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FORTY YEARS OF BEHAVIOR ANALYSIS IN MEXICO: A REVIEW OF THE MEXICAN JOURNAL OF BEHAVIOR ANALYSIS

QUARENTA ANOS DE ANÁLISE DO COMPORTAMENTO NO MÉXICO: UMA REVISÃO DA REVISTA MEXICANA DE ANÁLISE DO COMPORTAMENTO

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RESUMO

Este artigo apresenta uma revisão atual da Revista Mexicana de Análise do Comportamento (MJBA). A revisão inclui um breve resumo histórico da Sociedade Mexicana de Análise do Comportamento, juntamente com alguns aspectos sobre o contexto acadêmico e social da análise do comportamento no México, que são mencionados para uma melhor compreensão da origem do MJBA. O artigo apresenta o número de artigos publicados em inglês e espanhol e um análise de artigos relacionados ao comportamento humano e não humano e à pesquisa básica e aplicada. O artigo também relata a afiliação universitária dos primeiros autores com maior porcentagem de artigos publicados.

Palavras-chave: análise do comportamento no México, Revista Mexicana de Análise do Comportamento, Sociedade Mexicana de Análise do Comportamento

ABSTRACT

The present paper shows a current review of the Mexican Journal of Behavior Analysis (MJBA). The review includes a brief historical summary of the Mexican Society of Behavior Analysis, along with some aspects about the academic and social context of behavior analysis in Mexico which are mentioned in order to understand the origin of MJBA. The paper presents the number of articles published in English and Spanish, an analysis of the articles related to human and non-human behavior, basic and applied research. The paper also reports the first authors' university affiliation with higher percentage of articles published.

Keywords: behavior analysis in Mexico, Mexican Journal of Behavior Analysis, Mexican Society of Behavior Analysis

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Footnote 1. Even when Panama does not officially belong to the South American countries, we included it in such category in order to have a sole category.

Over the course of the past forty years, the Mexican Journal of Behavior Analysis (MJBA) has been an important reference point for Spanish-speaking researchers interested in the most recent discussions of and findings on behavior analysis in Latin America (Ribes, 2015). Nevertheless, before going through a description of the MJBA and a recount of its most recent publications, we must describe the conditions that allowed its emergence and by which the Mexican Society of Behavior Analysis (MSBA) was able to also be established.

The MSBA was established in 1975 in response to the growing need to integrate and provide identity to a new tradition in psychology, taking into account objectives such as: a) promoting the creation of spaces aimed at dissemination and discussion, focusing on aspects of a methodological and theoretical nature in basic and applied scenarios, b) spreading the knowledge of behavior analysis to psychology and its related disciplines, c) publishing the MJBA, the organization of seminars, congresses and scientific events aimed at communication among behavior analysts in Mexico, d) establishing links to similar associations in Mexico and other countries around the world, and, e) assessing institutions, organizations, and associations in regard to issues related to behavior analysis (Ribes, 2015; Public Registrar / MSBA, 1975).

Given the commitment and responsibility of the different boards of directors from the MSBA, and from the general editors and their boards of editors at the MJBA, in 2015 the MSBA and the MJBA celebrated their 40th anniversary.

Considering that previous writings have already described the beginnings and development of the MJBA (Ardila, 2006; Bijou, 1975; Bruner, 1999; López-López, Vera-Villaruel, Pérez-Acosta, Aguilar-Bustamante, Hurtado-Parrado & Valenzuela, 2010; Martínez, 2006; Pérez-Almonacid & Gómez-Fuentes, 2014; Ribes, 1999, 2000, 2010, 2012, 2015), no further description will be given. Nevertheless, we consider that a short description of some aspects could provide a general overview for the development of the MJBA. The MJBA was first published in 1975 under conditions suitable for its emergence, such as the development of bachelor-degree programs based on behavior analysis, along with their consolidation, and its establishment through the development of behavior-analysis research programs in Mexico (Ribes, 1999, 2015). Since its beginning, the MJBA has been a scientific product that emerged and has remained active thanks to the collaboration of people committed to psychology, and particularly to behavior analysis. For example, in Mexico, Emilio Ribes, who received The International Dissemination of Behavior Analysis Award by the Society for the Advancement of Behavior Analysis, and Carlos Bruner, who is a member of the Fellow Committee of the Association for Behavior Analysis International, have been pillars of the MSBA and the MJBA. As editors of the MJBA, Emilio Ribes succeeded in establishing the foundations for the development and consolidation of the journal, and Carlos Bruner succeeded in including the MJBA inside the index of scientific journals of excellence

