



Revisiting the Subject Condition: A Miracle Creed Perspective

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ABSTRACT

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This paper investigates the Subject Condition within the recently developed Miracle Creed (MC) framework (Chomsky 2024), proposing that the selective opacity of subjects is not an independent or construction-specific constraint, but rather an emergent property arising from the interplay between the Labeling Algorithm and the MC framework. While recent minimalist approaches have attributed subject islandhood to uniform phasehood or resource limitations, such accounts often struggle to derive the empirical transparency of passive, unaccusative, and in-situ subjects. To address this, the present study proposes the notion of labeling stabilization. We argue that a structurally indeterminate object becomes computationally stable and transparent for further extraction if and only if it is properly labeled (via a head-complement configuration or feature-sharing). Typical subjects fail to achieve this external stabilization before moving to a subsequent position, resulting in stacked unresolved {XP, YP} configurations. To maintain computational efficiency, the system freezes such deeply indeterminate constituents in situ. Conversely, subjects that are properly labeled prior to displacement remain structurally transparent, allowing extraction. By deriving the systematic asymmetry between subject types from the Labeling Algorithm and the boxing mechanism, this study demonstrates how classical island effects follow naturally from the internal logic of the MC framework without resorting to ad hoc stipulations.

KEYWORDS

Duality of Semantics, Labeling Algorithm, Minimal Search, Miracle Creed, Subject Condition

1. Introduction

Since the early development of generative grammar, one of the central goals of syntactic theory has been to provide a principled account of long-distance dependencies. A robust phenomenon in this domain is the Subject Condition (Chomsky 1973, 1986, Freidin 1992, Huang 1982, among many others), which posits that subjects, unlike objects, constitute islands for extraction. This is illustrated by the contrast between sub-extraction from a subject and an object, as shown in (1) and (2), respectively:

(1) Subject

- | | |
|--|-----------------------|
| a. *Who _i did [stories about t _i] terrify John? | Chomsky (1973, 92b) |
| b. *Who _i did [pictures of t _i] lay on the table? | Postal (1974, p. 189) |
| c. *Who _i was [a picture of t _i] lying on there? | Kayne (1981, p. 114) |
| d. *What _i did [the owner of t _i] sneeze? | Chaves (2013, p. 309) |

(2) Object

- | | |
|--|--------------------------------|
| Who _i did you hear [a story about t _i]? | Lasnik and Saito (1992, p. 42) |
|--|--------------------------------|

Traditionally, this asymmetry has been explained through structural conditions on formal domains. Within the Government and Binding framework (Chomsky 1981), the Condition on Extraction Domain (CED) (Huang 1982) attributed the islandhood of subjects to their status as non-governed positions (i.e., a syntactic position within a phrase marker that is not licensed by a (local) governing head). Within the Minimalist Program, the Freezing Principle (Wexler and Culicover 1980) has often been invoked, suggesting that once a subject moves to Spec,IP (to satisfy requirements such as the EPP or ϕ -feature checking), it becomes frozen, rendering its internal contents inaccessible to further syntactic operations.

However, the empirical landscape of the Subject Condition is more complex than such a governed/non-governed distinction alone would predict. Several environments demonstrate a systematic obviation of the Subject Condition. For instance, sub-extraction is permitted when the subject remains in its base-generated position, as in (3):

(3) In-situ Subject

- | | |
|---|--------------------------------|
| [Which candidate] _i were there [posters of t _i] all over town? | Lasnik and Park (2003, p. 651) |
|---|--------------------------------|

Furthermore, subjects that are base-generated as internal arguments such as those in passive and unaccusative constructions allow sub-extraction, challenging the view that Spec,IP is a universal barrier.¹

¹ There exists a notable tension between theoretical predictions regarding the transparency of derived subjects and actual acceptability data. In the case of passive subjects, while Ross (1967) and Chomsky (2005) observe that sub-extraction is permitted, Gallego and Uriagereka (2007) identifies counter-examples where such extraction results in ungrammaticality, as in (i).

- | | |
|---|--------------------------------------|
| (i) *Who _i was [a picture of t _i] taken t _j by Peter? | Gallego and Uriagereka (2007, (43a)) |
|---|--------------------------------------|

(4) Passive Subject

- | | |
|---|-------------------------|
| a. [Of which cars] _i were [the hoods t _i] _j damaged t _j by the explosion? | Ross (1967, p. 242) |
| b. [Of which car] _i was [the driver t _i] _j awarded t _j a prize? | Chomsky (2008, p. 147) |
| c. [What] _i were [pictures of t _i] _j seen t _j around the globe? | Kluender (1998, p. 268) |
| d. [Which problem] _i will [a solution to t _i] _j never be found t _j by you? | Chaves (2013, p. 301) |

(5) Unaccusative Subject

- | | |
|---|----------------------|
| [Of which car] _i did [the driver t _i] _j collapse t _j ? | Zyman (2021, p. 517) |
|---|----------------------|

The outline of this study is as follows: Section 2 establishes the theoretical background by introducing the Miracle Creed (MC) framework and its core mechanisms. It also reviews previous labeling-based and binarity-based accounts of the Subject Condition, identifying their empirical challenges regarding certain subjects. Section 3 presents the main proposal, demonstrating how the Subject Condition emerges from the interplay between the Labeling Algorithm and the MC architecture. This section details how cumulative labeling conflicts lead to structural indeterminacy and in situ freezing in typical subjects, while labeling stabilization—achieved via head-driven configurations or feature-sharing—ensures transparency in other subject types. Finally, Section 4 concludes the study by summarizing the findings and their theoretical implications for computational efficiency.

