Deconstructing quirky subjects

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1. Introduction

Subjects display an array of properties unique to them. A theory of subjecthood is therefore a theory of the distribution of subjecthood properties. The predominant approach has been to reduce subjecthood to a purely structural phenomenon wherein subjecthood properties are the result of moving to \([\text{Spec, TP}]\) (e.g. Chomsky 1981, 2001). This approach readily accounts for canonical nominative subjects, but does not straightforwardly extend to quirky (nonnominative) subjects (QSs). In many languages, QSs only exhibit a proper subset of the subjecthood properties exhibited by canonical nominative subjects. This is prima facie incompatible with a view that subjecthood is a unitary property, i.e. all-or-nothing.

This paper makes two central claims. First, subjecthood properties manifest on a DP in accordance with an implicational hierarchy, the Quirky Subject Hierarchy (QSH) given in (1). The empirical motivation for the QSH comes from a crosslinguistic study of QSs in Hindi-Urdu (henceforth Hindi), German, Basque, Icelandic, and Laz.

(1) binding \(\ll\) PRO \(\ll\) reduced relatives

Second, subjecthood is indeed a structural phenomenon, but subjecthood properties are distributed across heads on the clausal spine, mirroring the order of the QSH. Movement through these subjecthood positions is necessarily cyclic. Whereas nominative subjects can move through all the positions, the final landing site of a QS may be an intermediate position, thus yielding a proper subset of subjecthood properties. Under this proposal, QSs are not so quirky, but partially derived variants of ordinary nominative subjects.

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1 Many thanks to Rajesh Bhatt, Kyle Johnson, Stefan Keine, Julie Anne Legate, Jon Ander Mendia, Jason Merchant, Gereon Müller, Ellen Woolford, and audiences at NELS 45, MIT, and UMass Amherst for helpful discussion. For discussion about data and grammaticality judgements, I am indebted to Rajesh Bhatt (Hindi), Ömer Demirok (Laz), Anton Karl Ingason (Icelandic), Stefan Keine (German), René Lacroix (Laz), Jon Ander Mendia (Basque), and Einar Freyr Sigurðsson (Icelandic). All remaining errors are my own. This work is supported by the National Science Foundation Graduate Research Fellowship under NSF DGE-1451512.

1 This paper is a condensed presentation of Poole (2015). For reasons of space, I will not discuss the literature on QSs, e.g. Zaenen et al. (1985), Mohanan (1994), Eyþórsson & Barðdal (2005), and many others.
2. Subjecthood diagnostics

This paper uses three crosslinguistic diagnostics for subjecthood. The first two come from Zaenen et al. (1985), while the third is novel.\(^2\) The first diagnostic is whether the DP can bind subject-oriented anaphora (SOA), a special class of anaphora whose antecedent must be the subject.\(^3\) For example, in Hindi, the possessive anaphor *apne* must take the subject as its antecedent, as shown in (2).

\[(2) \text{Ram-}	ext{ne}_i \text{Mohan-ko}_j \text{[apn}_i/s_j \text{kit}äb }] \text{di-i} \]
\[\text{Ram-erg Mohan-dat self book.nom give-pfv} \]
\[\text{‘Ram}i \text{gave Mohan}j \text{his}_i/s_j \text{book’} \]

The second diagnostic is whether the DP can be PRO. It is well-known that in control structures, only the subject can be controlled, not an object, as illustrated in (3).

\[(3) \begin{align*}
a. \quad & \text{Kyle}_i \text{wanted [PRO}_i \text{to hug Megan]} \\
b. \quad & *\text{Kyle}_i \text{wanted [(Megan) to hug PRO}_i \text{]} \\
\end{align*} \]

The third diagnostic is whether the DP can be relativised on in reduced relative clauses (RRCs), which differ from finite relative clauses in that the relativised element can only occur in the subject position. For example, in the ditransitive in (4), it is possible to relativise on the agent (4a), but not on the goal (4b) or the theme (4c). To my knowledge, this test has not been previously used as a subjecthood diagnostic.