by the Consejo Nacional de Ciencia y Tecnología (CONACYT) (Bruner, 1999). In addition, Andy Lattal has contributed as a Foreign Language Editor for the MJBA, thus helping with the international visibility of the MJBA (Bruner, 1999). Also, not to mention the collaboration of W. N. Schoenfeld and J. R. Kantor, who with their mentorship during the establishment of the MJBA, contributed on setting its objectives (Ribes, 1999).

Since it was first established, one of the main objectives of the MJBA has been to retain its status as a scientific dissemination forum for behavior analysts, not only in Mexico but also in Latin America and English speaking countries. Due to these objectives, the MJBA has remained a bilingual journal since its beginnings. The purpose of publishing papers in both languages has been to promote Spanish as a scientific language, and thus communicate to English speaking readers the results obtained by Spanish speaking researchers (Ribes, 1999). Recently, and thanks to its bilingual nature, the MJBA has received collaborations from foreign authors as can be seen in its most recent publications, especially in the special (monographic) issues of 2013, 2014, and 2015.

In an effort to identify the impact and coverage achieved by the MJBA, Lattal (1999) published a bibliometric revision of the MJBA for the 1975-1998 period. In order to keep a similar strategy, the present article will show a comparison between some of the information presented by Lattal for the 1975-1998 period and information for the 1999-2015 period. Along with such comparison, additional analyses will be shown (i.e., percentage of basic and applied research articles, percentage of research articles by area) which could allow an assessment of the contributions made to the MJBA and its relevance throughout the behavior analysis community.

METHOD

The type of research is bibliometric because it seeks quantitatively the production of knowledge in the MJBA (Aguado-López, Becerril-García & Aguilar-Bustamante, 2016; Rivera-Garzón, 2009; Spinak, 2001).

Data from all issues of the MJBA, ranging from Volume 1, No.1 (1975) to Volume 41, No.3 (2015) was collected and analyzed using an IBM SPSS (v.21) spreadsheet. Access to all issues was provided by the library of the Centro de Estudios e Investigaciones en Comportamiento at the Universidad de Guadalajara and by MJBA webpage.

Data collection consisted of a total of 730 articles. Information from each article was classified, therefore identifying the year of publication, the volume and its number, language of publication, the name of the article, the name of the author and collaborating authors, the country of origin, the name of the university or institute to which the authors belong to, and the name of the department or laboratory of the authors. Likewise, all articles were classified depending of the type of article, the area and type of research (*see Table 1*). This classification was elaborated by reading the abstract and keywords of each article, and by common agreement between the authors of the present article.

Table 1.
Classification of Articles Based on Its Type, Area and Type of Research.

Type of article	Research reports
	Reviews
	Theoretical - conceptual
	Commemorative
	Obituary
	Replica
Research area	Non-human
	Human
	Neural networks
	Technology
Type of research	Basic
	Applied

RESULTS

From its establishment until 1998 the MJBA published a total of 414 articles, including obituaries and commemorative articles (i.e., interviews, and reviews on special issues); whereas in the term 1999-2015 a total of 316 articles were published. Thus, more articles were published, on average, per year, in the later period. A comparative analysis between the percentage of published articles in English and Spanish for both periods (1975-

1998; 1999-2015) is shown in Figure 1. For the first period, 37% of the published articles were written in English, while 63% were written in Spanish. For the second period, 38% and 62% of the articles were written in English and Spanish, respectively. Even when more articles have been published during the 1999-2015 period, it is still possible to identify the same proportion of published articles in each language during both periods.

