

Linguopragmatic Functions Of Number-Based Nonverbal Signs In Multisystem Languages

Kurbanova Sevarakhon Rustamjon qizi

PhD student, Andijan State Institute of Foreign Languages., Uzbekistan

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Abstract: This article explores the linguopragmatic mechanisms behind number-based nonverbal signs in languages belonging to different structural systems. Unlike traditional studies that treat numbers primarily as linguistic or mathematical units, this research investigates their semiotic, cultural, pragmatic and digital communicative roles. Drawing on multimodal discourse data from Uzbek, English, Russian and Turkish, the study reveals that numeric gestures and symbolic number codes constitute a complex semiotic layer that shapes interpersonal interaction, cultural symbolism and online communication practices. A new explanatory model is proposed to account for the multifunctionality of numeric nonverbal signs in contemporary multimodal communication.

Keywords: Number-based signs, nonverbal communication, semiotics, linguopractics, multimodality, symbolic numbers.

Introduction: In modern communication, numbers extend far beyond their primary mathematical function. They appear in rituals, gestures, media discourse and digital interaction, gradually acquiring symbolic, emotional and pragmatic value. As a result, number-based nonverbal signs have developed into a distinct semiotic category that interacts with linguistic, cultural and cognitive systems in complex ways.

In typologically diverse languages such as Uzbek, English, Russian and Turkish, numeric signs naturally occur in daily communication as indexing devices, evaluative markers, cultural symbols and concise meaning units. They contribute to the organization of interaction, the expression of social attitudes and the encoding of culturally specific meanings.

Although nonverbal communication has been widely explored in studies on gesture, proxemics and multimodal meaning making [1], [2], the pragmatic behavior of numbers used as nonverbal signs remains insufficiently addressed. Anthropological and folkloric works occasionally mention sacred or taboo numbers, yet contemporary multimodal discourse reveals a much broader phenomenon. Numbers now function as compact pragmatic expressions such as "twenty four seven", "first class" and "zero tolerance", as well as

digital codes like "404" or "143". They also appear as symbolic gestures, including raising a single finger to attract attention, and as ritual indicators in practices such as the Uzbek "qirq kun" tradition or the Turkish custom known as "kırkı çıkmak".

Given their expanding presence across various communicative environments, the aim of this study is to develop a linguopragmatic framework explaining how number-based nonverbal signs operate within and across different linguistic and cultural settings.

METHODOLOGY

This study employs a multi-dimensional qualitative methodology designed to capture the complex semiotic and pragmatic behavior of number-based nonverbal signs across different linguistic and cultural environments. First, a semiotic analysis was conducted in order to classify numeric signs according to Peircean categories such as iconic, indexical and symbolic forms [5]. For instance, the representation of "three" with fingers varies cross-culturally and therefore serves as an iconic manifestation, while raising a single finger to request silence or attention functions as an indexical cue. The second component of the methodology involves cross-linguistic comparison. Gesture inventories, ritual practices, media texts and digital

communication samples from Uzbek, English, Russian and Turkish were examined to determine both universal tendencies and culture-specific distinctions. Third, a pragmatic analysis was carried out to identify the illocutionary force and contextual meaning of numeric signs, focusing on how expressions such as “number one” or a displayed “zero” influence speaker intention and interpersonal interaction [7].

In addition, a digital corpus observation was undertaken to analyze the emergence of numeric codes in online spaces. Social-media posts, memes and emoji-number combinations were inspected to reveal new forms of digital semiotics, including expressions like “404” for confusion or “99+” to signal overload. Finally, ethnographic elicitation was used to validate interpretations in culturally grounded contexts. Ritual specialists, educators and young digital users provided insights into traditional practices such as the Uzbek “qirq kun” observance or contemporary youth expressions like using “7” to imply luck.

This integrated approach offers a comprehensive view of how numeric nonverbal signs operate as multimodal meaning-making resources across diverse communicative settings.

RESULTS

1. Structural Types of Numeric Nonverbal Signs. The findings demonstrate that numeric nonverbal signs form a hybrid semiotic system comprising iconic, indexical and symbolic structures that function simultaneously in communication. Iconic forms emerge when numbers are represented through visual resemblance, most notably finger-counting gestures. For example, the gesture for “three” differs significantly across cultures, with English speakers typically extending the index, middle and ring fingers, while Uzbek speakers often display the thumb, index and middle fingers. Indexical forms rely on socially recognized conventions, such as raising a single finger to request a turn, signaling ranking in competitions or forming a circle to indicate “zero” during disagreement or negation. Symbolic forms represent culturally established associations, including Uzbek expressions like “yetti qavat”, Western avoidance of the number “13”, or globally recognized numeric icons such as “007”. The coexistence of these three semiotic types illustrates the layered and dynamic nature of numeric nonverbal communication, showing that the same number may carry iconic simplicity, indexical direction and symbolic depth depending on context.

2. Linguopragmatic Functions. Cross-linguistic analysis identified five major linguopragmatic functions of numeric nonverbal signs. The first is the regulatory function, observed when numeric gestures help

coordinate interaction. Teachers regularly use finger-count sequences to manage classroom participation, while sports referees rely on numeric hand signals to maintain order. The second is the evaluative function, in which numbers encode judgments or assessments; for example, expressions like “number one” or the Uzbek exclamation “besh!” denote high quality or excellence. The third is the expressive function, where enlarged or intensified numeric gestures convey emotional stance, such as emphatically showing “zero” to reject a suggestion. The fourth is the cultural-symbolic function, reflected in culturally rooted numeric meanings: Uzbek and Turkic traditions attach symbolic weight to numbers such as seven, twelve and forty; English cultural discourse assigns ritual value to seven while maintaining a long-standing taboo around thirteen; Russian communicative norms incorporate numerically coded historical connotations. The fifth is the digital-pragmatic function, increasingly prominent in online environments where numbers act as compressed communicative formulas. Codes such as “404” for confusion, “143” for affection, “520” as a phono-semantic declaration of love, and “99+” to express overload demonstrate how numeric semiotics adapts to the demands of digital minimalism.