2. Background

2.1 The Miracle Creed (Chomsky 2024)

To provide a principled account of the Subject Condition, it is necessary to first establish the theoretical landscape of the Miracle Creed (MC) (Chomsky 2024). Central to this framework is the notion of the workspace (WS), the computational domain where all syntactic operations occur. Under the Strong Minimalist Thesis (SMT), the language faculty is shaped by third-factor principles (Chomsky 2005)—specifically, principles of computational efficiency and least effort that are not specific to language but are reasonably understood as natural laws.

As in (6), in earlier minimalist inquiries (Chomsky 1995), the primary structure-building operation, Merge, simply combined two syntactic objects (x and y) into a new set, $\{x, y\}$.

$$(6) \text{ Merge}(x, y) \rightarrow \{x, y\}$$

A similar empirical conflict is found in ECM environments. Although certain theoretical accounts (Chomsky 2008, Zyman 2021) treat ECM subjects as transparent, experimental evidence suggests they can be highly resistant to extraction. For instance, Jurka (2010) claimed that sub-extraction from an ECM subject, as illustrated in (ii), is highly degraded, receiving a low mean score of 2.24 on a 7-point Likert scale.

- | | |
|---|----------------------|
| (ii) *[Which politician] _i did John believe [a book about t _i] to have caused a scandal? | Jurka (2010, p. 159) |
|---|----------------------|

Taken together, these data points suggest that the transparency of derived subjects may not be categorically guaranteed by their base-generated position; rather, it appears to allow for significant speaker variation, suggesting the potential influence of additional pragmatic factors.

However, recent developments reformulate this as MERGE (in capitals), an operation that specifically maps one state of the WS to another. This shift ensures that every operation is strictly defined by how it updates the computational domain (Chomsky et al. 2019).

(7) MERGE maps $WS = [x, y]$ to $WS' = [\{x, y\}]$

This system further provides a formal execution of movement through Internal Merge (IM). Consider a scenario where an element y undergoes movement within a given WS:

(8) a. $WS_1 = [\{x, y\}]$
b. $WS_2 = [\{y, \{x, y\}\}]$

As shown in (8b), the operation updates the WS such that the element y appears twice: once as a member of the entire set $WS_2 = [\{y, \{x, y\}\}]$ and again as a constituent within the pre-existing set $\{x, y\}$. This redundant representation of y effectively captures the mechanism of IM within a MERGE-based system, providing the foundation for the subsequent boxing or segregation of moved elements.

The Miracle Creed (MC) framework further constrains the operations of MERGE within the WS through two fundamental principles. Chomsky (2024) proposes that both EM and IM are governed by Principle [S] and Principle [T], which define the nature and purpose of syntactic derivations.

(9) a. Principle [S]: The computational structure of language should adhere as closely as possible to SMT.
b. Principle [T]: All relations and structure-building operations are thought related, with semantic properties interpreted at CI.

Chomsky (2024, p. 19)

Principle [S] ensures that the computational system maintains structural integrity, while Principle [T] posits that the human language faculty is essentially a thought-generating system. Under Principle [T], all syntactic operations must be directly related to the formation of thought, with their properties interpreted at the Conceptual-Intentional (CI) interface. This functional orientation leads to the Duality of Semantics. Chomsky proposes that the two modes of updating the WS map onto two distinct categories of human thought:

(10) The Duality of Semantics

- a. Propositional thought created via External Merge (EM):
establishes basic argument structure by filling θ -positions.
- b. Clausal thought created via Internal Merge (IM):
establishes discourse-related properties such as scope, force, and information structure (e.g., interrogative, topic, focus).

Chomsky (2024)

Following the Duality of Semantics, Chomsky (2024) argues that the outcomes of EM and IM must be strictly segregated in order to prevent clausal properties from interfering with the propositional core. This requirement is reflected in the well-known separation between A-movement, associated with propositional structure, and A'-movement, associated with discourse-related interpretation. IM establishes this separation by shifting a θ -marked

element away from the ongoing EM-based computation and placing it at the phase edge, where it becomes boxed and inaccessible to further structural manipulation within the derivation. In this way, elements introduced via IM are segregated from the propositional structure generated by EM, ensuring that information-structural properties do not disrupt the argument-structural configuration of the clause.

$$(11) \text{ WS} = [\{ \text{Phase PH} \quad \dots \quad \boxed{\text{XP}_i} \} \{ \text{Phase} \quad \dots \quad t_i \quad \dots \}]$$

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Specifically, A'-movement is reinterpreted as a one-time shift to the first or lowest phase edge. Upon undergoing IM—an operation restricted exclusively to θ -marked elements—the element is shifted to this phasal edge and placed in a box, effectively segregating it from the ongoing derivation. As Chomsky (2023, p. 8) notes, “IM creates an element that has no further interactions with the EM-generated structures that constitute the propositional domain or with operations that apply there.”

