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The Misunderstanding of Outcome Monitoring: A Systematic Literature Review on Instrumental Leadership

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Abstract

This paper, through a systematic literature review, argues that the scientific study of instrumental leadership has been the object of a misunderstanding of its fourth dimension, that is, outcome monitoring. The general conceptualization of this dimension, which interprets outcome monitoring as an activity consisting of performance supervision and feedback provision, is highly reductive. Outcome monitoring allows instrumental leaders to modify their style and behavior depending on followers' performance and environmental conditions. After the descriptive analysis, the article presents a content analysis performed using a grounded approach. The study conducts the design of a thematic map that highlights the complex nature of instrumental leadership's outcome monitoring, linking performance and context in a self-empowering circuit, in which instrumental leaders, through outcome monitoring, modify the contextual conditions and their actions, strategies, and behavior. Finally, recommendations were given for further research.

Keywords: Instrumental leadership, output, performance, monitoring, complexity

Introduction

After the diffusion of the full-range leadership model (Bass & Avolio, 2002) and the most employed method for gathering and analyzing leadership

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data, that is, the Multifactor Leadership Questionnaire, scholars began to study some aspects that the model could not capture—leaders' strategic and task-monitoring actions (Antonakis & House, 2002; 2014). By overcoming these limitations, Antonakis and House (2002) expanded the model by introducing instrumental leadership (IL).

Initially, Antonakis and House (2004) defined such a leadership style as 'a class of leader behaviors concerning the enactment of leader expert knowledge toward the fulfillment of organizational-level and follower task performance' (Antonakis & House, 2004:2). Moreover, the construct of IL consists of four dimensions: (1) environmental monitoring, (2) strategy formulation and implementation and follower work facilitation, (3) path-goal facilitation, and (4) outcome monitoring (Rowold, 2014).

Ten years later, the evolution of the IL study led Antonakis and House (2014) to provide a more profound definition, markedly more inspired by complexity principles: 'the application of leader expert knowledge on monitoring of the environment and performance, and the implementation of strategic and tactical solutions' (Antonakis & House, 2014: 749). This change shows that the relevance of the outcome monitoring dimension increased over time in the debate on IL. Although IL can be identified as a task-oriented leadership style (Greene & Schriesheim, 1980), with directive traits and a strong influence on work climate and followers' performance (Mulki et al., 2008), from its last definition, it appears that the main element of this leadership style is the monitoring of environment and performance. Leaders can adapt their strategies, actions, and behaviors to achieve their final goals through these dimensions.

This article refers to this definition and argues that during the development of empirical literature that followed the conceptualization of IL, outcome monitoring has been wrongly interpreted as a static dimension. Nevertheless, the positivistic and leader-centered perspective that interprets leadership as a static concept has already been criticized at the beginning of this millennium (e.g., Barker, 2001). In particular, the literature seems to consider outcome monitoring as a dimension limited to providing positive and constructive feedback to followers.

From a theoretical viewpoint, precisely during the same period during which these doubts were emerging, the literature debated the role of the context within the structures. In particular, concerning the highly phenomenological constructs of leadership, performance affects the context, which has to be considered as a consequence, not only as a premise (Dourish, 2004). This conceptualization highlights the need to integrate leadership into a self-empowering circuit that distances from a positivistic conceptualization and moves closer to hybrid and changing leadership models (e.g., Gronn, 2009). Therefore, analyzing the nature of output monitoring in the definition

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and change of leadership style is reasonable (Pizzolitto et al., 2022). IL is the literature's answer to intuition concerning performance and its effects on context, leadership style, and followers' behavior. In particular, the dimension of outcome monitoring is critical for this theoretical inspection.

Scholars have analyzed various aspects of IL. Beyond its dimensions, more than 60 years ago, science debated such a leadership style and the conditions that could implicate its efficacy (e.g., Turk, 1961). IL is a construct that considers the behaviors needed to achieve an objective. Moreover, it reflects the social conditions and interpersonal relations that generate followers' consideration of leaders (Mannheim et al., 1967; Mulki et al., 2008). In fact, the acceptance of IL is more probable when the workgroup is cohesive (Greene & Schriesheim, 1980). Moreover, the popularity of instrumental leaders is directly correlated with the objective content and the tasks that reflect the dominant values of the group (Turk, 1961).

There are different hints in the literature that interpret IL as a dynamic style able to affect outcomes and context. Greene and Schriesheim (1980) argued that effective IL could stabilize the groups' structure with positive impacts of cooperation, cohesion, and arousal. Such a stabilizing effect has a precise iterative nature. Schriesheim and DeNisi (1981) hypothesized that the more the variety of tasks perceived by followers, the more the effectiveness of IL, highlighting the complex nature of this leadership style.

IL shows clear elements of complexity in the numerous typologies of leadership that it includes and represents. In fact, it shows directive, pragmatic, charismatic, and transactional characteristics (Antonakis & House, 2014; Rowold, 2014; Tung & Yu, 2016). Moreover, although it has directive traits, it is positively correlated with an ethical climate in the workplace (Mulki et al., 2008). Antonakis and House (2014) argued that 'this form of leadership changes social structures in which organizational players interact' (Antonakis & House, 2014: 749). The authors also highlight the complex nature of this leadership style, arguing that it requires the 'formulation and implementation of solutions to complex social (and task-oriented) problems' (Antonakis & House, 2014: 747).

Therefore, IL can modify the context in which followers perform their tasks through leaders' actions and strategies. In fact, IL can produce effects on the context through its outcomes. Instrumental leaders intervene and adapt the organization to achieve its objectives (Tung & Yu, 2016; Benedetti Chammas & Hernandez, 2019), making this leadership style refined and effective (Antonakis et al., 2017). Since leadership is a relevant part of the context, it is reasonable to argue that it could be modified by leaders' behaviors and the outcomes that such behaviors generate.

Despite these numerous shreds of evidence, scholars seem to have maintained a rather positivistic approach in studying IL effects. In general, IL

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is considered a precondition, and its effects are studied on employees' prevention focus and promotion focus (Tung & Yu, 2016), the ethical climate in the workplace (Mulki et al., 2008), and employees' performance (Benedetti Chammas & Hernandez, 2019). Moreover, different studies have analyzed the moderator of the relationship between IL and employee satisfaction (e.g., Schriesheim & DeNisi, 1981; Schriesheim & Schriesheim, 1980).

Nevertheless, the research questions posed by Antonakis and House regarding IL are based on more general considerations that tend to consider most aspects of this leadership style. For example, they verified that the four dimensions of IL could be 'rated as highly prototypical of good leadership' (Antonakis & House, 2014: 750). Moreover, Antonakis and House (2014) considered the complexity and endogeneity of leadership, studying these conditions as a limit that should be considered during the analysis. The prototype of good leadership does not concern only performance; it is a more advanced concept (Antonakis et al., 2017) that can include any effects of this leadership style on the internal and external context of the firm, which instrumental leaders should consider (Tung & Yu, 2016; Benedetti Benedetti Chammas & Hernandez, 2019).

For all these reasons, it seems that the relevance of output monitoring in IL has been relatively undervalued in the empirical debate. Its nature seems to be attributable to the complexity of its effects, both in cases in which they are produced on followers' actions and performance, and in cases in which they modify the internal and external context of the firm.

In this literature review, IL was considered as a whole and its specific outcome monitoring dimension. The almost total absence of theoretical papers on this topic in the relevant literature justifies this research. Nevertheless, it is believed that the fourth dimension of IL has been relatively misunderstood by the research that followed its conceptualization. In particular, this innovation's relevance has been limited by an excessively positivistic interpretation of this dimension. Based on my opinion, the discussion on outcome monitoring could not be limited to feedback provision. However, such a dimension is the most relevant in IL, as it has effects on firms' strategies and leaders' behaviors and styles.

In summary, it is argued that instrumental leaders can go beyond providing feedback, modifying their leadership approach and the strategies they adopt for achieving the objectives depending on the context, firms' performance, and work-related performances. To verify this intuition, the following research questions were proposed:

RQ1: How does the literature debate IL?
RQ2: What is the nature of outcome monitoring in IL?

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The article is structured as follows. In the next paragraph, the paper discusses the theoretical background of this research, which is followed by a methodological section that introduces the descriptive and content analysis. Finally, the research questions were answered and further research opportunities were discussed.

Theoretical Background

This section presents the theoretical background of this study. In particular, the full-range leadership model was debated, discussing its basis and the limitations that led to the theorization of subsequent leadership models, including IL. Since IL is the focus of this research, its definition and dimensions were considered. Moreover, a trait union between the two models was proposed by discussing the phenomenological nature of leadership. Finally, the shared interpretation of outcome monitoring was criticized, that is, the fourth dimension of IL.