\[(4) \begin{align*}
a. \quad & \text{the Basque}_i \text{[ ___ giving Stefan the rutabaga]} \\
b. \quad & *\text{the German}_i \text{[ Jon Ander giving ___ the rutabaga]} \\
c. \quad & *\text{the rutabaga}_i \text{[ Jon Ander giving Stefan ___]} \\
\end{align*} \]

These three diagnostics are summarised in (5)–(7) below.

\[(5) \text{Binding Diagnostic} \]
\[\text{If XP can bind subject-oriented anaphora, XP is a subject.} \]

\[(6) \text{PRO Diagnostic} \]
\[\text{If XP can be PRO, XP is a subject.} \]

\[(7) \text{Reduced Relative Diagnostic} \]
\[\text{If XP can be relativised on in reduced relatives, XP is a subject.} \]

\(^2\) Zaenen et al. (1985) include two other subjecthood diagnostics: raising-to-object and conjunction reduction. Raising diagnostics are in general difficult to apply to SOV languages, where raising cannot be diagnosed from the word order. Conjunction reduction is complicated by the fact that it is often subject to morphological-matching constraints, e.g. in German. Therefore, I do not use these diagnostics in this paper.

\(^3\) A closely related diagnostic, not used here due to space, is whether the DP triggers Condition B violations.
3. Types of quirky subjects

In this section, the subjecthood diagnostics are applied to QSs in Hindi, Icelandic, and Laz, illustrating the different distributions of subjecthood properties in these languages.\(^4\)

3.1 Hindi

Hindi quirky subjects can bind the SOA \textit{apne} (8), but cannot be PRO (9) or undergo relativisation in RRCs (10).

\begin{align*} 
(8) & \text{Mujhe}\_ [\textit{apne}\_ \text{ sab rishtedār } ] \text{ pasand hē} \quad \text{Binding \checkmark} \\
& \text{I.DAT self all relatives.NOM like be.PRS} \\
& \text{‘I like all my relatives’} \\
& \text{[Hook 1990:322]} \\
(9) & \text{*Ravi}\_ [\textit{PRO}\_ \text{Rina pasand ā-nā } ] \text{ nahi cāh-tā} \quad \text{PRO \xmark} \\
& \text{RAVI.NOM PRO.DAT Rina.NOM like come-INF NEG want-HAB} \\
& \text{Intended: ‘Ravi doesn’t want to like Rina’} \\
(10) & \text{*[___ cot lag-ā ] larkāi …} \quad \text{Reduced Relative \xmark} \\
& \text{___DAT hurt.NOM contact-PFV boy.NOM} \\
& \text{Intended: ‘the hurt boy …’} \\
\end{align*}

3.2 Icelandic

Icelandic quirky subjects can bind the SOA \textit{sinn} (11) and be PRO (12), but cannot undergo relativisation in RRCs (13).\(^5\)

\begin{align*} 
(11) & \text{Henni\_ pykir [bróðir sinn\_ ] leiðinlegur} \quad \text{Binding \checkmark} \\
& \text{she.DAT thinks brother.NOM self boring} \\
& \text{‘She\_ thinks her\_ brother boring’} \\
& \text{[Zaenen et al. 1985:450]} \\
(12) & \text{Ég\_ vonast til [\textit{PRO}\_ \text{ að vanta ekki peninga } ]} \quad \text{PRO \checkmark} \\
& \text{I.NOM hope for PRO.ACC to lack not money.ACC} \\
& \text{‘I hope not to lack money’} \\
& \text{[Zaenen et al. 1985:454]} \\
(13) & \text{*[___ ekni ] blli\_i …} \quad \text{Reduced Relative \xmark} \\
& \text{___DAT driven car.the.NOM} \\
& \text{Intended: ‘the driven car …’} \\
& \text{[Einar Freyr Sigurðsson, p.c.]} \\
\end{align*}

\(^4\)The QSs used in this section are experiencer subjects, which are typically dative, though not always, e.g. in Icelandic. There are other types of QSs in these languages, not included here. German and Basque QSs pattern like Hindi QSs (Poole 2015), but are not included in this paper for reasons of space. This paper does not discuss reversible dative–nominative structures in Hindi and German, where the nominative object can also possess subjecthood properties; see Poole (2015) for an account of these facts.

