# Bibliometric Analysis Of Consumer Insightsand Its Importance For Content Marketing Development

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# Abstact

Neuromarketing, its various theories and elements gain importance in the academic community for orientation towards the study the behavior of the brain before the moment and after making a purchase of a good or service. Therefore, the present work provides a systematic review of the published literature based on consumer perceptions and its importance for the development of content marketing. For this, an analysis was carried out with bibliometric and network indicators within the Scopus database, which was limited to search criteria and objectives.

**Keywords:** neuromarketing, consumer insights, content, conversion funnel, neuroscience, bibliometrics, scientific mapping.

# INTRODUCTION

Traditional, strategic, relational, content, viral or digital marketing can be linked to other sciences. This allows in-depth investigations to be carried out with a high level and impact. In this way it can be indicated that neuroscience in the last 20 years has been contributing to the development of marketing, that combining the two has given rise to what we know today as neuromarketing (Lee, Chamberlain, & Brandes, 2018), (Rúa-Hidalgo I., Galmes-Cerezo, Cristofol-Rodríguez, & Aliagas, 2021),(Lee, Sung, & Hooshmand, 2022). Neuromarketing appears in the nineties, also known as the decade of the brain. due to the contribution of great research based on the brain study directed at its behavior when buying. In this way, neuromarketing is defined as the science that studies the way in which people react or behave before a campaign or marketing strategies. Therefore, this discipline helps the study of how the brain reacts before, during and after buying (Nunez, 2018).

According to (Cardoso, and others, 2022),(Mansor, Isa, & Noor, P300 and decision-making in neuromarketing, 2021),(Alsharif, Salleh, Baharun, & E, Neuromarketing research in the last five years: a bibliometric analysis, 2021),(Pereira, M. Córdova, & A. Díaz),(Mglobal, 2014), agree that neuromarketing is the application of neuroscience techniques to marketing. This discipline then aims to know and understand the levels of attention that people show to certain stimuli (Sixtos, López, & Ortega, 2016). In addition (Sánchez-Núñez, Cobo, Vaccaro, Peláez, & Herrera-Viedma, 2021)indicate that it tries to explain the behavior of people from the base of their neural activity.

(Alimardani & Kaba, So according to 2021) neuromarketingit is directed directly to the study of the consumer in order to predict their purchasing behavior. Also known as the science of applied human decision, for the use of neuroscientific methods to analyze and understand specific reasons for decisions regarding the consumption of existing products, services or brands in the market.(Santa Maria, 2016). In short, it is a science that studies purchasing or consumption behavior and customer decisions regarding different products, services and/or brands (Machado, 2018).

By specifying that the study of consumer behavior lies mainly in neuromarketing,(Leeuwis, Bommel, & Alimardani, 2022),(Mansor & Isa, 2022),(Pelau, Nistoreanu, Lazar, & Badescu, 2022), it is clear that the functioning of the brain of people should be studied, which leads us to understand in depth the origin of their individual actions, (Byrne, Bonfglio, Rigby, & Edelstyn, 2022),(Ahmed, and others, 2022),(Schneider, Brenninkmeijer, & Woolgar, 2022). Some authors like(Alsharif, Salleh, & Baharun, 2021)Y(Chiang, Yen, & Chen, 2022), make reference in their studies to Paul MacLean, who developed the well-known theory of the triune brain, which is based on the subdivision of three types of brain, the reptilian, the limbic and the neocortex.

This theory refers to the three specialized parts or brains in humans, they develop at different times in the evolutionary cycle, which is why it is said that they are created from the bottom up.(Carrillo, 2019). That is, the oldest and most primitive part of the brain develops in the womb (when the baby is in the womb), while the emotional brain is organized in the first six years of life and the prefrontal cortex develops at the end.(Knight, 2018). According to this theory, three levels have been progressively superimposed in the human brain, although these levels make up a whole and are interrelated, they are also capable of operating independently. The reptilian brain (base of instinctive balance) is the oldest area of the nervous system, it is made up of the cerebellum, the spinal cord and the basal ganglia, it is a functional, territorial brain, responsible for preserving life. This is resistant to change, here the functions that have to do with doing, such as routine behavior and habits, are organized and processed.