The Full-range Leadership Model

The relation between leader and follower has been studied from the leaders' behaviors viewpoint through the full-range leadership model (Avolio, 2011; Bass & Avolio, 2002), which is based on two variables: engagement, which develops through a passive-active continuum scale, and efficiency, which develops through a low-high continuum scale (Figure 1). The space built through these two axes includes the following leadership styles: laissez-faire, transactional, and transformational leadership.

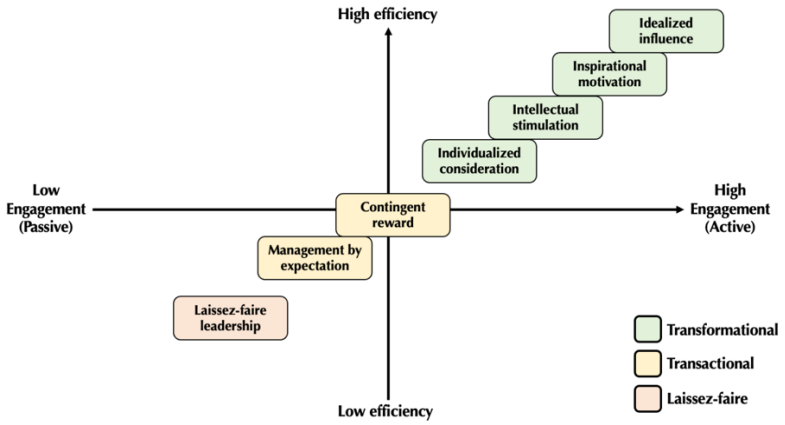

Figure 1. Full-range leadership model (Bass & Avolio, 2002)

At the lower extrema of efficacy and engagement, there is laissez-faire leadership. With this style, leaders avoid decision responsibilities, which are transferred to their followers. In an environment dominated by laissez-faire

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leadership, followers demonstrate limited motivation and satisfaction. At the intermediate levels of the two dimensions, transactional leaders work to conserve the status quo. They communicate objectives, rewards, and penalties clearly to their followers, and they spend their energy verifying that the activities do not deviate from predetermined standards. Finally, at the highest engagement and efficiency levels, transformational leaders with a long-term vision radiate solid and elevated ideals. They use motivation and inspiration to increase followers' satisfaction and engagement.

Although this approach was widely accepted, the model did not 'include leader strategic and task-monitoring related actions' (Antonakis & House, 2014: 749). Through studying these limitations, an extension of this model was theorized and verified (§2.3). Before summarizing this extension, it is critical to understand the philosophical aspects that were conducted to upgrade the full-range leadership model.

Performance is More than an Outcome: The Phenomenological and Endogenous Nature of Leadership

The scientific study of leadership presented issues related to the conflicting conditions of the complex structure of the social environment and the socio-cultural systems that inevitably affect the formation and development of leadership (Hunt, 1991). Such critiques considered that the positivistic and leader-centered approach that the literature used (and uses) to describe the leadership effects on performance was limited if included in the complexity of the social structure (Barker, 2001). Social systems are not static; they change depending on the consequences that performance generates on context, especially when the structure of the study's focus is strongly phenomenological (Dourish, 2004).

The complexity of leadership comes from changes that the leaders' styles and behaviors cause in followers' perceptions. Moreover, the way followers respond to specific leaders' styles and behaviors affects the nature of their relations and performance, as argued by the leader-member exchange theory (Uhl-Bien, 1995). Empirical research has tried to explain how leaders' and followers' behaviors and actions affect each other, generating endogeneity and simultaneity bias (Günter et al., 2020). Antonakis and House (2014), who first developed the formalized concept of IL, suggested that 'leadership style is, for several reasons, endogenous' and that 'a leader may be more or less considerate or show more or less management-by-exception as a function of follower performance and motivation' (Antonakis & House, 2014: 766). Therefore, leadership is a function of leaders' strategies, actions, and behaviors.

The literature strongly calls for approaches to the study of leadership that are more inspired by complexity. For example, Pizzolitto et al. (2022), in

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their recent study on authoritarian leadership, verified the existence of an underground push in the literature for not considering the context as a premise but as a result of a self-empowered and dynamic circuit, as theorized by Dourish (2004). New leadership styles are being conceptualized in the literature, for example, hybrid leadership (Gronn, 2009), demonstrating that the study of leadership is trying to open to more complex approaches.
The Multifactor Leadership Questionnaire, which is relatively accepted in the literature for evaluating leadership styles, could not include all the shadows needed to represent such a phenomenon. The bias generated from this gap produced a new leadership style—IL—that presents outcome monitoring as one of its dimensions. Through this dimension, the literature encourages a more in-depth exploration of the effects of performance on the context of leadership.

The Extension of the Full-range Leadership Model: Instrumental Leadership

An effective leader should go beyond social and economic relations that generate followers' engagement and increase their performance. In particular, given the complex nature of reality, leaders should adapt their organization to external and internal firms' conditions, monitor the environment and performance, and plan effective strategies that could answer complex questions (Connelly et al., 2000). Moreover, given context and performance, leaders should adapt their leadership style depending on the objective (Pizzolitto et al., 2022) and the external environment and available resources (Hunt, 1991).

The principal limit of the full-range leadership model and the Multifactor Leadership Questionnaire is that the instrumental characteristic of leadership is not effectively measured, causing estimation bias (Antonakis & House, 2014). Antonakis and House (2002) attempted to fill this gap by defining IL and its four dimensions. IL is 'the application of leader expert knowledge on monitoring the environment and performance, and the implementation of strategic and tactical solutions' (Antonakis & House, 2014: 749). Therefore, IL is focused on performance, and outcome monitoring is a precondition for leaders' strategy application. Consequently, performance modifies the context and acts not only as an output but also as a premise (Dourish, 2004). Given this theoretical setting, a more complex and complete leadership vision can be conceptualized. This perspective interprets contextual, behavioral, and performance-related factors as part of a self-empowering circuit that should be monitored through its phenomenological complexity.

Figure 2 shows the four dimensions of IL. The first is environmental monitoring with two sub-dimensions: identifying opportunities for

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development and acquiring resources needed to ensure adequate labor conditions for followers. In the second dimension of strategy formulation and implementation and follower work facilitation, leaders identify specific and achievable objectives and associate them with effective strategies. The third dimension—path-goal facilitation—concerns leaders' productivity. In particular, leaders should give practical and cognitive support to followers, making the path toward the objective clear and sustainable. Lastly, through the dimension of outcome monitoring, leaders provide relevant and constructive feedback to their followers (Rowold, 2014).

The fourth dimension of IL is the focus of the research question. Through an explorative literature review, this study argues that the generalization of outcome monitoring has led to a simplification of the impacts of this activity. To clarify this claim, the methodology employed for this literature review was presented in the following section.

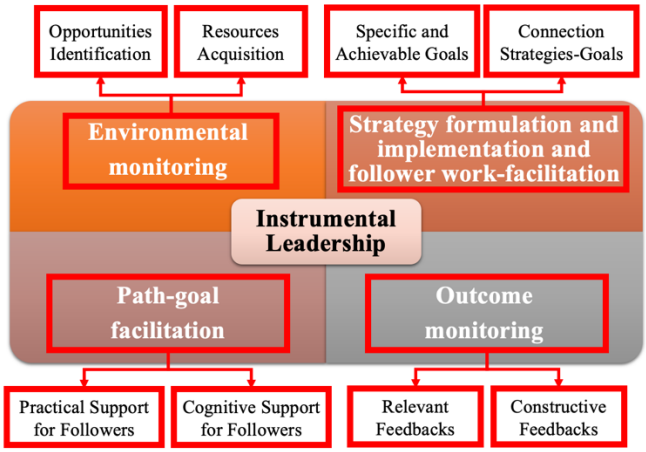

Figure 2. Instrumental leadership's dimensions (Rowold, 2014)

This paper focuses on a systematic literature review (SLR) because the research questions, especially RQ2, are extremely specific. There are few relevant contributions to IL in the literature. Moreover, to verify the debate on outcome monitoring, the single contributions have to be analyzed in depth, concentrating on limited sections of the articles. For these reasons, the SLR seems to represent the best method for completing this research.

This SLR is mainly based on Wolfswinkel et al. (2013). Starting from consolidated methods for selecting relevant literature, which was proposed by previous methodological papers (e.g., Denyer & Tranfield, 2009; Post et al., 2020), Wolfswinkel et al. (2013) added a component for improving the degree of objectivity on the presentation of results, that is, grounded theory applied to content analysis of the articles. With open, axial, and selective coding, the

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grounded approach allows the emergence of themes and subthemes, limiting the author's subjectivity. The authors' interpretations are separated from the descriptive and content analysis of contributions through this methodological setting because they are included in the final discussion section.