\(^5\)Icelandic QSs have been studied extensively in the literature; see Prăinsson (2007) for a summary. However, to my knowledge, the Reduced Relative Diagnostic has never been applied to Icelandic QSs.
3.3 Laz

Laz quirky subjects can bind the SOA *ti-muşi* (14), be PRO (15), and undergo relativisation in RRCs (16).

(14)  [Ham biç'i-s ]_i ti-muşi_ı opşa a-limb-en \textit{Binding ✓}  
this boy-DAT head-poss.3.nom much appl-love-imppfv.3  
‘This boy, loves himself, very much’ \cite{Demirok2013:21}

(15)  Bere-kı [PRO_ı layç’-epe o-limb-u ] gor-um-s \textit{PRO ✓}  
child-erg PRO.DAT dog-PL.nom nms-love-nms want-imppfv-3  
‘The child wants to love the dogs’ \cite{Demirok2013:25}

(16)  [___ i ma limb-eri ] bere_i … \textit{Reduced Relative ✓}  
___DAT 1.nom love-ptcp child.nom  
‘the child who has loved me …’ \cite{Demirok,p.c.}

4. The Quirky Subject Hierarchy

The findings (18) show that there is not a unitary property of subjecthood, but rather each diagnostic identifies a unique property associated with subjecthood. A generalisation does however emerge from the data: the subjecthood properties exhibited by QSs obey an \textit{implicational hierarchy}, which I call the \textbf{quirky subject hierarchy} (QSH) (17).

(17) \textit{Quirky Subject Hierarchy (QSH)}  
binding \ll PRO \ll reduced relatives  
(where \(x \ll y = y \rightarrow x\))

The QSH typologically predicts only three types of QSs (19): (i) Hindi-type QSs that can only bind SOAs; (ii) Icelandic-type QSs that can bind SOAs and be PRO, but not undergo relativisation in RRCs; and (iii) Laz-type QSs that can do all three.

(18) \textit{Summary of empirical findings} (19) \textit{Typology of (quirky) subjects}  
\begin{tabular}{lccc}
 & Binding & PRO & RRCs \\
\hline
Hindi & ✓ & × & × \\
Icelandic & ✓ & ✓ & × \\
Laz & ✓ & ✓ & ✓ \\
\end{tabular}  

\begin{tabular}{lcc}
 & Binding & PRO \\
\hline
Hindi-type & ✓ & × \\
Icelandic-type & ✓ & ✓ \\
Laz-type, Nominative subjects & ✓ & ✓ \\
\end{tabular}

The QSH excludes other logically possible types of QSs, e.g. QSs that can be PRO, but not bind SOAs. Crucially, the QSH shows that subjecthood properties do not arbitrarily cluster together into \textit{any} subsets; rather, they cluster together into subsets constrained by the QSH.

Even though the QSH is based on an investigation of QSs, it applies to all DPs. Nominative subjects possess all of the subjecthood properties, while objects possess none of them, thus vacuously satisfying the QSH. QSs are unique because they sit somewhere in the middle of the QSH, the exact position depending on the type of QS and the language. This variation is what makes QSs the interesting empirical domain for investigating subjecthood.
5. The Height Conjecture

In this section, I propose that the QSH mirrors how high a DP has raised in the structure. Subjecthood properties are distributed across heads in the functional sequence such that a DP must raise to the specifier of that head to bear the associated property. The QSH results from the requirement that a DP move cyclically along the functional sequence, the Height Conjecture. QSs differ from nominative subjects in that their final landing site may be an intermediate subjecthood position.

5.1 The proposal

I propose that the subjecthood properties of a DP are a function of how high it raises in the functional sequence. This principle, the height conjecture, is given in (20).

