Grammaticalization and beyond
—The invisible space behind the body-part term boi55 ‘back’ (背) in Hakka∗

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ABSTRACT

The purpose of this study is twofold. On the one hand it examines the motivations and mechanisms activating various senses of the Hakka morpheme boi55 ‘back’, along with its grammaticalization path. It is found that semantically, INANIMATE OBJECT-IS-ANIMATE CREATURE Metaphor, SPACE-IS-OBJECT Metaphor, TIME-IS-OBJECT Metaphor, Metonymy of spatial contiguity, and MEMBER-FOR-CATEGORY Metonymy are involved in this grammaticalization path. Syntactically, reanalysis and analogy bring about the morphosyntactic change

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1. Hakka is one language in the family of Chinese. The Hakka language consists of several dialects, spoken in Guangdong (廣東), Fujian (福建), Jiangxi (江西), Guangxi (廣西), Sichuan (四川), Hunan (湖南), Guizhou (貴州) provinces in Mainland China, and also Hainan island (海南島) and Taiwan (台灣). Generally speaking, five spoken Hakka dialects are used in Taiwan Hakka communities scattered around the island, including Si55 yen55 (四縣) Hakka dialect, Hoi53 liuk5 (海陸) Hakka dialect, Tai55 pu24 (大埔) Hakka dialect, Ngieu11 ping11 (饒平) Hakka dialect, and Sea53 on24 (話安) Hakka dialect. According to the data documented by Council for Hakka Affairs in Taiwan in 2006, there are approximately 6,800,000 Hakka people in Taiwan, about 27% of the total population. Phonological and morphological differences can be observed between various sub-dialects. The data presented in this paper are mainly based on Si55 yen55 Hakka dialect. The Manual of Taiwan Hakka Tongyong Romanization System published by Ministry of Education in 2003 is used to render the data. Moreover, the tone is marked based on the isolation tone. The tone diacritics and the graphic representations in the data follow the system used in Hakka Dictionary of Taiwan. The superscript 5 is the highest, and 1 is the lowest; and 11 is yangping (陽平), 24 is yinping (陰平), 31 is yinshang (陰上), 55 is yinciu (陰去), 2 is yinru (陰入), 55 is yangciu (陽去), and 5 is yangru (陽入).

of boi	extsuperscript{55}. On the other, adopting frames of reference, this study, with Hakka boi	extsuperscript{55} as an illustration, investigates the interactions between spatial conceptualization and language. We show how the different choices of intrinsic or relative frames of reference influence the spatial interpretations of the sentences with boi	extsuperscript{55}. And it is further demonstrated how the noun category preceding boi	extsuperscript{55} interacts with frames of reference and gives rise to different degrees of ambiguity. It is shown that the interaction of lexical meanings and world knowledge brings about different interpretations of a single form. The research findings prove that both universal and regionally restricted forces are needed to account for the structure of conceptual transfer.

**Key Words:** grammaticalization, frames of reference, space and cognition, body-part terms, back, Hakka

1. **Introduction**

Languages are so anthropocentric	extsuperscript{2} that it would have been astonishing for humans not to begin describing the world in terms of their body and their everyday experience (Allan 1995:12). Whenever possible, human categories are used to describe and understand nonhuman ones. That human body provides the most important model for expressing concepts of spatial orientation has been attested by cross-linguistic evidence (Heine 1997:40). Heine indicates that some formal similarities exist between certain body-part terms and locative markers. Following the analysis by Goldap (1992:613) and Stolz (1994:61), Heine not only argues that these locative markers are historically derived from the body-part terms but also indicates that this is a process of universal significance (Heine 1997:62). In Swahili, the body-part term *mbele* 'breast' is grammaticalized to refer to the spatial meaning ‘front’ (Heine, et al. 1991). Lillehaugen’s (2004) study illustrates that the body-part term *läa’iny* ‘stomach’ in Valley Zapotec languages is grammaticalized to denote the spatial meaning ‘inside’. In addition, Matsumoto’s (1999) research shows that in Japanese, body-part nouns extend to spatial adpositions, and the development of the body-part term *waki* ‘flank’ to the spatial adposition ‘beside’ can serve as an illustration. Moreover, in Icelandic, Halia,

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2. Following Allan’s (1995) definition, the term *anthropocentric* means “human centered, i.e. perceiving everything from a human point of view using human beings as the standard and basis for judging all else in the universe.” And it properly includes *anthropomorphic*, “using the human form as model”.
Tzotzil, and Colonial Quiché, the body-part noun ‘back’ is grammaticalized to the spatial adposition ‘behind’ (Heine and Kuteva 2003:47–48). These cross-linguistic examples validate that the semantic extension from body-parts to spatial orientation is widely found in human languages.

