

**BIBLIOMETRIC ANALYSIS OF RESEARCH
IN THE FIELD OF EVOLUTIONARY
PSYCHOLOGY BETWEEN 1894 AND 2024**

**EVRİMSEL PSİKOLOJİ ALANINDA 1894-
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Psychology,
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Anahtar Kelimeler:
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ABSTRACT

This study aims to conduct a bibliometric analysis of the scientific literature published in the field of evolutionary psychology between 1894 and 2024. Drawing on 9,679 publications indexed in the Scopus database, the analysis examines the distribution of publications by year, country, institution, author, and keyword to identify developmental trends in the discipline. Using VOSviewer software, the study visualizes co-authorship networks, citation patterns, and keyword clusters to map the intellectual landscape of the field. The results indicate that the highest publication output occurred in 2012, with journal articles being the dominant publication type (63.93%). The University of California, Los Angeles emerged as the most active institution, while T.K. Shackelford was identified as the most prolific author. “Bayes Factors” received the highest number of citations, and keywords such as “evolutionary psychology,” “adaptation,” and “cultural evolution” represented the field’s core focus areas. The findings highlight not only the theoretical richness of evolutionary psychology but also its responsiveness to contemporary issues such as COVID-19. Additionally, subtopics such as consumer behavior, social media engagement, and technology adaptation are analyzed through the lens of evolutionary motives, demonstrating the applied potential of the discipline. The study also reveals a Western-centric pattern in the literature and emphasizes the importance of fostering cross-cultural research to enhance global inclusivity. Overall, this bibliometric study provides both a historical account and a strategic roadmap for future inquiry, encouraging the diversification of theoretical perspectives, global collaboration, and the exploration of underrepresented motivational systems within evolutionary psychology.

ÖZ

Bu çalışma, evrimsel psikoloji alanında 1894–2024 yılları arasında yayımlanan literatürü bibliyometrik yöntemlerle analiz etmeyi amaçlamaktadır. Scopus veri tabanında indekslenen 9.679 yayın üzerinden gerçekleştirilen analizde, alandaki yayınların yıllara, ülkelere, kurumlara, yazarlar ile anahtar kelimelere göre dağılımı değerlendirilmiş; alandaki gelişim eğilimleri ortaya konmuştur. Analizlerde VOSviewer yazılımı kullanılarak işbirliği ağları, atif analizleri ve anahtar kelime kümeleri görselleştirilmiştir. Sonuçlara göre, en fazla yayın 2012 yılında yapılmış, yayını olara makaleler (%63,93) öne çıkmıştır. En aktif kurum University of California, Los Angeles; en üretken yazar ise Shackelford olarak belirlenmiştir. “Bayes Factors” en çok atif alan çalışma olurken, “evolutionary psychology”, “adaptation” ve “cultural evolution” gibi kavramlar alanının temel odak noktaları olarak öne çıkmıştır. Bulgarlar, evrimsel psikolojinin hem teorik zenginliğini hem de çağdaş meselelerle (ör. COVID-19) kurduğu etkileşimi ortaya koymaktadır. Ayrıca, tüketici davranışları, sosyal medya kullanımı ve teknolojik adaptasyon gibi alt temaların evrimsel güdüllerle ilişkilendirilmesi, disiplinin uygulama potansiyelini vurgulamaktadır. Çalışma ayrıca literatürdeki Batı merkezli önemini belirleyerek, kültürlerarası araştırmaların önemine dikkat çekmektedir. Bu yönyle çalışma, evrimsel psikolojinin tarihsel gelişimini haritalandırmakla kalmayıp, gelecekteki araştırmalara yönelik kapsamlı bir yönlendirme de sunmaktadır.

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INTRODUCTION

Evolutionary psychology is a theoretical framework that posits human behaviors and cognitive processes have been shaped through evolutionary mechanisms (Barrett et al., 2002). This approach asserts that the human mind evolved as a set of adaptations in response to ancestral environmental challenges and aims to interpret cultural structures based on these biological foundations. Within this framework, culture is understood not merely as a social construct, but as a manifestation of evolved psychological mechanisms.

The theory of cultural evolution applies the principles of variation, selection, and transmission originally observed in genetic evolution to cultural information, thereby offering a framework that intersects with evolutionary psychology to elucidate the cognitive and social processes underpinning cultural change. Experimentally supported social learning strategies in social psychology such as conformity bias, model-based bias, and content bias—are regarded as core mechanisms that facilitate cultural transmission within this paradigm (Mesoudi, 2009). Conversely, cultural evolutionary theory contributes to understanding how individual-level evolutionary adaptations give rise to enduring social norms and structures at the population level.

