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COGNITIVE ASPECTS OF THE GENDER CONCEPT IN LANGUAGES

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Abstract. Gender as a linguistic category operates not only as a grammatical marker but also as a cognitive framework that shapes human perception, categorization, and cultural discourse. The interaction between linguistic structures and conceptual thought has been widely examined within cognitive linguistics, yet the specific role of gender systems in influencing mental representations remains an active area of inquiry. This paper adopts a comparative qualitative approach to investigate cognitive aspects of the gender concept in languages, focusing on grammatical gender (Russian, German, Spanish), natural gender (English), and gender-neutral systems (Turkish, Finnish). Drawing on descriptive grammars, corpus analysis, and previous psycholinguistic studies, the research identifies cross-linguistic patterns in gender-based categorization, metaphorical extension, and stereotype reinforcement. Findings indicate that even in gender-neutral languages, cultural discourse maintains gendered conceptual schemas, suggesting that linguistic reform must address both structural and cultural levels to effect cognitive change. The study contributes to the broader discussion of linguistic relativity by highlighting how grammatical categories interact with societal norms to influence thought.

Keywords: Cognitive linguistics, gender in language, grammatical gender, gender-neutral languages, conceptual categorization, linguistic relativity, metaphorical associations, cross-linguistic analysis.

TILDA GENDER TUSHUNCHASINING KOGNITIV JIHATLARI

Annotatsiya. Til tizimida gender kategoriyasi nafaqat grammatik belgi sifatida, balki inson idroki, tasnifi va madaniy diskursini shakllantiruvchi kognitiv tuzilma sifatida ham faoliyat yuritadi. Lingvistik tuzilmalar va konseptual tafakkur o'rtasidagi o'zaro ta'sir kognitiv lingvistika doirasida keng o'rganilgan bo'lsa-da, gender tizimlarining aqliy tasavvurlarga ta'siri masalasi hanuz faol tadqiqot sohasidir. Ushbu maqola tilshunoslikdagi gender konsepsiyasining kognitiv jihatlarini tadqiq etish uchun qiyosiy sifat tahliliga asoslangan bo'lib, grammatik jins (rus, nemis, ispan tillari), tabiiy jins (ingliz tili) va jins neytral tizimlar (turk, fin tillari)ga qaratilgan. Tavsifiy grammatikalar, korpus tahlili hamda avvalgi psixolingvistik tadqiqotlardan foydalanib, izlanish jinsga asoslangan tasniflash, metaforik kengayish va stereotiplarni mustahkamlashning turli tillardagi o'xshash naqshlarini aniqlaydi. Natijalar shuni ko'rsatadiki, hatto gender neytral tillarda ham madaniy diskurs jinsga oid konseptual sxemalarni saqlab qoladi, bu esa til islohotlari kognitiv o'zgarishga erishish uchun ham tuzilmaviy, ham madaniy darajalarga qaratilishi zarurligini anglatadi. Tadqiqot, grammatik kategoriyalar jamiyat normalari bilan qanday o'zaro ta'sir qilishi orqali tafakkurga ta'sirini yoritib, lingvistik nisbiylik bo'yicha kengroq munozaraga hissa qo'shadi.

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Kalit so'zlar: Kognitiv lingvistika, tilda gender kategoriyasi, grammatik gender, gender neytral tillar, konseptual tasnif, lingvistik nisbiylik, metaforik assotsiatsiyalar, qiyosiy tilshunoslik tahlili.