At this point, the formal status of boxing requires clarification. Boxing is not an independent structure-building operation, nor does it introduce a new syntactic object into the derivation. Rather, it is a computational consequence of IM that regulates accessibility within the WS. Once an element is introduced via IM and shifted to the phase edge, the system marks it as segregated from the ongoing propositional derivation. Importantly, boxing does not replace the Labeling Algorithm. Labeling continues to apply to syntactic objects formed by MERGE, determining whether configurations such as {XP, YP} can be resolved. Boxing, by contrast, regulates interaction across derivational domains: once an element is boxed, it can no longer participate in further EM-based structural manipulation within the propositional domain. Furthermore, boxing must be distinguished from Transfer. While Transfer removes a domain from narrow syntax by sending it to the interfaces, boxing does not eliminate the boxed element; rather, the element remains present at the phase edge, inaccessible to further narrow syntactic operations. Instead, it is only a higher phase head (PH) that can access this boxed element to obtain feature instructions for CI interpretation and SM externalization. Consequently, within the Miracle Creed framework, the traditional notion of successive-cyclic movement—characterized by a series of intermediate stops at every phase edge—is no longer tenable. By replacing these redundant intermediate steps with a one-time shift to the clausal plane, the MC framework seeks to derive syntactic dependencies in the most streamlined manner possible. Since an element is boxed immediately upon its initial shift, any further movement of the boxed element is prohibited, thereby simplifying the derivation in accordance with the SMT.

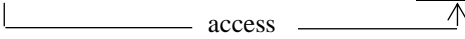
To illustrate, consider the derivation of a simple *wh*-object dependency in (12). This demonstrates how the boxing mechanism applies as the derivation proceeds through successive stages of the WS.

- (12) What did John buy?
 a. $\text{WS}_1 = [\{ \text{v}_P \text{ buy, what} \}]$
 b. $\text{WS}_2 = [\{ \{ \text{v}^*_P \boxed{\text{what}_i}, \{ \text{v}^*_P \text{ v}^*, \{ \text{v}_P \text{ buy, what}_i \} \} \}]^2$

² The lower copies are eliminated by Form Copy (FC). Specifically, FC applies to the pairs of identical inscriptions that reside within the same phase, rendering the lower occurrence phonologically null.

i) Where X,Y are structurally identical, FC(X,Y) interprets X, Y as copies, that is, the inscriptions are interpreted in exactly the same way.

Chomsky et al. (2023, p. 24, (25))

- c. $WS_3 = [\{_{v^*P} \text{John}, \{_{v^*P} \boxed{\text{what}}_i, \{_{v^*P} v^*, \{_{VP} \text{buy}, \text{what}_i\}\}\}\}]$
 d. $WS_4 = \{_{CP} C_{[Q]} \{_{\langle \varphi, \varphi \rangle} \text{John} \{_{IP} \text{INFL}, \{_{v^*P} \text{John}, \{_{v^*P} \boxed{\text{what}}_i, \{_{v^*P} v^*, \{_{VP} \text{buy}, \text{what}_i\}\}\}\}\}\}\}$


In (12a), the derivation proceeds via EM of *buy* and *what*, establishing the basic propositional structure where *what* receives its θ -role from the verb. The derivation continues as shown in (12b) and (12c): since *what* is a θ -marked element, it is eligible for IM. It undergoes a one-time shift to the first available phase edge (v^*P edge) to satisfy the Phase Impenetrability Condition (PIC). As soon as this occurs, the element is immediately boxed or segregated from the ongoing derivation. Consequently, the computational system no longer recognizes *what* as a candidate for further movement or interaction within the narrow syntax. It is effectively boxed at the v^*P edge, where it remains invisible to further search until it is accessed for interface interpretation. As illustrated in the final step (12d), once the phase head $C_{[Q]}$ enters the derivation, it identifies and accesses the boxed element at the phase edge. This mechanism confirms that the Miracle Creed framework not only simplifies the derivation by eliminating successive-cyclic movement but also provides a principled way to separate the requirements of the interface.

2.2 Bošković (2018): Labeling and Phases

Bošković (2018) provides a formal account of the Subject Condition by integrating the Labeling Algorithm (Chomsky 2013, 2015) with a refined theory of phases. The core of this analysis rests on the premise that only labeled objects—specifically those identified as CP, v^*P , or DP (Chomsky 2000, 2001)—can function as phases. Crucially, Bošković adheres to the principle that only phases are eligible for movement. Under this framework, let us consider the extraction of a *wh*-element from a subject DP as shown in (13):

- (13) *Who_i did [[_{DP} stories about t_i] [_{v^{*}P} terrify John]]? (=1a)

To be extracted from the subject phase, *who* must first move to the edge of the DP phase due to the effects of the Phase Impenetrability Condition (PIC), thereby remaining accessible to higher operations.

- (14) [_? who_i [_{DP} stories about t_i]] [_{v^{*}P} terrify John]

In (14), the merger of *who* (which Bošković treats as an XP) and the subject DP creates a symmetric {XP, YP} configuration. Under the standard assumptions of the Labeling Algorithm, such a configuration cannot be labeled unless the two elements share a feature (see Section 3.1 for discussion of the Labeling Algorithm). However, in English, there is no feature sharing between *who* and the subject DP. Because the syntactic object lacks a label, it does not count as a phase and, therefore, cannot undergo movement to the Spec,IP. This failure to identify the phrase as a phase eligible for movement effectively derives the Subject Condition violation.