Evolutionary psychology is grounded in a robust theoretical foundation shaped by natural selection and particulate inheritance. However, evolutionary theory has often been subject to reductionist interpretations, especially concerning cultural and cognitive phenomena, which has led to significant misunderstandings. Historical examples such as the extinction of Neanderthals and the decline of behaviorism's scientific influence have reintroduced evolutionary explanations as relevant to psychological inquiry. Evolutionary psychology provides an opportunity to reinterpret the human mind through theoretical and empirical developments unavailable during Darwin's era. The emergence of ethology as a response to environmental determinism underscored the biological underpinnings of social behavior.

In this context, key theoretical developments such as

inclusive fitness theory, parental investment theory, and sexual selection have proven instrumental in explaining the evolutionary foundations of core psychological constructs, including kin relations, altruism, group dynamics, and aggression (Buss, 2024).

Despite its theoretical and empirical contributions, evolutionary psychology has encountered significant criticism in the social sciences, particularly regarding its interpretations of sex and gender differences (Winegard et al., 2014). These critiques often focus on how evolutionary arguments may be used to legitimize gender inequalities. For instance, evolutionary psychology frequently offers counterarguments to the "blank slate" perspective and tends to ground social disparities in biological explanations (Van Anders et al., 2005; Geary, 2010). Such interpretations structurally resemble self-legitimizing discourses commonly employed by socially privileged groups, albeit in a naturalized form.

At the core of evolutionary psychology lies the identification of adaptive cognitive mechanisms shaped in response to environmental challenges. Evolved psychological mechanisms are defined as modular, content-specific mental structures that respond selectively to particular environmental inputs. A broad methodological spectrum—including behavioral observation and experimental research—is utilized to empirically examine these mechanisms. For example, Karl Grammer's investigations into sexual signaling in semi-natural contexts illustrate the applicability of evolutionary models to observable human behaviors (Abdel Kader et al., 2025).

Contemporary perspectives in evolutionary science emphasize that inheritance occurs not solely through genetic transmission, but also via epigenetic mechanisms and learned information. These dimensions interact dynamically with the social and physical environments that individuals actively construct. While natural selection typically acts at the phenotypic level, genetic inheritance remains a central factor in evolutionary explanations. Importantly, epigenetic mechanisms—whereby behavioral traits are transmitted across generations independently of changes in DNA sequences—provide novel insights into the persistence of complex behaviors (Charney, 2012).

Emotional systems such as empathy and anxiety are also conceptualized within evolutionary psychology as evolved psychological adaptations. These responses function not only as individual emotional experiences but also as adaptive mechanisms that promote survival and social cohesion (Gnocchi, 2025). While empathy facilitates intra-group cooperation and supports social cohesion, anxiety plays a critical role in detecting and responding to potential threats (Izaki et al., 2024; Gamble et al., 2024). Evolutionary explanations thus contribute to a deeper understanding of how these emotional responses influence social interactions and decision-making processes.

Although evolutionary psychology has been increasingly applied across diverse domains, it remains underutilized in areas such as individual development, skill acquisition, and performance. Nevertheless, understanding how individuals adapt to environmental demands necessitates the integration of evolutionary perspectives into these domains. In this context, the distinction between proximate and ultimate explanations becomes theoretically significant. While ultimate explanations address the evolutionary function of behaviors, proximate explanations concern the biological, developmental, and environmental mechanisms that produce them (Baker et al., 2025).

To systematically assess the development and intellectual structure of the field, bibliometric analysis emerges as a rigorous and objective methodology in evolutionary psychology research (Van Eck & Waltman, 2010). This method enables a comprehensive understanding of academic literature through both descriptive and evaluative procedures (McBurney & Novak, 2002; Garfield, 1970). Due to its reliance on automated or semi-automated processing of quantitative data, bibliometric analysis minimizes subjectivity (Donthu et al., 2021; Lim et al., 2022; Zhao et al., 2023). Consequently, it has been widely employed to map the intellectual landscape of specific disciplines (Azam et al., 2021; Zhang et al., 2022).

Among the principal techniques in bibliometrics, citation analysis is employed to trace intellectual linkages and collaborative networks within and across fields (Osareh, 1996). However, it is crucial to recognize the limitations of citation metrics, as citations may not always indicate

positive reception and can occasionally reflect critical engagement (Cronin et al., 2000).

The primary aim of this study is to systematically examine the academic literature published in the field of evolutionary psychology through bibliometric analysis methods and to reveal the structural characteristics, research trends, and intellectual development of the field. As a discipline inherently open to interdisciplinary interaction, evolutionary psychology encompasses both theoretical and empirical contributions across a wide range of topics. Therefore, mapping the accumulated knowledge in the field using objective and quantifiable data is essential for understanding its general landscape.

