

The Wise Leader: Where did the Roads paved by Nonaka and Takeuchi lead to?

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Abstract: Ikujiro Nonaka's contribution to the knowledge management (KM) field over the last decades is remarkable. His research has heralded major paradigm shifts (e.g., emphasis on tacit knowledge). In this regard, we can consider his widely received article – The Wise Leader in Harvard Business Review (May 2011) – as an attempt to develop KM towards a new direction. In it, Nonaka and Takeuchi introduce *phronesis*, i.e., practical wisdom, as a complementary source of knowledge and emphasize its importance for responsible leadership. A decade after its presentation, we aim to understand how their work has influenced subsequent research. Using VOSviewer software, we develop a bibliometric analysis of the research that follows the paths laid out by Nonaka and Takeuchi. Therefore, we searched the studies citing The Wise Leader on the *Scopus* database. The outcomes comprise 119 documents. We scrutinized the metadata – papers, journals, institutions, countries, authors, and keywords – applying a comparative approach – authorship, bibliographic coupling, citation, co-citation, and co-occurrence analyses. The results reveal that the concepts of *phronesis* and practical wisdom link knowledge management and leadership, supporting Nonaka and Takeuchi's stance on knowledge management as a primarily social endeavor whose success depends on personal capabilities and the enactment of (tacit) knowledge, both of which are mirrored in *phronesis*. We also find that the concept has hardly spread beyond the boundaries of knowledge management, leadership, and business ethics, although it has become interwoven with other concepts. Of these connections, those to non-rational forms of knowledge and values (e.g., spirituality, emotions, virtue ethics) may be of particular relevance to the further development of the knowledge management field. This is also reflected in the recently started discussion on *responsible knowledge management*. Moreover, we set an agenda for future research and offer contributions to theory and practice.

Keywords: Leadership, Practical Wisdom, *Phronesis*, Wise Leader, Responsible Knowledge Management

1. Introduction

The beginning of the 21st century is being marked by a number of global crises (Jones and Millar, 2010). Among them was the subprime crisis that was triggered by the sharp increase in high-risk mortgages that went into default beginning in 2007. In response to this crisis, Nonaka and Takeuchi (2011) turned to both practitioners and academics in their Harvard Business Review article, arguing that many companies were failing to be truly a “knowledge creating company”. Analyzing the problem, they found that “many leaders use knowledge improperly, and most do not cultivate the right kinds” (Nonaka and Takeuchi, 2011, p. 59). Faced with this problem these authors argue that two important concepts have been sidelined by many knowledge management practices: *phronesis*, i.e., practical wisdom, and wise leaders, i.e., those who can judge goodness, can grasp the essence, create shared contexts, communicate the essence, exercise political power, and foster practical wisdom in others.

These wise leaders, also called phronetic leaders, always have in mind the people (in the organization or in the surrounding environment), trying to make them and those who work with them make decisions that benefit the whole, including people, the organization, its stakeholders, and society (Nonaka and Takeuchi, 2011). Thus, wise leaders must possess six abilities: (1) make decisions only after they figure out what is good for the organization and society; (2) quickly grasp the essence of any situation or problem and intuitively fathom the nature and meaning of people, things, and events; (3) constantly create informal as well as formal shared contexts for senior executives and employees to construct new meaning through their interactions; (4) know how to use metaphors and stories to convert the essence of their actual experiences into tacit knowledge for individuals and groups; (5) exercise political power to bring together people with conflicting goals and spur them to action; and (6) encourage the development of practical wisdom in others, especially employees on the front lines, through apprenticeship and mentoring (Nonaka and Takeuchi, 2011, p. 60).

This vision adds complexity to the already complex activity of managing knowledge, demanding from leaders much more than treating knowledge as one more resource, but integrating it into a set of actions that have to

be understood from a holistic and ethics-based perspective (Nonaka and Takeuchi, 2011, 2019). For researchers, too, the challenges have grown, and the approach to knowledge management as a set of tasks (mainly knowledge creation, memorization, sharing, and use, e.g., Jordan and Jones, 1997) has become insufficient. This brings a new dimension to the study of organizational wisdom, combining two perspectives: action capability and ethics. This study starts to have *phronesis* as a central element, where it is not enough to do the right thing, but to make it happen through the right values (do the right thing and do things right), *phronesis* becoming the consequence of the SECI model (Nonaka and Takeuchi, 2019).

However, the financial crisis did not remain the last global challenge. The COVID-19 virus triggered a pandemic (WHO, 2020) that is still troubling most parts of the world, and more recently we are witnessing a new tragedy with the war in Ukraine that could escalate into an energy crisis, a food crisis, or both. Considering the concept of wise leadership against the background of these more recent crises, it becomes evident that it remains a timely concept that highlights the role of leaders - for better or for worse. Wise leaders are those who profoundly understand and weigh anticipated outcomes before implementing appropriate actions. In other words, they not only have the desired future for the common good in mind but are guided by that vision when implementing actions. This power of practical wisdom is vividly reflected in the concerted response to the COVID-19 pandemic and the development of vaccines and drugs that have allowed an increasing normalization of life and economies in record time.

Given the importance of the concept of the wise leader and Nonaka and Takeuchi's (2011) foundational work on it, we aim to understand how their article in Harvard Business Review has influenced subsequent research in the first decade following its presentation. Therefore, we conduct a bibliometric analysis of the research that follows the paths laid out by Nonaka and Takeuchi.

