

Untangling Temporal Threads: Evaluating Correlations in Autochthonous Dog Breed Associations' Timelines in the Balearic Islands

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SUMMARY

This study investigates the temporal dynamics of autochthonous dog breed recognition in the Balearic Islands, revealing a complex interplay of relationships across various stages. The analysis, depicted through a heatmap and correlation matrix, highlights the significance of early breed recognition by showing strong negative correlations with subsequent stages, shaping the trajectory for standardized breed preservation. Associations evolve as central players, exhibiting positive correlations in their temporal dynamics and contributing significantly to the sustainability of the island ecosystem. Notably, the study identifies nuanced connections between the temporal sequence of association development and the subsequent achievements of autonomic and national official recognitions. The findings provide valuable insights into the intricate patterns governing breed preservation, offering a comprehensive roadmap for informed conservation strategies and contributing to broader efforts in biodiversity conservation and cultural heritage stewardship unique to the Balearic Islands.

Desenmarañando Hilos Temporales: Evaluando Correlaciones en las Líneas Temporales de Asociaciones de Razas Caninas Autóctonas en las Islas Baleares

RESUMEN

Este estudio investiga las dinámicas temporales del reconocimiento de razas autóctonas de perros en las Islas Baleares, revelando una compleja interacción de relaciones a lo largo de diversas etapas. El análisis, representado a través de un mapa de calor y una matriz de correlación, destaca la importancia del reconocimiento temprano de las razas al mostrar fuertes correlaciones negativas con etapas posteriores, dando forma a la trayectoria para la preservación estandarizada de las razas. Las asociaciones emergen como actores centrales, exhibiendo correlaciones positivas en sus dinámicas temporales y contribuyendo significativamente a la sostenibilidad del ecosistema isleño. Notablemente, el estudio identifica conexiones matizadas entre la secuencia temporal del desarrollo de las asociaciones y los logros subsiguientes de reconocimientos oficiales autonómicos y nacionales. Los hallazgos proporcionan perspectivas valiosas sobre los patrones intrincados que rigen la preservación de las razas, ofreciendo una guía integral para estrategias de conservación informadas y contribuyendo a esfuerzos más amplios en la conservación de la biodiversidad y la tutela del patrimonio cultural único de las Islas Baleares.

INTRODUCTION

The Balearic Islands, with their varied ecosystems and cultural heritage, serve as a unique backdrop for the examination of autochthonous dog breeds. Going beyond mere chronological analysis, this investigation aims to decode narratives that shape the past, illuminate the present, and guide the future of these canine populations. The archipelagic nature of the region introduces challenges, navigating a delicate balance between geographic isolation (Cervantes & Castañeda

2012) and the imperative for coordinated conservation efforts (Mujica et al. 2005).

The exploration commences with an examination of the time from the first registries to the recognition of the first standard—a period where breed identity takes root (Alfranca 2001). Progressing through time, the transition from Breed First Recognition to Association Foundation signifies the evolution from a passion for preservation (Valera Córdoba, Vázquez González & Fernández Martín 2007) to organized conserva-

tion efforts (Tibaduiza Castañeda et al. 2021). These milestones mark the dynamic evolution of canines and highlight the intricate interplay between human stewardship and the ecological dynamics of the islands.

In the broader spectrum of recognition, from local to international stages, autochthonous breeds undergo a transformative journey. Positive correlations identified in the study underscore that recognition timelines are interwoven narratives, emphasizing the significance of collective efforts and institutional support.

Within the context of the balearic islands' archipelagic challenges, the role of associations (Pérez de Muniain Ortigosa) becomes pivotal. These organizations evolve into not just guardians of breed standards (León Gaudó, Monteagudo Ibáñez & Tejedor Hernández) but contributors to sustainability within the island ecosystem (Sanz 2009). Associations act as bridges, connecting enthusiasts and experts in a collaborative symphony that addresses the challenges posed by the unique geography of the region.

The aim of the study is to offer more than a glimpse into the past, providing a comprehensive understanding of the present and charting a course for the future. Beyond statistical correlations, the study aspires to provide a roadmap for informed and effective conservation strategies. In untangling these threads, the objective is to preserve biodiversity and cultural heritage, ensuring the harmonious coexistence of autochthonous dog breeds within the intricate tapestry of the balearic islands.

MATERIAL AND METHODS

XLSTAT Version 2014.5.03 was used to calculate Pearson's Product Moment correlations among variables that collectively represent distinct temporal milestones in the comprehensive process of autochthonous dog breed recognition, spanning from the establishment of breed registries to the formal acknowledgment of standards, association foundation, and eventual national and international recognition, marking key evolutionary transitions in breed preservation.

RESULTS

PEARSON'S PRODUCT MOMENT CORRELATIONS

Figure 1 shows a heatmap reporting correlations across the moments in the timeline running from the moment in which first registries for dog populations are collected to the moment when the association achieves its recognition at a national and international level. As suggested by the scale, the more intense the red colour is the larger the positive correlations between element pairs is as well. On the contrary the more intense the blue colour is the larger the negative correlations across elements and features is as well.