However, Bošković’s (2018) approach faces a potential empirical challenge regarding its uniform treatment of subject DPs. By assuming that it is theoretically impossible in English for any {XP, YP} configuration in a

It should be noted that while boxed elements no longer interact with narrow syntactic operations like MERGE or Search, FC remains applicable as an interpretive principle that identifies identity relations within the WS for interface externalization. In this sense, FC is not a structure-building operation but a mapping rule that ensures computational efficiency by preventing the redundant realization of identical inscriptions.

specifier position to be labeled, this framework adopts a categorical view of subjects as inherent islands. This undifferentiated categorization struggles to accommodate the systematic obviation of the Subject Condition in passive constructions, as illustrated in (15).

(15) [Of which car]_i was [the driver t_i]_j awarded t_j a prize?
(=4b)

As established earlier, in a passive construction, the subject DP is base-generated in the complement of V. If we follow Bošković's logic, the movement of a *wh*-element to the Spec,DP position should render the relevant {XP, YP} configuration unlabeled, as illustrated in (16).

(16) ... [V [₂ [of which car]_i [the driver t_i]]]

Since unlabeled SOs are prohibited from moving, under Bošković's strict assumptions, the DP should be frozen in its base-generated position and unable to undergo further movement to Spec,IP. This leads his framework to predict that (15) should be ungrammatical, leaving no formal difference between typical and passive subjects.

However, we point out that this monolithic treatment of subjects faces a serious empirical challenge. The fact that passive subjects empirically remain transparent to extraction demonstrates that Bošković's labeling-failure-before-movement logic overgenerates the freezing effect. Therefore, this study argues that a more derivationally sensitive approach is required to account for the systematic asymmetry between different types of subjects, moving beyond a uniform phasal identity.

2.3 Goto and Ishii (2024): Minimal Search-Free Merge Hypothesis

Building on the recent framework of Chomsky (2021), Goto and Ishii (2024) offer a more computationally-driven account of the Subject Condition. Their analysis centers on the Minimal Search-Free Merge Hypothesis, which argues that the operation MERGE must apply without the mediation of the Minimal Search (MS) to achieve maximum computational efficiency. A direct consequence of this hypothesis is the strict adherence to Binariness, a principle requiring that the WS contain no more than two accessible items at any given stage of the derivation.

Consider the extraction from a subject DP as shown in (17), which repeats the configuration discussed in the previous section:

(17) *Who_i did [[DP stories about t_i] [_{v*P} terrify John]]?
(=1a)

In Goto and Ishii's account, the ungrammaticality of (17) arises from a Binariness violation on Search for Merge. Consider the state of the WS before the *wh*-phrase *who* undergoes IM to the Spec,CP:

(18) WS = [[C {IP {DP ... who_i} {Infl {_{v*P} {DP ... who_i} {V(terrify)-v* ... }}}}}]]

To generate the structure in (17), the operation Search for IM must select the head C along with the element *who*. However, there are already two copies of the *wh*-phrase present: *who* in the Spec,IP and *who* in its base-generated position. Under the MS-Free Merge Hypothesis, Search for Merge does not terminate upon finding the

first occurrence of a target. Consequently, if Search were to select the head *C* and the element *who*, the elements provided to the IM operation would be ternary—namely *C*, *who* (in Spec,IP), and *who* (in Spec,v*P). This ternary input directly violates Binarity on Search, which restricts the number of input elements to Merge to exactly two. Because the system cannot select only one part of a discontinuous syntactic object (the *who* chain) without violating the architectural constraints of the WS, the derivation of (16) is blocked. By reducing the Subject Condition to a Binarity violation, Goto and Ishii’s approach aligns with the Miracle Creed’s emphasis on third-factor principles, treating the freezing effect as a byproduct of universal computational resource restrictions.

Similar to the challenges faced by Bošković (2018), the Binarity-based account by Goto and Ishii (2024) also encounters difficulties in accommodating the transparency of passive subjects. According to the Binarity analysis, sub-extraction from a passive subject should be blocked due to the same computational resource restrictions that apply to typical subjects. Consider the passive construction in (19), which repeats the data from (4b):

(19) [Of which car]_i was [the driver t_i]_j awarded t_j a prize?
(=4b)

The derivation of the WS before the *wh*-phrase *of which car* (abbreviated as *wh*) moves to the Spec,CP would be represented as follows:

(20) WS = [{C {IP {DP ... wh_i} {Infl {vP {awarded {DP ... wh_i} } } } } }]

In the derivation of (20), the *wh*-phrase has already moved from its base-generated position in Comp,V to Spec,IP. Crucially, in passive or unaccusative constructions, the relevant vP is not a phase (Chomsky 2000, 2001). This non-phasal status ensures that the lower copy of the *wh*-element (*wh* in Comp,V) remains fully accessible to further operations. Consequently, when the head *C* searches for its goal, it encounters two identical inscriptions—*wh* (in Spec,IP) and *wh* (in Comp,V)—resulting in a total of three accessible candidates (*C*, higher *wh*, and lower *wh*). According to Goto and Ishii (2024), this configuration yields a ternary input that directly violates Binarity, leading their framework to predict that (19) is ungrammatical.