2. Method and Analysis of the results

We conducted a systematic review searching for documents that cite *The Wise Leader* in the *Scopus* Elsevier database on March 4th, 2022. The outcomes comprise 119 sources, including book chapters, papers published in journals, and conference proceedings. The results cover all periods, all fields, and all languages. We did not exclude any documents. We acknowledge that other databases, e.g., *Scholar Google*, also present citations¹. However, it is not possible to use the results in a bibliometric analysis using VOSviewer (van Eck and Waltman, 2010).

Using VOSviewer version 1.6.18 (van Eck and Waltman, 2010), we conducted a bibliometric analysis (Broadus, 1987; Zupic and Čater, 2015) of the research that follows the paths laid out by Nonaka and Takeuchi (2011). We scrutinized the metadata – documents, journals, organizations, countries, authors, and keywords – applying a comparative approach (e.g., Rocha and Ferreira, 2021) – authorship, bibliographic coupling (Total Link Strength – TLS), citation (Cit), co-citation, and co-occurrence analyses (see Table 1).

Concerning these analyses, we use citation analysis to uncover the most significant publications. Additionally, to evaluate the cited documents we use the co-citation analysis. Likewise, to perceive what are the most impacting documents we use the bibliographic coupling. Moreover, co-authorship provides the networks of institutions and countries. Furthermore, the co-occurrence analysis offers the thematic visualization of the results. Therefore, comparing these outcomes provides a comprehensive analysis of the documents citing *The Wise Leader*, enhancing the validity and overcoming bias limitations of choosing only one of them (van Eck and Waltman, 2010, 2014; Waltman, van Eck, and Noyons, 2010).

Figure 1 displays the citation evolution on *Scopus* from 2011 until 2021. After its publication, there was a growth in number of citations until 2014. Then, from 2016 to 2021, we see a steady number of citations per year. In the following sections, we comparatively examine each unit of analysis.

¹ The Wise Leader has 460 citations on Google Scholar. For more information, see: [Google Scholar - The Wise Leader](#)

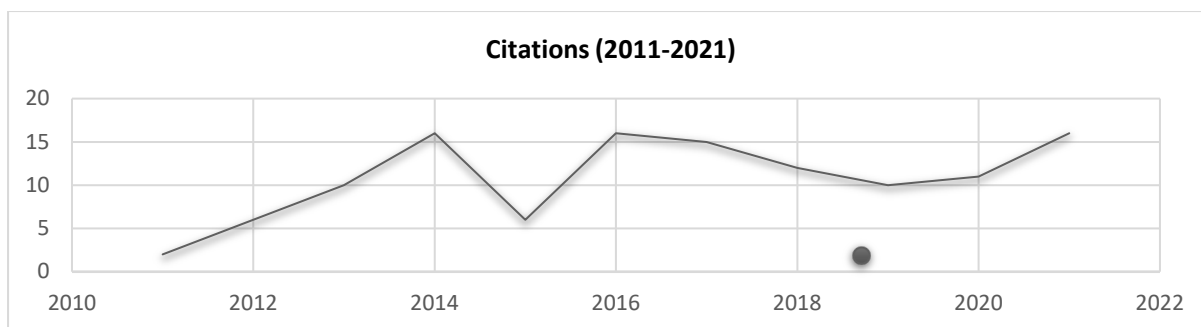


Figure 1: Citations by year

2.1 Sources

Using the default settings, we analyzed the sources in terms of co-citation, citation, and bibliographic coupling. Table 1 shows these results. The top sources are distinguished outlets and international conferences, e.g., *Academy of Management Journal*, *Journal of Business Ethics*, and the *European Conference on Knowledge Management*.

Table 1: Sources' citation, co-citation, and bibliographic coupling

Co-citation			Citation				Bibliographic coupling	
Source	Cit	TLS	Source	Doc	Cit	TLS	Source	TLS
Journal of Business Ethics	235	162.1	Academy of Management Journal	2	184	0	Journal of Business Ethics	46.81
Harvard Business Review	234	185.9	Management Learning	3	129	3	Wisdom Learning: Perspectives on Wising-up Business and Management Education	38.93
Academy of Management Review	123	110.4	European Management Journal	2	122	1	Proceedings of the European Conference on Knowledge Management	29.83
Organization Science	112	99.77	Journal of Business Ethics	6	76	2	Management Learning	26.59
The Leadership Quarterly	102	82.05	Advances in Intelligent Systems and Computing	4	28	0	Proceedings of the Annual Hawaii International Conference on System Sciences	25.92
Journal of Knowledge Management	94	67.03	Proceedings of the Annual Hawaii International Conference on System Sciences	2	24	0	Advances in Intelligent Systems and Computing	20.50
Strategic Management Journal	91	74.64	Faculty Development in the Health Professions: A Focus on Research and Practice	2	18	0	Wise Management in Organisational Complexity	13.67
Academy of Management Journal	79	73.11	Proceedings of The European Conference on Knowledge Management	5	5	1	European Management Journal	12.92
Business Ethics Quarterly	67	54.82	Knowledge Creation in Public Administrations	3	5	1	Knowledge Creation in Public Administrations	8.52
Organization Studies	67	61.50	Wisdom Learning: Perspectives on Wising-Up Business and Management Education	3	3	2	Faculty Development in The Health Professions	7.92

The sources in the citation analysis are those that cited *The Wise Leader*, e.g., *Academy of Management Journal* and *Management Learning*. While the sources in the co-citation analysis are the sources most cited in the references of our results, e.g., *Journal of Business Ethics* and *Harvard Business Review*. Conversely, the sources in the bibliographic coupling analysis share the most references, e.g., *Journal of Business Ethics* and the book *Wisdom Learning: Perspectives on Wising-up Business and Management Education*.