In this context, the study seeks to identify the temporal distribution of publications in evolutionary psychology, the most prolific authors, leading institutions, and the academic journals in which the research is disseminated. Furthermore, by analyzing prominent keywords, thematic clusters, and research domains, the study aims to uncover dominant theoretical orientations and focal topics within the literature. In addition, citation analysis will be used to determine the most highly cited works, influential scholars, and patterns of interdisciplinary interaction, thereby allowing for an objective evaluation of the field's scientific impact.

Another objective of the study is to examine the direction and intensity of scientific collaboration. In this regard, co-authorship, institutional, and international collaboration networks will be analyzed to explore the global distribution, patterns of interaction, and cooperation within the field of evolutionary psychology. Ultimately, this study aims to provide a comprehensive evaluation of the bibliometric patterns within evolutionary psychology, to make visible the prevailing theoretical directions and potential research gaps, and to propose a structural roadmap to guide future investigations.

METHODOLOGY

This study employed a descriptive bibliometric research design to systematically analyze the scientific literature in the field of evolutionary psychology. The primary aim was to examine the structural characteristics, intellectual

development, and research trends within the field through quantitative analysis of publications indexed in the Scopus database (Elsevier). Data collection was conducted by retrieving all documents categorized under the subject area of Evolutionary Psychology between the years 1884 and 2024, with the final data extraction performed on January 1, 2025. The inclusion criterion was the presence of the term “evolutionary psychology” in the title, abstract, or keywords of indexed publications. Only journal articles, reviews, and conference proceedings written in English and indexed as scientific documents were included in the analysis, while non-peer-reviewed content (e.g., editorials, book reviews, or notes) was excluded to ensure the reliability of the dataset.

The final dataset consisted of 9679 publications. Although this study did not involve human participants, the sampled units included scientific publications, and the analysis focused on variables such as authorship, country affiliation, publication year, citation counts, and keyword usage. As such, probabilistic or non-probabilistic sampling techniques were not applicable. However, rigorous inclusion and exclusion criteria were applied to ensure consistency and relevance of the sampled literature.

The data collection instrument was not a standardized scale but rather the Scopus database query interface. As the study relied on secondary data from a structured and validated database, no psychometric validation (e.g., reliability or construct validity) was necessary. However, to ensure methodological transparency and reproducibility, the search strategy, keywords used, and time frame were clearly specified.

The data analysis was conducted using bibliometric techniques, with a particular focus on citation analysis and co-word analysis to identify influential publications, emerging research topics, and author networks. VOSviewer software (Version 1.6.20) was employed to visualize co-authorship networks, citation networks, and keyword co-occurrence patterns. The clustering algorithms within VOSviewer allowed for the identification of thematic structures within the literature.

Although this study does not employ content analysis in the traditional qualitative sense, co-word analysis was used to extract thematic trends, and clusters of keywords were interpreted based on their frequency and proximity in the co-occurrence network. In this context, the coding process was automated through the software’s internal algorithms, and thematic interpretation was based on both visual inspection and the density of keyword clustering. The methodological process was designed to ensure objectivity, replicability, and transparency, in line with established standards in bibliometric research.

RESULTS

A total of 9,679 publications related to evolutionary psychology were identified in the Scopus database. The distribution of these publications by year is shown in Table 1. According to the data, the highest number of publications occurred in 2012 (581 publications), followed by 2020 (541 publications) and 2017 (525 publications). Of these publications, 6,188 (63.93%) were journal articles, 1,323 (13.66%) were reviews, 994 (10.26%) were book chapters, 570 (5.88%) were books, 233 (2.40%) were conference papers, and 371 (3.87%) were categorized as other types of publications (e.g., letters to the editor, notes, corrections, bibliometrics, etc.) (Table 2, Figure 2).

Table 1: Number of Studies by Year

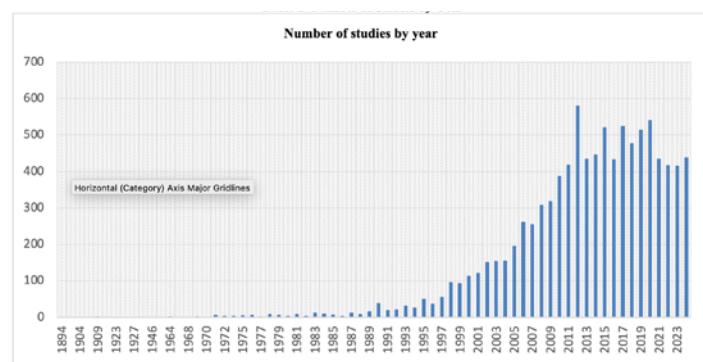
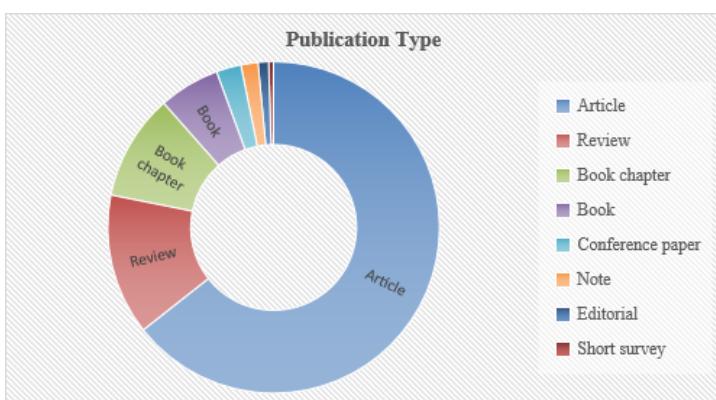