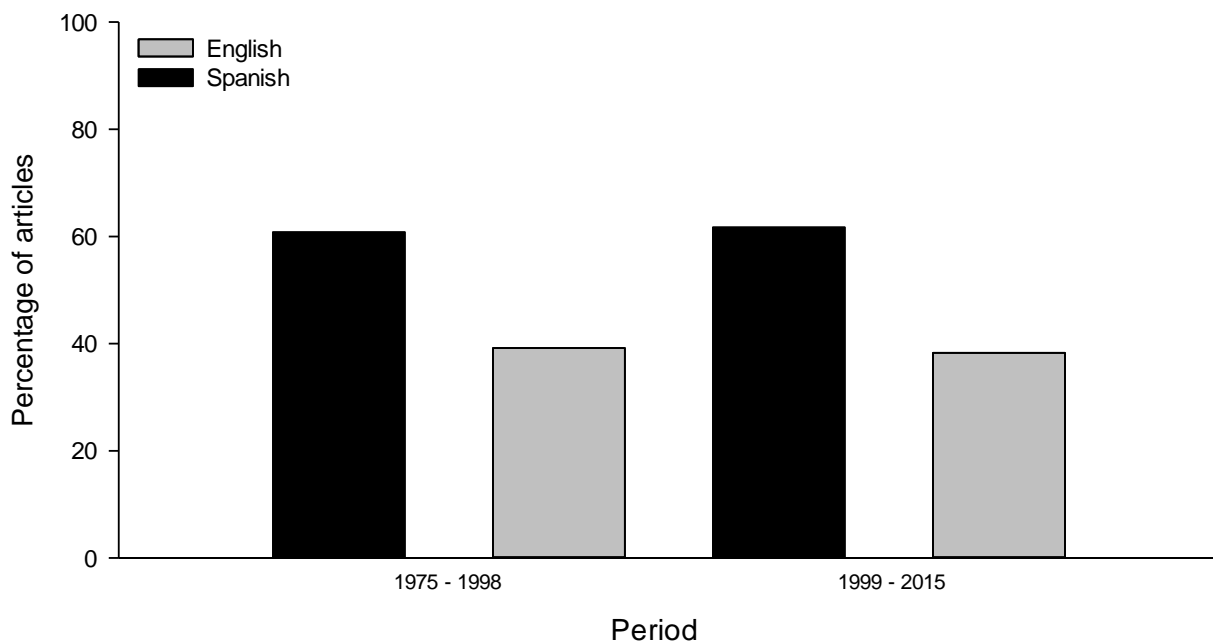


Figure 1. Percentage of articles published in Spanish and English in the MJBA for periods 1975-1998 and 1999-2015.

