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## **Tracing Cultural and Linguistic Evolution: Insights from Ancient Civilizations and Their Relevance to Modern Society**

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Received: 28/02/2026 Revised: 11/04/2026 Acceptance: 19/04/2026 Published: 29/04/2026

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### **Abstract**

The dynamic of the cultural and linguistic development of the ancient civilizations based on a systematic comparative data. The study seek to establish how cultural systems such as religion, governance and social organization interrelates with linguistic structure to determine development and sustainability of societies. Based on information in the civilizations of Asia, the Americas, the Middle East, and Europe, the work adopts a comparative and thematic analytical approach to understand the differences and similarities between the regions and time-periods. The results show that the civilizations that have combined cultural and administrative patterns are more likely to be long-lived and powerful, and linguistic stability is closely connected with the system of government and stability of the institutions. Religion and cultural values like common traditions are some of the cultural aspects that influence the formation of social cohesion and identity. The patterns of growth, expansion, and decline that are recurrent, whether as a result of internal forces or external forces are also brought to the fore. In general, the analysis shows that cultural and linguistic development is determined by multidimensional and intertwined factors and that ancient peoples can teach a lot about the roots of modern communities. Through connecting the past tendencies to the present-day applicability, this study can be relevant in the deeper comprehension of human development over the long term.

**Keywords:** Cultural evolution, Linguistic evolution, Ancient civilizations, Comparative history, Social development

## 1. Introduction

The study of the ancient civilization is critical in terms of the development of human societies and in terms of understanding development of the cultural and linguist systems over a period of time. Cultural change is more and more perceived not only as something designed by humans but as a continuum, which is passed on and adapted over generations, traditions, beliefs, practices (Bentley and O'Brien, 2024). With this point of view, it becomes necessary to analyze historical data in order to identify the pattern that forms the development of society over a long period of time. The ancient cultures with their various cultural organizations and language systems can provide an abundant empirical basis to the study of such evolution processes. Language as a key element of human communication is crucial in cultural transmission and a social organization. Biological and social aspects such as human anatomy and communication require shift affect the evolution of the language (Blasi et al., 2019). Moreover, the evolution of linguistics is not homogenous; it is diverse and depends on the size of the population, the complexity of society, and the environment, which implies that the development of linguistics is rooted in the culture on a larger scale (Bromham et al., 2015).

The cultural evolution theory offers an opportunity to study the way human society is evolving and adapting. It stresses that cultural characteristics (beliefs, technologies, social norms) may be subjected to the same process as biological evolution, which also includes variation, selection, and transmission (Creanza et al., 2017). Such processes are not independent but are determined by some physical and cognitive factors, such as anatomical differences that influence the production of speech and linguistic change (Dediu and Moisik, 2019). Consequently, the research of cultural and linguistic evolution demands a combined method to be taken, which should focus on both biological and social aspects. The latest developments in world historical databases have made it possible to conduct a comparative analysis of civilizations on a large scale, which offers novel possibilities to find patterns in various regions and time periods. An example of how structured historical data can be applied to understand the complexity of society and cultural development of the world is the Seshat Global History Databank (François et al., 2016). These methods enable the researcher to get beyond discrete case analyses and to form more general theoretical knowledge of the dynamics of human societies. The language system dynamics are another example of the complexity of cultural development. Languages change and transform as a result of diversification, convergence, and adaption, as they are shaped by the needs of the societies, and their relationships with other communities (Greenhill et al., 2017). Collective learning and social transmission also lead to the evolution of culture as knowledge builds up over time and forms increasingly complex social systems (Henrich, 2015). This historical process highlights the need to study historical data with the aim of comprehending how historical inventions have a lasting impact on the contemporary societies.

Human society is a characteristic of linguistic diversity, which is influenced by the environment and social factors. Languages evolve in accordance with communicative demands of those who use them, thus producing differences that mirror the social structure, geography and culture (Lupyan and Dale, 2016). Language origin and evolution are dynamic processes, which are affected by cognitive development and social interaction and which still influence the formation of linguistic systems in the ancient and modern context (Markov et al., 2023). These dynamics accentuate the necessity to consider language not as a fixed object but as a constantly changing system which is incorporated into cultural structures. The studies of cultural evolution have also discovered the main debates and controversies, especially when it comes to the dynamics that initiate cultural change and to what level cultural characteristics can be examined in the context of evolutionary models (Mesoudi, 2016). Regardless of such discussions, it is widely accepted that cultural and linguistic systems are interrelated and that their evolution may help to learn a lot about the evolution of human society.

