A Formal Study of Grammaticalization in Tsou*

Wei-Tien Dylan Tsai
National Tsing Hua University

The issues concerning grammaticalization bear closely upon the interaction between content and functional words and their evolution on the historical front. This paper proposes to examine a number of cases of grammaticalization in Tsou from the vantage point of formal syntax, taking them as instances of moving a lexical category to the locus of a functional category with the effects of semantic bleaching and phonological reduction. Though the level of grammaticalization can vary from one individual item to another, they all conform to the general patterns across languages, that is, structurally higher, semantically more specialized, and phonologically lighter. Our analysis fits well into Roberts & Roussou's (1999) notion of "structural simplification" due to syntactic raising and subsequent reanalyses of lexical material as functional material, driven by the computationally conservative nature of the acquisition process.

Keywords: Grammaticalization, Austronesian Syntax, Generative Syntax Formosan Languages, Tsou

* This paper derives from a project report sponsored by the National Science Council of Taiwan (NSC 93-2411-H-007-003). First and foremost, I would like to express my gratitude to Prof. Paul Li for bring me to the realm of Formosan linguistics, without whose guidance there would be little chance for me to venture into this “promised land”. Melody Chang, as my chief assistant, has also made great contribution to the project both in terms of data collection and analyses. Finally, I want to take this opportunity to thank Barry Yang, Yu-yun Wang, and Chuan-hui Weng for their part in surveying the literature and writing reviews, which is essential in establishing the theoretical backbone of our line of inquiry.
1. Introduction

This paper proposes to deal with various phenomena of grammaticalization from a formal point of view. Grammaticalization is a term generally referring to the process in a language where lexical forms undergo changes into grammatical items (cf. Meillet 1912). The grammatical items may further develop into “more” grammatical elements or even new grammatical functions. A typical case may be of the following type where on the one hand the semantic content of a word/phrase tends to be weakened (Givón 1973, Fleischman 1982) while on the other hand the grammatical function to be more grammatical (Kurylowicz 1976) or “generalized” (Hopper & Traugott 2003), as illustrated below:

content item > grammatical word > clitic > inflectional affix

While the empirical range of grammaticalization is vast and dynamic, in this study we limit our investigation to three clusters of phenomena manifesting the cline of grammaticalization, namely, the development from personal pronouns to agreement markers, that from a conjunction to a complementizer, and that from a manner predicate to a sentential adverbial.

Among the characteristics of grammaticalization in which a functional item becomes even more functional, a well-known type is the development from personal pronoun to agreement marker (see, for example, Ariel 2000, Muhlhusler 2001, among others). Section 3 demonstrates that in Tsou, an Austronesian language, such an phenomenon is even more articulated. That is, a personal pronoun develops into a clitic and then further into an agreement marker. Moreover, it is pointed out in section 4 that, though ho may serve either as a preposition or as a conjunction in Tsou, it has changed into a complementizer in front of a complement clause. Finally, section 5 examines various usages of ci in Tsou, and show how the combination of mainenu ci ‘how come’ undergoes several stages of reduction to produce mainci ‘why’, presumably due to a combination of semantic bleaching, morphological bonding, and phonological attrition.

In Section 6, we entertain Roberts’s (1993) concept of “grammaticalized element”, which corresponds to the notion of “functional category” in Chomskyan syntax. We also adopt the claim advanced by Clark & Roberts (1993), that is, the parameter-setting device (the learner) is computationally conservative. In other words, when children start to learn their mother tongue, they tend to keep the simplest hypothesis about the language. Based upon the above theory, Roberts & Roussou (1999) further the claim that grammaticalization involves the reanalysis of lexical material as functional material. The reason this kind of change is so common is that the reanalysis involves structural simplification, driven by the computationally conservative property in the parameter-
setting device. This will be the central view we hold throughout our investigation of grammaticalization in Tsou.

2. The properties of grammaticalization

As first noted by Lehmann (1985), there are six properties of grammaticalization:

(1) Attrition: This term refers to the gradual loss of semantic and phonological substance. Lexical heads typically have more semantic and phonological content than functional heads, and as such the development of lexical into functional material typically involves the loss of such content.

(2) Condensation: This term describes the development of simpler and more restricted selectional properties of grammaticalized formatives.

(3) Paradigmatisation: This term refers to the integration of lexical material into morphological or quasi-morphological paradigms, e.g., the development of modals as future or mood markers.

(4) Coalescence: This term refers to the fact that grammaticalization often involves turning free morphemes into bound ones.

