VISÃO BASEADA NA ATENÇÃO: MAPEANDO TENDÊNCIAS, FONTES E EVOLUÇÃO

ATTENTION-BASED VIEW: MAPPING THE TRENDS, SOURCES AND EVOLUTION

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VISÃO BASEADA NA ATENÇÃO: MAPEANDO TENDÊNCIAS, FONTES E EVOLUÇÃO

Objetivo do estudo
Este artigo retrata uma revisão de pesquisa acadêmica com foco no campo da Visão Baseada na Atenção

Relevância/originalidade
Este artigo identifica os desenvolvimentos e a evolução deste subcampo da gestão estratégica; ele documenta os principais periódicos, artigos e autores mais proeminentes em conceitos de campo e estrutura intelectual.

Metodologia/abordagem
RSL usando técnicas de correspondência e cocitação de 165 artigos relevantes, publicados entre 2004 e 2021, em periódicos listados na base de dados Web of Science, considerando bases de conhecimento, tendências e possíveis caminhos para o campo da Attention-based View (ABV).

Principais resultados
Os resultados demonstram que a pesquisa da Visão Baseada na Atenção (ABV) possui três períodos e maturidades distintas. O periódico de maior cobertura de conteúdo, com base no número de artigos relevantes publicados em relação ao tema, é o Strategic Management Journal.

Contribuições teóricas/metodológicas
O estudo contribui para enfatizar a importância da SLR para o avanço do conhecimento sobre a Visão Baseada na Atenção ao abrir novas possibilidades de descoberta de temas não atendidos nesta área de pesquisa.

Contribuições sociais/para a gestão
Este estudo é benéfico para os pesquisadores em vários aspectos identificando as principais áreas de pesquisa sobre um tema e os principais autores e artigos em cada linha de pesquisa fornecer informações qualificadas para planejar suas pesquisas em lacunas.

Palavras-chave: Visão baseada na atenção, Análise bibliométrica, Revisão de Literatura, Análise de Cocitação, Estratégia Comportamental

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International Symposium on Management, Project, Innovation and Sustainability
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Study purpose

This article portrays a review of academic research focusing on the field of Attention Based View.

Relevance / originality

This article identifies developments and evolution of this subfield of strategic management; it documents leading journals, articles and more prominent authors in field concepts and intellectual structure.

Methodology / approach

SLR using matching and co-citation techniques of 165 relevant articles, published between 2004 and 2021, in journals listed in the Web of Science database, considering knowledge bases, trends, and possible paths for the field of Attention-based View (ABV).

Main results

The results demonstrate that Attention-based View (ABV) research has three distinct periods and maturity. The top journal in terms of content coverage, based on the number of relevant articles published in relation to the theme is Strategic Management Journal.

Theoretical / methodological contributions

The study contributes to emphasize the importance of SLR to knowledge advancement concerning Attention Based View by opening new possibilities to discover unmeet topics in this research area.

Social / management contributions

This study is beneficial to researchers in many ways Junior researchers often have difficulties identifying the main areas of research on a topic and the leading authors and articles in each research line providing qualified information for planning their research in gaps.

Keywords: Attention-based view, Bibliometric analysis, Co-citation analysis, Literature review, Behavioral strategy

1. Introduction

Research in Applied Social Sciences is criticized for the limited view of strategic phenomena, and although Attention Based View has evolved from a nascent topic area into a hot topic of major subfield of strategic management it seems that studies that emphasize empirical regularities have not achieved their momentum to be considered as a mainstream. On the other hand Gavetti and colleagues on the quest for a neo-Carnegie School approach states that bounded rationality and specialized decision structures are cornerstone to be fertilized by advances in a multidisciplinary way encompassing the very nature of Carnegie approach to organizational phenomena (Gavetti et al., 2007).

Strategic cognition is the study of cognitive structures of organization and decision processes to comprehend strategic decision making and strategy implementation, we cannot shell away that by individuals act inside organization in a specific organizational structure which create inducements for them. So, understanding the state of the art of ABV will support research and lectures in advancing in the comprehension of selective attention mechanisms of choice (Bundy et al., 2013; Calabrese & Costa, 2015).

Managers are responsible for organizational decisions at different levels influenced by psychological aspects such as moral understanding, values, personality, ethical behavior, attention and sense of justice. In a social context, the cognitive process integrates these, which can influence the position in the decision-making process (Rerup, 2009; Vuori & Huy, 2016)

Attention-Based View (Ocasio, 1997) which states that company behavior results from channeling and distributing the attention of its decision-makers. Extant literature analyzes the interplay among macro and micro foundations of strategy. From the behavior of individuals, we derive micro-foundations and from the organization's agenda and focus, identifying issues and goals that guide top-down strategic process. In this regard the executive attention is an amalgam paramount (Barney & Felin, 2013; Ocasio & Joseph, 2005).

Moreover, Ocasio's Attention-Based View (Ocasio, 1997) has been employed by some authors who have analyzed mechanisms, constructs as mindfulness (Weick & Sutcliffe, 2006) and applications such as selling issues to top management (Dutton & Ashford, 1993),the merger and acquisition integration process (Yu, Engleman & Van de Ven, 2005), organizational crises (Rerup, 2009), CEO behavior (Tuggle et al., 2010) and opportune and effective management decision-making (Barnett, 2008).

As it is considered limited, attention activates by signals that are more relevant to the organization. Moreover, it also requires the ability of decision-makers to perceive all the signs in the environment that may be suited strategically. Attention limits ensure that certain types of data go entirely unnoticed, preventing interpretation at all (Shepherd et al., 2017). Furthermore, although at first controversial, it is now generally accepted that several perceptual, emotional and cognitive processes can unfold in the absence of awareness (van Gaal et al., 2012).

As mentioned by (Dutton et al., 1989) attention refers to the set of elements that occupy the conscience of decision-makers and is a cognitive process in which the focal point is selectively focused on one aspect of the environment, ignoring others, actively processing a limited amount of information (Sternberg, 2000; Strayer et al., 2003). Under this perspective attention is understood as a socially funnel that dynamically structure the pattern of choice within an organization (Cho & Hambrick, 2006; Ocasio et al., 2018).

The limited empirical studies that address the construct of attention in decision-making processes may also be related to the lack of reliable scientific methods in Applied Social Sciences for measuring and analyzing the process. In the last two decades, it was possible to

verify the increase of publications in strategic management that use neuroscientific tools to observe cognitive processes.

This article is relevant because it contributes by depict a map of conceptual framework and intellectual structure of a field can be of great interest in the pursuit of a holistic view of the field, improving our understanding of relationships between paradigms and the most analyzed topics and, thus, identifying essential work still to be done (Ferreira et al., 2016)

This study is beneficial to researchers in many ways. Junior researchers often have difficulties identifying the main areas of research on a topic and the leading authors and articles in each research line. Moreover, it can help by providing them with qualified information for planning their research in gaps of knowledge. Senior researchers can also benefit from a deeper understanding of how the field has evolved, lately more research lines, avenues for future research, or how network of collaborations influence research.