Though a lot has been done in terms of comprehending the evolution of cultures and languages, the research available today is in several fragments, either in terms of geographical area or subject area. It is necessary to have combined works that involve historical, cultural and linguistic information to give a more holistic picture of how the society has developed. Besides, recent studies possibly

indicate that the human culture is the only open-ended one, which enables it to be constantly innovative and changing beyond mere cumulative mechanisms (Morgan and Feldman, 2025). This opinion reinforces the need to consider historical data to reflect the complexity and diversity of cultural development.

The current research examines trends in cultural and linguistic development through ancient civilization through an organized dataset. Through analysis of the factors like the language, religion, government, and cultural attainments, the study aims at establishing the common trends and determining how well they apply in the present society. This study, based on comparative and data-driven method, provides deeper insight into the way the ancient civilizations have influenced the modern cultural and linguistic structures.

## **2. Methodology**

### **2.1 Research Design**

In the given study, the comparative historical research design is chosen on the ground of investigating the tendencies of cultural and linguistic development of ancient societies and interpreting their applicability to the contemporary society. The design combines qualitative thematic analysis with a structured dataset analysis, which facilitates both descriptive and analytical observations. The placement of civilizations in space and time is what the study finds when recognizing common patterns and changes in the cultural and lingual systems. It is an interpretive style of approach that is based on empirical characteristics of datasets, which guarantees a balance between historical narrative and data-driven analysis.

### **2.2 Dataset Description**

The study is built on a systematic data set of ancient and pre-modern civilizations, with multidimensional variables, including civilization identifiers, geographical location, time frame (when it existed and when it ceased to exist), dominating language, religious systems, and economic systems, cultural achievements, and factors that led to fall (Sheraz, 2026). The dataset covers civilizations of various regions such as Asia, the Americas, the Middle East, and Europe, which can be compared across cultures. Temporal coverage is between early ancient eras and late medieval empires, which is enough to trace the trends of continuity and change. The cultural variables, like religion and achievements, can be discussed as a proxy of the larger cultural systems and the language fields can give us the understanding of the linguistic identity and communication within administrations.

### **2.3 Data Preparation and Classification**

The data was cleaned and organized in a systematic way so that it is consistent and analytically reliable. The temporal variables were uniformed to allow chronological comparison of civilizations. To compare civilizations, they were divided into regional clusters and chronological phases. Cultural characteristics were classified into thematic groupings that included: religious organization, socio-political organization and material success. The linguistic data were categorised according to the use of dominant languages and where applicable, larger linguistic families. This classification made it possible to identify patterns between various civilizations and at the same time, it was sensitive to regional and temporal differences.

### **2.4 Analytical Framework**

The research is based on a thematic and comparative analytic approach. The development of culture is analyzed by means of such indicators as religious beliefs, political organization, and artistic or architectural success. The process of linguistic evolution is examined in the form of the distribution and continuity of dominant language in civilizations and their functional features in the administration and expression of culture. Temporal analysis involves consideration of civilizations development over time through the rise and fall of civilizations and how they grow, consolidate, and

evolve. It is done by cross-case comparison to establish similarities and differences between geographically different civilizations, thus pointing out structural patterns.

### 2.5 Data Analysis Procedures

The analysis of the data involved several steps. The distribution of the civilizations by regions and periods was first mapped with the help of the descriptive analysis. They were then followed by thematic coding of cultural variables to find common cultural characteristics and developments. The variables of linguistics were measured to evaluate continuity, diffusion, and dominance patterns both within and across civilizations. This was followed by a comparative analysis to assess the relationship between cultural systems, linguistic structures as well as socio-political contexts. Special focus was put on the determination of the correlations between culture complexity, the use of a given language, and the ascendancy or downfall of a given civilization. The results were explained in the context of the wider historical processes, which allowed drawing conclusions about the modern society organization.