Figure 3 shows the flowchart of the algorithm employed for article selection. In particular, the process identified by Wolfswinkel et al. (2013) consists of five phases that start with identifying criteria for including and excluding articles and end with the presentation of the results. To apply the algorithm, publications were selected in the Scopus, EbscoHost, and Web of Science databases, and the results was limited to journals included in the ABS list ranked with 3, 4, or 4*. All the ABS journals devoted to studying leadership was included, regardless of their rankings. Referring to Adams et al. (2017), it was verified that gray literature could help complete the articles set in the review.

The final sample was composed of 27 articles, divided into three categories: 22 selected from the database search, and after the exclusion criteria mentioned above, two articles selected through the cross-references analysis, and three articles selected from the gray literature. Table 1 shows the complete bibliographical data of the selected articles. Also, an ID was assigned to each paper to simplify reference to the following tables. Table 2 shows the data employed to complete the descriptive analysis presented in the fourth paragraph.

Descriptive Analysis

This paragraph presents the descriptive analysis of the dataset. In particular, it shows the typologies of articles, the distribution of publication per year, journals, and fields, the authors' productivity and origins, and the methods employed in the articles.

Typology of Articles, Year of Publication, Journals, and Fields

Figures 4, 5, and 6 shows the number of papers per journal, papers per field, and the number and typology of papers per year of the sample included in this SLR. The most relevant evidence of this analysis is that the extracted articles are all empirical, except for two contributions (Antonakis & House, 2002; 2013). Therefore, after the conceptualization made by Antonakis and House in 2002, all the relevant literature were devoted to empirical proof of IL's effects or moderators. However, this condition was considered as a limitation of this topic. The absence of a conceptual interest in IL dimensions has perhaps impeded the development of a more complex background for this leadership style.

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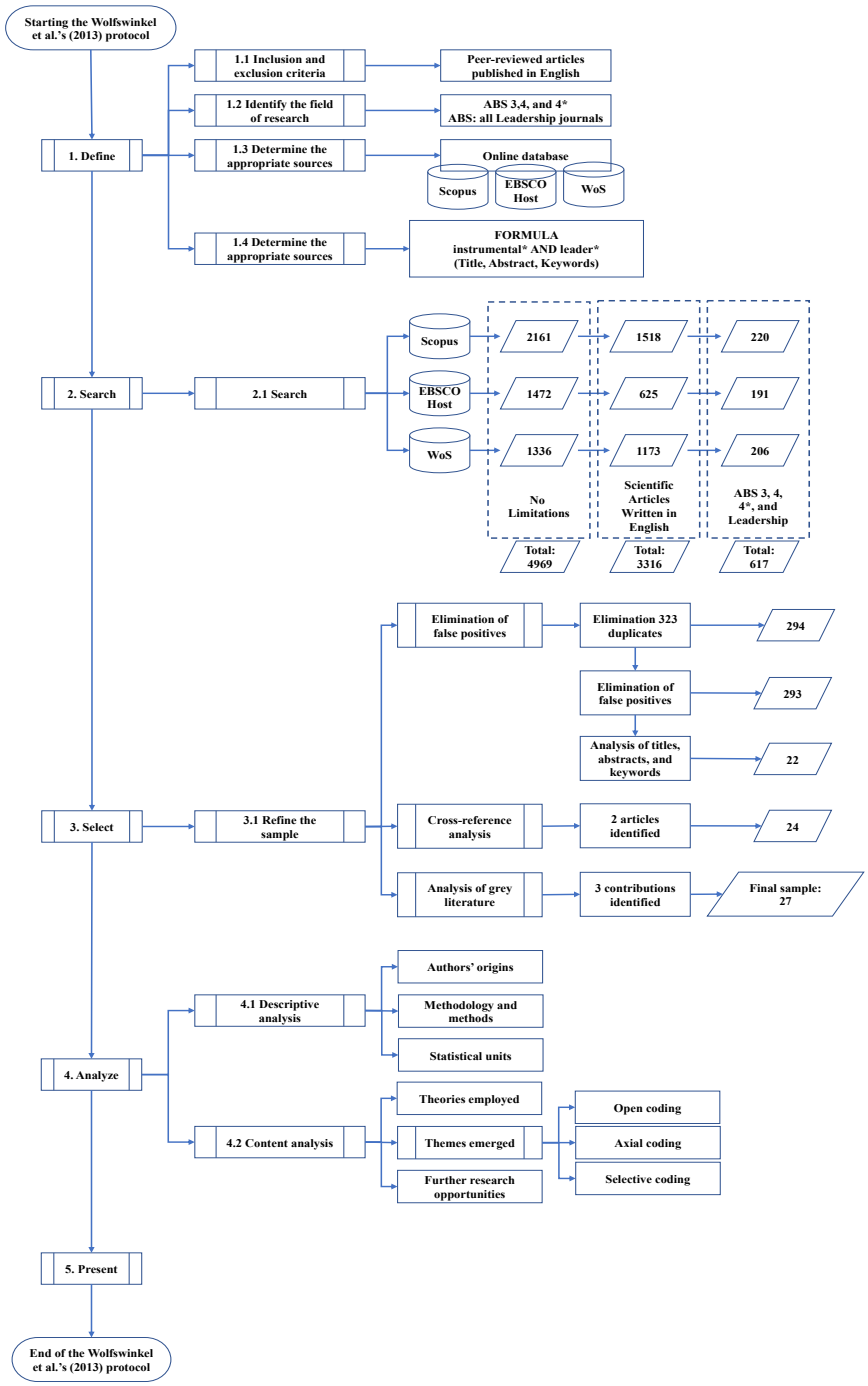

Figure 3. Flow chart employed for this systematic literature review (Wolfswinkel et al., 2013)

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Most of the articles were found in organizational studies and psychology journals (62.96%). In particular, 9 of the 27 articles were published in Organization Studies journals (33.33%), and 8 papers were published in psychology journals (29.63%). The limited number of papers published in the human resource management (HRM) field is surprising. Since leadership is a critical condition for success from the perspective of HRM (Pizzolitto & Verna, 2021), HRM research should be more interested in developing theoretical and empirical research on IL.

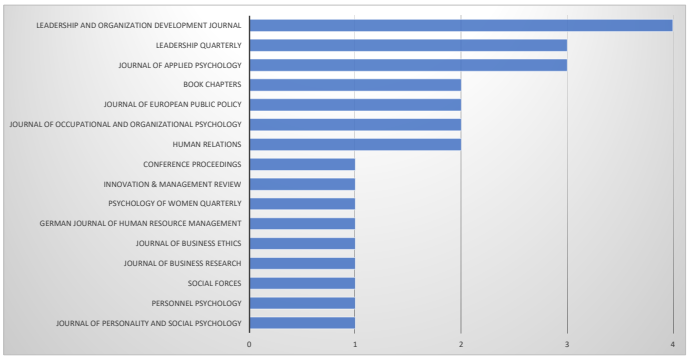

Figure 4. Number of papers per journal

Authors' Productivity and Origins

A total of 50 authors contributed to the 27 extracted articles. In particular, five authors published more than one paper. John Antonakis, who presented two different affiliations (USA and Switzerland), published six papers of which five were coauthored by Robert J. House (USA), who is the most prolific author after Antonakis. The papers of these two authors are both conceptual and empirical, and they devoted their research to establishing the foundation of IL (e.g., Antonakis et al., 2002; 2014). Antonakis and House also contributed to the analysis of the relationship between intelligence and leadership behavior (Antonakis et al., 2017).

Chester A. Schriesheim (USA) published three empirical articles, one of which was explicitly devoted to studying task dimensions as moderators of the effects of IL (Schriesheim & DeNisi, 1981). Pankaj C. Patel (USA) discussed the leadership of CEOs and CFOs (Feng et al., 2020; Li & Patel, 2019). Finally, Derek Beach, who showed two affiliations (Denmark and the Netherlands), published two contributions about IL in public institutions (e.g., Beach, 2004).