TIME FROM FIRST REGISTRIES TO RECOGNITION OF FIRST STANDARD:

The correlation matrix in Table 1 reveals intriguing

relationships in the timeline of dog breed recognition. The time from first registries to the recognition of the first standard demonstrates strong negative correlations with subsequent stages, particularly with the time from the first standard to its official recognition.

TIME FROM BREED FIRST RECOGNITION TO ASSOCIATION FOUNDATION:

Examining the interplay between the breed's initial recognition and the establishment of an association, a significant negative correlation highlights potential connections between these pivotal phases in the breed recognition process.

TIME FROM FIRST STANDARD TO OFFICIAL RECOGNITION OF STANDARD:

Analysis of the temporal aspects within breed standards exposes noteworthy correlations. The time from the first standard to its official recognition shows strong negative associations with the time from the first registries to the recognition of the first standard, and substantial positive correlations with the time from the association foundation to national official recognition.

TIME FROM ASSOCIATION FOUNDATION TO AUTONOMIC OFFICIAL RECOGNITION OF THE ASSOCIATION:

Transitioning to the association phase, correlations emerge between the time from its foundation to both autonomic and national official recognitions. Notably, positive correlations suggest interdependencies between the association's foundational stage and subsequent recognitions.

TIME FROM ASSOCIATION FOUNDATION TO NATIONAL OFFICIAL RECOGNITION OF THE ASSOCIATION:

Further exploring the association's journey, correlations highlight the temporal dynamics in achieving national official recognition. Associations founded earlier appear to have moderately positive connections with both autonomic and national official recognitions.

TIME FROM AUTONOMIC OFFICIAL RECOGNITION TO STUDBOOK RECOGNITION:

Examining the progression from official recognition to studbook recognition, moderate positive correlations emerge, providing insights into the temporal relationships between autonomic official recognition and the subsequent step of studbook recognition.

TIME FROM NATIONAL OFFICIAL RECOGNITION TO STUDBOOK RECOGNITION:

Finally, in the transition from national official recognition to studbook recognition, strong negative correlations with the time from first registries to the recognition of the first standard, coupled with moderate positive correlations with the association foundation and autonomic official recognition, unveil intricate temporal patterns in this crucial phase.

DISCUSSION

The examination of temporal dynamics in the recognition and conservation of autochthonous dog breeds within the Balearic Islands provides a nuanced perspective on the intricate interplay between various stages. The temporal sequences, from the inception of breed registries (García 2017) to the attainment of national and international recognition (Dunner & Cañón 2014), offer profound insights into the evolving narrative of breed preservation.

The negative correlations observed between the time from the first registries (García 2017) to the recognition of the first standard (Beuk, Melero & Sastre 2013) and subsequent stages underscore the critical importance of early breed recognition (Driver 2012). This foundational phase appears to be a crucial determinant, setting the trajectory for the subsequent formalization of breed standards (Barbosa Mireles & López Islas). The negative correlation with the time from the first standard to its official recognition sug-

gests that swift acknowledgment of breed characteristics contributes to a streamlined standardize

As the timeline progresses from Breed First Recognition to Association Foundation, a significant negative correlation points towards an intrinsic connection between the initial recognition of a breed and the subsequent establishment of an association. This highlights a nuanced evolutionary transition, signifying a shift from individual passion for preservation to organized, collective efforts in the form of associations (Reza 2006). The positive correlations identified in this transition imply that the organizational structure of associations (Casanova et al. 2005) is closely intertwined with the early recognition of specific dog breeds.

The temporal dynamics within associations become evident as the study unfolds. Positive correlations between the time from association foundation to both autonomic and national official recognitions indicate a symbiotic relationship. Associations, founded earlier, not only pave the way for national recognition but also exhibit positive connections with autonomic recognition. This suggests that the temporal dimen-

