

# Will it sink or will it float: Putting three common conceptions about principals' transformational leadership to the test

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## Abstract

In discussions about transformational leadership theory, three conceptions frequently emerge: (a) principals' transformational leadership behaviours are more prevalent in national contexts than are restructuring-oriented; (b) principals' transformational behaviours are more effective than transactional behaviours; and (c) principals are either transformational or transactional. These conceptions are repeatedly addressed but seldom explored in an empirical manner. Accepting conceptions as given might result in flattening scholarly discourse and depriving practice of research knowledge. The present paper aims to investigate these conceptions based on data derived from published works and from the author's database. The results of the investigation suggest that conceptions about principals' transformational leadership in education are unsupported by empirical exploration. Educational leadership research may be improved by periodically subjecting conceptions to empirical test and incorporating in future works only those that show empirical support. Such exploration is necessary to maintain relevance in an applied research field such as education.

**Keywords:** educational leadership; transactional leadership; transformational leadership

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## **Introduction**

Since the early 1990s, the full-range theory of leadership, also known as leadership style theory, has been one of the most popular theories in school leadership research (Bush, 2014; Hallinger, 2003). Despite the fact that the majority of empirical studies in the field of education addressed transformational leadership, because this style is perceived as the ideal model for school principals (Leithwood, 1994; Leithwood and Jantzi, 2005), other leadership styles, such as transactional leadership and *laissez-faire*, have also been discussed and investigated (e.g., Bogler, 2001; Cemaloglu, 2011; Eyal and Roth, 2011; Nir and Hameiri, 2014; Nir and Kranot, 2006; Kythreotis et al., 2010). Transformational leadership behaviours target followers' views, values, and abilities in order to make them transcend their self-interest and enlist them to act on behalf of the organisation (Wu et al., 2007). Transactional leadership behaviours are generally instrumentally-oriented and focus primarily on the procedural management of tasks (Conger, 1999). Transactional leadership is more than a technical exchange, as transactional leaders "focus on the proper exchange of resources" (Judge and Piccolo, 2004: 755). Leaders who display *laissez-faire* behaviours (passive leadership) tend to avoid interactions with followers and to dodge their duties (Hinkin and Schriesheim, 2008; Humborstad and Giessner, 2015).

I first became familiar with transformational leadership theory as an undergraduate student, somewhere in the mid-2000s. The charismatic lecturer presented the theory as the cutting-edge framework in the field of leadership research. I was caught up in the general fascination with the theory and embraced it as one of the key frameworks in my thesis and doctoral studies. In time, as my understandings of the theory expanded, together with intimate knowledge of the data I collected and of what practitioners in the field said, I began to ask how common conceptions associated with the theory held up. After years of accepting the conceptions of the theory as given, I reached a point where it was clear to me that an in-depth investigation of the conceptions of the theory was necessary to make sense of some of the contradictions I perceived. The present paper contains the insights and understandings achieved in the course of this investigation.

## **Background on transformational leadership theory**

Transformational leadership cannot be addressed apart from leadership style theory.

Leadership style theory emerged from James M. Burns's (1978) research on political leadership. The theory was later adopted by Bernard M. Bass (1985) and adapted to analyse leaders in the field of business. Not long after, the theory was embraced by school leadership researchers (Hallinger, 1992; Leithwood and Jantzi, 1990). Two researchers in particular, Kenneth Leithwood and Doris Jantzi, played an instrumental role in legitimising the theory and demonstrating its relevance to the exploration of schools (Leithwood and Jantzi, 1990; Leithwood and Jantzi, 2000; Leithwood and Jantzi, 2005; Leithwood et al., 1999). Since then, transformational leadership theory has been the leading theory in the leadership research community. For example, a systemic review of published research in management studies on leadership in the years 2000-2012 confirms that transformational leadership is the most investigated and debated conceptualisation of all leadership theories (Dinh et al., 2014).

Transformational leadership theory is also integrated in many textbooks used in field of educational administration (Oplatka, 2014), and it is frequently addressed in training programs for principals and administrators. Several governments and professional associations have adopted transformational leadership style as a standard for training (e.g., Avney Rosha (2008) in Israel; CCSSO (2015) in the USA).

### *The popularity of transformational leadership in education and educational administration*

To illuminate the extent of the interest of the educational community in transformational leadership, I mapped the popularity of leadership models used in education in general and in educational administration research in particular.<sup>1</sup> First, I created a list of popular leadership concepts used in education. To this end, I scanned the contents of educational leadership textbooks to identify different leadership models popular in education. Because educational leadership discourse is dynamic and often influenced by related fields of research (Oplatka, 2014), I also perused the review by Dinh et al. (2014) of leadership research in the 21st century, and added models that to the best of my knowledge have been adopted by educational researchers. This process resulted in a list of 23 popular leadership concepts in education (Table 1). I used the Education Resources Information Centre (ERIC)

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<sup>1</sup> Note that a more refined exploration that attempted to locate only papers that focused on each leadership concept as a primary theoretical or empirical lens may produce different outcomes; therefore, the results presented here should be interpreted with caution.

search engine to locate the number of peer-reviewed documents published on each leadership concept between the years 1990-2016. As seen in Table 1, this search produced three central leadership concepts at the top of the list: instructional leadership (n=3915),<sup>2</sup> transformational leadership (n=819), and distributed leadership (n=330). A similar conclusion about the popularity of transformational leadership in educational research has been reached by other scholars (Gumus et al., 2016).

**Table 1.** Popularity of leadership concepts in educational research: 1990-2016.

	Referring source	Number of peer-reviewed publications
1. Authoritarian leadership	4	<50
2. Authentic leadership	2	50-100
3. Contingent leadership/contingency leadership*	1, 2, 3, 4, 5, 6	<50
4. Democratic leadership	4	50-100
<b>5. Distributed leadership</b>	1, 5	<b>330</b>
6. Emotional leadership	1	<50
7. Entrepreneurial leadership	2	<50
8. Ethical leadership	2	50-100
9. Evolutionary leadership	3	<50
10. Initiating structure leadership	4	<50

<sup>2</sup> In my opinion, there are two reasons for the high volume of documents on instructional leadership: (a) the concept has been adopted by many research communities in education, besides the educational administration community (e.g., the teaching research community); and (b) in the first decade of the 21st century, the concept received strong endorsement from influential international agencies, such as the OECD.

