

A photograph of three chickens in a grassy field. In the background, a black chicken with a red comb. In the middle ground, a white chicken with a red comb. In the foreground, a brown chicken with a red comb. The text is overlaid on the right side of the image.

# Principios básicos para la escritura de manuscritos científicos

Un curso de Torres-Salinas, Robinson-García & Arroyo-Machado



**Principios  
básicos para  
la escritura de  
manuscritos  
científicos**

**Breve introducción**

# Principios básicos para la escritura de manuscritos científicos

**Viernes 16 de Junio 2023**

**12.00 - 13:30**

**#yosigopublicando**

**Daniel Torres Salinas** nos desvelará el enigma que es el artículo científico, llevándonos paso a paso por una radiografía completa del mismo. Vamos a investigar cada componente de un artículo y a adquirir conocimientos sobre cómo ordenar las secciones, párrafos y frases.

**Nicolás Robinson García** se enfocará en los pilares fundamentales de la redacción de textos científicos. Nicolás nos brindará valiosos consejos y técnicas para plasmar nuestras ideas de manera clara y precisa, mejorando la calidad de nuestros escritos científicos.

**Wenceslao Arroyo Machado** se concentrará en un componente crucial en la retórica científica: los gráficos y las tablas. Este módulo te ofrecerá pautas y sugerencias para crear representaciones visuales efectivas de tus datos científicos.

**Escribir es una destreza compleja, exige resolver numerosas cuestiones más pequeñas: buscar ideas, organizarlas, hacer un borrador, elegir el todo; requiere anotar lo que se va pensando, garabatear o teclear, hacer esquemas, conocer la estructura de los discursos, la tipografía... (Cassany, 2023)**

*¡Empezamos!*



Principios  
básicos para  
la escritura de  
manuscritos  
científicos

*Torres-Salinas*  
**/la forma/**

**En esta  
primera parte  
os quiero  
hablar de tres  
aspectos  
sencillos**

LA FORMA DE  
LOS ARTÍCULOS

EMPEZAR EL  
PRIMER  
BORRADOR

EL GUIÓN DEL  
ARTÍCULO

**Forma y Fondo**  
**Para escribir un**  
**artículo científico**  
**es fundamental**  
**conocer la forma**  
**del mismo, su**  
**estructura y su**  
**organización**

Título del trabajo

Autores + centros de trabajo

Abstract / Resumen

Keywords / Palabras clave

...

**IMRD**

...

Notas

**Introducción**

**Métodos**

**Discusión**

**Resultados**

Agradecimientos y financiación

Bibliografía / Listado de referencias

Anexos y material complementario



# Writing the first draft of your science paper

## **IMRD**

**Introduction:** 1.5-2 pages

**Methods:** 2-3 pages

**Results:** 6-8 pages

**Discussion:** 4-6 pages

**Conclusion:** 1 paragraph

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**Figures:** 6-8 (one per page)

**Tables:** 1-3 (one per page)

**References:** 20-50 papers (2-4 pages)

# Detailing the Writing of Scientific Manuscripts

**Introduction:** 1 page (ideally), maximum 400 words over 1-4 paragraphs (ideally 3

**Methods:** 2-3 pages not exceeding 750 words over 6-9 paragraphs; 5-15 references

**Results:** 2-3 pages of text, figures and tables, as strictly necessary; not exceeding 1,000 words over 4-9 paragraphs; usually without references.

**Discussion:** 3-4 pages of text; 1,000-1,500 words distributed over up to 10 paragraphs; including a conclusion paragraph. The discussion usually has 10-20 references, with some of them possibly appearing in previous text sections.

Si conocemos la estructura y conocemos la longitud de sus elementos nos será mucho más fácil afrontar el proceso de escritura y además nos permite distribuir adecuadamente esfuerzos

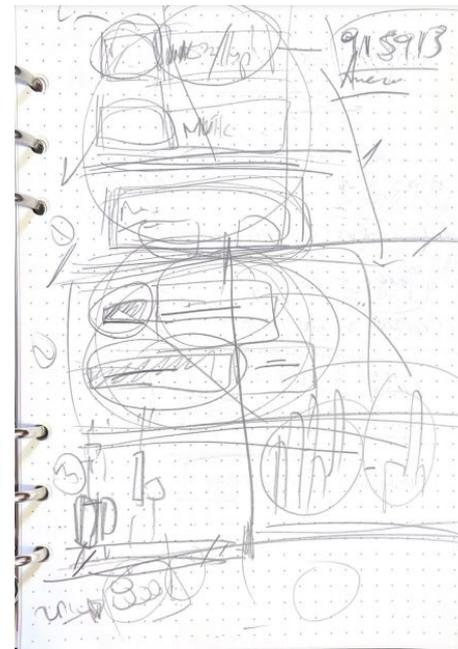
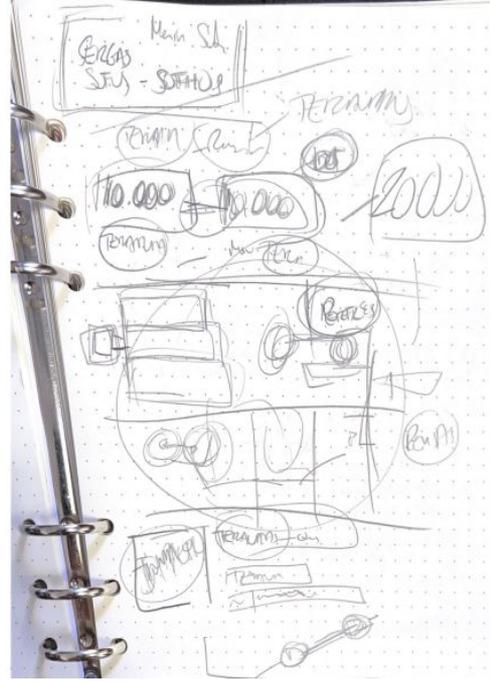
"Cuando escribo nunca pienso en el montaje, ni en el desglose por planos, sino tan sólo en la duración de la película. (...) Siempre uso la misma máquina de escribir, con la misma cantidad de líneas por página, de forma que conozco la equivalencia entre la longitud de mi texto y la duración de la película, y mi margen de error es de unos cinco minutos.

La relación tiempo/texto es alrededor de un minuto y medio por página. Mis guiones suelen tener entre sesenta y cinco y setenta y dos páginas. (...) Es muy importante rodar una película que en el montaje no plantee elecciones dolorosas: una película no se sostiene si se corta por allí y por allá. La película ha de estar pensada en su ritmo y duración"

## Mis artículos son más o menos así

	Páginas	Párrafos*	Total líneas**	Total Palabras
Página datos	1			
<b>Introducción</b>	<b>2</b>	<b>8</b>	80	<b>1040</b>
Material y Métodos	1,5	5	50	<b>650</b>
Resultados	6	20	200	<b>2600</b>
Discusión	2	8	80	<b>1040</b>
Tablas / Figuras	4			
<b>Totales</b>	<b>15</b>	<b>41</b>	<b>410</b>	<b>5330</b>
References (25/30)	25/30 Referencias			
* En una página cogen 4 párrafos				
* Cada párrafo tiene 10 líneas				
* Cada párrafo tiene 130 palabras				

**Veamos a continuación cómo comenzamos a escribir a partir de un documento en blanco, lo primero es un borrador y después configurar mi página**



1. Creo un Word un documento en blanco con un interlineado 1,15 y tipografía 12 en Times New Roman (o 11 en arial también me gusta)
2. Creo un esqueleto cuyo índice sigue la estructura según esquema IMRYD de con 12-15 páginas - 3500/5000 palabras (cada cual que ajuste a su página)
3. Tengo claro a continuación el número tablas y figuras que quiero incluir, por ejemplo un esquema es el siguiente (2x3, 3x2 o 3x3) (veremos con wences como hacer los bocetos)
4. No olvides además: abreviaturas, números de páginas y números de líneas