Table 2: Distribution of Publications

Publication Type	Number of Publications	Percentage
Article	6,188	63,93%
Review	1,323	13,66%
Book chapter	994	10,26%
Book	570	5,88%
Conference paper	233	2,40%
Note	160	1,65%
Editorial	98	1,01%
Short survey	47	0,48%
Letter	30	0,30%
Erratum	22	0,22%
Other Publications	14	0,14%
Total	9679	100%

**Figure 1:** Distribution of Research Types

Active Institutions

The most prolific institution in the field of evolutionary psychology is the University of California, Los Angeles, with a total of 151 publications. This is followed by the University of Texas at Austin and the University of Oxford, both contributing 136 publications each (Table 3).

Table 3: Active Institutions

Affiliation	Research numbers
University of California, Los Angeles	151
The University of Texas at Austin & University of Oxford	136
Harvard University	132
Arizona State University & Florida Atlantic University	126
University of California, Santa Barbara	110
University of Michigan, Ann Arbor	109
University College London	105
Vrije Universiteit Amsterdam	104
The University of New Mexico	102
CNRS Centre National de la Recherche Scientifique	100
Aarhus Universitet	94
Florida State University & The University of British Columbia & Oakland University	88
The University of Arizona	83
University of Minnesota Twin Cities	78
London School of Economics and Political Science & University of Cambridge & University of Toronto	77

Active Journals

The leading journal in evolutionary psychology is Behavioral and Brain Sciences, publishing 210 articles in total. It is followed by Personality and Individual Differences and Frontiers in Psychology, both with 147 publications (see Table 4).

Table 4: Active Journals

Active Journals	Research numbers
Behavioral and Brain Sciences	210
Personality and Individual Differences & Frontiers in Psychology	147
Evolution and Human Behavior	140
Evolutionary Psychology	133
Plos One	122
Philosophical Transactions of the Royal Society Biological Sciences	114
Psychological Science & Journal of Social Evolutionary and Cultural Psychology	82
Evolutionary Behavioral Sciences	81
Human Nature	72
Evolutionary Psychological Science	61
Proceedings of The National Academy of Sciences of The United States of America	60
Journal of Personality and Social Psychology	59
Biology and Philosophy	58
American Psychologist & Archives of Sexual Behavior & Scientific Reports	55
Proceedings of The Royal Society Biological Sciences	54
Psycoloquy/Review of General Psychology	52
Review of General Psychology	49
Behavioural Processes	46
Integrative Psychological and Behavioral Science	45
Psychological Bulletin	44

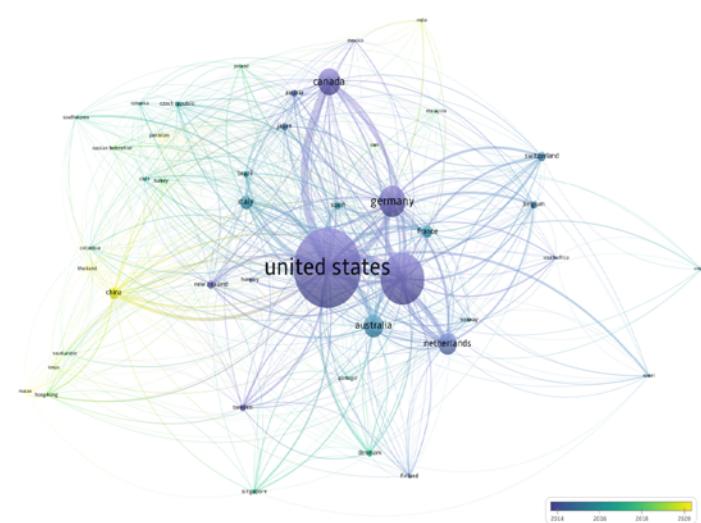
Active Countries

The United States leads the field of evolutionary psychology in terms of publication output, with a total of 4,399 publications. The United Kingdom and Canada follow, with 1,492 and 710 publications, respectively (Table 5; Figures 2 and 3).