The midbrain or limbic system (support of the "learned" functioning of the decision-maker) is associated with desires, feelings and, even more, it is attributed the ability to bring the past to the present (a key learning in learning and emotional memory). This controls the emotional life, however, at present, it is accepted that the limbic system is a kind of brain that covers the reptilian part and governs the functions related to self-preservation, fighting, procreation and fundamentally emotional behavior, it is it consists mainly of the hippocampus.

The brain cortex (thinking, decisional brain), also called neocortex, is the most recent evolution of the brain, it is larger than in other species, it is the cause of making us truly human. This part is responsible for the formation of the self, the awareness of ourselves, our emotions and our environment. It is divided into two hemispheres that are connected by nerve fibers (axons), known as the corpus callosum. This level of the brain is responsible for thought and higher cognitive functions, such as abstract reasoning and language and our feelings (Braidot, 2008),(Menendez, 2019).

According to (Chen, Silaban, Hutagalung, & Silalahi, 2023),(Coco & Eckert, 2020),(Zhang & Dong, 2020),(Kim & Lee, 2014),(Singh & Chakrabarti, 2020), the insights are the true motivations or perceptions, the hidden truths, what the consumer does not show about why, for what, how, when purchasing a product or service. The proper use of these allows to improve the strategic direction of the business, allowing to understand cultural and human truths that denote competitive strategies. Undoubtedly, its value contains potential in many areas, being a manager of business growth today (Quinones, 2019). In this way for (Girisken, 2020),(Ismajli, Ziberi, & Metushi, 2022), the insights should be considered as the pearls within marketing to carry out studies of consumer behavior. Considered as a precious treasure in organizations

since consumer insights are deep needs and mobilizing behaviors, which can be based on the biological (functional, sensory, and emotional), the psychological, and the cultural. (Sebriano, 2016).

The consumer insights according to (Alsharif, Salleh, Ahmad, & Khraiwish, 2022),(Married-Aranda & Sanchez-Fernandez, 2022)In short, they are the hidden, deep motivations that are found in the subconscious or the unconscious of people, which are often not accessible. Therefore, its discovery and construction requires extensive field research, but if they can be identified and discovered, they will be an unprecedented contribution to the generation of business strategies. This will undoubtedly generate a competitive advantage within the market (Mashrur, et al., 2022),(Russo, et al., 2022),(Ismajli, Ziberi, & Metushi, 2022).

The consumer insights (Rúa-Hidalgo I., Galmes-Cerezo, Cristofol-Rodríguez, & Aliagas, Understanding the emotional impact of gifs on instagram through consumer neuroscience, 2021), (Mansor, Isa, & Noor, 2021) They help to deeply understand the target market or the public to which we are addressing. Being able to develop strategic applications that go beyond the traditionally understood creative process (Slope, 2012). But beyond capturing the clear conceptualization of what an insight is, it is necessary to know parameters or characteristics that specifically describe this term, since it can be a competitive advantage for organizations today.(Quinones, 2013)

**Table 1.** Characteristics of an Insights

- Uncover a fundamental truth of prospect behavior
- They give us a new way of looking at the world, which makes us re-examine existing conventions and question
whether they are useful
- They are an observation on the actions of people that make us see consumers from another perspective

- Reveal the hidden motivations behind people's actions

- They are applicable to our marketing, either to increase demand for an existing product or to justify the launch of a new one

Note. This table describes the fundamental characteristics of insights, these being the hidden motivations behind people's actions, which make consumers look from another perspective, thereby discovering the fundamental truth of the behavior of

real or potential customers. They are applicable in marketing, either to increase the demand for an existing product or to collaborate in the launch of a new one.

Areas	Description	
Communication	Transformation of data into insights and these into communication ideas that connect brands	
	with people to generate relationships instead of transactions.	
Innovation	Insights that help generate ideas for new products and concepts based on relevant needs of	
	people and their trends.	
branding	Human brands that compete for people's emotions, developing brand building strategies	
	based on consumer insights	

Table 2.	Insights	Focus Areas	
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Note: The table clearly describes the fundamental areas for the implementation of value strategies in a company through insights, these being innovation, communication and branding.