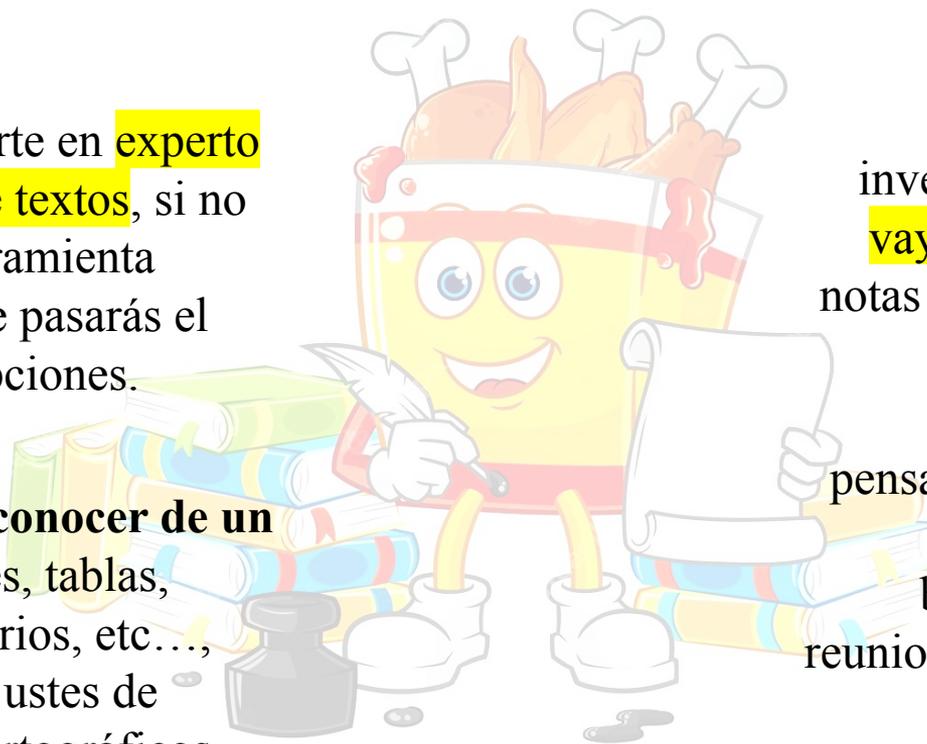


# Un último consejo: domina las herramientas



Tienes que convertirte en **experto de un procesador de textos**, si no conoces bien la herramienta perderás fluidez y te pasarás el tiempo buscando opciones.

**¿Qué deberíamos conocer de un procesador?** Índices, tablas, revisiones, comentarios, etc..., encabezamientos, ajustes de líneas, correctores ortográficos, gramaticales, traductores, ...



Durante el proceso de investigación es importante que **vayas tomando notas**. Con esas notas tendrás material de partida.

**¿Qué anoto?** Puedes anotar pensamientos random, ideas para el futuro, referencias bibliográficas, resúmenes de reuniones, cositas que escuchas en congresos, imágenes, hacer listados de tareas, ....

*En mi caso Zotero como plataforma integral de anotación*

A rooster with a red comb and wattle, white and black feathers, stands on a paved surface in front of a blue wall. The wall has peeling paint and a window with metal bars. A corrugated metal pipe runs horizontally across the wall.

Principios  
básicos para  
la escritura de  
manuscritos  
científicos

*Robinson-García*  
**/la redacción/**

# Dos cuestiones esenciales

El ritmo



El tono

# El tono

## INTRODUCCIÓN

1. Presentación del problema/tesis
2. Motivación

## CONCLUSIONES

1. Implicaciones de la tesis
2. Nuevos problemas

## MÉTODOS

Cómo puede solucionarse

## DISCUSIÓN

Discute el alcance de su propuesta

## RESULTADOS

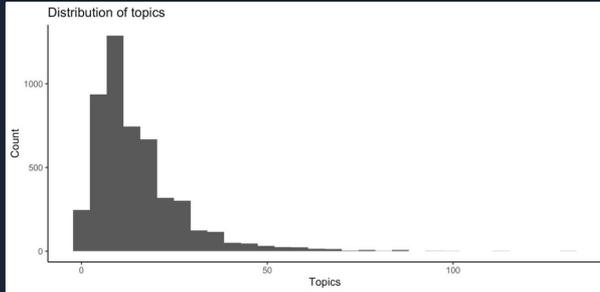
Muestra la solución

**A pesar de su estructura relativamente fija, el artículo científico debe tener una narratividad**

Si lo que busco es **expresar con mayor claridad una idea** que estoy rumiando, utilizo lo que se suele llamar como escritura libre

#### Individual level

- We need to understand how researchers work on topics before looking for differences based on mobility. To explore this I took a sample of 5000 researchers starting from 1990 onwards with at least 10 active years. rango intercuartílico por producción



- Data issues;
  - o Coverage
  - o Data gaps → metadata, lack of linkage between authors and affiliations
  - o Data cleaning
- Conceptual challenges: mobility definitions:
  - o 'global brain'
  - o Mobility as change
  - o Mobility as multiple affiliations
  - o Modeling problem → limitations with linear models (moving from A to B)

1

#### Advantages of bibliometric approaches

To be done.

#### 2. Objectives

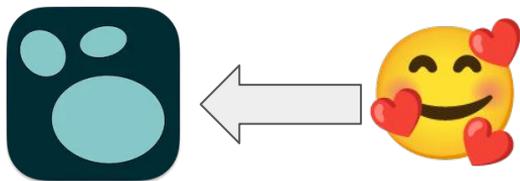
Main objective: to conceptualize and calculate diverse indicators of mobility based on bibliometric information.

**Algunas ideas y técnicas que suelo emplear para encontrar el tono de un paper**

*La tesis*

Si lo que busco es **sintetizar literatura previa y justificar mi trabajo** (e.g., revisión bibliográfica), utilizo anotaciones y tablas

Para ello recomiendo el software de anotaciones *logseq*, que se ha convertido en mi cerebro externo



**Algunas ideas y técnicas que suelo emplear para encontrar el tono de un paper**

- “The aim of indicators is to understand how science works, how it can be measured, and how it can inform evaluation practice”. (Wildgaard, 2012)
- Incentive/ Reward system
- Considerations about quality (Langfeldt, Nedeve, Sörlin, & Paradeise 2015). Martin (1996) 'activity', 'output' and 'prestige' the distinction between 'quality', 'importance' and 'impact'. Notions of research quality (Ben-David 1971; Merton 1942; Nedeve and Boden 2006; Molas-gallart 2012; Paradeise 2015; Langfeldt 2020; D'Este 2018).
- Considerations to develop a indicators framework (Wouters, Ràfols, et al., 2019)
  - Goal of monitoring/evaluation, Mission of research, Level of assessment, Disciplinary structures, epistemic cultures and research approaches, Stakeholders, audiences and beneficiaries, Research environment (Wouters, Ràfols, et al., 2019)
  - Objectives: Research policy, accountability/distribution of funds, access and promotion and the rewarding science.
  - Discipline variation. A system of quality indicators in humanities must comprise both output indicators and esteem indicators (indicators that express previous assessment by peers and recognition by the scientific community) (Sciences, 2011)
  - Moher et al (2018) key principles when assessing scientists.
  - The dos and don'ts in individual level bibliometrics (Glaenzel and Wouters 2013)
  - Consider strengths, weaknesses, potential and risks of each indicator (Most indicators proposed in this review are new and not gathered/evaluated yet).

**La motivación**

# El ritmo



- 1. Frases cortas pero hiladas**
- 2. Lenguaje sencillo frente a ideas complejas**
- 3. Diferentes estilos para cada sección**
  - a. Intro + Revisión bibliográfica**
  - b. Métodos + Resultados**
  - c. Discusión + Conclusiones**

# Frases cortas pero hiladas

El rol de las *palabras función* es clave en la legibilidad de un texto

*verbos auxiliares - conjunciones - preposiciones - pronombres  
personales, impersonales - calificadores - adverbios*

Scientists must drive progress, respond to societal demands, **and** engage with and reach out to society. **On top of** job insecurity and fierce competition, inside academia, unease at the way in which research is **currently managed** is growing. **But** scientists are also partially responsible. They participate in evaluation panels and set down criteria for career development. **How can we make sense of these contradictions?** This project aims to construct the building blocks of a new field of Experimental Studies of Science that combines scientometric methodologies and psychological concepts of bias and heuristics in decision making. It will explore how choices in research evaluation affect team science and the role played by research metrics and narratives in this process.

# Frases cortas pero hiladas

## ; Para separar frases complementarias

*She was always covered in cinders from cleaning the fireplace; they called her Cinderella.*

## : Para preceder listados

*Before her stepmother awoke, Cinderella had three chores to complete: feeding the chickens, cooking breakfast, and doing the wash.*

## : Para dar mayor énfasis

*One thing fueled the wicked stepmother's hatred for Cinderella: jealousy.*

# Lenguaje sencillo frente a ideas complejas

La sencillez es clave en la **Intro + Rev. bibliográfica**.