2.2 Documents

The results include articles (65), book chapters (23), conference papers (20), and others. They belong to a range of areas, namely, Business, Management and Accounting (68), Social Sciences (37), Economics, Econometrics and Finance (35), Computer Science (20), Decision Sciences (14), Arts and Humanities (13), Engineering (13), Medicine (5), Psychology (5), Mathematics (4), and others. Applying the default settings, we analyzed documents' citation, co-citation, and bibliographic coupling (Table 2).

Table 2: Documents' citation, co-citation, and bibliographic coupling

Co-citation		Citation		Bibliographic Coupling		
Cited Reference	Cit	Document	Cit	Document	Cit	TLS
Nonaka and Takeuchi (2011)	63	Donate (2015)	334	Shotter and Tsoukas (2014)	98	45
Ardelt (2003)	4	Dattee (2018)	138	Shotter <i>et al.</i> (2014)	79	39
Baltes and Staudinger (2000)	4	Nonaka <i>et al.</i> (2014)	117	Nayak <i>et al.</i> (2020)	25	26
Brynjolfsson and McAfee (2012)	4	Shotter and Tsoukas (2014)	98	Zacher <i>et al.</i> (2014)	39	21
Bynum (2006)	4	Shotter <i>et al.</i> (2014)	79	Nonaka <i>et al.</i> (2016)	32	19
Hoffer <i>et al.</i> (2002)	4	Spiekermann (2015)	48	Giudici <i>et al.</i> (2018)	46	18
Nonaka and Takeuchi (1995)	4	Giudici <i>et al.</i> (2018)	46	Küpers (2015)	27	16
Shotter and Tsoukas (2014)	4	Nonaka <i>et al.</i> (2014)	45	Nonaka <i>et al.</i> (2014)	45	13
Sommerville (2011)	4	Zacher <i>et al.</i> (2014)	39	Nonaka <i>et al.</i> (2014)	117	12
Storr (1988)	4	Dickson and Tholl (2014)	38	Donate (2015)	334	11

* Total Link Strength – TLS; citation – Cit

2.3 Authors

Using the default settings, we analyzed the authors in terms of co-citation, citation, bibliographic coupling, and co-authorship (Table 3). *The Wise Leader's* authors continued to work on this topic (citations and co-citations). Likewise, Nonaka is the author who appears most in the corpus we analyzed (co-authorship). Moreover, the top authors have cited *The Wise Leader* at least in three different documents.

Table 3: Authors' citation, co-citation, bibliographic coupling, and co-authorship

Bibliographic			Citation		
Author	Documents	Total Link Strength	Author	Documents	Citations
Bassano, C.	3	182.32	Nonaka, I.	5	212
Piciocchi, P.	3	182.32	Spohrer, J.	4	45
Spohrer, J.	4	150.01	Kohda, Y.	3	28
Pinheiro, P.	3	128.58	Intezari, A.	3	27
Rocha, R.	3	128.58	Bassano, C.	3	25
Kohda, Y.	3	79.56	Piciocchi, P.	3	25
Kragulj, F.	3	47.34	Mckimm, J.	3	23
Nonaka, I.	5	29.9	Ozuem, W.	3	16
Intezari, A.	3	28.7	Fachrunnisa, O.	3	11
Scalzo, G.	3	16.98	Béranger, J.	3	6
Fachrunnisa, O.	3	10.84	Scalzo, G.	3	5
Béranger, J.	3	4.33	Kragulj, F.	3	4
Mckimm, J.	3	2.84	Pinheiro, P.	3	0
Ozuem, W.	3	1.33	Rocha, R.	3	0
Co-Authorship			Co-Citation		
Author	Documents	Total Link Strength	Author	Citations	Total Link Strength
Nonaka, I.	5	0	Nonaka, I.	326	227.47
Spohrer, J.	4	4	Takeuchi, H.	162	147.00
Bassano, C.	3	3	Toyama, R.	65	61.40
Béranger, J.	3	0	Rooney, D.	61	52.87
Fachrunnisa, O.	3	0	Mckenna, B.	54	49.45
Intezari, A.	3	0	Spohrer, J.	48	34.04

Kohda, Y.	3	2	Avolio, B.J.	45	38.31
Kragulj, F.	3	1	Tsoukas, H.	43	36.04
Mckimm, J.	3	0	Sternberg, R.J.	40	37.03
Ozuem, W.	3	0	Baltes, P.B.	37	32.75
Piciocchi, P.	3	3	Bass, B.M.	37	32.27
Pinheiro, P.	3	3	Staudinger, U.M.	36	32.36
Rocha, R.	3	3	Crossan, M.	30	23.48
Scalzo, G.	3	0	Von Krogh, G.	30	25.10

2.4 Organizations

Applying the default settings, we analyzed the organizations in terms of co-citation, citation, and bibliographic coupling (Table 4). The *University of Cyprus* is the most relevant organization concerning citations (177). Conversely, the *Japan Advanced Institute of Science and Technology* has the most publications (3).