Among the various kinds of body parts, “back” is usually the first term to be grammaticalized as evidenced cross-linguistically. According to Levinson (2003:106) and Heine, et al. (1991:130), an implicational scale over the body-part terms in the grammaticalization process is as follows: BACK > FRONT > SIDE > TOP > BOTTOM. This scale involves the following implication: if any of these spatial concepts is derived from the body part model, then the concepts to its left may be derived from the body part as well. After examining African and Oceanic languages, Heine claims that the universal source for “back” expressions is the body-part “back”, which accounts for 77.7% of the African and 95% of the Oceanic expressions for the spatial concept “back” (Heine 1997:42). Moreover, studying the English word back, Allan (1995) confirms that the uses and meanings of English back are motivated by our cognitive modeling of the world and that they evidence a powerful anthropocentric image of “the body in the mind” of humankind. Concentrating on English back, his study offers an explanation for the extension of the original human body-part term to other vertebrate and invertebrate creatures, to inanimate objects, to spatial-temporal location, to acts and to movement. The body-part term boi\textsuperscript{55} ‘back’ in Hakka displays various senses similar to those of the body-part term “back” in other languages such as English. Since it has been mentioned that the extension from body part to spatial or temporal orientations is a universal grammaticalization process, this study, adopting this grammaticalization cline, will provide an abductive reasoning from the Hakka data to construct the grammaticalization pattern with semantic as well as syntactic mechanisms behind these synchronic representations.

The semantic extension of boi\textsuperscript{55} ‘back’ in Hakka will be briefly presented below. First, the meaning of boi\textsuperscript{55} can be extended from ‘the back of the human body’ as in \( A^{11}\)-fu\textsuperscript{55} ge\textsuperscript{55} boi\textsuperscript{55} an\textsuperscript{21} tong\textsuperscript{55,3} \) (阿當個背癢痛。) A-fu’s back hurts very much. to ‘the end of the object’ as in \( C a^{11}\)-boi\textsuperscript{55} he\textsuperscript{55} fung\textsuperscript{11}-set\textsuperscript{2} ge\textsuperscript{55}. \) (車背係紅色個。) ‘The back of the car is red.’ and ‘behind the object’ as in vuk\textsuperscript{2}-boi\textsuperscript{55} (屋背) ‘behind the house’. Moreover, when the morpheme boi\textsuperscript{55} is preceded by an object

3. The following abbreviations are used for their corresponding grammatical functions: POSS, possessive marker; DO, Hakka complementizer; NEG, negative marker; LOC, locative marker; CL, classifier; ASP, aspect marker; SF, suffix.
4. This example is ambiguous. This point will be illustrated later.
nour without intrinsic sideness or facet, the space denoted by this noun phrase depends on the perspective of the perceiver as illustrated by san\textsuperscript{24}-\textit{boi}\textsuperscript{55} (山背) ‘the other side of the mountain’. In addition, the original specific spatial meaning of \textit{boi}\textsuperscript{55} can be further generalized into a general localizer as shown by \textit{song}\textsuperscript{55}-\textit{boi}\textsuperscript{55} (上背) ‘above’, \textit{ha}\textsuperscript{11}-\textit{boi}\textsuperscript{55} (下背) ‘below’, \textit{di}\textsuperscript{11}-\textit{boi}\textsuperscript{55} (底背) ‘inside’ and \textit{ngoi}\textsuperscript{55}-\textit{boi}\textsuperscript{55} (外背) ‘outside’. In addition to the meaning extension in the spatial domain, the meaning of \textit{boi}\textsuperscript{55} is extended to mean ‘at last’ in a chronological order exemplified by \textit{Gi}\textsuperscript{11} \textit{gong}\textsuperscript{31} \textit{m}\textsuperscript{11} \textit{lot}\textsuperscript{11}, \textit{boi}\textsuperscript{55}-\textit{mi}\textsuperscript{24} \textit{zi}\textsuperscript{55}-\textit{ga}\textsuperscript{24} \textit{zeu}\textsuperscript{31} \textit{den}\textsuperscript{31} \textit{lot}\textsuperscript{11} (佢講毋來，背尾自家走等來○) ‘He said that he wouldn’t come (when we invited him), but finally he came without asking.’ One important point to note is the ambiguity of the linguistic units with the morpheme \textit{boi}\textsuperscript{55}. The sentence \textit{Ca}\textsuperscript{11}-\textit{boi}\textsuperscript{55} \textit{yu}\textsuperscript{24} \textit{yit}\textsuperscript{2} \textit{zak}\textsuperscript{2} \textit{tong}\textsuperscript{11}-\textit{pung}\textsuperscript{24}-\textit{e}\textsuperscript{31} (車背有一隻糖蜂仔○) is an example to illustrate how the various senses produce the ambiguous meanings of one single sentence (‘There is a bee on the trunk of the car. / There is a bee on the backseat of the car. / There is a bee behind the car. / There is a bee on the other side of the car.’). These examples will be discussed in detail in Section 3 and Section 4. In order to see how these different senses are stuffed into one specific morpheme, this study aims to examine the development of \textit{boi}\textsuperscript{55} ‘back’ in Hakka, with special focus on its meaning relatedness through the grammaticalization theory and spatial framework.