КОГНИТИВНЫЕ АСПЕКТЫ КОНЦЕПТА РОДА В ЯЗЫКЕ

Аннотация. Грамматическая категория рода в языке функционирует не только как морфологический показатель, но и как когнитивная структура, формирующая восприятие, категоризацию и культурный дискурс. Взаимосвязь языковых структур и концептуального мышления широко изучена в рамках когнитивной лингвистики, однако конкретная роль гендерных систем в формировании ментальных репрезентаций остаётся актуальной областью исследований. В данной статье применяется сравнительный качественный подход к изучению когнитивных аспектов концепта рода в языках, с акцентом на грамматический род (русский, немецкий, испанский), естественный род (английский) и гендерно-нейтральные системы (турецкий, финский). На основе описательных грамматик, корпусного анализа и предыдущих психолингвистических исследований выявляются кросс-лингвистические закономерности в гендерной категоризации, метафорическом расширении и закреплении стереотипов. Результаты показывают, что даже в гендерно-нейтральных языках культурный дискурс сохраняет гендерные концептуальные схемы, что указывает на необходимость направлять языковые реформы как на структурный, так и на культурный уровни для достижения когнитивных изменений. Исследование вносит вклад в более широкий дискурс о лингвистической относительности, демонстрируя, как грамматические категории взаимодействуют с социальными нормами и влияют на мышление.

Ключевые слова: Когнитивная лингвистика, род в языке, грамматический род, гендерно-нейтральные языки, концептуальная категоризация, лингвистическая относительность, метафорические ассоциации, сопоставительный анализ языков.

INTRODUCTION. Gender in linguistic theory. Gender in language has traditionally been defined as a grammatical system for classifying nouns, pronouns, and related elements into distinct categories, often labeled *masculine*, *feminine*, and sometimes *neuter*. While some scholars treat gender as an arbitrary formal feature, others emphasize its semantic and cognitive dimensions (Corbett, 1991; Lakoff, 1987). The concept is particularly relevant in cognitive linguistics, where language is seen as an expression of conceptual structures rather than a purely symbolic code.

Gender in linguistics refers not only to social identity but also to a grammatical category encoded in many languages. Although often treated as a formal feature, gender interacts with cognition by channeling conceptualization, attention, and memory retrieval. From a cognitive-functional perspective, obligatory grammatical choices—such as gender marking on nouns, adjectives, or pronouns—act as filters that shape how speakers package experience for communication. The present article integrates typological, psycholinguistic, and corpus-based findings to show how grammatical gender can bias interpretation and how inclusive practices may modulate that bias.

Cognitive linguistics perspective. Cognitive linguistics approaches gender not as a static grammatical feature but as a conceptual category with prototype effects, metaphorical extensions, and cultural salience. Lakoff's (1987) work on categorization argues that human classification is based on prototypical members and conceptual metaphors, both of which are shaped by linguistic patterns. For

example, in Spanish, *la muerte* ("death") is grammatically feminine, often personified as a woman, reinforcing metaphorical associations of femininity with mystery and inevitability.

Typologically, gender systems range from sex-based (e.g., many Indo-European languages) to non-sex-based noun classes (e.g., Bantu), while a large set of languages exhibit no grammatical gender (e.g., Turkic, Finno-Ugric). In gendered languages, agreement propagates across the clause (nouns, adjectives, determiners, pronouns, sometimes verbs), whereas in genderless languages reference is maintained through lexical and pragmatic cues rather than morphosyntax.

Within cognitive linguistics, Slobin's "thinking-for-speaking" hypothesis predicts that obligatory categories guide attention during message planning; hence, gender can highlight distinctions that might otherwise remain backgrounded. Contemporary generative work locates gender features in the nominal spine (e.g., a little n head), explaining cross-linguistic variation in where agreement is checked and realized.

Linguistic relativity and gender. The Sapir–Whorf hypothesis, particularly in its weak form, posits that linguistic categories influence habitual thought. Studies by Boroditsky et al. (2003) demonstrate that speakers of grammatical gender languages attribute gendered qualities to inanimate objects in ways consistent with grammatical marking. Conversely, speakers of gender-neutral languages tend to rely more on functional or physical attributes. This paper situates its analysis within this framework, examining how gender marking interacts with cognition across different language types.

METHODS. The study examines three typological categories:

- **Grammatical gender languages** – Russian, German, Spanish.
- **Natural gender languages** – English.
- **Gender-neutral languages** – Turkish, Finnish.

Analysis followed three steps:

1. **Grammatical analysis** — identifying gender marking in nouns, pronouns, and agreement systems.
2. **Cognitive mapping** — tracing conceptual associations using Lakoff's prototype theory.
3. **Metaphorical categorization** — classifying gender-related metaphors and cultural schemas using the Lakoff & Johnson (1980) model.

