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# CYBERONOMASTICS AND VIRTUAL IDENTITY: A LINGUOCULTURAL ANALYSIS OF INTERNET USERS' NAMING STRATEGIES

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### Abstract

This study analyzes the national and cultural foundations of cyberonyms created by internet users and the strategies through which identity is expressed via these names. Nicknames, domain names, and other online onyms are examined from a linguocultural perspective. The findings indicate that users often rely on traditional naming models, religious components, and national values. At the same time, hybrid naming strategies are emerging under the influence of global internet culture. The study highlights the significance of cyberonomastics in contemporary linguistics.

**Keywords:** Cyberonomastics, identity, nickname, linguoculturology, Uzbek internet space.

### Introduction

Today, internet users widely employ usernames and cyberonyms to construct their virtual identities. These usernames function not only as technical identifiers but also as linguistic units reflecting personal, social, and cultural identity (Crystal, 2006; Danet & Herring, 2007). Therefore, the study of usernames is of great importance within the fields of cyberonomastics and linguoculturology. Previous studies demonstrate that users frequently incorporate their real names and surnames into usernames. For instance, an analysis of 2.6 million usernames

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from the Google Profiles dataset revealed that 70% of usernames contain at least one component matching real names (Dell'Amico et al., 2007). Among these, 30% follow a “first name + last name” format, while more than 18% include numerical elements. This reflects how users attempt to maintain and represent their identity in virtual environments.

The online environment also reflects national and religious values. Users express their identity through the use of traditional naming models, religious elements, and national symbols in nicknames and domain names (Hofstede, 2011). At the same time, hybrid usernames combining English words with creative elements are becoming increasingly common under the influence of global internet culture, allowing users to integrate local and global identities (Blommaert, 2010).

The aim of this study is to identify the national and cultural foundations of cyberonyms in the online space and to analyze users' strategies for expressing virtual identity. The use of real names, numbers, punctuation, and abbreviations in usernames reveals the linguistic and cultural mechanisms underlying identity construction. The findings contribute to further research in cyberonomastics and linguoculturology.

### Methodology

This study focuses on examining the uniqueness and traceability of usernames in online environments. It is primarily based on the data presented in Perito, Castelluccia, Kaafar, and Manils (2009), “How Unique and Traceable are Usernames?”

The data were collected from several large datasets: Google Profiles (~3.5 million usernames), eBay (~6.5 million usernames), a research center LDAP directory (16,000 usernames), a Finnish dataset (~79,000 usernames), and a MySpace dataset (~30,000 usernames). These sources provide a comprehensive basis for analyzing username selection practices across different platforms.

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Only usernames written in the Latin alphabet and containing identifiable first names (w1) and last names (w2) were selected for analysis. After filtering, 2.6 million name–username pairs remained. The analysis focused on combinations of first name + last name, abbreviations (c1, c2), and numerical elements (d). The results showed that 70% of usernames contain at least one real-name component; 30% consist solely of first name + last name, and over 18% include numerical additions, often representing birth years or other personal identifiers (Perito et al., 2009).

Additionally, Information Surprisal and Markov Chain models were applied to evaluate username uniqueness and traceability. These approaches estimate the probability of previously unseen usernames and demonstrate how easily online identities can be tracked (Perito et al., 2009).

From a personal perspective, statistical data alone are insufficient to fully understand user identity. Username selection is often influenced by cultural, religious, and national values, as well as emerging creative strategies shaped by global internet culture. For example, many users combine numbers or abbreviations to integrate local and global identities, resulting in more complex virtual representations. Therefore, it is essential to consider both linguistic and cultural contexts alongside statistical analysis.

### Results and Discussion

The findings indicate that users frequently rely on their real names and surnames when selecting usernames. According to the analysis, 70% of usernames contain at least one real-name component, 30% follow a full name format, and 18% include numerical elements (Perito, Castelluccia, Kaafar, & Manils, 2009). This suggests that users attempt to represent their identity in online spaces while ensuring memorability and uniqueness through slight modifications.

A new approach—pseudo-random generators and cluster analysis—proved effective in distinguishing between fake and genuine accounts. Furthermore,

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users rarely change their usernames, and when they do, the changes tend to follow predictable patterns. This implies that tracking usernames can provide insights into users' online behavior and identity, which may be applied in marketing, online security, and spam detection.

From a linguocultural perspective, usernames are not merely technical identifiers but also tools for expressing personal, cultural, and social identity. For example, Uzbek internet users often incorporate national values, religious references, and traditional naming models. Therefore, analyzing usernames requires not only statistical methods but also consideration of cultural and humanistic contexts.

### Conclusion

Usernames play a crucial role in expressing user identity. They not only serve as identifiers but also reflect the cultural, personal, and social context of individuals. The analysis shows that users often rely on their real names and surnames, occasionally adding numbers or symbols to ensure uniqueness.

New approaches such as pseudo-random generation and cluster analysis enable the differentiation of fake and genuine accounts, contributing to improved online security. At the same time, username analysis allows users to better manage their online privacy and protect their identity.

In conclusion, the study of usernames requires not only a technical but also a humanistic approach, as it reflects users' personal and cultural contexts and contributes to enhancing security in online environments.

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