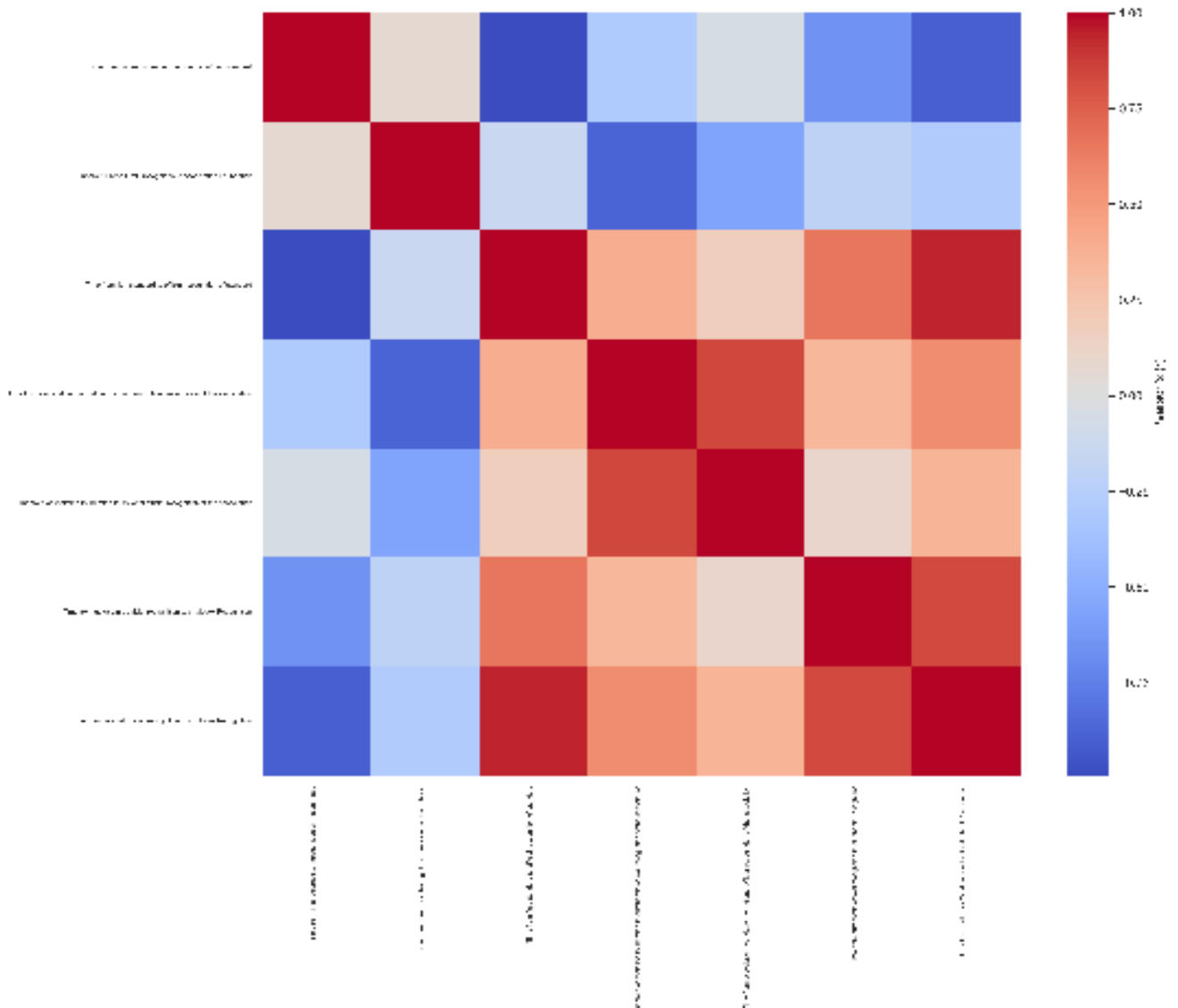


Figure 1. Pearson’s Product Moment correlations across breed and breed associations chronological milestones.

sion of association development plays a role in shaping the broader recognition journey.

Moving further along the timeline, the transition from Autonomic Official Recognition to Studbook Recognition (Rodero & Herrera 2000) reveals moderate positive correlations. This underscores the temporal relationships between achieving official recognition and progressing to the formalization of studbooks. The intricate nature of this phase suggests that the temporal alignment of these events may contribute to a more coherent and effective conservation trajectory.

The transition from National Official Recognition to Studbook Recognition (Rodero & Herrera 2000) introduces complexities marked by strong negative correlations with the time from first registries to the recognition of the first standard. Simultaneously, moderate positive correlations with association foundation and autonomic official recognition indicate a delicate balancing act. Navigating these challenges requires a harmonized approach, where early breed recognition aligns with association establishment, contributing to a smoother transition to national and international studbook recognition.

Understanding these intricate temporal dynamics offers a foundation for future conservation strategies. The comprehensive roadmap derived from statistical correlations becomes a crucial tool for informed decision-making. Beyond statistical analyses, the study's ambition to provide a roadmap for effective conservation strategies gains significance, particularly in the preservation of biodiversity and cultural heritage within the Balearic Islands.

CONCLUSIONS

This study explores the temporal dynamics of autochthonous dog breed recognition in the Balearic Islands, unveiling a narrative of interdependencies and transitions from early breed identification to national and international recognition. The foundational phase emphasizes the pivotal role of early breed recognition in shaping standardization, facilitating subsequent transitions, and laying the groundwork for organized conservation efforts. Associations emerge as key contributors, evolving from guardians of breed standards to integral players in the island ecosystem's sustainability. Positive correlations in association development underscore their crucial role in guiding breeds from local to international recognition, acting as vital bridges to address challenges posed by the archipelagic nature of the Balearic Islands. These findings offer profound insights into the multifaceted preservation of unique breeds and provide a valuable model for broader efforts in biodiversity conservation and cultural heritage stewardship within this distinct context.

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