- *Watching chickens is really fun → I enjoy watching chickens*

Voz activa en la primera parte y más impersonal en **Métodos + Resultados**

- *We show a chicken playing the guitar → The results show a chicken...*

La forma verbal más habitual es el tiempo pasado, pero el uso del presente da una mayor sensación de urgencia y relevancia

# ★ Last tip ★ Disección de artículos

## Introduction

Successful research careers are built on concepts such as leadership (*Shen and Barabási, 2009*), productivity (*McKiernan et al., 2019; Reskin, 1979*), and impact (*Radicchi et al., 2009; Petersen et al., 2014*). But evidence suggests that the design of a unique career path built on individualistic success may hamper the way in which science is actually produced (*Milojević et al., 2018*). Collaboration has become essential and ubiquitous (*Guimerà et al., 2005; Mongeon et al., 2017*); however, the increase in team size may come at a cost for those who are not in leading roles (*Milojević et al., 2018*). The overreliance on past success in terms of accrued credit through publications and citations (*Merton, 1968*) may both reduce the scientific careers of team players and introduce gender biases (*Cole and Zuckerman, 1984; Macaluso et al., 2016; Larivière et al., 2013*), discouraging women to

pursue careers in academia (*Gaule and Piacentini, 2018; Huang et al., 2019*). The heterogeneity in scientists' profiles realizes the need for distribution of labor (*Larivière et al., 2016*). However, there is still a lack of understanding of how research profiles differ from each other, and how they are associated with career stages (*Laudel and Gläser, 2008*).

The goal of this study is to analyze the relation between task specialization and career length of scientists. Do specific profiles of scientists have shorter research careers than others? How do profiles relate to gender? Are these differences also reflected in productivity and citations? To answer those questions, we develop a Bayesian network—that is, a probabilistic graphical model—to predict the specific contributions scientists made to each of their publications throughout their career. We then profile researchers based on contribution statements and explore how those profiles evolve

Cuando encuentres artículos científicos que te gusten, analiza el estilo y estructura, más allá del contenido

# ★ Last tip ★ Disección de artículos

## Introduction

are built on concepts such as , and . But evidence suggests that may hamper way in which . has become essential and ubiquitous however, the increase in may come at a cost for . The overreliance on in terms of may both reduce and introduce , discouraging

pursue . The heterogeneity in realizes the need for . However, there is still a lack of understanding of how , and how . The goal of this study is to analyze the relation between . Do specific profiles of have than others? How do profiles relate ? Are these differences also reflected in and ? To answer those questions, we develop a , a to predict . We then profile based on and explore how those profiles

Cuando encuentres artículos científicos que te gusten, analiza el estilo y estructura, más allá del contenido



Principios  
básicos para  
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manuscritos  
científicos

*Arroyo-Machado*  
**/gráficos y tablas/**



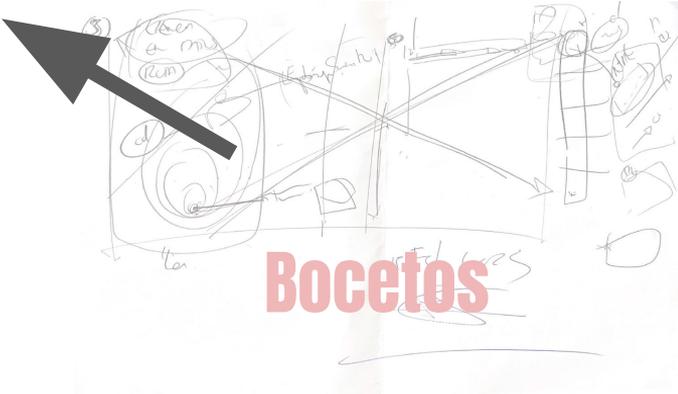
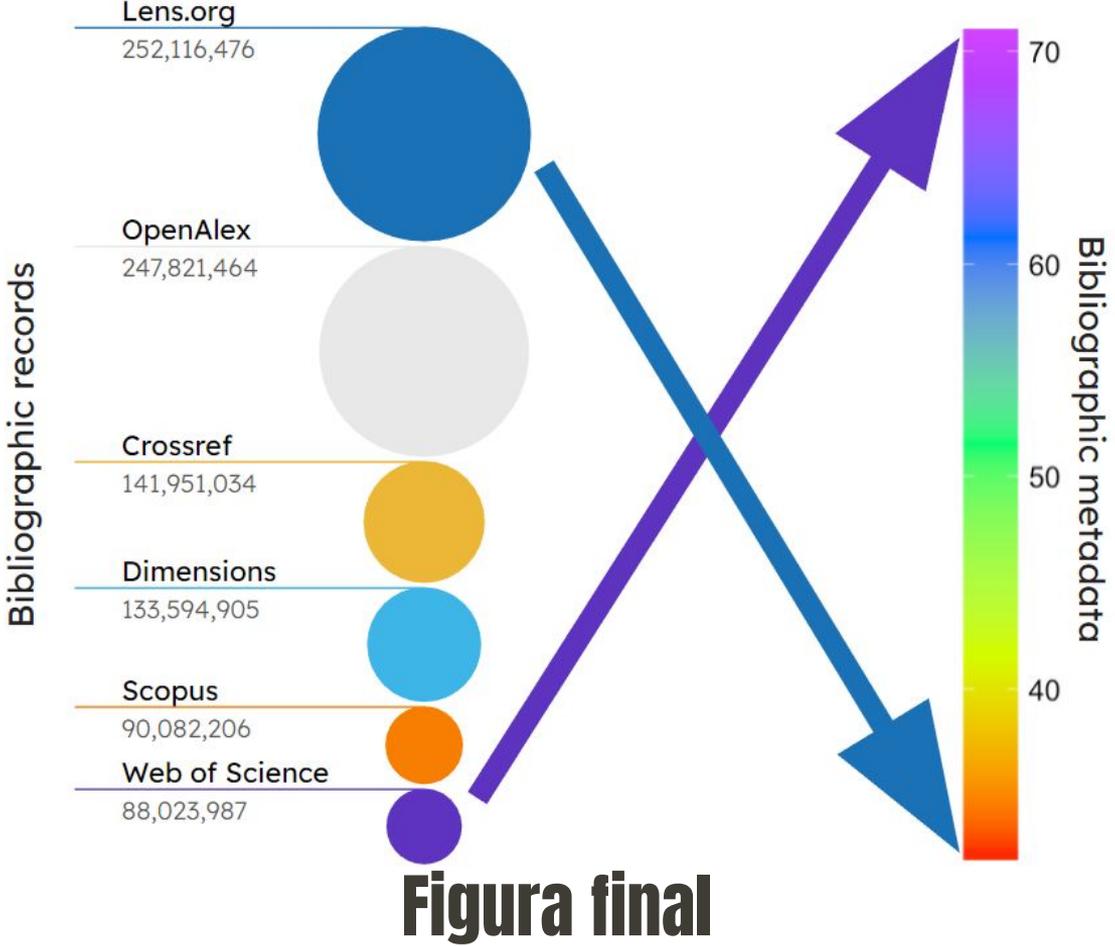
15 Fish Loops