(5) Obligatorification: This term refers to the fact that grammaticalized material tends to occur obligatorily in a given context, rather than optionally like lexical material.

(6) Fixation: This term refers to the fact that grammaticalized material occupies fixed syntactic or morphological positions (cf. second-position phenomena) and can indeed be purely pleonastic slot-fillers.

On the other hand, a recent proposal by IJbema (2002) distinguishes among seven characteristics of grammaticalization, placing more emphasis on the syntactic and semantic side of phenomena:

(7) Phonological reduction and cliticization:
Grammaticalization can lead to phonological reduction and to cliticization of the grammaticalizing item.

(8) *Semantic bleaching*:  
Grammaticalization involves a meaning change of the grammaticalizing item.

(9) *Persistence*:  
The etymology of a grammaticalizing item constrains its subsequent grammatical functions.

(10) *Paradigmatization*:  
A grammaticalized item can be integrated into a morphological paradigm.

(11) *Gradualness*:  
Grammaticalization is a gradual process.

(12) *Unidirectionality*:  
Grammaticalization is a unidirectional process.

(13) *Context dependency*:  
The construction in which the grammaticalizing item appears contributes to the resulting grammatical meaning of this item.

As for the origin of grammaticalization, there are also four major hypotheses, as listed below:

a. **Kurylowicz (1976)** suggests that Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical and from a less grammatical to a more grammatical status. In other words, grammaticalization is a gradual process. Items become more grammatical through time. As a result, both diachronically and synchronically intermediate stages of grammaticalization may be recognized.

b. **Bybee, Perkins and Pagliuca (1994)** proposes that a lexical morpheme does not grammaticalize by itself. Rather, it is a lexical morpheme which grammaticalizes in a construction.

c. As noted by **Heine & Reh (1984)**, grammaticalization process affects both the form and the meaning of an item. Formally, a grammaticalizing item loses phonological substance and may become an affix that cliticizes to other elements. Semantically, a grammaticalizing item loses (part of) its meaning.
d. Traugott & König (1991) and Hopper & Traugott (1993) argue that grammaticalization involves pragmatic strengthening, not weakening. The original meaning of a grammaticalizing item plays an important role in its further development. That is, the etymology of a grammaticalizing item constrains its subsequent grammatical functions. This property is called persistence. Unidirectionality is generally considered to be a characteristic property of the process of grammaticalization.

3. Grammaticalization of pronominals

First let’s look into the behavior of personal pronouns in Tsou, which can be seen as grammatical items encoded with deictic property. Bresnan (1998) suggests a hierarchy of personal pronouns based on their phonological and morphological substance:

(14) zero > bound > clitic > weak > pronoun

Two parameters, overt/non-overt and reduced/nonreduced, account for the forms of personal pronominals. Zeros are of the non-overt forms while pronouns are of the nonreduced forms. Hopper & Traugott (2003:15) present an example of pronoun developing into agreement marker. In standard French, il is a personal pronoun signals number and gender:

(15) Le garçon est venu hier soir. Il est danseur.
the boy is come yesterday evening he is dancer
‘The boy came yesterday evening. He is a dancer.’

In non-standard French, il has the function of being an agreement marker. It is bound to a verb and does not signal gender (Lambrecht 1981:40):'

(16) Ma femme il est venu.
my.Fem wife Agr has come
‘My wife has come.’

---

1 The abbreviations of this paper are glossed as follows: 3S: third person singular; Agr: agreement; AV: agent/active voice; Comp: complementizer; Conj: conjunction; Fem: feminine; Irr: irrealis tense; NAV: non-agent voice; Nom: nominative case; Obl: oblique case; Rea: realis tense.
To begin with, we would like to point out that there is substantial evidence for the claim that at least some pronominal has evolved into agreement on verbal elements in Tsou. First note that the third person singular pronoun $taini$ may occupy a normal argument position, as in the subject position of (17) (AV: actor voice):

(17) m-i-cu b-ait-o to-o'ko ta-taini.
    AV-Rea-Asp AV-see Obl-child Nom-s/he 'He saw a child.'

This is the so-called strong form of a pronominal, also known as a full pronoun. By contrast, Tsou also allows a weak or reduced form, namely, -ta, which attaches to the highest verbal element of a sentential projection, namely, serving as a clitic in (18):

(18) m-i-ta-cu b-ait-o to-o'ko.
    AV-Rea-3S-Asp AV-see Obl-child 'He saw a child.'