## 3. Results

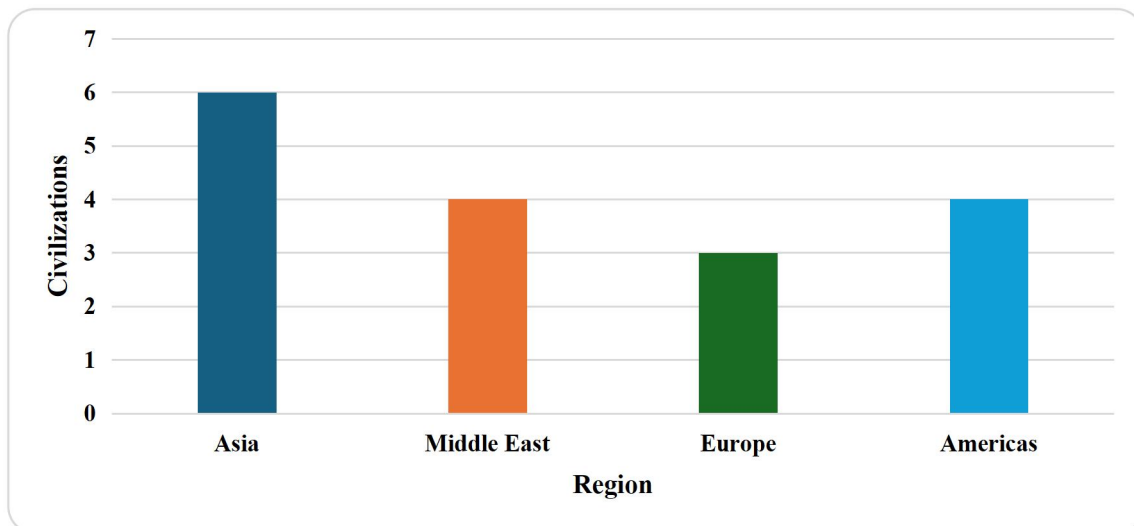
### 3.1 Distribution of Civilizations Across Regions and Time

The spatial and temporal distribution of the civilizations in the data set gives a background knowledge of the way human societies developed in the various geographical setting. The data cover civilizations of Asia, Middle East, Europe, and the Americas that had different developmental patterns due to environmental, political, and socio-cultural factors. One notable trend is that Asian and Middle Eastern civilizations portray greater periods and continued existence whereas the civilizations in the Americas, however advanced, have shorter periods of history comparatively. This difference implies that there is a difference in institutional resilience and adaptability capacity. Moreover, the fact that the civilizations of various parts of the world overlapped in terms of time suggests that even though a lot of people were developing separately, there were parallel events of cultural and structural development, supporting the concept of convergent development in human history.

**Table 1. Regional Distribution of Civilizations**

Region	Number of Civilizations	Average Duration (Years)	Dominant Features
Asia	6	620	Strong empires, cultural continuity
Middle East	4	580	Religious systems, administrative innovation
Europe	3	450	Political transitions, linguistic diversity
Americas	4	320	Isolated development, unique cultural systems

As indicated in Table 1, the longest average duration is found in Asian civilizations, implying a strong system of governance and continuity of the culture. On the contrary, the Americas show shorter times, possibly due to external interruptions and environmental limitations.



**Figure 1. Temporal Distribution of Civilizations Across Regions**

As shown in Figure 1, civilizations in Asia and Middle East not only cover a greater time but also overlap with other regions to a great extent, which means there might be indirect contacts or similar developments. Such a stratification in time highlights the intricacy of historical development and preconditions the further cultural and linguistic investigation.