Against this prediction, we argue that reducing the Subject Condition to a strict Binarity constraint is empirically insufficient. The empirical transparency of (19) clearly contradicts their prediction, as extraction from passive subjects is well-attested. Although Goto and Ishii correctly connect freezing effects to third-factor efficiency, their uniformly enforced binarity tends to overgenerate freezing. This obscures the crucial contrast between subjects merged in specifier positions and those integrated as complements prior to displacement.

Taken together, recent minimalist approaches—whether phase/labeling-based (Bošković 2018) or resource-based (Goto and Ishii 2024)—converge on treating subject DPs as uniformly opaque. Consequently, they share a common limitation: they have difficulty deriving the selective transparency of passive, unaccusative, and in-situ subjects. These considerations suggest that subject islandhood cannot be reduced to a single trigger—such as phase-based inaccessibility, labeling failure, or search-resource limitations—without a more articulated derivational account of how different subject types are integrated during the course of the derivation.

Against this background, the present study develops such an account within the Miracle Creed architecture. While recent MC-based work has clarified the consequences of boxing, labeling, and workspace-based computation for movement and locality, a systematic derivational treatment of the Subject Condition has not yet been pursued. We argue that the subject island effect follows from independently motivated properties of the MC system, in particular the interaction between labeling resolution, the derivational timing of external stabilization,

and the restricted accessibility of boxed elements. In this way, the analysis aims to show how a classical island effect emerges from the internal logic of the MC framework, without introducing a construction-specific constraint.

3. Proposal

3.1 The Labeling Algorithm (Chomsky 2013, 2015)

Before proceeding to the main analysis, this section provides a brief overview of the Labeling Algorithm (LA) (Chomsky 2013, 2015) to establish the theoretical background necessary for the proposed account. Under the Strong Minimalist Thesis (SMT), every syntactic object (SO) must be labeled for proper interpretation at the interfaces. It is crucial to emphasize that labeling remains an indispensable operation even within the MC framework; while MC simplifies the derivation through the Boxing mechanism, the system still requires the LA to identify the categorial identity of each SO for the Conceptual-Intentional (CI) and Sensorimotor (SM) systems.

To be conceptually precise, Chomsky (2013, p. 43) states “that there is a fixed labeling algorithm LA that licenses SOs so that they can be interpreted at the interfaces, operating at the phase level along with other operations.” He further proposes that this algorithm is “just minimal search, presumably appropriating a third factor principle, as in Agree and other operations.”³ By utilizing this third-factor principle, the Minimal Search (MS) locates the closest minimal head to determine the label. This specific application of the MS for labeling has been widely adopted and refined in subsequent research (Bošković 2016, Epstein et al. 2014, among others). LA typically evaluates three primary configurations, as illustrated in (21):

- (21) a. $\{\boxed{XP} X, YP\}$
 b. $\{XP, YP\}$
 (i) $\{XP_i, \{\boxed{YP} t_i, YP\}\}$
 (ii) $\{\langle f, f \rangle X_{[f]}, Y_{[f]}\}$

In configuration (21a), a head X merges with a phrase YP . Since X is the only minimal head within the set, the MS immediately locates it, and X is identified as the label. Configuration (21b) addresses the labeling conflict inherent in $\{XP, YP\}$ structures where both members are phrases. In such cases, the two heads (X and Y) are equally embedded at the same minimal depth of search. Consequently, the MS is ambiguous as it encounters both heads simultaneously, leading to an initial failure to assign a label. As in (21bi), this is resolved when the syntactic object is modified by one element (e.g., XP) undergoing IM. Because the lower copy is rendered invisible to the MS, the remaining head Y becomes the only visible head, allowing Y to become the relevant phrase projection. Alternatively, as in configuration (21bii), labeling is achieved if the two equally embedded heads share a prominent feature via agreement. When X and Y are identical in this respect, that shared feature (e.g., $\langle \phi, \phi \rangle$) determines the label for the entire set.

The integration of the LA within the MC framework highlights the system’s reliance on structural determinacy for successful derivation. While boxing emerges as a computational effect following IM to ensure domain isolation, the system still requires the MS to identify a label and define the structural boundaries of a constituent. In this sense, labeling is not a redundant operation but remains independently required for structural interpretation and interface access. As will be demonstrated in Section 3.2, the Subject Condition can be reinterpreted as a natural

³ While Goto and Ishii (2024) focus on MS as a mechanism for Merge (search for input), this specific application of the MS for labeling determines categorial identity (search for output).

consequence of the system's internal constraints. When the system encounters stacked labeling conflicts that MS cannot resolve, it avoids an indeterminate search by freezing the constituent in situ to maintain computational efficiency. This principled approach suggests that the islandhood of subjects arises directly from the system's inability to further manipulate a structurally indeterminate object.

3.2 Proposal: A Labeling-based Account

With the fundamental mechanisms of the LA and MS established, we now formulate our proposal. We argue that the Subject Condition is a derivational consequence of whether a DP containing an internally unlabeled *wh*-configuration achieves external labeling resolution prior to further displacement.