Table 4: Organizations' citation, bibliographic coupling, and co-authorship

Co-Authorship			Bibliographic		Citation		
Organization	Docs	Cit	Organization	TLS	Organization	Docs	Cit
University of Cyprus, Cyprus	2	177	University of Cyprus, Cyprus	194.91	University of Cyprus, Cyprus	2	177
University of New Hampshire, US	2	177	University of New Hampshire, US	194.91	University of New Hampshire, US	2	177
University of Warwick, UK	2	177	University of Warwick, UK	194.91	University of Warwick, UK	2	177
Hitotsubashi University, Japan	2	162	Japan Advanced Institute of Science and Technology, Japan	67.43	Hitotsubashi University, Japan	2	162
University of Glasgow, UK	2	70	University of Glasgow, UK	60.38	University of Glasgow, UK	2	70
Japan Advanced Institute of Science and Technology, Japan	3	69	Hitotsubashi University, Japan	58.55	Japan Advanced Institute of Science and Technology, Japan	3	69
Hitotsubashi University, Japan	2	45	Hitotsubashi University, Japan	34.03	Hitotsubashi University, Japan	2	45
Royal Roads University, Canada	2	38	Department of Global Business, College of Business, Rikkyo University, Japan	21.98	Royal Roads University, Canada	2	38
Department of Global Business, College of Business, Rikkyo University, Japan	2	18	IBM Almaden Research Center, US	16.82	Department of Global Business, College of Business, Rikkyo University, Japan	2	18
IBM Almaden Research Center, US	2	17	Royal Roads University, Canada	5	IBM Almaden Research Center, US	2	17
Department of Management, Sapienza University of Rome, Italy	2	12			Department of Management, Sapienza University of Rome, Italy	2	12
Vienna University of Economics and Business, Austria	2	4			Vienna University of Economics and Business, Austria	2	4
Southampton University, UK	2	1			Southampton University, UK	2	1
NECE, University of Beira Interior, Portugal	2	0			NECE, University of Beira Interior, Portugal	2	0

Co-Authorship			Bibliographic		Citation		
Organization	Docs	Cit	Organization	TLS	Organization	Docs	Cit
Universidad Panamericana, Mexico	2	0			Universidad Panamericana, Mexico	2	0
University of Wales, UK	2	0			University of Wales, UK	2	0

* Total Link Strength – TLS; citation – Cit

2.5 Countries

Using the default settings, we analyzed the sources in terms of co-authorship, citation, and bibliographic coupling. The most relevant countries are the United Kingdom (25) and the United States (22). Their publications combined were cited by more than nine hundred documents. Conversely, countries from Africa, Central and South American are absent in the results, as well as from the Middle East.

Table 5: Countries' citation, bibliographic coupling, and co-authorship

Co-authorship			Bibliographic			Citation	
Country	Docs	Cit	Country	Docs	Total Link Strength	Country	Cit
United Kingdom	25	522	United States	22	846.98	United Kingdom	522
United States	22	385	United Kingdom	25	776.65	United States	385
Australia	12	87	Australia	12	309.82	Spain	346
Japan	11	272	China	6	239.52	Japan	272
Canada	7	87	Japan	11	225.41	France	154
China	6	25	France	6	215.84	Australia	87
France	6	154	Italy	6	210.28	Canada	87
Italy	6	31	Spain	5	167.77	Italy	31
Indonesia	5	11	Canada	7	167.5	China	25
Portugal	5	3	Portugal	5	113.56	Indonesia	11
Spain	5	346	Indonesia	5	53.73	Portugal	3

* Total Link Strength – TLS; citation – Cit

2.6 Keywords

Using the co-occurrence analysis of the authors' keywords, with a fractional counting method, we selected all 280 keywords, of these, only 211 have significant links and appears on the following figures. The normalization method selected was *fractionalization* with a cluster minimum size of five keywords. Figure 2 displays the network visualization. The distance between and size of the keywords indicate their relatedness and weight. For example, in the results, research on spirituality is not linked to research on corporate governance. Therefore, the network visualization displays the sparsity of the research that followed *The Wise Leader*.

Figure 3 displays the thematic evolution over the last years. The circles identify the previous clusters (Figure 2). Moreover, there is a diverse average year of publication in the clusters. Following, Figure 4 displays the density visualization, where *red/orange* indicates the high importance and the number of keywords nearby. Conversely, *light yellow/greenish* indicates the opposite, small number, and importance of the keyword nearby. Accordingly, research approaching knowledge management and leadership are the densest in the results.

