

Lexical Borrowing and Multilingual Contact in Hainan: Evidence from Hainanese and Li

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Abstract

Hainan Island constitutes a historically significant contact frontier between Sinitic and Tai–Kadai language communities within the South China Sea region. This study investigates lexical interaction between Hainanese (Southern Min) and Li (Hlai) through a stratified contact framework integrating contact-induced change theory and Proto-Hlai comparative reconstruction. Drawing on documented lexical sources and phonological descriptions, the analysis demonstrates that borrowing between the two systems is systematically layered rather than incidental. Ecological terminology likely reflects early settlement-phase adaptation, trade-related vocabulary corresponds to intensified maritime exchange, and administrative lexicon indexes later institutional consolidation. Comparative phonological evidence, particularly in initial consonant substitution and tonal reassignment, reveals structured adaptation mechanisms that correlate with borrowing depth. These patterns support a model of multilingual ecological equilibrium characterized by functional differentiation rather than structural convergence or language shift. By situating Hainan within broader South China Sea diffusion networks, the study reframes the island as a nodal interface in regional linguistic history rather than a peripheral dialect zone. The findings contribute to contact linguistics by proposing tonal integration and phonological opacity as relative chronological indicators in frontier multilingual systems. Future empirical testing through dialect geography and corpus-based frequency analysis is suggested to refine the stratification model.

Keywords

language exposure, Hainan Min language, Li language

1. Introduction

Maritime frontier zones frequently exhibit complex multilingual interaction rather than linguistic isolation. Hainan Island provides a compelling example. Located at the southern periphery of China, it has historically connected Southern Min-speaking settlers with indigenous Tai–Kadai-speaking populations [4,16]. The resulting contact environment fostered lexical exchange that remains visible in Hainanese and Li varieties today.

Previous research on Chinese dialect contact has emphasized mainland southern China [4], while Hlai studies have focused primarily on internal classification and reconstruction [9–13]. Systematic investigation of bidirectional lexical borrowing between Hainanese and Li remains comparatively limited. This paper

addresses that gap by applying contact-linguistic theory to documented lexical correspondences. Following Thomason and Kaufman [1] and Winford [3], lexical borrowing is interpreted as an index of contact intensity. Borrowing hierarchies suggest that cultural vocabulary transfers more readily than core grammar, while stratified loanword layers reflect different phases of interaction [2].

Hainanese belongs to the Southern Min (Minnan) branch of Sinitic. Due to geographic separation and contact influence, its phonological system differs from other Minnan varieties [5,6]. It retains complex tonal contrasts and distinctive consonant correspondences. However, Li languages (Hlai branch of Tai–Kadai) are spoken in central and southern Hainan. Comparative reconstruction of Proto-Hlai reveals a tonal and monosyllabic system distinct from Sinitic phonology [9–11]. Historical interaction between Li speakers and Sinitic settlers created conditions for prolonged bilingualism [10].

2. Lexical Borrowing and Comparative Evidence

Descriptive materials indicate that several Hainanese lexical items referring to indigenous ecological features lack clear Sinitic etymologies but align semantically with Li vocabulary recorded in major surveys [7,8]. Examples documented in Li lexical materials [6] include terms for upland rice varieties, rattan, and forest-based tools. Corresponding Hainanese items display tonal assignment consistent with Min tonal categories but show segmental features compatible with Tai–Kadai sources.

For instance, Li lexical entries for certain bamboo-related implements recorded in [6] show monosyllabic roots with specific tonal contours. Parallel Hainanese forms exhibit substitution of Li initial consonants with Min phonotactically permissible equivalents and tone reassignment into Hainanese tone categories. The degree of phonological integration suggests early borrowing rather than recent transfer. Similarly, ecological vocabulary relating to tropical plant species appears in both Li and Hainanese lexicons. The semantic specificity of these items supports substrate borrowing, consistent with borrowing hierarchies predicting ecological transfer during settlement phases [1,2].

Li lexical materials [6] also contain numerous Sinitic-origin terms. Comparative phonological analysis suggests that many of these derive from Southern Min rather than Mandarin. For example, Li forms corresponding to numerals beyond the basic counting range display phonological resemblance to Minnan forms rather than Mandarin reflexes [5,6]. The tonal adaptation of these forms into Li tonal categories is consistent with Tai–Kadai phonological constraints described in Proto-Hlai reconstructions [9–11]. Administrative vocabulary relating to taxation, markets, and institutional functions similarly reflects Sinitic influence. The phonological profiles of such loanwords exhibit systematic consonant substitution and syllable restructuring characteristic of Li phonotactics [8]. This directionality aligns with sociopolitical asymmetry models in contact linguistics [1,3], whereby institutional vocabulary transfers from the dominant administrative language into indigenous languages.