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<b>11. Instructional leadership</b>	1, 5	<b>3915</b>
12. Leader-member exchanges (LMX)	2, 4	<50
13. Managerial leadership	1	50-100
14. Moral leadership	1, 5	50-100
15. Participative leadership	1, 2, 5	<50
16. Path-goal leadership	2, 3	<50
17. Postmodern leadership	1	<50
18. Relational leadership	2	<50
19. Servant leadership	2	<50
20. Situational leadership	2, 3, 4, 5, 6	<50
21. Spiritual leadership	2	50-100
22. Synergistic leadership	4	<50
<b>23. Transformational leadership</b>	1, 2, 3, 4, 5, 6	<b>819</b>

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*Note:* Results were generated using exact term searches (" ") of peer-reviewed documents in the ERIC search engine. \*The number of publications is the sum of the documents found containing the two terms. <sup>1</sup>Bush (2011); <sup>2</sup>Dinh et al., 2014; <sup>3</sup>Hoy and Miskel (2013); <sup>4</sup>Lunenburg and Ornstein (2012); <sup>5</sup>Oplatka (2007); <sup>6</sup>Razik and Swanson (2010).

Second, to map the popularity of the three main leadership concepts in educational administration research, I located the number of research articles published on each (instructional, transformational, and distributed leadership) in three leading educational administration journals: Educational Administration Quarterly, Educational Management Administration & Leadership, and Journal of Educational Administration in the years 1990-2016. As seen in Table 2, the gaps in popularity of the three leadership concepts within the educational administration field are much narrower. Instructional leadership emerged as the leading concept, and transformational leadership and distributed leadership are tied in second place. Thus,

the results show that transformational leadership is one of the most popular leadership concepts in educational administration research.

**Table 2.** Popularity of three central leadership concepts in educational administration research: 1990-2016.

	Educational Administration Quarterly	Educational Management Administration & Leadership	Journal of Educational Administration
1. Distributed leadership	52	126	45
2. Instructional leadership	99	73	93
3. Transformational leadership	45	88	46

*Note:* Results were generated using exact term searches (" ") in the search engine of each journal, and were narrowed using the descriptor 'research article'.

In general, it is possible to identify two periods in the research of transformational leadership in educational administration: the Western period (1990s to mid-2000s) and the global period (mid-2000s to the present). During the first period, transformational leadership in education has been a subject of research mainly in Western countries (see Leithwood and Jantzi, 2005); in the latter period, there has been growing interest in transformational leadership in non-Western countries. Recent studies conducted in the Middle East (e.g., Jordan: Khasawneh et al., 2012; Kuwait: Alsaedi and Male, 2013; United Arab Emirates: Litz and Scott, 2016), East Asia (China: Peng, 2015; Singapore: Retna and NG, 2010), Eurasia (Turkey: Aydin et al., 2013), and Africa (Ethiopia: Tesfaw, 2014) suggest a new stage in the life cycle of the theory, as it endeavours to become global. In my opinion, there are three main reasons for the expansion of the theory. First, transformational leadership incorporates all the components that are linked with 'widely accepted' theories (Cairney, 2013, 10).

Among others, it contains (a) general propositions about the concepts and their relevance, (b) conceptual clarity about concepts and a suggestion of possible causal processes that can be translated into testable hypotheses, and (c) detailed and clear operational methods that can be empirically tested and replicated. Second, transformational leadership is highly relevant in educational organisations as school restructuring, pressures of performance and change due to local initiatives are common challenges of schools worldwide (Berkovich, 2016). It is possible to suggest that this policy environment is shaped largely by a globalised educational policy led by international agencies, which increases the practice of policy borrowing (Steiner-Khamsi, 2014). Third, transformational leadership in educational administration has been promoted by leading scholars in the field. Critical works have argued that the popularisation of scientific knowledge is linked largely to the academic abilities, status, and network of the scholars (Meier, 2009).

#### *Three conventional conceptions about leadership styles*

A conception is an understanding of a theoretical idea or a deduction that is linked with a theory. Conception often takes the form of a universal 'law'. When conceptions become common, they often achieve axiomatic status. An axiomatic status is particularly powerful because it enables a statement to be accepted as a given, and thus it is usually quite persistent.

The present paper is not an attempt to review all conceptions about transformational leadership, but focuses on three key claims that one often reads again and again in the literature. I suggest that the conventional wisdom in education regarding transformational leadership can be represented by these three conceptions:

*Conception no. 1:* Principals' transformational leadership behaviours are more prevalent in national contexts than are restructuring-oriented.

*Conception no. 2:* Principals' transformational behaviours are more effective than transactional behaviours.

*Conception no. 3:* Principals are either transformational or transactional.

These claims frequently appear explicitly stated in various forms, or are implicit in discourse in the field. Below I present each conception as it is reflected in the literature, in particular in textbooks. Next, using empirical evidence, I explore these conceptions with the aim of discovering the essential features of each.

**Testing conception no. 1: Are principals' transformational leadership behaviours are more prevalent in national contexts than are restructuring-oriented?**

*What is the common conception?*

One of the basic arguments about transformational leadership in schools is linked with the relevance of this particular style to the present time. Scholars have reiterated the claim that an environment that emphasises restructuring of schools motivates transformational leadership, because this style better fits the challenges of identifying problems and setting goals for school staff. One of the early expressions of this viewpoint was by Hallinger (1992) in a historical essay about the evolving roles of principals in America. The same claim was made by Leithwood (1994), who argued that "school restructuring creates new expectations of those who offer leadership to schools," and suggested that transformational leadership was a promising style in this context (498). The arguments focused on restructuring are related to the broader change that occurs in many Western countries as educational governance switches from a bureaucratic-centralised mode of command and control to a post-bureaucratic one that relies on decentralisation and privatisation (Maroy, 2009).

