

Disjunctions in spoken Chinese: The fall of logic and the rise of category-member relations

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When discussing disjunctions in natural language, English *or* is often used to refer to it for terminological convenience. *A or B* thus has long been considered the standard form of disjunctions that is consistent with the logic core of $A \vee B$, expressing a state in which speakers are not fully informative as they cannot zero in on a single option. Though indicating speakers' epistemic uncertainty, *A or B* could be true if at least one of the options is true, which is compatible with the state that A and B both are true. This logical 'inclusivity' has been assigned to the core linguistic meaning of *or*, paired with the semantic constraint that *A or B* is unacceptable if one disjunct entails the other. The traditional study has been challenged when some linguists stepped outside the logic-oriented path and suggested the linguistic core of *or* is simply to introduce a set of alternatives (Zimmerman 2000; Geurts 2005; Aloni 2002, 2007; Alonso 2006 and Ariel 2016, 2018, 2019). To make *A or B* acceptable, A and B must be construable as members of a higher-level category (Ariel 2018).

From logic back to natural language, studying English disjunctions has taken a long journey before reaching a turning point. In contrast, the Chinese research tradition has long categorized disjunction structures as "alternation structures" (e.g. Lü 1942), a choice of terminology that suggests a non-logical oriented, discourse function-based research paradigm. The "general or", which has been analogized as the logic connective \vee , looms large in the Chinese grammatical collection. Taking *huò zhě/ huò A huò zhě/ huò B*, *A huò zhě/ huò B*, *A hái shì B* and *yào me A yào me B* as targets, my current study is seeking to understand why we use disjunctions in natural conversation, based on the spoken Chinese data from the TV program *Dialogue*. The first line is drawn between *A hái shì B* and other structures as it is usually used to raise questions. As for the other disjunction structures, the classic logical rules almost failed to account for their functions as only 10% express the speaker's epistemic uncertainty. The other 90% of structures show full confidence of the speaker and serve for multiple discourse functions: a. alternating one expression with the other that comes from the same category (see 1); b. including a member into the current category activated by the aforementioned member (see 2); c. asserting several things are indifferent as they belong to the same category (see 3); d. making up an unnamed category by exemplifying its members (see 4); e. breaking down an aforementioned category by listing its members (see 5). All these functions cluster around the category-member relation, the source of 'alternativity' as Ariel (2018) has revealed, and even the 'uncertain' cases could be construed as the competition between two members for a single slot. Disjunction structures also show different distributions based on their functions. The member-focus types are prohibited from appearing in the subject or topic position, while the category-focus types have fewer restrictions.

- (1) 百度的搜索流量成为了中国或者说中文搜索第一。
- (2) 游艇非常出名的一个比例，叫做1比9，或者甚至是1比10都有。
- (3) 无论是塔隆，或者是我们的海尔，在对方的国度现在都有了很好的发展。
- (4)... 才有可能在下一轮的竞争中形成它的核心竞争力，或者是核心竞争优势。
- (5) 他说在东京市场，一个证券被定义成，或者是股票或者是债券|几乎我没有看到一个人愿意谈，每一个人要么推开，要么对不起，要么低着头心事重重地走。

The bottom-up, usage-based approach will lead to more interesting topics about Chinese disjunctions. For example, how could we reinterpret 'uncertainty' beyond the truth-conditional content, and how could we historically trace the emergence of Chinese disjunctions with the perspective of category-member relations?

The Copulas in Choyo: A mixed system of Qiang and Bodish

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The copula system in Tibetan languages is notorious for its complexity. In the Qiang subbranch, there are various existential copulas that alternate depending on the referent being located or shown to exist, or on the nature of its location (LaPolla & Huang 2007, Huang 2007). In the Bodish subbranch, equational and existential copulas show a three-way distinction of **Egophoric**, **Factual**, **Evidential** (DeLancey 2018), with the possibility of presenting as conjunct/disjunct or mirative in previous studies (Hale 1980, DeLancey 2001, Tournadre 2008).

As a member of the Qiangic subbranch, Choyo undoubtedly exemplifies the richness of its existential copula. There are seven existential copulas in Choyo. The most prevalent form is /ro/, whose semantic feature is [+movable]. It can be used for non-first person humans, animals, or entities, as long as the referent is movable. Conversely, /ɣwə/ is used for [-movable] entities like plants and buildings. Inalienable possession, such as body parts or fetuses, also uses /ɣwə/. /tɛi/ is used to denote the existence of humans, especially when the referent is the first-person pronoun. As a result, /tɛi/ is developing an Egophoric meaning to some extent. The semantic feature of /ɛi/ is [+movable] [-animate], and it is used for objects like a book on the table. /tɛy/ is used for entities in a vessel, like water in a bottle or a stone in a box. /lo/ is used when the referent is mixed with other things, such as red beans in black beans. Lastly, /tu/ is used when denoting the existence of abstract things, like 'There is something with me.' The animacy, movability, existing status, and properties of the referent all matter when Choyo speakers choose the existential copulas.