To guide our further investigation of ABV, a literature comprehensive study provides the building blocks for a successful start. To the best of our knowledge, little citation-based systematic literature review (SLR) study has so far been conducted on the subject. Given the growing interest in, and its importance for business performance, the study reported in the present paper was undertaken to gain an understanding of the most relevant sources, contributors and their main contributions. Using a series of Bibliometric and network analyses, the paper maps the network of authors, documents and countries, with a view to highlight the capital aspects and it considers the attendant implications for future work. The outcome of the study is the prime trends and growth pattern of Attention-based View.

The paper is organized as follows. Section 2 provides a detailed description of the methodology that includes the SLR approach, selection criteria, final data set and the techniques used for analysis. Section 3 presents the results based on Bibliometric and 95 journal analyses. Section 4 concludes the paper, highlighting its limitation and future research areas.

2. **Methodology**

Systematic Literature Review (SLR) played an essential role in systematizing scientific publications to use the existing body of knowledge effectively to give evidence-based insights for practical implications and improve professional judgment and competence (Paul & Criado, 2020). Using validated search techniques, objective research questions, data extractions, and data presentations (Ahmad, Menegaki, et al., 2020) SLR is carried out successfully in many areas.

SLR articles can be categorized as domain-based, theory-based, and method-based. Meta-analytical reviews are also increasingly popular in many subject areas (Hulland & Houston, 2020). Domain-based review articles can be classified into different groups; namely – Structured review focusing on widely used methods, theories, and constructs; Framework-based review, Bibliometric review, Hybrid-Narrative with a framework for setting future research agenda, and Review aiming for model/framework development (Paul & Criado, 2020).

Research question's formulation

Scoping involves the formulation of research questions that provide an underline plan, logical context, aim and base for operationalizing SLR. The key research questions for this research are:

RQ1. How has the field of ABV evolved?

RQ2. What are the most significant contributions, journals, keywords and who are the most influential authors, in the field of ABV?

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This study uses the Bibliometric reviews method, employing statistical tools, the analysis in bibliometric review articles figures out trends, citations and co-citations of a particular theme, by year, country, author, journal, method, theory and research problem. Software like VoSviewer (and R-Studio) are widely used to conduct such bibliometric reviews in diverse subject areas (Paul & Criado, 2020).

As stated by (Thomé et al., 2016) the literature offers a variety of approaches for searching and selecting an area of research, however, our analysis is based on six steps that include: Scoping and formulating the research question; Database selection and searches criteria; Search strings or Keywords; Relevancy and Quality assessment; and Data extraction, analysis and synthesis.

Database selection

The research articles for this study have been extracted from Web of Science (WoS) due to quality of and comprehensiveness of the data (Ahmad, Aghdam, et al., 2020; Ahmad, Menegaki, et al., 2020; Harzing & Alakangas, 2016; Harzing & van der Wal, 2009). As pointed out by Paul and Criado (2020), one of the most popular and appropriate methods for selecting the relevant articles for any study is to search for articles using rigorously chosen keywords or strings present in the title, abstract or in the keywords list.

Following this approach, the keywords for this study are "Attention-based view"; "Attention-based or ABV", document type= article, topic= management ". Journal articles published only in the English language, from 2004 to 2020 are included for the final analysis. Articles were assessed for relevance by two researchers working in the field, primarily by reading the title and abstract but, where necessary, the full article was read. An initial search showed 167 articles. Book chapters, conference papers and articles not relevant to the field of behavioral strategy as a sub-field of strategic management were excluded, leaving 95 articles for final analysis.

Data extraction, bibliometric and network analysis and synthesis

Bibliometric analysis helps in finding the most representative contributors, themes and collaborations (Anwar et al., 2021). The network approach is a quantitative method for analyzing scientific publications and is widely accepted within Bibliometric studies (Randhawa et al., 2016). Co-word analysis is a methodology involving keywords of articles to seize scientific networks of the field under study (Ding et al., 2001). Co-word analysis aims to map the conceptual structure of a field using the word co-occurrences in a bibliographic collection. This helps the researchers to highlight the nexus of the main theme with the emerging subfields of the study (Koseoglu & Parnell, 2020). Co-citation analysis reveals patterns of co-citation, by searching citation databases in ways that reveal the intellectual structures of fields, based on cited references (Alonso et al., 2018).

For this study, 167 articles were converted into Text format which is readable in R-Studio software for Bibliometrix analysis, and into Excel (CSV) format for complementary analysis. R-Studio is an open-source R-tool for comprehensive quantitative research and scientific mapping, encompasses statistical algorithms, mathematical functionality and visualization capabilities for analysis through tables and graphs (Aria & Cuccurullo, 2017).

3. Results and discussion

This section presents the descriptive statistics and results of the citation and network analysis. Citation analysis includes the time trend of publications and citations, identifies the most influential sources, the most prolific authors and the most influential articles. Network

analysis is divided into subsections; Documents Co-citation analysis, Authors Co-citation Analysis; Co-word analysis and Collaboration network analysis.

Descriptive statistics

The summary statistics showing numbers, sources, authors, keywords, publications period, collaboration measures, average citation per article and other related information are presented in Table 1.

The selected 165 articles were published in 95 journals from 2004 to 2021. In total, 396 authors contributed showing an average of 2,76 authors per article and a collaborative index of 2,67. The articles with single authors are 25 (6,3%), while 371 (93,7%) articles were written by multiple authors, this indicator exhibits a different pattern from the Behavior Strategy field were more than 20% are single authored (Anwar et al., 2022). The general high quality of articles is evidence by an average citation count of 29,95 citations per article

Table 1
Baseline Statistics

Main information	Numbers
Documents	165
Sources (Journals, Books, etc)	95
Keywords Plus (ID)*	594
Author's Keywords (DE)	689
Time period of publications	2004:2021
Total citations	10727

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Average citations per articles	29,95
Authors	396
Single authors	25
Multi-authors	371
Articles per author	0,417
Average Nº of authors per article	2,40
Average Nº of co-authors per articles	2,76
Collaboration Index	2,67

Note. * Total number of phrases used in titles of an article's references

Annual publication and citation trend

There is an increasing trend with some variations of research on Attention-based view in the timespan of analysis 2004–2021. The period can be divided into three distinct stages: The latency stage (2004–2010); steady growth stage (2011–2015); and takeoff stage (2016–2021). During the initiation stage, only 15 articles (9,09%) were published, which is equal to almost one article per year. The steady growth period represents 34 articles (20,61%) with an improved average of 6,8 articles per year. After 2016, the publication trend showed a sharp increase representing 104 articles (63,03%) of the sample with an impressive average of 17,3 articles per year with an Annual Growth Rate: 22.11% in the hole period. The declining line for year 2021 is because the data was collected up to October 2021 only. However, it is important to note that research on the subject continues to growth.