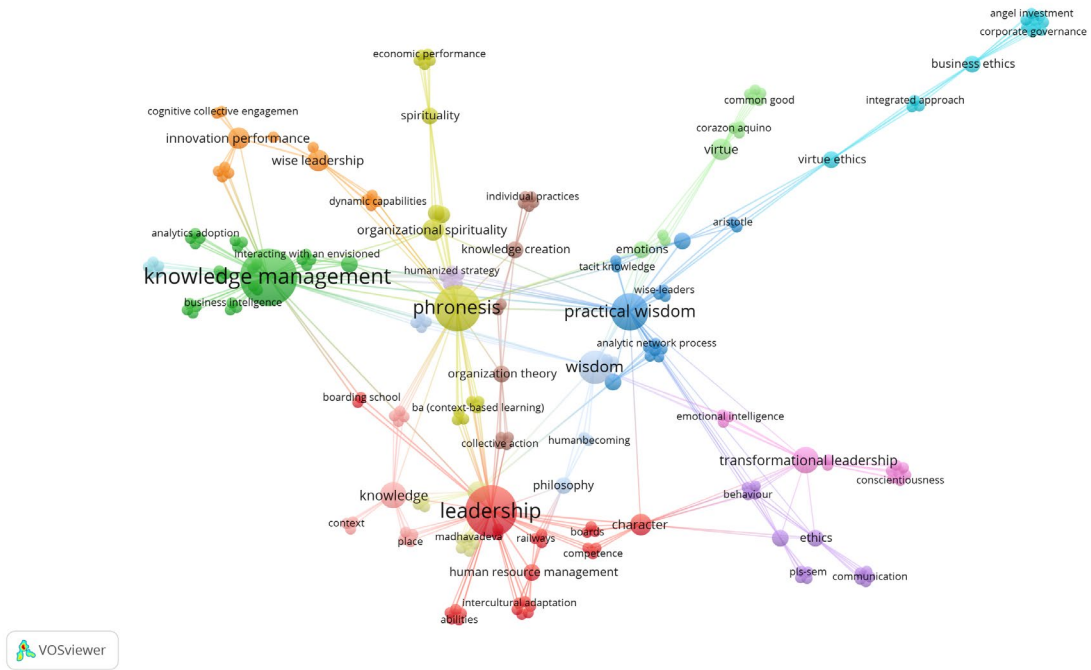


Figure 2: Network visualization by VOSviewer

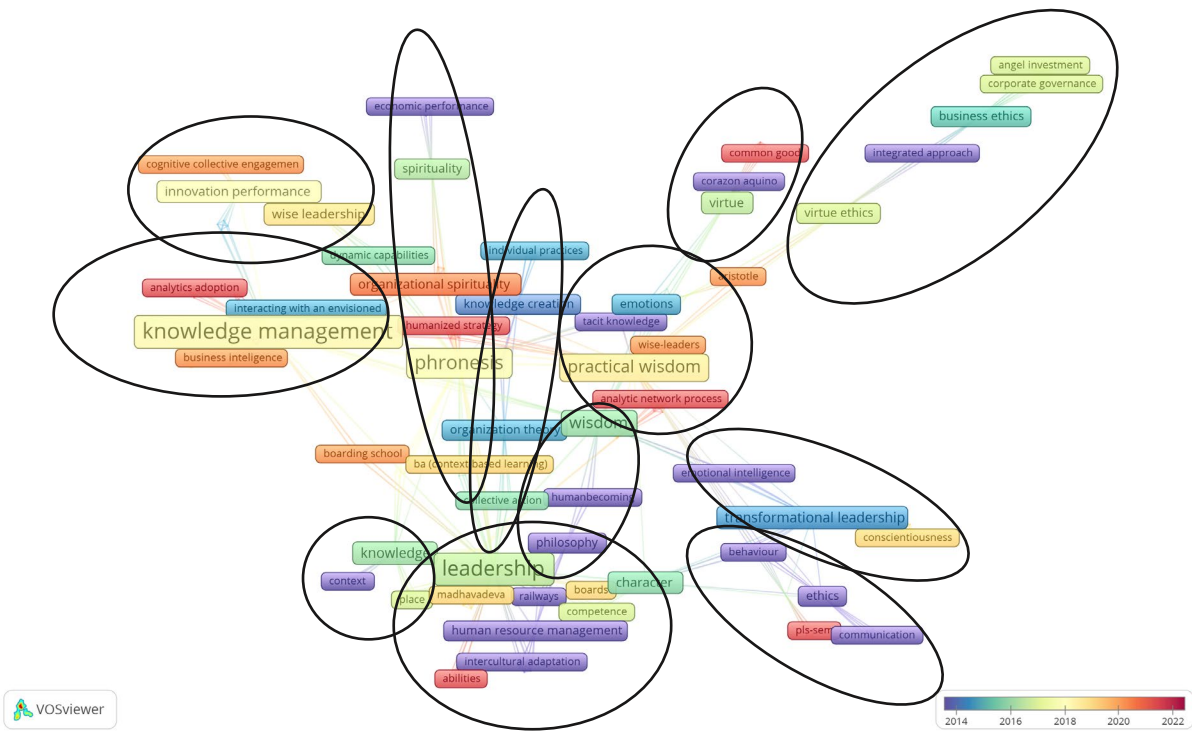


Figure 3: Overlay visualization by VOSviewer

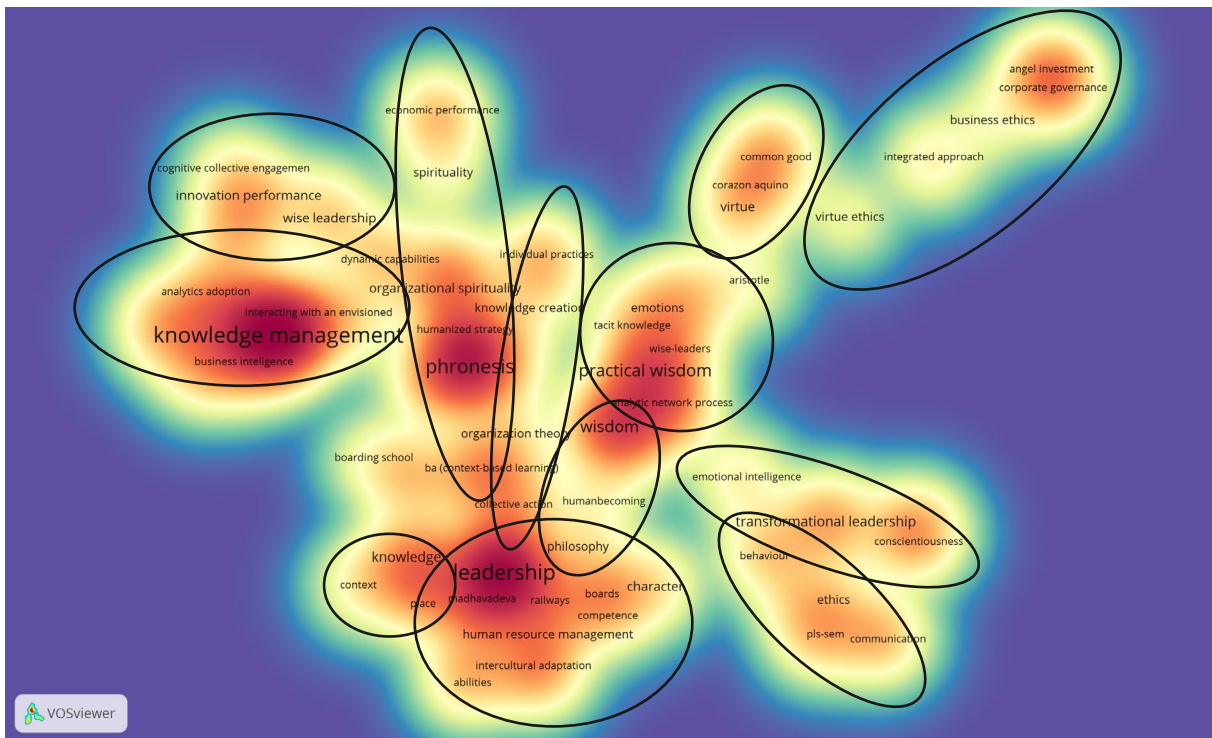


Figure 4: Density visualization by VOSviewer

3. Discussion

In the aftermath of the financial crisis, about ten years ago, Nonaka and Takeuchi (2011) outline their view of what makes a wise leader. Although the paper was published in *Harvard Business Review*, a prestigious journal that invites both practitioners and scholars to discuss contemporary issues in business and management, our analysis shows that the width of the paper’s scholarly impact is limited. It has not significantly moved beyond the areas of knowledge management and leadership (Figure 4), which we initially expected to be different. *The Wise Leader* addresses a topic, i.e., *phronesis*, that has remained mostly discussed at the individual level; most sources refer to it as a personal capacity (e.g., Shotter and Tsoukas, 2014) or personality trait (e.g., Halverson, 2004). However, our analysis suggests that knowledge management is the gateway to shifting the concept to the organizational level (e.g., Rocha *et al.*, 2021; Schiuma *et al.*, 2021).

In terms of the co-occurrence analysis (Figure 2), practical wisdom and *phronesis* are close but distinct concepts. This is surprising as the terms are often used interchangeably. Similarly, the concept of wise leadership is distant from both *phronesis* and practical wisdom, and even further from leadership. This finding indicates that wise leadership is considered a distinct concept in the literature. We find that fields that orbit around the central concepts of *The Wise Leader*, i.e., leadership and practical wisdom, are inspired by Nonaka and Takeuchi’s work, but none builds on *The Wise Leader* or tests and evaluates its theoretical propositions. It appears that researchers implicitly take their theory as (empirically) granted.

