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MEANING AS A MULTIDIMENSIONAL SYSTEM: REINTERPRETING STRUCTURAL, COGNITIVE, AND PRAGMATIC INTERFACES

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Abstract: The traditional compartmentalization of linguistic meaning into discrete structural, cognitive, and pragmatic domains has long impeded a unified understanding of how language functions as a meaning-making system. This study advances a reconceptualization of meaning as an inherently multidimensional phenomenon in which structural form, conceptual content, and contextual appropriateness are not merely adjacent components but dynamically interfacing dimensions of a single integrated system. Drawing upon converging evidence from cognitive linguistics, interlanguage pragmatics, and systemic functional theory, this research argues that meaning emerges through the continuous interaction of three critical interfaces—structural-cognitive, cognitive-pragmatic, and structural-pragmatic—rather than through any single dimension in isolation. Through qualitative conceptual analysis and synthesis of existing empirical literature, the study demonstrates that the structural-cognitive interface reveals how grammatical constructions encode conceptual schemas; the cognitive-pragmatic interface demonstrates how mental representations are calibrated against sociocultural norms; and the structural-pragmatic interface shows how formal choices index social and contextual variables. The findings indicate that pedagogical approaches which artificially separate these domains fundamentally misrepresent the nature of linguistic competence and contribute to the persistent gap between classroom-acquired knowledge and real-world communicative effectiveness. By reinterpreting these interfaces as co-constitutive rather than hierarchical, this study offers a principled framework for understanding meaning as a multidimensional system with significant implications for second language pedagogy, lexicographic practice, and computational language modeling.

Keywords: multidimensional meaning, structural meaning, cognitive semantics, pragmatic competence, interface theory, language pedagogy, conceptual metaphor, contextual appropriateness

1. Introduction

The question of what meaning is and how it is constituted has occupied a central position in linguistic inquiry since the discipline's inception. Yet despite decades of intensive research, the field remains characterized by a persistent fragmentation: structural linguistics examines meaning as a function of formal systems; cognitive linguistics investigates meaning as mental representation and conceptual structure; and pragmatics studies meaning as contextualized, socially negotiated interpretation. Each tradition has generated substantial insights, but their relative isolation has produced a theoretical landscape in which the whole of meaning is less well understood than its constituent parts.

This fragmentation is not merely an academic concern. It has tangible consequences for how language is taught, how dictionaries are compiled, how natural language processing systems are designed, and how communicative disorders are diagnosed and treated. When structural, cognitive, and pragmatic dimensions of meaning are treated as separable instructional objectives—as they frequently are in second language curricula—learners develop competence in each domain without necessarily acquiring the ability to integrate them in real-time communication. The result is a well-documented gap between classroom-acquired knowledge and communicative effectiveness in authentic contexts (Bardovi-Harlig, 2013; Taguchi & Roever, 2017).

The present study proposes a reinterpretation of these three meaning dimensions not as autonomous modules but as interfacing components of a unified multidimensional system. The central argument is that meaning is fundamentally relational: it arises not from structural form, conceptual content, or pragmatic context alone, but from the dynamic interaction among all three. Structural patterns carry cognitive import; cognitive representations are pragmatically calibrated; and pragmatic choices are formally encoded. These interactions occur continuously and simultaneously in ordinary language use, and any theoretical or pedagogical approach that fails to account for this simultaneity misrepresents the nature of linguistic competence.

This article is organized according to the IMRAD structure. Section 2 (Methods) describes the qualitative research design and analytical procedures. Section 3 (Results) presents the findings concerning each of the three interfaces. Section 4 (Discussion) interprets these findings and explores their implications. Section 5 (Conclusion) synthesizes the contributions and identifies directions for future research.

2. Methods

This study employs a qualitative research design aimed at synthesizing and critically analyzing existing theoretical and empirical literature to construct a unified framework for understanding meaning as a multidimensional system. The methodological approach is interdisciplinary, drawing upon primary sources from cognitive linguistics, interlanguage pragmatics, systemic functional linguistics, and second language pedagogy.

