

PSEUDOCLEFTS AND PARAMETERS IN THE PACIFIC*

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Abstract Many languages of the Austronesian family show a restriction in content questions: nominal WH-words cannot undergo direct WH-movement. Recent works propose a typological generalization which links this restriction to a separate pattern common in the family: nominals cannot move to the left periphery in any language which derives its basic word order through VP-fronting (36; 45). Facts from Mandar (South Sulawesi, Indonesia) suggest that this link cannot be absolute: this language shows a verb-initial word order and the classic signs of VP-fronting, but appears to permit direct WH- and focus-movement of nominal categories. These patterns are expected on a Minimalist approach to variation where UG does not directly encode typological generalizations between putative cross-linguistic parameters.

Keywords: Austronesian, Extraction, Pseudoclefts, Pied-Piping, Mandar

1 INTRODUCTION

What is the significance of typological generalization in linguistic theory? This question involves two separate lines of inquiry. On the empirical level, it must be known whether generalizations hold cross-linguistically. On the theoretical level, it must be asked where such generalizations should be housed in the grammar- and which grammatical primitives should be employed to derive them.

The various iterations of generative theory have provided different answers to the theoretical questions above. The Principles and Parameters framework (P&P; 10) espoused a model of Universal Grammar (UG) rich enough to directly encode typological generalizations through primitive parameters. On this approach, UG contained lists of interconnected principles arranged in implicational hierarchies to derive cross-linguistic generalizations (5); variation arose through

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parameter-setting in areas left underspecified by UG. Thus Chomsky writes, "what we 'know innately' are the principles of the various subsystems of S^0 and the manner of their interaction, and the parameters associated with these principles. What we learn are the values of these parameters" (11: 150-151).

The Minimalist Program (MP; 12; 13) takes a different position. On this view, UG reflects a minimal, evolutionarily plausible 'optimal solution' to language design (14); variation arises only as a uniform syntax undergoes externalization (7). The resultant grammatical architecture cannot encode typological generalizations directly in the syntax: if variation arises outside this domain, the relationships between points of variation must do so as well. And if this domain falls beyond the purview of UG, then these relationships are left without a clear home: some may be localized to individual heads and rehoused in the lexicon, but it is not clear that all can be handled this way. As a result, MP offers the expectation that the typological generalizations taken to exist robustly in the P&P era should be theoretically non-primitive and empirically non-absolute.

This paper illustrates that the logic above yields correct predictions in the realm of one former absolute: the link between VP-fronting and the lack of argument WH-movement. This connection appears robust in the Austronesian family, where many Western Malayo-Polynesian (WMP), Formosan, and Polynesian languages show two properties. The first involves the derivation of v1 word order: many of these languages show evidence for a step of VP-fronting in the basic clause (37; 18). The second involves a restriction on constituent questions: in these languages, interrogative argument WH-phrases occur clause-initially but do not undergo direct WH-movement. Instead, they form the higher predicates of pseudoclefts (28; 20). The correlation between these properties is shown in (1).

- (1) *Typological Generalization across Austronesian*
 Languages which derive their basic word order via VP-fronting lack direct WH-movement of WH-arguments into the left periphery.

This generalization has been formalized in several ways. (35; 36) proposes that any language which establishes its basic word order via VP-fronting systematically lacks movement of nominal categories into the C-domain (2). (? 45) argues for a stronger position: Malagasy (and other WMP languages) systematically disallow phrasal movement of nominal categories (3).

- (2) *Oda's Generalization* (35; 36)
 a. If a language derives verb-initial order via VP-fronting,
 then it lacks WH-movement of arguments into the left periphery.
 b. *Summary*: VP-FRONTING → NO WH-MOVEMENT.

- (3) *Travis's Typology* (? 45)
- a. Languages fall into two types with regard to movement operations:
 - (i) TYPE A: head-movement of v; phrasal movement of DP
 - (ii) TYPE B: phrasal movement of VP; head-movement of D
 - b. Malagasy and other WMP languages are of TYPE B.

These formal generalizations cannot be expressed in the syntax on the Minimalist view of UG. The component parts of the generalization above cannot be linked: they cannot reduce to the properties of an individual head in the lexicon and MP has no straightforward means to encode either into UG. If this approach is on the right track, then the generalizations above should not be absolute: there could exist WMP languages that go against this pattern.

Mandar, a language of the South Sulawesi subgroup (Central Indonesia), serves as such a case. This language shows both VP-fronting and direct WH-movement in constituent questions: nominal WH-words move directly from their thematic positions into the left-periphery. The examples below illustrate.¹

- (4) *Wh1 Questions* *Mandar*
- a. **Innai** mam-eang diong?
 who AV-fish there
 'Who's fishing down there?'
 - b. [_{CP} **Innai** mameang *t_{innai}*]?

The present paper argues that constituent WH-questions like (4) involve direct WH-movement. Key evidence comes from three domains: agreement paradigms, biclausality tests, and pied-piping patterns. The argumentation extends to parallel constructions which involve clause-initial argument foci (F1). Throughout this paper, I use the term WH1/F1 to refer explicitly to constructions like (4a).

The Mandar evidence above fits neatly into the MP view above. While particular patterns may tend to co-occur, 'parametric links' cannot be encoded directly into UG and thus should not reflect cross-linguistic absolutes. The presence of direct WH-movement in Mandar suggests that the same holds for the link between VP-fronting and the lack of argument WH-movement in Austronesian.

The remainder of this paper is organized as follows. Section 2 below lays out a sketch of Mandar clause structure and argues for an operation of VP-fronting behind the basic v1 order. Section 3 lays out several empirical properties of WH1/F1 structures and argues that they arise through direct displacement. Section 4 concludes that an absolute parametric link between the two properties under discussion cannot be maintained.