# Figuras y tablas

*/ Organización /*

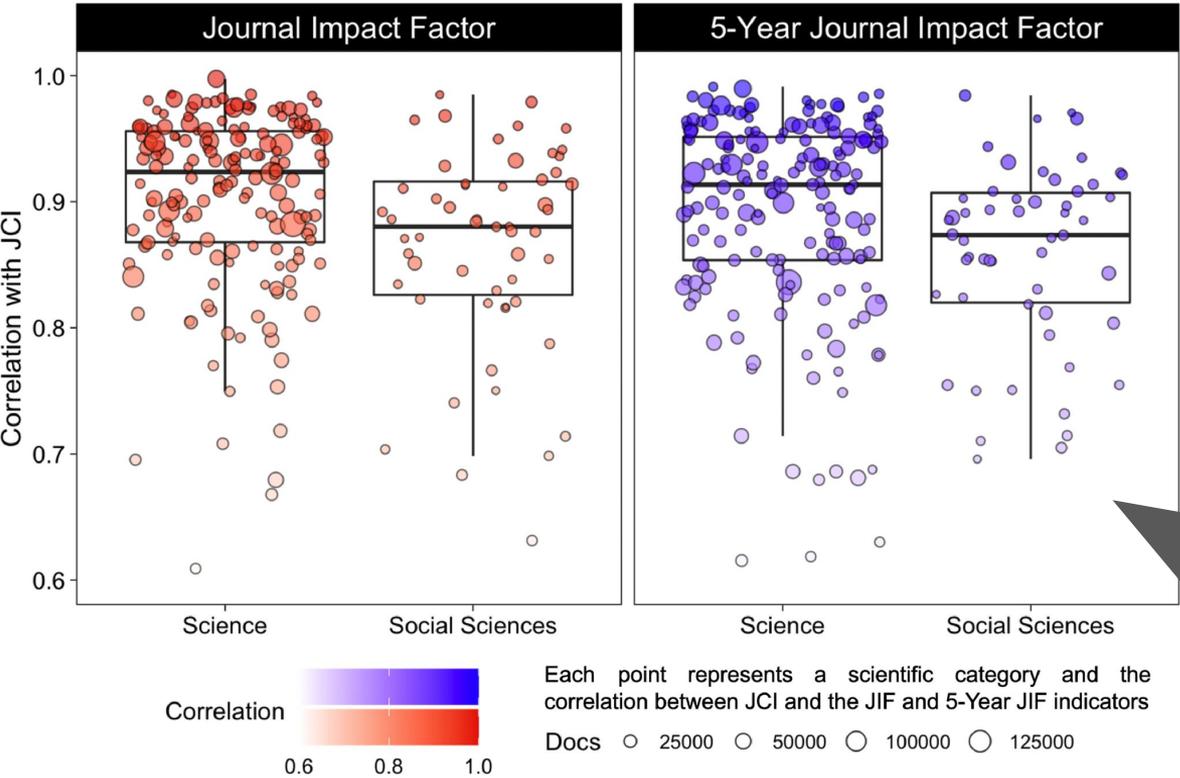
El trabajo  
normalmente  
parte de bocetos



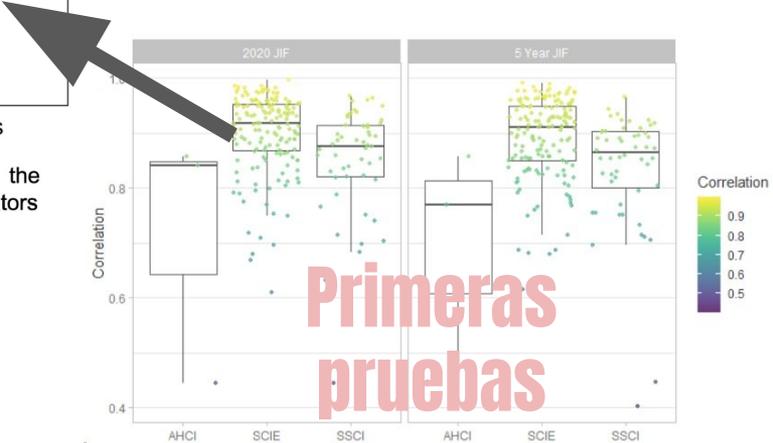
# Figuras y tablas

*/Organización/*

Y requiere muchos cambios



**Figura final**



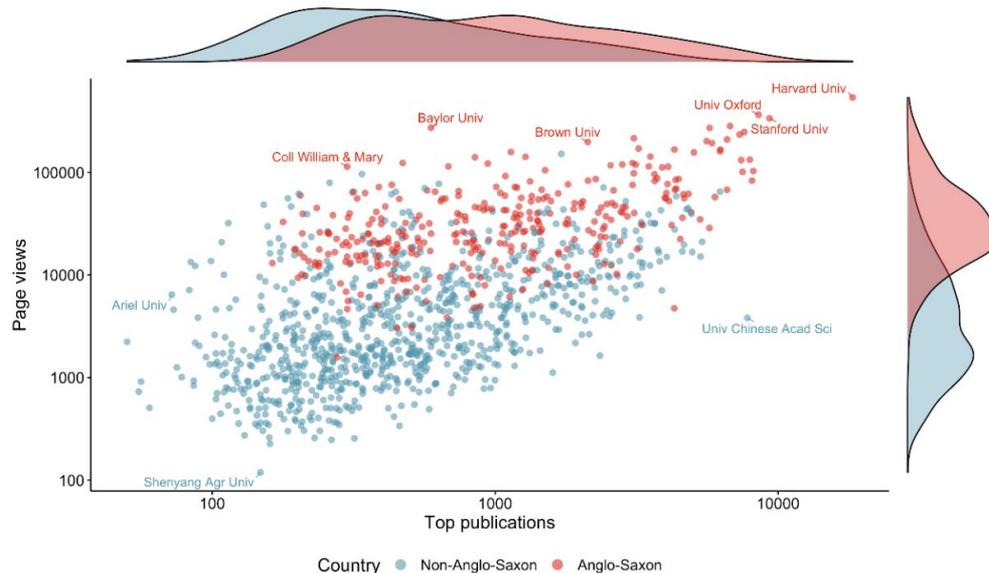
# Figuras y tablas

*/Recomendaciones/*

Integra todo en la narrativa y **no** describas al milímetro

The effect of taking into account whether universities are located in Anglo-Saxon countries or not, is clearly apparent when plotting the two. **Figure 2 shows that most universities from Anglo-Saxon countries gather more Wikipedia attention regardless of their academic reputation. Particularly outstanding is the performance of Harvard, Oxford and Stanford universities.** For non-Anglo Saxon universities, although this relationship holds true, they clearly receive much less page views despite achieving a high number of highly cited publications, **with the University of Chinese Academy of Sciences as the most extreme case.** On the contrary, Baylor University. achieve a large number of visits with less than 1,000 highly cited publications.

Figure 2. Scatter and density plots (log scale) of top publications and Wikipedia page views of universities included in the Leiden Ranking.





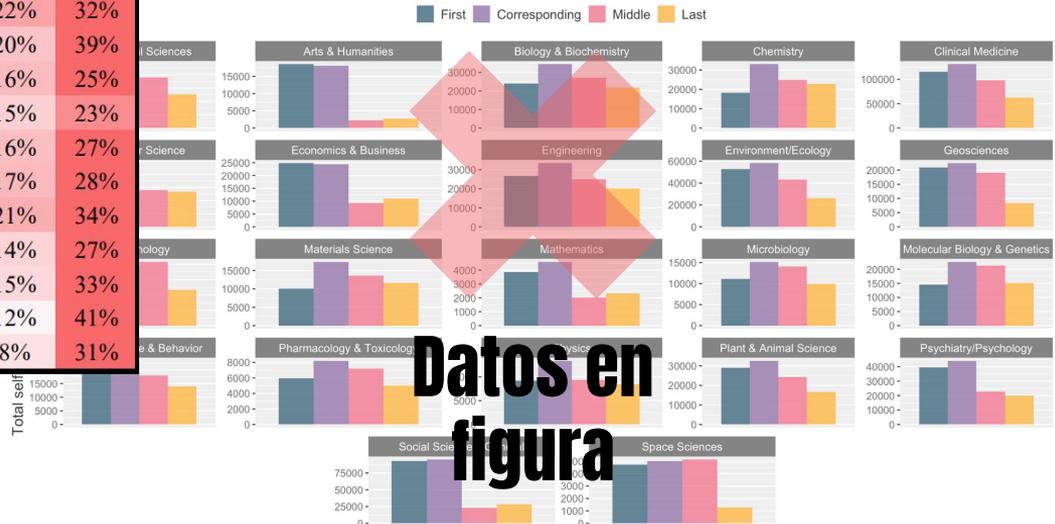
# Figuras y tablas

*/Recomendaciones/*

Escoge bien entre  
tabla y figura

ESI field	Avg. authors	Publ.	ORIGINAL TWEETS			
			First	Mid.	Last	Cor.
Agricultural Sciences	6.77	41,997	24%	23%	15%	28%
Arts & Humanities	2.45	33,894	55%	7%	8%	53%
Biology & Bioch.	8.05	134,696	18%	20%	16%	26%
Chemistry	6.43	108,820	17%	23%	21%	30%
Clinical Medicine	9.06	508,493	23%	19%	12%	26%
Computer Science	4.89	38,825	29%	18%	17%	31%
Economics & Business	3	67,349	37%	14%	16%	36%
Engineering	5.87	106,400	25%	24%	19%	32%
Environment/Eco.	6.18	208,821	25%	21%	13%	28%
Geosciences	6.39	75,979	27%	25%	11%	30%
Immunology	11.51	41,081	18%	25%	14%	24%
Materials Science	6.73	53,832	19%	25%	22%	32%
Mathematics	3.93	11,735	33%	17%	20%	39%
Microbiology	8.53	61,635	18%	23%	16%	25%
Molecular Bio. & Gen.	11.27	98,312	15%	22%	15%	23%
Neuroscience & Beh.	8.2	86,727	23%	21%	16%	27%
Pharmacology & Tox.	8.01	29,531	20%	24%	17%	28%
Physics	10.08	39,900	23%	24%	21%	34%
Plant & Animal Sci.	6.22	122,863	24%	20%	14%	27%
Psychiatry/Psych.	5.58	132,454	30%	17%	15%	33%
Social Sciences, Gen.	2.94	233,411	40%	10%	12%	41%
Space Sciences	22.32	16,316	29%	31%	8%	31%