2.1 Research Design

The study adopts a conceptual-analytical methodology centered on the identification, classification, and synthesis of interface relationships between structural, cognitive, and pragmatic dimensions of meaning. Rather than collecting primary empirical data, the research synthesizes findings from systematic reviews, theoretical frameworks, and empirical studies published over the past four decades. This approach is appropriate given the study's objective of constructing a meta-theoretical framework that integrates insights from previously compartmentalized research traditions.

2.2 Data Sources and Selection Criteria

The primary data sources include peer-reviewed journal articles, monographs, and edited volumes in cognitive linguistics (Lakoff & Johnson, 1999; Goldberg, 2006), interlanguage pragmatics (Kasper & Rose, 2002; Taguchi, 2022; Taguchi & Roever, 2017), and second language pedagogy (Bardovi-Harlig, 2013; Cohen, 2005). Selection criteria prioritized sources that explicitly address the relationships among structural form, conceptual content, and pragmatic

context, as well as studies documenting the consequences of instructional fragmentation in language education.

2.3 Analytical Procedures

The analytical process involved three stages. First, conceptual analysis was employed to clarify the theoretical foundations of structural meaning, cognitive meaning, and pragmatic meaning, and to identify their respective limitations when treated in isolation. Second, interface analysis was conducted to examine how each pair of dimensions interacts in actual language use, drawing on construction grammar, conceptual metaphor theory, and politeness theory as analytical tools. Third, synthetic integration was performed to construct a unified multidimensional framework and to derive implications for pedagogy, lexicography, and computational modeling.

2.4 Theoretical Framework

The study is grounded in an interdisciplinary theoretical framework combining construction grammar (Goldberg, 2006), which treats grammatical constructions as form-meaning pairings; conceptual metaphor theory (Lakoff & Johnson, 1999), which posits that abstract thought is structured by mappings from embodied experience; and relevance theory and politeness theory, which account for the contextual calibration of linguistic choices. This tripartite theoretical foundation enables the simultaneous analysis of formal patterns, conceptual structures, and pragmatic functions without privileging any single dimension.

3. Results

The analytical procedures yielded three major findings concerning the interfaces between structural, cognitive, and pragmatic dimensions of meaning. Each finding addresses one critical interface and demonstrates how meaning emerges through the interaction of dimensions rather than through any single dimension in isolation.

3.1 The Structural-Cognitive Interface: Form as Conceptual Schema

The first finding concerns the structural-cognitive interface, which reveals how grammatical constructions encode conceptual schemas. Analysis of construction grammar literature demonstrates that grammatical patterns are not merely formal arrangements but carry conventionalized conceptual content. The English ditransitive construction (X caused Y to receive Z), for example, encodes a caused-possession scenario that is independent of the specific lexical items instantiating it. This constructional meaning is not an epiphenomenon of word meaning but a conceptual schema encoded directly in the grammatical pattern.

Further analysis reveals that the same conceptual content can be encoded by different structural patterns with distinct cognitive construals. The caused-motion construction (X caused Y to move Z) and the intransitive motion construction (Y moved Z) encode similar change-of-location scenarios but impose different cognitive perspectives: the former highlights agentive force, while the latter highlights the patient's autonomous movement. The passive construction (Mistakes were made) and the active construction (Someone made mistakes) encode the same propositional content but construe it with different attentional profiles and agent-defocusing strategies. These findings indicate that structural form is not a neutral vehicle for pre-existing conceptual content but an active determinant of how that content is mentally represented.

The analysis also identifies that conceptual metaphor theory provides a mechanism for understanding how abstract grammatical categories are grounded in embodied experience. Image schemas such as containment, path, and force—recurring patterns of bodily experience—provide the foundational structure for grammatical categories including prepositions, aspect, and case marking. The structural-cognitive interface is thus bidirectional: grammatical constructions encode conceptual schemas, and conceptual schemas provide the experiential grounding for grammatical categories.

3.2 The Cognitive-Pragmatic Interface: Concept as Social Calibration

The second finding concerns the cognitive-pragmatic interface, which demonstrates how mental representations are calibrated against sociocultural norms and contextual variables. Analysis of conceptual metaphor usage across different discourse contexts reveals that the same conceptual structure is pragmatically calibrated differently depending on the social setting, relational dynamics, and communicative goals. The metaphor ARGUMENT IS WAR, for instance, is cognitively real and systematically structures English speakers' reasoning about argumentative interactions. However, its pragmatic appropriateness varies significantly: in academic discourse, war metaphors may be conventional and unmarked; in therapeutic or diplomatic contexts, they may be counterproductive or offensive.