Overall, there is a reasonable variation in citations visible in all three stages while no summarizing major topic appear to be distinguished in terms of the topic advancement.

Figure 1 – Average article citation per year
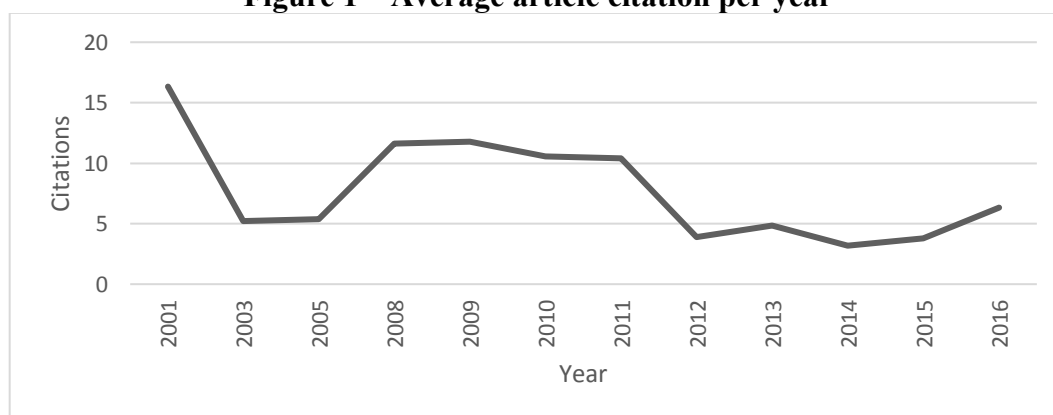
Most influential journals

The results for most influential journals based on the total citation are displayed in Figure 3. The most influential journals are derived from the ranking based on Bradford's law (Brookes, 1969), where a group of journals is divided into different zones. Zone 1 lists the 15 journals with the highest number of publications and citations, and these are likely to be of the highest interest to researchers in the discipline. Strategic Management Journal holds the top position with a total of 1.555 citations, which accounts for 10% of the total number. SMJ is followed by the Academy of Management Journal (AMJ) with 1006 (~ 7%) and Journal of Organization Science with 910 (6%) citations respectively. These citation counts reflect the numbers of citations for the articles selected for this study identified via our keyword's searches.
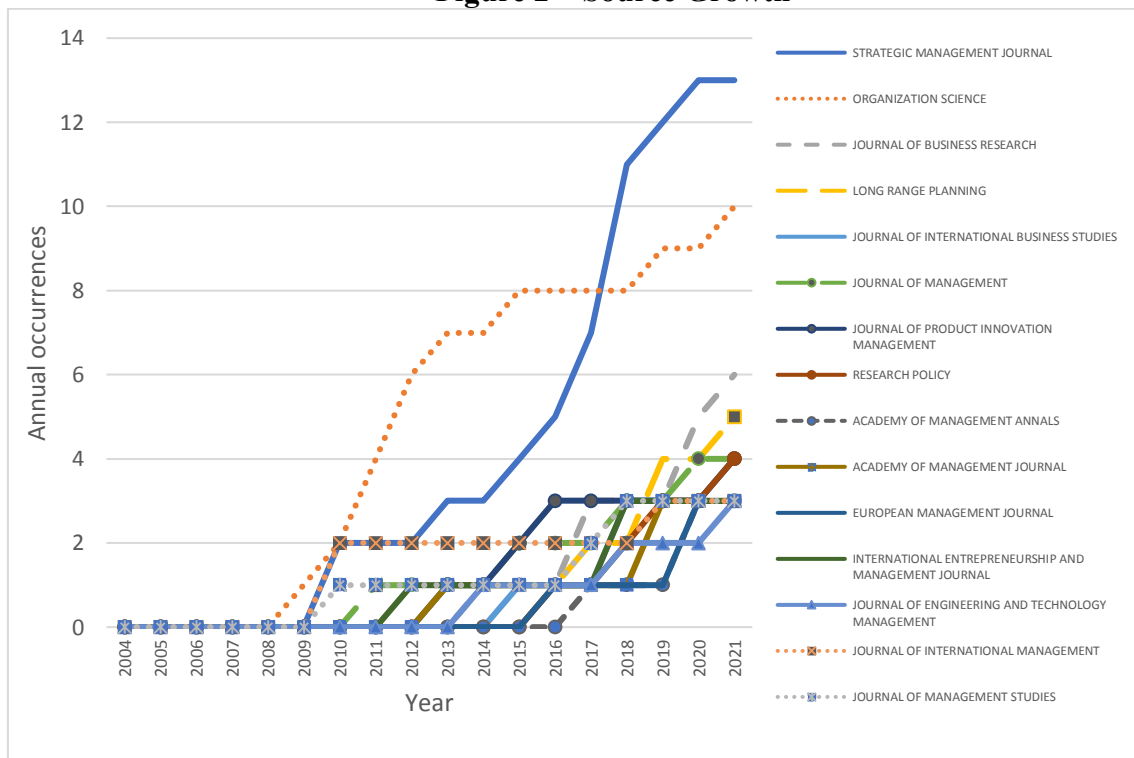
These results show that Attention Based view has been the prominent area of attention for top-tier journals especially during the recent past. The Strategic Management Journal

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publishes research articles and eventually "prospective" on new or emerging lines of research. It is interesting to point out that in 2017, within ABV studies reporting in SMJ, it was published the article "Communication and attention dynamics: An attention-based view of strategic change" in the scope of new emerging lines of research, showing the importance of the subject to nowadays' studies.

Moreover, in 2020 SMJ had highlighted ABV in the Editorial section "Contributions to attention-based marketing: Foundations, insights, and challenges and thus expanded ABV scope beyond strategy, including other aspects of management processes.

Figure 2 provides insights into source headway overview in terms of annual production. SMJ seems to have a strong and long-term commitment and has been publishing on Attention Based View over an extended period, demonstrating robust growth. It is followed by Organization Science. Publication in Journal of Business Research started in the last decade, but it has demonstrated tremendous vertical growth during the last five years.

Figure 2 – Source Growth

It is noted that although the Long-Range Planning have been in the top five publisher still on the out of the top cited. There are, again, some surprising omissions (e.g. Strategy Science), and inclusions (e.g. Journal of Engineering and Technology Management), in the list. Strategy Science, for example, is omitted, due to a lack of publications encompassing the relevant keywords over the review period. These results show that Attention Based view has been the prominent area of attention for top-tier journals especially during the recent period.