Table 5: Active Countries

Active countries	Research numbers	Active countries	Research numbers
United States	4,399	Switzerland, Sweden	149
United Kingdom	1,492	Denmark	146
Canada	710	New Zealand	135
Germany	606	Belgium	129
Australia	485	Austria	115
Netherlands	380	Russian Federation & Israel	106
Italy	311	Poland	104
China	291	Norway	99
France	253	Finland	98
Spain	212	Hungary	88
Japan	167	Czech Republic	78
Brazil	162	Portugal	71

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**Figure 2: Active Countries by Year**

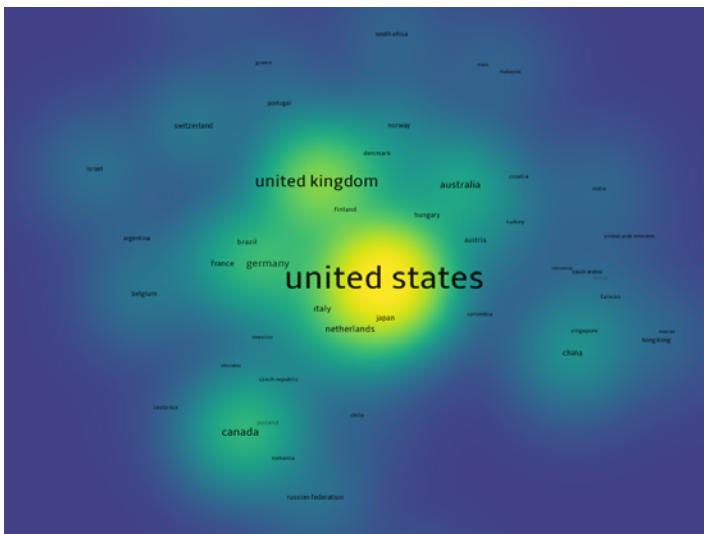


Figure 3: Research Intensity of Active Countries

Active Authors

Shackelford is the most prolific author in the field of evolutionary psychology, having published 147 works. Buss and Kanazawa follow with 93 and 51 publications, respectively (Table 6).

Most Cited Publications

The most highly cited study in the field of evolutionary psychology is Bayes Factors by Kass et al. (1995), with 12,591 citations. This is followed by Henrich et al.'s (2010) The Weirdest People in the World? with 8,282 citations, and Gross's (1998) The Emerging Field of Emotion Regulation: An Integrative Review with 6,055 citations (Table 7).

Table 6: Active Authors

Authors	Research numbers
Shackelford, T.K.	147
Buss, D.M.	93
Kanazawa, S.	51
Bjorklund, D.F.	45
Jonason, P.K.	44
Li, N.P.	41
Kenrick, D.T.	40
Tooby, J., Maner, J.K.	39
Gangestad, S.W.	32
Petersen, M.B.	31
Griskevicius, V.	30
Saad, G.	29
Brown, M.	28
Fisher, M.L.	27
Henrich, J.	26
Goetz, A.T.	25
Jensen, A.R., Figueiredo, A.J. Cosmides, L.	24

Table 7: Most Cited Publications

Article	Authors	Source	Citations
Bayes factors	Kass, R.E. , Raftery, A.E. (1995)	Journal of the American Statistical Association 90(430), pp. 773–795	12,591
The weirdest people in the world?	Henrich, J. , Heine, S.J. Norenzayan, A. (2010)	Behavioral and Brain Sciences 33(2-3), pp. 61–83	8,282
The emerging field of emotion regulation: An integrative review	Gross, J.J. (1998)	Review of General Psychology 2(3), pp. 271–299	6,055
The emotional dog and its rational tail: A social intuitionist approach to moral judgment	Haidt, J. (2001)	Psychological Review 108(4), pp. 814–834	5,752
Mate selection-A selection for a handicap	Zahavi, A. (1975)	Journal of Theoretical Biology 53(1), pp. 205–214	3,759
Universal dimensions of social cognition: warmth and competence	Fiske, S.T. Cuddy, A.J.C. Glick, P. (2007)	Glick, P. Trends in Cognitive Sciences 11(2), pp. 77–83	3,149
Understanding and sharing intentions: The origins of cultural cognition	Tomasello, M., Carpenter, M. Call, J. , Behne, T., Moll, H. (2005)	Behavioral and Brain Sciences 28(5), pp. 675–691	3,089
Neuroscience: The faculty of language: What is it, who has it, and how did it evolve?	Hauser, M.D. , Chomsky, N. , Fitch, W.T. (2002)	Science 298(5598), pp. 1569–1579	3,058
Sexual strategies theory: An evolutionary perspective on human mating	Buss, D.M., Schmitt, D.P. (1993)	Psychological Review, 100(2), pp. 204–232	2,964
Correlates of physical activity: Why are some people physically active and others not?	Bauman, A.E. , Reis, R.S. , Sallis, J.F. , ... Ogilvie, D. , Sarmiento, O.L. (2012)	The Lancet, 380(9838), pp. 258–271	2,872