This calibration is not merely a matter of lexical selection but involves adjusting the entire conceptual framing of a situation. A speaker who reframes an argument as collaborative exploration rather than adversarial combat is not simply choosing different words but activating a different conceptual metaphor with different pragmatic implications. The cognitive-pragmatic interface thus reveals that conceptual structures are not context-independent mental representations but are continuously modulated by pragmatic considerations.

Empirical studies of L2 pragmatic performance (Youn & Bi, 2019) provide converging evidence for this interface. L2 learners in pragmatic role-play tasks were found to frequently activate appropriate conceptual schemas but fail to calibrate them against target-language pragmatic norms. A learner might understand the conceptual structure of a request but select a framing that is too direct or too indirect for the specific context, indicating a breakdown at the cognitive-pragmatic interface rather than a deficit in either cognitive or pragmatic knowledge alone. This finding suggests that the cognitive-pragmatic interface constitutes a distinct competence dimension that must be explicitly developed in language instruction.

3.3 The Structural-Pragmatic Interface: Form as Social Index

The third finding concerns the structural-pragmatic interface, which shows how formal choices index social and contextual variables. Analysis of grammatical variation across registers and genres reveals that structural choices routinely carry pragmatic significance beyond their propositional content. The passive voice, for example, is not merely a syntactic alternative to the active but a pragmatic resource for managing information structure, agent defocusing, and stylistic register. In scientific writing, the passive may index objectivity; in political discourse, it may index evasion of responsibility; in certain formal registers, it may index deference or distance.

This interface is particularly evident in systems where grammatical categories have been conventionalized specifically for pragmatic functions. Honorific systems, evidentials, and discourse markers represent cases where structural and pragmatic dimensions are thoroughly interfaced. In Korean, for instance, speech levels are morphologically encoded and pragmatically

obligatory; the choice of level is not optional but constitutive of appropriate social interaction. The structural and pragmatic dimensions are so thoroughly integrated that they cannot be separated without misrepresenting the nature of the linguistic system.

Cross-linguistic analysis reveals that the structural-pragmatic interface presents distinctive challenges for second language learners. The same formal pattern may carry different pragmatic values across languages. Directness in English requests (Pass the salt) is structurally simple and pragmatically conventional; the equivalent directness in many other languages would be pragmatically inappropriate. Learners must acquire not only the structural patterns of the target language but their specific pragmatic indexical values—a task that requires simultaneous attention to form and context. Studies of pragmatic development (Kasper & Rose, 2002; Taguchi, 2022) consistently document that learners who master structural patterns without acquiring their pragmatic indexical values produce grammatically accurate but socially inappropriate utterances.

3.4 Synthesis: Meaning as Emergent from Interface Interaction

The synthesis of these three findings yields a central conclusion: meaning is not the sum of structural, cognitive, and pragmatic components but the product of their continuous interaction. The structural-cognitive interface reveals that grammatical constructions encode and constrain conceptual schemas. The cognitive-pragmatic interface reveals that conceptual schemas are calibrated against sociocultural norms. The structural-pragmatic interface reveals that formal choices index social and contextual variables. These interfaces operate simultaneously and bidirectionally: structural patterns shape conceptual construals, conceptual schemas motivate pragmatic choices, and pragmatic contexts select among structural alternatives.

Table 1 presents an analytical framework summarizing the three meaning dimensions, their core properties, and their interface relationships. Table 2 presents a spiral integration model for curriculum design based on the multidimensional framework. Table 3 presents an assessment framework for evaluating integrated competence across the three dimensions.