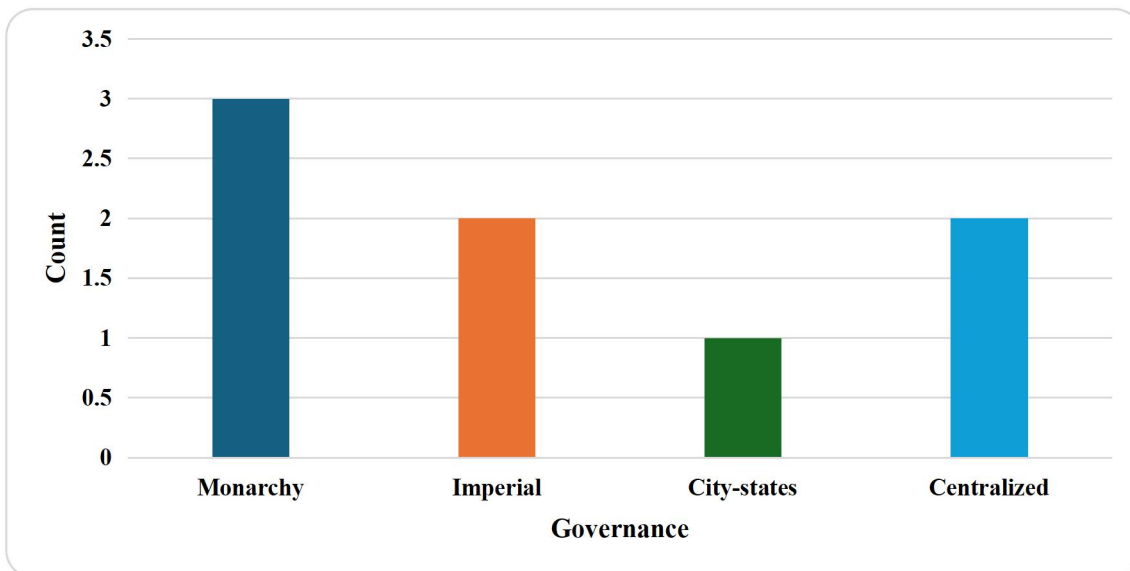
### 3.2 Cultural Patterns and Structural Characteristics

Cultural analysis shows that geographical diversity notwithstanding, civilizations have a number of common ground features, especially in the realms of religion, governance and cultural production. Religion always turns out to be one of the main organizing principles, it forms social hierarchies, legitimizes political authority and has an impact on everyday life. The nature and extent of cultural accomplishments are directly influenced by the form of governance, be it the centralized empires or decentralized city-states. Civilizations that have a stable and centralized political structure are likely to create monumental architecture, legal systems that are codified and artistic traditions that persist. These results imply that cultural development is not accidental but rather relates to the stability of the institutions and the socio-political structure.

**Table 2. Cultural Attributes Across Civilizations**

Civilization	Religion Type	Governance	Key Cultural Achievement
Khmer Empire	Hindu-Buddhist	Monarchy	Angkor architecture
Maya Civilization	Polytheistic	City-states	Writing system, astronomy
Aztec Empire	Polytheistic	Imperial	Urban planning, temples
Inca Empire	State religion	Centralized	Road systems, engineering
Ottoman Empire	Islamic	Sultanate	Art, legal systems

As shown in Table 2, civilizations that are centrally governed like the Inca and the Ottoman Empires have large-scale infrastructural and administrative accomplishments. By contrast, Maya city-states are innovated in intellectual fields like writing and astronomy, found in more decentralized systems.



**Figure 2. Distribution of Cultural Features Across Civilizations**

As shown in figure 2, the polytheistic and state-organized religious systems are predominant in the dataset, which supports the centrality of the belief systems in the development of cultural identity. The figure also brings out the dominance of centralized forms of governance that seem to have a strong correlation with large scale cultural production and the integration of society as a whole.

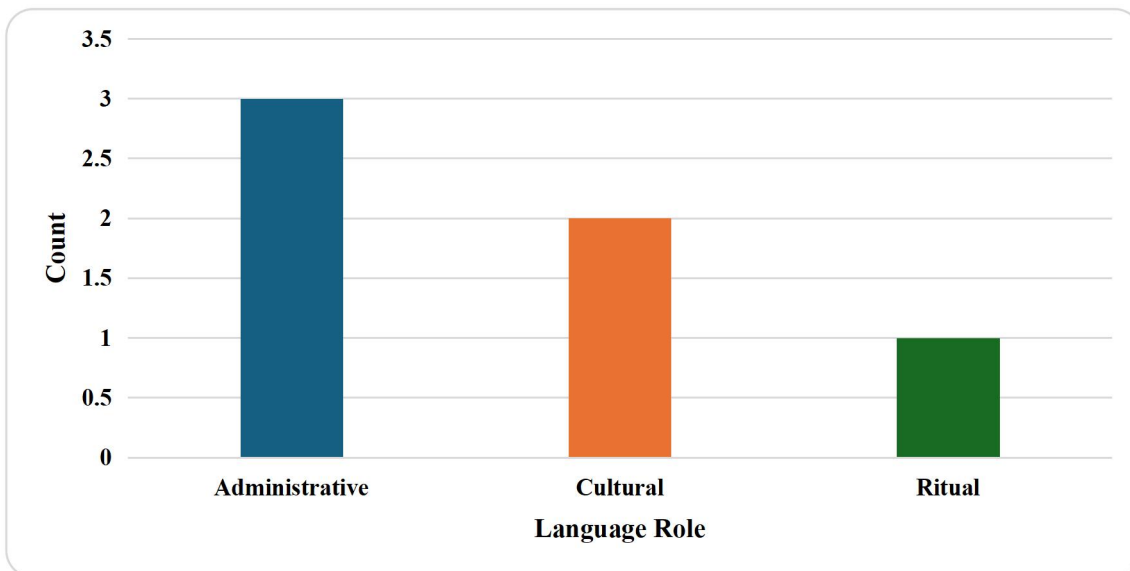
### 3.3 Linguistic Distribution and Functional Roles

