

HELSINKI JOURNAL OF SOCIAL SCIENCES AND HUMANITIES
A Scientific Publication of Helsinki University, Finland.
Volume: 10 Issue: 5 October, 2026
Pages: 189-205, 2026; Publication No: HJSSH.49072
ISSN: 3442-3567

ORIGINAL ARTICLE

DISPLACEMENT AS THE SYNTAX OF PERSPECTIVE: INTERNAL MERGE, COPIES, AND THE HUMAN CAPACITY TO ENTERTAIN THE SAME THING IN MULTIPLE POSITIONS

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Abstract

Displacement, the fact that a phrase is pronounced in one position yet interpreted in another, has been central to generative grammar since its transformational beginnings. In the Minimalist Program, it is derived by Internal Merge, with copy theory supplying the representational result. This conceptual paper asks what the copy–chain architecture reveals about the human mind. It argues, firstly, that the architecture is best understood as a solution to a problem of identity. A single syntactic object must figure in several structural roles without becoming several objects. Secondly, it argues that the mapping from chains to interpretation parallels a broader cognitive capacity to track one entity across changing viewpoints, roles, and discourse positions, a capacity documented in research on object files, mental files, perspective-taking, and theory of mind. Thirdly, it draws on cross-linguistic evidence from pronounced copies, resumption, logophoricity, and sign languages to show how languages externalize this capacity differently. This study states explicitly that the link between displacement and

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perspective is a hypothesis, not an established finding. It considers non-movement alternatives and proposes a research agenda that integrates formal syntax, semantics, psycholinguistics, and African-language data.

Keywords: Displacement, Internal Merge, Copy Theory of Movement, Chains, Perspective, Reference, Minimalist Program.

INTRODUCTION

Consider the question which book did Ada say Obi read? A competent speaker of English understands it as a question about the thing Obi read, even though the phrase which book is pronounced at the left edge of the sentence, far from the verb that selects it. The phrase is heard in one place and understood in another. Generative grammar has treated this mismatch as fundamental since its earliest formulations, in which constituents were moved from one structural position to another by transformations (Chomsky, 1957, 1965). In the Minimalist Program the same fact is called displacement, and it is derived not by a special movement rule but by Internal Merge, the application of the basic structure-building operation to an element already inside the structure being built (Chomsky, 1995, 2004, 2008). According to copy theory, the representational result is a set of occurrences of one and the same syntactic object, a chain, each situated in a different structural context (Chomsky, 1993, 1995; Corver & Nunes, 2007).

Treatments of this architecture are rightly technical. This study asks a different question. What does the copy–chain architecture suggest about the mind that has it? The question is not idle. Chomsky (1995, 2000) observed that displacement looks, at first sight, like an imperfection in a system otherwise shaped by simplicity, and later proposals argued that it instead follows from the simplest conception of Merge (Chomsky, 2004, 2008; Epstein et al., 2021). If displacement is a near-inevitable consequence of having a combinatorial operation at all, then the capacity to represent one object in several structural roles is not an accessory of human language but part of its core. A capacity at the core of language deserves to be asked about in the vocabulary of cognition: what is it for a mind to hold one thing in several positions at once?

We defend three claims. The first is that the copy–chain architecture is best understood as a formal solution to a problem of identity: how a single object can figure in several roles (argument of a predicate, bearer of grammatical relations, topic or focus of a conversation) without multiplying into several objects. The second is that the mapping from chains to interpretation parallels a broader cognitive capacity to track one entity across changing viewpoints, a capacity studied in work on object files, mental files, and perspective-taking (Kahneman et al., 1992; Recanati, 2012; Tomasello et al., 2005). The third is that natural languages externalize this capacity in varied ways, by pronouncing lower copies, by resumptive pronouns, by logophoric marking, and by spatial and bodily devices in signed languages, and that this variation shows many routes to one cognitive destination.

A terminological note is needed. Hockett (1960) listed displacement among the design features of human language, meaning the ability to talk about things remote in space and time. Syntactic displacement is a different notion, a mismatch between where an element is pronounced and where it is interpreted, and the two should not be conflated. They share a family resemblance that this study takes seriously, however: in both, language decouples the form of an utterance from the here and now of what it is about.