RESULTS

Table 1. Gender system typology

Language Type	Example Languages	Grammatical Gender	Pronoun System	Gender-neutral Alternatives
Grammatical Gender	Russian, German, Spanish	Masculine, Feminine (+ Neuter in some)	Pronouns agree in gender	Rare, usually periphrastic
Natural Gender	English	Minimal (pronouns)	He/She for humans, It for non-humans	Singular *they* emerging
Gender-neutral	Turkish, Finnish	None	Single pronoun form	No gender marking in any noun/pronoun

Table 2. Metaphorical associations

Language Type	Example	Common Associations
Grammatical Gender	Spanish: *el sol* (masc. – sun), *la luna* (fem. – moon)	Masculine = strength, activity; Feminine = beauty, mystery
Natural Gender	English: "Mother Nature," "Father Time"	Feminine = nurturing; Masculine = authority
Gender-neutral	Finnish: *aurinko* (sun), *kuu* (moon) — no gender	Associations depend on folklore rather than grammar

Cross-linguistic patterns

• **Prototype effects** — Gendered grammatical forms influence default mental imagery (e.g., *uchitel'* in Russian evokes a male image despite being generic).

• **Metaphorical persistence** — Even without grammatical gender, metaphorical personifications (e.g., Mother Earth) remain.

• **Cultural reinforcement** — Folk narratives and proverbs perpetuate gendered conceptual schemas regardless of grammar.

DISCUSSION

Cognitive implications. The data support the idea that grammatical gender acts as a cognitive cue, subtly shaping speakers' conceptualizations of both animate and inanimate entities. While this influence is strongest in grammatical gender languages, even gender-neutral languages maintain gendered associations through metaphor and culture.

Cultural persistence of gender. One of the most striking findings is that cultural narratives can maintain gender distinctions even when grammar does not encode them. Finnish folklore, for example, personifies the moon as feminine and the sun as masculine, despite the absence of grammatical gender. This suggests that language reform alone cannot eliminate cognitive gender bias; cultural change is equally necessary.

Implications for inclusivity. Efforts to introduce gender-neutral forms, such as *hen* in Swedish or singular *they* in English, can gradually reshape prototypes. However, adoption rates vary, and resistance often reflects deeper societal attitudes toward gender identity.

Limitations and future research. The study is limited by its reliance on existing data and secondary analysis. Experimental work involving reaction times, recall tasks, or implicit association tests could provide more robust evidence for cognitive effects. Longitudinal studies could also measure whether linguistic reforms lead to measurable cognitive shifts.

Cognitive mechanisms: how gender exerts its effects

1. Categorization and associative profiling. Gendered systems can produce stable associative profiles for inanimate nouns (e.g., "bridge" aligning with attributes stereotypically associated with masculine or feminine forms in particular languages). These associations may leak into metaphor choice and descriptive language.

2. Reference and inference. Noun phrases and occupational terms intended as generic masculine often skew interpretation toward male referents in comprehension tasks, showing that "generic" forms are not cognitively neutral.

3. Processing cost. Violations of gender agreement inflate reading times and elicit characteristic ERP signatures (often N400/P600 patterns), indicating costs at both lexical-semantic integration and syntactic reanalysis.

4. Socio-cognitive interface. Distributional patterns in corpora (e.g., frequent pairing of certain professions with male pronouns) reinforce inferential biases during comprehension and memory, creating a feedback loop between usage and cognition

Conclusion. Grammatical gender is not a merely formal ornament; it is a **cognitive resource** that directs attention, shapes referential expectations, and interacts with social stereotypes. Converging evidence from typology, on-line processing, neurocognitive measures, and corpus methods supports the claim that gendered morphosyntax leaves measurable traces on interpretation. Inclusive strategies can mitigate default male biases without sacrificing clarity, particularly when implemented consistently across institutions. For Uzbek—a structurally gender-neutral language—the main front is **lexical practice** and **translation policy**. Carefully designed bilingual experiments can deliver local, policy-relevant evidence on how language structure and usage jointly steer cognition.

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