¹ Abbreviations include: 1/2/3: first, second, third person, ABS: absolutive, AV: agent voice, DAT: dative, EMPH: emphatic, EX: exclusive, EXPL: expletive, FUT: future, GEN: genitive, IMP: imperative, IPFV: imperfective, LNK: linker, NEG: negative, OBL: oblique, PASS: passive, PFV: perfective, PRT: particle, PV: patient voice, Q: question particle, RED: reduplication, REL: relativizer, SUBJ: subjunctive

2 CLAUSE STRUCTURE AND VP-FRONTING IN SOUTH SULAWESI

2.1 SOUTH SULAWESI: BACKGROUND AND METHODOLOGY

Mandar is a member of the South Sulawesi Subgroup, a primary branch of WMP spoken in central Indonesia. This subgroup contains roughly thirty languages in four subfamilies: the SEKO, MAKASSAR, BUGIS, and NORTHERN groups (23). Mandar, spoken in West Sulawesi, is a primary branch of the last.

This paper presents data from three sources: (i) texts published by the Indonesian language ministry, (ii) spontaneous speech, and (iii) sentences judged in elicitation. Two speakers have been consulted for this study; both have worked with me in person since 2018 and over Zoom since the spring of 2020. The present discussion focuses on the ‘standard’ dialects of BALANIPA and POLEWALI.

2.2 WORD ORDER AND VP-CONSTITUENCY

Transitive clauses show a verb-initial order in Mandar. The agent and patient show flexible order and the verb precedes arguments and VP-level adjuncts (5).

- (5) *Mandar permits both VAO and VOA Orders.* *Mandar*
- a. Map-pamula=i **bunga i=Murni**.
 AV-plant=3 flower NAME
 ‘Murni is planting flowers.’ (38: 195)
- b. Pura=i na-ala **baine-na diqo bau**.
 already=3 3.PV-take wife-3 that fish
 ‘His wife had already taken that fish.’ (38: 155)

The predicate which precedes the surface subject is phrasal. Three facts suggest this view. First, non-verbal predicates occupy a clause-initial position as well. When phrasal, these constituents precede the subject in full (6).

- (6) *Nonverbal Predicates can be Phrasal.* *Mandar*
- a. **Diing**=dua=i **di=litaq** diqe tommuane=e.
 there=still=3 OBL=floor this man=DEF
 ‘This man was still on the floor.’ (38: 154)
- b. **Posasi**=i **annaq paqgalung** to dini di=kappung=e.
 Fisherman=3 and famer PRS here OBL=village=DEF
 ‘The people who live here are fishermen and farmers.’

Second, coordination tests suggest that the verb and object form a constituent. The v-o string can coordinate with v-o sequences (7a) and bare verbs (7b). Similar patterns suggest that a VP constituent across WMP (32).

- (7) *Mandar Permits VP-Coordination* *Mandar*
- a. [Mam-baca=i buku] annaq [maq-jama PR] i=Kacoq.
 AV-read=3 book CONJ AV-work HW NAME
 ‘Kacoq reads books and does his homework.’
- b. [Mang-uma=i] annaq [maq-baluq soklat] i=Kacoq.
 AV-garden=3 CONJ AV-sell chocolate NAME
 ‘Kacoq keeps a garden and sells chocolate.’

Third, *Mandar* permits ‘pseudo-incorporation’ structures where the verb forms an accentual unit with following phrasal material. Second-position clitics follow the phrasal constituent (8).² Similar patterns occur in Polynesian (33).

- (8) *The Narrow VP can form a prosodic constituent.* *Mandar*
- a. Maq-itai **baine=malólo=o** dini di=Mandar a?
 AV-look.for wife=pretty=2 here OBL=Mandar PRT
 ‘So you’re looking for a pretty wife here in *Mandar* country, huh?’
- b. Miq-keqdeq **di=lémbang=i** ia digenaq.
 AV-stand OBL=river=3 he earlier
 ‘He was standing in the river earlier.’

Distributional restrictions suggest that the accentual unit is an intact VP. The postverbal position hosts only those elements which remain inside the VP: NP objects and locative PPs. It cannot contain elements which originate above the VP (external arguments: 9a) or raise out of it (DP objects: 9b).

- (9) *No Pseudo-incorporation for Constituents outside the VP.* *Mandar*
- a. *Maq-ande **to dini=i** bau. b. *Maq-itai **yau=do=qo?**
 AV-eat REL here=3 fish AV-look.for me=Q=2
 INT: ‘The people here eat fish.’ INT: ‘Are you looking for me?’

2.3 PREDICATE FRONTING

These patterns show that the *Mandar* VP forms a surface constituent. This conclusion raises a separate question: does the linearization of the VP before the subject arise through predicate fronting? On a certain view, the predicate-initial order cannot arise in any other way (31). From a theoretical perspective, this position is problematic for a range of reasons (17). Nevertheless, the classical diagnostics brought to bear on this puzzle in WMP yield positive results in *Mandar*.

² The subfamily literature calls this ‘incorporation’: (9; 46; 21; 6; 27); the construction involves focus in *Mandar* (1).

The first argument for predicate fronting in Mandarin stems from freezing effects. Like other WMP languages, Mandarin bans objects which remain within the VP from undergoing movement later in the derivation. This pattern is typically demonstrated in WMP through the interaction of object shift with extraction (15). Mandarin verbs show a binary morphological alternation linked to object specificity: they take inflecting prefixes (PATIENT VOICE; PV) if objects are specific and an invariant prefix *maN-* (AGENT VOICE; AV) if not (10). Following (42), I take the former series of prefixes to encode the presence of object shift.

(10) *Prefix Selection Marks Object Shift.* *Mandar*

- | | |
|--|---|
| <p>a. Maq-itai=i dalleq-na.
 AV-look.for=3 fortune-3
 ‘He’s looking for his fortune.’
 (34: B4)</p> | <p>b. Na-itai=i i=Nabila.
 3.PV-look.for=3 NAME
 ‘He’s looking for Nabila.’</p> <p>c. *Maq-itai=i i=Nabila.</p> |
|--|---|

Objects and other elements which remain within the VP cannot undergo movement later in the derivation. Mandarin permits foci to surface in a position identical to that occupied by argument WH-words (11). Objects can move to this position when they independently shift out of the VP (when the verb bears PV morphology); when they do not (when the verb bears AV morphology), they cannot.