Table 1

Analytical Framework of the Three Meaning Dimensions

Dimension	Core Focus	Key Theories	Interface Function
Structural	Grammatical, phonological, morphological, and lexical systems	Construction Grammar, Systemic Functional Linguistics	Encodes conceptual schemas; indexes social variables
Cognitive	Mental representations, conceptual metaphors, image schemas	Conceptual Metaphor Theory, Cognitive Grammar	Provides experiential grounding; calibrated by context
Pragmatic	Contextual appropriateness, sociocultural norms, communicative intent	Relevance Theory, Politeness Theory, Speech Act Theory	Selects among alternatives; motivates formal choices

Table 2

Spiral Integration Model for ESL Curriculum Design

Curriculum Phase	Structural Focus	Cognitive Focus	Pragmatic Focus
Phase 1: Foundation	Basic grammatical constructions (ditransitive, passive, causative)	Core image schemas (containment, path, force)	High-frequency speech acts (requests, apologies, greetings)
Phase 2: Expansion	Complex constructions (conditionals, relative clauses, nominalizations)	Conceptual metaphors (ARGUMENT IS WAR, TIME IS MONEY)	Register variation (academic, professional, informal)
Phase 3: Integration	Genre-specific patterns (research articles, narratives, argumentative essays)	Cross-cultural conceptual mapping and contrastive analysis	Intercultural pragmatics and politeness strategies
Phase 4: Mastery	Creative construction use and stylistic variation	Metacognitive awareness of conceptual framing	Strategic adaptation to novel communicative contexts

Table 3

Assessment Framework for Integrated Competence

Competence Dimension	Assessment Method	Indicators	Weighting
Structural-Cognitive	Construction analysis tasks; Conceptual mapping exercises	Accuracy of grammatical form; Appropriateness of conceptual construal	30%
Cognitive-Pragmatic	Pragmatic role-play tasks; Reflective journals	Appropriateness of conceptual framing; Contextual calibration accuracy	35%
Structural-Pragmatic	Register analysis; Genre-specific writing tasks	Appropriateness of formal choice; Social indexical accuracy	35%

4. Discussion

The results of this study confirm that linguistic meaning cannot be adequately understood through the analysis of structural, cognitive, or pragmatic dimensions in isolation. Rather, meaning emerges as a multidimensional system constituted by the dynamic interaction of three critical interfaces. This finding has significant implications for linguistic theory, second language pedagogy, lexicographic practice, and computational language modeling.

4.1 Theoretical Implications

The multidimensional framework challenges the modular assumptions underlying much contemporary linguistic theory. If meaning is fundamentally relational—emerging from the interaction of structural form, conceptual content, and pragmatic context—then theories that privilege any single dimension as foundational are necessarily incomplete. Construction grammar correctly identifies that grammatical constructions carry meaning, but without the cognitive-pragmatic interface, it cannot explain why particular constructions are selected in particular contexts. Conceptual metaphor theory correctly identifies that abstract thought is grounded in embodied experience, but without the structural-pragmatic interface, it cannot explain how metaphorical mappings are formally realized or socially calibrated. Pragmatic theory correctly identifies that meaning is context-dependent, but without the structural-cognitive interface, it cannot explain the systematicity of contextual interpretation or the learnability of pragmatic knowledge.

The framework also suggests a reconceptualization of communicative competence. Canale and Swain's (1980) influential model identified grammatical, sociolinguistic, discourse, and strategic competences as distinct components. The present findings suggest that these components are not merely related but interfaced: grammatical competence is always already sociolinguistic, and sociolinguistic competence is always already cognitive. The task of the language learner is not to acquire discrete competencies and then integrate them, but to develop an integrated competence from the outset—a competence in which structural accuracy, conceptual understanding, and pragmatic appropriateness are co-constitutive.

4.2 Pedagogical Implications

The most urgent implications of this study concern second language pedagogy. Current curricula frequently organize instruction around discrete competencies: grammar courses address structural meaning, reading and vocabulary courses address cognitive meaning, and conversation or pragmatics courses address contextual appropriateness. This organizational structure reflects the theoretical fragmentation criticized above and produces the well-documented gap between classroom knowledge and communicative effectiveness.

The spiral integration model presented in Table 2 offers an alternative approach. Rather than teaching structural, cognitive, and pragmatic dimensions sequentially, the model proposes a spiral curriculum in which all three dimensions are present from the earliest stages but with increasing depth and complexity. In Phase 1 (Foundation), learners encounter basic grammatical constructions together with the image schemas that ground them and the high-frequency speech acts in which they occur. In Phase 2 (Expansion), learners engage with more complex constructions, conceptual metaphors, and register variation. In Phase 3 (Integration), learners analyze genre-specific patterns, cross-cultural conceptual mappings, and intercultural pragmatics. In Phase 4 (Mastery), learners develop metacognitive awareness and strategic adaptation capabilities. At each phase, the three dimensions are taught as interfacing rather than separate.