(20) Height Conjecture

a. Let \( fseq \) be the functional sequence \( \{X_n > X_{n-1} > \cdots > X_2 > X_1 \} \) such that \( X_i \) takes \( X_{i-1} \) as its complement.

b. Let \( m(x) \) be the mapping from functional heads to properties \( \{(X_1, p_1), (X_2, p_2), \ldots, (X_n, p_n)\} \) such that \( p_1 \ll p_2 \ll \cdots \ll p_n \).

c. Given \( fseq \) and \( m(x) \), a DP base-merged in [Spec, \( X_k P \)] bears \( p_i \) only if it moves to [Spec, \( X_j P \)] through [Spec, \( X_j P \)] for all \( j \) such that \( k < j < i \).

d. A DP must be (re)merged in [Spec, \( X_n P \)] to bear \( p_n \).

(20) maps an implicational hierarchy onto the syntactic structure and derives the implications via movement. To illustrate how (20) works, let \( fseq \) be \( \{X > Y > Z > \cdots \} \) and \( m(x) \) be \( \{(X,x), (Y,y), (Z,z), \ldots \} \). Compare Language A (21) and Language B (22).

(21) \[
\begin{array}{c}
\text{Language A} \\
[XP \alpha [\underbrace{X^0 [Y^0 [Z^0 \ldots]]}_Y]]
\end{array}
\]

(22) \[
\begin{array}{c}
\text{Language B} \\
[XP \underbrace{\alpha [\underbrace{Y^0 [Z^0 \ldots]}_Y]}_X]
\end{array}
\]

In Language A (21), \( \alpha \) raises from [Spec, \( ZP \)] to [Spec, \( XP \)] through [Spec, \( YP \)] such that it receives all three properties: \( x, y \), and \( z \). In Language B (22), \( \alpha \) only raises from [Spec, \( ZP \)] to [Spec, \( YP \)] such that it receives properties \( y \) and \( z \), but not \( x \).

5.2 Voice\(^0\) and T\(^0\)

What are the heads associated with these three subjecthood properties: binding SOAs, being PRO, and forming reduced relatives? I propose that the first two properties are associated with Voice\(^0\) and T\(^0\) respectively. Voice\(^0\) mediates the binding relationship of SOAs wherein a DP must raise to [Spec, Voice\(P\)] to serve as the antecedent. T\(^0\) hosts PRO wherein PRO
must raise to [Spec, TP] to yield a semantically interpretable structure. T⁰ crosslinguistically projects above Voice⁰ in the functional sequence, such that \( \text{fseq} = (C \times T \times \text{Voice} \times v \times V) \).⁶

Although the primary function of Voice⁰ is to encode grammatical voice, it also facilitates the binding relationship between SOAs and the subject. Following Kratzer (2009), this comprises two processes: (i) binding a variable in the position of the anaphor and (ii) transmitting the \( \varphi \)-features of the antecedent, in [Spec, VoiceP], to the anaphor. In the interest of space, let us focus on the first process, which yields the actual bound interpretation of the anaphor. Voice⁰ facilitates this process with a denotation like (23), where \( r \) is the special index borne by SOAs and \( \psi \) stands in for whatever meaning Voice⁰ contributes concerning the grammatical voice, here some relationship between the subject \( x \) and the eventuality.⁷

\[
(23) \quad [\text{Voice}^0]^g = \lambda P_{(e, st)} \lambda x_e \lambda e_s . \psi(x)(e) \wedge [P]^g[r\mapsto x](x)(e)
\]

Voice⁰ modifies the variable-assignment function \( g \) to map the special index \( r \) borne by SOAs to its argument \( x \). This argument position \( x \) is saturated by the DP that occupies [Spec, VoiceP]. By assumption, as nothing can be base-generated in [Spec, VoiceP], a DP must move to that position, as illustrated in (24).⁸

\[
(24) \quad [\text{VoiceP} \ I [\text{Voice}^0 \ [vP \ ti \ saw \ myself_r ]]] \not\rightarrow \text{LF:} \ [ I [\text{Voice}^0 \ [\lambda x \ [x \ saw \ g(r) ]]]] \quad \text{a.} \\
\quad [\lambda x [x \ saw \ g(r)]]^g = \lambda x_e \lambda e_s . \text{AGENT}(x)(e) \wedge (g(r))(e) \quad \text{b.} \\
\quad \text{Voice}^0 [\lambda x [x \ saw \ g(r)]]^g = \lambda x_e \lambda e_s . \psi(x)(e) \wedge \text{AGENT}(x)(e) \wedge \text{SEE}(x)(e) \quad \text{c.} \\
\quad [I \ [\text{Voice}^0 [\lambda x [x \ see \ g(r)]]]]^g = \lambda e_s . \psi(I)(e) \wedge \text{AGENT}(I)(e) \wedge \text{SEE}(I)(e)
\]