(11) *Nonshifted Objects cannot Front* *Mandar*

- | | |
|--|--|
| <p>a. I=Nabila na-itai.
 NAME 3.PV-look for
 ‘He’s looking for NABILA.’</p> | <p>b. *Dalleq-na maq-itai=i.
 fortune-3 AV-look.for=3
 INT: ‘He’s after his FORTUNE.’</p> |
|--|--|

This pattern suggests that the VP becomes an island for extraction at a certain point in the derivation. This restriction resembles a freezing effect (48): the VP becomes an island because it moves.

The second argument for predicate fronting comes from adverb linearization. Mandarin requires certain adverbial elements to appear in second-position (12). Controlled for prosody, the elements which cluster in this position surface in a mirrored order: higher-scoping adverbs occur to the right of lower ones.³

(12) *Adverbs show Mirrored Order* *Mandar*

- | | |
|--|---|
| <p>a. Loppa=sanna=dua=bandi?
 hot=really=still=honestly
 ‘Is it honestly still really hot?’</p> | <p>b. Dio=poleq=kapang=todiq.
 there=again=maybe=sadly
 ‘Sadly maybe there again.’</p> |
|--|---|

³ The same pattern arises among 2P elements in Tagalog (Jed Pizarro-Guevara; p.c.).

Similar patterns have been argued to arise via roll-up predicate fronting across Austronesian. Within WMP, Malagasy requires non-clitic adverbs to surface in mirrored order postverbally (41); in Formosan, Seediq shows the same requirement (26). The standard analysis derives this pattern via iterative COMP-to-SPEC movement (?): adverbs head projections base-merged in an LCA-compliant Cinquean hierarchy and trigger fronting of their complements into specifier positions.

These diagnostics establish that Mandar follows other Austronesian languages on the classic tests for predicate fronting. If convincing, they suggest Mandar derives its basic word order through phrasal movement of a predicative constituent. The minimal analysis posits one step of VP-fronting to derive the patterns in (5)-(9); further movements may be required for the adverb facts in (12).

Setting the latter subject aside, I assume that the Mandar VP undergoes minimally one step of predicate fronting. This operation targets a low position: the verb follows both negation (6a) and aspectual adverbs (6b), which stand below T in the Cinquean hierarchy (16). For concreteness, I assume that the VP moves to the edge of *voiceP* (19).

- (13) *Verbs follow Negation; Middle-field adverbials* *Mandar*
- a. **Andap**=pa=i **mala** u-pau.
 NEG=IPFV=3 can 1.PV-say
 ‘I can’t say it yet.’ (22: B17)
- b. Maq-ua=m=i baine-na ”**Pura**=i=tuqu u-paressuq!”
 AV-say=PFV=3 wife-3 already=3=EMPH 1.PV-cook
 ‘His wife said ”I already cooked it!”’ (38: A15)

The resultant view of clause structure divorces the verb’s position from both its morphological complexity and a formal EPP localized to T. I assume that the verb undergoes no head-movement in the narrow syntax and takes on prefixes only through post-syntactic amalgamation (24). Moreover, the linear ordering facts suggest that predicate-fronting does not target the specifier of TP; as a result, I see no reason to connect the process to an EPP requirement localized to this position (*pace* 33).

3 MANDAR WH-QUESTIONS AND PSEUDOCLEFTS

3.1 THE PSEUDOCLEFT ANALYSIS

The model of clause structure developed above places Mandar in line with the Austronesian languages which adhere to (1). Like its relatives across the family, Mandar shows a v1 order which arises via predicate-fronting. The typological generalizations in (2)-(3), then, yield the prediction below: Mandar WH1-questions like (14a) should have the underlying pseudocleft structure in (14b).

(14) *The Pseudocleft Analysis of Mandar Wh-Questions* Mandar

- | | |
|--|--|
| a. Apa na-peang?
what 3.PV-fish.for
‘What is he fishing for?’ | b. \emptyset Apa [\emptyset na-peang]
COP PIVOT FREE RELATIVE
‘What’s what he’s fishing for?’ |
|--|--|

On this view, the WH1 structure in (14a) would bear the structure of a specificational pseudocleft. The PIVOT, the WH-word, would merge in object position of a copular clause. The COUNTERWEIGHT, or remainder, would be treated as a free relative merged in subject position (3; 47), despite the lack of relativizing morphology. The surface word order of WH-REMAINDER would arise through the process of predicate-fronting described above.

From a surface perspective, this analysis seems unlikely. Pseudoclefts show both an overt copula and relativizing morphology in English, but the WH-question in (14a) shows neither. In Austronesian, moreover, relativizing morphology is generally required. Cebuano (Central Philippines), for instance, recruits the morpheme which heads free relatives (here *ang*) for these constructions (15).

(15) *Wh-Pseudoclefts Require Relativizers* Cebuano

- | | |
|--|---|
| a. Dautan ang amo=ng gi-na-buhat.
bad D 1.EX=LNK PV-IPFV-DO
‘What we were doing was bad.’ | b. Unsa *(ang) amo=ng gi-na-buhat?
what D 1.EX=LNK PV-IPFV-DO
‘What were we doing?’ |
|--|---|
- Jed Pizarro-Guevara; p.c.

Nevertheless, clause-initial arguments show certain properties which suggest an analysis like (14b). Mandar has a subjunctive enclitic =*a* which occurs adjacent to predicates ??and cannot appear after nominals in argument positions (16b). However, this element can surface on clause-initial WH1 and F1 elements (17).⁴

(16) *Subjunctive -a: follows Predicates, not Arguments* Mandar

- | | |
|---|---|
| a. Baraq siccoq- a =i dosa-na.
hopeful bit-SUBJ=3 sin-3.GEN
‘Hopefully his sin is little.’ | b. *Pole=pa=i i=Mulle- a .
come=IPFV=3 PRS=N-SUBJ
INT: ‘Mulle might come later.’ |
|---|---|

(43: C99)

⁴ Many second-position particles show the same distribution in Mandar, but the complexities behind their linearization undermine the diagnostic value of their surface positions. To my knowledge, the subjunctive *a* is the only enclitic which does not move to second position in the language.