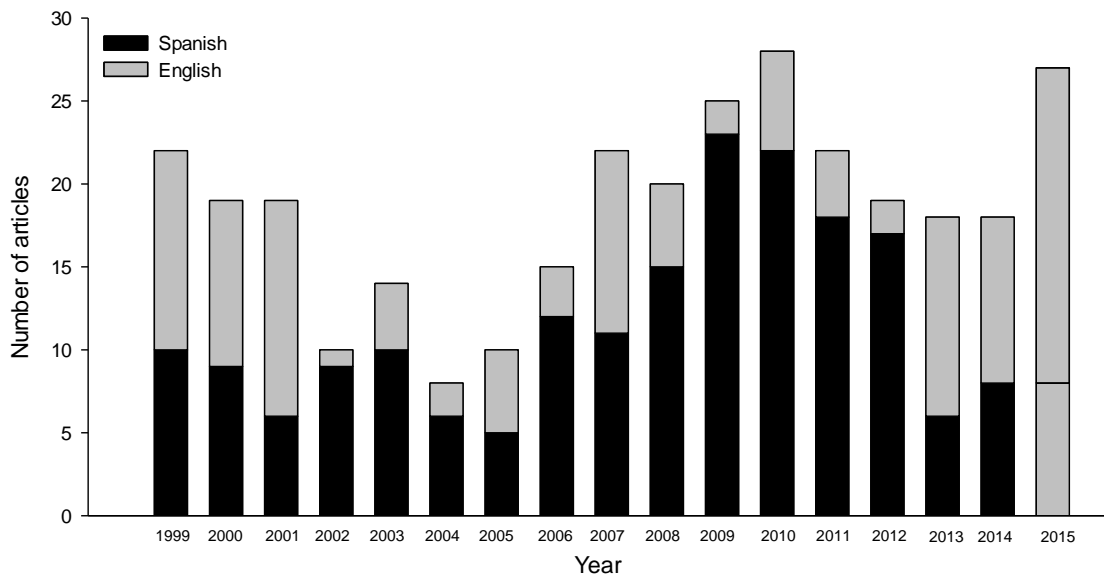


Figure 2. Number of articles published in Spanish and English in the MJBA from 1999 through 2015.

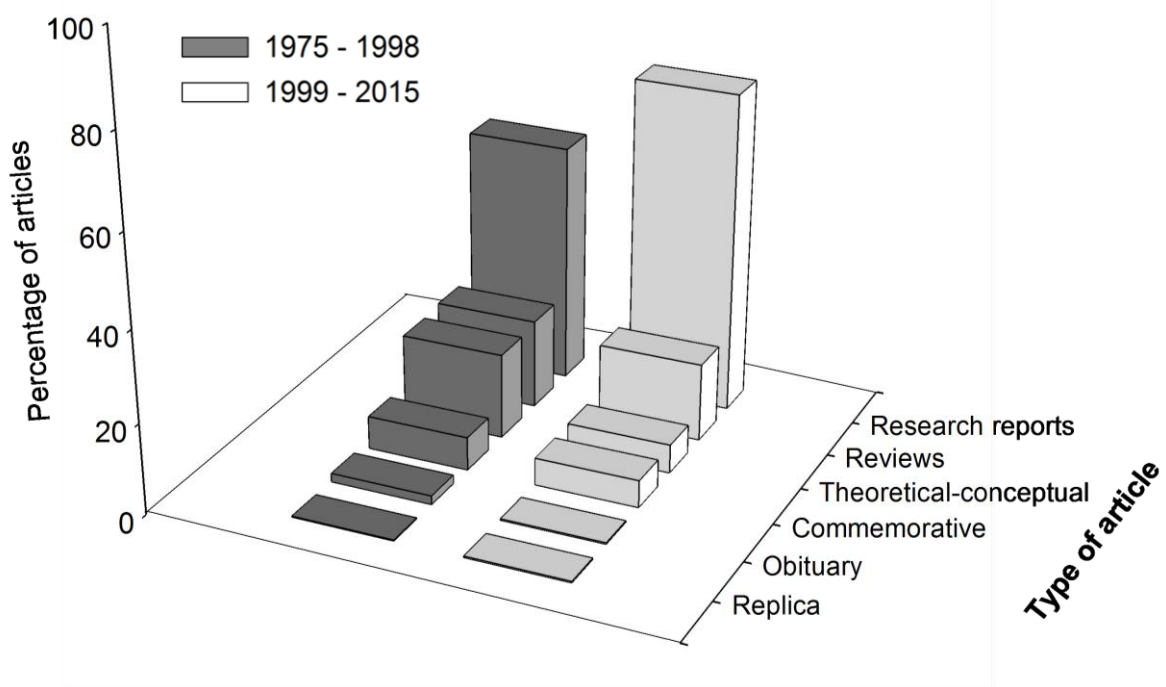


Figure 3. Percentage of articles published by type of article, during the periods 1975-1998 and 1999-2015.