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Table 1. Bibliographical data of selected publications

ID	Authors	Title	Year	Source title	ISSN	Document Type
1	Feng C., Patel P.C., Sivakumar K.	Chief global officers, geographical sales dispersion, and firm performance	2020	Journal of Business Research	0148-2963	Article
2	Gerlach F., Hundeling M., Rosing K.	Ambidextrous leadership and innovation performance: a longitudinal study	2020	Leadership and Organization Development Journal	0143-7739	Article
3	Smeets S., Beach D.	Political and instrumental leadership in major EU reforms. The role and influence of the EU institutions in setting-up the Fiscal Compact	2020	Journal of European Public Policy	1350-1763	Article
4	Li M., Patel P.C.	Jack of all, master of all? CEO generalist experience and firm performance	2019	Leadership Quarterly	1048-9843	Article
5	Kramer M.W., Day E.A., Nguyen C., Hoelscher C.S., Cooper O.D.	Leadership in an interorganizational collaboration: A qualitative study of a statewide interagency taskforce	2019	Human Relations	0018-7267	Article
6	McKee R.A., Lee Y.-T., Atwater L., Antonakis J.	Effects of personality and gender on self–other agreement in ratings of leadership	2018	Journal of Occupational and Organizational Psychology	0963-1798	Article
7	Antonakis J., House R.J., Simonton D.K.	Can super smart leaders suffer from too much of a good thing? The curvilinear effect of intelligence on perceived leadership behavior	2017	Journal of Applied Psychology	0021-9010	Article
8	Tung F.-C., Yu T.-W.	Does innovation leadership enhance creativity in high-tech industries?	2016	Leadership and Organization Development Journal	0143-7739	Article
9	Antonakis J., House R.J.	Instrumental leadership: Measurement and extension of transformational-transactional leadership theory	2014	Leadership Quarterly	1048-9843	Article
10	Agostino D., Arena M., Arnaboldi M.	Leading change in public organisations: the role of mediators	2013	Leadership & Organization Development Journal	0143-7739	Article
11	Mulki J.P., Jaramillo J.F., Locander W.B.	Critical role of leadership on ethical climate and salesperson behaviors	2009	Journal of Business Ethics	0167-4544	Article
12	Beach D.	The unseen hand in treaty reform negotiations: The role and influence of the council secretariat	2004	Journal of European Public Policy	1350-1763	Article
13	Waldersee R., Eagleson G.	Shared leadership in the implementation of re-orientations	2002	Leadership & Organization Development Journal	0143-7739	Article
14	Van Vugt M., De Cremer D.	Leadership in social dilemmas: The effects of group identification on collective actions to provide public goods	1999	Journal of Personality and Social Psychology	0022-3514	Article
15	Bryman A., Stephens M., Campo C.A.	The importance of context: Qualitative research and the study of leadership	1996	Leadership Quarterly	1048-9843	Article
16	Landeweerd J.A., Boumans N.P.G.	The effect of work dimensions and need for autonomy on nurses' work satisfaction and health	1994	Journal of Occupational and Organizational Psychology	0963-1798	Article
17	Kahn L.S.	Group Process and Sex Differences	1984	Psychology of Women Quarterly	0361-6843	Article

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18	Schriesheim C.A., DeNisi A.S.	Task dimensions as moderators of the effects of instrumental leadership: A two-sample replicated test of path-goal leadership theory	1981	Journal of Applied Psychology	0021-9010	Article
19	Greene C.N., Schriesheim C.A.	Leader-group interactions: A longitudinal field investigation	1980	Journal of Applied Psychology	0021-9010	Article
20	SCHRIESHEIM J.F., SCHRIESHEIM C.A.	A test of the path-goal theory of leadership and some suggested directions for future research	1980	Personnel Psychology	0031-5826	Article
21	Turk H.	Instrumental values and the popularity of instrumental leaders	1961	Social Forces	0037-7732	Article
22	Mannheim B. F., Rim, Y., Grinberg G.	Instrumental Status of Supervisors as Related to Workers' Perceptions and Expectations.	1967	Human Relations	0018-7267	Article
23	Benedetti Chammas C., Mauro J., Hernandez C.	Comparing transformational and instrumental leadership	2019	Innovation & Management Review	2515-8961	Article
24	Antonakis J., House R. J.	ON INSTRUMENTAL LEADERSHIP: BEYOND TRANSACTIONS AND TRANSFORMATIONS	2004	UNL Gallup Leadership Institute Summit		Conference Article
25	Rowold J.	Instrumental leadership: Extending the transformational-transactional leadership paradigm	2014	German Journal of Human Resource Management: Zeitschrift für Personalforschung"	0179-6437	Article
26	Antonakis J., House R. J.	The Full-Range Leadership Theory: The Way Forward	2013	Transformational and Charismatic Leadership: The Road Ahead 10th Anniversary Edition		Book Chapter
27	Antonakis J., House R. J.	The full-range leadership theory: The way forward	2002	B. Avolio & F. Yammarino (Eds.), Transformational and charismatic leadership: The road ahead (pp. 3-34). Amsterdam: JAI.		Book Chapter

Table 2a. Descriptive data of selected articles

ID	Number of authors	Authors' origins	ABS	Ranking ABS	Paper typology	Cited theories and references	Methodology
1	3	USA; USA; USA	ETHICS-CSR-MAN	3	Empirical	Information processing theory (Galbraith, 1973) Instrumental leadership framework (Antonakis & House, 2014)	Quantitative analysis
2	3	Germany; Germany; Germany	ORG STUD	1	Empirical	Ambidextrous leadership model (Rosing et al., 2011)	Quantitative analysis
3	2	Denmark/Netherlands; Netherlands	PUB SEC	3	Empirical	Entrepreneurial leadership (Young, 1991)	Qualitative analysis
4	2	USA; USA	ORG STUD	4	Empirical	Functional leadership theory (Fleishman et al., 1991; Morgeson et al., 2010) Full-range model of	Quantitative analysis

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						instrumental leadership (Antonakis & House, 2014) Domain expertise framework (Ericsson et al., 1993; Shanteau, 1992)	
5	5	USA; USA; USA; USA; USA	ORG STUD	4	Empirical	Fuller full-range leadership behavior (Antonakis & House, 2014)	Qualitative analysis
6	4	USA; Spain; USA; Switzerland	PSYCH (WOP-OB)	4	Empirical	Self–other (dis)agreement (Fleenor et al., 2010; Atwater, 1997) Big 5 personality traits (no ref.)	Quantitative analysis
7	3	USA; USA; USA	PSYCH (WOP-OB)	4*	Empirical	Simonton's theory: Intellectual superiority, Comprehension factor, Criticism factor, Intellectual stratification (Simonton, 1985) Antonakis-House "fuller" full-range leadership model (Antonakis & House, 2014)	Quantitative analysis
8	2	China; China	ORG STUD	1	Empirical	Regulatory focus theory (Higgins, 1998)	Quantitative analysis
9	2	Switzerland; USA	ORG STUD	4	Empirical	Full-range leaderhip (Bass, 1985)	Quantitative analysis
10	3	Italy; Italy; Italy	ORG STUD	1	Empirical	Institutional theory (DiMaggio, 1988)	Qualitative analysis
11	3	USA; USA; USA	ETHICS-CSR-MAN	3	Empirical	Path-goal theory (Greene, 1979; House, 1996); House, 1971)	Quantitative analysis
12	1	Denmark	PUB SEC	3	Empirical	Negotiation theory (Zartmann, 2002)	Qualitative analysis
13	2	Australia; Australia	ORG STUD	1	Empirical	Re-orientation theory (Nadler & Tushman, 1990)	Qualitative analysis
14	2	UK; UK	PSYCH (GENERAL)	4	Empirical		Quantitative analysis
15	3	UK; UK; UK	ORG STUD	4	Empirical	New Leadership approach (Bryman, 1992)	Qualitative analysis
16	2	Netherlands; Netherlands	PSYCH (WOP-OB)	4	Empirical	Job Characteristic Model (Hackman & Oldham, 1975; Hackman & Oldham, 1976)	Quantitative analysis
17	1	USA	PSYCH (GENERAL)	3	Empirical	Women authority (Beauvais, 1976; Beauvais, 1977)	Qualitative analysis
18	2	USA; USA	PSYCH (WOP-OB)	4*	Empirical	Path-goal leadership theory (House, 1971; House & Dessler, 1974)	Quantitative analysis
19	2	USA; USA	PSYCH (WOP-OB)	4*	Empirical		Quantitative analysis
20	2	USA; USA	PSYCH (WOP-OB)	4*	Empirical	Path-Goal Theory (House, 1971; House & Dessler, 1974; House & Mitchell, 1997)	Quantitative analysis
21	1	USA	SOC SCI	3	Empirical	Leadership and Popularity Roles in Small Groups (Theodorson, 1957)	Quantitative analysis

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22	3	Israel; Israel; Israel (deducted)	ORG STUD	4	Empirical	Human relations (Likert, 1961) Initiation of structure and Consideration (Hemphill & Coons, 1957; Fleishman, 1951; Fleishman, 1957)	Quantitative analysis
23	3	Brazil; Brazil; Brazil	INNOV (deducted by the author)	NA	Empirical	Extended FRLT model (Antonakis & House, 2014)	Quantitative analysis
24	2	USA; USA	ORG STUD (deducted by the author)	NA	Empirical	Full-range leadership model (Bass, 1985) (deducted)	Quantitative analysis
25	1	Germany	HRM&EMP	2	Empirical	Full-range leadership theory (Antonakis & House, 2002)	Quantitative analysis
26	2	USA; USA	ORG STUD (deducted by the author)	NA	Conceptual	Full-range leadership theory (Antonakis & House, 2002)	
27	2	USA; USA	ORG STUD (deducted by the author)	NA	Conceptual	Full-range leadership theory (Antonakis & House, 2002)	

