Wh Path Phenomena, p. 1

In the following examples, clause boundaries, where relevant, are marked with brackets. *Wh* Domain boundaries (not necessarily a constituent) are marked with double brackets.

As Discussed by Zaenen (1983)

French

Classification: Indo-European, Italic, Romance, Italo-Western, Western, Gallo-Iberian, Gallo-Romance, Gallo-Rhaetian, Oïl, French. 64,858,311 speakers
Kayne, Richard, and Jean-Yves Pollock (1978) "Stylistic Inversion, Successive Cyclicity, and Move NP in French." *Linguistic Inquiry* 9: 595–621.

French is an SVO language. On a *wh* path, the verb and subject are optionally inverted.

Nonembedded interrogatives (K&P's (1)):
(1)   a.   ⟦ Quand partira   ton ami ⟧ ?
                   when   will.leave your friend
                'When will your friend leave?'
        b.   ⟦ Avec qui jouaient   tes enfants ⟧ ?
                   with who play.IMPF your children
                'With whom were your children playing?'
        c.   ⟦ Où   espéraient diner tes amis ⟧ ?
                   where hope.IMPF to.dine your friends
                'Where did your friends hope to dine?'

Embedded interrogatives (K&P's (2)):
(2)   a.   Je me demande ⟦ quand partira   ton   ami ⟧.
                I wonder   when   will.leave your friend
                'I wonder when your friend will leave.'
        b.   Elle sait   très bien ⟦ à quelle heure partira   ce garçon ⟧.
                she knows very well   at what   time   will.leave this boy
                'She knows very well at what time this boy will leave.'
        c.   A-t-il dit ⟦ avec qui jouaient   tes enfants⟧ ?
                has.he said   with who play.IMPF your children
                'Did he say who your children were playing with?'

Relative clauses (K&P's (3))
(3)   a.   La maison ⟦ où   habite cet homme ⟧ est très jolie.
                the house   where lives   this man   is very pretty
                'The house where this man lives is very pretty.'
        b.   Le problème ⟦ auquel   réfléchit le savant ⟧ est trivial.
                the problem   to.which thinks   the scholar is trivial
                'The problem the scholar is thinking about is trivial.'

NOT Yes-no questions (K&P's (4))
(4)   a.   *Partira   ton ami ?
                 will.leave your friend
                'Will your friend leave?'

Wh Path Phenomena, p. 2

b. *Est sortie Marie ?
is left Marie
'Has Marie left?'

NOT *wh*-in-situ (K&P's (6a,7a)):

(5) a. Ton ami partira quand ?
'your friend will.leave when'
b. *Partira ton ami quand?
c. *Partira quand ton ami?
'When will your friend leave?'

Not in the same clause as the *wh*, but in the path (K&P (13a,14b))

(6) a. ⟦ Qui a-t-elle dit [qu' avait vu Paul] ⟧ ?
who has.she said that had seen Paul
'Who did she say that Paul had seen?'
b. L' homme ⟦ qu' elle a dit [qu' avait vu Paul] ⟧ s'appelle Georges.
the man that she has said that had seen Paul is.named Georges
'The man that she said that Paul has seen is named Georges.'

NOT if not in the path (K&P (15a, 16a))

(7) a. ⟦ Qui a dit ⟧ que Paul pleure ?
who has said that Paul cries
b. *⟦ Qui a dit ⟧ que pleure Paul?
'Who said that Paul is crying?'

Note the difference in interpretation between (K&P (17, 18)):

(8) a. ⟦ Où/Quand Marie a-t-elle déclaré ⟧? que Paul était mort ⟧? ?
where/when Marie had.she declared that Paul was dead
'Where/when did Marie declare that Paul had died?' (ambiguous as in English: either
'where/when did she declare' or 'where/when had he died')
b. ⟦ Où/Quand Marie a-t-elle déclaré qu' était mort Paul ⟧ ?
where/when Marie had.she declared that was dead Paul
'Where/when did Marie declare that Paul had died?' (unambiguous: can only mean
'where/when had he died')

The data are less clear about intermediate clauses, but stylistic inversion appears to be possible in them.

Kikuyu

Kikuyu is a tone language. In the transcriptions here, [´] is high tone, [`] is extra low tone, [ˇ] is rising tone, [ˆ] is falling tone, and low tone is unmarked. Diphthongs only get one tone.