Datos en tabla

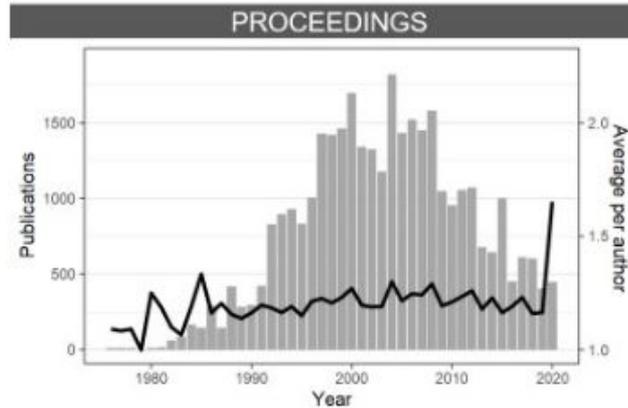
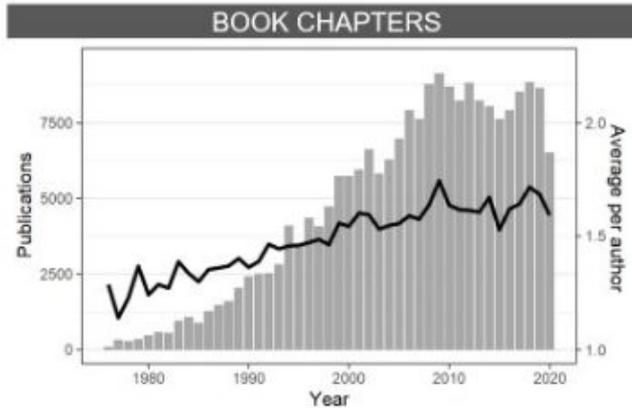
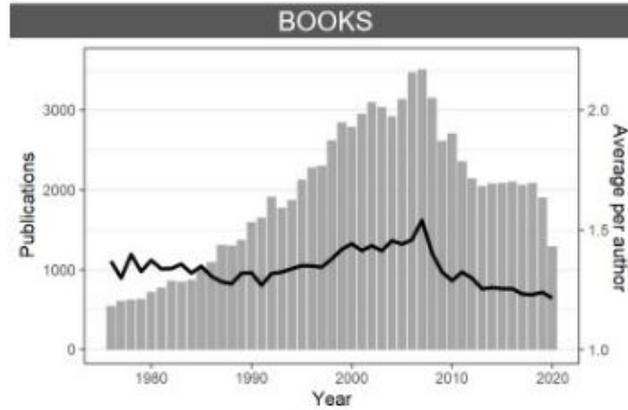
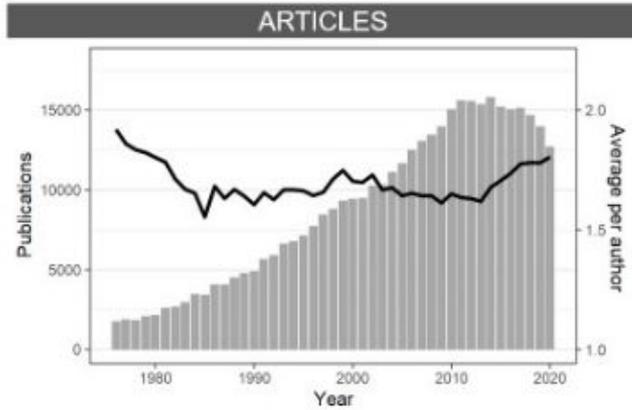


Datos en  
figura

# Figuras

*/Recomendaciones/*

The simply  
is the best



**Figura final**

# Figuras

*/Recomendaciones/*

Si no es legible ni  
ofrece información  
clara huye

**Nota:** escucha a tus  
coautores



**Prueba inicial**

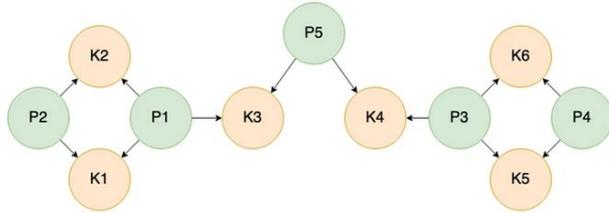
# Figuras

*/Recomendaciones/*

Las figuras no son solo para resultados

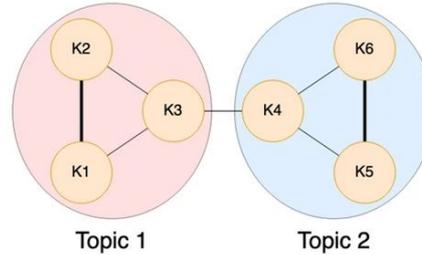
## 1. Publication-keyword network

Network of scientific publications (Pn) and their Web of Science author keywords (Kn).



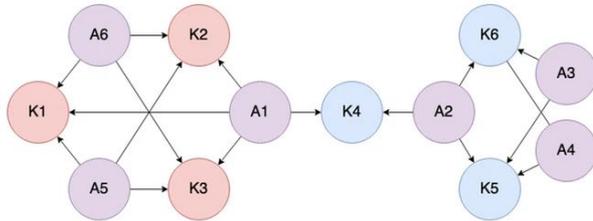
## 2. Semantic map

Network of author keyword co-occurrence. Topics are identified by community detection.



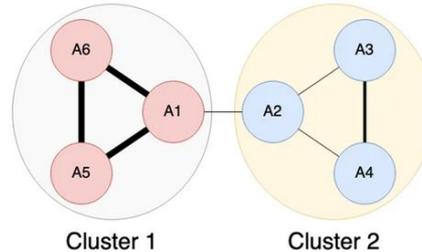
## 3. Actor-keyword network

Network of social actors (An) that mention keywords, based on the papers mentioned. Keywords belong to one of the topics identified in the semantic map.



## 4. Socio-semantic network

Network of co-occurrence of actors combined with the semantic map. Each actor belongs to a topic based on its keyword mention. Clusters of actors are identified by community detection.



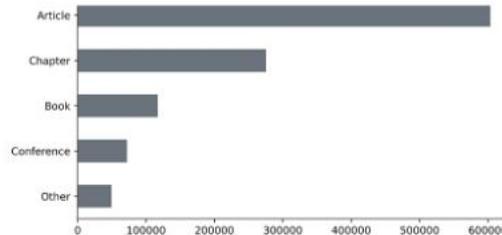
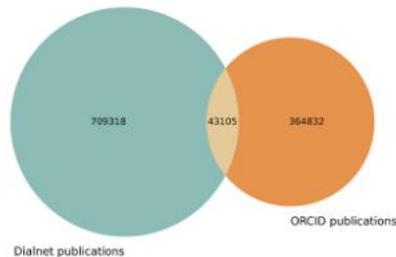
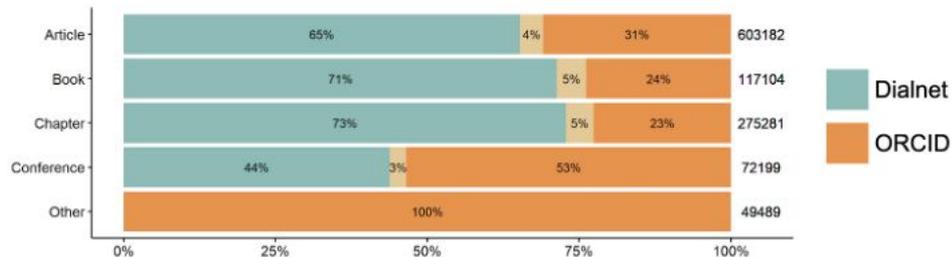
**Figura final**