The most prolific and influential researcher

In order to evaluate the scientific output of researchers based on *h*-index, g-index, citations (full citation, fractional citation, Citation per Year, etc.). The ranking of authors' based on full citation count shown Ocasio, as the forefront author with 686 citations followed by Vaara (2018) and Joseph as first author with Ocasio (2012) as second and third with 224 and 192 citations respectively.

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At the author-level metrics g-index and *h*-index measure both the productivity and citation impact of the publications of a researcher and thus show the impact of academics, representing the most cited papers based on the number of citations of their publications. Ocasio (University of Illinois Urbana-Champaign) is at the highest rank, with six publications, in total citation Joseph is at second with five publications and Laamanen is at third with four publications. As the proportion of single-authored papers were low no difference in top authors raking were observable and even Ocasio starting publication on the end of 90´ he maintains top position in the field.

Most influential articles are ranked based on the total citation. Normally in total citation parameter, the old articles get high ranking, but their influence may be less than the current articles if the ranking is based on citation per year (CPY). The results presented in Table 2 showed that the article published by Ocasio (2011) has on average more CPY than Grimpe, C., & Kaiser, U. (2010) and Gregoire, D. A., Barr, P. S., & Shepherd, D. A. (2010).

Table 2 - List of works ranked by year and number of cites

Rank	Title	Reference	Total Citations (TC)	TC per Year	SJR	H	Quartil
1	Attention to Attention	(Ocasio, 2011)	405	33.750	6,96	238	Q1
2	Balancing Internal and External Knowledge Acquisition: The Gains and Pains from R&D Outsourcing	(Grimpe & Kaiser, 2010)	285	21.923	4,40	184	Q1
3	Cognitive Processes of Opportunity Recognition: The Role of Structural Alignment	(Gregoire et al., 2010)	232	17.846	6,96	238	Q1
4	Commanding board of director attention: investigating how organizational performance and CEO duality affect board members' attention to monitoring	(Tuggle et al., 2010)	195	15.000	11,40	286	Q1
5	Top management attention to innovation: the role of search selection and intensity in new product introductions	(Li et al., 2013)	157	15.700	11,19	318	Q1

Accordingly, the most influential article is "Attention to Attention" published a decade ago. The article reflects on the concept of attention and their distinct operationalization by numerous metatheories like as the behavioral theory of the firm, managerial cognition, issue selling, attention-based view, and organizational ecology. In this paper author develop five propositions on how diversity on attention at organizational level provides alternative theoretical options against structural determinism or strategic choice, on the explanation of organizational adaptation and change.

The second-ranked article is titled "Balancing Internal and External Knowledge Acquisition: The Gains and Pains from R&D Outsourcing" published in JMS (Grimpe & Kaiser, 2010). This article U-shaped relationship between R&D outsourcing and innovation performance presenting the amount of managerial attention to as an organizational scarce resource in the traditional framework proposed by Cyert, R. M., & March, J. G. (1963). The third most influential article is "Cognitive Processes of Opportunity Recognition: The Role of Structural Alignment" Organization Science (Gregoire et al., 2010). The article develops and test a model of cognitive process that lays behind opportunity recognition.

The results presented in Table 2 also showed that 60% of the top 25 articles are published in the journals with H-factor above 200 and 92% of the articles have at least H-factor above 100.

The conceptual structure of attention-based view

Co-word analysis. Co-word analysis is a methodology involving author supplied keywords of articles to seize scientific networks of a field (Callon et al., 1983; Ding et al., 2001). Co-word analysis is used to map the conceptual structure of a field, based on the co-occurrences of particular words in each bibliographic collection. This helps the researchers to highlight the nexus of the main theme with the emerging subfields of the study (Koseoglu & Parnell, 2020). Here, the size of the nodes depicts the occurrence frequency of the keywords. The higher the frequency, the larger the node size will be. The thickness of the line connecting nodes is proportional to the closeness of connections between two keywords.

The thicker the line between two key words, the closer their relationship will be. Eight clusters distinguished by colors in Co-occurrence Network visualization are shown in Figure 3. Each cluster represents a theme based on co-occurrence keywords in our sampled papers.

Figure 3 – Co-occurrence Network in Attention Based View Field
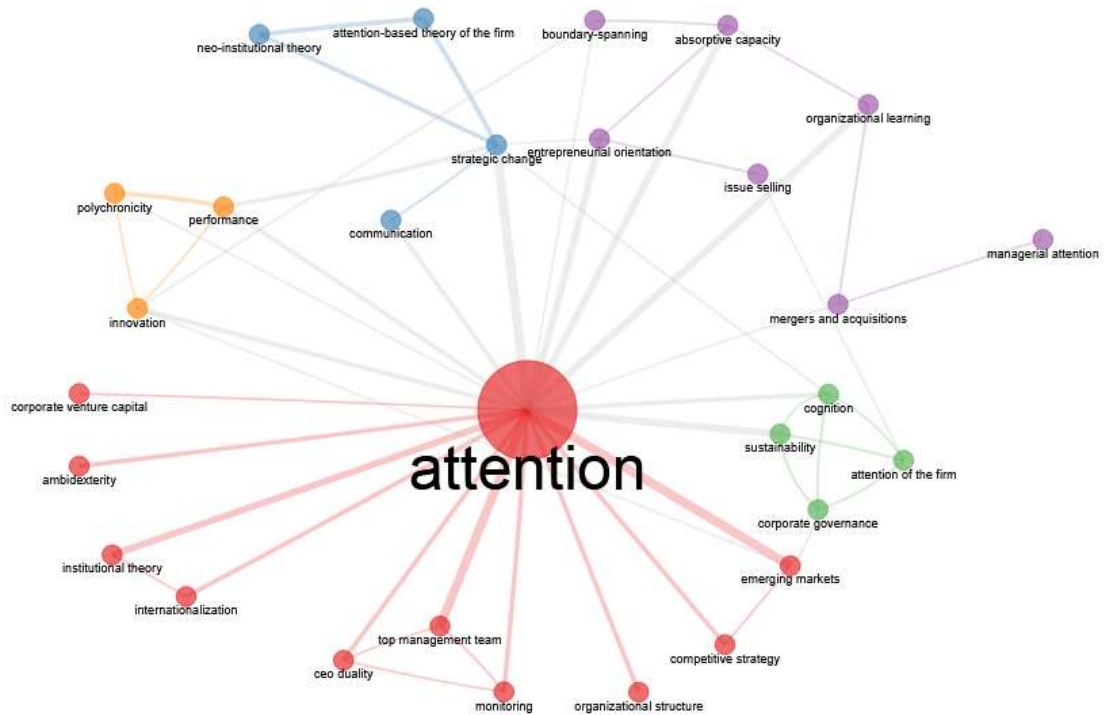
Notes:
1) Clustering by Louvain, normalized by association level with minimum edges of 1 and 31 nodes.
2) Authors Keywords were cleaned from synonyms and all non-concepts were removed.