This is a conceptual paper. It reports no new experiments and no new analysis of a particular construction. Its contribution is integrative. It reads the formal literature on Internal Merge and copies alongside philosophical and psychological work on identity and perspective, in order to state a hypothesis and specify what would count for and against it. We distinguish three kinds of claim. They are; those internal to a theoretical framework, those supported by empirical evidence, and those that are hypotheses of the present study.

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The link between displacement and perspective belongs to the third kind. The example sentences are constructed illustrations in the standard manner of the field, not corpus data. This study first reviews displacement in the Minimalist Program, then examines copies and identity, the interpretation of copies, and the relation to perspective. It then turns to cross-linguistic evidence, processing and neurocognition, objections, and a research agenda.

Displacement in the Minimalist Program

From Transformations to Traces

Early transformational grammar derived surface sentences from deep structures by operations that moved, deleted, and inserted constituents (Chomsky, 1957, 1965). The theory of movement was progressively constrained. Ross (1967) identified island constraints on how far an element may travel, and Chomsky (1973, 1977) proposed general conditions on transformations. A decisive development was trace theory, on which a moved constituent leaves behind an unpronounced marker of its original position (Fiengo, 1977; Chomsky, 1981). Traces solved a problem of interpretation: if thematic roles are assigned in one position but the phrase surfaces in another, something must record where the role was assigned. The cost was theoretical, since a trace is an element not found in the lexicon that the derivation introduces on its own.

Merge, Internal Merge, and the Copy

The Minimalist Program removed this cost by adopting an inclusiveness condition: the computation may not introduce new elements like traces or indices, beyond the lexical items it begins with (Chomsky, 1995). Under that condition a moved element cannot leave a trace; what it leaves is another instance of itself. Structure is built by Merge, which takes two syntactic objects X and Y and forms the set {X, Y} (Chomsky, 1995, 2000). Merge comes in two varieties that differ only in where the inputs come from. In External Merge, X and Y are distinct objects. In Internal Merge, one is a part of the other, so merging them yields a structure in which the same object appears twice. Chomsky (2004, 2008) argued that Internal Merge needs no special stipulation; barring it would require a restriction on Merge with no independent motivation. Displacement is therefore a free consequence of the operation, not an added mechanism.

To illustrate, the derivation of which book did Obi read? First merges read with which book, building the verb phrase. Further applications of Merge add the subject, tense, and a clause-peripheral head. Merge then applies to the whole structure and to which book, which is a term of that structure, producing an object in which book occurs both at the edge and in the original position. The two occurrences are the same object and differ only in their structural contexts. At the sound interface normally only the higher occurrence is pronounced; at the meaning interface both may be relevant.

Phases and Successive Cyclicity

Long-distance dependencies raise the question of intermediate steps. In phase theory the derivation is built and transferred to the interfaces in chunks, and an element that is to move further must first reach the edge of each phase (Chomsky, 2000, 2001, 2008). Step-by-step movement through clause edges has independent support from languages in which intermediate positions leave morphosyntactic traces. McCloskey (2002) shows that the form of complementizers in Irish varies along the path of an extracted element, and Chung (1998) reports comparable effects in Chamorro, where verbal agreement is sensitive to the passage of a wh-phrase. Such effects suggest that the grammar registers the displaced element in each clause it traverses, a point that matters for the discussion of embedded viewpoints below.

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Recent Developments

Recent work reformulates the operation without abandoning the idea. Epstein et al. (2021) develop the simplest-Merge hypothesis, on which Merge does nothing beyond forming a set, and derive properties of structure from third-factor considerations of the kind introduced by Chomsky (2005). Chomsky (2021) and Chomsky et al. (2023) recast Merge as an operation on a workspace, and in these proposals a further operation, Form Copy, is invoked to establish that two occurrences count as copies of one another. The details are in flux. Collins and Stabler (2016) provide a formalization of core minimalist assumptions against which proposals can be compared, and Hornstein (2018) assesses the program's first quarter-century. For present purposes the stable core is what matters: displacement is derived by an operation that yields multiple occurrences of one object, and the question of what makes occurrences count as the same object is, if anything, more explicit in current work than before.