(17) *Subjunctive -a: occurs with clause-initial wh-words, foci* Mandar

- | | |
|--|--|
| <p>a. Innai-a=mo di=aya=e?
 who-SUBJ=PFV OBL=top=DEF
 ‘Who might be up there?’</p> | <p>b. Bekkeq-a=mo na-gereq.
 goat=SUBJ=PFV 3.PV-kill
 ‘He might kill a goat.’</p> |
|--|--|

This pattern places Mandar WH1/F1 structures in line with constructions argued to be covert pseudoclefts elsewhere in Austronesian. Both Standard Fijian and certain dialects of Malagasy form WH1-questions without overt relativizing morphology, but both languages permit ‘predicate-only’ particles to follow the WH-word in these constructions (39; 40). As a result, WH1-questions in these languages have been argued to conform to the structure in (14b): they involve biclausal, pseudoclefted structures and pose no threat to the generalization in (1). As such, the covert pseudocleft analysis serves as the null hypothesis on WH1-questions in Mandar. This analysis appears sensible for comparative reasons and can be empirically justified through a particle placement pattern which recurs across the family. From a theoretical perspective, moreover, this approach eliminates a potential counterexample to (2) and allows for the preservation of a deep link between VP-fronting and WH-pseudoclefts.

Given these advantages, the pseudocleft analysis in (14b) cannot be discarded lightly. A convincing refutation of this approach requires minimally two things: (i) detailed counterarguments from independent properties of equation, predication, embedding, and extraction structures and (ii) a convincing alternative explanation for the particle placement pattern in (17). A successful proposal of this sort should also (iii) contextualize the Mandar argumentation within the broader context of WH1/F1 structures in South Sulawesi and WMP at large.

The present paper aims for a modest goal: to demonstrate that there are more compelling reasons to consider a monoclausal WH-displacement analysis of WH1 questions in Mandar. Key evidence comes from four predictions of the pseudocleft analysis which are systematically not borne out.

(18) *The Mandar Pseudocleft Analysis: Predictions*

- a. The counterweight should behave like a headless relative clause.
- b. The WH-word should behave as the predicate of a copular clause.
- c. The WH-question should show other signs of being biclausal.
- d. The WH-question should show other properties of pseudoclefts.

The patterns below suggest that Mandar WH1 questions lack the canonical biclausal structure of WH-pseudoclefts across WMP. This conclusion places these structures at odds with the typological generalization in (1): Mandar appears to be a language with both VP-fronting and direct WH-movement.

3.2 HEADLESS RELATIVE CLAUSES

The first argument for direct WH-movement comes from the distribution of null relativizers. On the pseudocleft approach, the post-WH constituent is a headless relative clause in subject position. This stance yields the prediction in (19).

(19) *First Prediction of the Pseudocleft Analysis*

The COUNTERWEIGHT resembles a headless relative in subject position.

This prediction is not borne out. Mandar forms headless relatives with two relativizers: the inanimate *anu* and animate *to*. These morphemes must be overt when headless relatives surface in subject (20a) or object (20b) position.

(20) *Headless Relatives Require Overt Relativizers in Argument Positions*

- | | |
|--|---|
| a. Mararas=i *(anu) na-bawa.
spicy=3 REL 3.PV-bring
'What he brought is spicy.' | b. U-oloqi=i *(to) maq-elong.
1.PV-like=3 REL AV-sing
'I like who is singing.' |
|--|---|

The pseudocleft analysis treats the post-WH material as a free relative subject of a copular clause. As a result, it predicts that this constituent should contain an overt relativizer. However, WH1 questions cannot contain these morphemes: it is impossible to insert either *anu* or *to* in the constituent which follows an argument WH-word (21a). The same restriction holds over F1 constructions (21b).

(21) *Wh1 Questions ban Overt Relativizers*

Mandar

- | | |
|---|---|
| a. Apa (* anu) mane bemme?
what REL just fall
'What just fell?' | b. Hape-u=di (* anu) bemme.
phone-1=just REL fall
'Just my phone fell.' |
|---|---|

3.3 COPULAR SYNTAX

The second argument for WH-movement comes from the agreement paradigm. On the pseudocleft approach, WH1-questions involve copular structure: the WH-word forms the predicate of a copular clause. This leads to the prediction in (22).

(22) *Second Prediction of the Pseudocleft Analysis*

WH1 elements should resemble the predicates of copular clauses.

WH-words show the expected behavior as predicates of equational copular clauses. These constructions show unremarkable syntax in Mandar: the predicate occurs in its typical position and hosts canonical agreement with the subject (23a). When a WH-word serves as the predicate, it shows the same behavior (23b).

(23) *Wh-Words host agreement in Predicative Copular Clauses* Mandar

- | | |
|---|--|
| <p>a. Ceh, asu=i kandi_q-qu.
 <small>PRT dog=3 little.sibling-1</small>
 ‘Ugh, my brother’s a jerk.’</p> | <p>b. Apa=o i_qo?
 <small>what=2 you</small>
 ‘What are you?’ (Halloween)</p> |
|---|--|

Copular clauses which link two specific nominals show a different pattern. These constructions permit two orders linked with distinct agreement paradigms in Mandarin: the predicate can occur initially and host regular agreement (24a) or the subject can occur initially and take an expletive agreement clitic *mi* (24b).

(24) *Two Agreement Frames* Mandar

- | | |
|--|--|
| <p>a. Guru-nna=i i=Majiq.
 <small>teacher-3=3 NAME</small>
 Majid is the teacher.</p> | <p>b. i=Majiq=mi guru-nna.
 <small>PRS=N=EXPL teacher-3</small>
 It’s Majid that’s the teacher.</p> |
|--|--|

Clausal subjects trigger regular agreement under normal circumstances. Full CPs must be indexed with agreement when they serve as the subjects of clauses like (25a). Headless relatives show the same behavior: they trigger canonical third-person agreement even on nominal predicates (25b).