Following Chierchia (1989), the complement of a control predicate denotes a property of individuals (25e), which allows attitude predicates to encode their obligatory de se interpretation by quantifying over centred worlds of which the subject is the centre. This is illustrated in the semantic derivation of \textit{John wanted to eat the rutabaga} in (25).

\[
(25) \quad \text{John} \_ \text{wanted} \ [\text{PRO} \_ \text{to eat the rutabaga} ] \\
\quad \text{a.} \quad \text{want}_{x,w} = \{ (w',y) : \text{it is compatible with what } x \text{ wants in } w \text{ for } x \text{ to be } y \text{ in } w' \} \\
\quad \text{b.} \quad [\text{want}] = \lambda P_{(e, st)} \lambda x_e \lambda w_s . \forall (w',y) [ (w',y) \in \text{want}_{x,w} \rightarrow P(y)(w') ] \\
\quad \text{c.} \quad [\text{PRO} \_ \text{to eat the rutabaga}] = \lambda x_e \lambda w_s . x \text{ eats the rutabaga in } w \\
\quad \text{d.} \quad [\text{John} \_ \text{wanted} \ [\text{PRO} \_ \text{to eat the rutabaga} ] = \lambda w_s . \forall (w',y) [ (w',y) \in \text{want}_{\text{John},w} \rightarrow y \text{ eats the rutabaga in } w' ]
\]

⁶The crucial point of this analysis is that there are two distinct functional heads associated with binding SOAs and being PRO respectively, where the latter projects above the former. Although I argue that the identity of these heads is Voice⁰ and T⁰, this decision is less consequential as there are other viable options. Moreover, I assume that Voice⁰ and \( V_\text{̃} \) are distinct heads, but I make no assumptions about the division of labour between them, other than that Voice⁰ facilitates binding. The exact division is not relevant for the purposes of this paper.

⁷Due to space, I present a much simplified version of Kratzer's proposal.

⁸First, I assume that subjecthood positions are \textit{derived} positions to which a DP must move, though nothing critical hinges on this assumption; see Poole (2015) for discussion. Second, movement to [Spec, VoiceP] is interpreted according to the procedure in Kratzer (2004) where the movement-driving feature is interpreted as a \( \lambda \)-abstraction over a variable in the trace position, which scopes beneath the head hosting the feature.
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It is standardly assumed that PRO must move to [Spec, TP] to satisfy the EPP. As will be discussed below, the probes driving movement to subjecthood positions must be allowed to fail gracefully to account for why Hindi-type QSs can occur in finite clauses when overt, but not in nonfinite clauses when PRO. In other words, there needs to be a more principled reason why PRO must move to [Spec, TP] without resorting to the EPP. I propose that PRO must move to [Spec, TP] in order to yield a semantically interpretable structure. PRO denotes the identity function of type \( \langle e, st \rangle \) such that when it moves to the clause edge, the resulting structure denotes a property, which can compose with a control predicate, as shown in (26). This is equivalent to how Heim & Kratzer (1998) interpret relative pronouns.

(26)

\[
\begin{array}{c}
\text{TP : } \langle e, st \rangle \\
\text{PRO} \\
\langle \langle e, st \rangle, \langle e, st \rangle \rangle \\
\lambda x \text{TP : } st \\
T^0 \langle st, st \rangle \\
x e \\
\text{VoiceP : } st \\
\text{VoiceP : } \langle e, st \rangle \\
\end{array}
\]

Failure of PRO to move to [Spec, TP] would yield a structure denoting a proposition (type \( st \)). As a proposition is not in the domain of a control predicate, such a structure where PRO has not moved to [Spec, TP] is ungrammatical.