Wh Path Phenomena, p. 3

The important part of the tonal system is an unpronounced low tone, called "downstep" and represented as [ˈ]. A downstep lowers the base pitch which the tones are based on. Some words have downsteps lexically. What we're concerned with is the downstep which is suffixed to the verb. According to Clements et al. (1983: 7): "The downstep element normally appears at the end of the first major constituent following the verb. However, if this constituent ends with a high tone, the downstep is displaced to the right of any following sequence of (underlying) low-toned syllables, which themselves acquire high tone." Sentence-final high tones are lowered, but if a downstep follows the high tone it is not really sentence final and does not lower. So, in the following example (Zaenen (11)), there is a downstep suffix on the verb *ɛːrirɛ*. The first major constituent following the verb is /Kaːnákɛ́/ (a proper name), which ends with a high tone. For this reason, the downstep moves to the right. The next word is /ate/ 'that', which consists entirely of low tones. The word after that is /Kariokǐ/ with low tones on the first two syllables; the four low tones change to high tones and the downstep follows them. In the subordinate clause, the downstep on 'cut' moves to the end of the sentence, blocking the lowering of the final high tone.

(9)   Kamaú έːˈríɾέ   Kaːnákɛ́ áté Káriókˈí átέmíɾέ   mótĕˈ.
      Kamau SUBJ.tell.PST Kanake that Kariũki SUBJ.cut.PST tree
      'Kamau told Kanake that Kariũke cut the tree.'

However, on a *wh* path, this downstep is absent (Zaenen (13,14)). (The high tone on the first syllable of 'that' in a. is due to an independent rule, and the falling tone on the last word in b. is a result of question intonation, but note that the high tone has not disappeared, unlike in a.)

(10) a.   ⟦ Nóo   Kámaú έːˈríɾέ   Kaːnákɛ́ áte otɛmíɾέ   mote⟧ ?
           FOC.WH Kamau SUBJ.tell.PST Kanake that RELSUBJ.cut.PST tree
           'Who did Kamau tell Kanake that cut the tree?'
      b.   ⟦ Nóo   Kámaú έːˈríɾέ ⟧   ate Karioki átˈέmíɾέ   motê' ?
           FOC.WH Kamau SUBJ.tell.PST that Kariũki SUBJ.cut.PST tree
           'Who did Kamau tell that Kariũki cut the tree?'

Others
Irish complementizer selection
Icelandic: omission of dummy *það*

LFG Analysis

Zaenen's analysis is based on the old "constituent-control" formalism (using the metavariables ⇑ and ⇓), but it can be translated into more modern terms.

The basic idea is that there is a special feature along the path of a *wh* construction, which Zaenen calls BND and Dalrymple (2001) calls LDD. (Does anyone think [SLASH] is a good name?) We will call it [WHPATH].

Wh Path Phenomena, p. 4

The presence of the WHPATH feature can be enforced along the path much more straightforwardly than in Zaenen's account, due to the inherent locality of the licensing. At each step along the path, the containing f-structure needs to be checked for the presence of the feature [WHPATH +]. As Dalrymple discusses, this is done by means of an "off-path" constraint.

Given the WHPATH feature, it is very easy to model the idea that there are forms which either must or must not appear in a *wh* path. For example, Kikuyu verb forms with downstep will have the lexical specification (11a) (or perhaps (11b)) and those without will have the specification (11c).

(11)   a. $\neg\,(\uparrow\text{ WHPATH})$
        b. $(\uparrow\text{ WHPATH}) = -$
        c. $(\uparrow\text{ WHPATH}) = +$

As we will see below, some of the details need to be refined. For example, there is evidence that the WHPATH feature is more than a simple ± feature. In addition, Zaenen's observation that path phenomena always involve either the verb or the complementizer (her Generalization B) is incorrect, as we will see in the Ewe example below. This means that Zaenen's conjecture that WHPATH is an inflectional feature is incorrect. Finally, and more controversially, Generalization C, that functional properties of the *wh* element are irrelevant, also may be false. However, these are minor changes: the overall structure of the analysis that Zaenen originally proposed appears to be sound.

Other Cases

Spanish

Classification: Indo-European, Italic, Romance, Italo-Western, Western, Gallo-Iberian, Ibero-Romance, West Iberian, Castilian. 322,299,171 speakers.
Esther Torrego (1984) "On Inversion in Spanish and Some of Its Effects." *Linguistic Inquiry* 15: 103–129.

Obligatory inversion of subject and verb on the *wh* path. There is no obligatory inversion in yes-no questions or *wh*-in-situ. (Note: Spanish also has optional inversion, so it is always possible for the verb to precede the subject. The question is whether it is necessary.)