Copies, Chains, and the Problem of Identity

What a chain is: In Chomsky's (1995) formulation, a chain is the set of occurrences of an object, where an occurrence is defined by the object's context, that is, by what it is merged with. This has a consequence that is easy to overlook: occurrences are individuated by context, not by content. The two occurrences of which book in the question above have identical content, being by hypothesis the same object, and differ only in what surrounds them. This is the structure of what philosophers call the problem of identity across difference: one thing, many circumstances.

Copy theory also distinguishes copies from mere repetitions. If a speaker selects the word book twice from the lexicon, as in Book after book arrived, the two tokens are distinct objects that happen to be alike. If one object is merged twice by Internal Merge, the two occurrences are copies. Nunes (2004) and Corver and Nunes (2007) develop this distinction because it matters for linearization and for the conditions under which more than one occurrence may be pronounced. It is the grammatical counterpart of the difference between numerical identity (one object) and qualitative similarity (two objects alike), a difference that any theory of reference must respect.

Why a displaced phrase is usually pronounced once: If a chain has several occurrences, why is a displaced phrase typically pronounced only once? Linearization requires terminals to be ordered, and a phrase pronounced in two positions would receive contradictory ordering instructions, needing to precede and follow the same material (Nunes, 2004; see also Bobaljik, 2002; Bošković & Nunes, 2007). The usual solution is that the phonological component deletes all but one occurrence, normally the highest. Fox and Pesetsky (2005) propose that cyclic spell-out imposes ordering requirements that interact with how chains cross spell-out domains. Deviations from the default are informative, since they show that deletion belongs to externalization and not to the underlying representation (Section 6).

One object, several kinds of role: A chain does more than record a position of origin. Its occurrences are typically licensed in positions of different types. The lowest occurrence is where an element receives its thematic role, as the thing read. An intermediate occurrence may enter into agreement or Case relations, as in raising and passive constructions. The highest occurrence may be in the left periphery, a region that the cartographic tradition has shown to host force, topic, and focus information (Rizzi, 1997). Miyagawa (2010) argues that agreement and discourse-configurational properties are two ways in which languages trigger displacement, so that movement to the edge is often a matter of anchoring an element in the information structure of the clause. A chain therefore binds together three kinds of fact about one object: what it is in the event described, what grammatical relation it bears, and what it is

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doing in the conversation. This distribution of roles over a single object is the formal property that the rest of the paper relates to perspective.

The contrast between A-chains and A-bar chains illustrates the point. In the passive Chidi was praised ~~Chidi~~, the person praised occupies the subject position, which in many languages is the default anchor for what a sentence is about (see Lambrecht, 1994). In the question Whom did Ada praise ~~whom~~?, the same kind of participant occupies the clause edge, where it is the unknown to be resolved. In both cases one participant is the one who is praised, and the two constructions give the speaker different ways of making that participant central. Choosing the passive over the active is, in effect, a choice about which participant to treat as the starting point of the clause. This is an everyday case of what the architecture makes possible.

What Copies Do at the Meaning Interface?

Reconstruction

The strongest argument for copies is that the grammar sometimes interprets a phrase as if it were in a lower position. This is called reconstruction. In (1), the reflexive himself is bound by Obi, although Obi does not c-command the pronounced position of the phrase containing it.

Which picture of himself did Obi like ~~which picture of himself?~~

The binding relation is established with the lower copy, which Obi does c-command (Barss, 1986; Huang, 1993; Chomsky, 1993). A further contrast shows that copies need not be identical in every respect. In (2a), he can refer to Obi; in (2b) it cannot.

Which claim that Obi made did he deny ~~which claim that Obi made?~~

Which claim that Obi was dishonest did he deny ~~which claim that Obi was dishonest?~~

On the account of Lebeaux (1991), a relative clause is an adjunct that can be merged late, after displacement, and so is absent from the lower copy, where it would otherwise be c-commanded by he. A complement clause must be present from the start, so the violation arises in (2b). Whatever the final analysis, the contrast shows that the occurrences of a chain are not simply interchangeable and that the grammar tracks their differences.