The most important value area in an organization is communication (Lee & Chamberlain, 2018),(Gountas, Gountas, Ciorciari, & Sharma, 2019), because this is going to generate content marketing(Šola, Mikac, & Roncević, 2022), high level and impact. These contents must be designed considering the insights, connecting consumers and clients in a symbolic-emotional way with what we offer in the market,(Pereira & Cruz-Silva, 2021),(Rúa-Hidalgo I., Galmes-Cerezo, Cristofol-Rodríguez, & Aliagas, 2021).

After setting the contents (Rúa-Hidalgo I., Galmes-Cerezo, Cristofol-Rodríguez, & Aliagas, 2021), is necessary to describe an insight, it is good to know a model that helps to identify and discover it, for which the process of the pyramid of insights is applied, taking into account that this process involves large doses of intuition and Disruption means moving from the observable to the unobservable, from the rational to the emotional, and from the objective to the subjective. To begin with the study of the pyramid, we will investigate the insights construction model that has three basic processes: decoding meanings through facilitating techniques (the consumer's words); delve into human emotions through projective techniques (the feeling of the consumer); and observe and analyze behaviors with ethnographic techniques (the behavior of the 2010),(Quinones, consumer),(Consumer Truth, 2013).

The techniques are the facilitators, which describe what the consumer reveals, thinks, believes and perceives; the projective ones where the consumer feels, experiments, gets frustrated, acquires taste, among others; finally the ethnographic ones that reveal what the consumer does, acts, buys. There is a process to determine consumer insights, and the pyramid established by Cristina Quiñonez is one of the most efficient models to carry out these investigations, determining in a simple and clear way the steps to follow to later develop a marketing idea, taking into account that it can be focused on branding, communication or innovation. Clarifying that this research has the objective of generating high-level content and impact (content marketing), which relates the client or consumer to the company in a symbolic and emotional way, we are going to

give priority to the area of communication, and the application of this pyramid allows Generate ideas of value to comply with the objectives set.

Therefore, one must start with the data, which are observations, facts or statistical data, added to the interpretation of the underlying reasons behind the observed data, to find a finding that refers to what the product really means, with this we generate consumer insights that would become the human truths that connect the brand with the person. Finally we turned it into a marketing idea. As previously mentioned in this research, insights are applied with a focus on communication, therefore it is taken into account that in the field of communication, companies talk a lot about Content Marketing or Content Marketing as one of the tools more efficient applicable in the current business world, the same that allows reaching a specific audience efficiently. In other words, this tool is about generating highly valuable, high-impact content that earns us the unconditional trust of our customers, while gaining a competitive advantage; This high-quality information must not be in any case of an advertising nature or be designed to sell directly, but must provide knowledge and resolve doubts or problems.(Ramos, 2017)

Content marketing influences the purchase decision, due to the fact that today the public is at the forefront of technology, which causes better strategies to be used for efficient communication and content marketing currently stands out, to provide clear and specific information, that shows unique, high-level and impact content, where it makes a difference and positions itself as a leader through a competitive advantage, it also generates content that expresses the meaning of the brand, trusting the consumer, achieving their loyalty and satisfaction(Cerna, Ramos, & Valdivia, 2018). This communication tool is directly linked to what is known as a sales funnel or conversion funnel, which are specific processes of how the client goes through a campaign executed by the organization (See table 3)

 Table1. Content Marketing Factors

factors	Description	
Attract Through relevant content, attract visitors interested in the business		

Convert	The intention is to transform visitors into leads, bringing them closer to your business and	
	transforming them into potential sales.	
Sell	If the lead is interested in the product, this is the time to show solutions and try to close the sale.	
Love	Your client's relationship with the company does not end with the purchase, a lasting relationship is	
	sought, for this it is necessary to offer the necessary support to delight the client, it can be with	
	interesting materials and competent attention	

Note: The table above describes the factors of content marketing.

These are directly related to what is known as the conversion funnel. This begins with attraction, where visitors who are interested in our product, service or brand are sought to be attracted through relevant content, to later convert them into leads, where they are sought to be transformed into qualified leads. If the lead is interested, it is the right time to show solutions and try to close the vein. However, this does not end here, you have to charm the client to have a lasting relationship, for which the necessary support is offered to make them fall in love.