# Figuras

*/Recomendaciones/*

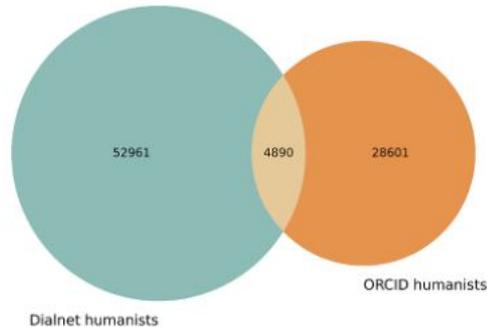
Una figura puede estar compuesta de varios gráficos

**A**

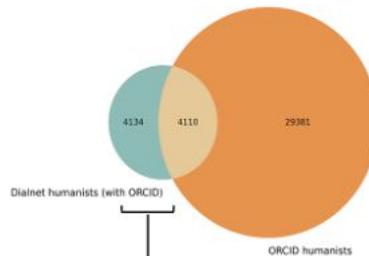


**B**

Overlap between Dialnet and ORCID humanists



Only Dialnet humanists with ORCID iD



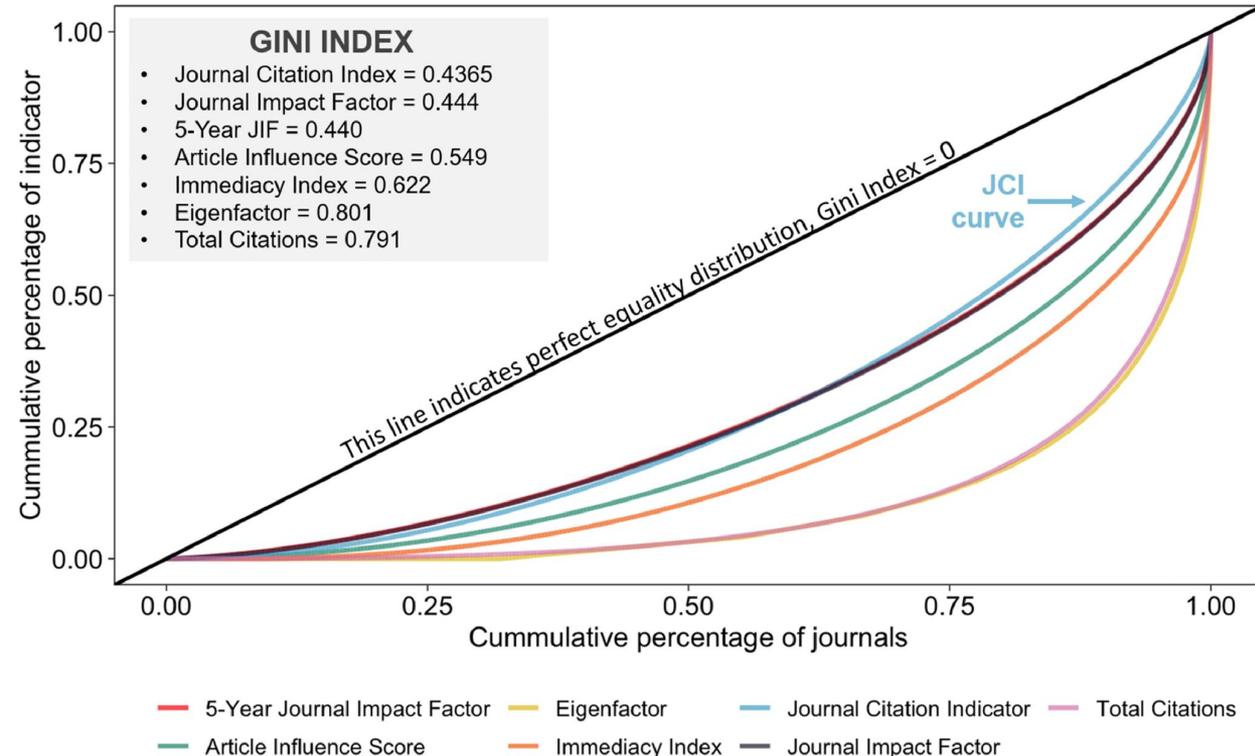
No match due to wrong field assignment in Dialnet and private or deleted ORCID record