Regarding the composition of the scholarly discussion that followed *The Wise Leader*, the analysis (Figure 2 and Figure 4) reveals that the discourse on *phronesis* and practical wisdom has emancipated itself from (business) ethics (Figure 2, blue-green cluster) and has become a field in its own right (central parts of the network), even if it is still interconnected. *Phronesis* links to (organizational) spirituality (Figure 2, yellow cluster), and a discussion has developed on related topics such as innovation performance, dynamic capabilities, or cognitive collective engagement (reflected by the yellow cluster in Figure 2).

From a temporal perspective, the discussion following *The Wise Leader* has gone through several phases that can be roughly divided into two-year periods (Figure 3). First, the discussion revolved around philosophy, ethics, and tacit knowledge, reflecting the (ancient) roots of *phronesis* (e.g., Beekun, 2012). Then, the discussion focused on knowledge creation, transformational leadership, and organizational theory. Around 2016 (Figure 3), authors mainly discussed *The Wise Leader* against the background of business ethics (e.g., Spiekermann, 2015),

leadership (e.g., Sturm, Vera and Crossan, 2017), and spirituality before turning to knowledge management, the wise leader, practical wisdom, and *ba* (shared context). The latest links are to spirituality (e.g., Rocha and Pinheiro, 2021), the common good (Meynhardt, 2019; e.g., Barile *et al.*, 2021), and humanized strategy (e.g., Nonaka and Takeuchi, 2021; Rocha, Kragulj and Pinheiro, 2022).