The red cluster is the largest network of keywords with a major theme as "Attention-based view" (i.e. attention) associated with other nodes such as top management team, competitive strategy, institutional theory and organizational structure. This cluster is also connected with other relatively smaller clusters such as "Strategic Change" and "Entrepreneurial Orientation and Capability". The Green cluster is related to sustainability, corporate governance, cognition and firm level attention process. The purple cluster presents key concepts of Entrepreneurial Orientation and Capability and its linkages with M&A, organizational learning, boundary-spanning, issue selling and managerial attention. The blue cluster is based on network of keywords relating to strategic change, attention-based theory of the firm, neo-institutional and communication.

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Finally, the orange cluster represents performance, innovation and polychronicity. The understanding of these themes, their underlying theories and network relationships provides the avenues for future research and development in the field of Attention-based view and Strategic Management in general.

Co-citation network. Co-citation network analysis is another tool to identify the intellectual structure of an academic discipline. Co-citation analysis reveals patterns of co-citation, by searching citation databases in ways that reveal the intellectual structures of fields, based on cited references (Alonso et al., 2018). According to (Koseoglu & Parnell, 2020), intellectual connections, co-citation networks, invisible colleges, social contagions, knowledge networks, knowledge domains and source knowledge are the other terms that are used interchangeably for intellectual structure.

In the current study, the intellectual structures of ABV are shown in Figure 4. The size of boxes indicates the strength of paper co-citation and distinct colors of the boxes correspond to the different clusters of papers. Within the network, each node represents publications and the lines between them are citations. The nodes with thick links/ lines reflecting stronger association and are considered as the most cited authors or documents. The nodes with the highest links are considered the most cited ones.

Figure 4 – Intellectual structure of Attention Based View Field
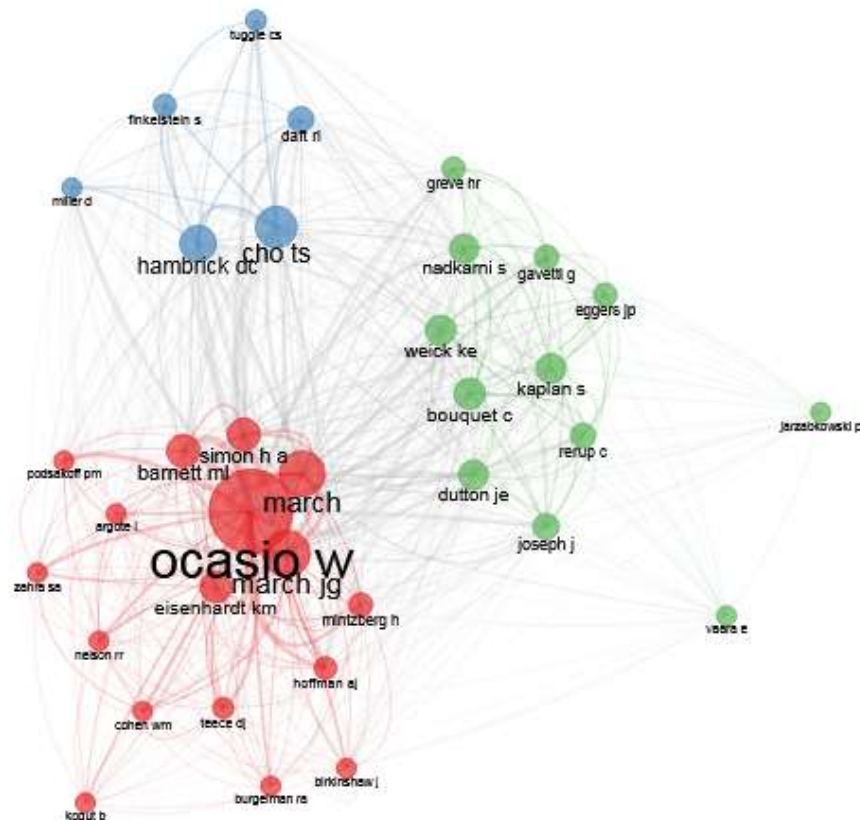
Each cluster is indicated with a distinct color and labeled with a title, based on the contents of the research articles. The highest the co-citation of two papers in a paper citation network, the more possible is that these papers deal with similar topics. Given that strong co-citation relationship, a reflection of each cluster in the network demonstrates that publications bridging different domains can be considered as a common research stream based on research background and topics.

The red color represents cluster 1, showing more nodes with Ocasio (1997) as the biggest node. This cluster representing the overall conceptualization of ABV and has the focus on "Carnegie School" three foundational works (Cyert et al., 1958; Cyert & March, 1963; Simon, 1947), "Learning" and "Absorptive Capacity" (Cohen & Levinthal, 1990; Levinthal & March, 1993; March, 1991). Articles in this cluster mainly involved studies that underpins aspects related with selection, reasoning and processing of information in the Strategy Context and how institutions, routines and organizing. Green is cluster 2 discussing topics of documents like attention structures, distributed attention, shared emotions effects, social dynamic of organization; attention attributes and grasping theory of agency, behavioral science, treat rigidity, issue selling and contingency. This cluster shows a relevant link of Ocasio, W. (2011) with Ocasio, W., & Joseph, J. (2005) publication. These two publications have the major citation citations as a reflection by the links with other publications within the cluster.

Cluster 3 is in the blue color concentrating on "Top Management Team" and "Upper Echelon Theory". Therefore, the intellectual structure of Attention Based View can be categorized into three groups as (1) "Carnegie School", "Learning" and "Absorptive Capacity"; (2) "Organizational Attention Dynamics" and "Attentional Mechanisms"; (3) "Top Management Team" and "Upper Echelon Theory".

Table 3 - Intellectual structure and key articles

Cluster		Title of top articles in each cluster	Reference	Between centrality
Cluster 1 – Core roots of ABV in Bounded rationality, Theory of the firm and Learning				
1	1	Towards an attention-based view of the firm	(Ocasio, 1997)	44,83
1	2	A behavioral theory of the firm	(Cyert & March, 1963)	9,32
1	3	An Attention-Based View of Real Options Reasoning	(Barnett, 2008)	4,41
1	4	Administrative behavior	(Simon, 1947)	4,06
1	5	The Role of Expectations in Business Decision Making	(Cyert et al., 1958)	3,36
Cluster 2 – Focus on organizational dynamics of attentional process				
2	1	Attention to attention	(Ocasio, 2011)	44,99
2	2	An attention-based theory of strategy formulation: Linking micro-and macroperspectives in strategy processes	(Ocasio & Joseph, 2005)	15,55
2	3	Weight versus voice: How foreign subsidiaries gain attention from corporate headquarters.	(Bouquet & Birkinshaw, 2008)	7,68
2	4	Architecture, attention, and adaptation in the multibusiness firm: General electric from 1951 to 2001	(Joseph & Ocasio, 2012)	7,59
2	5	Attentional triangulation: Learning from unexpected rare crises	(Rerup, 2009)	6,39