5.3 Deriving the Quirky Subject Hierarchy

Quirky subjects vary crosslinguistically on two dimensions: (i) how high they raise in the functional sequence and (ii) whether they can undergo projecting movement from [Spec, TP] to form a reduced relative clause.

The first source of variation corresponds to the Height Conjecture, where the subjecthood properties of a QS are a function of its final syntactic A-position. This differentiates Hindi-type QSs from Icelandic-type and Laz-type QSs. Hindi-type QSs only raise to [Spec, VoiceP] and cannot further raise to [Spec, TP], as shown in (27).

(27) Hindi-type quirky subjects

\[
\begin{array}{c}
\text{TP} \\
T^0_{\text{NONST}} \text{VoiceP QS Voice}^0_{\text{[st]}} [ \ldots ] \\
\end{array}
\]

In (27), the QS can bind SOAs because it raises to [Spec, VoiceP], but it cannot be PRO because it does not raise to [Spec, TP]. Whenever a Hindi-type QS is PRO, as it does not raise to [Spec, TP], the resulting structure will not denote a property. Therefore, the embedded clause and the control predicate cannot combine semantically, thus rendering the sentence ungrammatical. As a result, Hindi-type QSs cannot occur in the complement of
a control predicate as PRO. However, if the Hindi-type QS is overt and in a finite clause, i.e. not PRO, it is unproblematic that it does not raise to [Spec, TP] because the semantic interpretation does not necessitate such movement.

On the other hand, Icelandic-type and Laz-type QSs cyclically raise to [Spec, VoiceP] and then to [Spec, TP], as illustrated in (28). Therefore, they can bind SOAs and be PRO.

(28) *Icelandic-type and Laz-type quirky subjects*

\[
\begin{aligned}
\text{TP} & \quad \text{QS} & \quad T^0 & \quad [\text{VoiceP} \quad \text{Voice}^0 \quad [\ldots]] \\
\end{aligned}
\]

Whenever an Icelandic-type or Laz-type QS is PRO, the resulting structure denotes a property because the QS has properly raised to [Spec, TP]. The embedded clause and the control predicate can therefore combine semantically. Hence, Icelandic-type and Laz-type QSs can occur in the complement of a control predicate as PRO.

Movement to subjecthood positions is driven by *case-discriminating* feature probes. Following Preminger (2014) (based on Bobaljik 2008), case discrimination is the satisfaction condition that the goal targeted by a probe can establish an *agree*-relationship with that probe iff that goal is also of a particular type of case, e.g. unmarked (nominative). Case discrimination is relativised to positions on the (Revised) Moravcsik Hierarchy in (29).

(29) *(Revised) Moravcsik Hierarchy*

\[
\text{unmarked case} \ll \text{dependent case} \ll \text{lexical/inherent case}
\]

For instance, a feature relativised to dependent case can establish an *agree*-relationship with a DP marked with either nominative or dependent case, but not lexical/inherent case. This paper makes use of two structure-building EPP probes (notated with bullets, following Heck & Müller 2007): \[\bullet \text{nom} \bullet\], relativised to unmarked case such that it can only agree with a nominative DP, and \[\bullet \text{d} \bullet\], unrelativised to any case such that it can agree with any DP regardless of case. These probes target the highest accessible DP. Therefore, they are subject to intervention if the targeted DP is not of the correct type of case. As a consequence, only the highest DP is eligible to bear subjecthood properties.

The difference between Hindi-type QSs and Icelandic-type and Laz-type QSs results from the movement-driving features borne by Voice\(^0\) and T\(^0\) in these languages. In languages like Hindi, Voice\(^0\) bears \[\bullet \text{d} \bullet\] and T\(^0\) bears \[\bullet \text{nom} \bullet\], which permits QSs to raise to [Spec, VoiceP], but not to [Spec, TP]. In languages like Icelandic and Laz, both Voice\(^0\) and T\(^0\) bear \[\bullet \text{d} \bullet\], which permits QSs to raise to [Spec, VoiceP] and then to [Spec, TP]. It follows from case discrimination being stated in terms of the Moravcsik Hierarchy that a nominative DP will always raise to [Spec, VoiceP] and then to [Spec, TP] because it satisfies both \[\bullet \text{nom} \bullet\] and \[\bullet \text{d} \bullet\]. Therefore, a canonical nominative subject will always bear the full array of subjecthood properties regardless of the particular probes on Voice\(^0\) and T\(^0\).