For the 1999-2015 period, a fluctuation can be observed in the number of articles published, in both English and Spanish, per year (Figure 2). It is worth highlighting the increase in the amount of published articles in English for the first (1999, 2000 and 2001) and last three years (2013, 2014, 2015) within the period. Even though an increase in the number of published articles for the years of 2009, 2010, and 2011 can be observed, this increase is mostly observed for articles written in Spanish. Even so, it is worth noting that most of the recently published articles in the last three years are written in

English, which could be evidence not only of the international visibility of the MJBA, but also of the efforts made by the editorial team towards encouraging authors to publish their works in the MJBA.

Since its first years, the MJBA has been distinguished as a journal that publishes articles of different types (research reports, theoretical and conceptual articles, reviews, among others). Figure 3 presents an analysis of the percentage of published articles and their respective types per period.

As shown in Figure 3, research reports are the most published, followed by review articles, and then by theoretical and conceptual articles. For the period 1975-1998, 51.4% of the published articles were constituted by research reports, reviews with 20.2%, theoretical and conceptual articles 20.5%, commemorative articles 6.7%, followed by obituaries 0.8% and replicas 0.3%. For the 1999-2015 period the equivalent percentages were 69.9%, 17.1%, 6.3%, 6.0%, and 0.3%. So far during the 1999-2015 period, an increase on the percentage of research reports and a decrease on that of reviews and theoretical and conceptual articles can be observed. Even when it might be difficult for us to clearly identify the reason why such an increase and decrease on certain types of publications is observed, we could argue in favor of the tendency towards the fulfillment of the criteria of certain institutions. That is, authors seem to give priority towards the publication of research papers before assessing their proper implications.

As mentioned, the MJBA has provided a dissemination space for the publication of research papers within the behavior analysis community, while also providing the opportunity to publish both basic and applied research. Figure 4 shows a comparison of the percentages of published research reports that were applied vs basic in nature, for both periods. For the 1975-1998 period, 86.4% of the publications corresponded to

basic-research and only 13.6% to applied-research reports. For the 1999-2015 period, the percentages were 86.8% and 13.2% for basic and applied research, respectively. Given Mexico's cultural background, but most importantly, the slow development of behavior analysis in our country (Ribes, 2015), it seems reasonable that such percentages are shown for applied research reports. Nevertheless, even when the MJBA has been a journal open to basic and applied research, it seems like applied-research authors would rather publish in different journals before considering the MJBA.

The analysis presented in Figure 5 corresponds to the percentage of published articles separated by research field: non-human behavior (50.8% for the first period and 44.3% for the second period), research with humans (47.6% for the first period and 46% during the second period) and technology (1.6% during the first period and 6.3% for the second period). Also, during the second period it is possible to observe the appearance of a new type of published article, neural networks constituting 3.4% of publications. Given the current happenings in public institutions, where non-human behavior laboratories are being closed-down and thus decreasing the research in that field, it seems plausible that researchers are looking towards the development and use of new techniques in order to find answers to their questions.