Scope and Trace Conversion

Reconstruction is not limited to binding. How many books should Obi read? can ask for a number n such that there are n particular books Obi is required to read, or for the minimum number of books he is required to read. The second reading requires the quantity expression to be interpreted below the modal, that is, in the lower copy (Fox, 1999, 2000).

Fox (2002) proposes that the lower copy is not interpreted as a replica of the higher one. Through trace conversion, it is interpreted as a definite description whose variable is bound by the displaced operator, roughly which book λx, Obi read [the book x] (see Heim & Kratzer, 1998, for the semantic machinery). The restrictor book is shared by the two positions but does different work in each: at the top it helps define the set of candidate answers, and at the bottom it identifies what was read. The interpretive system thus treats the copy as the same object, yet does not interpret the two occurrences identically; it selects, for each occurrence, the role appropriate to its position.

Selecting a Position

Reconstruction is optional and constrained, and interpretive principles select a copy for binding, another for scope, and another for discourse function (Fox, 2000). Whether such selection belongs to the grammar or to the way interpretive systems read structures is debated. What is not debated is the many-to-one relation: many positions, one object, with interpretation determining which position is operative for which purpose.

A related point concerns attitude reports. Philosophers distinguish de dicto and de re

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readings of descriptions under verbs of belief (Quine, 1956), and Lewis (1979) argued that belief about oneself, de se belief, is a further irreducible kind. In Ada believes that the winner of the prize is a poet, the description may be Ada's way of thinking of someone or the speaker's way of identifying the person Ada has in mind. Whether such readings are derived by structural position is contested, and I rely on no particular analysis. I note only that the grammar supplies positional contrasts, higher and lower, that line up with a contrast in whose way of presenting an entity is in play.

Displacement and the Architecture of Perspective

Sameness across Difference as a Cognitive Problem

Minds that represent a world of persisting things face the problem that the same thing presents itself differently. Frege (1892/1948) observed that Hesperus and Phosphorus denote one planet although a person may rationally believe different things about them, and he distinguished the object referred to from the mode of presentation under which it is thought of. Perry (1979) showed that thoughts expressed with I, here, and now are tied to a perspective in a way no description can replace without loss. Recanati (2012) proposes that thinkers organize information in mental files, which collect what is known about one object and are linked, merged, or kept apart according to the thinker's identity judgments.

Psychology offers a complementary picture at a more basic level. Kahneman et al. (1992) proposed that perception maintains object files, episodic representations that persist while the object changes position and appearance. Pylyshyn (2007) argues that the visual system indexes objects directly, prior to description, and Spelke (1990) and Carey (2009) show that infants parse the world into persisting objects on the basis of spatiotemporal continuity. In all of these accounts the cognitive system has a bookkeeping device with three properties: a persistent token for the object, a collection of context-sensitive attributions made to it, and a way of deciding which attribution is relevant at a given moment.

A Structural Homology

We propose that the copy–chain architecture shows the same three-part organization. A chain supplies a persistent token (one object, identical across occurrences), a set of context-sensitive attributions (the roles fixed by each occurrence's context), and interpretive mechanisms that select which occurrence is operative for binding, scope, or discourse function. Table 1 sets out the correspondences.

Table 1: Correspondences between the Copy–Chain Architecture and Cognitive Accounts of Identity and Perspective

Component	In the copy–chain architecture	In accounts of identity and perspective
Persistent token	One syntactic object, identical across occurrences (Chomsky, 1995)	Object file or mental file for a single entity (Kahneman et al., 1992; Recanati, 2012)
Context-sensitive attributions	Roles fixed by each occurrence's context: thematic, grammatical, discourse (Rizzi, 1997)	Different modes of presentation of, or viewpoints on, one referent (Frege, 1892/1948; Perry, 1979)
Selection of the operative attribution	Interpretive choice of copy for binding, scope, or focus (Fox, 2000, 2002)	Perspective-sensitive access to the relevant mode of presentation (Tomasello et al., 2005)
Persistence criterion	Derivational history distinguishes copies from repetitions (Nunes, 2004)	Spatiotemporal continuity and identity judgments (Spelke, 1990; Carey, 2009)

Note. The correspondences are structural analogies proposed in this paper, not established

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identities.