Together, these findings show that numeric nonverbal signs perform diverse and context-dependent functions that transcend their denotational origins and become key components of modern multimodal communication.

3. Convergence and Divergence Across Languages. The comparative analysis of Uzbek, English, Russian and Turkish communicative practices reveals both striking divergences and notable convergences in the use of number-based nonverbal signs. Divergence is most evident in the cultural-symbolic layer. Uzbek and other Turkic languages preserve strong mythopoetic traditions in which numbers such as seven, twelve and forty represent cosmological structure, ancestral memory or ritual purification. English, by contrast, relies more heavily on numeric metaphors shaped by technological and institutional domains, including expressions such as “twenty four seven” or academic course labels like “English 101”. Russian communicative culture maintains indexical meanings inherited from the Soviet period, where numeric designations such as “yukaz 58” or “troika” evoke specific historical or ideological associations.

Despite these cultural distinctions, several points of convergence emerge across languages. First, finger-based quantification is universally practiced, although gesture forms vary. Second, digital numeric codes have become globally intelligible, with expressions like “404” for error or “99+” for overload circulating freely across

linguistic boundaries. Finally, generational differences indicate a global pattern: younger speakers, regardless of cultural background, employ numeric semiotics more actively, particularly in digital communication. This suggests that numeric nonverbal signs are evolving toward translingual and technologically mediated forms that complement culturally rooted traditions.

DISCUSSION

1. **Numbers as Cognitive and Pragmatic Condensers.** The analysis indicates that numbers often act as cognitive shortcuts and pragmatic condensers, functioning as “compressed speech acts” that convey complex meanings with minimal linguistic form. Expressions such as “first class”, “zero tolerance”, or the simple use of “one” to signal exclusivity or superiority illustrate how numerical forms can encode evaluative, directive or expressive meanings instantly [9]. This tendency reflects broader communicative preferences in modern societies, where brevity, efficiency and symbolic density are increasingly valued across interpersonal, institutional and digital exchanges.

2. **Digitalization of Numeric Semiotics.** The rapid digitalization of communication has transformed numeric semiotics from predominantly gesture-based representations into algorithmic and textual code systems. Online expressions such as “404” for confusion, “143” for affection or “520” for love illustrate how numbers have been refunctionalized as shorthand digital utterances. Hashtags, emoji-number combinations and platform-specific numeric trends further reveal the increasing abstraction of numbers from physical gesture toward multimodal digital symbolism, marking a significant evolution in semiotic practice.

3. **Multimodal Integration.** Numeric nonverbal signs do not operate in isolation; instead, they engage in constant interaction with other semiotic modes such as facial expressions, intonation, gesture and written language. In face-to-face communication, a numeric gesture may be synchronized with tone or gaze to strengthen its pragmatic force. In digital environments, numbers are embedded within visual media—videos, GIFs, emojis—forming integrated multimodal meaning units that enhance clarity and emotional expressiveness. This multimodal integration underscores the flexibility and communicative richness of numeric semiotics across diverse platforms and contexts.

2. **Cultural Anchoring of Numeric Symbols.** The cultural embeddedness of numeric symbols is especially evident in societies where ritual traditions and inherited cosmological frameworks strongly influence

social consciousness. In Uzbek and Turkish cultural settings, numbers such as seven, twelve and forty function not only as quantitative units but also as deeply rooted symbolic constructs that preserve ancestral worldviews, spiritual interpretations and moral values. These numbers maintain their significance because they represent culturally defined temporal cycles, phases of purification and moments of social transition.

One clear example is the Uzbek practice of observing “qirq kun” after childbirth, marriage or bereavement. This tradition reflects an ancient belief that a forty day period marks a significant transformation in the emotional and social state of an individual or family. A similar meaning is present in the Turkish custom known as “kırkı çıkmak”, which also signifies the completion of a symbolic period of transition and renewal [11]. Such examples illustrate how numeric symbols operate as cultural stabilizers that organize ritual sequences, guide social behavior and preserve mythopoetic understandings of time and human experience.

Overall, these traditions demonstrate that numeric semiotics extends beyond everyday communication and serves as a medium through which collective identity, cultural continuity and shared memory are transmitted across generations.

CONCLUSION

The findings of this research show that number based nonverbal signs represent a dynamic and multifunctional semiotic system whose communicative potential extends far beyond their basic quantitative purpose. Numbers operate as symbolic, emotional, cultural and digital meaning carriers that influence both interpersonal interaction and broader sociocultural practices. The comparative analysis indicates that numeric symbolism differs across cultures due to distinct historical experiences, ritual traditions and value systems. At the same time, increasing globalization and the rapid growth of digital communication have generated a shared repertoire of numeric expressions that circulate widely across linguistic boundaries. Expressions such as “404”, “143” or “99+” demonstrate how technologically mediated environments reshape traditional semiotic resources and create new cross cultural numeric codes.

The study also highlights the need for a comprehensive linguopragmatic model that integrates symbolic heritage with interactional function, cognitive economy and digital transformation. Such a model would make it possible to understand numeric semiotics as both a culturally rooted phenomenon and a flexible communicative tool that adapts to new media and new forms of social interaction. Future research

should focus on constructing multimodal corpora, examining generational differences in numeric semiotic use and investigating how emerging numeric codes are interpreted in diverse cultural environments. These directions will contribute to a deeper understanding of the evolving role of numbers in modern multimodal communication.

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