(12) a.   (i)   ⟦ ¿ Qué querían esos dos? ⟧
                   what wanted those two
                  'What did those two want?'
        (ii)   *⟦¿Qué esos dos querían? ⟧
     b.   (i)   ⟦¿ Con quién vendrá   Juan hoy? ⟧
                   with who will.come Juan today
                  'Who will Juan come with today?'
        (ii)   *⟦¿Con quien Juan vendrá hoy? ⟧
     c.   (i)   No sabía ⟦ qué querían esos   dos ⟧.
                   not I.knew   what wanted those two
                  'I didn't know what those two wanted.'
        (ii)   *No sabía ⟦ qué esos dos querían⟧.

Wh Path Phenomena, p. 5

d.   (i)   ⟦ Un viaje a las Canarias   hizo Antonio este verano.⟧
                a   trip to the Canary.Islands made Antonio this summer
              A trip to the Canary Islands, Antonio made last summer.

        (ii)   *⟦Un viaje a las Canarias Antonio hizo este verano. ⟧

(13) a.   ¿ Marta quiere café?
            Marta wants coffee
          'Does Marta want coffee?'

      b.   ¿ Marta quiere qué?
            Marta wants what
          'Marta wants what?'

The inversion is obligatory in every clause along the path.

(14) a.   Juan pensaba que Pedro le   había dicho que la revista había
           Juan thought that Pedro him.DAT had   said that the journal had
           publicado ya   el   artículo.
           published already the article
          'Juan thought that Pedro had told him that the journal had published the article already.'

      b.   ⟦¿ Qué pensaba Juan que le   había dicho Pedro que había publicado
             what thought Juan that him.DAT had   said Pedro that had   published
           la   revista ?⟧
           the journal
          'What did Juan think that Pedro had told him that the journal had published?'

      c.   *⟦¿Qué pensaba Juan que Pedro le había dicho que la revista ha publicado?⟧

However, the inversion is **not** obligatory in the lowest clause of the *wh* path.

(15) a.   ⟦ ¿ En que   vía   dijo Juan [que anunció   el altavoz   [que el   tren
               in   what track said Juan that announced the loudspeaker that the train
           se estacionaría?]]⟧
           would.station
          'What track did Juan say that the loudspeaker announced that the train would arrive at?'

      b.   ⟦ ¿ Con quién creías   tú [que quería Juan [que María hablara ?]]⟧
             with who thought that you that wanted Juan that María speak.PST.SBJCT
          'Who did you think that Juan wanted María to speak with?'

      c.   ⟦ Un viaje a las Canarias   dice Juan [que quiere la gente [que
             a   trip to the Canary.Islands says Juan that want the people that
           Antonio haga   este verano]]⟧
           Antonio make.SBJCT this   summer
          'A trip to the Canary Islands, Juan says that people want Antonio to take this summer.'

An additional apparent complication is that inversion is not required if the *wh* element is an adjunct:

Wh Path Phenomena, p. 6

(16)   a.   ⟦¿ En qué medida la   constitución ha contribuido a eso?⟧
                    in what way   the Constitution has contributed to that
                'In what way has the Constitution contributed to that?'
       b.   ⟦¿ Por qué Juan quiere salir   antes que los demás? ⟧
                    why   Juan wants to.leave before that the others
                'Why does Juan want to leave before the others?'
       c.   ⟦¿ Cuándo Juan consiguió por fin⟧ abrir   la   puerta ayer?
                    when   Juan managed finally to.open   the door   yesterday
                'When did Juan finally get to open the door yesterday?'
       d.   ⟦¿ Cómo Juan ha   conseguido⟧ meter allí   a   su hijo?
                    how   Juan has managed   to.put there ACC his son
                How has Juan managed to get his son in there?

This might be taken as evidence that the path-phenomenon mechanism is sensitive to the local grammatical function of the *wh* element. However, it is possible that these are not really "*wh*-~~movement~~" constructions, and that the initial position is just a possible adjunct position.

Ewe

Classification: Niger-Congo, Atlantic-Congo, Volta-Congo, Kwa, Left Bank, Gbe. 3,112,400 speakers, mostly in Ghana, some in Togo.
Chris Collins (1994) "Economy of Derivation and the Generalized Proper Binding Condition." *Linguistic Inquiry* 25: 45–61.