We first clarify the notion of structural stabilization, which serves as the core premise of our analysis. Crucially, this stabilization is not an independent stipulation, but an emergent property arising directly from the interplay between the LA (which evaluates structural determinacy) and the Miracle Creed architecture (which dictates derivational accessibility via boxing). In the present account, a structurally indeterminate syntactic object achieves stabilization if and only if it becomes properly labeled (via either a head-complement {H, XP} configuration or feature-sharing).

Once a constituent is properly labeled, its structural boundaries become visible to MS, rendering it transparent for further syntactic operations. Without such labeling resolution, the constituent remains structurally indeterminate. A labeling conflict arises whenever MERGE creates an {XP, YP} configuration that cannot be resolved through MS or feature sharing. Such configurations need not immediately crash the derivation; the system may temporarily tolerate them if a subsequent operation supplies an external label.

To make explicit how labeling conflicts accumulate in the derivation, we first provide the schematic representation in (22), which will serve as the template for the derivations discussed below. The relevant contrast lies between a configuration in which a DP containing an unresolved labeling conflict is merged into a second labeling-indeterminate position and one in which the same DP receives immediate external stabilization through head-complement merger.

(22) Derivational representations of labeling conflict and resolution

- a. Internal {XP, YP} configuration: [_? wh_i [DP ... t_i]]
- b. Merger to a specifier (Conflict accumulation): [_? [_? wh_i [DP ... t_i]] [_v*P ...]] → unlabeled
- c. Merger to a complement (Labeling resolution): [_{VP} V [_? wh_i [DP ... t_i]]] → externally labeled by the head

As shown in (22a), IM of the *wh*-element to the DP edge creates an unresolved {XP, YP} configuration within the DP. If this internally unstable DP is then merged into a specifier position that also fails to provide a label, as in (22b), a second unresolved configuration arises. This stacking of {XP, YP} conflicts leaves the structural boundaries of the object completely indeterminate for MS. Within the Miracle Creed framework, this structural indeterminacy interacts directly with the boxing mechanism (introduced in Section 2.1). Once the *wh*-element undergoes IM and is boxed at the DP edge, its internal structure is no longer accessible for reconfiguration. Because the system cannot retroactively properly label this doubly indeterminate object, it avoids further manipulation to maintain computational efficiency. Consequently, the entire object becomes opaque to further displacement, effectively freezing in situ. By contrast, when the same DP is merged as a complement of a head, as in (22c), the head-complement configuration supplies an immediate external label. This properly labels the structure before any further displacement applies, bypassing the fatal accumulation of conflicts.

This schematic can now be directly instantiated in the derivation of typical subject structures. The following derivation in (23) makes this mapping explicit for a canonical configuration.

(23) Typical Subject

- a. Typical Subject: [_? wh_i [_{DP} a story about t_i]]
- b. External Merge of EA: [_? [_? wh_i [_{DP} a story about t_i]] [_{v*P} ...]]
- c. [INFL [_? [_? wh_i [_{DP} a story about t_i]] [_{v*P} ...]]]

In (23a), following Bošković's (2018) integrated assumptions regarding internal movement to the DP edge and the strict adherence to the No-Tampering Condition (NTC), the *wh*-element undergoes IM to the DP edge. Upon this shift, the *wh*-element is boxed and segregated from further structural manipulation. This creates an internal {XP, YP} configuration within the DP that remains unlabeled. In (23b), this internally unstable DP is externally merged into Spec,v*P, yielding a second {XP, YP} configuration. Because no head-driven labeling or feature-sharing resolution is available in this specifier position, a second unresolved labeling conflict arises. The derivation now contains stacked unlabeled configurations. When INFL is introduced in (23c), the computational system attempts to move the subject DP to Spec,IP to complete the propositional domain. However, under the MC framework, the propositional domain and the clausal domain are strictly segregated following the Duality of Semantics. To proceed, the system would have to manipulate a DP whose internal *wh*-element is boxed and whose structural boundaries remain undefined due to cumulative labeling failure. Since MS cannot identify a label for this doubly indeterminate object, any attempt to reconfigure or stabilize it would require retroactive modification of a boxed constituent, which is prohibited by the system's restricted accessibility to boxed elements.

Consequently, the derivation halts further displacement of the subject. The DP remains frozen in situ, and the higher phase head C cannot access the *wh*-element contained within it. Subject islandhood thus follows from the accumulation of unresolved labeling conflicts prior to external stabilization. In contrast to typical subjects, the derivation of passive subjects avoids the fatal accumulation of labeling conflicts due to the distinct nature of their base-generated position. Note that for ease of exposition, the *wh*-element *wh* in (24) represents a displaced constituent such as *of which car*.

(24) Passive Subject

- a. Internal DP Formation: [_? wh_i [_{DP} the driver t_i]]
- b. External Merge as a Complement of V: [_{VP} V [_? wh_i [_{DP} the driver t_i]]]

The initial step for a passive subject in (24a) is identical to that of a typical subject: the *wh*-element undergoes IM to the edge of the DP phase and is boxed, yielding an internally unlabeled {XP, YP} configuration. A crucial divergence arises in (24b). Although the subject DP enters the derivation as internally unstable, it is externally merged as the complement of V, forming a head-complement {H, XP} configuration. In such configurations, MS identifies the relevant head V as the labeling source, yielding a VP in accordance with (21a).