The table states structural analogies, not identities. I do not claim that object files are chains or that syntax is the mechanism of mental-file management. The claim is weaker: language needed a solution to the same abstract problem, and the copy–chain architecture is such a solution, adapted to the conditions of a sequential, hierarchical, and communicative signal. Whether the linguistic solution is continuous with non-linguistic cognition or a human-specific invention is open.

Where Perspective Lives in the Clause

Displacement is embedded in a clausal architecture that encodes perspective directly. Bühler (1934/1990) located the anchor of deictic reference in the origo, the point from which speaker, place, and time are reckoned, and Benveniste (1971) argued that the category of person is what makes language a medium of subjectivity. Generative work has given these ideas syntactic form. Speas and Tenny (2003) propose syntactic point of view roles such as speaker and hearer, Sigurðsson (2004) places speech-event features in the left periphery, and Wiltschko (2021) develops a model in which an interactional layer of structure encodes speaker and addressee knowledge and its coordination. Verhagen (2005) and Traugott (2010) approach the same terrain from cognitive-functional and diachronic directions, treating grammar as shaped by the intersubjective coordination of attention.

The clause edge is where these perspectival categories and displacement meet. Rizzi's (1997) left periphery contains the projections to which topics and foci move, and these are interpretive categories that exist only relative to a conversation: a topic is what the exchange is about, and a focus is what is at issue between interlocutors (Lambrecht, 1994; Krifka, 2008). When which book moves to the edge of a question, the speaker directs the addressee's attention to the entity whose identity is at issue, while the lower occurrence continues to record the role the entity plays in the event described. The same object is thus located in an event perspective (the thing read) and in a conversational perspective (the thing we are trying to identify). Clark (1996) and Tomasello (2008) stress that human communication rests on jointly attended referents; displacement can be seen as a syntactic device for installing such a referent at a structurally privileged place. This is a hypothesis of the present paper, not a result.

Nested Viewpoints

Displacement can cross clause boundaries, and clause boundaries are where perspectives are embedded. In Which book does Ada think Obi said Chidi read?, the question is posed by the speaker, the thought attributed to Ada, the statement to Obi, and the reading to Chidi. A single wh-phrase thread through these layers, and under phase theory it does so by stopping at the edge of each clause (Chomsky, 2000, 2001). The languages discussed earlier, in which complementizers or agreement reflect the passage of the element (Chung, 1998; McCloskey, 2002), suggest that this stopping is grammatically real. An interpretive gloss, offered as a hypothesis and not as a consequence of the theory, is that successive cyclicity keeps the item accessible at each embedded viewpoint, so that it can be anchored in the speaker's context while linked to the content of each attributed mental state.

The structure can be made concrete with the example above. At the lowest position, which book is the object of Chidi's reading and is interpreted relative to what Chidi did. At the edge of the clause headed by said, it is linked to what Obi asserted, and at the edge of the clause headed by think to what Ada believes. At the top it is the object of the speaker's inquiry. On the hypothesis advanced here, each of these positions answers to a different viewpoint on the same book, and the chain is the device by which the grammar guarantees that the four viewpoints concern one book and not four. This does not claim that listeners

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consciously compute four perspectives, nor that each intermediate position has a distinct semantic effect. Intermediate positions have independent syntactic and, in some languages, morphological motivation (Section 2), and the semantic reading just offered is an interpretation of that evidence, not a demonstration.

There is developmental evidence that the grammar of embedding and the capacity to represent other minds are related. Children's understanding of false belief, the recognition that someone may hold a belief that differs from reality (Wimmer & Perner, 1983), correlates with mastery of sentential complements of verbs like think and say (de Villiers & de Villiers, 2000; de Villiers, 2007), and training studies suggest that linguistic experience contributes to the relation (Hale & Tager-Flusberg, 2003; see also Astington & Baird, 2005). Theory of mind, in the sense of Premack and Woodruff (1978) and Baron-Cohen et al. (1985), is thus entangled with the syntax of embedding. This evidence concerns complementation in general. Whether long-distance dependencies make a distinct contribution has not, to my knowledge, been tested. Children do, however, sometimes pronounce an intermediate copy while acquiring long-distance questions, as in what do you think what Cookie Monster likes? (Thornton, 1990; Crain & Thornton, 1998), forms absent from adult English that suggest children's grammars generate the intermediate positions the theory predicts.