Table2. Steps to take into account in the content marketing strategy

Description
A clear objective helps to perceive what metrics must be monitored and what
results must be taken to improve the results. That is why setting objectives is one of
the essential phases to generate content.
You should not attract anyone to our site, if not the right person, the one with the
profile to become a client
Illustrate the sales process, from the first contact with the public until the moment
the sale is made, and in many cases until a post-sale
When you already have a well-structured persona and a sales funnel drawn up, it is
time to choose which channels are the most appropriate to distribute the content.

Note: There are specific steps for the implementation of a content marketing strategy.

This is because each organization is based on its line of business, but there are guidelines that are taken into account in the implementation of this strategy. The table above outlines certain important points to keep in mind when implementing content marketing. To start, the objectives must be clearly defined, each with its measurement indicator (KPIs); Likewise, something fundamental is to define the Buyer persona, taking into account that you should not attract just any person to our site, if not the correct one, the qualified one who has the ideal profile to become a client. Next, the content is adapted to the sales funnel from the first contact with the public until the moment the sale is made, and in most cases until a post-sale.

The Sales Funnel is a representation of the stages through which a potential client passes, from the first contact with the company to the closing of the sale. In short, it is the way in which a company plans and establishes processes to get in touch with the different users and thus achieve a final objective, which may well be the conversion of clients, achieving a registration, closing a sale, among others.

<b>Table 3.</b> Phases for the implementation of	a sales funnel
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Phases	Description
Contact	Identify and attract potential users through the different content formats. It is sought that the
	user can interact so that they leave their contact information.

Prospect /	The user's information is available, which is then classified. This filter is done to see if it is
Lead	feasible or not to invest in the potential user and leave out those who are not interested in
	what we offer.
Chance	Wait for the selected users to express attention or interest in our offers, to go directly to it
Qualification	Here you can determine the type of product that the user is willing to purchase. But continue
	with strategies to capture more information (surveys, calls, among others)
Closing	Once the type of product or service has been determined, we can start the sales process and
	thus convert the user into a customer.

Note: The table above clearly describes the phases necessary for the implementation of a sales funnel.

In this sense, it begins with the contact, which seeks to identify potential users through different types of format, with the purpose of interacting and, if possible, leaving their contact information; if the user's information is already available, a survey is carried out to see if it is qualified or not and if it is worth investing in said user; You have to be aware that the user shows interest in a specific product to finally start the sales process and thus convert the user into a customer.

## METHODOLOGY

The data that were estimated are from the Scopus database, according to (Gómez et al., 2014; Navarro et al., 2011); this bibliographic data with these characteristics is more reliable and has better coverage in the field of social sciences. Therefore, in a first selection of data, 77 results were obtained to generate an analysis of the tree of knowledge under a broad and precise view of the subject, with the criteria used for the search that are listed in Table 6.

Search criteria	
Space of time	Undetermined
consultation period	January 19, 2023
Document types	Article, book, book chapter, conference paper
magazine type	Any kind
search field	Title, abstract, keywords
Search terms	(TITLE-ABS-KEY (neuromarketing) AND TITLE-ABS-KEY (insights)
	AND TITLE-ABS-KEY (contents))
Database	Scopus
Total result	77

Note. This table shows the fields that allowed the information search, however, it is not considered to be consistent.

In a second selection of data, 94 results were obtained to generate an analysis of the knowledge tree under a broad and precise vision of the subject, with the criteria used for the search that are listed in Table 7.

#### Table 7. Search criteria

Table 6. Search criteria

Search criteria	
Space of time	Undetermined
consultation period	January 19, 2023
Document types	Article, book, book chapter, conference paper

magazine type	Any kind
search field	Title, abstract, keywords
Search terms	(TITLE-ABS-KEY (neuromarketing) AND TITLE-ABS-KEY (insights) AND TITLE-ABS-KEY (consumer) OR TITLE-ABS-KEY (content) OR TITLE-ABS-KEY (conversion AND funnel) OR TITLE- ABS-KEY (neuroscience))
Database	Scopus
Total result	94

Note. This table shows the fields that allowed the information search, however, it is not considered to be consistent.

In a third selection of data, 98 results were obtained to generate an analysis of the tree of knowledge under a broad and precise vision of the subject, with the criteria used for the search that are listed in Table 8.