4. Conclusion

This research presented a bibliometric analysis of the publications citing *The Wise Leader* (Nonaka and Takeuchi, 2011). Nonaka and Takeuchi, as wildly renewed academics in the knowledge management field, introduced an insightful perspective on Leadership. Therefore, assessing its reverberation is a relevant matter to this evolving field. The major contribution of this research is the identification, the mapping, and the examination of research that has followed in the footsteps of Nonaka and Takeuchi in *The Wise Leader*.

The results reveal that the concepts of *phronesis* and practical wisdom link knowledge management and leadership, supporting Nonaka and Takeuchi's stance on knowledge management as a primarily social endeavor (Nonaka and Takeuchi, 1995) whose success depends on personal capabilities and the enactment of (tacit) knowledge, both of which are mirrored in *phronesis*. We also find that the concept has hardly spread beyond the boundaries of knowledge management, leadership, and business ethics, although it has become interwoven with other concepts. Of these connections, those to non-rational forms of knowledge and values (e.g., (organizational) spirituality, emotions, virtue ethics) may be of particular relevance to the further development of the knowledge management field. This is also reflected in the recently started discussion on *responsible knowledge management* (Durst, 2021; Rocha *et al.*, 2022).

Despite its contributions, this research has limitations. The impossibility of merging databases to measure all research following *The Wise Leader* is the major limitation. Likewise, the bibliometric method itself has limitations, e.g., it is not possible to reach all research supported by *The Wise Leader* because the databases do not list all relevant publications. Concerning the suggestions for future research, besides extending the analysis to all *phronesis* related works of Nonaka and colleagues, our principal recommendation is the development of empirical research on the six characteristics of the wise leader using qualitative data in various cultures. Moreover, the link between *The Wise Leader* and the development of *responsible knowledge management* in organizations is an issue that should be addressed. Furthermore, organizational spirituality and spiritual leadership are topics that are seemingly related to wisdom. Then, understand how they behave in the organizations will bring a relevant perspective in this evolving thematic.

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References

- Ardelt, M. (2003) 'Empirical Assessment of a Three-Dimensional Wisdom Scale', *Research on aging*, 25(3), pp. 275–324. doi: 10.1177/0164027503251764.
- Baltes, P. B. and Staudinger, U. M. (2000) 'Wisdom: A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence.', *American Psychologist*, 55(1), pp. 122–136. doi: 10.1037/0003-066X.55.1.122.
- Barile, S. *et al.* (2021) 'Empowering value co-creation in the digital age', *Journal of Business and Industrial Marketing*. doi: 10.1108/JBIM-12-2019-0553.
- Beekun, R. I. (2012) 'Character centered leadership: Muhammad (p) as an ethical role model for CEOs', *Journal of Management Development*, 31(10), pp. 1003–1020. doi: 10.1108/02621711211281799.
- Broadus, R. N. (1987) 'Toward a definition of "bibliometrics"', *Scientometrics*, 12(5–6), pp. 373–379.
- Dattee, B., Alexy, O. and Autio, E. (2018) 'Maneuvering in poor visibility: How firms play the ecosystem game when uncertainty is high', *Academy of Management Journal*, 61(2), pp. 466–498. doi: 10.5465/amj.2015.0869.
- Dickson, G. and Tholl, B. (2014) *Bringing leadership to life in health: LEADS in a caring environment: A new perspective*, *Bringing Leadership to Life in Health: LEADS in a Caring Environment: A New Perspective*. Springer London. doi: 10.1007/978-1-4471-4875-3.
- Donate, M. J. and de Pablo, J. D. (2015) 'The role of knowledge-oriented leadership in knowledge management practices and innovation', *Journal of Business Research*, 68(2), pp. 360–370. doi: 10.1016/j.jbusres.2014.06.022.
- Durst, S. (2021) 'A plea for responsible and inclusive knowledge management at the world level', *VINE Journal of Information and Knowledge Management Systems*, ahead-of-p(ahead-of-print).