The morphological form of the third person subject pronoun depends on whether the clause is on a *wh* path or not.

(Notice, that what is affected is the SUBJ, not the verb or the complementizer.)

If it is not on a *wh* path, it is *é*.

(17)   a.   É/*Wo ɟo Kɔsi.
                he   hit Kɔsi
                'He hit Kɔsi.'
       b.   Kofi gblɔ be   é/*wo ɟo Kɔsi.
                Kofi said that he   hit Kɔsi.
                'Kofi said that he hit Kɔsi.'

If it is the top clause of a *wh* path, it is *wo*.

(18)   Kofi biɛ   ⟦be   lamata *é/wo ɟo Kɔsi.⟧
        Kofi asked that why   he   hit Kɔsi
        'Kofi asked why he hit Kɔsi.'

If it is an embedded clause in the *wh* path, either form is grammatical.

Wh Path Phenomena, p. 7

(19) ⟦ Kofi ɛ   me gblɔ [be   é/wo ʄo]⟧.
       Kofi FOC I   said   that he   hit
       'It was Kofi that I said that he hit.'

Of course, below the *wh* path, only *é* is grammatical.

(20) ⟦ Kofi ɛ   me gblɔ na⟧ be   é/*wo ʄo Kɔsi.
       Kofi FOC I   said   to   that he   hit Kɔsi
       'It was Kofi that I told that he hit Kɔsi.'

Duala

(Transcriptions omit tone and some vowel distinctions.)

In fronting constructions, the particle *no* (glossed here as LDD) is inserted after the first verbal element in the clause. This includes topicalization, relativization, and *wh* questions when the *wh* is fronted. (Duala allows *wh*-in-situ as well.)

(21) a.   ⟦ Nu moto nde Kuo a bodi no   kalati kiele.⟧
               that man FOC Kuo he give LDD book   yesterday
               'It's that man Kuo gave a book to yesterday.'
       b.   Muto   ⟦na tondi no⟧ a   si   tondi mba.
               woman I   love LDD she not love me
               'The woman I love doesn't love me.'
       c.   (i)   Kuo a po   njika ponda
                        Kuo he come WH time
                        'At what time will Kuo arrive?'
               (ii)   ⟦ Njika ponda Kuo a po   no?⟧
                        WH time   Kuo he come LDD
                        'At what time will Kuo arrive?'
       d.   Na si bi   ⟦nga wenge nde Kuo a ben no   kekise. ⟧
               I   not know if   today FOC Kuo he have LDD exam
               'I don't know if it's today that Kuo has an exam.'
       e.   Baise Kuo ⟦nje a pula no⟧.
               ask   Kuo what he want LDD
               'Ask Kuo what he wants.'

Unlike the other cases we have looked at, in Duala the marking only appears in the top clause of a *wh* construction. Other clauses do not have the *no* marking.

Wh Path Phenomena, p. 8

(22) a.   ⟦ Ni kalati nde na ta   no   na kwalane Kuo [na a- angamene wana].⟧
             that book FOC I PST LDD I tell   Kuo that he- must   bring
             'That's the book I told Kuo he should bring.'

      b.   ⟦ Njika ponda o   mende no   pula [na Kuo a keke wanea wa mo]?⟧
             WH time   you FUT   LDD want that Kuo he try   bring you it
             'When will you want Kuo to try to bring it to you?'

      c.   Buńa ⟦na si ta   no   n- oŋgele [na Kuo a po]⟧,   a poi.
             day   I   not PST LDD I- think   that Kuo he come   he come
             'The day I was not expecting Kuo to arrive, he did arrive.'

      d.   ⟦ Kuo nde o   kwadi no   [na a po   weŋge]? ⟧
             Kuo FOC you say   LDD   that he come today
             'Is it Kuo you said would arrive today?'

If the appearance of path phenomena on every clause along the path is evidence for the standard transformational analysis, the restriction to the main clause in Duala is evidence against it. On that note, consider the title of the article from which these data were taken.

(Note: When the "fronted" element is the subject of the main clause, there is no marking. However, since Duala is an SVO language, it could be analyzed as not being fronted. So this is probably not a legitimate case of sensitivity to the grammatical function of the *wh* element.)

Revised LFG Analysis

In the transformational literature, *wh* path phenomena are often taken to be evidence for a clause-by-clause approach to *wh* movement (i.e. a theory involving subjacency). Any such approach, however, predicts that all clauses are created equal. The cases we have just looked at show that this is not the case.