Comparative analysis reveals several recurring adaptation mechanisms: Initial consonants absent in Li are replaced by the closest Tai–Kadai equivalents. Min affricates are simplified, and complex onset clusters are reduced. Tones are reassigned according to Li tonal categories reconstructed in [7] and [9]. In the reverse direction, Li lexical items borrowed into Hainanese undergo tonal reassignment into Min tonal registers and consonant substitution consistent with Southern Min phonology described in [5]. Earlier borrowings show deeper phonological integration, often obscuring source-language structure. Later borrowings retain more transparent phonetic correspondences, supporting a stratified contact model.

Southern Min varieties participated extensively in maritime trade networks. Lexical diffusion from Minnan into Southeast Asian languages is well documented [4,15]. Items such as tauke and kopi entered Malay via trade networks connected to Southern Min speakers. While these examples reflect broader Minnan–Malay contact, they situate Hainanese within a maritime lexical diffusion system. Hainan's coastal orientation and migration history reinforce the plausibility of layered contact between Sinitic and Tai–Kadai languages.

3. Stratified Model of Contact

The lexical patterns observed between Hainanese and Li are not random accumulations of borrowed vocabulary but display internal organization consistent with stratified historical layering. A stratified model assumes that lexical transfer correlates with shifting sociolinguistic configurations rather than occurring uniformly across time. This perspective treats lexical items as historical artifacts whose phonological integration depth and semantic stability encode the relative chronology of contact.

The earliest identifiable layer appears to correspond to ecological adaptation. When Sinitic-speaking settlers first entered Hainan, they encountered environmental features and subsistence practices unfamiliar to mainland agricultural systems. In such contexts, borrowing tends to be necessity-driven rather than prestige-driven. Ecological terminology—particularly items relating to endemic flora, terrain features, agricultural implements adapted to tropical climates, and ritual objects tied to indigenous cosmology—likely entered Hainanese during sustained face-to-face interaction between communities. The phonological opacity of some of these items in modern Hainanese suggests early integration, where repeated bilingual use gradually obscured their external origin. In contact theory terms, such borrowing reflects high-intensity local bilingualism without sociopolitical asymmetry [1,2].

The second layer, associated with trade and material exchange, reflects increased economic interdependence. Unlike ecological vocabulary, trade lexicon is often portable and diffuses across social networks more rapidly. During periods of maritime intensification, particularly as Hainan became more integrated into regional coastal circuits, bilingual intermediaries likely facilitated lexical transfer in both directions. Words referring to commercial exchange, tools, market practices, and transport technologies display moderate phonological transparency, suggesting structured but domain-restricted contact. This pattern corresponds to Winford's domain-specific borrowing model [3], in which bilingual competence is uneven across semantic fields. Importantly, this layer demonstrates that Li was not merely a passive recipient; lexical evidence indicates bidirectional exchange, particularly in domains where indigenous knowledge intersected with expanding trade networks.

The most recent layer is associated with institutional and administrative consolidation. As Hainan became more tightly integrated into larger state structures, Sinitic varieties—especially Southern Min—gained institutional authority. Administrative terminology, numerals used in taxation or record-keeping, and terms associated with governance entered Li in this phase. These borrowings often retain clearer phonological resemblance to Min forms, implying shorter integration time and potentially lower degrees of widespread bilingualism. In contact-intensity terms, this stage reflects asymmetrical bilingualism with superstrate lexical transfer [2].

Crucially, stratification should not be interpreted as strictly sequential replacement. Rather, layers coexist synchronically. Ecological borrowings persist alongside later administrative loans, creating a lexicon that is historically layered but functionally simultaneous. This coexistence illustrates how contact-induced change accumulates rather than resets. Moreover, tonal adaptation patterns suggest that earlier layers underwent complete prosodic restructuring, while later layers exhibit partial tonal correspondence. Such gradience offers a methodological tool for relative dating of borrowings, supplementing documentary evidence. Therefore, stratification in Hainanese–Li contact is not merely semantic but phonological and prosodic.

4. Multilingual Ecology

The Hainanese–Li interaction cannot be adequately described using a dominance-substrate dichotomy. Instead, the evidence supports a model of stable multilingual ecology characterized by functional differentiation, domain specialization, and adaptive equilibrium.

In multilingual ecological systems, languages occupy overlapping yet distinct functional niches. Li maintained authority in domains tied to land, ritual, and local identity. Hainanese expanded in domains associated with commerce, mobility, and institutional administration. Rather than total displacement, this configuration resembles what Enfield describes as epidemiological diffusion across partially overlapping speech networks [19]. Linguistic features spread through social interaction, but only within domains where they are pragmatically useful.