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Keyword Analysis and Trending Topics

A total of 16,636 keywords were identified across 9,679 Turkey-affiliated publications included in the keyword analysis. Among these, 1,097 keywords appeared in at least five publications. The 33 most frequently used keywords are presented in Table 8, while keyword-based network visualizations are shown in Figure 4. The visualizations indicate that core concepts in the field include “Evolutionary Psychology,” “Evolution,” “Sexual Selection,” and “Adaptation.” In addition, more recent and emerging trends are represented by keywords such as “Cultural Evolution,” “Covid-19,” and “Psychology,” reflecting the field’s responsiveness to contemporary scientific and societal developments.

Table 8: Most Frequently Used Keywords

Keywords	N	Keywords	N	Keywords	N
Human	3,240	Physiology	789	Adolescent	420
Humans	2,581	Cognition	759	Human Experiment	393
Evolutionary Psychology	2,436	Review	667	Social Psychology	388
Psychology	2,173	Biological Evolution	611	Learning	375
Article	1,910	Priority Journal	588	Sexual Behavior	373
Evolution	1,690	Social Behavior	574	Behavior	355
Female	1,648	Nonhuman	563	Psychological Aspect	341
Male	1,580	Emotion	455	Motivation	322
Adult	1,014	Controlled Study	455	Cooperation	315
Animals	897	Young Adult	450	Child	313
Animal	793	Decision Making	427	Perception	310

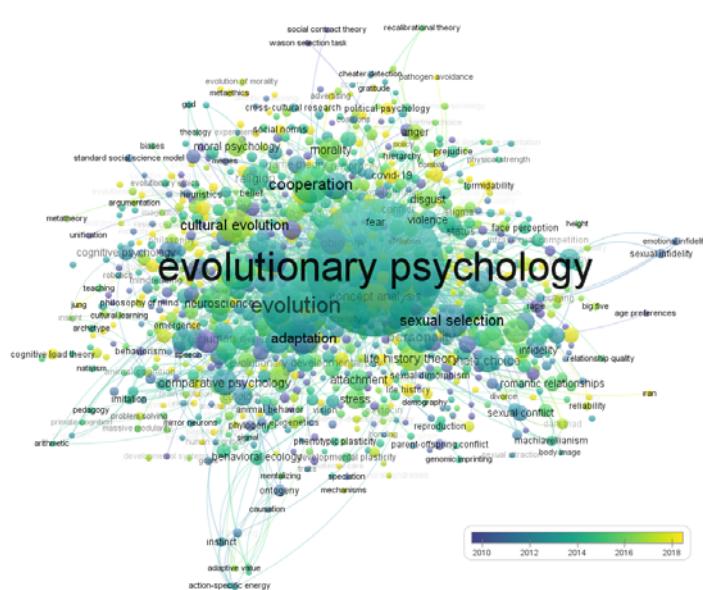


Figure 4: Network Visualization of the Most Frequently Used Keywords

Research Areas with the Most Publications

Within the field of evolutionary psychology, Psychology represents the most prominent research area, encompassing

4,748 publications. This is followed by Arts and Humanities with 2,277 studies and Social Sciences with 2,175 studies (Table 8).

Table 8: Research Areas with the Most Publications

Subject area	Research numbers
Psychology	4,748
Arts and Humanities	2,277
Social Sciences	2,175
Agricultural and Biological Sciences	1,300
Neuroscience	1,226
Medicine	1,159
Biochemistry, Genetics and Molecular Biology	853
Business, Management and Accounting	466
Computer Science	426
Multidisciplinary	334
Economics, Econometrics and Finance	300
Environmental Science	247
Mathematics	230
Nursing	217
Engineering	183
Immunology and Microbiology	119
Physics and Astronomy	60
Earth and Planetary Sciences	56
Decision Sciences	55
Pharmacology, Toxicology and Pharmaceutics	35

DISCUSSION

The bibliometric analysis findings in the field of evolutionary psychology provide significant insights into the historical and thematic development of the discipline. The results of the study, particularly the peak in the number of publications observed in 2012, indicate a turning point in the scientific productivity of this field. This trend points to a period during which evolutionary psychology expanded its theoretical and methodological framework to explain the evolutionary origins of human behavior. Among the types of publications, articles constituted the most common format with a share of 63.93%, while reviews and book chapters also held a notable portion. This

diversity highlights the discipline's structure, encompassing both theoretical and applied perspectives. Evolutionary psychology is a robust theoretical framework that seeks to explain human behavior through evolutionarily shaped motivational systems, and it has gained increasing attention in the context of consumer behavior in recent years.