Shifting Perspective inside a Sentence

Languages also have devices that change whose perspective anchors an expression within a single sentence. In some languages, indexicals like I can in embedded contexts refer to the attitude holder instead of the speaker, a phenomenon called indexical shift (Schlenker, 2003; Anand & Nevins, 2004). In many West African languages, logophoric pronouns mark an embedded referent as the one whose speech, thought, or perception is reported (Clements, 1975; Hyman & Comrie, 1981; Culy, 1994), and logophoricity has been analyzed in terms of the attitude holder's perspective (Sells, 1987). In sign languages, role shift lets the signer adopt the posture and viewpoint of another (Quer, 2005). These devices work through pronouns and verbal morphology, not chains, but they address the same problem. How to keep one referent in play across viewpoints.

Externalizing the Capacity: Cross-Linguistic Windows
Pronounced Copies and Resumption

If copies are real objects of the grammar, pronouncing them should sometimes be possible, and it is. Wh-copying constructions in some varieties of German and Dutch pronounce intermediate copies of the wh-phrase or a related form (Felser, 2004), and child English does so, as noted above. Kandybowicz (2008) argues that in Nupe, a Niger-Congo language of Nigeria, copies of verbs and phrases are pronounced under conditions regulated at the interface with phonology, which supports the view that the number of pronounced copies is determined by externalization and not by syntax proper. Resumptive pronouns offer a further option: instead of deleting the lower occurrence, the language realizes it as a pronoun linked to the displaced element, a strategy found in typologically diverse languages (McCloskey, 2006). Gungbe, a Kwa language, hosts focus and topic in dedicated left-peripheral positions marked by overt particles (Aboh, 2004), giving a transparent view of the discourse-anchoring role of the edge.

Visible Perspective in Signed Languages

Signed languages show displacement and perspective in another modality. In American Sign Language, wh-phrases may appear at the right edge of the clause, sometimes doubled, and non-manual markings such as eyebrow position extend across the domain of the dependency (Neidle et al., 2000; Petronio & Lillo-Martin, 1997). Role shift gives bodily expression to perspective (Quer, 2005). That both appear in a language without

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sound indicates that the capacity is not tied to speech and fits the view that the architecture belongs to the language faculty and not to a particular output channel (Berwick & Chomsky, 2016).

Complementary Strategies

Together these patterns suggest a hypothesis that is testable in principle: languages may differ in the weight they place on chain-based and pronoun-based strategies for keeping one referent available across positions and viewpoints, so that a language with a robust logophoric system might lean less on chain-based dependencies for perspective than one without. This is speculation, and to my knowledge no cross-linguistic study has tested it. Descriptive grammars of Nigerian languages, such as Emenanjo (2015) for Igbo, are natural starting points for studying how focus, relativization, and perspective marking interact.

Processing, Brain, and Evolution

Real-time Dependency Formation

If a chain links several positions, a listener must recover the link in real time, and the evidence indicates that this happens. Comprehenders anticipate gaps and try to integrate a displaced phrase as soon as a plausible gap position is available (Fodor, 1978; Stowe, 1986; Frazier & Clifton, 1989), and cross-modal priming shows reactivation of the displaced element's antecedent at the gap (Nicol & Swinney, 1989). The cost of maintaining a dependency grows with distance and with the number of intervening discourse referents (Gibson, 1998), and comprehenders respect structural constraints such as islands in real time (Phillips, 2006). These findings are compatible with copy theory, since a copy at the gap is what a parser would be expected to reactivate, but they do not establish it: any theory with a filler–gap dependency makes similar predictions. The processing data show that the mind does the bookkeeping; they do not decide how the grammar represents it.