Table 2b. Descriptive data of selected articles

ID	Type/Methods	Estimators/Variables/Sources	Sampling numerosity	Statistical units typology	Statistical units provenience
1	Panel probit regression	Total q; International sales performance; CGO presence; Geographical sales dispersion; TMT size; CEO tenure; CEO pay slice; Total sales; International assets; Product diversification; Firm age; Labor intensity; Net leverage; Dividend issuance; Industry concentration	8,593 firm-year observations 1,293 firms	U.S. publicly traded firms in the following NAICS 2-digit industries: (1) Manufacturing, (2) Wholesale Trade, (3) Retail Trade, (4) Transportation and Warehousing, (5) Information, (6) Real Estate, Rental, and Leasing, (7) Professional, Scientific, and Technical Services, and (8) Administrative, Support, and Waste Management	USA
2	Questionnaires	Innovation performance: five-item scale Opening and closing leader behaviors: scale used by Zacher and Rosing (2015) Transformational leadership: Multifactor leadership questionnaire Transactional leadership: Multifactor leadership questionnaire Instrumental leadership: scale proposed by Antonakis and House (2014) Leader–member exchange: LMX-7	49	Employees	Germany
3	Case study	In-depth process-tracing analysis: Observations of all primary documents (draft texts by institutions, proposals from			Europe

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		governments) Conversations			
4	Regression analysis Two-stage least square (2SLS) regression	Tobin's Q; Industry median Tobin Q; ROA; Industry median ROA; ROE; Industry median ROE; Total shareholder return; Industry median total shareholder return; Age; New CEO; Outsider CEO; Duality; Firm size; Log (R&D expense); Log (capital expenditure); Dynamism; Munificence; CEO relative pay; CEO delta; CEO vega; CEO tenure; CEO experience dummy; Conglomerate experience dummy; Number of positions; CEO generalist experience - number of firms; CEO generalist experience - number of industries; Number of firms × tenure; Number of industries × tenure;	2243 (firms), 3634 (CEOs) 16,158 firm-year observations from 1993 to 2007	Firms in database: COMPUSTAT Standard & Poor's Execucomp	USA
5	Observation Interviews Document collection		39 (consulting group) 48 (interviews)	Consulting groups: administration, communications, deterrence/education, law enforcement, prosecution/adjudication, stra- tegic planning/program management, treatment Consulting group members and leaders Recommendation list, documents from meetings, strategic plan	USA
6	5-point rating scale	Instrumental leadership: scales (eight items) of Antonakis and House (2014), MIMIC modelconfirmatory factor analysis. Subcomponents: Environmental monitoring, Strategy formulation and implementation, Path-goal facilitation, Outcome monitoring. Personality: NEO-PI-R self-personality assessment. Subdimensions considered: Conscientiousness, Agreeableness, Openness to Experience, Extraversion, Neuroticism, Over-rater dummy, Age, Gender, Firm	378 (managers) 2,895 (raters)	Managers Raters	30 Countries
7	Regression analysis	Leadership: Multifactor Leadership Questionnaire	Leaders: 351 (seven multinational private-sector companies)	Leaders: Mid-level leaders Raters: followers	Netherlands (139), UK (27), France (23),

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		Intelligence: Wonderlic Personnel Test	28 (two cohorts of working leaders attending an an executive education course) Raters: 2,905		Germany (23), Sweden (24), Greece (14), Ireland (12), USA (12)
8	Questionnaires Structural equation modelling	Leaders' participative, supportive, and instrumental leadership styles from the employees' viewpoints: 12-item scale, seven-point Likert scale Employees' promotion focus: seven-point Likert scale Employees' prevention focus: seven-point Likert scale Employee creativity: seven-point Likert scale	206	Dyads employee/supervisor	Taiwan
9	Pilot study 2: Explorative scoring Pilot study 2: Explorative scoring Study 1: Experimental design Study 2: Experimental design Study 3: Field experiment Study 4: Field experiment	Pilot study 2: 1/0 scale Pilot study 2: 1/0 scale Study 1: SEM-WLSMV, OLS Study 2: OLS Study 3: OLS, Stereotype logit Study 4: Two-stage least squares	Pilot study 1: 22 Pilot study 2: 133 Study 1: 137 Study 2: 89 Study 3: 374 Study 4: 418 (leaders), 3164 raters	Pilot study: Full-time MBA students Pilot study: Part time MBA students Study 1: Management Bachelor students Study 2: Adults working at a Swiss IT company Study 3: Participants on Mechanical Turk via the Crowdflower platform who were working in 19 out of 20 of the industries listed in the North American Industry Classification System Study 4: Practicing mid-level leaders	Pilot study 1: NA Pilot study 2: NA Study 1: Switzerland Study 2: Switzerland Study 3: U.S. Study 4: Switzerland, Netherlands, USA, France, Germany, Sweden, Greece, Ireland, UK
10	Case study: interviews, participant observation, analysis of archival data and official documentation		42	Members of Tribunal, Court of External and Court of Appeal	Italy
11	Survey	Exploratory factor analysis Fornell and Larcker (1981) method for discriminant validity Harmon's CFA method for common method variance Maximum likelihood method (covariance matrix) for estimating the structural model parameters	333	Sales-people of a large multinational pharmaceutical company operating in North America	USA
12	Case study	Leadership model developed by the author (section 2)			Denmark
13	Case study: Hotels belonging to a large hotel management		6 hotels		Australia

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	corporation, AHC				
14	Study 1: Computer-led experiment Study 2: Computer-led experiment (deducted)	Study 1: Democratic leader, Elected leader, Internal leader, Appointed leader, External leader, Autocratic leader Study 2: Instrumental, Relational	Study 1: 96 Study 2: 93	Study 1: Undergraduate psychology students Study 2: Undergraduate students	Study 1: UK Study 2: UK
15	Semi-structured interviews		43 (Northern officers) 37 (Midshire) 66 (Chief inspectors)	Officers, Chief inspectors	UK
16	Questionnaire Factor analysis Cronbach's alphas computation	Work dimensions: Six job characteristic from Hackman & Oldham (1975, 1976), complexity and difficulty, feedback and clarity, work pressure, autonomy, promotional and growth opportunities, patient attending and caring. Leadership styles: Leadership Behaviour Questionnaire Nursing care system: degree of task versus patient allocation Outcome variables (nurses' reactions): Job satisfaction: Seven separate dimensions measured by 42 items Experience job satisfaction: Three dimensions measured by 11 items Health complaints: The Organizational Stress Questionnaire Absence frequency: Self-reported absence rates	561	Nurses	Netherlands
17	Group session	90-minutes session for two days	68 (17 groups of 2x2 people)	Respondents to advertisements (90% full- or part-time students)	USA
18	Moderated regression analyses	Instrumental leader behavior, Task dimensions (Variety, Feedback, Dealing with others), Satisfaction with supervision	Sample 1: 110 Sample 2: 205	Sample 1: employees working in a medium-sized bank located in the Midwes Sample 2: employees of a medium-sized manufacturing company lo- cated in the Midwest	USA
19	Cross-lagged correlational Path analytic procedures	Group recency, Group size, Instrumental leadership, Supportive leadership, Group arousal, Group cohesion	123 workgroups from 4 organizations: - aircraft manufacturer: 30 project engineering and 19 aircraft component assembly groups - manufacturer of electronic equipment and business forms: 15 engineering project and 15 manufacturing assembly group - private laboratory: 18	Workgroups from 4 organization	USA (deducted)

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			project groups - manufacturer of steel: 26 production work groups		
20	Questionnaires Moderated regression analyses	Leader behavior measures: House and Dessler's (1974) 7- and 10- item measures of instrumental and supportive leader behavior Task structure measure: House and Dessler's (1974) 10-item factor-analytically derived scale Role clarity measure: Rizzo et al. (1970) 6-item scale was employed as a measure of role clarity Job satisfaction measure: sum of the respondents' scores on the satisfaction	290	Managerial and clerical employees	USA
21	Rotation groups	Dominance of Task Activities as Values: Interpersonal Check List Identification of Instrumental Leaders: Peer nominations for head nurse Personal Popularity: comparison with half of the group	5 rotation groups (from 10 to 26 members)	University students	USA
22	Structured interviews (questionnaires)	Initiation of Structure: 10 items Consideration: 10 items	21 groups (164 manual workers) 13 groups (101 clerical workers)	Manual workers Clerical workers	Israel (deducted)
23	Structural equation modeling	Transformational leadership: GTL scale Instrumental leadership: Instrumental leadership scale Employee performance: RBPS	126	Brazilian startups	Brazil
24	Pilot test: Confirmatory factor analysis Study: Experimental design	Pilot test: NA Study: Instrumental leader-extended version of the MLQ	Pilot test: 22 (students), 349 (followers), 52 (leaders) Study: 33 (low-level managers), 197 (followers)	Pilot test: Students, Followers, Leaders Study: Low-level managers), Followers	Pilot study: Switzerland (student), Europe (Others) Study: Europe (predominantly UK)
25	Study 1: Survey Study 2: Survey Study 3: Survey	Study 1: leadership scales, job satisfaction Transactional and transformational: Transformational Leadership Inventory (Podsakoff et al., 1990) Laissez-faire: Rowold's (2011) four-item scale Instrumental leadership: Environmental monitoring, Strategy formulation and implementation, Path-goal facilitation, Outcome monitoring, (Antonakis & House, 2004) Job satisfaction: Neuberger and Allerbeck's (1978) scale	Study 1: 435 Study 2: 163 Study 3: 149	Study 1: Employees from German organizations Study 2: Employees from printing machine industry in Germany Study 3: Employees from for-profit organizations	Study 1: Germany Study 2: Germany Study 3: Germany