Zaenen's analysis also assumes that all clauses are created equal, but it is easily adapted to the more complex cases where not all the clauses bear the same kind of marking. The key is to conceive of the WHPATH feature slightly differently: as marking parts of the *wh* construction. We hypothesize that the value of the WHPATH feature consists of two binary features: [±TOP] and [±BOTTOM]. This yields four possible values for the WHPATH feature:

[+T, −B]: the top of a construction in which the multifunctionality spans more than one clause.
[−T, +B]: the bottom of a construction in which the multifunctionality spans more than one clause.
[−T, −B]: the middle of a construction in which the multifunctionality spans more than two clauses.
[+T, +B]: a clause containing a one-clause *wh* construction

Wh Path Phenomena, p. 9

In Spanish, the uninverted construction (SV order) cannot be used for a top or middle of a *wh* construction. (Since inversion is always possible, the inverted structure (VS order) has no restriction.) This restriction can be expressed as:

(23)   ($\uparrow$ WHPATH) $\neq$ [−B]

In Ewe, the pronoun *é* can be used anywhere except in the top clause of a *wh* construction, and the pronoun *wo* can be used anywhere along a *wh* path but not outside of a *wh* path.

(24)   a.   *é*   ($\uparrow$ WHPATH) $\neq$ [+T]
      b.   *wo*   ($\uparrow$ WHPATH)

In Duala, the particle *no* is used only in the top clause of a *wh* construction.

(25)   *no*   ($\uparrow$ WHPATH) = [+T]

In addition, Spanish and Duala appear to show evidence that the GF of the *wh* matters, but this is not entirely certain. In both cases, other analyses are available. The real evidence comes from Chamorro and Palauan, to which we now turn.

Maybe?

Chamorro
Classification: Austronesian, Malayo-Polynesian, Chamorro. 76,705 speakers. National language of Guam and the Northern Mariana Islands.
Sandra Chung, and Carol Georgopolous (1988) "Agreement with Gaps in Chamorro and Palauan." in Michael Barlow and Charles A. Ferguson, ed., *Agreement in Natural Language: Approaches, Theories, Descriptions*. 251–267. and other papers by Chung.

As usually described, verbal inflection is affected by being on a *wh* path, in a construction sometimes called *wh* agreement. In non-*wh* sentences, there is a marker on the verb which encodes agreement with the subject as well as mood (realis or irrealis) and transitivity. (Note: UNM in the glosses is unmarked Case, i.e. not oblique.)

(26)   a.   Ha-   fa'gasi si   Henry i   kareta ni   häpbun.
                3SG.REAL.TRANS- wash   UNM Henry the car OBL   soap
                'Henry washed the car with soap.'
      b.   Pära u-   fa'gasi si   Henry i   kareta ni   häpbun.
                FUT 3SG.IRR- wash   UNM Henry the car   OBL soap
                'Henry will wash the car with soap.'

Wh Path Phenomena, p. 10

But, if the clause is on a *wh* path and the next step down the path is SUBJ (i.e. either the *wh* is the SUBJ of the clause or it is an element embedded in the SUBJ of the clause) and the normal agreement would be realis transitive, the agreement prefix is replaced by the infix *um*.

(27) a. ⟦ Hayi f- um-   a'gasi i   kareta ⟧?
          who   WH.SUBJ- wash   the car
          'Who washed the car?'
     b. ⟦ Hafa um-   istotba hao [ni   malago'- ña   i   lahi- mu]⟧ ?
          what WH.SUBJ- disturb you that want-   3SG(WH.OBL) the son- your
          'What does it disturb you that your son wants?'

If the next step down on the path is OBJ, OBJ$_\theta$, OBL$_{Instr}$, or some oblique argument of an intransitive verb, there is a different change. The verb is nominalized, which means that it takes nominal agreement suffixes instead of the usual verbal prefixes. If the next step is an oblique function, this is all there is to it. If the next step is an object function the nominalization is optional, but if the verb is nominalized the infix *in* is added to the verb in addition to the nominal agreement suffix.