Thus far, the cyclicity required by the Height Conjecture follows from the particular feature combinations on Voice\(^0\) and T\(^0\). The combinations \[\bullet \text{d} \bullet\]–\[\bullet \text{nom} \bullet\] and \[\bullet \text{d} \bullet\]–\[\bullet \text{d} \bullet\] derive Hindi-type QSs and Icelandic-type and Laz-type QSs respectively. The combination \[\bullet \text{nom} \bullet\]–\[\bullet \text{nom} \bullet\] would derive languages without QSs, e.g. English. The criterion governing
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these licit combinations is that the probe on T\(\text{0}^0\) must be a subset of the probe on Voice\(\text{0}^0\). This rules out the illicit combination of [\(\bullet\text{Nom}\bullet\)]–[\(\bullet\text{D}\bullet\)], which would permit a QS to skip [Spec, VoiceP] and move directly to [Spec, TP], violating the QSH. This criterion suffices for the purposes of this paper, though see Poole (2015) for deriving this restriction.

The second source of variation is that when a QS raises to [Spec, TP], it may or may not be able to undergo further projecting movement to form a reduced relative.\(^9\) This source of variation distinguishes Icelandic-type QSs and Laz-type QSs. As both types of QSs raise to [Spec, TP], they are both in principle eligible to undergo projecting movement to form a reduced relative. However, languages are parameterised with respect to whether nonnominative DPs can undergo projecting movement. In languages like Icelandic, they cannot do so (30), but in languages like Laz, they can do so (31). In (30) and (31), solid lines represent normal movement and dashed lines represent projecting movement.

\(^9\)To form a reduced relative clause, the relativised element must move to the edge of the clause to undergo projecting movement to form the head NP (Bhatt 2006).

(30) **Icelandic-type quirky subjects**

\[
\begin{array}{c}
\text{NP} \\
\text{TP} \\
\text{QS} \\
\text{T}_0^0 \\
\text{VoiceP} \\
\text{Voice}_0^0 \\
\text{...} \\
\end{array}
\]

(31) **Laz-type quirky subjects**

\[
\begin{array}{c}
\text{NP} \\
\text{QS} \\
\text{TP} \\
\text{T}_0^0 \\
\text{VoiceP} \\
\text{Voice}_0^0 \\
\text{...} \\
\end{array}
\]

In languages like Hindi, QSs are ineligible to undergo projecting movement to form a reduced relative because they do not raise to [Spec, TP].

Moreover, reduced relatives provide a diagnostic for syntactic height because whenever a reduced relative can be formed on a particular element, that element necessarily occupies the specifier position of the highest syntactic projection. The analysis presented above predicts that whenever a reduced relative can be formed on a DP, it has raised to [Spec, TP] through [Spec, VoiceP] thereby possessing the abilities to bind SOAs and be PRO. This prediction is borne out because Laz-type QSs also have these two properties.

6. Conclusion

This paper makes two important contributions to the theory of subjecthood. The first is the empirical contribution of the Quirky Subject Hierarchy, which reveals that the subjecthood properties exhibited by QSs are constrained by an implicational hierarchy. The QSH shows that the behaviour of QSs is predictable and codifies the challenge that QSs present for the theory of subjecthood. It also provides a framework for studying QSs in other languages.

The second contribution is preserving the enterprise of reducing subjecthood to a purely structural phenomenon by accounting for the QSH in terms of movement. It was proposed that subjecthood properties are distributed across heads in the functional sequence such that a DP must raise to the specifier of that head to bear the associated property. The QSH results from the requirement that a DP move cyclically through these positions. QSs differ
from nominative subjects in that their final landing site may be an intermediate subjecthood position, yielding a proper subset of subjecthood properties. Crucially, this analysis of QSs is only possible in light of the QSH because it reveals that subjecthood properties are distributed in a way amenable to an analysis in terms of syntactic structure.

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