**Figura final**  
**(combinación de varias)**

# Figuras

*/Recomendaciones/*

Incluye  
anotaciones para  
facilitar la lectura

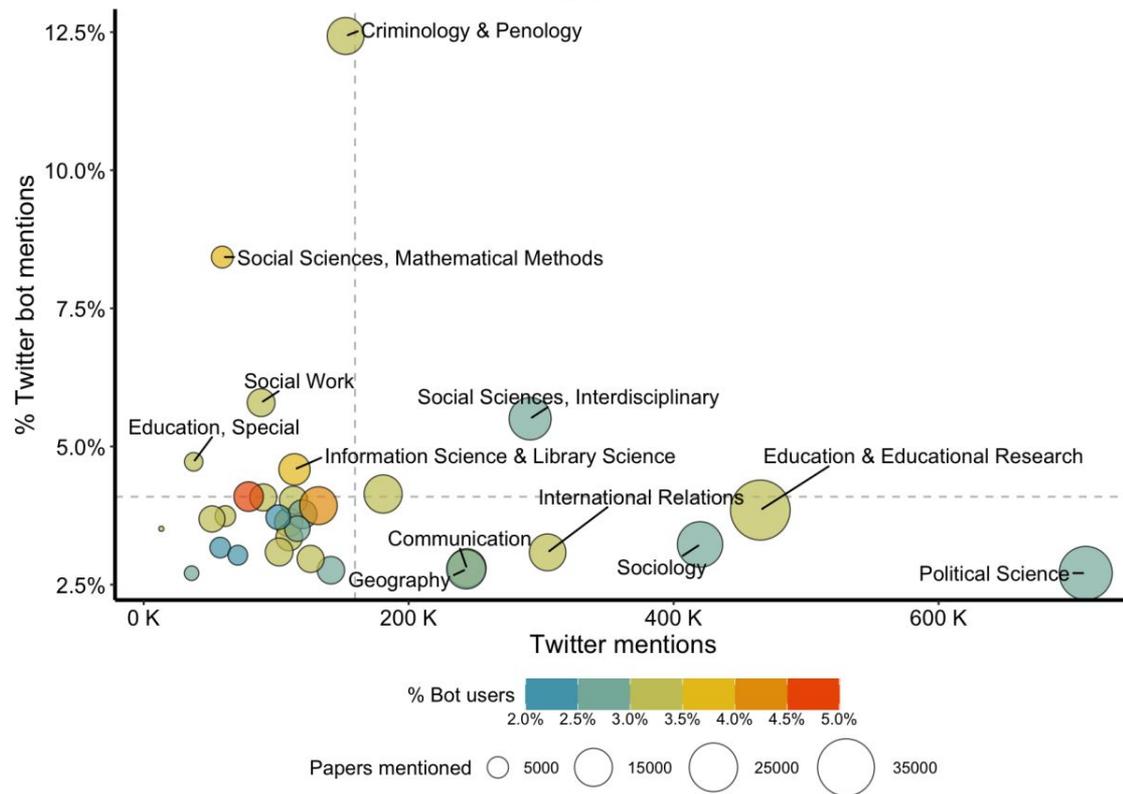


## Figura final

# Figuras

*/Recomendaciones/*

Integra diferente  
información con  
coherencia y sin  
excederte



**Figura final**

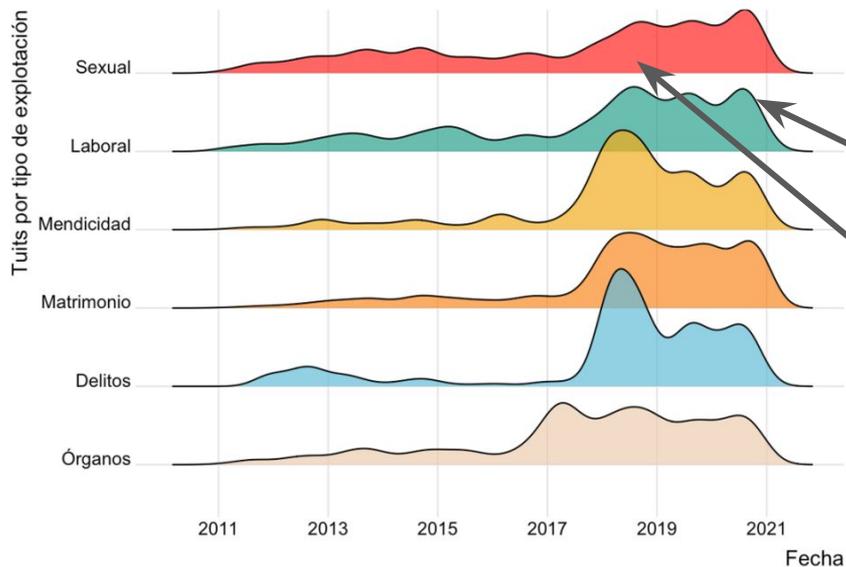


# Figuras

*/Recomendaciones/*

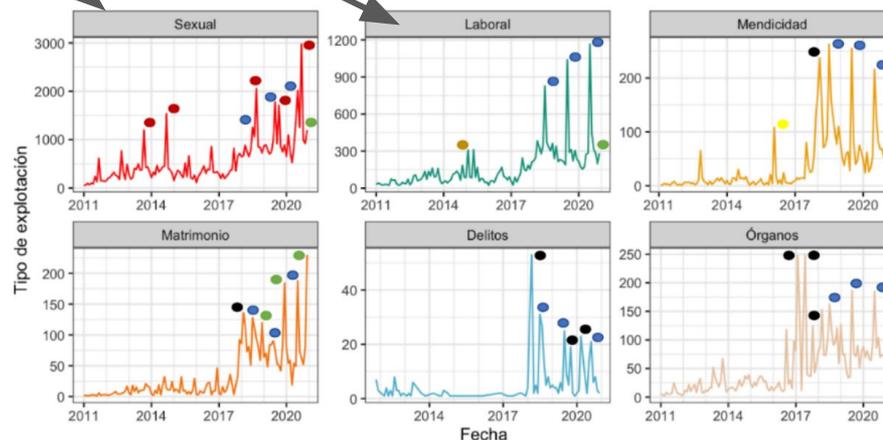
## Preserva la coherencia

Figura 1. Distribución de densidad temporal de la publicación de tuits, por tipo de explotación



**Figura final**

Figura 2. Picos de actividad de publicación de tuits por tipo de explotación



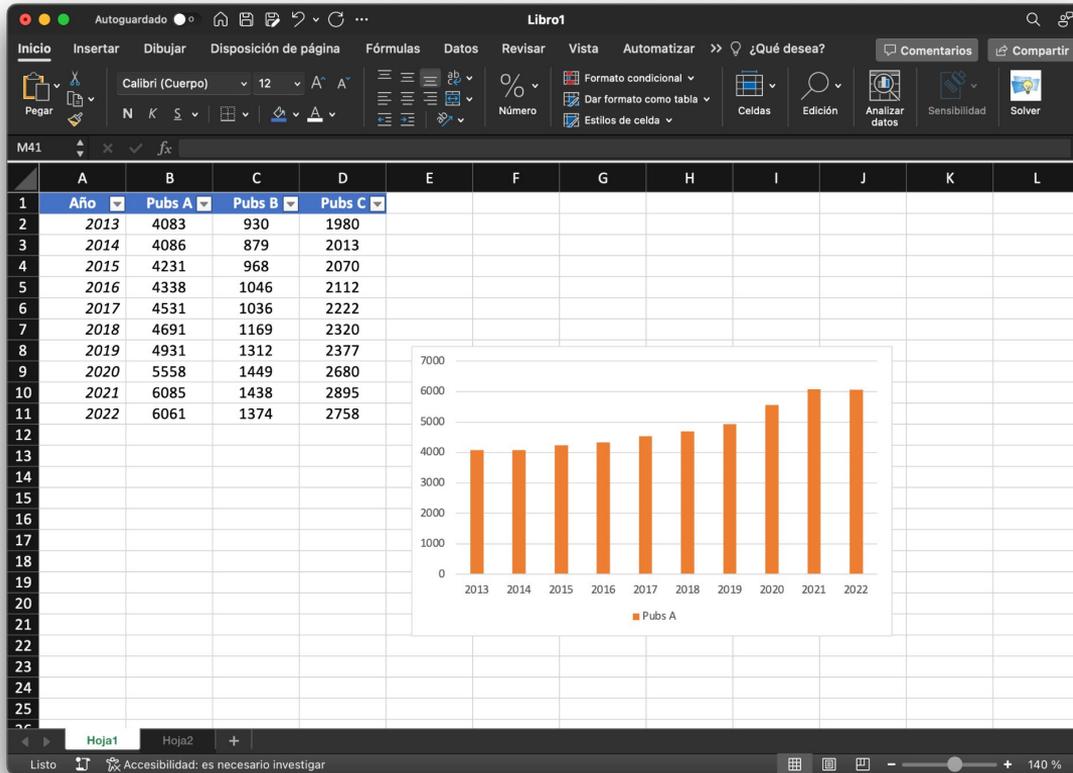
- Día Internacional Contra la Explotación Sexual y el Tráfico de Mujeres
- Día Mundial de la Justicia Social
- Día Mundial contra la Trata de Personas
- Campañas de información sobre la trata de personas
- Día Internacional de la Abolición de la Esclavitud
- Casos de juicios a redes de tratantes de personas

**Figura final**

# Figuras

*/Recomendaciones/*

Se eficiente y trabaja  
con herramientas  
que domines



# Tablas

*/Recomendaciones/*

Puedes incluir  
color para  
facilitar la lectura

ESI field	Avg. authors	Publ.	ORIGINAL TWEETS				RETWEETS			
			First	Mid.	Last	Cor.	First	Mid.	Last	Cor.
<i>Agricultural Sciences</i>	6.77	41,997	24%	23%	15%	28%	11%	19%	8%	12%
<i>Arts &amp; Humanities</i>	2.45	33,894	55%	7%	8%	53%	20%	6%	6%	18%
<i>Biology &amp; Bioch.</i>	8.05	134,696	18%	20%	16%	26%	12%	24%	10%	14%
<i>Chemistry</i>	6.43	108,820	17%	23%	21%	30%	10%	20%	9%	14%
<i>Clinical Medicine</i>	9.06	508,493	23%	19%	12%	26%	13%	24%	9%	14%
<i>Computer Science</i>	4.89	38,825	29%	18%	17%	31%	11%	16%	9%	12%
<i>Economics &amp; Business</i>	3	67,349	37%	14%	16%	36%	14%	10%	9%	14%
<i>Engineering</i>	5.87	106,400	25%	24%	19%	32%	9%	16%	7%	10%
<i>Environment/Eco.</i>	6.18	208,821	25%	21%	13%	28%	13%	21%	8%	13%
<i>Geosciences</i>	6.39	75,979	27%	25%	11%	30%	10%	20%	6%	11%
<i>Immunology</i>	11.51	41,081	18%	25%	14%	24%	11%	24%	7%	12%
<i>Materials Science</i>	6.73	53,832	19%	25%	22%	32%	9%	18%	7%	11%
<i>Mathematics</i>	3.93	11,735	33%	17%	20%	39%	10%	12%	8%	11%
<i>Microbiology</i>	8.53	61,635	18%	23%	16%	25%	11%	24%	9%	13%
<i>Molecular Bio. &amp; Gen.</i>	11.27	98,312	15%	22%	15%	23%	11%	27%	10%	14%
<i>Neuroscience &amp; Beh.</i>	8.2	86,727	23%	21%	16%	27%	11%	22%	8%	12%
<i>Pharmacology &amp; Tox.</i>	8.01	29,531	20%	24%	17%	28%	11%	20%	8%	12%
<i>Physics</i>	10.08	39,900	23%	24%	21%	34%	9%	16%	7%	11%
<i>Plant &amp; Animal Sci.</i>	6.22	122,863	24%	20%	14%	27%	13%	21%	9%	14%
<i>Psychiatry/Psych.</i>	5.58	132,454	30%	17%	15%	33%	13%	16%	9%	14%
<i>Social Sciences, Gen.</i>	2.94	233,411	40%	10%	12%	41%	19%	10%	10%	19%
<i>Space Sciences</i>	22.32	16,316	29%	31%	8%	31%	7%	22%	3%	8%