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Cluster 3 – Managerial cognition

3	1	Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation.	(Cho & Hambrick, 2006)	42,91
3	2	Upper echelons: The organization as a reflection of its top managers	(Hambrick & Mason, 1984)	13,03
3	3	Framing contests: Strategy making under uncertainty.	(Kaplan, 2008)	9,10
3	4	Cognition and renewal: Comparing CEO and organizational effects on incumbent adaptation to technical change	(Eggers & Kaplan, 2009)	7,66
3	5	Environmental context, managerial cognition, and strategic action: An integrated view.	(Nadkarni & Barr, 2008)	5,72

The top articles per cluster are shown in Table 3 based on betweenness centrality measures which give insight into how productive communication can occurs in a network and who are the leading authors in controlling the network communication. Betweenness centrality measures the number of times a node lies on the shortest path between other nodes, it means that an individual influence the flow around a system or concept.

Co-authorship network

As proposed by Anwar et al. (2022) we conduct a co-authorship network analysis to represent the publication work carried out by a given group of researchers, this network is a useful to understand collaboration patterns; for instance, the numbers of papers groups of authors write, how many co-authors are involved, the distance between authors within the network and how collaboration patterns vary between authors within the group as a whole.

Figure 5 – Collaboration network of authors
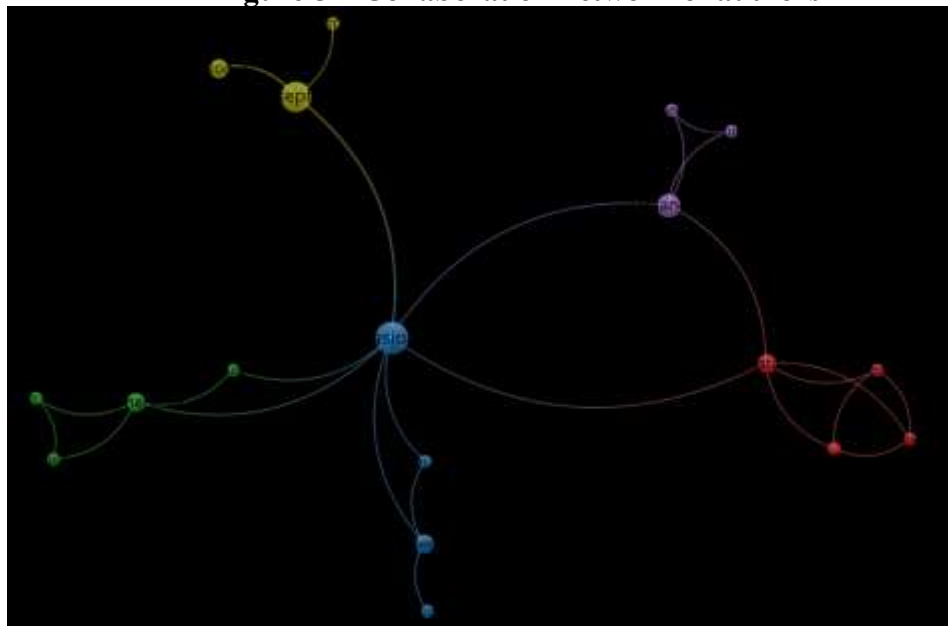
The network illustrated in Figure 5 reveals that Ocasio, W (Ocasio, 2011) is the most influential author in the network portrayed, has stronger associations with Joseph, J (Joseph & Ocasio, 2012), Laamanen, T (Burgelman et al., 2018), Vaara, E (Graebner et al., 2017), Rhee,

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International Symposium on Management, Project, Innovation and Sustainability
ISSN: 2317-8302

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I. (Rhee & Leonardi, 2018) and Mcmullen, J. S (Shepherd et al., 2017), relative to other authors in this network with whom he has also collaborated.

4. *Conclusion*

Attention-based view is an emerging research interest within Behavior Strategy, our scope in this study has been the identification of the most influential sources, researchers, documents, region/institutions, keywords, themes and networks contributing to the development of the field. The number of annual publications reflects the overall increasing trends. The fewest publications were found during 2004–2021.

The aim of this study has been the identification of the most influential sources, researchers, documents, keywords and themes contributing to the development of Attention Based View. The number of annual publications reflects the overall increasing trends. The fewest publications were found up to 2010. This period can be labeled as the latency stage. From 2011 to 2015, the annual publication trend started to increase and hence it can be called the development stage. And beyond 2016, a sharp growth has been seen in the field and this may be called the take off stage. During this period no renowned journal published a special number with this topic.

Top ranking journals such as Strategic Management Journal (SMJ), Academy of Management Journal and Organization Science are the major contributors to the development of Behavioral Strategy. The top three most influential articles are (Ocasio, 2011), (Grimpe & Kaiser, 2010) and (Gregoire et al., 2010) with 33.75, 21.923 and 17.846 citations per year respectively. All these influential articles were published in top ranked journals of management. The important and most relevant keywords that have been identified are: top management team, competitive strategy, institutional theory and organizational structure, strategic change, entrepreneurial orientation, capability, sustainability, corporate governance, cognition, firm level attention process, M&A, organizational learning, boundary-spanning, issue selling, managerial attention, attention-based theory of the firm, neo-institutional and communication . These keywords and the themes identified through this research will help researchers on the field or that are interested on to design and establish their research scope or even update their lecture orientation for students.

Limitations and future directions

In this study we face some limitations. Firstly, only the Web of Science database was used for sample articles. It is possible that some relevant and interesting articles were missed out because they were not present in this database. Future work should compare the present findings with a replication study based on the Scopus database, to see what continuities and discontinuities emerge from the respective findings including changes in the intellectual structure of ABV. A second limitation are the absence of field network collaboration.

Until the following studies arrives, our study consolidates and exhibited robust evidence to conclude that attention-based view has evolved from their roots to a vibrant subfield of Behavioral Strategy research, with a proximal orientation to understand dynamic nature of the phenomena. Although a lot of work has been done much more has yet to be done, and our expectation is that the findings reported in this paper will support and foster researchers to connect and discuss the effects of ABV on firm Strategic Management.