Neurocognitive Evidence

Neurocognitive research links hierarchical syntactic processing to left inferior frontal regions and their connections to posterior temporal cortex (Friederici, 2017). Zaccarella and Friederici (2015) report that building minimal phrases engages a sub-region of the pars opercularis, and Ding et al. (2016) show that cortical activity tracks hierarchical linguistic structure in connected speech. Musso et al. (2003) reported that learning rules of real languages and learning rules based on linear order engage Broca's area differently (see Moro, 2016). Research on the neural basis of movement dependencies is more contested: Grodzinsky and Santi (2008) review competing views of Broca's region, and Hagoort (2019) argues for a unification model in which syntactic and semantic combination are not neatly separable. To my knowledge no study isolates a neural signature of Internal Merge as distinct from filler–gap integration generally, so the question remains open.

Evolutionary Considerations

Proposals that the key innovation of the human language faculty is a combinatorial operation of the Merge type (Hauser et al., 2002; Bolhuis et al., 2014; Berwick & Chomsky, 2016) carry a specific implication: if Internal Merge comes with Merge, the capacity to represent one object in several structural positions arrived together with hierarchical combination. Suddendorf and Corballis (2007) argue that mental time travel, the projection of oneself into past and future, is distinctively developed in humans, and Corballis (2011) links it to recursion. Whether syntactic displacement and Hockett's displacement share a mechanism of decoupling is speculative, but the possibility gives the humanistic question a biological form. The point should be held lightly: Everaert et al. (2015) emphasize that structure, not linear order, is the crucial property, and the evolutionary story remains

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disputed.

Alternatives, Objections, and Limits

Non-movement Accounts

The strongest objection is that the architecture on which this paper builds is one among several. Generalized Phrase Structure Grammar introduced slash features to pass information about a missing constituent through a tree without movement (Gazdar, 1981), an idea carried forward in Head-Driven Phrase Structure Grammar (Pollard & Sag, 1994) and, with different machinery, in Lexical-Functional Grammar (Bresnan et al., 2016). Simpler Syntax and construction-based approaches treat filler–gap dependencies as properties of constructions, not derivational results (Culicover & Jackendoff, 2005; Goldberg, 2006), and Brody (1995) offers a representational alternative within the broadly Chomskyan tradition. These frameworks encode a relation between filler and gap, and none denies that one entity is linked to several positions.

Our argument therefore has two levels. At the theory-neutral level, any adequate grammar must encode many-roles, one-entity relation, and that requirement motivates the analogy with cognitive bookkeeping. At the second level, copy theory is one explicit way of meeting the requirement, with the advantage that it makes the identity of the object, not merely a link between positions, a primitive of the system. Whether the advantage is real is an empirical matter, decided by reconstruction effects and the typology of copy pronunciation, where copy theory has a strong record (Fox, 2002; Corver & Nunes, 2007) though not an uncontested one.

Usage-based and Processing-based Critiques

Usage-based approaches question whether such architecture is innate and universal. Tomasello (2003) and Ambridge and Lieven (2011) argue that children construct grammatical knowledge from experience and general cognitive abilities, Evans and Levinson (2009) argue that linguistic diversity exceeds universalist assumptions, and Christiansen and Chater (2016) propose that processing pressures shape language. Hofmeister and Sag (2010) argue that island effects reflect processing difficulty and not grammatical constraints, an argument Sprouse et al. (2012) test, finding little support for the working-memory account. These challenges bear on the present paper in a limited way. A perspective-based reading of displacement does not require the architecture to be innate; it requires only that the capacity to track identity across positions be a stable feature of human language, however acquired. It is congenial to usage-based views that treat joint attention and perspective as the foundation of linguistic reference (Tomasello, 2003, 2008).

Limits of the Analogy

Three cautions apply. Firstly, perspective is an overloaded term, covering visual viewpoint, epistemic stance, discourse role, and syntactic position, and the argument equivocates unless these are kept apart. I have tried to confine the claim to a structural parallel between occurrences-in-context and viewpoints-on-an-entity. Secondly, the direction of explanation is open: language may exploit pre-linguistic object tracking (Carey, 2009), or language may reshape how humans track objects, or both may rest on common computational principles. Thirdly, the data base is skewed. Reconstruction and island judgments have been developed overwhelmingly on English and a few European languages, and the African, signed, and other evidence needed to test the hypothesis is only beginning to be integrated.