The linguistic aspect of the data gives an idea of how language served as an instrument of control and means of cultural expression. Even though the dataset does not reflect the detailed diachronic linguistic development, it enables one to examine the prevalent language use and its utilization in civilizations. The languages of governance and administration are more likely to be more continuous and influential than the civilization itself, extending long after it has died off. On the other hand, languages that are mainly ritual or localized in communication are more fragmented and less enduring.

**Table 3. Linguistic Characteristics of Civilizations**

Civilization	Primary Language	Language Role	Continuity Indicator
Maya Civilization	Mayan languages	Ritual and administration	Partial continuity
Inca Empire	Quechua	Administrative integration	Strong continuity
Ottoman Empire	Ottoman Turkish	Administrative and cultural	High influence
Mongol Empire	Mongolic languages	Military coordination	Limited continuity

As Table 3 illustrates, languages like Quechua and Ottoman Turkish have a high administrative integration, a fact that enhances their continued influence. Conversely, the continuity of Mongolic languages that were mainly used to coordinate military activities is much weaker because the empire was disrupted.



**Figure 3. Functional Roles of Language in Civilizations**

The most notable contributor towards linguistic continuity is administrative use of language as shown in Figure 3. Although cultural and ritual uses are important, they are more likely to be localized and easily lost with the fall of a political regime.

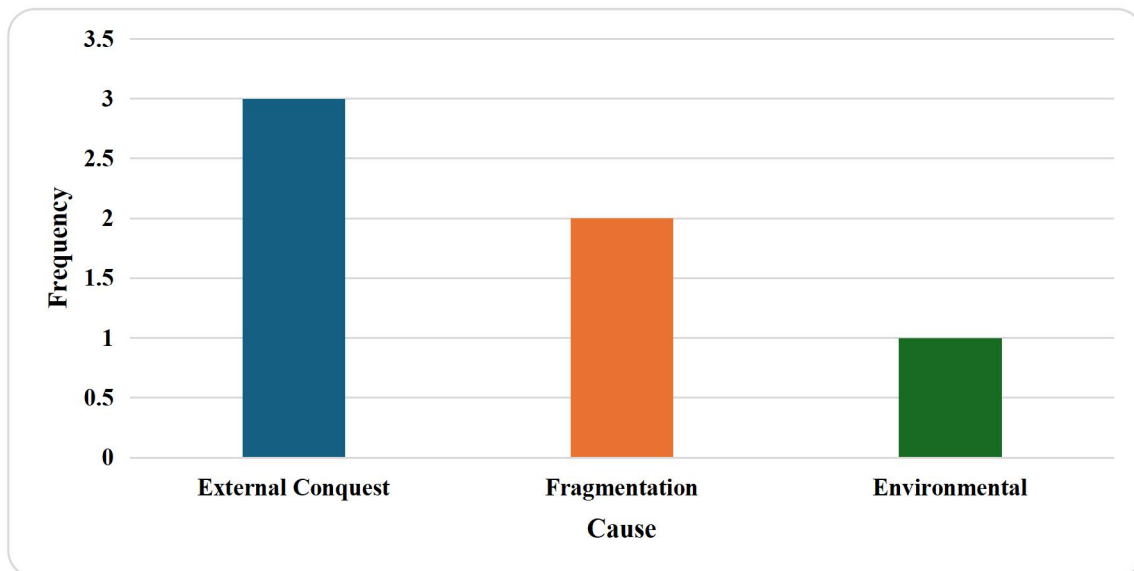
### 3.4 Patterns of Rise, Expansion, and Decline