Following the Introduction, Section 2 proposes the theoretical background. The motivations and mechanisms of grammaticalization proposed by Hopper and Traugott (2003) and the theory of space and cognition proposed by Levinson (2003) and Langacker (1999) will be shown respectively. The grammaticalization motivations and mechanisms of the Hakka morpheme \textit{boi}\textsuperscript{55} are provided in Section 3. The spatial conceptualization of \textit{boi}\textsuperscript{55} is shown in Section 4. And Section 5 concludes the study by not only summarizing the analysis but also pointing out implications for future studies.

2. Theoretical Background

To lay the groundwork, the theories relevant to this study will be shown. Section 2.1 presents the grammaticalization motivations and mechanisms, Section 2.2 presents the theory concerning space and cognition, and Section 2.3 gives the remarks of this section.

2.1 Motivations and Mechanisms of Grammaticalization

Grammaticalization theory proposed by Hopper and Traugott (2003), Meil-
let (1912), Pagliuca (1994), Heine (1997), and Heine and Kuteva (2003) among others reveals the mechanisms involved in the process whereby nouns and verbs undergo syntactic decategorization and semantic development. Heine and Kuteva (2003:2) further claim that grammaticalization theory provides the tools to discover how different grammatical meanings can be related to one another in a principled way, how such issues as polysemy and heterosemy are dealt with, and why certain linguistic forms have simultaneous lexical and grammatical functions. Since Meillet (1912), not only have various principles of the grammaticalization theories been proposed, but widespread typological and cross-linguistic investigation of paths of grammaticalization has also been done (Hopper and Traugott 2003, Pagliuca 1994, Heine 1997, Heine and Kuteva 2003). Grammaticalization is further argued to be processed through mechanisms such as reanalysis or analogy, which are activated by metaphorical mapping, metonymic process, or pragmatic inferencing. More specifically, the pragmatic factors of the grammaticalization process include metaphor, metonymy and inference, while the syntactic mechanisms are mainly reanalysis and analogy.

First of all, let us confine our attention to motivations behind grammaticalization. Hopper and Traugott (2003:92) claim that semantic change in general, not just grammaticalization, can be interpreted as a problem solving process. One problem to be solved is that of representing members of one semantic domain in terms of another, which can be served by metaphorical strategies. The second problem is the search for ways to regulate communication and negotiate speaker-hearer interaction, which can be served by metonymic changes. The main direction of both types of problem solving is toward informativeness and expressivity. Harris (2005:537) also proposes that the syntactic change can be motivated by a need for variety of expression. Specifically speaking, metaphorical processes are processes of inference across conceptual boundaries, and are typically referred to in terms of “mappings,” or “associative leaps,” from one domain to another, motivated by analogy and iconic relationships. On the other hand, the meaning changes arising out of contiguity in linguistic contexts are known as conceptual metonymic changes, which involve specifying one meaning in terms of another that is present, even if only covertly, in the context. Radden and Kövecses (1999) define metonymy as “a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same idealized cognitive model (ICM)” (21). It is largely correlated with shifts to meanings situated in the subjective belief state or attitude toward the situation, including the linguistic one. In sum, metonymic and metaphorical inferencing are complementary processes at the pragmatic level.