Text-centered learning provides an effective mechanism for such integration. When students engage with culturally and socially meaningful texts, they encounter linguistic forms, conceptual schemas, and pragmatic norms in their natural co-occurrence. Analysis of a literary text, for example, can simultaneously address how grammatical constructions shape narrative perspective (structural-cognitive), how conceptual metaphors reflect cultural values (cognitive-pragmatic), and how formal choices index genre and register (structural-pragmatic). Dialogic teaching methods further support integration by requiring students to activate all three dimensions in real-time communication. Classroom discussion demands structural accuracy, conceptual clarity, and pragmatic appropriateness simultaneously; it cannot be successfully navigated through competence in any single dimension.

The assessment framework presented in Table 3 addresses the challenge of evaluating integrated competence. Traditional assessments typically measure structural, cognitive, and pragmatic dimensions separately, producing profiles that may not reflect actual communicative ability. The proposed framework weights the interface dimensions more heavily than discrete skills, recognizing that communicative effectiveness depends on the integration of dimensions rather than on competence in any single domain. Construction analysis tasks assess the structural-cognitive interface; pragmatic role-play tasks assess the cognitive-pragmatic interface; and register analysis tasks assess the structural-pragmatic interface.

4.3 Implications for Lexicographic Practice

Traditional dictionaries have historically privileged the structural and cognitive dimensions of meaning, providing grammatical information and definitional content while treating pragmatic usage as secondary or peripheral. The multidimensional framework suggests that lexicographic resources should systematically represent all three interfaces. Entries for polysemous words should indicate not only their structural patterns and conceptual senses but also their pragmatic profiles—register constraints, collocational preferences, and contextual appropriateness conditions. Learner dictionaries have made progress in this direction through the inclusion of usage notes and pragmatic labels, but a fully multidimensional lexicography would integrate this information into the core representational structure rather than appending it as supplementary material.

4.4 Implications for Computational Language Modeling

Large language models have achieved remarkable success in generating contextually appropriate text, but their internal representations of meaning remain opaque. The multidimensional framework suggests that more interpretable and robust language models might be developed by explicitly encoding the three interfaces: structural patterns as constructional schemas, conceptual content as embedding spaces grounded in embodied experience, and pragmatic calibration as contextual adaptation mechanisms. Current models implicitly approximate these interfaces through statistical pattern matching, but explicit architectural commitments to multidimensional meaning could improve generalization, reduce harmful biases, and enhance cross-linguistic transfer. A model that understands ARGUMENT IS WAR as a conceptual metaphor with variable pragmatic calibration, for instance, would be less likely to generate adversarial language in contexts where collaborative framing is appropriate.

4.5 Limitations and Future Directions

This study is limited by its reliance on secondary sources and its qualitative, conceptual-analytical methodology. While the synthesis of existing research provides a robust foundation for the multidimensional framework, future research should empirically test the framework through

experimental and longitudinal studies. Specifically, research is needed to investigate the neural substrates of the three interfaces, the developmental trajectories of interface integration in first and second language acquisition, and the cross-linguistic variation in how structural, cognitive, and pragmatic dimensions are mapped onto one another. Additionally, intervention studies should evaluate the effectiveness of the spiral integration model in actual classroom settings, comparing outcomes with those of traditional compartmentalized curricula.

5. Conclusion

This study has demonstrated that linguistic meaning is best understood not as a property of linguistic form, mental representation, or social context alone, but as a multidimensional system constituted by the continuous interaction of structural, cognitive, and pragmatic interfaces. The structural-cognitive interface reveals that grammatical constructions encode and constrain conceptual schemas. The cognitive-pragmatic interface reveals that conceptual schemas are calibrated against sociocultural norms. The structural-pragmatic interface reveals that formal choices index social and contextual variables. These interfaces are not hierarchical stages in a processing sequence but co-constitutive dimensions that are simultaneously activated in ordinary language use.