Summarising a decade of empirical exploration, Later, Leithwood, Jantzi, and Steinbach (1999) concluded that "school restructuring undoubtedly frames the context for school leadership in the 1990s," particularly in the developed world, and argued for the "fit of transformational approaches to leadership with this restructuring context" (23). Doubts about the validity of this claim are rare, but there have been critics of what is viewed by some as the manipulative nature of restructuring-oriented policy environments. For example, Bush (2011) suggested that "transformational language is used by governments to encourage, or require, practitioners to adopt and implement centrally-determined policies" (86).

*What does the evidence say?*

To investigate conception no. 1 empirically, two operative exploration paths were defined: one having to do with differences in principals' transformational behaviours between countries with different educational governances, and another having to do with differences in principals' transformational behaviours within a country undergoing key changes in its educational governance.

To test differences in principals' transformational behaviours between



countries with different educational governances, I reviewed the literature looking for works in English that address leadership styles in different national contexts. I defined several inclusion criteria: (a) data were collected with MLQ (the most common instrument used in educational leadership research (Leithwood and Jantzi, 2005); (b) data were the result of teachers' reports on principals; (c) means and standard deviations of leadership styles are presented in the text; and (d) the Likert scale range used is reported in the text. This was an extensive search but it was not a systemic one, as my goal was to identify sufficient publications from different countries that could be assigned to each of the following three contexts: pre-bureaucratic educational governance, bureaucratic educational governance, and post-bureaucratic educational governance. The works I located and their descriptive data are presented in Table 3 below. To better reflect the scores representing each type of governance, I calculated weighted averages of means and *SDs* for each leadership style by type (see Table 4).

**Table 3.** Means, SDs, and descriptive data of a sample of empirical works from different countries on leadership styles in education.

National context	Pre-bureaucratic educational governance		Bureaucratic educational governance				Post-bureaucratic educational governance				
	Ethiopia <sup>*a</sup>	Republic of Trinidad and Tobago <sup>*a</sup>	Tanzania <sup>*b</sup>	Cyprus <sup>*a</sup>	Indonesia	Iran <sup>*b</sup>	Turkey <sup>*b</sup>	Australia <sup>*a</sup>	Estonia	Israel	USA
<b>1. Principals' transformational leadership</b>	4.50** (.55)	4.27** (.27)	3.07 (.93)	3.98** (.68)	3.50** (.56)	3.36(.72)	3.81** (.81)	3.74 (1.06)	3.78*** (.74)***	3.49 (.70)	3.50 (.98)
<b>2. Principals' transactional leadership</b>	--	3.62** (.46)	3.13 (.76)	3.85** (.74)	3.04** (.49)	3.29 (.66)	1.89** (.49)	3.08 (.93)	2.25*** (.65)***	2.73 (.87)	--
<b>3. Principals' passive leadership</b>	--	2.04** (.54)	2.25 (.77)	2.13** (.94)	1.81 (.67)	2.16 (.82)	1.55** (.53)	2.39 (1.10)	--	--	--
<i>Source</i>	Tesfaw (2014)	Howell-Jack (2014)	Nyenyembe, Maslowski, Nimrod, and Peter (2016)	Menon, (2014)**	Hariri, Monypenny, and Prideaux (2014)	Sayadi (2016)	Kuğuoğlu and Küçük (2013)	Waters (2013)	Heidmets and Liik (2014)	Eyal and Roth (2011)	Song, Bae, Park, and Kim (2013)
<i>N used in analysis</i>	320 teachers	320 teachers	180 teachers	438 teachers	475 teachers	387 teachers	787 teachers	211 teachers	305 teachers	122 teachers	304 teachers
<i>School type</i>	3	1	3	3	2	1+2+3	1	1	1+3	1	3 (VET)

*Note.* All studies used MLQ to collected teachers' reports on principals. All scores are on a 1-5 scale. 1=primary schools, 2=middle schools, 3=high schools; VET= vocational education training.