(25) *Free Relatives and CPs trigger Agreement* Mandar

- | | |
|--|-------------------|
| <p>a. Pura=i na-pipissangang muaq na=na-ro_poq=i boyang-na,
 <small>Already=3 3.PV-announce if FUT=3.PV-sell.off=3 house-3</small>
 ‘He announced that he’d sell his house.’</p> | <p>(43: C219)</p> |
| <p>b. Tommuane=i to maq-itai=o digenaq.
 <small>man=3 REL AV-look.for=2 earlier</small>
 ‘The one who was looking for you earlier was a man.’</p> | |

On the pseudocleft analysis, Mandarin WH1 questions involve a structure like (25b): the WH-word is predicated against a headless relative. Specifically, the pseudocleft analysis assumes a null-headed headless relative. Mandarin does permit this type of constituent in one context: beneath the existential verb *diang* (26a). Crucially, these null-headed headless relatives can trigger expletive agreement (25b).

(26) *Null-headed HRCs co-occur with Expletive Agreement* Mandar

- | | |
|---|--|
| <p>a. Diang u-paressuq dio di=pacceko, tapi sumaya=o: mararas=i!
 <small>EXIST 1.PV-cook there OBL=kitchen but careful=2 spicy=3</small>
 ‘There’s something I cooked in the kitchen, but be careful- it’s spicy!’</p> | |
| <p>b. Diang=mi manarang mak-kalindaqdaq indini di=kapping=e.
 <small>EXIST=EXPL skilled AV-LOCAL.POEM here OBL=village=DEF</small>
 ‘There’s someone skilled at reciting <i>kalindaqdaq</i> here in the village.’</p> | |

The pseudocleft analysis thus arrives at a strong prediction. Mandarin permits two forms of agreement in copular clauses: canonical agreement (23a) and expletive agreement in an inverse configuration (24b). Regular CP subjects trigger regular agreement (25a); null-headed headless relatives exist and can trigger expletive agreement (26b); nominal predicates can host agreement (25a) and WH-words do in equative copular clauses (23b). As a result, clause-initial WH-words and foci should be able to host some type of agreement if WH1/F1 structures bear any type of copular structure. However, these constructions ban all agreement (27).

(27) *Wh1 Questions ban all Agreement* *Mandar*

- | | |
|--|--|
| <p>a. Apa(*=i/*=mi) di-pogauq?
 what=3/EXPL PASS-do
 ‘What are you doing?’
 (22: 37)</p> | <p>b. Iqo(*=i/*=mi) u-salili.
 you=3/EXPL 1.PV-miss
 ‘I miss YOU.’
 (34: A162)</p> |
|--|--|

This pattern poses a challenge to any analysis which ascribes copular structure to the clauses in (27). The complete ban on agreement suggests that clause-initial WH-words and foci do not behave as predicates in any meaningful sense. Instead, these elements must be arguments which have undergone movement.

3.4 BICLAUSALITY

A third set of arguments for direct WH-movement come from diagnostics for monoclausality. On the pseudocleft approach, the post-WH constituent contains a CP boundary and the overt material which follows occupies an embedded clause. This view leads to the prediction in (28).

(28) *Third Prediction of the Pseudocleft Analysis*

The post-WH constituent should resemble an embedded clause.

The distribution of imperative morphology provides a first argument against this claim. Mandarin has a direct imperative marked by a null verbal prefix which replaces normal ergative agreement (29a). This morphology occurs only in matrix clauses: it cannot occur beneath the prohibitive *da* ‘don’t!’, which embeds a small clause, or within an embedded CP (29b)-(30).

(29) *Imperative Morphology* *Mandar*

- | | |
|--|--|
| <p>a. Ø-Baca=m=i iting=o!
 IMP-read=PFV=3 that=DEF
 ‘Read that!’</p> | <p>b. Da *Ø/mu-baca=i!
 DON’T! IMP/2.PV-read=3
 ‘Don’t read it!’</p> |
|--|--|

(30) *Imperative Morphology: Matrix Clauses Only* Mandar

U-posara=mo annaq *Ø/mu-baca=i, tapi ndang=o min-dalinga!
1.PV-beg=PFV C IMP/2.PV-read=3 but NEG=2 AV-listen

‘I begged that you read it, but you didn’t listen!’

Clause-initial focus constructions like (31a) allow the predicate following the focus to bear imperative morphology (31b). This pattern suggests that the resultant structures are monoclausal: the main verb cannot occupy an embedded clause.

(31) *F1 Constructions allow Imperative Morphology* Mandar

- | | |
|--|---|
| a. Iting boyang na-papia.
that house 3-make
‘He built THAT HOUSE.’ | b. Boyang=doloq Ø-papia!
house=first IMPER-build
‘Build a HOUSE first!’
(43: C488) |
|--|---|

The same diagnostic cannot be run in interrogative clauses. Nevertheless, clause-initial *WH*-words and foci show identical syntactic behavior and plausibly occupy the same position.⁵ As a result, this conclusion over *F1* structures extends naturally to their *WH1* equivalents: the latter must be monoclausal as well.

Clitic climbing patterns provide further evidence that *WH1/F1* structures are monoclausal. Mandar has second-position clitics which follow the first prosodic word in an intonational unit linked to the clause (32a). These clitics cannot raise to the *C* domain: they cannot climb to *C* (32b) or escape free relatives (33).⁶

(32) *2P Clitic Placement Patterns* Mandar

- | | |
|---|--|
| a. Indang= bappa = tia urang.
NEG=hopefully=just rain
‘Hopefully it won’t rain.’
(22: 262) | b. Apaq sibuq= bega =i i=Ali.
because busy=too=3 NAME
‘Because Ali is too busy.’
(22: 68) |
|---|--|

(33) *Clitics cannot climb out of Free Relatives* Mandar

- | | |
|--|--|
| a. Indandiang to maq-ita= aq .
NEG.EXIST REL AV-see=1
‘There’s nobody who saw me.’ | b. Muaq to tuna= mo = todiq ,
as.for REL suffer=PFV=poor
‘As for whoever suffers,’
(34: A98) |
|--|--|

⁵ In Mandar, foci and *wh*-words both (i) host predicate-only particles, (ii) cannot host agreement with the following constituent (iii) or trigger agreement in it, and (iv) obey identical extraction constraints.

⁶ Similar restrictions recur over clitic systems in South Sulawesi and the Philippines (29; 30).