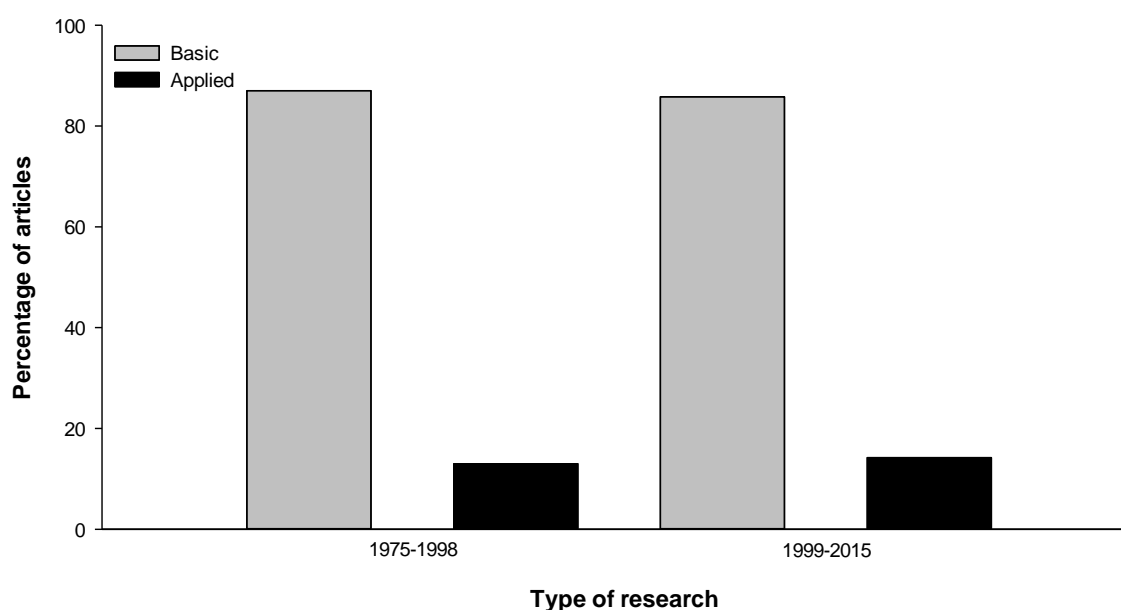


Figure 4. Percentage of basic and applied research articles published for periods 1975-1998 and 1999-2015, in Spanish and English.

A previous analysis reported by Lattal (1999) is regarding the number and percentages of the first author per country or continent. The same analysis was done for the 1999-2015 period and is shown in Table 2. Articles from Colombia, Peru, Brazil, Argentina and Panama¹ were grouped under the "South America" category. Whereas countries like Spain, France, England, and Switzerland were grouped under the "Europe" category. Finally, the contributions made by authors from Japan, New Zealand,

and Turkey were grouped under the "Others" category. Such analysis provides an overview of the quantity of published articles by country or region. Mexico was the country with the most published articles (218), followed by the United States (71), countries from South America (18), Europe (12) and Others (7).

Being able to recognize the institutions that mainly publish in the MJBA provide a general overview of the presence of behavior analysts around the world, in

several institutions, universities, and research centers. This analysis is presented in Figure 6 for each period that we have presented. The reported data correspond to universities with the highest number of published articles. The percentages for each university, during the period 1975-1998, were as follows: Universidad Nacional Autónoma de México (UNAM) with 46%, Universidad de Guadalajara (UDG) with 7%, University of Chicago 3%, University of Brasília 3%, Auburn University 3%; whereas for the 1999-2015 period the percentages were: UNAM 33%, UDG 15%, West Virginia University 4%,

Universidad Veracruzana 3%, and the Intercontinental University 2%. The fact that papers written by authors affiliated to either the UNAM or the UDG seem to be the most published in the MJBA provides an overview of where behavior analysis is currently at in Mexico. On the other hand, the decrease in the percentage of publications by authors affiliated to the UNAM could be attributed to the fact that such research is either being published in other journals, or that researchers are turning towards other fields.

Table 2.

Number and Percentage of First Authors Indicated by the Location of Their Home Institutions, Indicated by Countries or Continents. South America is Integrated by Colombia, Peru, Brazil, Argentina, and Panama; Europe by Spain, France, England, and Switzerland; and Others by Authors from Turkey, New Zealand, and Japan.

Country or continent	Number of first authors	Total Percentage (%)
Mexico	218	66
United States	71	22
South America	18	6
Europe	12	4
Others	7	2