Ahmad, N., Aghdam, R. F., Butt, I., & Naveed, A. (2020). Citation-based systematic literature review of energy-growth nexus: An overview of the field and content analysis of the top 50 influential papers [Review]. *Energy Economics*, *86*, 25, Article 104642. https://doi.org/10.1016/j.eneco.2019.104642

Ahmad, N., Menegaki, A. N., & Al-Muharrami, S. (2020). SYSTEMATIC LITERATURE REVIEW OF TOURISM GROWTH NEXUS: AN OVERVIEW OF THE LITERATURE AND A CONTENT ANALYSIS OF 100 MOST INFLUENTIAL PAPERS [Review]. *Journal of Economic Surveys*, *34*(5), 1068-1110. https://doi.org/10.1111/joes.12386

Alonso, J. M., Castiello, C., & Mencar, C. (2018). A Bibliometric Analysis of the Explainable Artificial Intelligence Research Field [Proceedings Paper]. *Information Processing and Management of Uncertainty in Knowledge-Based Systems: Theory and Foundations, Ipmu 2018, Pt I*, *853*, 3-15. https://doi.org/10.1007/978-3-319-91473-2_1

Anwar, J., Bibi, A., & Ahmad, N. (2022). Behavioral strategy: mapping the trends, sources and intellectual evolution. *Journal of Strategy and Management*, *15*(1), 140-168. https://doi.org/10.1108/JSMA-01-2021-0002

Anwar, J., Hasnu, S. A. F., Butt, I., & Ahmed, N. (2021). Miles and Snow Typology: most influential journals, articles, authors and subject areas [Article]. *Journal of Organizational Change Management*, *34*(2), 385-402. https://doi.org/10.1108/jocm-07-2018-0190

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis [Article]. *Journal of Informetrics*, *11*(4), 959-975. https://doi.org/10.1016/j.joi.2017.08.007

Barnett, M. L. (2008). An attention-based view of real options reasoning [Article]. *Academy of Management Review*, *33*(3), 606-628.

Barney, J., & Felin, T. (2013). WHAT ARE MICROFOUNDATIONS? [Article]. *Academy of Management Perspectives*, *27*(2), 138-155. https://doi.org/10.5465/amp.2012.0107

Bouquet, C., & Birkinshaw, J. (2008). Weight versus voice: How foreign subsidiaries gain attention from corporate headquarters [Article]. *Academy of Management Journal*, *51*(3), 577-601. https://doi.org/10.5465/amj.2008.32626039

Bundy, J., Shropshire, C., & Buchholtz, A. K. (2013). STRATEGIC COGNITION AND ISSUE SALIENCE: TOWARD AN EXPLANATION OF FIRM RESPONSIVENESS TO STAKEHOLDER CONCERNS [Article]. *Academy of Management Review*, *38*(3), 352-376. https://doi.org/10.5465/amr.2011.0179

Burgelman, R. A., Floyd, S. W., Laamanen, T., Mantere, S., Vaara, E., & Whittington, R. (2018). Strategy processes and practices: Dialogues and intersections [Article]. *Strategic Management Journal*, *39*(3), 531-558. https://doi.org/10.1002/smj.2741

Calabrese, A., & Costa, R. (2015). Strategic thinking and business innovation: Abduction as cognitive element of leaders' strategizing [Article]. *Journal of Engineering and Technology Management*, *38*, 24-36. https://doi.org/10.1016/j.jengtecman.2015.06.001

Callon, M., Courtial, J. P., Turner, W. A., & Bauin, S. (1983). FROM TRANSLATIONS TO PROBLEMATIC NETWORKS - AN INTRODUCTION TO CO-WORD ANALYSIS [Article]. *Social Science Information Sur Les Sciences Sociales*, *22*(2), 191-235. https://doi.org/10.1177/053901883022002003

Cho, T. S., & Hambrick, D. C. (2006). Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation [Review]. *Organization Science*, *17*(4), 453-469. https://doi.org/10.1287/orsc.1060.0192

Cohen, W. M., & Levinthal, D. A. (1990). ABSORPTIVE-CAPACITY - A NEW PERSPECTIVE ON LEARNING AND INNOVATION [Article]. *Administrative Science Quarterly*, *35*(1), 128-152. https://doi.org/10.2307/2393553

Cyert, R. M., Dill, W. R., & March, J. G. (1958). THE ROLE OF EXPECTATIONS IN BUSINESS DECISION-MAKING [Article]. *Administrative Science Quarterly*, *3*(3), 307-340. https://doi.org/10.2307/2390716

Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Prentice-Hall.

Ding, Y., Chowdhury, G. G., & Foo, S. (2001). Bibliometric cartography of information retrieval research by using co-word analysis [Article]. *Information Processing & Management*, *37*(6), 817-842. https://doi.org/10.1016/s0306-4573(00)00051-0

Dutton, J. E., & Ashford, S. J. (1993). SELLING ISSUES TO TOP MANAGEMENT [Review]. *Academy of Management Review*, *18*(3), 397-428. https://doi.org/10.2307/258903

Dutton, J. E., Walton, E. J., & Abrahamson, E. (1989). IMPORTANT DIMENSIONS OF STRATEGIC ISSUES - SEPARATING THE WHEAT FROM THE CHAFF [Article]. *Journal of Management Studies*, *26*(4), 379-396. https://doi.org/10.1111/j.1467-6486.1989.tb00735.x

Eggers, J. P., & Kaplan, S. (2009). Cognition and Renewal: Comparing CEO and Organizational Effects on Incumbent Adaptation to Technical Change [Review]. *Organization Science*, *20*(2), 461-477. https://doi.org/10.1287/orsc.1080.0401

Ferreira, J. J. M., Ferreira, F. A. F., Fernandes, C. I., Jalali, M. S., Raposo, M. L., & Marques, C. S. (2016). What do we [not] know about technology entrepreneurship research? *International Entrepreneurship and Management Journal*, *12*(3), 713-733.

Gavetti, G., Levinthal, D., & Ocasio, W. (2007). Neo-carnegie: The carnegie school ' s past, present, and reconstructing for the future [Article]. *Organization Science*, *18*(3), 523-536. https://doi.org/10.1287/orsc.1070.0277

Graebner, M. E., Heimeriks, K. H., Huy, Q. N., & Vaara, E. (2017). THE PROCESS OF POSTMERGER INTEGRATION: A REVIEW AND AGENDA FOR FUTURE RESEARCH [Article]. *Academy of Management Annals*, *11*(1), 1-32. https://doi.org/10.5465/annals.2014.0078

Gregoire, D. A., Barr, P. S., & Shepherd, D. A. (2010). Cognitive Processes of Opportunity Recognition: The Role of Structural Alignment [Article]. *Organization Science*, *21*(2), 413-431. https://doi.org/10.1287/orsc.1090.0462

Grimpe, C., & Kaiser, U. (2010). Balancing Internal and External Knowledge Acquisition: The Gains and Pains from R&D Outsourcing [Article]. *Journal of Management Studies*, *47*(8), 1483-1509. https://doi.org/10.1111/j.1467-6486.2010.00946.x

Hambrick, D. C., & Mason, P. A. (1984). UPPER ECHELONS - THE ORGANIZATION AS A REFLECTION OF ITS TOP MANAGERS [Article]. *Academy of Management Review*, *9*(2), 193-206. https://doi.org/10.2307/258434