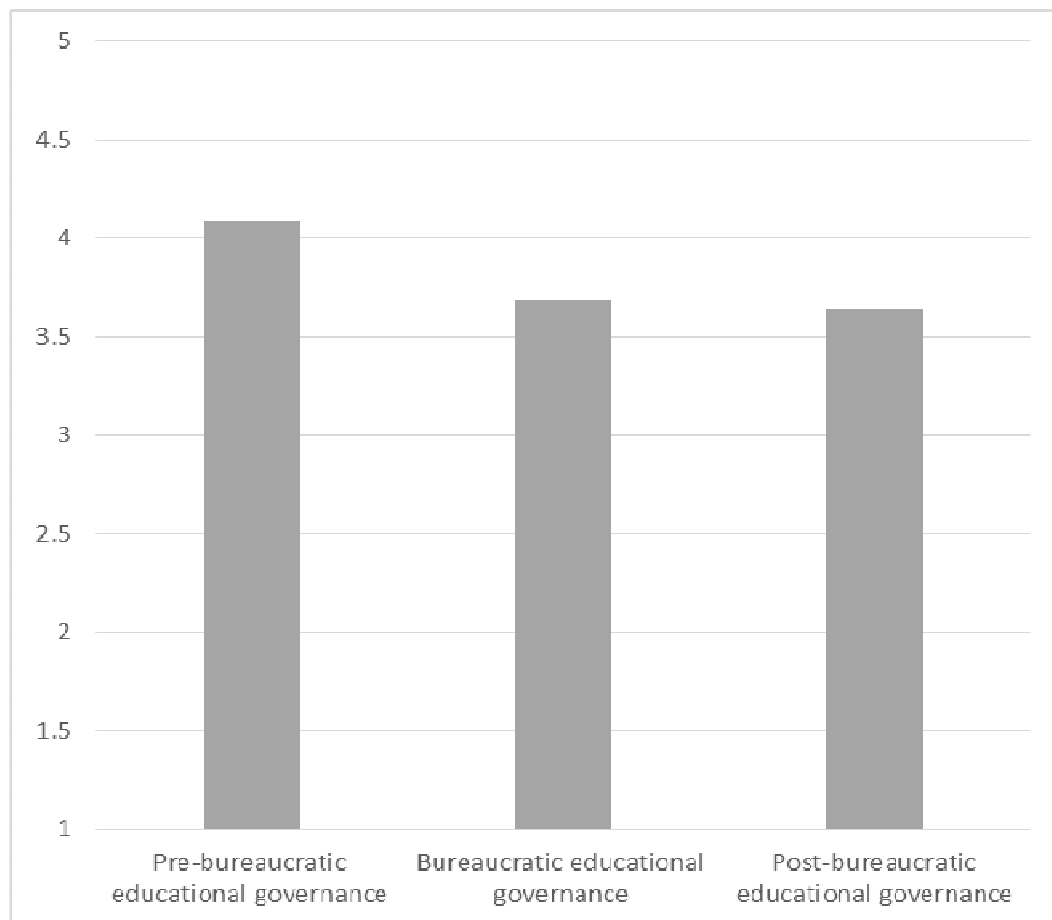
\*When sub-components were reported, inspirational motivation<sup>a</sup> (or intellectual stimulation<sup>b</sup>) was used to represent transformational leadership, management by exception-active was used to represent transactional leadership, and *laissez-faire* was used to represent passive leadership; \*\*original scale was 0-4, means were added 1; \*\*\*original scale was 1-6, scores were transformed; \*\*\*\*scale information was retrieved by email.

**Table 4.** WA of means and SDs for each leadership style by educational governance.

		Pre-bureaucratic educational governance	Bureaucratic educational governance	Post-bureaucratic educational governance	Total
Transformational leadership	WA of means	4.09	3.69	3.64	3.76
	WA of SDs	0.8	0.75	0.9	0.81
	Combined N	820	2087	942	3849
Transactional leadership	WA of means	3.44	2.82	2.61	2.87
	WA of SDs	0.63	0.97	0.87	0.94
	Combined N	500	2087	638	3225
Passive leadership	WA of means	2.11	1.84	--	1.93
	WA of SDs	0.63	0.76	--	0.79
	Combined N	500	2087	--	2798

*Note.* WA= weighted average. Studies that did not measure the style were omitted from WA calculations.

Figure 1 shows that the difference in means of transformational leadership between principals in bureaucratic educational governance (3.69) and post-bureaucratic educational governance (3.64) is extremely small. The difference in the means emerged as non-significant in independent t-test analysis ( $t(3027)=1.593, p<.05$ ). At the same time, the means of transformational leadership in bureaucratic and post-bureaucratic contexts were significantly lower ( $t(2095)=11.81$  and  $t(1760)=10.04, p<.001$ ) than the mean of transformational leadership in pre-bureaucratic context (4.09).



**Figure 1.** Prevalence of principals' transformational leadership behaviours by type of educational governance.

*Note.* Scores are weighted averages of means per context; MLQ scale is 1-5.

To explore the differences in principals' transformational behaviours within a country undergoing key changes in its educational governance, I focused on a country whose public education is undergoing key restructuring initiatives since the beginning of the 21st century and is moving from bureaucratic to post-bureaucratic governance (see Berkovich, 2014). I chose this context because of the published comparative data available on local principals' transformational behaviours that can be used to construct a timeline. The following inclusion criteria were used to select the empirical works: (a) use of MLQ; (b) works based on teachers' reports of principals; (c) focus on primary public schools; and (d) use of aggregated scores representing the school level of analysis.

Independent t-tests were conducted to compare the means in principals' leadership styles across the three samples collected from different time points (2004, 2010, and 2014). Table 5 shows that independent t-tests indicate non-significant differences across studies in principals' transformational behaviours. These analyses indicate that the means of principals' transformational leadership seem to emerge from the same population.

**Table 5.** Frequencies of Israeli school principals' leadership styles over time.

	Mean and SD of principals' leadership styles			Independent t-tests <i>t</i> (df)		
	2004 Study 1 (N=140)	2010 Study 2 (N=104)	2014 Study 3 (N=191)	Study 1 vs. Study 2	Study 2 vs. Study 3	Study 1 vs. Study 3
1. Principals' transformational leadership	3.92 (.40)	3.94 (.46)	3.84 (.68)	0.36 (242)	1.34 (293)	1.24 (329)
2. Principals' transactional leadership	2.88 (.36)	3.35 (.48)	2.72 (.60)	8.74*** (242)	9.22*** (293)	2.80** (329)
3. Principals' passive leadership	2.02 (.41)	2.14 (.50)	2.6 (.87)	2.05* (242)	4.96*** (293)	7.31*** (329)

*Note.* All samples were obtained from elementary school teachers. Numbers represent aggregated scores. Study 1: Eyal and Kark (2004), Scale range: 1-5; Study 2: Kurland, Peretz, and Hertz-Lazarowitz, (2010), Scale range: 1-5; Study 3: Nir and Hameiri (2014), scores were transformed from a 1-7 scale. \*  $p < .05$  ; \*\*  $p < .01$  ; \*\*\*  $p < .001$ .

#### *What is the bottom line?*

Conception no. 1, which suggests that transformational leadership may be more prevalent in post-bureaucratic environments that emphasise restructuring, was not supported.

Although such cross-sectional explorations are limited in their ability to support causal claims, they can still provide some preliminary indications whether or not a phenomenon exists. In this case, a question mark emerged regarding conception no.1 because the means of transformational leadership are similar in both bureaucratic and post-

bureaucratic contexts. This doubt is reinforced by the fact that the within-country analysis produced non-significant differences of principals' transformational behaviours over time, despite reports about the introduction of frequent policy reforms and the rise of post-bureaucratic educational governance.