**Tabla final**

# Tablas

*/Recomendaciones/*

Estructura  
correctamente las  
filas y columnas

	All articles	Featured articles	Featured lists	A	Good	B	C	List	Start	Stub
<i>N. of articles</i> → <i>Wiki Metrics</i> ↓	6,328,134	5945	3816	958	34,004	109,019	394,065	253,066	1,818,356	3,079,778
<b>Editors</b>	48.38	516.93	179.13	176.80	275.71	297.62	165.36	56.27	63.13	22.85
<b>Edits</b>	101.92	1491.35	593.61	564.91	724.13	705.41	369.89	159.80	129.52	40.23
<b>Linked</b>	80.53	725.25	175.84	202.01	330.18	417.00	234.08	107.34	93.03	55.70
<b>Links</b>	87.77	329.68	270.16	236.56	224.88	233.87	164.23	174.78	101.28	69.90
<b>Age</b>	9.59	14.33	11.52	12.74	12.06	12.47	10.92	9.13	10.45	9.20
<b>Length</b>	7844.68	61,248	51,549	43,329	39,444	35,009	21,676	18,202	10,033	3748
<b>Talkers</b>	5.38	66.17	16.62	27.90	29.64	28.16	15.03	4.98	6.56	3.64
<b>Talks</b>	9.19	258.40	42.36	92.21	88.56	88.35	35.32	9.07	9.69	4.32
<b>Views</b>	3345.07	64,801	26,685	16,011	29,229	30,359	15,829	3777	4094	710
<b>References</b>	4.6	53.95	55.49	31.76	38.87	26.51	15.40	9.20	5.79	1.84
<b>Pub. Ref.</b>	0.59	14.27	2.34	8.51	5.83	4.77	2.37	0.53	0.69	0.22
<b>URLs</b>	10.33	58.03	67.32	33.32	46.10	40.31	25.95	22.82	12.90	6.09

**Tabla final**

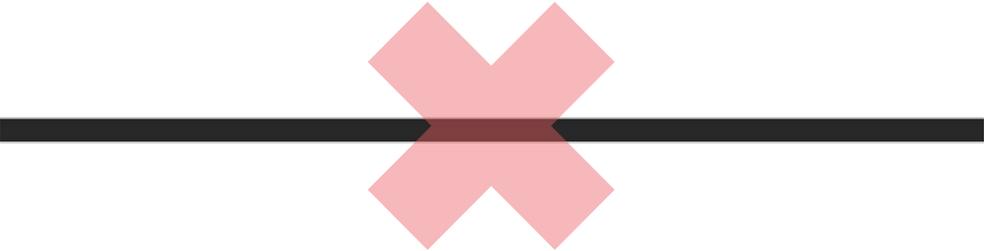
# Tablas

*/Recomendaciones/*

Nunca dividas un  
tabla en varias  
páginas

**Nota:** para megatablas  
tienes el material  
complementario

	Wikipedia	Open peer review
<i>Open identities</i>	The name of the wikipediaian who edits and comments, or the IP address, is always visible	Authors and reviewers know each other's identity
<i>Open reports</i>	The discussion is fully accessible on the talk pages	The review reports are published together with the article
<i>Open participation</i>	Anyone can participate	The community can participate



<i>Open interaction</i>	Any wikipediaian can discuss with another one directly through the talk pages	Discussion among the different people involved is allowed and encouraged
<i>Open pre-review manuscripts</i>	Pages can be published and edited without prior review or discussion of their content	Manuscripts are available prior to peer review
<i>Open final-version commenting</i>	Editing and discussion always remain open	Review or commenting on final publication
<i>Open platforms</i>	The whole process is done within Wikipedia	The review is provided by an entity other than the place of publication

## Tabla preliminar

## Tabla final

	Content	Access	Format	Update frequency	Data quantity*	Type**	Main challenge***
<b>Wikimedia Dumps</b>	Metadata, page content, and relationships	Offline	XML, SQL	Once/twice a month	Big data	General	Data processing
<b>MediaWiki and Wikimedia APIs</b>	Metadata, page content, relationships, and statistics	Online	JSON, WDDX, XML, YAML, PHP	Realtime	Small data	General	Data recovery
<b>Wiki Replicas</b>	Metadata, page content, and relationships	Online	SQL	Near-realtime	Small data	General	Data recovery
<b>Event Streams</b>	Real-time logs	Online	SSE, JSON	Realtime	-	Specific	Data recovery
<b>Analytics dumps</b>	Statistics on page views and activity	Offline	TSV	Monthly	Big data	Specific	Data processing
<b>WikiStats</b>	Statistics on page views, content and activity	Online	JSON/CSV	Monthly	Small data	Specific	Data recovery
<b>Dbpedia</b>	Contents and semantic relationships	Both	RDF/XML, Turtle, N-Triplets, SPARQL endpoint	Live/monthly	-	General	Data recovery
<b>XTools</b>	Statistics on page views, content and activity	Online	JSON	Realtime	Small data	Specific	Data recovery
<b>Repositories</b>	Dedicated Wikipedia datasets	Offline	-	-	-	-	-
<b>Altmetric aggregators</b>	Wikipedia References to publications	Online	CSV/JSON	Daily	-	Specific	Data processing

\*Volume of data to be retrieved and processed.

\*\*Data from Wikipedia are included to address different problems or are of a specific nature.

\*\*\*Task that will require more effort when using the data source.

Antes que recortar y reducir, pon la página horizontal



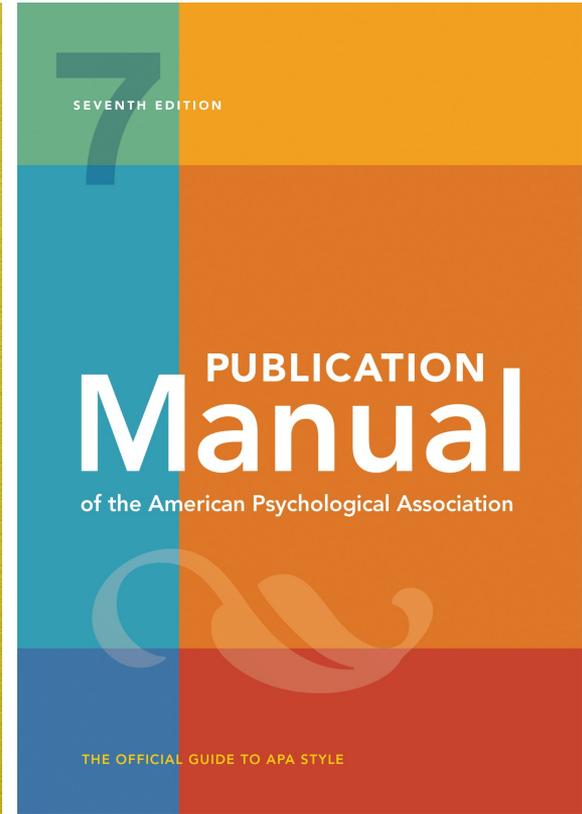
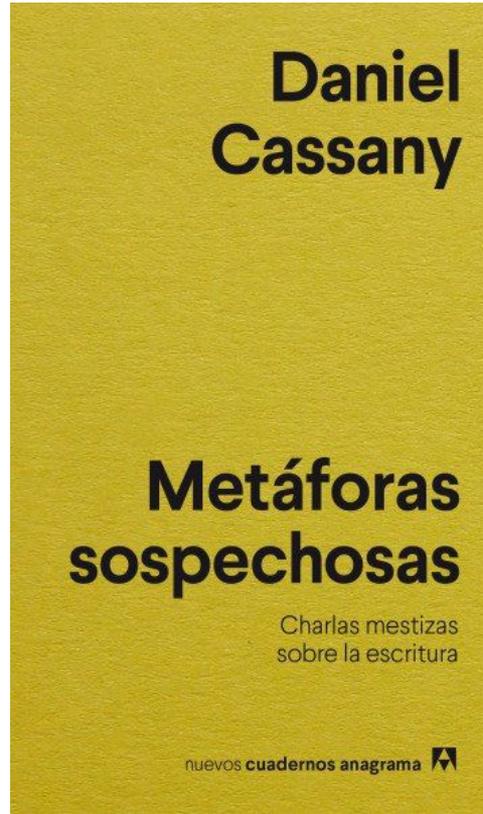
Principios  
básicos para  
la escritura de  
manuscritos  
científicos

*Para terminar*

**/algunos recursos complementarios/**



Para terminar os  
quiero hacer dos  
recomendaciones  
bibliográficas





**y ahora  
un pequeño  
espacio para  
dudas,  
preguntas,  
reflexiones,  
gracias**