The interesting thing is that we may another full pronoun $taini$ in the subject position, which must be coreferential with the clitic -ta, as in (19):

(19) m-i-ta-cu b-ait-o to-o'ko 'e-taini.
    AV-Rea-3S-Asp AV-see Obl-child Nom-s/he 'Pasuya saw a child.'

This demonstrates that the clitic is only a “shadow” of the subject pronoun, i.e., serving as an agreement on Infl. The same observation obtains for sentences with a proper noun in the subject position, as evidenced by (20):

(20) m-i-ta-cu b-ait-o ta-o'ko 'e-Pasuya.
    AV-Rea-3S-Asp AV-see Obl-child Nom-Pasuya 'Pasuya saw a child.'

Consequently, we have a typical case of pronominal grammaticalization often observed in synthetic languages, that is, pronoun > clitic > agreement.

4. Grammaticalization of *ho*
The coordinate conjunction *and* in English has an interesting usage as in *One more can of beer and I’m leaving* (see Culicover 1970, 1972, Culicover & Jackendoff 1997). Its semantic meaning renders itself more like a subordinate construction as in *After I drink one more can of beer, I’m leaving*, though it syntactically looks like a coordinate construction. Mei (2003) suggests that English is a language of the coordination type. Its speakers prefer to use the syntactic coordinate structure to express the semantic subordination. Mei further suggests that Ancient Chinese also belongs to the coordination type and it then undergoes major change into subordination type since Middle Chinese (approximately Eastern Han Dynasty). Moreover, the claim that complementizers may be derived from conjunctions or adpositions is attested in many languages (Noonan 1985, see also Croft 2001:ch. 9).
4.1 Ho/ne as a preposition

Another instance of grammaticalization in Tsou comes from a functional category ho and its realis counterpart ne, which are construed as irrealis and realis respectively. This point should be clear from the fact that ho occurs in hohucma ‘tomorrow’, as in (21a), while ne occurs in nehucma ‘yesterday’, as in (21b):

(21) a. ho-hucma ‘tomorrow’
    b. ne-hucma ‘yesterday’

They often function as prepositions of some sort, as illustrated in (22):

(22) la-'u you-ne tfuya na a'o.
    Gen-1S live-NE Tfuya NA 1S
    ‘I live in Tfuya.’

4.2 Ho as an adjunct clause complementizer

Ho may also serve as an irrealis complementizer introducing a temporal adjunct clause, as evidenced by (23):

(23) ho m-i-ta moyomo, m-i-ta yusvi 'e-Pasuya.
    when[Irre] AV-Rea-3S drunk AV-Rea-3S talkative Nom-Pasuya
    ‘Pasuya is talkative after he is drunk.’

(24) shows that ne is again a realis counterpart of ho, introducing a when-clause:

(24) ne m-o uh-tan'e 'o-Mo'o ne-hucma,
    when[Real] AV-Rea come-here Nom-Mo'o yesterday
    m-oh-'u soulu oengu tu
    AV-Rea-1S in-process sleep
    ‘I was sleeping after Mo’o came here.’

4.3 Ho as a conjunction

Furthermore, ho may serve as a conjunction, linking together either a plurality of DPs, as in (25), or a plurality of VPs, as shown by (26):

332
A Formal Study of Grammaticalization in Tsou

(25) m-oh-cu uh-ne tfuya 'o- \([\text{DP amo}] \text{ho} [\text{DP ino}] \text{ho} [\text{DP ohaesa}]\).  
AV-Rea-Asp come-NE Tfuya Nom father and mother and brother  
"Father, Mother, and my brothers came to Tfuya."

(26) m-i-ta \([\text{VP tmunoi}] \text{ho} [\text{VP eopocio}]\) 'e-Pasuya.  
AV-Rea-3S loudly and fast Nom-Pasuya  
"Pasuya talks loudly and fast."

The conjunctive nature of this type of construals can be seen from the fact that the voice of the first conjunct must agree with that of the second conjunct, as evidenced by (27a, b). Otherwise, the conjunctive construals of \(\text{ho}\) would be blocked, as evidenced by (27c, d) (NAV: Non-Actor Voice):

(27) a. butaso ho eobako ta-o’ko 'e-Pasuya.  
severe.AV Conj beat.AV Obl-child Nom-Pasuya  
"Pasuya is beating the child severely."

b. utasveni ho eobaka ta-Pasuya 'e-o’ko.  
severe.NA V Conj beat.NA V Obl-Pasuya Nom-child  
"The child is being beaten by Pasuya severely."

c. * butaso ho eobaka ta-o’ko 'e-Pasuya.  
severe.AV Conj beat.NA V Obl-child Nom-Pasuya  
"Pasuya is beating the child severely."

d. * utasveni ho eobako ta-Pasuya 'e-o’ko.  
severe.NA V Conj beat.AV Obl-Pasuya Nom-child  
"The child is being beaten by Pasuya severely."