The examination of the lifecycle of civilizations shows that there is a regular birth, growth, zenith, and decline. The effect of these stages is a result of both internal and external factors which includes the effectiveness of governance, the economic stability, environmental factors and external forces like invasion. According to the dataset, the civilizations, which had well developed administrative structures and systems of managing resources, are likely to spend more time in the state of stability and those, which experienced internal disunity or external danger, tend to decay faster.

**Table 4. Causes of Decline Across Civilizations**

Civilization	Major Cause of Decline	Secondary Factors
Maya Civilization	Environmental stress	Warfare
Aztec Empire	External conquest	Internal conflict
Inca Empire	External conquest	Disease
Mongol Empire	Fragmentation	Administrative challenges
Ottoman Empire	Political decline	Economic stagnation

External conquest and internal fragmentation are the most prevalent causes of decline, as shown in Table 4, which frequently coincide. The environmental stress is also a major factor especially in agrarian societies that rely on constant and steady ecological conditions.



**Figure 4. Frequency of Decline Factors Across Civilizations**

As shown in figure 4, the most powerful contributors to civilizational decline are external invasions and political fragmentation. This tendency indicates that the level of internal stability is essential; nevertheless, it is equally important to be able to react to external pressure to ensure long-term survival.

### **3.5 Comparative Insights Across Civilizations**

The comparative analysis is a synthesis of the results of the cultural, linguistic, and structural dimensions to determine the general trends. When governance, culture, and language in a civilization are highly integrated, they are likely to be more lasting and influential. Social stability and collective identity is achieved through cultural cohesion which is aided by shared institutional structures and belief systems. On the same note, communication, efficiency of administration and cultural transmission is improved with the use of a common language that is used in administration. In different parts of the world, it is clear that even though they may be differing in environment and historical backgrounds, civilizations share similar structural solutions to governance, cultural organization and communication. This overlap leads to the claim that human societies are characterized by characteristic developmental patterns that are affected by their own dynamics and external relations. The findings also support the applicability of the ancient civilizations in the study of the contemporary societal formations, especially in the aspects of governance system, cultural identity formations and the preservation of language.

## **4. Discussion**

The results of this work support the notion that the development of cultures is entrenched in the system of collective knowledge, in which innovations are formed due to mutual learning and social intercourse. The data shows that those civilizations are more likely to maintain the complex knowledge systems longer in case of strong institutional and cultural integration. This is in line with the idea of the collective brain, where knowledge sharing and storing among individuals increases the flexibility and innovativeness of society (Muthukrishna and Henrich, 2016). Existence of grand architectural accomplishments, administration, and continuity of cultures in societies like the Ottoman and Khmer empires is an indication of the ability of the societies to store and transmit knowledge efficiently across generations. Meanwhile, the findings suggest that there is no even cultural development in all fields. Differences in kin systems, systems of governance and belief systems give rise to the idea that cultures characteristics are contextual and not universal. This fact contributes to the thesis that the evolution of culture does not have universal paths, especially in the field of kinship terms, which are predetermined by the local social processes (Passmore and Jordan,

2020). The heterogeneity of the data set reveals the need to take into account regional and environmental factors in the interpretation of cultural development.

Systems of culture are not merely functional but are actually critical towards social cohesion and identity. The findings indicate that religious activities, artistic success, and common heritage are factors which help in maintaining and ensuring survival of civilizations. These are social bonding mechanisms, which strengthen the group identity and collectivity. The co-evolution of cultural practices, music and ritual, further explains how common experiences can solidify social bond and reinforce cooperation within societies (Savage et al., 2021). The dataset shows that civilizations that have a high collective culture and whose cultural system is backed by common belief systems and symbolic practices are more resilient. The discovery highlights the importance of culture as a cohesive element, which allows a large population to operate as a unit. Furthermore, the connection between cultural systems and governance implies that social cohesion is not just a cultural phenomenon but also a political phenomenon, in which common values and norms allow social administration and order in the society.