Unlike typical subjects, which merge into a specifier position and thereby introduce a second labeling conflict, the passive subject receives immediate external stabilization through head-driven labeling. This mechanism is independently motivated in the literature (see Kim and Park 2020 for a related approach in which head-complement labeling allows extraction out of certain phrases). Crucially, external labeling does not eliminate the internal conflict within the DP; rather, it embeds the unstable constituent within a determinately labeled domain, preventing the accumulation of stacked unresolved configurations. As a result, when the computational system later moves the passive subject to Spec,IP within the propositional domain, it operates on a structurally stabilized object rather than on a doubly indeterminate one. Because no cumulative labeling conflict arises, the subject remains transparent, allowing the higher phase head C to access the internally boxed *wh*-element without triggering a freezing effect.

The same logic of head-driven stabilization naturally extends to unaccusative subjects. Assuming that the subject of an unaccusative verb is base-generated in the complement position of V (Perlmutter 1978), it forms a

Head-Complement {H, XP} configuration identical to that of passive subjects. Consequently, the unaccusative subject is also externally stabilized by the verbal head prior to any displacement. This structural integrity ensures that unaccusative subjects, like passive ones, remain transparent for sub-extraction, as they do not possess the stacked unlabeled layers that would otherwise trigger a freezing effect.⁴

The proposed account further extends to in-situ subjects in existential constructions, which allow for sub-extraction. Following Lasnik (1995), we assume that in-situ subjects are generated as subjects of a small clause, as illustrated in (25):

(25) In-situ Subject

- a. Internal DP Formation: [_? wh_i [_{DP} posters of t_i]]
- b. External Merge with Pred: [_{PredP} Pred [_? wh_i [_{DP} posters of t_i]]]
- c. Feature Inheritance from *be*: [_{be} [_{<φ, φ>} DP_j (= in-situ subject) [_{PredP} Pred, wh_i [_{t_i}]]]]]

The initial derivation in (25a) is identical to the initial stages of both typical and passive subjects; the *wh*-element moves to the edge of the DP phase, where it is boxed, resulting in an internally unlabeled status. A critical parallel to the passive subject emerges in (25b) regarding head-driven stabilization. Following Lasnik's (1995) small clause analysis, the in-situ subject phrase is externally merged with the head Pred. Like the passive subject merging as a complement of V, this interaction with a head provides the structural basis for external stabilization. By merging with a head rather than into a specifier position that lacks shared features, the derivation avoids the stacking of unresolved labeling conflicts that characterizes typical subjects. To ensure a complete theoretical account of how in-situ subjects are derived, step (25c) demonstrates how the Pred head inherits φ-features from the copular verb *be* upon the merger of the higher head. This inheritance enables a feature sharing configuration <φ, φ> between the in-situ subject DP and the Pred head, properly defining the structural boundaries of the constituent (cf. Kim 2023). Because the subject is stabilized through this head-driven process and its position at Spec,IP is satisfied by the expletive *there*, it remains in its base-stabilized position without being displaced. Consequently, once the higher phase head C is introduced, it can directly access the boxed *wh*-element for instructions. Since the structural boundaries were properly established via Pred and subsequent feature sharing, this access allows the *wh*-element to be extracted successfully.

The proposed account further extends to ECM subjects, where sub-extraction is consistently found to be illegitimate (Chomsky 1973, Jurka 2010, among many others), as demonstrated by the following examples:

(26) ECM Subjects

- a. *[Of whom]_i does Mary believe [_{DP} friends t_i] to be stupid? Sabel (2002, p. 293)
- b. *[Which politician]_i did John believe [_{DP} a book about t_i] to have caused a scandal? Jurka (2010, p. 159)
- c. *[Who]_i do you expect [_{DP} stories about t_i] to terrify John? Chomsky (1973, p. 106)
- d. *[Which artists]_i did you find [_{DP} works by t_i] to be offensive? Uriagereka (2004, p. 10)
- e. *[Who]_i did John believe [_{DP} pictures of t_i] to have caused the riot? Boeckx (2012, p. 116)

⁴ One might argue that a root R (or V) is not strong enough to provide a relevant label without the assistance of a higher head. However, the current account assumes that the {H, XP} configuration at the base is sufficient for initial structural stabilization. Traditional approaches, which treat R or V as weak heads, inevitably yield the raising of V to v*, resulting in the Pair-merge of V and v*. Such a mechanism is strictly reconsidered in the MC framework; as the system strives for maximum computational efficiency, assuming that the head V provides sufficient labeling at the base avoids redundant head-movement operations and maintains structural determinacy from the earliest stage of the derivation. This allows the propositional core to remain stable and transparent for further clausal operations without resorting to prohibited or computationally costly head-merger processes.

As with other typical subject DPs, the *wh*-phrase within an ECM subject initially moves to the edge of the DP phase, as shown in (27).

(27) ECM Subject

- a. Internal DP Formation: [_? $\boxed{wh_i}$ [_{DP} ... t_i]]
 b. External Merge with embedded vP: [_? [_? $\boxed{wh_i}$ [_{DP} ... t_i]] [_{vP} ...]]