#### Table 8. Search criteria

Search criteria	
Space of time	Undetermined
consultation period	January 19, 2023
Document types	Article, book, book chapter, conference paper
magazine type	Any kind
search field	Title, abstract, keywords
Search terms	(TITLE-ABS-KEY (neuromarketing) AND TITLE-ABS-KEY (insights) AND TITLE-ABS-KEY (consumer) OR TITLE-ABS-KEY (content) OR TITLE-ABS-KEY (conversion AND funnel) OR TITLE- ABS-KEY (neuroscience) OR TITLE-ABS-KEY (marketing))
Database	Scopus
Total result	98

Note. This table shows the fields that allowed the information search, however, it is not considered to be consistent.

Finally, in a fourth selection of data, 605 results were obtained, generating an analysis of the knowledge tree under a broad and precise vision of the subject, with the criteria used for the search that are listed in Table 9.

Search criteria	
Space of time	Undetermined
consultation period	January 19, 2023
Document types	Article, book, book chapter, conference paper
magazine type	Any kind
search field	Title, abstract, keywords
Search terms	(TITLE-ABS-KEY (neuromarketing) AND TITLE-ABS-KEY (consumer
	AND insights) OR TITLE-ABS-KEY (content) OR TITLE-ABS-KEY

### Table 9. Search criteria

	(conversion AND funnel) OR TITLE-ABS-KEY (neuroscience) OR	
	TITLE-ABS-KEY (marketing))	
Database	Scopus	
Total result	605	

Note. This table shows the fields that allowed the search for information, this unit of analysis is considered to have consistency.

In relation to consumer Insights and its importance for the development of content marketing, four results were obtained; however, it has been decided to use the scenario of 605 records in Scopus. For the bibliometric analysis of the data provided, the quantitative method was used, observing a alignment with research in the field of neuromarketing where there is no extensive data at this level, however, the search terms delimited the study of interest.

With the R studio language with application in version 4.2., it was possible to carry out the scientific mapping of the diverse current of research, (Aria and Cuccurullo, 2017). He also carried out a systematic review, which is consistent due to the application of an open source bibliometrix, since this tool is the most recommended for the broad field of social sciences (Kurtuluş and Tatar, 2021; Buitrago, et al., 2020), being used in similar studies (Forliano et al., 2021; Guleria and Kaur, 2021; Skare et al., 2022).

## RESULTS

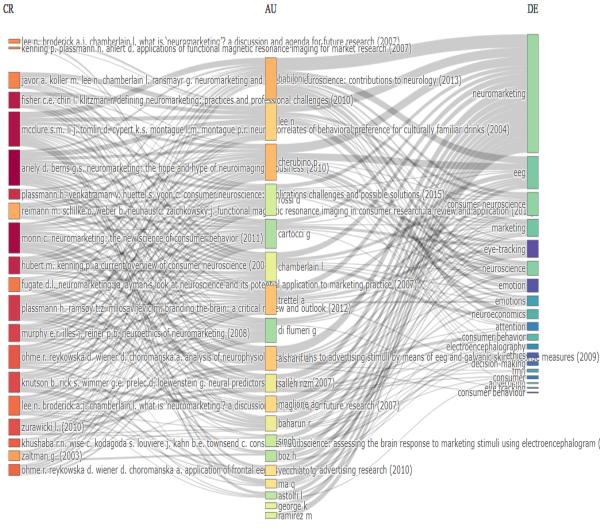
When we found little or little research on neuromarketing and in particular on Consumer Insights and its importance for the development of content marketing, a mapping of scientific research was carried out, of the theoretical structure, with the tree of knowledge and the trend of the variables;

Figure 1. Scientific annual production

generating an analysis of bibliometric indicators to delve into the rhetoric related to consumer Insights and its importance for the development of content marketing, which would give way to future research to strengthen the generation of new knowledge. To give rise to this intention, we worked with information obtained from the Scopus database; the results were exported under bib extension, and the R studio and bibliometrix tools were used for their analysis,

#### Number of publications and authors

Next, the number of publications registered in the Scopus database can be evidenced, with the search fields described without time limitation. With the tree of knowledge generated from R studio, it has allowed us to determine that since 2003, conceptualized as root, studies oriented to keywords are generated; the most trending field for this process is neuromarketing, which will allow us to focus on the studies as researchers. In this way, in Figure 1, the results of the research evolution are presented, noting that the most relevant sources consulted by the researchers is Frontiers in Psychology, cataloged as Q1 in Scimago Journal & Country Rank with an impact factor of 0.87, with 18 studies; followed by Ethics and Neuromarketing: Implications for market; frontiers inneuroscience and smart innovation, systems and technologies; however, most of the local sources cited are in quartile 1 neuroimaging and with an impact factor of 2.75 by 2021.