Philippine languages show a common restriction over second-position elements: they cannot climb to clause-initial WH-words and foci. The Cebuano data below illustrate: the clitics *niya* ‘3.GEN’ and *nako* ‘1.GEN’ originate within the post-WH constituent but cannot climb to follow the initial WH1/F1 elements. Given that Philippine 2P clitics cannot climb across CP boundaries, this pattern suggests that these constructions are biclausal (4; 8).

(34) *Wh1/F1 Structures ban Clitic Climbing* *Cebuano*

- | | |
|---|---|
| <p>a. Unsa ang gi-na-buhat=niya
 what D PV-IPFV-do=3.GEN
 ‘What is he doing?’</p> | <p>c. Si=Indang ang gusto=nako
 NAME D like=1.GEN
 ‘Indang’s the one I like.’</p> |
| <p>b. *Unsa=niya ang gi-na-buhat?</p> | <p>d. *Si=Indang=nako ang gusto.</p> |

Unlike Cebuano, Mandarin permits clitic climbing to the clause-initial WH-word. All dialects permit aspectual clitics like *boi* ‘again’ to follow clause-initial WH-words while modifying the matrix predicate (35a). The northern dialects, moreover, permit subject agreement to do the same (35b).

(35) *Wh1/F1 can host clitics linked to the main predicate* *Mandar*

- | | |
|---|--|
| <p>a. Innai=boi maq-ellong?
 who=AGAIN AV-sing
 ‘Who’s singing again?’
 <i>All Mandar Dialects</i></p> | <p>b. Apa=o na-bengan?
 what=2 3.PV-give
 ‘What did he give you?’
 <i>Tapalang Mandar</i></p> |
|---|--|

This clitic climbing pattern suggests that Mandarin WH1 structures are monoclausal. Second-position elements generally cannot climb high into the c domain and cannot cross overt clausal boundaries. In the Philippine languages which form WH1 questions via pseudocleft, this restriction yields a ban on clitic-climbing to clause-initial WH-words. In Mandarin, however, no such ban arises.

The two patterns reviewed here suggest that WH1/F1 structures are monoclausal in Mandarin. This conclusion goes directly against the pseudocleft analysis of Mandarin WH-questions laid out above.

3.5 PIED-PIPING: AGAINST PSEUDOCLEFTS

Pied-piping facts offer a final argument for direct WH-movement. Mandarin has a class of path prepositions which encode the direction of motion along which an action occurs (36). These elements head phrases which follow the verb and precede their complements, which often surface with the oblique marker *di=*.

- (36) *Path Prepositions* Mandar
- a. Tileller=i **naung** di=bao letteq-na.
 droop=3 down OBL=top foot-3
 ‘[His beard] droops down to his feet.’ (43: C147)
- b. Meq-ita=aq **daiq** di=bulang- kara-karambo=pa=i!
 AV-look=1 up OBL-moon RED-far=IPFV=3
 ‘I look up at the moon -how far it is!’ (34: A5)

These elements are prepositions. Unlike motion verbs, they surface without voice morphology. Like other functional elements, they cannot reduplicate (37). Like prepositions, they introduce arguments: psych predicates require that goals surface with the path *lao* ‘toward’ (38a), and this context forces suppletive forms of pronominal objects (38b).

- (37) *Path Prepositions, Functional Categories cannot Reduplicate* Mandar
- a. Lambiq (***lao**)-lao aheraq. b. (i) *Iti-iting (RED-that); D
 reach RED-to afterlife (ii) *Mua-muaq (RED-if); C
 ‘Until (we) reach death.’ (iii) Bala-balao: RED-rat; N
 (34: D20) (iv) Loa-loa: RED-say; V

- (38) *Paths Introduce Objects; trigger Suppletion* Mandar
- a. Wah, mongeq=sannal=i ***lao** di=kottaq-na.
 PRT sick=really=3 to OBL=girlfriend-3
 ‘Man, he really loves his girlfriend.’
- b. Pallaq=tongang=o **mai** / (***lao** di=yau)!
 heartless=truly=2 to.me (to OBL=me)
 ‘You’re so uncaring toward me!’

The pseudocleft analysis makes the prediction in (40) about path questions. Pseudoclefts generally resist pied-piping of prepositions cross-linguistically: the pivot cannot pied-pipe prepositions in English (25) or Cebuano (39).

- (39) *No Pied-Piping in Pseudoclefts* Cebuano
- *Para sa imo ang gi-buhat nako ang adobo.
 for DAT you REL PV-make 1.GEN ABS adobo
 LIT: ‘For you is who I made the adobo.’
- (40) *Fourth Prediction of the Pseudocleft Analysis*
 Paths should be unable to pied-pipe in complement questions.

WH1 questions do not conform entirely to this prediction. Mandar permits two patterns when the complement of a path is questioned: the path either strands

in-situ (41a) or surfaces in a derived position above the verb (41b).⁷

(41) *Path Questions permit Pied-Piping* *Mandar*

- | | |
|---|--|
| <p>a. Inna mu-ola tama?
 where 2.PV-go into
 ‘Where did you go in?’</p> | <p>b. Apa tama mu-peqitai?
 what into 2.PV-look
 ‘What are you looking into?’</p> |
|---|--|

I argue that the latter pattern involves pied-piping of the path under movement of its complement. Two patterns suggest this conclusion. First, paths cannot follow their complements (42a) or occur preverbally (42b) without extraction.

(42) *No Independent Path Inversion, Fronting* *Mandar*

- | | |
|---|---|
| <p>a. *Di-bawa=i di=buttu daiq.
 PASS-bring=3 OBL=hill up
 INT: ‘We took her up the hill.’</p> | <p>b. *Lao=i mongeq di=kindoq.
 to=3 sick OBL=mom
 INT: ‘He loves mom.’</p> |
|---|---|

Second, paths surface only in the preverbal position only when it is their complements which extract. As such, the path associated with a goal cannot surface preverbally when the theme surfaces clause-initially (43).