In (27a), internal movement creates an {XP, YP} configuration that results in an internally unlabeled status. The critical failure occurs in step (27b), where the subject DP is externally merged into the Spec,vP of the embedded clause. Identical to the typical subject case, this EM into a specifier position creates a second layer of labeling conflict, resulting in a stacked unlabeled configuration. At this point of the derivation, the subject DP is already structurally indeterminate; its boundaries are ill-defined for MS due to the lack of a label. Consequently, when the embedded INFL is introduced, the system is unable to move this constituent to the embedded Spec,IP. Since the subject has failed to achieve stabilization at its base specifier position, it remains a computationally undecidable object that the system cannot identify as a legitimate target for displacement. The ECM subject is thus frozen in situ within the embedded vP domain. This early freezing, caused by the cumulative labeling conflicts at the base specifier position, ensures that the ECM subject strongly prohibits sub-extraction from it. Even though a higher matrix head might later attempt to access the DP, the structural indeterminacy established at the embedded level effectively renders the constituent an impenetrable island.⁵

To complete the symmetric picture of the proposed account, it is necessary to briefly address why extraction out of objects is permitted, in contrast to the opacity of typical subjects. Under the current analysis, the transparency of objects is a direct consequence of their base-generated position. As illustrated in (28), an object DP is merged as a complement of the verb, forming a stable {H, XP} configuration from the outset.

(28) Object

- a. Internal DP Formation: [_? $\boxed{wh_i}$ [_{DP} a picture of t_i]]
 b. Merge with V: [V [_? $\boxed{wh_i}$ [_{DP} posters of t_i]]]

In (28a), similar to the subject case, the IM of the *wh*-element creates an initial labeling conflict within the DP. However, in (28b), this internally unlabeled DP is immediately externally stabilized by the matrix verb V. Because the object is merged as a complement, the head V provides the necessary structural instructions to resolve the indeterminacy of the DP's boundaries through MS. Crucially, unlike typical subjects, the object DP does not need to undergo further displacement to Spec,IP. This lack of subsequent movement ensures that the object avoids the accumulation of additional labeling conflicts that would otherwise arise from being re-merged into a specifier position. The structural integrity initially provided by the head V thus remains intact throughout the derivation, allowing the object DP to stay transparent. Consequently, when the higher phase head C is introduced, it can successfully locate and access the internally boxed *wh*-element without initiating a costly restructuring of the object's boundaries, adhering to the requirements of computational efficiency.⁶

⁵ Regarding the derivation of ECM subjects, it should be noted that the specific formal analysis, whether following the exceptional case marking (ECM) analysis (Chomsky 1981) or the raising-to-object analysis (Postal 1974), is entirely compatible with the current labeling-based account. This is because both theoretical frameworks involve a configuration where the subject DP is base-generated in an embedded Spec,vP. Such a configuration inevitably results in the cumulative labeling conflicts and structural indeterminacy discussed in this study.

⁶ Theoretical doubts may be raised regarding this access, as a boxed element resides within a phasal domain (v*P) that is typically transferred to the interfaces for interpretation. However, this study follows the unified phasal analysis proposed by

4. Conclusion

This paper has revisited the Subject Condition through the lens of the MC framework, demonstrating that the ban on extraction from typical subjects is not an independent grammatical constraint, but a principled consequence of the interplay between the LA and the boxing mechanism. By shifting the analytical focus from a monolithic phasal identity to the derivational timing of labeling stabilization, we have provided a unified account that captures both the opacity of typical subjects and the selective transparency of passive, unaccusative, and in-situ subjects.

We argued that when an internally unstable *wh*-element is boxed at the edge of a DP, it becomes segregated from further structural manipulation. If this indeterminate DP is merged into a position that fails to provide immediate external labeling resolution (e.g., Spec,v*P), it induces a stacking of unresolved {XP, YP} conflicts. Crucially, the computational system operates under the strict Duality of Semantics, rigidly segregating the propositional domain and the clausal domain. Because these domains are distinct, the system cannot retroactively re-access or restructure an internally boxed element (a clausal domain-related object) to satisfy the labeling requirements of the Propositional Domain. Faced with a structurally indeterminate object that cannot be further manipulated without violating computational efficiency, the system is forced to freeze the constituent in situ.

By contrast, when a subject DP achieves labeling stabilization through a head-complement {H, XP} configuration (as in passives and unaccusatives) or via feature-sharing $\langle \varphi, \varphi \rangle$ (as in in-situ subjects), its structural boundaries are properly identified by MS. This early stabilization prevents the fatal accumulation of labeling conflicts, rendering the boxed elements accessible for subsequent extraction. Ultimately, the proposed account eliminates the need for construction-specific stipulations regarding subject islandhood. By deducing the empirical asymmetries of subject extraction strictly from computational efficiency, the LA, and the independently motivated architecture of the Miracle Creed, this study reinforces the explanatory adequacy of the Strong Minimalist Thesis.

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Kitahara and Seely (2025), which simplifies the interaction between the two modes of thought. Under the Duality of Semantics, IM shifts a *wh*-element from the propositional (theta) domain to the clausal (non-theta) domain. Given that these are the only two functional domains in the system, any element that has undergone IM is, by definition, situated on the clausal plane. Consequently, a phase head can successfully access the *wh*-element because the search is directed toward clausal properties, and the element is already positioned in the appropriate domain for such interface-related operations.

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Examples in: English

Applicable Languages: English

Applicable Level: Tertiary