This functional differentiation has structural consequences. Borrowing remains predominantly lexical rather than grammatical, indicating stable bilingualism without language shift. Core grammatical systems in

both Hainanese and Li remain structurally intact, suggesting that neither language experienced intense structural convergence comparable to creolization scenarios [1]. The preservation of grammatical autonomy reinforces the interpretation of contact as prolonged but balanced.

The ecological metaphor also highlights spatial variation. Contact intensity likely differed between coastal trade centers and inland Li-majority regions. Such variation predicts micro-stratification within lexical layers, where certain loanwords cluster geographically. Future fieldwork incorporating dialect geography could test this prediction.

Another important ecological dimension concerns identity marking. In multilingual frontiers, lexical retention or resistance can function as identity signaling. Ecological terms preserved from Li may index local authenticity, while administrative Sinitic borrowings index integration into broader political networks. Thus, lexical stratification reflects not only contact chronology but sociocultural positioning.

Importantly, the Hainan case complicates simplistic narratives of center-periphery diffusion. Hainan was not merely a recipient of mainland influence but an active node within South China Sea mobility networks. Southern Min maritime diffusion [4] situates Hainanese within a broader contact chain that includes Southeast Asian languages. Therefore, the island's multilingual ecology is nested within larger regional linguistic systems.

Finally, interpreting Hainan through ecological contact theory underscores the importance of resilience. Despite centuries of contact, Li languages persist, and Hainanese retains distinctive phonological identity separate from other Min varieties. Contact here produced layered integration rather than homogenization. This outcome challenges deterministic models that equate prolonged contact with inevitable convergence.

5. Conclusion

The lexical interaction between Hainanese and Li cannot be reduced to incidental borrowing or substrate influence. Rather, it reflects a historically layered multilingual system embedded within a maritime frontier ecology. By integrating comparative Hlai reconstruction [9–11], Southern Min phonological description [5,6], and established models of contact-induced change [1–3], this study has demonstrated that lexical transfer in Hainan exhibits patterned stratification corresponding to ecological adaptation, trade intensification, and institutional consolidation.

The central contribution of this paper lies in reframing Hainan not as a peripheral dialect zone but as a structurally stable multilingual contact frontier. The stratified lexical model proposed here suggests that degrees of phonological integration and tonal reassignment may serve as relative chronological indicators in contact environments lacking extensive written documentation. In this sense, tonal restructuring emerges not merely as phonetic accommodation but as a diagnostic marker of contact depth.

Furthermore, the Hainan case challenges linear diffusion models of linguistic influence. Rather than exhibiting wholesale convergence or language shift, the evidence points to functional differentiation and ecological equilibrium. Li retained domain authority in culturally embedded and environmentally grounded vocabulary, while Hainanese expanded within administrative and commercial domains. Such differentiation produced bidirectional lexical exchange without grammatical erosion, underscoring the resilience of both systems under sustained contact.

Situating Hainan within the broader South China Sea contact zone further amplifies its theoretical relevance. Southern Min maritime diffusion [4] and Tai–Kadai internal diversification [12,13] intersect geographically on Hainan Island. The island thus represents a nodal interface between Sinitic expansion and Tai–Kadai continuity. This configuration complicates center–periphery narratives and instead supports a network-based model of multilingual interaction in coastal East and Southeast Asia.

Methodologically, the analysis highlights the importance of combining reconstruction-based phonological comparison with domain-specific lexical analysis. Such integration enables contact linguistics to move beyond impressionistic borrowing lists toward structured ecological modeling. Future research incorporating fine-grained dialect geography, acoustic tonal analysis, and corpus-based frequency distribution could empirically test the stratification hypothesis advanced here.

Several testable predictions follow from this model. First, earlier ecological borrowings should exhibit greater phonological opacity and broader geographic distribution across Hainanese dialects. Second, administrative Sinitic loans in Li should cluster in regions with historically stronger state integration. Third, tonal reassignment patterns may correlate with borrowing chronology across additional Tai–Kadai–Sinitic contact zones in southern China.

Ultimately, the Hainanese–Li contact situation demonstrates that maritime frontiers can sustain long-term bilingual equilibria characterized by lexical layering rather than structural collapse. In doing so, it contributes to a growing recognition that multilingual stability, rather than convergence or replacement, may be a defining feature of coastal contact ecologies. Hainan, therefore, should be viewed not as a marginal dialect region but as a microcosm of South China Sea linguistic history.

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Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

Acknowledgment

This paper is an output of the science project.

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