Also note that we can tell adjunction construals from conjunction ones by the fact that an adjunct clause headed by \(\text{ho}\) can be placed either before or after the main predicate, as illustrated below:

(28) m-i-ta butaso [ho m-i-ta eobako ta-o’ko 'e-Pasuya].  
AV-Rea-3s severe.AV Comp AV-Rea-3s beat.AV Obl-child Nom-Pasuya  
"It was severe when Pasuya beat the child."

(29) [ho m-i-ta eobako ta-o’ko 'e-Pasuya],  
Comp AV-Rea-3s beat.AV Obl-child Nom-Pasuya m-i-ta butaso.  
AV-Rea-3s severe.AV  
"It was severe when Pasuya beat the child."
The same construal is impossible with conjunctive ho, as evidenced by comparing (30a) with the deviance of (30a, b):

(30) a. *[ho eobako ta-o’ko], butaso ’e-Pasuya.
Conj beat.AV Obl-child severe.AV Nom-Pasuya
‘Pasuya is beating the child severely.’
b. *[ho eobako ta-o’ko ’e-Pasuya], butaso.
Conj beat.AV Obl-child Nom-Pasuya severe.AV
‘Pasuya is beating the child severely.’

4.4 Ho as a complement clause complementizer

In some other cases, conjunctive ho has evolved into a complementizer for complement clauses, such as the one directly selected by the main verb cohivi ‘know’ in (31):

(31) i-si cohiv-i to-Pasuya [CP ho i-si p-hin-i
NAV-3S know-NAV Obl-Pasuya Comp NAV-3S buy-NAV
to-Yangui ’e-yousku].
Obl-Yangui Nom-fish
‘That fishes are bought by Yangui is known by Pasuya.’

4.5 Ho as a result clause complementizer

The last case has to do with the fact that conjunctive ho undergoes grammaticalization when the first conjunct turns into a result clause, as illustrated in (32):

(32) [alu pe-puncuke *(ho)] m-i-ta mimo
reach.AV drink-full Comp AV-Rea-3S drink.AV
to-emi ’e-Pasuya.
Obl-wine Nom-Pasuya
‘Pasuya drank wine to the full.’

Here ho serves to a complementizer delimiting a result clause. This is in direct contrast to previous cases of grammaticalization: Namely, it is the second conjunct that has evolved into either an adjunct, as in (23) and (24), or a complement, as in (31). Moreover, we know that (32) cannot be a case of adjunction, since, unlike an adjunct clause, ho and the rest of the sentence cannot raise to the sentence-initial position, as evidenced by the deviance of (33a, b):
(33) a. *[ho m-i-ta mimo to-emi 'e-Pasuya],
    Comp AV-Rea-3S drink.AV Obl-wine Nom-Pasuya
    alu pe-puncuke.
    reach.AV drink-full
b. *[ho m-i-ta mimo to-emi], alu pe-puncuke
    Comp AV-Rea-3S drink.AV Obl-wine reach.AV drink-full
    'e-Pasuya.
    Nom-Pasuya

4.6 Conjunctive reduction

To reconstruct the above grammaticalization processes, which we will lump together under the cover term “conjunctive reduction”, we would like to entertain the possibility that the complementizer usage of ho actually derives from its conjunctive usage. On the other hand, the historical development has been as diverse as it can be. Consequently, we have a complementizer ho introducing not only an adjunct clause, as in (23) and (24), but also a complement clause, as in (31). As a matter fact, it even develops a “reverse complementation” strategy, which turns the first conjunct into a result clause, as in (32). We may visualize the three distinct processes in (34a-c) respectively (cf. Tsai & Chang 2003):

(34) a. conjunct + conjunct
    → main predicate + temporal/conditional clause
    ConjP VP
    2 2
    V Conj’ → V’ CP
    2 1 2
    Conj V V Comp V

b. conjunct + conjunct
    → main predicate + complement clause
    ConjP VP
    2 2
    V Conj’ → V CP
    2 2
    Conj V Comp V
Our treatment of the last case is somewhat controversial: If our approach is on the right track, the complementizer *ho* would be in the clause-final position when introducing a result clause. This is in direct contrast to the other cases of conjunctive reduction where *ho* appears in the clause-initial position. Nevertheless, the situation is not so uncommon with the placement of the relative clause complementizer *ci*, in which case *ci* may appear either clause-finally or clause-initially depending on whether the relative clause in question appears before its head noun or not. We will therefore leave the proposal as a working hypothesis in this report, and pursue the issue elsewhere.