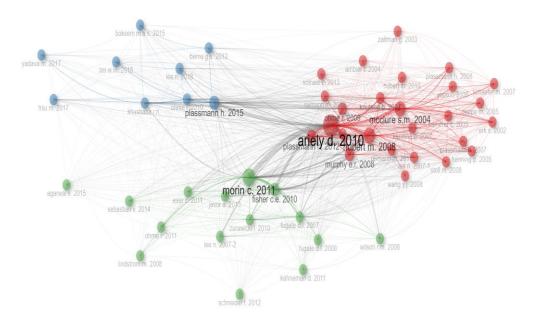


Note. The graph represents the evolution of years of scientific production from the R studio tool.

From a sample of 605 publications, it is determined that the most relevant authors in this field are Babiloni, F. with 18 publications; Cherubino, P. with 13 publications and Trettel, A. with 10; who have excelled in the field of neuroscience, neuropsychology, consumer behavior, among others. The countries with the highest correspondence established by the authors are the United States with 30 intra-country and 8 inter-country studies; in the same way for Italy there are 15 balanced documents and followed by Spain with 23 intra-country and 6 inter-country documents.

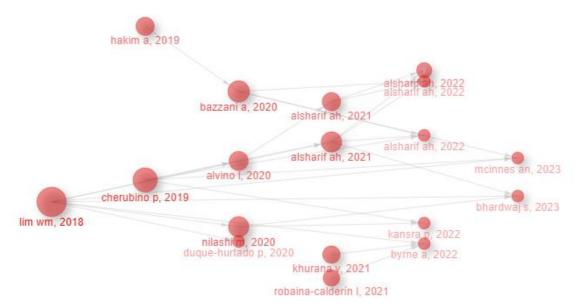
When analyzing the network of citations and the data provided, Figure 2 shows two predominant currents or groups where the authors with the highest scores described in the previous paragraph stand out, being the most influential in the field of consumer insights and its importance for the development of content marketing.

Figure 2. Summons Network



Note. The figure represents the network of citations and relevant authors determined from the information search criteria.

It is also very relevant to publicize the development through history see figure 3, and how the scientific contributions have come together with respect to consumer Insights and its importance for the development of content marketing.



## Figure 3. Historiographer Network

Note. The figure represents the network of historical contributions of relevant authors determined from the information search criteria.

Citations by relevant publications and journals From the year 2005 to 2023; based on Scopus, the article called "Nat Rev Neurorosci" whose author is Ariely D, (2010) was cited 578 times, establishing itself as the document with the highest citation. The article published by Lee, N. (2007); it has 392 citations, of the total studied. From this analysis, the

rise of this topic stands out in 2010, followed by 2020 and 2021, Table 10.

Paper	DOI	Total,	TC per
		Citations	Year
ARIELY D, 2010, NAT REV NEUROSCI	10.1038/nrn2795	518	37.00
LEE N, 2007, INT J PSYCHOPHYSIOL	10.1016/j.ijpsycho.2006.03.	392	23.06
	007		
KHUSHABA RN, 2013, EXPERT SYS	10.1016/j.eswa.2012.12.095	283	25.73
APPL			
REIMANN M, 2010, J CONSUM PSYCHOL	10.1016/j.jcps.2010.06.009	282	20.14
PLASMANN H, 2012, J CONSUM	10.1016/j.jcps.2011.11.010	273	22.75
PSYCHOL			
MORIN C, 2011, SOCIETY	10.1007/s12115-010-9408-1	248	19.08
DIMOKA A, 2011, INF SYST RES	10.1287/isre.1100.0284	193	14.85
FALK EB, 2012, PSYCHOL SCI	10.1177/0956797611434964	191	15.92
BOKSEM MAS, 2015, J MARK RES	10.1509/jmr.13.0572	177	19.67
OHME R, 2009, J NEUROSCI PSYCHOL	10.1037/a0015462	154	10.27
ECON			