What would Count against the Hypothesis

A hypothesis that cannot fail is not worth holding, and several findings would count against the one proposed here. If languages that make relatively little use of overt

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displacement were found to handle embedded attitudes and discourse anchoring in exactly the same ways as languages with rich displacement, the proposed link would lose much of its motivation. If developmental studies showed that long-distance dependencies emerge independently of, and uncorrelated with, the grasp of embedded mental states once general language ability is controlled, the specific contribution of displacement would be doubtful. If reconstruction judgments proved insensitive to perspectival manipulations of the kind described in Section 9, the idea that positional contrasts track whose viewpoint is in play would have to be abandoned. These are demanding conditions, and meeting them would not refute the architecture of copies itself, which has independent support. They would refute only the further claim that displacement is the syntax of perspective.

IMPLICATIONS AND A RESEARCH AGENDA

The hypothesis yields five lines of inquiry, each of which could confirm or embarrass it.

The first line of inquiry is typology. Map which languages realize lower occurrences, in which constructions, and whether this correlates with logophoric or other perspectival marking, using descriptive grammars and field data (Culy, 1994; McCloskey, 2006).

The second is acquisition. Test whether the onset of long-distance wh-questions and intermediate copies tracks the development of false-belief understanding and sentential complementation, controlling for general language ability (de Villiers, 2007; Thornton, 1990). The third is interpretation. Examine whether speakers' reconstruction judgments shift when an attitude holder's perspective is made salient, building on work on reconstruction and attitude reports (Fox, 2002; Quine, 1956).

The fourth is neurocognition. Design studies that separate Internal Merge from general filler–gap integration (Ding et al., 2016; Zaccarella & Friederici, 2015).

The fifth is theory. Clarify what makes two occurrences copies in workspace-based models and whether that notion of identity is adequate for the semantic uses described here (Chomsky, 2021; Chomsky et al., 2023; Epstein et al., 2021).

There is also a pedagogical implication, offered as an untested suggestion. For teachers of English as a second language, wh-questions, relative clauses, topicalization, and passives are the places where learners must manage one referent across several positions. Presenting these constructions as ways of taking and shifting a viewpoint on an entity, in addition to presenting them as rules of word order, may help learners see why the same noun phrase can be asked about, described, and foregrounded within one sentence. Whether such framing improves learning is an empirical question for applied linguistics.

CONCLUSION

This study began with a sentence in which a phrase is heard in one place and understood in another. It has argued that this mismatch, derived in the Minimalist Program by Internal Merge and represented by chains of copies, is more than a technical curiosity. It is a formal solution to a problem every representing mind faces; keeping one thing while it appears in many roles. The chain supplies a persistent token, the positions supply context-sensitive attributions, and interpretation selects the attribution relevant to the purpose at hand. That organization parallels the bookkeeping that object-file, mental-file, and perspective-taking research ascribe to human cognition, and it lines up with the clause-peripheral positions at which grammar encodes the shared attention of speakers and hearers.

In humanistic terms the result is modest and, we hope, suggestive. A grammar that lets one thing be situated in many places supports some of the most ordinary human achievements: asking about something absent, reporting what another person believes about it, and placing it at the center of a shared conversation. In daily life we call these achievements seeing a matter from another's side without losing sight of the matter itself.

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Displacement is the point at which the formal study of syntax touches that experience most directly.

The claim has been advanced as a hypothesis and hedged accordingly. Non-movement grammars encode filler–gap relations without copies, processing and neuroimaging evidence does not single out Internal Merge, the word perspective covers a great deal, and the evidence base is dominated by a few languages. What survives these caveats is a question that formal and humanistic inquiry can share: what is it about the human mind that lets one entity occupy many positions without ceasing to be itself? Answering it will require syntacticians, semanticists, psycholinguists, and the many communities of speakers whose languages externalize the capacity in forms still to be fully described, among them the languages of Africa and the signed languages of the world.

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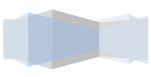
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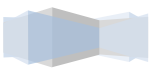
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