- van Eck, N. J. and Waltman, L. (2010) 'Software survey: VOSviewer, a computer program for bibliometric mapping', *Scientometrics*, 84(2), pp. 523–538. doi: 10.1007/s11192-009-0146-3.
- van Eck, N. J. and Waltman, L. (2014) 'Visualizing Bibliometric Networks', in Y. Ding, R. Rousseau, & D. W. (ed.) *Measuring Scholarly Impact*. Cham: Springer International Publishing, pp. 285–320.
- Giudici, A., Reinmoeller, P. and Ravasi, D. (2018) 'Open-system orchestration as a relational source of sensing capabilities: Evidence from a venture association', *Academy of Management Journal*, 61(4), pp. 1369–1402.
- Halverson, R. (2004) 'Accessing, documenting, and communicating practical wisdom: The phronesis of school leadership practice', *American Journal of Education*, 111(1), pp. 90–121. doi: 10.1086/424721.
- Jones, M. T. and Millar, C. C. J. M. (2010) 'About Global Leadership and Global Ethics, and a Possible Moral Compass: An Introduction to the Special Issue', *Journal of Business Ethics*, 93(SUPPL. 1), pp. 1–8.
- Jordan, J. and Jones, P. (1997) 'Assessing your company's Knowledge Management style', *Long Range Planning*, 30(3), pp. 392–398.
- Küpers, W. M. and Pauleen, D. (2015) 'Learning wisdom: Embodied and artful approaches to management education', *Scandinavian Journal of Management*, 31(4), pp. 493–500. doi: 10.1016/j.scaman.2015.08.003.
- Meynhardt, T. (2019) *Public value: Value creation in the eyes of society, Public Value: Deepening, Enriching, and Broadening the Theory and Practice*. Taylor and Francis.
- Nayak, A., Chia, R. and Canales, J. I. (2020) 'Noncognitive microfoundations: Understanding dynamic capabilities as idiosyncratically refined sensitivities and predispositions', *Academy of Management Review*, 45(2), pp. 280–303. doi: 10.5465/amr.2016.0253.
- Nonaka, Ikujiro et al. (2014) 'Dynamic fractal organizations for promoting knowledge-based transformation – A new paradigm for organizational theory', *European Management Journal*, 32(1), pp. 137–146.
- Nonaka, I et al. (2014) 'Wisdom, management and organization', *Management Learning*, 45(4), pp. 365–376.
- Nonaka, I., Hirose, A. and Takeda, Y. (2016) 'Meso'-Foundations of Dynamic Capabilities: Team-Level Synthesis and Distributed Leadership as the Source of Dynamic Creativity', *Global Strategy Journal*, 6(3), pp. 168–182.
- Nonaka, I. and Takeuchi, H. (1995) *The Knowledge-creating company: How Japanese companies create the dynamics of innovation*. Edited by O. U. Press. Oxford.
- Nonaka, I. and Takeuchi, H. (2011) 'The Wise Leader', *Harvard Business Review*, 89(5), pp. 58–67.
- Nonaka, I. and Takeuchi, H. (2019) *The Wise Company: How Companies Create Continuous Innovation*. New York: Oxford University Press.
- Nonaka, I. and Takeuchi, H. (2021) 'Humanizing strategy', *Long Range Planning*, 54(4), pp. 1–11.
- Rocha, R. et al. (2021) 'Organizational phronesis scale development', in *Proceedings of the European Conference on Knowledge Management, ECKM*. Virtual, pp. 631–638. doi: 10.34190/EKM.21.085.
- Rocha, R. G. and Ferreira, J. J. (2021) 'Gazelles (High-Growth) Companies: a Bibliometric Science Map of the Field', *Journal of the Knowledge Economy*, (0123456789). doi: 10.1007/s13132-021-00828-4.
- Rocha, R. G., Kragulj, F. and Pinheiro, P. (2022) 'Practical wisdom, the (not so) secret ingredient for responsible knowledge management', *VINE Journal of Information and Knowledge Management Systems*, ahead-of-p(ahead-of-print). doi: 10.1108/VJKMS-09-2021-0211.
- Rocha, R. G. and Pinheiro, P. G. (2021) 'Organizational spirituality and knowledge management supporting organizational practical wisdom', *Spirituality Studies*, 7(1), pp. 68–83.
- Schiuma, G. et al. (2021) 'The transformative leadership compass: six competencies for digital transformation entrepreneurship', *International Journal of Entrepreneurial Behaviour and Research*.
- Shotter, John and Tsoukas, H. (2014) 'In Search of Phronesis: Leadership and the Art of Judgment', *Academy of Management Learning & Education*, 13(2), pp. 224–243. doi: 10.5465/amle.2013.0201.
- Shotter, J and Tsoukas, H. (2014) 'Performing phronesis: On the way to engaged judgment', *Management Learning*, 45(4), pp. 377–396. doi: 10.1177/1350507614541196.
- Spiekermann, S. (2015) *Ethical it innovation: A value-based system design approach, Ethical IT Innovation: A Value-Based System Design Approach*. CRC Press. doi: 10.1201/b19060.
- Sturm, R. E., Vera, D. and Crossan, M. (2017) 'The entanglement of leader character and leader competence and its impact on performance', *Leadership Quarterly*, 28(3), pp. 349–366. doi: 10.1016/j.leaqua.2016.11.007.
- Waltman, L., van Eck, N. J. and Noyons, E. C. M. (2010) 'A unified approach to mapping and clustering of bibliometric networks', *Journal of Informetrics*, 4(4), pp. 629–635. doi: 10.1016/j.joi.2010.07.002.
- WHO, W. H. O. (2020) *Coronavirus disease (COVID-19) Pandemic, World Health Organization*. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019> (Accessed: 5 May 2020).
- Zacher, H. et al. (2014) 'Leaders' Personal Wisdom and Leader-Member Exchange Quality: The Role of Individualized Consideration', *Journal of Business Ethics*, 121(2), pp. 171–187. doi: 10.1007/s10551-013-1692-4.
- Zupic, I. and Čater, T. (2015) 'Bibliometric Methods in Management and Organization', *Organizational Research Methods*, 18(3), pp. 429–472. doi: 10.1177/1094428114562629.