

## From Operator to Nominalizer: Grammaticalization of old Chinese *zhe*

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In old Chinese of the Warring States period (5<sup>th</sup> – 3<sup>rd</sup> C. BC), the morpheme *zhe* combined with a relative clause to form a nominal phrase which could appear in argument position. (1a) shows *zhe* forming a relative clause with a verbal predicate; (1b) is a relative clause with an adjectival predicate.

The function of *zhe* can be captured in formal terms by treating it as a determiner which combines with a CP to form a DP (cf. Basilico 1996, Kayne 1994, Williamson 1987). This phrase can then appear in argument position, for example function as the subject of the matrix clause, as in (1b). Semantically, *zhe* functions as an operator which binds a variable position within the CP. This analysis assumes that *zhe* relative clauses were not derived through movement: the operator *zhe* is base generated as the head of DP, external to the CP. Evidence in favor of the base generation analysis comes from numerous sources. First, Chinese of this period had internally headed relative clauses, as in (2a). *Zhe* relative clauses could also be formed on the possessor of the subject, as in (2b). Movement from the possessor position in the subject NP would violate the Left Branch Condition. Likewise, *zhe* relative clause formation could invoke apparent violations of the Coordinate Structure Constraint. The gap in (2c) is inside one of the conjoined TPs.

Given the above evidence that *zhe* was an operator binding a variable position inside a relative clause CP and projecting a nominal category, I adopt the analysis in (3), based on Adger's (2005) proposal for relative clauses in Scottish Gaelic. *Zhe* carries a dependent identification feature which it must value on a DP in its c-command domain for the derivation to converge. The effect of this feature valuation will be to ensure that *zhe* is interpreted as an operator binding a variable, which is the DP (overt or non-overt) in subject or topic position in the relative clause.

This analysis not only allows a unified analysis of relative clauses formed on *zhe*, it also provides a straightforward account of historical change in the function of *zhe*. It is well-known that grammaticalization typically involves semantic bleaching or syntactic simplification. A common example of change of this sort is the reanalysis of lexical verbs as auxiliary verbs. In Minimalist terms, I propose that one way to capture grammaticalization is with the loss of a feature. This predicts that historical change in the function of *zhe* could result from the loss of the ID feature. *Zhe* without the ID feature would retain its nominalizing capability but no longer be able to bind a variable. Therefore, *zhe* would cease to be a relativizer and simply serve to nominalize a clause.

Interestingly, precisely this trend can be found in texts from the Han dynasty (2<sup>nd</sup> C. BC – 3<sup>rd</sup> C. AD). In the Han period, the number of externally headed relative clauses like (4a) increased dramatically, while *zhe* relative clauses showed a marked decrease. In (4a), the head of the relative clause appears following the clause and the genitive marker *zhi*. There is no *zhe*; the external head binds the gap inside the clause. Along with the decrease in relative clauses formed on *zhe* was the increase of embedded clauses nominalized by *zhe*. Examples like (4b) can express a reason or a condition or can function as a topic. They are not relative clauses, as they contain no gap or variable position.

In this way, the proposal put forth in this paper provides a straightforward account of the structure of old Chinese relative clauses formed with *zhe*. This proposal also makes a clear prediction as to the path of historical change in *zhe* clauses, which appears to be borne out. The Minimalist approach also has the merit of bringing to light hitherto obscure facts of old Chinese syntax and allowing historical change in Chinese to be viewed in a broader typological and theoretical perspective.

- (1)a. 欲 战 者  
 [DP [CP  $e_i$  [VP  $yu$   $zhan$  ]] **zhe<sub>i</sub>**] (Zuozhuan, Cheng Gong 6)  
 desire fight ZHE  
 “(those) who desire to fight”
- b. 仁 者 不 忧  
 [DP [CP  $e_i$  [AP  $ren$  ]] **zhe<sub>i</sub>**] bu you. (Analects, Zihan)  
 virtue ZHE Neg worry  
 “One who is virtuous does not worry.”
- (2)a. 蛮 夷 属 于 楚 者  
 [DP [CP [  $man$   $yi$ ]<sub>i</sub>  $shu$   $yu$   $chu$  ]] **zhe<sub>i</sub>**  
 Man Yi belong to Chu ZHE  
 “the Man and Yi which belong to Chu” (Zuozhuan, Cheng Gong 7)
- b. 我 未 见 力 不 足 者  
 wo wei jian [DP [CP [DP  $e_i$  li] bu zu ] **zhe<sub>i</sub>**  
 I not.yet see strength not suffice ZHE  
 “I have yet to see someone whose strength is not sufficient.” (Analects)
- c. 莫 之 为 而 为 者  
 [DP [CP [TP  $mo$   $zhi$   $wei$ ] er [TP  $e_i$   $wei$  ]] **zhe<sub>i</sub>**  
 noone him force and do ZHE  
 “one who no one forces him and (he) does” (Mencius, Wanzhang 1)
- (3)  $zhe_{[D, ID:Dep]} \dots DP_{[ID: ]}$   
 $\Rightarrow zhe_{[D, ID:Dep]} \dots DP_{[ID: Dep]}$
- (4)a. 命 吉 之 人  
 [DP [CP  $e_i$   $ming$   $ji$ ]  $zhi$   $ren_i$ ] (Lunheng, Mingyi)  
 destiny fortuitous Gen person  
 “person with a fortuitous destiny”
- b. 鲁 宋 事 楚 而 齐 不 事 者  
 [DP [CP Lu, Song  $shi$  Chu er Qi bu  $shi$  ]] **zhe**  
 Lu Song serve Chu but Qi Neg serve ZHE  
 齐 大 而 鲁 宋 小  
 Qi da er Lu, Song xiao.  
 Qi large and Lu Song small  
 “Lu and Song’s serving Chu and Qi’s not doing so is because Qi is large and Lu and Song are small.” (Zhanguoce, Qi Ce)

## Reference

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