Harzing, A. W., & Alakangas, S. (2016). Google Scholar, Scopus and the Web of Science: a longitudinal and cross-disciplinary comparison [Article]. *Scientometrics*, *106*(2), 787-804. https://doi.org/10.1007/s11192-015-1798-9

Harzing, A. W., & van der Wal, R. (2009). A Google Scholar h-Index for Journals: An Alternative Metric to Measure Journal Impact in Economics and Business [Article]. *Journal of the American Society for Information Science and Technology*, *60*(1), 41-46. https://doi.org/10.1002/asi.20953

Hulland, J., & Houston, M. B. (2020). Why systematic review papers and meta-analyses matter: an introduction to the special issue on generalizations in marketing [Editorial Material]. *Journal of the Academy of Marketing Science*, *48*(3), 351-359. https://doi.org/10.1007/s11747-020-00721-7

Joseph, J., & Ocasio, W. (2012). Architecture, attention, and adaptation in the multibusiness firm: General electric from 1951 to 2001 [Review]. *Strategic Management Journal*, *33*(6), 633-660. https://doi.org/10.1002/smj.1971

Kaplan, S. (2008). Framing Contests: Strategy Making Under Uncertainty [Review]. *Organization Science*, *19*(5), 729-752. https://doi.org/10.1287/orsc.1070.0340

Koseoglu, M. A., & Parnell, J. (2020). The evolution of the intellectual structure of strategic management between 1980 and 2019 [Article]. *Journal of Strategy and Management*, *13*(4), 503-534. https://doi.org/10.1108/jsma-05-2020-0102

Levinthal, D. A., & March, J. G. (1993). THE MYOPIA OF LEARNING [Article]. *Strategic Management Journal*, *14*, 95-112. https://doi.org/10.1002/smj.4250141009

Li, Q., Maggitti, P. G., Smith, K. G., Tesluk, P. E., & Katila, R. (2013). TOP MANAGEMENT ATTENTION TO INNOVATION: THE ROLE OF SEARCH SELECTION AND INTENSITY IN NEW PRODUCT INTRODUCTIONS [Article]. *Academy of Management Journal*, *56*(3), 893-916. https://doi.org/10.5465/amj.2010.0844

March, J. G. (1991). EXPLORATION AND EXPLOITATION IN ORGANIZATIONAL LEARNING [Article]. *Organization Science*, *2*(1), 71-87. https://doi.org/10.1287/orsc.2.1.71

Nadkarni, S., & Barr, P. S. (2008). ENVIRONMENTAL CONTEXT, MANAGERIAL COGNITION, AND STRATEGIC ACTION: AN INTEGRATED VIEW [Review]. *Strategic Management Journal*, *29*(13), 1395-1427. https://doi.org/10.1002/smj.717

Ocasio, W. (1997). Towards an attention-based view of the firm [Article]. *Strategic Management Journal*, *18*, 187-206. https://doi.org/10.1002/(sici)1097-0266(199707)18:1+<187::aid-smj936>3.3.co;2-b

Ocasio, W. (2011). Attention to Attention [Article]. *Organization Science*, *22*(5), 1286-1296. https://doi.org/10.1287/orsc.1100.0602

Ocasio, W., & Joseph, J. (2005). An attention-based theory of strategy formulation: Linking micro- and macroperspectives in strategy processes [Article]. *Strategy Process*, *22*, 39-61. https://doi.org/10.1016/s0742-3322(05)22002-8

Ocasio, W., Laamanen, T., & Vaara, E. (2018). Communication and attention dynamics: An attention-based view of strategic change [Article]. *Strategic Management Journal*, *39*(1), 155-167. https://doi.org/10.1002/smj.2702

Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? [Review]. *International Business Review*, *29*(4), 7, Article 101717. https://doi.org/10.1016/j.ibusrev.2020.101717

Randhawa, K., Wilden, R., & Hohberger, J. (2016). A Bibliometric Review of Open Innovation: Setting a Research Agenda [Review]. *Journal of Product Innovation Management*, *33*(6), 750-772. https://doi.org/10.1111/jpim.12312

Rerup, C. (2009). Attentional Triangulation: Learning from Unexpected Rare Crises [Article]. *Organization Science*, *20*(5), 876-893. https://doi.org/10.1287/orsc.1090.0467

Rhee, L., & Leonardi, P. M. (2018). Which pathway to good ideas? An attention-based view of innovation in social networks [Article]. *Strategic Management Journal*, *39*(4), 1188-1215. https://doi.org/10.1002/smj.2755

Shepherd, D. A., McMullen, J. S., & Ocasio, W. (2017). IS THAT AN OPPORTUNITY? AN ATTENTION MODEL OF TOP MANAGERS' OPPORTUNITY BELIEFS FOR STRATEGIC ACTION [Article]. *Strategic Management Journal*, *38*(3), 626-644. https://doi.org/10.1002/smj.2499

Simon, H. A. (1947). *Administrative behavior*. Macmillan Co.

Sternberg, R. J. *Psicologia cognitiva*.

Sternberg, R. J. (2000). *Psicologia cognitiva*.

Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Cell phone-induced failures of visual attention during simulated driving [Article]. *Journal of Experimental Psychology-Applied*, *9*(1), 23-32. https://doi.org/10.1037/1076-898x.9.1.23

Thomé, A. M. T., Scavarda, L. F., & Scavarda, A. J. (2016). Conducting systematic literature review in operations management. *Production Planning & Control*, *27*(5), 408-420. https://doi.org/10.1080/09537287.2015.1129464

Tuggle, C. S., Sirmon, D. G., Reutzel, C. R., & Bierman, L. (2010). COMMANDING BOARD OF DIRECTOR ATTENTION: INVESTIGATING HOW ORGANIZATIONAL PERFORMANCE AND CEO DUALITY

AFFECT BOARD MEMBERS' ATTENTION TO MONITORING [Article]. *Strategic Management Journal*, *31*(9), 946-968. https://doi.org/10.1002/smj.847

van Gaal, S., de Lange, F. P., & Cohen, M. X. (2012). The role of consciousness in cognitive control and decision making [Review]. *Frontiers in Human Neuroscience*, *6*, 15, Article 12. https://doi.org/10.3389/fnhum.2012.00121

Vuori, T. O., & Huy, Q. N. (2016). Distributed Attention and Shared Emotions in the Innovation Process: How Nokia Lost the Smartphone Battle [Article]. *Administrative Science Quarterly*, *61*(1), 9-51. https://doi.org/10.1177/0001839215606951

Weick, K. E., & Sutcliffe, K. A. (2006). Mindfulness and the quality of organizational attention [Article]. *Organization Science*, *17*(4), 514-524. https://doi.org/10.1287/orsc.1060.0196