Note. This table shows the relevant publications and the number of times cited

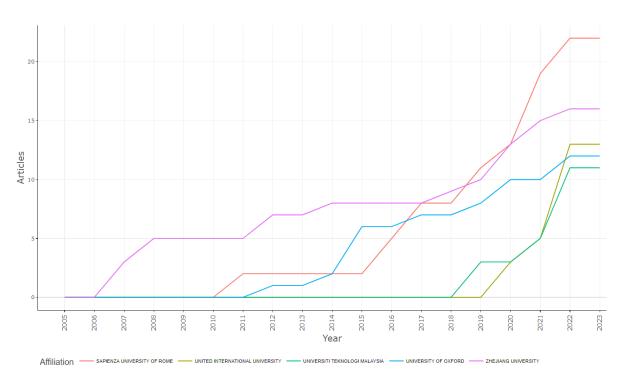
When carrying out an analysis of the affiliations to relevant magazines that have been carried out for these types of studies that are related to consumer Insights and its importance for the development of content marketing, important results have been found.

The largest number of publications is centered on the journal with affiliation to Sapienza University of Rome with a total of 22; another journal affiliated

with Zhejiang University with 16; United International University presents 13; ; the University of Oxford with 12; with affiliation to the Universiti Teknologi Malaysia with 11; on the other hand, with a similar number of journals affiliated with Bucharest University of Economic Studies, Complutense University of Madrid, and University of Rome Sapienza with 9 articles each; and finally with 8 and 7 magazine with affiliation to Hangzhou Dianzi University and Aston University consecutively.

Figure 4. Summons Network

#### 285 Wellbeing



Note. The figure represents the affiliation of the journals from the information search criteria.

## Countries with the highest contribution and trend

It has also been observed that over time the affiliations on this topic of study have gained greater applicability by researchers; for SAPIENZA UNIVERSITY OF ROME (Italy), it constitutes 22

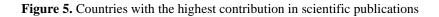
attributed articles, considering the greatest contribution within the analyzed group; followed by ZHEJIANG UNIVERSITY, (China) and later by UNITED INTERNATIONAL UNIVERSITY (Blangadesh) with 13 documents, according to the world map of country collaboration, see table 11.

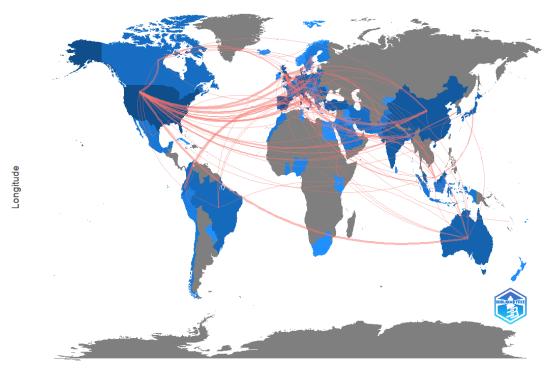
Desde	То	Frequency
ITALY	CHINA	7
SPAIN	ECUADOR	6
UNITED KINGDOM	SWITZERLAND	5
USES	CANADA	5
USES	DENMARK	5
USES	UNITED KINGDOM	5
SWITZERLAND	SWEDEN	4
UNITED KINGDOM	BANGLADESH	4
UNITED KINGDOM	SWEDEN	4
USES	AUSTRALIA	4

Table 11. Countriesmost relevant in research

Note. This table shows the collaboration of publications in journals with impact factor

On the other hand, it can be established that Italy presents a contribution with China with 7 studies; followed by Spain to Ecuador; With 6 articles, in this category it is presented as the only country in South America that has developed studies in this specific field, and contributes to research. If we georeference it would be detailed as in figure 5.





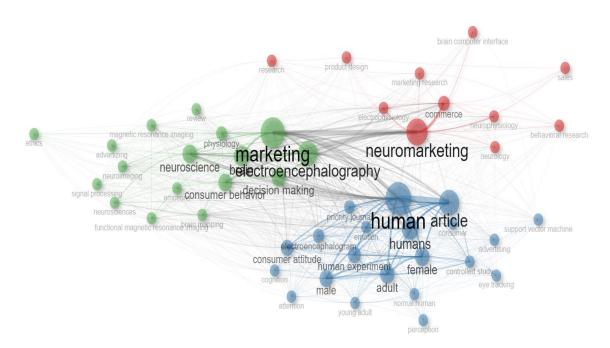
Latitude

Note. The graph represents the countries that provide the largest publications on the topic of study.