Nevertheless, while the existing literature has extensively examined some core motives such as mate acquisition, status seeking, and social affiliation, other fundamental motives—namely mate retention, disease avoidance, and kin care—have been largely overlooked in terms of their implications for consumer behavior (Thomas et al., Brick et al., 2023; 2019; Givi et al., 2023; Frias & O'Connor, 2024). For instance, behaviors such as secret consumption, brand compatibility, or gift-giving may be interpreted as manifestations of mate retention motives, whereas perceptions of food freshness, avoidance of second-hand goods, and health-related consumption choices can be regarded as expressions of the disease avoidance system (Gvili et al., 2017; Huang & Sengupta, 2020; Sharma & Kumar, 2023). Kin care motivations, on the other hand, have been associated with intra-family resource allocation and gift-related spending, and they may also explain consumers' willingness to expend greater cognitive effort in decision-making when outcomes affect their family or dependents (Saad et al., 2003; Durante et al., 2015; Li et al., 2019; Liang et al., 2023).

From a cognitive standpoint, evolutionary psychology may offer unique contributions to understanding consumer functions such as attention, information processing, and memory. For example, the well-documented tendency for individuals to rapidly detect evolutionarily relevant threats—such as snakes—suggests that similar perceptual prioritization may occur in consumption settings, where product attributes related to safety or caloric value may command early-stage attention (Kawai et al., 2016). These hypotheses can be empirically examined using eye-tracking methodologies, which, when integrated with established cognitive processing theories like the Elaboration Likelihood Model (Petty et al., 1983) or the Heuristic-Systematic Model (Chaiken, 1980), can advance theoretical and applied knowledge in consumer psychology (Campbell, 2023). Moreover, research on the representation

of anthropomorphized brands in memory suggests that such representations may interact with fundamental motives, thereby influencing brand evaluations and consumer-brand relationships (Aggarwal et al., 2007; Waytz et al., 2010; Maeng et al., 2018;).

Contemporary digital platforms—particularly social media—frequently activate motives related to status, mate selection, and affiliation, especially among young adults (Sharifian et al., 2021; Vinuales et al., 2021; Di Domenico et al., 2021; Diaz Ruiz et al., 2023; Thomas et al., 2024). These patterns highlight the relevance of signaling theory in explaining how influencer behaviors shape consumer perceptions in digitally mediated environments (Connelly et al., 2011). By contrast, consumer reactions to emerging technologies are often characterized by concerns related to personal safety, social inequality, and existential threats, which suggests that such reactions are rooted in evolutionarily shaped protective mechanisms (Zhan et al., 2023; Bozkurt et al., 2023). In this regard, integrating evolutionary psychology with established frameworks like the Technology Acceptance Model (Davis, 1989) may enable more nuanced explanations of consumer hesitancy or acceptance across technology categories. The symbolic association between status and technological consumption—such as the perception of iPhones as indicators of leadership and social capital—further illustrates how evolutionary motives underpin modern consumer symbolism (Ma et al., 2019).

On another front, virtual influencers may trigger aversive reactions in consumers due to the "uncanny valley" effect, a phenomenon in which entities that appear almost—but not exactly—human are perceived as unsettling or eerie (Mori, 1970; Schmitt, 2020; Lou et al., 2023). At the same time, these artificial agents can elicit parasocial relationships and perceptions of attractiveness, potentially activating both affiliation and mate-seeking motives (Deng et al., 2023; Stein et al., 2024). While these effects may increase engagement, they also raise concerns about unrealistic self-comparisons and diminished self-esteem among consumers.

In retail contexts, findings that female consumers respond more positively to male salespeople (Prendergast et

al., 2014) may appear to contradict previous literature suggesting general consumer avoidance of sales interactions (DeCarlo, 2005) and women's lower propensity to engage in negotiations (Kugler et al., 2018). However, this discrepancy may be clarified through an evolutionary lens: in fixed-price environments, mate attraction motives may override negotiation-related inhibition, whereas in negotiation-intensive contexts (e.g., car sales), dominance and threat-related concerns may prevail (Fagerstrøm et al., 2017).

Finally, much of the evolutionary psychology literature still conceptualizes gender and romantic relationships within binary and heteronormative frameworks, thereby limiting the scope and inclusivity of its findings. As marketing academia continues to emphasize the importance of inclusivity and representation in marketplace research, it becomes imperative that EP-based studies also reflect these values by incorporating diverse identities and relational dynamics into their conceptual and empirical models (Rosenbaum et al., 2022; Montecchi et al., 2024).

