A bibliometric analysis of the interdisciplinary field of cultural evolution

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The science of cultural evolution is a particularly interdisciplinary endeavor that has captivated researchers from a variety of disciplines. This emerging field is unified in its application of evolutionary logic to socially transmitted behavior, but diverse in methodologies and assumptions. Qualitative reviews of the subject demonstrate an effort to integrate cultural evolutionary studies by illuminating points of divergence and fostering interaction. This effort would be greatly enhanced by quantitative data on patterns of collaboration and idea sharing as represented in the literature. In the present study, we apply a novel combination of VOS mapping and bibliometric analyses to an extensive dataset of publications on cultural evolution, in order to represent the structure of the field and evaluate the level of disciplinary integration. We first construct a co-authorship network and identify clusters of collaborators, which we consider as proxies for subdisciplines. We then use bibliometric analyses to describe each cluster and investigate overall trends in collaboration and productivity. Lastly, we assess the topographical distance and degree of citation sharing between clusters, and generate science overlay maps to evaluate the diversity of subject categories within clusters. Our results reveal an increase in productivity and collaboration over time, albeit a higher inequality in author productivity than expected. Our structural approach reveals research subcommunities with differential levels of integration, citation sharing, and subject diversity. These findings confirm the emergence of a vigorous and growing interdisciplinary field, and indicate ways to drive targeted efforts to foster integration and synthesis in the study of cultural evolution.