The conceptual structure allows us to observe a first evolution of the themes (Zhang et al., 2015; Van Eck and Waltman, 2007). In the bibliometrix analysis tool, two clearly established dimensions are presented, the first being made up of human

Figure 6. Knowledge trends

variables, imaging and magnetic resonance, neuromarketing, marketing, and in dimension two are consumer behavior, neurology, human beings, marketing, interface computer brain. Figure 6.



Note. The figure represents the dimensions and trend factors of the subject of study

#### **Cluster Delimited Subtopics**

In the word cloud, more recurring terms are observed that allow us to focus on the trends of new knowledge, for the analysis it was designed in R studio under the bibliometrix code, which determined 3 clusters divided into: central axis of the investigation, keywords of authors and similar titles, Table 12, where it allows determining information associated with each other, which group documents under a shared area being entrepreneurship, entrepreneurial intention, and determinants; From this, 5 documents are selected in each category, where it can be evidenced that each publication has an important relationship with the determinants that are intended to be studied.

cluster	Criterion	documents	word cloud
one	Central Research Axis	Ariely D, (2010) Lee N. (2007) Reimann M, (2010) Plasmann H, (2012) Morin C, (2011) Falk EB, (2012)	Consumer behavior Line decision making reaction reaction of the second

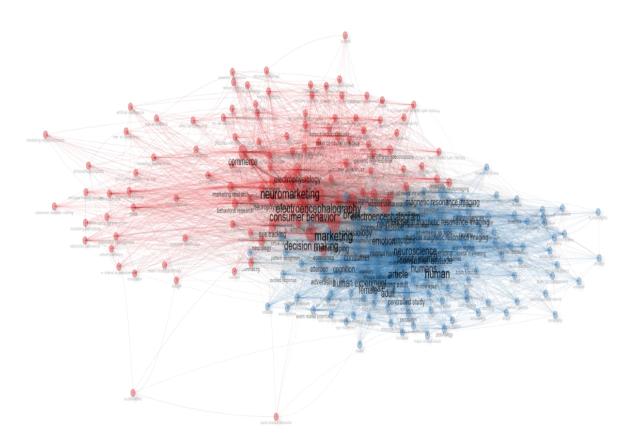
Note. This table shows the clusters formed for the study of trends

In the word cloud, more recurring terms are observed such as words, neuromarketing, marketing, electroencephalogram, brain, neuroscience, human content, consumer behavior, among others. Maintaining consumer insights and their importance for the development of content marketing as a relevant point, this implies that the investigations begin to be concurrent. Topics under study

Within the analysis of the tree of science studied, 4.3% corresponds to the existence of root documents provided by the builder of the investigations related

Figure 7. Theme map

to the determination of consumer insights and their importance for the development of content marketing. 35.7% correspond to the studies considered as trunk, and 60% correspond to those who are considered leaves.



Note. The figure represents the dimensions and trend factors of the subject of study

Consequently, after the meticulous analysis of the results, it is determined that consumer insights are very important for the development of content marketing, which would allow generating adequate customer loyalty.

## CONCLUSIONS

The scientific production developed in recent years regarding the study of neuromarketing and in particular consumer insights and its importance for the development of content marketing, turns out to be an interesting topic at present and of importance for researchers worldwide. Proposing a more rigorous database existing in the medium, the study identifies the study of neuromarketing, marketing, consumer behavior, the human being, the brain as the main factors of consumer insights and their importance for the development of content marketing. and above all the insights.

Since 2004, with the tree of knowledge it was possible to determine when the study of neuromarketing and consumer insights began. The most prominent researchers in the network of scientists could be identified by the size of the name of the author with the largest number of publications. This was done based on the most relevant journals within neuromarketing, an impact factor of 900 and an h-index of 83. The country with the highest concentration of publications is Italy, followed by Spain; On the other hand, South America presents Ecuador with progress in this research topic. The language used for this type of study is English as it is considered a universal language.

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