### **Testing conception no. 2: Are transformational behaviours more effective than transactional behaviours?**

*What is the common conception?*

In general, the traditional argument contends that transformational leadership is positively associated with transactional leadership and therefore there are strong relations between the two, as stated by Judge and Piccolo's (2004) meta-analysis concerning transformational and transactional leadership. The authors concluded that "transformational and transactional leadership are so highly related that it makes it difficult to separate their unique effects" (765). The educational literature naturally embraced this idea. For example, Menon (2014) found a strong positive correlation between transformational and transactional leadership ( $r = 0.78$ ), and contended that it is an empirical indication of the strong conceptual relation between the two styles (521).

The discussion of the interrelations between leadership styles reaches further because it also reflects on general assumptions about the effectiveness of styles. The common claim is that the effectiveness of styles can be ranked: at the top are transformational leadership behaviours and at the bottom passive leadership behaviours. A typical argument about the superior effectiveness of transformational behaviours over transactional ones can be found in several works. For example, Bush (2011) claimed that "the main limitation of the transactional model is that the exchange is often short-term and limited to the specific issue under discussion. It does not have a wider impact on the behavior of the teacher or on school outcomes. Transactional leadership does not produce long-term commitment to the values and vision being promoted" (203). Hoy and Miskel (2013) also argued that "transformational leaders have greater positive effects on their educational organisations than transactional leaders" (454).

The literature suggests that Judge and Piccolo's (2004) meta-analysis plays a key part in shaping conception no. 2. For example, addressing this work directly Razik and

Swanson (2010) concluded that: "leader effectiveness and follower satisfaction with the leader were shown as stronger with the transformational leader. Laissez-faire leadership was least strong in relation to follower job satisfaction, follower satisfaction with the leader, and leader effectiveness" (93). Lunenburg and Ornstein (2012: 130) have also built on Judge and Piccolo's meta-analysis to affirm the existence of positive links between transformational leadership and leader effectiveness.

*What does the evidence say?*

Two paths were defined for the empirical exploration of conception no. 2: one linked with differences in correlation patterns between principals' transformational behaviours and other styles, and another linked with manifestations of non-traditional hierarchy of styles as they emerge in the styles related to school effectiveness outcomes.

To investigate differences in correlation patterns between principals' transformational behaviours and other styles, I used the body of Israeli works identified in the course of the above exploration of conception no. 1. There are similarities in the instruments, factor structure, and level of analysis of leadership styles in this collection of studies, which provides a sound base for comparison between them. Note that I used management by exception-active as representative of transactional leadership.<sup>3</sup> Table 6 shows the interrelations between principals' leadership styles reported in the identified works. I examined the significance of the difference between all matching independent coefficients. As shown in Table 6, it appears that whereas the association between transformational leadership and passive leadership is relatively stable, and most differences between sample correlations are non-significant, the associations between transactional leadership and transformational leadership are less stable.

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<sup>3</sup> Bass and Avolio's (1994) conceptualization of transactional leadership as composed of three sub-scales (contingent reward, management by exception-active, and management by exception-passive) has been heavily criticized (see Van Knippenberg and Sitkin, 2013). One alternative frequently used is focusing on management by exception-active as representative of transactional behaviors (Berkovich, 2016).



**Table 6.** Correlations between Israeli school principals' leadership styles.

	Correlations of principals' leadership styles			Correlation difference test z score		
	Study 1	Study 2	Study 3	Study 1 vs. Study 2	Study 2 vs. Study 3	Study 1 vs. Study 3
	(N=140)	(N=104)	(N=191)			
1. Association between principals' transformational leadership and transactional leadership	.08	.51**	-.47**	-3.68***	-8.69***	-5.254***
2. Association between principals' transactional leadership and passive leadership	-.14	-.32**	.11	-1.45 <sup>†</sup>	-3.58***	-2.24*
3. Association between principals' transformational leadership and passive leadership	-.63*	-.53**	-.73***	-1.15	-2.74***	-1.66 <sup>†</sup>

*Note.* All samples were obtained from elementary school teachers. Numbers represent aggregated scores. Study 1: Eyal and Kark (2004); Study 2: Kurland et al. (2010); Study 3: Nir and Hameiri (2014). Correlation difference tests were conducted using online software (Preacher, 2002, May). <sup>†</sup>  $p < 0.1$  ; \*  $p < .05$  ; \*\*  $p < .01$  ; \*\*\*  $p < .001$ .

Next, with the goal of examining the non-traditional hierarchy of styles emerging in the connection between the styles and school effectiveness outcomes, I focused on the identified manifestations of non-traditional hierarchy of styles. Table 7 presents evidence indicating a non-traditional hierarchy of styles. As shown in Table 7, Shatzer, Caldarella, Hallam, and Brown's (2014) study is a case in which principals' leadership styles did not produce the standard hierarchy of styles, whereas my own database indicates that in some situations an alternative hierarchy of styles emerges, in which principals' transactional behaviours or passive behaviours contribute more to school effectiveness than do transformational behaviours.

**Table 7.** Empirical evidence of non-traditional hierarchy of effectiveness of leadership styles.

	Shatzer, Caldarella, Hallam, and Brown (2014) <sup>a</sup> Primary schools, USA		Author's database Primary schools, Israel	
	Standardised test-raw average (R <sup>2</sup> )	Standardised test-annual change (calculated per student) (R <sup>2</sup> )	Standardised test-raw average (estimate)	
			Schools serving low SES population	Schools serving high SES population
Principals' transformational leadership (TF)	.01	.04	-.23	.30
Principals' transactional leadership (TA)	<b>.04</b>	.02	<b>.40*</b>	<b>-.36*</b>
Principals' passive leadership (PA)	.00	<b>.08</b>	.06	<b>.48**</b>
N	N=37	N=36	N=31	N=30
Type of analysis	Single regression	Single regression	Multi-group analysis in PLS structural equation modeling	

*Note.* Studies reported on school level of analysis. Data in studies originated from country/state assessment. Highest positive outcome is marked in bold. <sup>†</sup>  $p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ .

<sup>a</sup>TF = Inspirational motivation, TA = Management by exception-active, PA = Laissez-faire leadership.

*What is the bottom line?*

Conception no. 2, which suggests that principals' transformational leadership behaviours are more effective than transactional ones, was not supported. The present exploration addressed two basic elements behind this conception: the existence of strong relations between transformational and transactional behaviours, which then translates into a traditional hierarchy of effectiveness of leadership styles (transformational behaviours > transactional behaviours > passive behaviours). Neither element was confirmed because the relation between transformational and transactional behaviours greatly varied across the studies that were investigated, and because several studies portrayed a non-traditional hierarchy of effectiveness of leadership styles.

### **Testing conception no. 3: Are school leaders either transformational or transactional?**

*What is the common conception?*

The common conception is that principals have a single style of leadership behaviour, so that some use transformational behaviours and others do not. This presents the use of transformational leadership behaviours as a personality-like characteristic. Claims of this nature appear in Oplatka (2007), who argued that only a small number of leaders are transformational (230). Lunenburg and Ornstein (2012) also noted in the "PRO CON debate" section on leadership styles that "in most instances, their [school administrators'] styles remain the same over their careers" and that "career administrators change their jobs but not their styles" (131).

Nevertheless, the literature acknowledges the use of dual styles by leaders, but these ideas are often marginalised in the text. One example of such acknowledgment can be found in Razik and Swanson (2010), who contended that "although Burns viewed transactional and transformative leadership as opposite ends of a continuum, Bass argued that leaders exhibit both types of leadership, depending on the situation" (92). A similar analysis of the development of the literature appears in Leithwood, Jantzi, and Steinbach (1999: 29).

*What does the evidence say?*

To test this conception, I performed a k-mean analysis on my own dataset, originating from a random sampling of public primary schools (Berkovich and Eyal, 2017). The data contained aggregated scores of teachers' reports on the leadership styles of 69 principals, collected using the MLQ. The number of clusters in the k-mean analysis was set to 3 after a visual inspection of a scatterplot graph, in which transformational leadership and transactional leadership were used as axes. The k-mean analysis results are presented in Table 8, which shows that the interquartile range per each cluster is narrow, attesting to the homogeneity of the clusters.

**Table 8.** Means, SDs, and interquartile ranges of profiles of leadership styles.

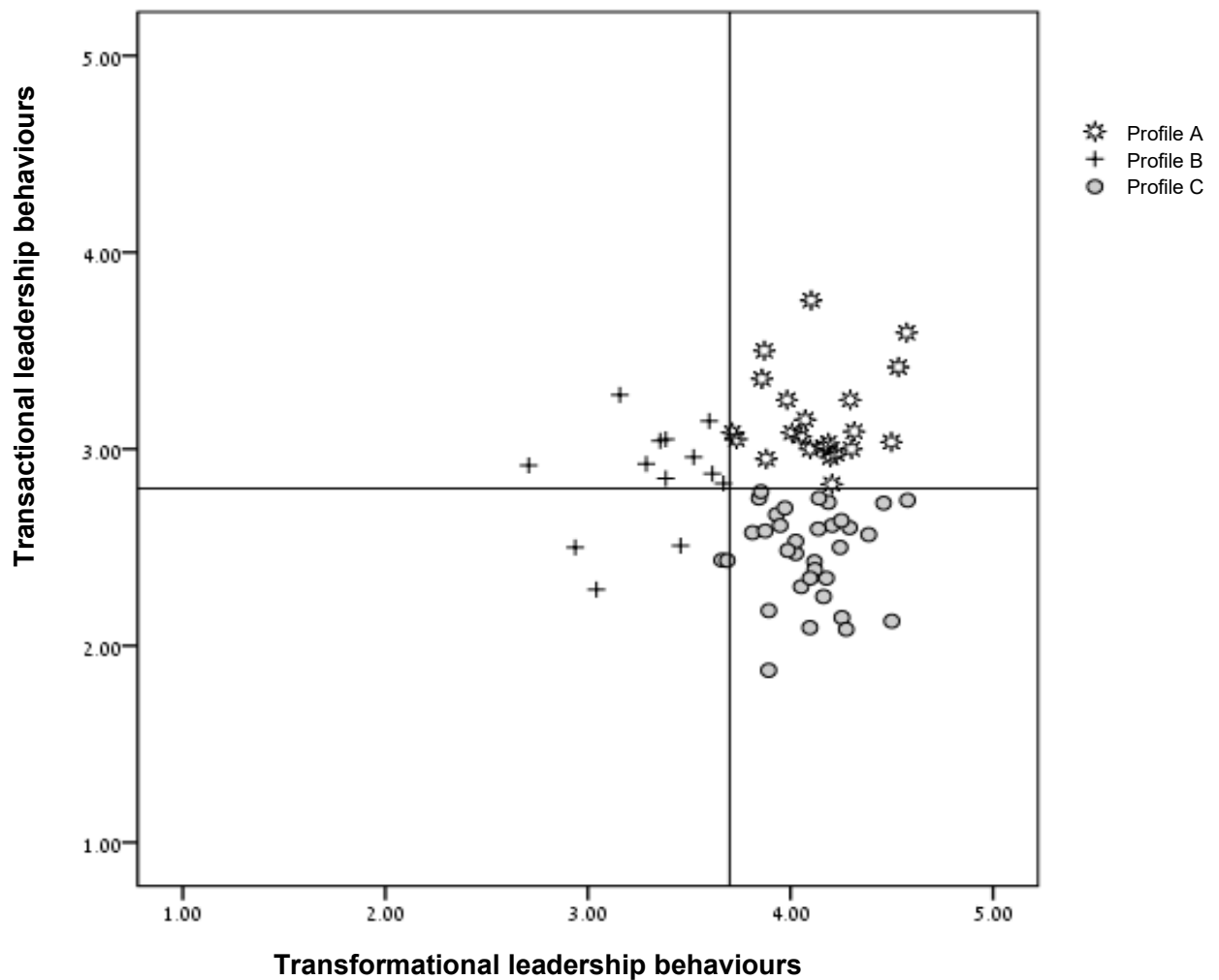
Dimensions	Profile A- ambidexterity	Profile B- transactional dominant	Profile C- transformational dominant
Transformational leadership behaviours (Median= 4.04)	4.12 (.23) [3.95-4.29]	3.31 (.28) [3.1-3.56]	4.09 (.21) [3.92-4.24]
Transactional leadership behaviours (Median= 2.75)	3.15 (.23) [3.00-3.27]	2.85 (.27) [2.66-3.04]	2.47 (.23) [2.33-2.64]
N	22 (31.9%)	13 (18.8%)	34 (49.3%)