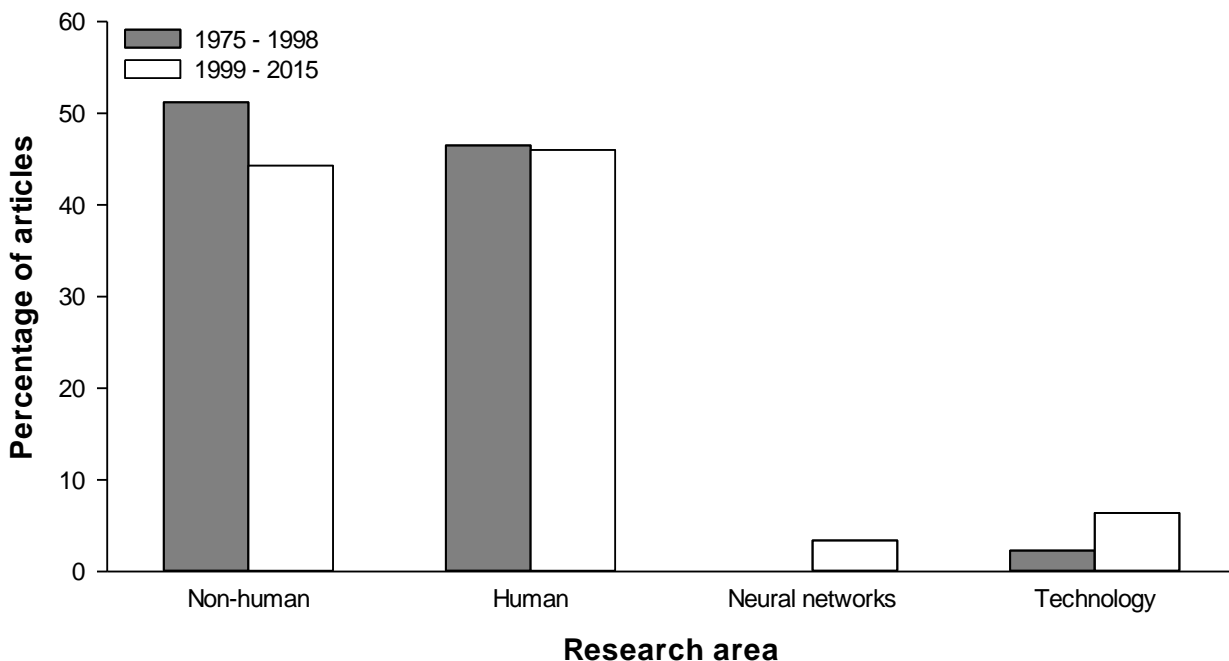


Figure 5. Percentage of articles published by research area, during the periods 1975-1998 and 1999-2015.