5. Grammaticalization of *Ci*

The phenomenon where clause-internal adverbials develop into sentential adverbials or even matrix predicates is widely observed across languages. The adverbials *indeed, in fact,* and *besides* in English are of such cases (Traugott 1995a, b). In Mandarin Chinese the *wh*-adjunct *zenme*(yang) ‘how’ also manifests similar path as exemplified in the following examples. Tsai (1999) observes an interesting distribution in the following data:

(35) Ta hui zenme(-yang) xiu na-liang che?

he will how fix that-CL car

‘How will he fix that car?’

a. Ta zenme hui xiu na-liang che?

he how can fix that-CL car

‘How come he can fix that car?’

b. Zenme ta hui xiu na-liang che?

how he can fix that-CL car

‘How come he can fix that car?’

In (35), *zenme*(yang) is a VP-adverbial modifying the action/event denoted by the verb phrase and it questions the manner or method of the car-fixing action/event. In (36),
zenme is located in the sentential position modifying the whole proposition and it questions the reason of his being able to fix the car. Its semantic meaning changes from how to how come. Note that the -yang morpheme is obligatorily contracted. More interestingly, zenme may even serve as a discourse predicate marking a tone of disbelief or contra-expectation as (37) shows.

(37) Zenme? Ta hui xiu na-liang che?
how he can fix that-CL car
‘How come? He can fix that car?’

5.1 Ci-adjunction

Next we will focus on the syntax and semantics of a functional element ci in Tsou, which presents a even stronger case of grammaticalization. First, we would like to pint out that, in addition to its usage as a relative clause complementizer, ci can introduce an adjunct clause expressing the notion of extent or degree when co-occurring with a wh-predicate, i.e., mainenu ‘how.AV’, as in (38):

(38) m-i-ta mainenu ‘e-Pasuya [ci i-ta
AV-Rea-3s AV-how Nom-Pasuya Comp NAV-Rea-3s
 eobak-a ’e-Mo'o]?
hit.NA V Nom-Mo'o
‘How was Pasuya such that Mo'o was hit by him?’

5.2 Ci-complementation

As it turns out, ci may also introduce a complement clause selected by the main predicate mainenu ‘how’ of (38), rendering a causal question akin to how come in English, which assumes the head-complement structure in (39):

(39) m-i-ta mainenu [ci eobak-o to-Mo'o ’e-Pasuya]?
AV-Rea-3s AV-how Comp hit-AV Obl-Mo'o Nom-Pasuya
‘How come Pasuya hit Mo'o?’

5.3 Ci-contraction

The last step involves incorporation of ci into mainenu, producing a contraction mainci, which has been grammaticalized as a verbal element similar to why in English, as shown below:
(40) (m-i-ta) **m-ainci** m-i-ta cobak-o to-Mo'o 'e-Pasuya?
AV-REA-3s AV-why AV-REA-3s hit- AV Obl-Mo'o Nom-Pasuya
‘Why did Pasuya hit Mo'o?’

We can tell **mainci** from **mainenu ci** by looking at an epistemic question, which is typically associated with **mainci** and a stative predicate, as in (41b):

(41) a. **m-ainenu** [ci m-o enghova 'e-enguca]?
AV-how Comp AV-REA blue Nom-sky
‘How come the sky is blue?’

b. **m-ainci** m-o enghova 'e-enguca?
AV-why AV-REA blue Nom-sky
‘Why is the sky blue?’

An epistemic question does not require a causal answer as a causal question such as (41a), since it does not presuppose any cause event and, as a result, blocks any pragmatic construal (i.e., denial or unexpectedness) often implicated by the causal question (cf. Tsai & Chang 2003, Tasi 2005).