(43) *Path Prepositions front only when Complements move* *Mandar*

- | |
|--|
| <p>a. *Apa naung mu-toloq <i>t_{naung}</i> di=kaca?
 what down.to 2.PV-pour OBL=glass
 INT: ‘What did you pour into the glass?’</p> |
|--|

The displaced path occupies a position through which its complement has moved. The stranded paths strictly follow both temporal and aspectual adverbs which occur immediately before the verb (44).⁸ This pattern suggests that they occupy a position at the left edge of the verbal domain. A’-extraction requires that moved nominals pass through such a position on standard assumptions about cyclicity (11). As a result, I assume that displaced paths are spelled out in *SPEC,voicep*.⁹

⁷ Path questions require the complement of the path to surface without the oblique marker *di=*. I assume this constraint has a non-syntactic origin: paths can generally take bare nominal complements without extraction (e.g. *lao* ‘to’ in (37a)), and the proclitic *di=* cannot be stranded. In addition, there is no context, to my knowledge, where the strings *di=inna* ‘in where’ and *di=apa* ‘on what’ occur.

⁸ The examples in (44) illustrates the only possible order of path and middle-field element in the pied-piping construction. Path elements can surface above aspectual and temporal adverbs when used as independent motion verbs; in these constructions, the path reading is unavailable.

⁹ Mandar does not allow the path to surface overtly before the clause-initial *wh*-word. This pattern follows from a broader prosodic constraint active elsewhere in the language: interrogative *wh*-words must stand at the left edge of an intonational unit corresponding to the clause whenever possible. See Brodkin (in production) for further discussion.

- a. Apa **tulu daiq** na-peqitai?
 what always up.to 3.PV-look.at
 ‘What is he always looking up at?’
- b. Apa **biasa naung** na-toloqi?
 what usually down.to 3.PV-pour.in
 ‘What does he usually pour it into?’

This pattern poses a final challenge to the pseudocleft analysis above. Mandarin allows paths to be spelled out in intermediate positions when their associates surface clause-initially. This construction involves partial pied-piping plus spell-out of the path at the lower phase edge.¹⁰ Pseudoclefts, however, show a cross-linguistic tendency to resist this operation: English and Austronesian languages like Cebuano completely ban the pied-piping configurations in (39). As a result, this pattern offers further evidence for the key conclusion advanced here: Mandarin WH1/F1 structures are not pseudoclefts.

4 CONCLUSION

This paper has put forward two claims about clause structure in Mandarin. First, this language derives its basic v1 order through an operation of VP-fronting. The VP forms a surface constituent for the purposes of coordination and ‘pseudo-incorporation’ and shows freezing effects which suggest that it has moved. The linear ordering of the verb with middle-field adverbs suggests that VP-fronting targets a projection within the lower phase, *pace* previous analyses which link predicate-fronting in Austronesian to a parameterized EPP feature on T.

Second, Mandarin permits argument WH-words and foci to undergo direct movement to the left periphery. Despite surface appearances, this conclusion is not trivial. While Mandarin shows no overt copula or relativizer in WH1/F1 structures, it allows WH-words and foci to host ‘predicate-only particles’- a pattern taken as key evidence for a biclausal analysis of WH1-questions elsewhere in Austronesian. Nevertheless, four patterns suggest that WH1/F1 structures are not pseudoclefts in this language. First, WH1/F1 structures ban overt relativizers, while null relativizers cannot occur in the configuration which the pseudocleft analysis assumes in these contexts. Second, WH1/F1 structures do not show the agreement pattern which obtains in typical copular clauses- and show an idiosyncratic ban on expletive agreement clitics which suggests that they may not be predicates themselves. Third, WH1/F1 structures permit imperative morphol-

¹⁰ This pattern may involve either subextraction of the WH-word from the PATHP or PATHP movement plus scattered deletion. The first account does not violate constraints on movement operations of insufficient length (e.g. COMP-TO-SPEC Antilocality; 2): only the prepositions high in the extended projection of P can strand (e.g. PATH, but not AXIAL.PART; 44).

ogy on the non-initial verb and clitic climbing from the predicate: both patterns which suggest a monoclausal analysis of these constructions. Fourth, WH1/F1 structures permit the pied-piping of path prepositions despite the ban on pied-piping in pseudocleft structures cross-linguistically. Together, these patterns suggest that Mandar may break from the Austronesian prototype in (1): this language may form WH1/F1 structures through direct displacement of WH-words.

These two points place Mandar in a typological cell which does not exist on parametric accounts of the VP-fronting-pseudocleft link. Since the 1990s, the view has been entertained that predicate fronting arises due to a parameterization of EPP features on T. On this view, particular assumptions about the C-T relationship lead to theoretical positions like (2)-(3) which formalize the generalization in (1) into a principle of UG. While this approach finds success across much of Austronesia, the Mandar facts show that it is too strong: this language derives its word order by VP-fronting but nevertheless may permit direct movement of WH-words into the left periphery.

This conclusion fits neatly into the model of variation espoused by MP at large. On this view, correlations like (1) cannot be directly encoded into UG; within a family, patterns of this sort are more likely to reflect historical accident than deep structural truth. The facts above suggest that the VP-fronting-pseudocleft link exists along these lines: while many languages have VP-fronting and lack WH-movement, the Mandar data show that the two options can coexist.

REFERENCES

- [1]
- [2] Klaus Abels. *Successive cyclicity, anti-locality, and adposition stranding*. PhD thesis, University of Connecticut, 2003.
- [3] Adrian Akmajian. On deriving cleft sentences from pseudo-cleft sentences. *Linguistic Inquiry*, 1(2):149–168, 1970.
- [4] Edith Aldridge. Nominalization and wh-movement in Seediq and Tagalog. *Language and Linguistics*, 3(2):393–426, 2002.
- [5] Mark C Baker. *The atoms of language: The mind's hidden rules of grammar*. Basic books, 2001.
- [6] Hasan Basri. *Phonological and syntactic reflections of the morphological structure of Selayarese*. PhD thesis, SUNY Stony Brook, 1999.
- [7] Robert C Berwick and Noam Chomsky. *Why only us: Language and evolution*. MIT press, 2016.
- [8] Loren Billings and Daniel Kaufman. Towards a typology of Austronesian pronominal clisis. *ZAS Papers in linguistics*, 34:15–29, 2004.
- [9] Philip J Campbell. *Some aspects of Pitu Ulunna Salu grammar: a typological approach*. PhD thesis, UMI Ann Arbor, 1989.
- [10] Noam Chomsky. Principles and parameters in syntactic theory. *Explanation in linguistics*, pages 32–75, 1981.
- [11] Noam Chomsky. *Knowledge of language: Its nature, origin, and use*. Greenwood Publishing Group, 1986.
- [12] Noam Chomsky. *The minimalist program*. MIT press, 1995.