*Note.* Numbers in square brackets represent interquartile ranges (Q1-Q3)

ANOVAs revealed a significant difference in the means of transactional behaviours between the three profiles ( $F(2, 66) = 54.99, p < .001$ ), and the differences were significant in all composition sets in Tukey's *post hoc* tests ( $p < .01$ ). ANOVAs also revealed significant differences in the means of transformational behaviours between the three profiles ( $F(2, 66) = 58.28, p < .001$ ). Tukey's tests indicated a non-significant difference in transformational behaviours between profiles A and C, but both profiles A

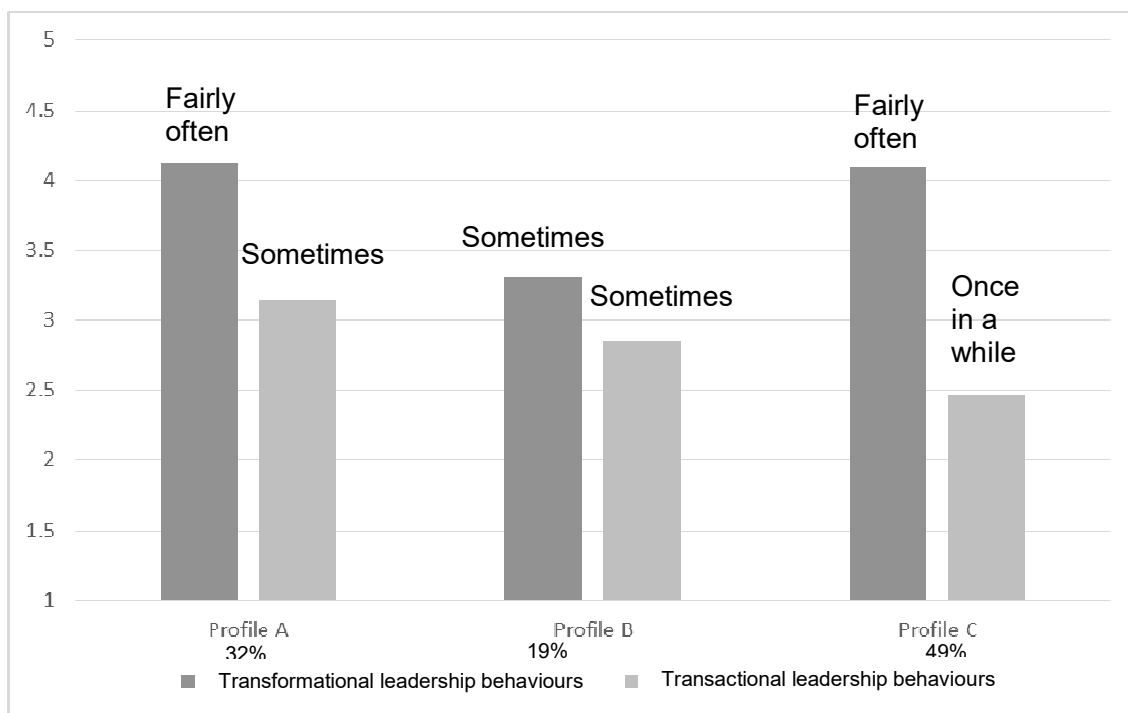
and C were significantly different in transformational leadership from profile B ( $p < .001$ ).

The plotting of the styles used to classify the principals is shown in Figure 2, together with the assignment of each principal to his profile, as determined by the k-mean analysis. Figure 2 shows that principals who seldom use transformational and transactional behaviours are extremely rare, so that in practice this is an “empty category.”



**Figure 2.** Plotted profiles of leadership styles.

The prevalence of the principals' leadership style profiles is presented in Figure 3. The most prevalent profile is C (49%), representing principals who use transformational behaviours fairly often but seldom use transactional ones. The second most prevalent profile is A (32%), representing principals who use transformational behaviours fairly often and transactional ones occasionally. The least prevalent profile is B (19%), representing principals who use both transformational and transactional behaviours occasionally.



**Figure 3.** Means of principals' transformational and transactional behaviours by profile type.

#### *What is the bottom line?*

Clustering analysis indicated that half the principals can be characterised as single-style transformational leaders because they stick to one dominant style and use transformational behaviours frequently. Thus, there is empirical support for the claim that some leaders can be profiled as simply transformational. But the analysis also indicated another segment of the population of school principals who tend to use two styles,

transformational and transactional. Although these principals rely more on transformational behaviours, transactional behaviours appear to be an inseparable part of their conduct. A significant proportion of principals base their leadership on behaviours belonging to two styles.