Regarding equational copulas in Choyo, a Bodish-like differentiation exists. Choyo has three equational copulas, namely /tsi/, /tɕi/, and /ri/, which represent **Egophoric**, **Factual**, and **Evidential** forms, respectively. /tsi/ is used for the first person in declarative sentences and the second person in interrogative sentences, while /tɕi/ is used in all other cases. /ri/ is exclusively used in Adjective copula clauses to indicate newly discovered information. Like Bodish languages, this three-way distinction extends to other verbs, making it part of the evidentiality system in Choyo. The **Egophoric** form /tsi/, which denotes personal knowledge, can express the intention of an action, such as 'I intend to do something.' The **Factual** form /tɕi/ indicates that the action is already known, such as in habitual behavior or common sense. The **Evidential** form /ri/ can be used as a clitic postposed to the existential copulas, endopathic verbs, or progressive activity verbs to express Mirativity or Inference.

Evidentiality is a highly diffusible linguistic feature (Aikhenvald 2005:302). Since Classical Tibetan does not exhibit evidentiality, scholars have reached a consensus that its prevalence in various Tibetan languages is convergent rather than divergent (DeLancey 2018). Previous research has shown that while the copula system in some Qiangic languages lacks Bodish-like contrast, certain Qiangic languages have developed an evidential meaning in their copulas due to contact with nearby Bodish (Song 2020). Upon examining the copula system in Choyo dialects, we observed considerable variation, with only those dialects closest to Bodish displaying the Bodish-like copula distinction. Therefore, we contend that the Choyo copula system is a mixed system, combining Qiangic features in its existential copula with Bodish characteristics in its equational copula.

Keyword: Choyo, Existential copulas, Equational copulas, Evidentiality

The tone type effect on the forced-attention dichotic listening of Cantonese tones

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The ear preference pattern of tone processing in the Dichotic Listening task (i.e., simultaneous presentation of two different stimuli and reports of the clearer one) differs from consonants and depends on tone types [1]. For instance, Cantonese tone processing showed an overall left ear advantage (LEA) combining two tone types, but contour tones triggered more right ear correct responses than level tones [2]. Previous research [3,4] has examined consonant processing with the Forced-attention Dichotic Listening (FADL) paradigm, where the participants are instructed to report the clearer stimuli (Non-forced condition, NF) and to report stimuli presented in the left (Forced-left condition, FL) and right ear (Forced-right condition, FR). They found an interaction between ear and condition, showing a consistent right ear advantage (REA) in the NF and FR conditions and LEA in the FL condition. When tone stimuli change the NF pattern, if tone type can further modulate the two-way interaction needs investigation. Researchers also found bilinguals had more correct responses in the instructed ears (i.e., left ear in FL and right ear in FR) than the monolingual group [3]. The research focused on two languages with a typological similarity (e.g., Finnish-Swedish) [3,4], but whether the bilingual effect can be found in bilinguals speaking languages with a large typological distance (e.g., tonal vs. non-tonal languages) is not clear. Therefore, this study examines whether tone type influences ear preference patterns across three conditions and whether bilingualism influences one's inhibitory ability.

Sixty Cantonese-English bilinguals, aged 18-30, are recruited in HK. They take a pre-test, a Cantonese tone training, and a target FADL task. Multilingual Language Diversity (MLD) score aggregated from the language history questionnaire [5] measures one's degree of bilingualism. The training is a contour-tone and a level-tone identification task with feedback to construct participants' tone awareness and the association between tones and labels (1-6). In the FADL task, contour tone pairs (e.g., /ji2/ 'chair' vs. /ji4 / 'son') and level tone pairs (e.g., /ji1/ 'doctor' vs. /ji3/ 'meaning') are used as stimuli. The participants are required to report a clearer tone from either ear in the NF condition, left-ear tones in the FL condition, and right-ear tones in the FR condition by pressing keys (1-6). The number of responses in each ear is collected.

Preliminary results (Fig. 1) show an interaction between ear and condition and a tone type effect on this two-way interaction. Regardless of tone type, the ear preference patterns change across conditions due to the varied instructions. In NF, contour tone processing calls for more right-ear responses and fewer left-ear responses than level tone. In both forced conditions, contour tone calls for more instructed ear responses than level tone type. The bilingual effect still needs exploration.

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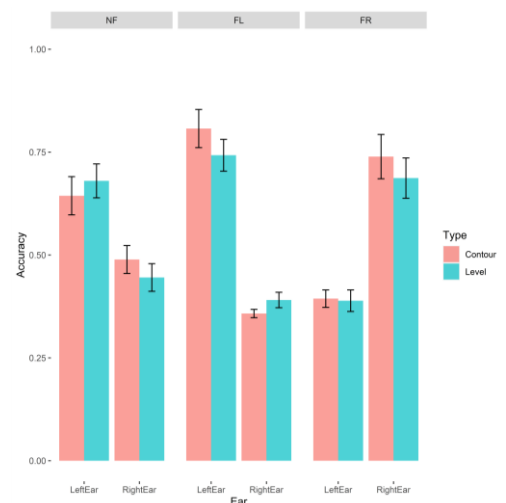


Fig1. Ear Accuracy in three conditions