- [13] Noam Chomsky. Derivation by phase. In Michael Kenstowicz, editor, *Ken Hale: A Life in Language*, pages 1–52. Cambridge, MA: MIT Press, 2001.
- [14] Noam Chomsky, Ángel J Gallego, and Dennis Ott. Generative grammar and the faculty of language: Insights, questions, and challenges. *Catalan Journal of Linguistics*, pages 229–261, 2019.
- [15] Sandra Chung. Properties of VOS languages. *The Blackwell companion to syntax*, pages 685–720, 2006.
- [16] Guglielmo Cinque. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press on Demand, 1999.
- [17] Lauren Clemens and Jessica Coon. Deriving verb-initial word order in Mayan. *Language*, 94(2):237–280, 2018.
- [18] Peter Cole and Gabriella Hermon. VP raising in a VOS language. *Syntax*, 11(2):144–197, 2008.
- [19] James N Collins. Samoan predicate initial word order and object positions. *Natural Language & Linguistic Theory*, 35(1):1–59, 2017.
- [20] Otto Christian Dahl. Focus in Malagasy and proto-Austronesian. In *Focal I: Papers from the fourth international conference on Austronesian linguistics*, pages 21–42. Pacific Linguistics series C-93. Canberra: Australian National University, 1986.
- [21] Barbara Friberg. Ergativity, focus and verb morphology in several south sulawesi languages. *Vical*, 2:103–130, 1991.
- [22] Barbara Friberg and Jerniati. Mandar conversations.
- [23] Charles E Grimes and Barbara D Grimes. *Languages of South Sulawesi*. Dept. of Linguistics, Research School of Pacific Studies, The Australian National University, 1987.
- [24] Boris Harizanov and Vera Griбанова. Whither head movement? *Natural Language & Linguistic Theory*, 37(2):461–522, 2019.
- [25] Lorie A Heggie. The syntax of copular structures. 1988.
- [26] Arthur Holmer. Seediq-adverbial heads in a formosan language. *Clause structure and adjuncts in Austronesian languages*, pages 83–123, 2006.
- [27] Anthony Jukes. *Makassarese (basa Mangkasara’) A description of an Austronesian language of South Sulawesi*. PhD thesis, The University of Melbourne, 2006.
- [28] Mashudi BH Kader. *The syntax of Malay interrogatives*. PhD thesis, Simon Fraser University, 1976.
- [29] Daniel Kaufman. South Sulawesi pronominal clitics: Form, function and position. *Studies in Philippine languages and cultures*, 17:13–65, 2008.
- [30] Daniel Kaufman. Austronesian predication and the emergence of biclausal clefts in Indonesian languages. *Studies in Diversity Linguistics*, (21), 2018.
- [31] Richard S. Kayne. *The antisymmetry of syntax*, volume 25. MIT press, 1994.
- [32] Edward L Keenan. The syntax of subject-final languages. *Syntactic typology*, pages 267–327, 1978.
- [33] Diane Massam. Pseudo noun incorporation in Niuean. *Natural Language & Linguistic Theory*, 19(1):153–197, 2001.
- [34] Abdul Muthalib and M Zain Sangi. *Puisi Kalindaqdaq Mandar*. Departemen Pendidikan dan Kebudayaan, 1991.
- [35] Kenji Oda. Wh-questions in v-initial languages. *MA paper*. University of Toronto, 2002.
- [36] Kenji Oda. V1 and wh questions. *Verb First: On the Syntax of Verb-Initial Languages*, ed. by Andrew Carnie, Heidi Harley and Sheila Dooley, pages 107–133, 2005.

- [37] Matthew Pearson. Predicate raising and 'VOS' order in Malagasy. *The structure of Malagasy*, 2:94–110, 1998.
- [38] RA Pelenkahu, Abdul Muthalib, and M Zain Sangi. *Struktur Bahasa Mandar*. Pusat Pembinaan dan Pengembangan Bahasa, Departemen Pendidikan dan Kebudayaan, 1983.
- [39] Eric Potsdam. Austronesian verb-initial languages and wh-question strategies. *Natural Language & Linguistic Theory*, 27(4):737, 2009.
- [40] Eric Potsdam and Maria Polisky. Information questions in malagasy dialects. *Western Papers in Linguistics*, 1(1), 2015.
- [41] Andrea Rackowski. Malagasy adverbs. *The structure of Malagasy*, 2:11–33, 1998.
- [42] Andrea Rackowski. *The structure of Tagalog: Specificity, voice, and the distribution of arguments*. PhD thesis, Massachusetts Institute of Technology, 2002.
- [43] Muhammad Sikki. *Kata tugas bahasa Mandar*. Pusat Pembinaan dan Pengembangan Bahasa, Departemen Pendidikan dan Kebudayaan, 1987.
- [44] Peter Svenonius. Spatial P in English. University of Tromsø ms, 2004.
- [45] Lisa Travis. Vp, d0 movement languages. In Raffaella Zanuttini, editor, *Crosslinguistic Research in Syntax and Semantics: Negation, Tense, and Clausal Architecture*, chapter 5, pages 127–150. Georgetown University Press, Washington, D.C, 2006.
- [46] Susanne Valkama. Notes on duri transitivity. *Studies in Sulawesi Linguistics part IV: NUSA*, 37:2–45, 1995.
- [47] Katie Maya Van Luven. *Pseudoclefts*. PhD thesis, Carleton University, 2018.
- [48] Kenneth Wexler and Peter W Culicover. *Formal principles of language acquisition*. MIT Press (MA), 1980.