### **Discussion**

The present paper explored three common conceptions of leadership style theory, particularly transformational leadership in education, stating that: (a) principals' transformational leadership behaviours are more prevalent in national contexts than are restructuring-oriented; (b) principals' transformational behaviours are more effective than transactional behaviours; and (c) principals are either transformational or transactional. The logic of the study is based on Karl Popper's idea of falsifiability as a criterion of scientific knowledge. Popper (1959) suggested "an asymmetry between verifiability and falsifiability; an asymmetry which results from the logical form of universal statements. For these are never derivable from singular statements, but can be contradicted by singular statements" (19). Although the present exploration focuses on a limited empirical evidence, it proves that common conceptions are unsupported. It is recommended that future works building on these statements avoid repeating such unsubstantiated premises, or at least communicate these ideas with adequate reservations.

Although the present paper focused on the empirical exploration of common conceptions, its findings deserve follow-up in future research. The investigation of conception no. 1, dealing with principals' transformational leadership behaviours in various restructuring-oriented contexts, produced several related insights. For example, the cross-country exploration indicated the possibility of an alternative claim concerning change from a pre-bureaucratic administration of education policy to a bureaucratic administration, because such a change seems to involve lower levels of transformational behaviours. Murphy (2006) described principalship in pre-bureaucratic contexts as "ideological." According to him, in such contexts school leadership is not based on formal training but on individuals' learning and authority. One probable explanation of this finding is the "routinisation" of charismatic authority, which Max Weber (1968) suggested occurs during times of formation of a bureaucratic system that emphasises

formal authority. It is possible that as pre-bureaucratic administration of education policy change into bureaucratic administration, principals are less expected by self and others to use charismatic transformational behaviours.

The investigation of conception no. 2, concerning principals' transformational behaviours being more effective than transactional behaviours, also generated several stimulating insights. For example, the fluctuations in the correlative relations between transactional and transformational behaviours suggest that transactional leadership has a chameleon-like nature, as it switches from complementary to contradictory relations with transformational leadership. This issue may be partially explained by the manifestations of non-traditional hierarchy of effectiveness of styles revealed by the present work. One possible explanation of these findings is that transactional leadership is more sensitive to variation in task difficulty. In education, Hardman<sup>4</sup> (2011) found similar means of principals' transformational behaviours in improving and non-improving schools, but the means of principals' management by exception-active showed greater dissimilarity (1.50 in improving vs. 1.92 in non-improving). These findings and the one resulting from the investigation of conception no. 2 reflect the logic behind situational leadership theory, which assumes that the ideal leadership style (relationship- or task-oriented) varies as a function of the subordinates' performance readiness, related to the task at hand (Hersey and Blanchard, 1982). Subordinates' performance readiness was described as the result of their competence and of their commitment to tackling the relevant task (Blanchard et al., 1985). The literature suggests that even key scholars of transformational leadership theory, such as Bass and Avolio, acknowledged the possibility that situational contingencies influence the emergence and consequences of leadership styles. For example, Bass (1997) suggested the possibility that 'the portion of the accountable variance due to a contingent situation ... becomes so large as to call into question the argument endorsing the universality of transactional-transformational behaviours and their effects' (137). Antonakis, Avolio, and Sivasubramaniam (2003) have argued that 'in context "Y" behavior "B" may not be necessary or may even be counterproductive, with

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<sup>4</sup> Scores reported by teachers at the individual level of analysis; improving schools are schools showing improvement greater than a 1% increase in achievements over 3 years, and non-improving schools are schools showing improvement of less than 1% increase in achievements over 3 years.



effective leaders demonstrating behavior “B” less frequently. Thus, in context “Y”, behaviors “A” and “B” may not be as strongly correlated or may even be negatively correlated’ (269).

Moreover, recently, there has been growing recognition in the educational leadership community that the empirical data on perceived and actual effectiveness of leadership styles are scarce (Menon, 2014; Nir and Hameiri, 2014). The present investigation may redirect attention to problematic methodological issues in educational leadership research. I was able to find indications of non-traditional hierarchy of styles only in studies that used measures of outcomes reported by non-teachers or that used non-perceptual measures. This may be considered as another indication of the widespread common method bias (see MacKenzie and Podsakoff, 2012) in educational leadership research, and of its effect on the quality of the data collected, because it liable to inflate, or at times deflate covariations.

Last, the examination of conception no. 3, concerning the classification of principals into transformational or transactional, resulted also in an intriguing outcome. The exploration indicated that a large proportion of principals use two styles. Some researchers contend that diversification of the principals' proactive styles is highly effective. For example, Hallinger (2003) argued that: "research has determined that effective leadership requires both transactional and transformational elements" (338). Recent works suggest that combining school leadership behaviours (e.g., transformational and instructional) can be extremely promising (Urlick and Bowers, 2014). This combination of behaviours describes many principals and therefore warrants additional research attention focusing on the manifestations of various principals' profiles.

In sum, the dynamic of scientific knowledge in the educational leadership, as it emerges from current research focusing on transformational leadership, seems to have a large resemblance with Thomas Kuhn's (1962) description in his book, "The structure of scientific revolutions." Exploring science from a historical perspective, Kuhn suggested that scientific knowledge is not built incrementally. He argued that this dynamic is the result of the scientific community coalescing around a certain paradigm at a given time. During such a period, conflicting evidence does not lead to abandoning the paradigm but

is often disregarded. This is partially the result of scientific community that is decentralised.

This essay is based on the premise that theories are never limited by the *a priori* assumptions of the original thinkers, because in time the discourse about them expands and produces common conceptions. Such a development is particularly sensitive in an applied scientific field, such as education, in which practitioners use research knowledge in their professional practices. This investigation emphasises the need of the educational leadership research community to move from modernistic (e.g., conception no. 1), universal (e.g., conception no. 2), and simplistic (e.g., conception no. 3) assertions to more sophisticated ones that are context-dependent, task-dependent, and complex. Transformational leadership theory is used here as a case study, but most likely similar conceptions exist in other dominant theories in educational leadership (e.g., instructional leadership, distributed leadership, democratic leadership, etc.). Researchers and practitioners alike are advised to periodically re-examine common conceptions to ensure that our agreed-upon knowledge is relevant and meaningful.

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