The findings indicate that any adequate theory of meaning must account for the simultaneous activation of all three dimensions. Theoretical approaches that privilege structural form, conceptual content, or pragmatic context as foundational are necessarily incomplete. Communicative competence is not the sum of discrete competencies but an integrated capacity in which structural accuracy, conceptual understanding, and pragmatic appropriateness are co-constitutive. This reconceptualization has significant implications for how language is taught, how dictionaries are compiled, and how natural language processing systems are designed.

The most urgent implication concerns second language pedagogy. When structural, cognitive, and pragmatic dimensions are taught as separate objectives, learners develop fragmented competence that does not transfer to authentic communication. The spiral integration model proposed in this study offers a principled alternative, organizing instruction around the progressive deepening of interface competence rather than the sequential acquisition of discrete skills. Text-centered learning, dialogic teaching methods, and reflective writing tasks provide effective mechanisms for fostering this integration in the classroom.

Future research should continue to investigate the neural and psychological substrates of the three interfaces, the developmental trajectories of interface integration in first and second language acquisition, and the effectiveness of integrated pedagogical approaches. The multidimensional framework provides a unified conceptual vocabulary for describing meaning in its full complexity and a principled foundation for such investigations. Ultimately, the reinterpretation of structural, cognitive, and pragmatic meaning as interfacing dimensions of a single system reflects a broader theoretical commitment: that language is not a code for transmitting pre-existing thoughts but a dynamic, socially embedded, cognitively grounded instrument for constructing and negotiating meaning in a complex world.

References

1. Bardovi-Harlig, K. (2013). Developing L2 pragmatics. Language Learning, 63(s1), 68–86. https://doi.org/10.1111/j.1467-9922.2012.00738.x

2. Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. Applied Linguistics, 1(1), 1–47. https://doi.org/10.1093/applin/1.1.1
3. Cohen, A. D. (2005). Strategies in learning and using a second language. Longman.
4. Cohen, A. D., & Sykes, J. M. (2013). Strategy-based instruction of pragmatics. In Pragmatic development in L2 contexts (pp. 145–170). Multilingual Matters.
5. Goldberg, A. E. (2006). Constructions at work: The nature of generalization in language. Oxford University Press.
6. Kasper, G., & Rose, K. R. (2002). Pragmatic development in a second language. Blackwell.
7. Lakoff, G., & Johnson, M. (1999). Philosophy in the flesh: The embodied mind and its challenge to Western thought. Basic Books.
8. Mao, T. (2020). Redefining pragmatic competence among modular interactions and beyond. Intercultural Pragmatics, 17(5), 605–631. https://doi.org/10.1515/ip-2020-0015
9. Nguyen, T. T. M., Do, H. T., Pham, T. T., & Nguyen, A. T. (2018). The effectiveness of corrective feedback for the acquisition of L2 pragmatics: An eight-month investigation. International Review of Applied Linguistics in Language Teaching, 56(3), 345–375. https://doi.org/10.1515/iral-2016-0068
10. Ren, W., & Han, Z. (2016). The representation of pragmatic knowledge in recent ELT textbooks. ELT Journal, 70(4), 424–434. https://doi.org/10.1093/elt/ccw026
11. Taguchi, N. (2022). Second language pragmatics: A historical overview and future directions. In N. Halenko & J. Wang (Eds.), Pragmatics in English language learning (pp. 7–25). Cambridge University Press.
12. Taguchi, N., & Roever, C. (2017). Second language pragmatics. Oxford University Press.
13. Thomas, J. (1983). Cross-cultural pragmatic failure. Applied Linguistics, 4(2), 91–112. https://doi.org/10.1093/applin/4.2.91
14. Youn, S. J., & Bi, X. (2019). The cognitive processes of L2 learners in pragmatic role-play tasks in academic settings. Frontiers in Psychology, 12, 586588. https://doi.org/10.3389/fpsyg.2021.586588
15. Zhang, Y. (2022). The influence of combining computer-assisted language learning with instruction on Chinese college students' L2 pragmatic ability. Chinese Journal of Applied Linguistics, 45(2), 213–231. https://doi.org/10.1515/CJAL-2022-0014