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		Study 2: Instrumental leadership (see Study 1), Objective performance Study 3: leadership scales, job satisfaction (see Study 1)			
26	NA	NA	NA	NA	NA
27	NA	NA	NA	NA	NA

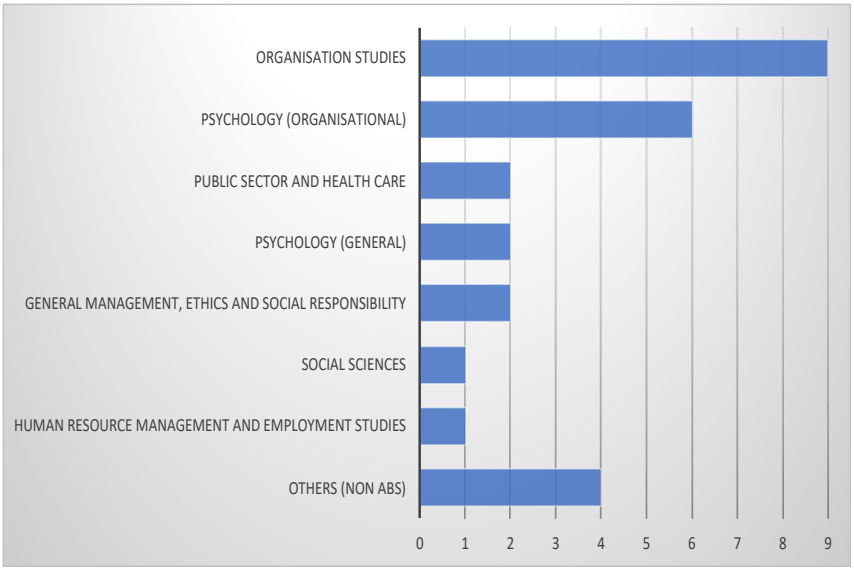

Figure 5. Number of papers per field

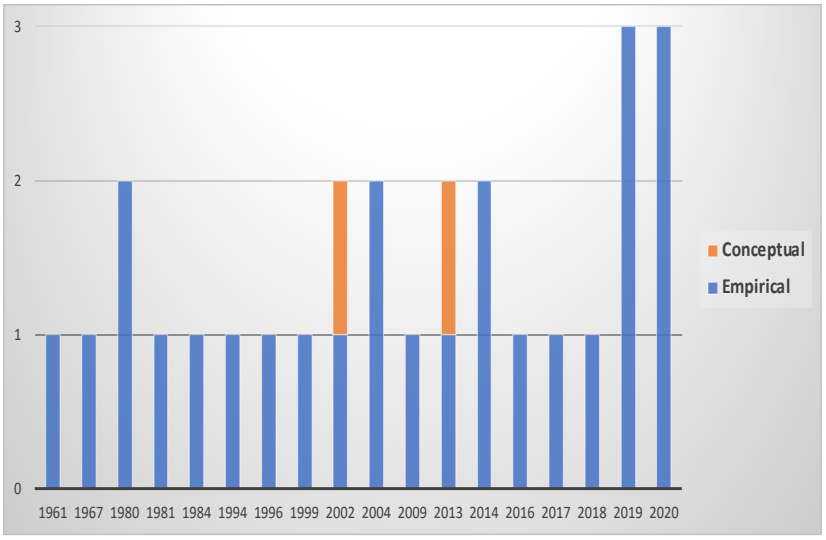

Figure 6. Umber and typology of articles per year

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Figure 7 shows the number of authors per country. The USA dominates the scene with 22 out of 50 authors. The UK attained second place with five authors. Germany and the Netherlands occupy the next positions with four authors. Interesting is the presence of Israel, Brazil, and Italy, each with three authors concentrated in three papers: Mannheim et al. (1967) for Israel, Benedetti Chammas et al. (2019) for Brazil, and Agostino et al. (2013) for Italy. China and Australia present two authors of two articles: Waldersee and Eagleson (2002) for Australia and Tung and Yu (2016) for China. Lastly, Denmark, Spain, and Switzerland present one author. Therefore, the total number of affiliations is not equal to the total number of authors because some authors present more than one affiliation (e.g., Antonakis, with the USA and Switzerland).

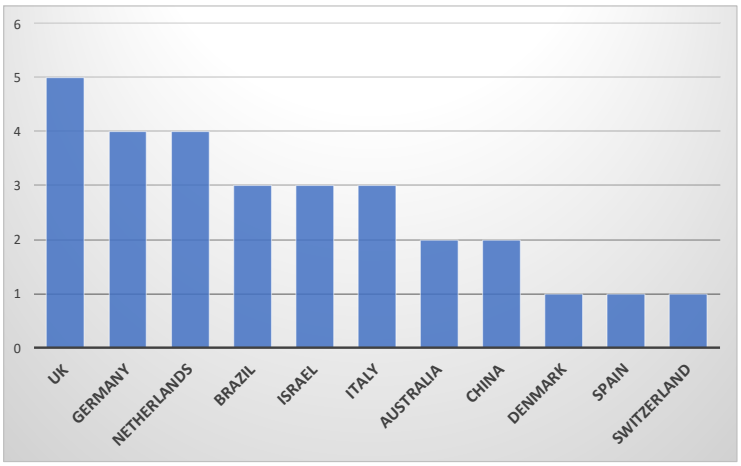

Figure 7. Number of authors per country

Methods Employed by Empirical Articles

A considerable number of methods were employed by the 25 empirical articles extracted. In particular, 7 articles employed a qualitative methodology, while 18 articles employed quantitative methodologies for deducting results (Figure 8). Among the qualitative articles, five employed case study analysis, while the other two articles used semi-structured interviews and group sessions. Most case studies were performed through observations, interviews, and document collection (e.g., Kramer et al., 2019; Agostino et al., 2013).

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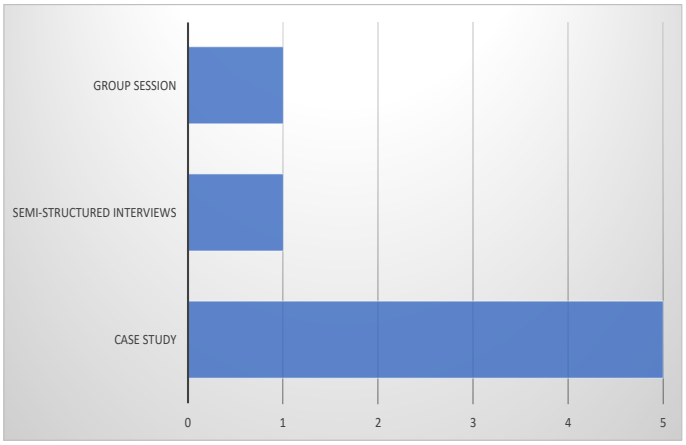

Figure 8. Methods employed by qualitative articles

Among the quantitative articles, the number of methods employed was surprising (Figure 9). Most articles used surveys (4 papers) and questionnaires (4 papers). Two articles employed experimental design in three different experiments (Antonakis & House, 2004; 2014). Moreover, regression and related analysis were employed in many articles (e.g., Li & Patel, 2019; Antonakis et al., 2017). Many papers employed very sophisticated methods, such as cross-lagged correlation (Greene & Schriesheim, 1980) or Cronbach's alpha computation (Landeweerd & Boumans, 1994).

