer önemli bulgusu, boş nesnelerin edatlarla *(prepositions)* olan güçlü korelasyonudur. Derlemde 530 örnekte boş nesnelerin bir edattan hemen önce geldiği saptanmıştır (Örneğin, *place Ø on…).* Bu bulgu, boş nesnenin fiziksel olarak yokluğuna rağmen, cümlede yer tamlayıcısı gibi yapısal öğelerle hâlâ aktif bir ilişki içinde olduğunu ve bu durumun okuyucunun zihninde nesneyi tamamlama sürecini kolaylaştırdığını kanıtlamaktadır.

Özne ve nesne arasındaki etkileşim incelendiğinde, derlemdeki tüm hedef fiillerin boş nesne kullanımı durumunda boş özne (null subject) ile eşleştiği görülmüştür. Derlem genelinde ikinci tekil şahıs zamiri olan "*you*" toplam 40 kez kullanılmış olmasına karşın, hedef fiillerle birlikte boş nesne oluşturduğu örnek sayısı sıfırdır. Ancak, hedef fiillerin dışındaki genel kullanımda *(simmer, cut, roll)* "*as you stir Ø"* veya *"when you Ø"* gibi üç istisnai örnekte açık özne ile boş nesnenin bir arada bulunduğu tespit edilmiştir. Bu bulgu, alanyazındaki "İngilizcede boş nesne sadece gizli özneli emir cümlelerinde olur" kuralının mutlak olmadığını, çok nadir de olsa bu kuralın esneyebildiğini göstermesi açısından kritiktir.

Son olarak, fiil çekimi ve yan cümle yapıları üzerine yapılan analizler, boş nesnelerin morfolojik olarak fiilin yalın haline (*base form*) sıkıştığını ortaya koymuştur. İncelenen örneklerde çekimli (inflected) fiil formları ile boş nesne kullanımı saptanmamıştır. Yan cümle analizlerinde ise *serve* fiili özel bir durum teşkil etmektedir. "*Before serving*" (n=73) yapısında 73 kez boş nesne kullanımı görülürken, "*until serving"* (n=10) yapısının tamamında boş nesne tercih edilmiştir. Buna karşılık, *"if"* (n=77) ve *"when"* (n=82) gibi bağlaçlarla kurulan yan cümlelerde boş nesne kullanımının neredeyse hiç tercih edilmemesi, boş nesne alma durumunun sadece "emir" kipiyle değil, aynı zamanda yan cümlenin sunduğu "tamamlanmışlık" veya "zaman" algısıyla da ilgili olabileceğini düşündürmektedir.

Sonuç, Tartışma ve Öneriler

Araştırma sonuçları, İngilizcedeki boş nesne olgusunun sadece keyfi bir kısaltma değil, yemek tarifi söylemine özgü karmaşık bir sözdizimsel strateji olduğunu kanıtlamaktadır. Elde edilen en temel sonuç, boş nesnelerin emir kipiyle olan güçlü bağı ve çekimli fiillerden kaçınma eğilimidir. Bu durum, Culy (1996) tarafından öne sürülen "boş nesnelerin çekimsiz fiilleri sevdiği" teziyle tam bir uyum içerisindedir. Ancak çalışmamızın Ruda (2014) dışındaki diğer tüm çalışmaları sarsan en kritik sonucu, boş nesnelerin her zaman gizli bir özneye ihtiyaç duymadığıdır. *"As you"* (sen ...-ken) gibi yapılarda karşımıza çıkan açık özneler, yemek tariflerinin sadece "katı komutlar" olmaktan çıkıp okuyucuyla etkileşime geçen daha samimi bir söyleme dönüştüğünün analitik bir göstergesidir. Bu çalışma, Massam'ın (1987) "boş nesneler ilgeçlerden önce gelemez" iddiasını sorgularken, "boş nesnelerin belirli bir öncül (*antecedent*) gerektirmediği" tartışmasında ise bağlamsal ipuçlarının yeterli olduğunu göstermiştir. Yani tarifteki bir nesne, daha önce açıkça telaffuz edilmese bile, tarifin başlığından veya mutfak ortamındaki fiziksel bağlamdan yola çıkarak zihinsel olarak doldurulabilmektedir.

Öneriler ve Gelecek Çalışmalar: Araştırma bulguları ışığında hem kuramsal hem de uygulamalı alanlar için şu öneriler sunulabilir:

- Gelecekteki çalışmalar, bu araştırmadaki beş fiil sınırlılığını aşarak daha geniş bir fiil grubuna odaklanmalıdır. Özellikle "hissetme" veya "düşünme" *(psych verbs)* fiillerinin tariflerde neden nesne düşüremediği üzerine yapılacak bir analiz, dilin anlamsal sınırlarını daha net çizecektir.
- FoodBase derleminin 20.000'den fazla tarif içeren düzenlenmemiş büyük versiyonu ile bu çalışmadaki küçük versiyon karşılaştırılmalıdır. Bu, nadiren görülen dilbilgisel yapıların aslında büyük veride daha sık olup olmadığını gösterecektir.
- Türkiye'deki İngilizce eğitimi açısından bu bulgular büyük önem taşımaktadır. Türkçe gibi boş nesne kullanımına çok yatkın bir dilden (L1 transferi) gelen Türk öğrencilerin İngilizcedeki bu kısıtlı nesne düşürme alanlarını öğrenmesi "biçem farkındalığı" *(register*

awareness) kazandıracaktır. Öğretmenler, öğrencilere İngilizcenin sadece sabit kurallardan oluşmadığını, bağlama göre esneyebildiğini bu tür gerçek veri setleriyle anlatmalıdır.

- Boş nesnelerin sadece tariflerde değil, aynı zamanda günlükler, donanma raporları veya spor yorumları gibi diğer telgraf üslubu alanlarında nasıl farklılaştığına dair karşılaştırmalı çalışmalar yapılarak dilin "ekonomi" ilkesinin evrensel haritası çıkarılabilir.