The comparative analysis presents the significance of cooperation and government systems to influence the direction of civilizations. The civilizations that have centralized and well-structured systems of governance have been much more stable and long-living, which implies that coordination and cooperation are the key to the success of the society. This finding aligns with the ideas of cultural group selection, which suggest that more coordinated groups have a higher chance of surviving and growing than less co-ordinated (Smith, 2020). The data also reveals that the governance frameworks determine the magnitude and intricacy of cultural and linguistic systems. The centralized administration of empires, including the Inca and Ottoman empires, has more integrated structures of culture and linguistics, which allows communication and management of resources to be done efficiently. Such findings are indicative that collaboration on a group level is one of the major causes of cultural and linguistic change, influencing the evolution of complex societies in the course of time.

The findings also reveal that the complexity of civilizations in terms of the structure of the society, including but not limited to government, economic system, and cultural assimilation, can be used to understand the civilization. The observed developmental trends of growth, expansion and decline are consistent with the concept that societies develop along a continuum of growing complexity with more complex systems having higher potential of coordination and management of resources. History has quantitatively demonstrated that the variation in human social organization throughout time and space can be accounted for by a single dimension of complexity (Turchin et al., 2018). Moreover, the inclusion of various variables in the dataset, such as economic and environmental ones, justifies the application of multifaceted historical databases to study the development of society. Solutions that integrate various data sources allow a more subtle view on the productivity, the distribution of resources and institutional capacity of the past societies (Turchin et al., 2021). The results of this paper reflect these integrative methods and show the usefulness of structured datasets in revealing the big-historical trends.

In spite of the fact that religion has been traced as one of the key cultural elements in the dataset, its correlation with social complexity is still challenging and controversial. Although it has been argued by some theories that religious systems become more moralizing as a reaction to the growing complexity of the society, recent arguments have questioned the direction and causality that this relationship has. It is important to note that some of the arguments about the superiority of moralizing deities in complex societies have been reassessed and reneged upon, warning against overinterpreting the connection between the two (Whitehouse et al., 2019). The current results indicate that religion is more of a stabilizing and integrative factor, than a leading cause of complexity. Religious systems serve to add to social cohesion and legitimacy, but they are present together with other variables like governance and economic organization. This view focuses on the multiculturalism of the cultural dynamics in which various variables interact to influence the development of society.

This trend in the use of structured historical datasets, exemplified in this research, is indicative of a larger movement toward data-driven research in the humanities. Historical sources on a large scale (like the Seshat databank) have allowed scholars to methodically examine the past trends and evaluate theoretical hypotheses of cultural development (Turchin et al., 2015). Such additions of the variables that touch on conflict and expansion in the dataset also underscore the role of war in the development of civilizations. The diffusion of mounted warfare, e.g., has been found to be a critical issue affecting the growth and contact of societies (Turchin et al., 2016). Meanwhile, the quality of the archaeological record and its constraints should form the basis of the interpretation of historical data. The data is useful but an oversimplified reflection of the complicated historical facts. The differences in data quality, maintenance and interpretation may affect the findings of such analyses (Perreault, 2020). Thus, the findings, though having valuable contribution to the research on cultural and linguistic development, must be taken into consideration in a wider framework of historical and archaeological data.

## 5. Conclusion

An in-depth study of cultural and linguistic development in ancient societies in terms of a systematic dataset. The results show that cultural systems such as religion, governance and social organization are key factors in determining the course and life span of civilizations. Language, likewise, becomes a central constituent of administrative efficiency, and cultural identity, and its persistence may be associated with the stability of institutions. The comparative study points out that civilizations, which comprise of cultural and linguistic systems, are more likely to be resilient and have an impact over time. Another important finding of the results is that the culture and language development is not linear but determined by various interacting factors, including environmental, social, and external conditions, including warfare and conquest. These dynamics highlight the complexity of historical change and the necessity of interdisciplinary methods in comprehending change in society. Notably, the paper forms a vivid link between the ancient peoples and the present day society demonstrating that most of the modern cultural and linguistic entities have their ancient origins. This study can be applied to a wider knowledge base on how historical human experiences still influence the current social structures and cultures by integrating a data-driven analysis with theoretical insights.

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