The key terms that emerged in the study underscore that the fundamental concepts of evolutionary psychology are rooted in evolutionary processes. Terms such as "evolutionary psychology," "adaptation," and "cultural evolution" reflect the discipline's primary orientations toward explaining human behavior in biological and cultural contexts. Furthermore, contemporary issues like COVID-19 have been observed to enter the research focus of evolutionary psychology. This finding demonstrates the discipline's adaptability to current social and health crises, offering broader applicability. Keyword analysis suggests that this thematic diversity is a crucial factor in enhancing the scientific impact and practical potential of the field.

The citation analysis presented in the study provides valuable insights into the epistemological foundations of evolutionary psychology. Among the most cited publications, articles such as "Bayes Factors" and "The Weirdest People in the World?" exemplify the field's methodological contributions and theoretical advancements. It has been emphasized that citations should not only be evaluated quantitatively but also considered in their context. Whether the cited studies are critical or supportive and the context in which they are cited are

critical to assessing the true scientific impact of research. This observation necessitates a deeper exploration of the main theoretical debates and methodological innovations in evolutionary psychology.

The study identifies the University of California, Los Angeles, and the University of Oxford as leading academic centers in the field. In addition, the contributions of authors such as Shackelford, Buss, and Kanazawa are noted to play a pivotal role in shaping evolutionary psychology. The work of these authors, in particular, has contributed to the strengthening of the theoretical foundation of the discipline by providing conceptual and experimental frameworks for understanding the evolutionary basis of human behavior. Additionally, collaborations between authors and institutions have been identified as a key factor in enhancing the international impact of the discipline.

Bibliometric studies commonly utilize two primary types of maps: distance-based maps and graph-based maps. In distance-based maps, the distance between two items represents the strength of the relationship between them; shorter distances indicate stronger relationships. While these maps are effective in identifying clusters of related items, the uneven distribution of items can lead to issues such as overlapping labels. In contrast, graph-based maps do not represent relationship strength through distance. Instead, connections between items are depicted using lines. These maps often distribute items more uniformly, reducing labeling issues. However, compared to distance-based maps, graph-based maps are less effective in visualizing relationship strength and identifying clusters of related items (Van Eck et al., 2010).

When conducting citation analysis, several critical considerations must be taken into account to ensure meaningful and reliable results. Over time, there has been a misconception that citation counts directly reflect the scientific quality of a study. However, relying solely on citation counts may not accurately represent a study's true impact. As Cole (2000) highlights, evaluating a study without considering the context and nature of its citations can lead to erroneous conclusions about its scientific significance or contribution. Some citations may indicate support, while others may highlight methodological shortcomings or critiques.

Additionally, differences in citation practices and publication norms across disciplines are significant factors to consider in citation analysis (van Raan, 1996). Ensuring consistency in author names, institutional affiliations, and other relevant metadata is crucial for accurate analysis. Moreover, self-citations and in-house citations (those from the same institution).

CONCLUSION

This study offers a comprehensive bibliometric overview of the evolutionary psychology literature spanning 1894 to 2024. By systematically analyzing 9,679 publications indexed in the Scopus database, it uncovers critical insights into the structural dynamics, intellectual foundations, and thematic evolutions that have shaped the discipline. The findings reveal a clear trajectory of scholarly expansion, marked by a significant increase in scientific productivity around 2012. Articles constituted the dominant publication type, while keywords such as "evolutionary psychology," "adaptation," and "cultural evolution" underscore the field's foundational orientation toward understanding human behavior through evolutionary principles.

The results also identify leading contributors, including institutions like the University of California, Los Angeles, and prolific authors such as Shackelford and Buss, whose work has significantly shaped the theoretical landscape of evolutionary psychology. Furthermore, the citation analysis demonstrates not only the influence of foundational methodological contributions—such as "Bayes Factors" and "The Weirdest People in the World?"—but also the necessity of contextualizing citation counts within broader scholarly discourse to avoid simplistic interpretations of impact.

Importantly, the study illustrates the field's responsiveness to contemporary issues, including global health crises like COVID-19, indicating a growing capacity for interdisciplinary integration and practical application. However, it also reveals a persistent geographical concentration of research in Western countries, pointing to the need for broader cross-cultural engagement to enhance the field's universality and inclusivity.

Methodologically, the integration of co-word and

citation analyses using VOSviewer has allowed for the visualization of thematic structures and collaboration patterns, supporting a deeper understanding of the field's intellectual architecture. Yet, the study also underscores ongoing limitations in citation-based metrics and the importance of maintaining methodological rigor and interpretive nuance.

In sum, this bibliometric analysis provides not only a historical account but also a strategic roadmap for future research in evolutionary psychology. It encourages diversification in theoretical focus, greater global collaboration, and increased attention to underexplored motivational systems. These directions are essential for ensuring the discipline's continued relevance and contribution to a holistic understanding of human behavior in both biological and cultural contexts.

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