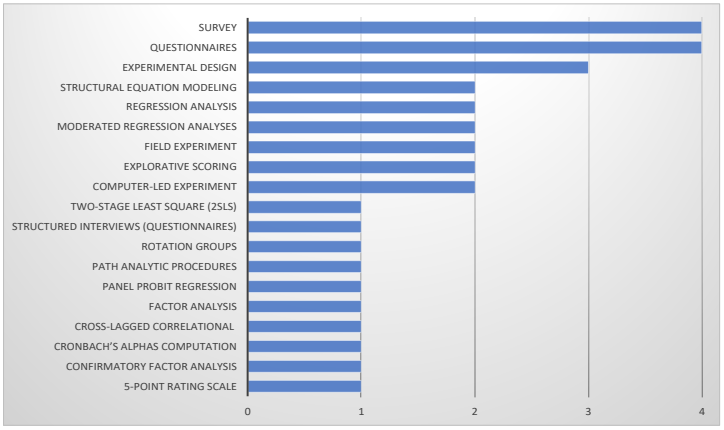

Figure 9. Methods employed by quantitative articles

Content Analysis

This paragraph includes the content analysis of the articles included in the dataset. In particular, it shows the employed theories, the themes emerged in the debate, the conceptual map of the field, and the future research opportunities suggested by the authors of the selected papers.

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Employed Theories in the Selected Literature

The selected articles show various theories for their study due to the multidisciplinary nature of leadership. Not surprisingly, most studies employed the models of Bass (1985) and Antonakis and House (2014) for their experimentation. Nevertheless, path-goal theory was also often employed (three articles). In particular, such a theory was used to study the relationship between leadership and ethical work climate (Mulki et al., 2009), to identify the moderating effect of task dimension on the effects of IL (Schriesheim & DeNisi, 1981), and at a more general level (Schriesheim & Schriesheim, 1980).

A considerable number of the articles used leadership theories as a conceptual basis. For example, Gerlach et al. (2020) employed the ambidextrous leadership model to study its effects on innovation performance. Smeets and Beach (2020) used the concept of entrepreneurial leadership to evaluate the effects of politics and IL on institutional reforms. Bryman et al. (1996) explored the new leadership approach, highlighting the relevance of the context in studying the effects of leadership.

Table 3. Employed theories in the extracted articles

Articles' ID	Theory	References
1, 4, 5, 7, 23, 25, 26	Fuller full-range leadership model	Antonakis and House (2014)
11, 18, 20	Path-goal theory	Greene (1979) House (1971) House (1996) House and Dessler (1974) House and Mitchell (1974)
9, 24	Full-range leadership model	Bass (1985)
2	Ambidextrous leadership model	Rosing et al. (2011)
6	Big 5 personality traits	No references
4	Domain expertise framework	Ericsson et al. (1993) Shanteau (1992)
3	Entrepreneurial leadership	Young (1991)
4	Functional leadership theory	Fleishman et al. (1991) Morgeson et al. (2010)
22	Human relations	Likert (1961)
1	Information processing theory	Galbraith (1973)
22	Initiation of Structure and Consideration	Hemphill (1957) Fleishman (1951) Fleishman (1957)
10	Institutional theory	DiMaggio (1988)
16	Job Characteristic Model	Hackman and Oldham (1975) Hackman and Oldham (1976)
21	Leadership and Popularity Roles in Small Groups	George (1957)

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12	Negotiation theory	Zartmann (2002)
15	New Leadership approach	Bryman (1992)
13	Re-orientation theory	Nadler and Tushman (1990)
8	Regulatory focus theory	Higgins (1998)
6	Self–other (dis)agreement	Fleenor et al. (2010) Atwater and Yammarino (1997)
7	Simonton's theory: Intellectual superiority, Comprehension factor, Criticism factor, Intellectual stratification	Simonton (1985)

Themes Emerged

The Efficacy of IL: Why is IL Effective?

The literature has verified that IL is a superior construct to previous consolidated leadership styles (Rowold, 2014). Its positive effects have been verified in various fields, such as performance and employees' satisfaction, groups' arousal and cohesion (Greene & Schriesheim, 1980), organizational climate and employees' attitude (Mulki et al., 2008), and innovation (Gerlach et al., 2020). For this reason, researchers should intensify their efforts to understand in what contexts such a leadership style can be applied successfully (Antonakis & House, 2004).

Not all studies have found a positive efficacy of IL (e.g., Benedetti Chammas & Hernandez, 2019; Landeweerd & Boumans, 1994). In different contexts, such as startups, a laissez-faire leadership can produce better effects than transformational and instrumental styles. However, in highly complex and uncertain contexts, possessing characteristics of transformational and IL can be successful (Benedetti Chammas & Hernandez, 2019).

The empirical literature verified that the outcome monitoring dimension could not always be correlated with the IL effectiveness criteria. Since IL has directive features, it can negatively affect employees with a high level of autonomy needs (Rowold, 2014). In fact, the literature did not always find a positive relationship between IL and employees' satisfaction (e.g., Schriesheim & Schriesheim, 1980). Nevertheless, such directive characteristics of IL are effective in contexts in which groups do not have a high level of identification (Van Vugt & De Cremer, 1999). Moreover, IL was effective within institutional contexts when exploited by conserving a low profile, that is, 'behind-the-scenes drafting and informational tactics' (Beach, 2007: 429).

The Efficacy of IL: Comparison of IL and other Leadership Styles

There are different contexts in which IL is more effective than other leadership styles. For example, in stable contexts, from an organizational viewpoint, charismatic and transformational leaders could be ineffective, whereas IL, through its active and constructive features, could produce

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positive effects (Antonakis & House, 2004; 2014). Instrumental and charismatic leadership have been found effective during relevant organizational change (Waldersee & Engleson, 2002). IL has been revealed to be more effective than visionary or participative leadership at the end of the planning process (Kramer et al., 2019).

Supportive leadership is effective for the cohesion and arousal of recent groups, while IL results in positive effects independently from the groups' seniority. Conversely, if the variable analyzed is the groups' dimension, big groups appreciate IL more, whereas supportive leadership has better effects in limited groups. Stress, tasks' nature, and feedback on performance are positively correlated to instrumental and supportive leadership (Greene & Schriesheim, 1980). Lastly, instrumental and ambidextrous leadership are directly correlated with innovation performance (Gerlach, 2020).

The Complexity of IL: The Complex Nature of IL

IL is an active and proactive style that is reliably measurable and positively correlated to transactional and transformational styles (Antonakis & House, 2014; Benedetti Chammas & Hernandez, 2019), and negatively correlated to the laissez-faire style (Rowold, 2014). It is a leadership style that considers the human side of the firm (Turk, 2961) and the organizational tasks and functions (Antonakis & House, 2004). Its complex nature made it difficult to achieve a reliable measurement, and for many years, tests performed on IL were inadequate and ineffective (Schriesheim & DeNisi, 1981).

According to Antonakis and House (2014), leadership is also about knowing which vision to project because of domain-relevant knowledge on the organization and its environment, how to implement the vision, and how to show followers the path to the goal by providing resources and monitoring outcomes in a constructive way' (Antonakis & House, 2004: 765). This approach highlights how leaders should adapt their style depending on the environment and performance monitoring. This need led the two researchers to include IL in full-range leadership. The authors underlined the complex nature of IL, arguing that it requires the 'formulation and implementation of solutions to complex social (and task-oriented) problems' (Antonakis & House, 2014: 747).

The Complexity of IL: The Effects of IL Modify the Context

Rowold (2014) affirmed that 'more categories of leadership behaviors are needed to describe the complex phenomenon of a leader's daily work' (Rowold, 2014: 385). IL seems adequate for this complex vision since its formation calls for the learning of a high level of tacit knowledge and 'rich causal schemata and condition-action frameworks' (Antonakis & House,

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2004: 10). IL can modify contexts through its effects (Bryman et al., 1996), generating a positive work environment and eliminating the ambiguity of tasks (Mulki et al., 2008). Instrumental leaders have the specific objective of supporting and communicating the achieved progress, even beyond the scheduled meetings, promoting and incentivizing the changes in the working context, and contributing to the dynamicity and development of the general framework in which IL is applied (Kramer et al., 2019). To achieve this goal, instrumental leaders should be educated to exploit all the organizational internal and external stimuli (Antonakis & House, 2014). Therefore, they should exploit the effects produced in the context of their actions, strategies, and behaviors.

In the practical implications of his study, Rowold (2014) argued that leaders should exploit followers' anonymous feedback to develop instrumental behaviors and, therefore, modify their leadership styles depending on feedback. Moreover, organizations should adapt their education paths so that IL styles are implemented and improved (Benedetti Chammas & Hernandez, 2019). Even at a high managerial level, the adaptation promoted by IL allows for modifying and improving the alignment of internal resources to the organizations' objectives (Li & Patel, 2019).