Object examples:
(28) a. ⟦ Hafa f- in-   a'gase- ña si   Henry pära hagu⟧?
          what   WH.OBJ- wash- 3SG UNM Henry for   you
          'What did Henry wash for you?'
     b. ⟦ Hafa s- in-   angane- ña i   chi'lu- mu [malago'- ña]⟧?
          what   WH.OBJ- tell-   3SG the sister- your want-   3SG(WH.OBL)
          'What did your sister tell (you) she wants?'
Oblique examples
(29) a. ⟦ Hafa fa'agase- ña   si   Henry ni   kareta ⟧?
          what wash-   3SG(WH.OBL) UNM Henry OBL car
          'What did Henry wash the car with?'
     b. ⟦ Hafa duda- nñiha   [ni   malago'- ña   si   Miguel]⟧?
          what doubt- 3PL(WH.OBL) that want-   3SG(WH.OBL) UNM Miguel
          'What do they doubt that Miguel wants?'

This is the pattern in questions. In relative clauses, only the bottom one is obligatory.

If this description of the facts is correct, the mechanism that accounts for *wh* path phenomena must be more powerful than we have hypothesized. It needs to be sensitive to the functional identity of the next step down on the *wh* path.

Palauan
Classification: Austronesian, Malayo-Polynesian, Palauan. 14,825 speakers. Official language of Palau.
Sandra Chung, and Carol Georgopolous (1988) "Agreement with Gaps in Chamorro and Palauan." in Michael Barlow and Charles A. Ferguson, ed., *Agreement in Natural Language: Approaches, Theories, Descriptions*. 251–267. and othert papers by Georgopolous.

Similar to Chamorro, but with different details. Only monoclausal examples will be given here.

Wh Path Phenomena, p. 11

Verbal agreement is a prefix. The agreement and other aspects of verbal morphology mark the mood of the verb (realis/irrealis).

(30) a. Ak-   mesa   a kekeriei el box.
          1SG.REAL- see.REAL   small   box
          'I see a small box.'

      b. Ngdiak ku-   sa   a kakerous.
          NEG   1SG.IRR- see.IRR   difference
          'I don't see the difference.'

If the clause is in a *wh* path and the next step in the path is SUBJ, the agreement marker is omitted. If the clause is in a *wh* path and the next step is a non-SUBJ, the verb appears in irrealis form even if the meaning is realis. (A complementizer that requires realis can override this.)

(31) a. a 'ad ⟦el mil'erar   tia el buk ⟧
          man   that bought.REAL(WH.SUBJ) that book
          'the man that bought that book'

      b. a buk ⟦el l-   ul'erar   a 'ad ⟧
          book   that 3.IRR- bought.IRR(WH.NONSUBJ)   man
          'the book that the man bought'

These phenomena also occur in resumptive pronoun constructions, which is very unusual for path phenomena cross-linguistically. And, unlike in Chamorro, they are never optional.

Dissenting View

Michael Dukes (1993) "On the Status of Chamorro Wh-Agreement." *WCCFL* 11: 177–190.

Mark Donohue, and Anna Maclachlan (1999) "What Agreement in Chamorro?." *Austronesian Formal Linguistics Association* 6: 121–132.

The phenomenon of *wh* agreement is problematic for several reasons. Despite its name, it is not agreement of the usual sort, since it "agrees" with the grammatical function of the next step on the *wh* path. As we have seen, it also would require a more complex analysis than we have given to path phenomena.

The literature has discussed the Chamorro case. The curious thing about the "*wh*-agreement" morphology in Chamorro is that it resembles a special kind of morphology known as "voice" morphology found in many closely related languages, such as Tagalog. In these languages, often referred to as Philippine-type languages, "voice" morphology marks one of the elements of the clause as bearing the grammatical function of "pivot" (roughly, subject). The *wh* path can only go through pivots in these languages, so every clause on the path has to have the correct morphology to mark the next element on the path as pivot. In Chamorro, the system has started to break down, so the function of the morphology is somewhat obscured. Donohue and Maclachlan compare Chamorro not only to Tagalog, where the Phillipine-type

system is still fully applicable, but also to Tukang Besi, where it has deteriorated farther than in Chamorro. They show that Chamorro is an intermediate case.

If this alternative line of analysis is correct, Chamorro does not provide evidence that path phenomena need to be sensitive to the next step on the path (and presumably, neither does Palauan).

Tagalog: Austronesian, Malayo-Polynesian, Meso Philippine, Central Philippine, Tagalog 15,900,098 speakers, mostly in the Philippines (Manila, most of Luzon, and Mindoro). Also spoken in Canada, Guam, Saudi Arabia, United Arab Emirates, United Kingdom, USA.

Tukang Besi: Austronesian, Malayo-Polynesian, Sulawesi, Muna-Buton, Tukangbesi-Bonerate. 120,000 speakers in southeast Sulawesi (Indonesia).