### 5.4 Parallels from NAV constructions

Now we may complete the picture by pointing out that all the observations made above applies to their non-actor-voice (NAV) counterparts, namely, **yainenu ci** and **yainici**. As illustrated below, we have **ci-adjunction** in (42a), **ci-complementation** in (42b), and **ci-contraction**, representing the three stages of the grammaticalization process in question:

(42) a. **Ci-Adjunction**:
  i-si **y-ainenu** 'o-o’ko [ci ala
NAV-REA-3s NAV-how Nom-child Comp each.NAV
 e-lolong-a to-Pasuya]?
beat-injure-NAV Obl-Pasuya
‘How is the child (affected) such that s/he was beaten to injury by Pasuya?’

b. **Ci-Complementation**:
  i-si **y-ainenu** [ci ala e-lolong-a
NAV-REA-3s NAV-how Comp reach.NAV beat-injure-NAV
 to-Pasuya ‘o-o’ko]?
Obl-Pasuya Nom-child
‘How come the child was beaten to injury by Pasuya?’
c. **Ci-Contraction:**

```
i-si   y-ainci   ala   e-lolong-a
NAV.Rea-3s NAV-why reach.NAV beat-injure-NAV
to-Pasuya   ’o-o’ko?
Obl-Pasuya  Nom-child
‘Why was the child beaten to injury by Pasuya?’
```

Again, the semantic distinction between causal and epistemic questions emerges when we put yainenu ci and yainici into test, as evidenced by the contrast of (43a, b):

```
(43) a. i-si y-ainenu [ci (*i-si) tu'tput-a
NAV.Rea-3s NAV-how Comp NAV.Rea-3s catch-NAV
to-av'u  ’o-buhci]?
Obl-dog  Nom-mouse
‘How come the mouse was caught by a dog?’

b. la-si y-ainici tu'tput-a to-niau ’o-buhci?
hab-3s NAV-why catch-NAV Obl-cat Nom-mouse
‘Why is a mouse (generally) caught by a cat?’
```

### 6. A formal account

Finally, we would like to propose the following formal analysis of ci-contraction under Roberts & Roussou’s (1999) structural simplification hypothesis: Namely, the contraction will be analyzed as a head movement from a complementizer position to a matrix verb position, and at a later stage of historical development, the configuration created by the C-to-V movement was simplified by young language learners under the assumption that the contracted forms, i.e., mainci ‘why.AV’ and yainci ‘why.NAV’, are actually a word rather than two adjoined elements. In other words, there is no head movement at all for the second-generation learners. Moreover, the semantics has also shifted from causal to epistemic. The entire process is illustrated below step by step:

**Step 1:** C-to-V movement

```
(44) m-ainenu(ci)k  [CP tk [m-o enghova  ’e-enguca]]?
   AV-how Comp   AV-Rea   blue   Nom-sky
```
Step 2: Structural simplification applies under conservatism: The matrix predicate plus the complementizer \( ci \) are reanalyzed as a verbal element taking an IP complement:

\[
\begin{array}{cccccc}
\text{VP} & \rightarrow & \text{VP} \\
2 & 2 \\
\text{mainenu} & \text{CP} & \rightarrow & \text{mainenu}+ci_k & \text{CP} \\
2 & 2 \\
\text{ci} & \text{IP} & \rightarrow & \text{mainenu} & \text{IP} \\
t_k & \text{IP} \\
\end{array}
\]

Step 3: The bi-clausal structure is flattened, and the contraction is completed in the real sense, i.e., not just phonologically but also morphologically. Now the manner predicate has evolved into a causal adverbial merged into the CP layer:

\[
\begin{array}{cccccc}
\text{VP} & \rightarrow & \text{VP} \\
2 & 2 \\
\text{mainenu}+ci_k & \text{CP} & \rightarrow & \text{mainenu-ci} & \text{IP} \\
2 & 2 \\
t_k & \text{IP} \\
\end{array}
\]

Step 4: The semantics has shifted from a causal question to an epistemic question, presumably shifting from a specifier position to a head position.

7. Concluding remarks

As observed by Roberts & Roussou (1999), the general loss of semantic substance (i.e., semantic bleaching) of grammaticalized items follows from the fact that functional heads are widely assumed to lack argument structure and other semantic properties. This seems to be true for the grammaticalization phenomena in Tsou to the extent that complementizers such as \( ho \) and \( ci \) have lost their original meaning (i.e., conjunctive
and extent/degree respectively). The same generalization obtains for the third singular pronoun, which has lost its ability to refer through cliticization, turning into a genuine agreement. We therefore have a clearer picture of how grammaticalization works to shape some of the versatile expressions in Tsou. With the working hypothesis established in this project, hopefully we will be able to dig deeper into the interaction between syntactic displacement (i.e., movement) and categorial shifts (i.e., reanalyses and restructuring).

References


University Press.
Amsterdam: John Benjamins, 2 vols.