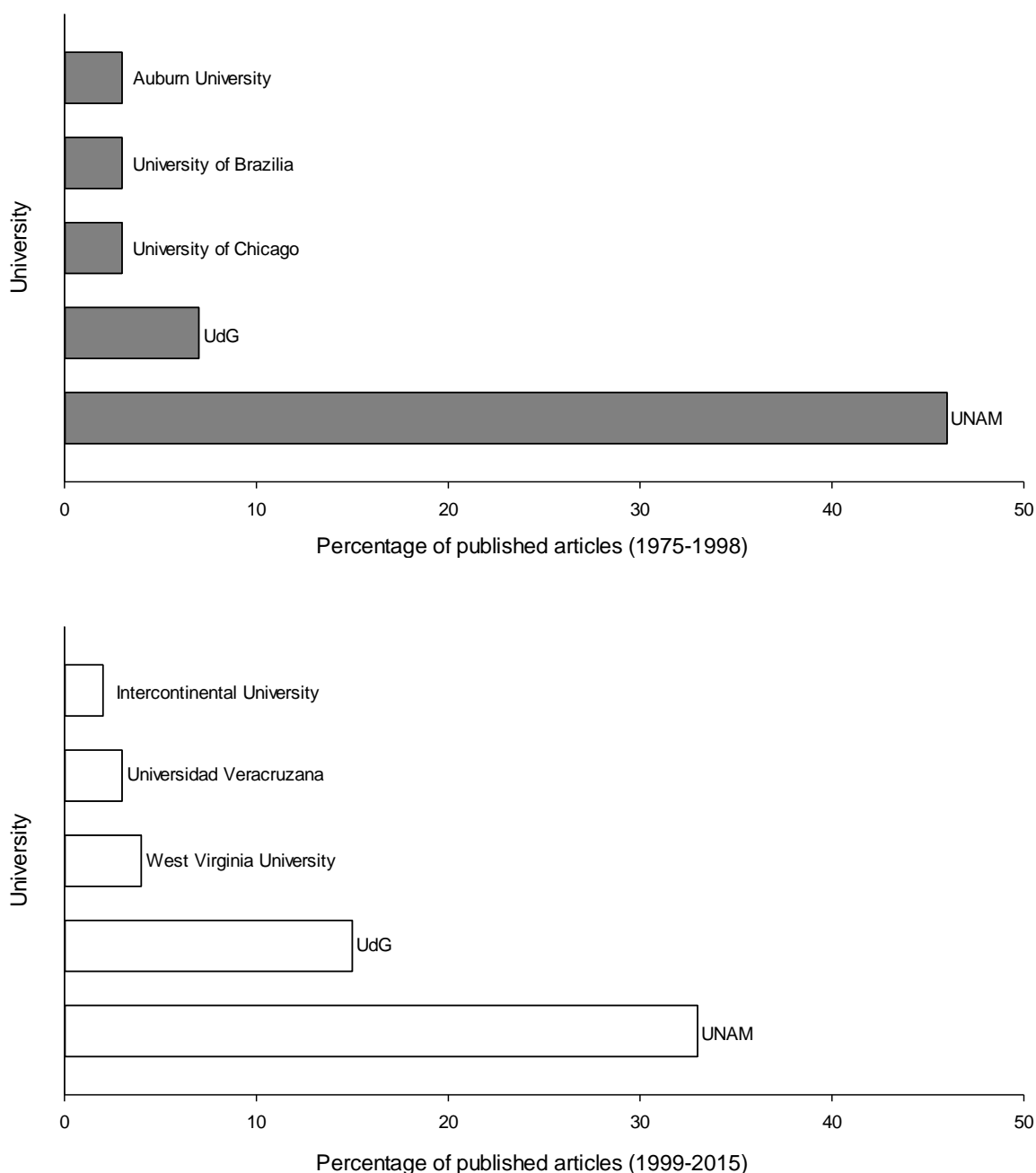


Figure 6. Percentage of articles published by their authors university, during the periods 1975-1998 and 1999-2015.

FINAL CONSIDERATIONS

Just as can be seen from the current analysis, for the past four years the gain in visibility of MJBA could be compared to its gain in its first 40 years. For several years, the MJBA has been publishing articles of international significance, putting the journal in a fortunate position to maintain its inclusion into a society of knowledge through its affiliation with alternative resources of electronic communication.

Having a bilingual journal at the quality level associated with the MJBA has allowed the community of behavior analysts that publish in it to take ownership of practices inside the scientific community. Likewise, its

dissemination through electronic media provides benefits such as the dissemination of the author’s research projects around the world, mostly in Latin America and, and an increase in citation rates. Such benefits fulfill the objective for which the journal was first created: *scientific dissemination*.

Keeping the MJBA visible by continuing the fulfillment of the objectives for which it was founded and adapting to emerging global changes will ensure its validity with respect to the challenges faced by journals around the world (López-López, 2014). Most probably the challenge today is to elevate the MJBA into the most relevant catalogues of scientific journals, and most

importantly, *to keep it there and within the boundaries of a behavior analysis journal.*

So far, forty years after its first publication, the MJBA has covered the objectives under which it was first initiated. In 2008, the MJBA along with the MSBA, had a domain name for the first time, which was hosted on a server belonging to the Centro de Estudios e Investigaciones en Comportamiento at the Universidad de Guadalajara. During that year, most of the MJBA collection was digitalized; this was a significant period due to the regularization of operations made in order to give the journal an electronic status by updating its ISSN registration. Once the registry was updated, it was possible to apply for evaluation and thus negotiate its inclusion into several databases and catalogs such as: REDALYC, SCOPUS, UNAM journal's catalog, and its reentry into the list of quality journals from CONACYT. This was an intense as well as promising period with regards to keeping the MJBA at SCOPUS and continuing its pathway towards the inclusion of the journal in databases of higher relevance.

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