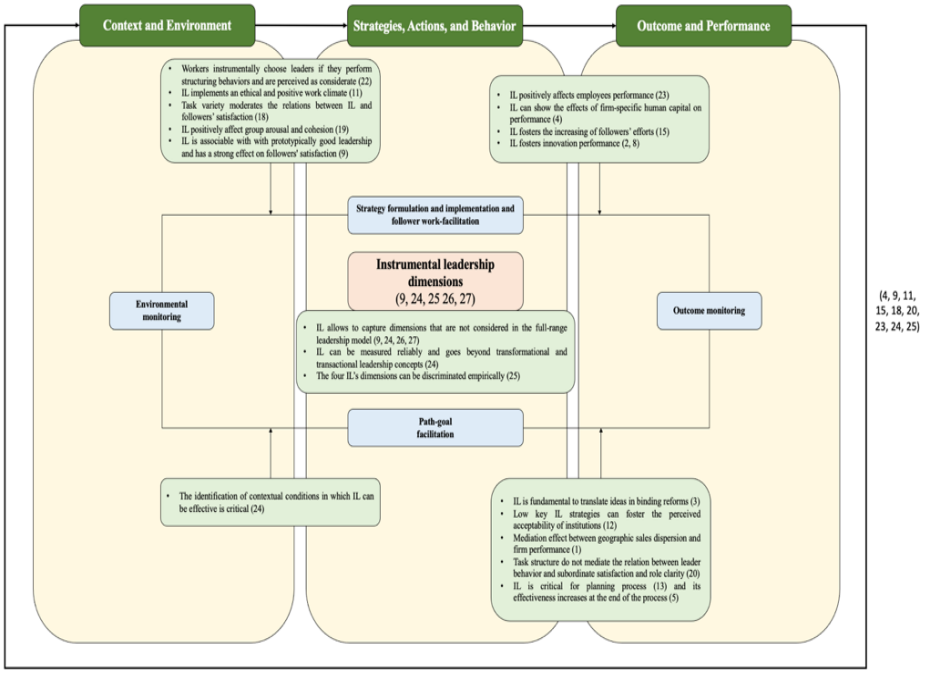

Figure 10. Conceptual map of the field

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The context in which leadership is developed is critical for understanding its effects (Benedetti Chammas & Hernandez, 2019). Individual differences and role ambiguities can allow the emergence of specific circumstances that can complicate the study of IL's effects on performance (Schriesheim & Schriesheim, 1980). IL can even change followers' perceptions of context. The literature started to incentivize qualitative study of a single context to avoid too general a debate on the concept of leadership (Bryman et al., 1996). Specific leaders' behaviors can change how employees approach low-level, repetitive, and low-added-value activities (Schriesheim & DeNisi, 1981). Moreover, critical episodes and events can change the episodic memory of evaluators, making it possible to achieve a more effective and in-depth measurement of IL (Antonakis & House, 2014).

Conceptual Mapping of the Field

Figure 10 shows the conceptual structure of this field. In particular, the main findings of the articles were organized according to the set of dimensions considered during the analysis. The principal deductions are summarized in boxes pointing to the link between the analyzed dimensions. The map clearly reveals that scientific interest is mainly concentrated on strategic topics rather than environmental and outcome monitoring.

Based on this map and the deductions produced by content analysis developed in the previous paragraph, a self-empowered circuit was identified according to which IL, through outcome monitoring, can produce effects on the context that is monitored and change leaders' actions, strategies, and behaviors. Therefore, this thematic map shows the complex nature of this dimension of IL.

In the next paragraph, conclusion was drawn on the content analysis by presenting further research opportunities suggested by the authors of the selected articles.

Future Research Opportunities

Table 4 show suggestions for further research made by the authors of the selected articles. From the considerable number of opportunities identified, suggestions were not considered but not concerning IL. There was no consideration of the request for study replications with more numerous samples, different cultures, or a different methodology.

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Table 4. Further research opportunities suggested by the considered articles

Articles' ID	Open research questions
9	Can forecasting, sensemaking, or planning broaden instrumental leadership factors or measures? How can contextual factors affect instrumental leadership? Can followers' self-efficacy be affected by work facilitation? What are the mediating effects of self-concept-related mechanisms? What individual differences represent the variance in leaders' behaviors? What are the connections between intelligence and the full-range leadership model? Is the idealized influence endogenous? How can the bias due to the endogeneity of leadership be eliminated to achieve a good measure of leaders' style on performance?
14	Can the method of selection (election VS appointment) affect the way through which leaders promote the cooperation?
18	How can the entire set of possible moderators be analyzed to achieve a better comprehension of the effects of instrumental leadership?
19	What can be the moderators of the relations between instrumental leadership and group goals, nature of group tasks, stress, and feedback on performance?
20	Can path-goal theory be employed to explain the moderating effects of task structure between leaders' behavior and subordinate satisfaction and role clarity? Can the characteristics of tasks, environment, and subordinates moderate the relation between leaders' behavior and subordinate satisfaction and role clarity? Can path-goal theory assumptions be discussed and questioned for explaining the moderating effects of task structure between leaders' behavior and subordinate satisfaction and role clarity?
25	Can instrumental leadership explain the incremental variance over and above transformational and transactional leadership? How much of the variance is attributable to instrumental, transformational, and transactional leadership styles? How can followers' personal characteristics be included as moderating factors of the relation between outcome monitoring and effectiveness relationship? Is the general mental ability a valid predictor of instrumental leadership? What educational interventions should be undertaken to develop instrumental leadership? Do leaders design a vision before they engage in instrumental leadership? Do instrumental leaders first develop a strategy and only then articulate goals and sub-goals to their followers?

Discussions and Hypotheses for Future Development

In this SLR, IL was analyzed, that is, a leadership style theorized in the 1960s and formalized through expanding the full-range leadership model (Bass & Avolio, 2002) developed by Antonakis and House (2002). Aside some limited exceptions, IL is more complex and effective than other

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leadership styles. Nevertheless, outcome monitoring (one of the four dimensions of IL) seems to have been the object of a misunderstanding that conducted the literature toward high-level empiricism, which is, however, limited in results and possible conceptual implications and development.

The descriptive analysis highlighted that the relevant literature on IL, after its conceptualization by Antonakis and House (2002), has been mainly empirical and devoted to studying IL's effects on performance and other factors, such as employees' satisfaction. Various studies have concentrated on the possible moderators of these relations. In particular, outcome monitoring was limited to the positive and constructive feedback provided by instrumental leaders who, also possessing directive traits, should use the feedback to facilitate the achievement of the desired performance.

Nevertheless, the content analysis of single articles and future research suggestions highlighted that outcome monitoring had been the object of a misunderstanding that limited its impact on research. Antonakis and House (2014) argued that a certain level of endogeneity characterizes leadership, as confirmed by other more general publications (e.g., Günter et al. 2020). Moreover, the conceptual development of IL started from a construct in which the most relevant element was the compliance of followers' task performance (Antonakis & House, 2004), to a construct in which, instead, the most relevant dimension is outcome monitoring, through which leaders implement correct strategies and tactics for achieving performance (Antonakis & House, 2014). In this framework, IL affects performance and outcomes through its actions and strategies. From a theoretical viewpoint, performance effects generate changes in the context (Doursh, 2004), as hypothesized for leadership by Pizzolitto et al. (2022). Therefore, it is reasonable to ask how outcome monitoring can modify leaders' behavior (the same leader who produced such outcomes). In particular, outcome monitoring can modify the strategies and tactics applied by leaders, including their leadership styles. Consequently, the literature used IL as an essentially contextual factor, adopting an extremely positivistic approach to the empirical study of leadership. Unfortunately, such an approach is limited because the endogeneity of leadership should be considered when evaluating how leaders modify their styles during and after outcome and environmental monitoring. The literature also hints at further research. For example, Rowold (2014) called for more scientific attention to obtain an in-depth analysis of the procedure with which IL articulates objectives to followers. In particular, Rowold asked whether the development of a strategy precede this articulation. He asked whether leaders design a vision before engaging in IL. In this sense, it is not clear whether instrumental leaders project their strategies rationally and positively. By contrast, they plan their actions and behaviors as the consequences of exploiting the endogeneity and complexity of leadership within a self-empowering circuit in which

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leaders consider leaders' effects on performance and context in an iterative way.

To answer the research question formulated during the introduction of this review, the nature of output monitoring is more profound than what emerged in the literature. The essence of performance monitoring is to modify the routes of leaders' strategies and behaviors. In particular, leaders vary their leadership styles depending on the effects produced by the same leaders on performance and, consequently, on context. Future research should plan longitudinal experiments to produce new research on IL and outcome monitoring. In particular, this paper proposes the use of measurement scales developed in the full-range leadership model and in the following expansion published by Antonakis and House for IL, measuring at different moments how the characteristics of IL change depending on the variations generated on performance through leaders' actions, decisions, and behaviors. Finally, this paper calls for more scientific attention to produce more conceptual papers, meta-analysis, and literature reviews to capture other levels of criticality inherent in IL dimensions. In particular, discussing the assumptions of path-goal theory as an instrument for evaluating IL's effects on performance and context could be the key to achieving a more comprehensive theoretical background for such a leadership style (Schriesheim & Schriesheim, 1980).

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