

The Role of School Principals in Shaping Children's Values

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Yair Berson^{1,2} and Shaul Oreg^{3,4}

¹Department of Psychology, Bar-Ilan University; ²Department of Management and Organizations, Stern School of Business, New York University; ³School of Business Administration, The Hebrew University of Jerusalem; and ⁴School of Industrial and Labor Relations, Cornell University

Abstract

Instilling values in children is among the cornerstones of every society. There is wide agreement that beyond academic teaching, schools play an important role in shaping schoolchildren's character, imparting in them values such as curiosity, achievement, benevolence, and citizenship. Despite the importance of this topic, we know very little about whether and how schools affect children's values. In this large-scale longitudinal study, we examined school principals' roles in the development of children's values. We hypothesized that relationships exist between principals' values and changes in children's values through the mediating effect of the school climate. To test our predictions, we collected data from 252 school principals, 3,658 teachers, and 49,401 schoolchildren. A multilevel structural-equation-modeling analysis yielded overall support for our hypotheses. These findings contribute to understanding the development of children's values and the far-reaching impact of leaders' values. They also demonstrate effects of schools on children beyond those on academic achievement.

Keywords

personal values, personality, schools, organizations

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Instilling values in children is among the cornerstones of every society. Educators play a key role in the value-transmission process, as highlighted by scholars and policymakers past and present. Aristotle, for example, emphasized the role of educators in the cultivation of values in society (Pritchard, 1988). Similarly, John Dewey (1964) held that teachers are responsible for imparting values to students. Indeed, many prominent statesmen, including President Bill Clinton in his 1996 State of the Union address, have called for emphasizing value education in schools (Clinton, 1996). Accordingly, most education systems, and schools in particular, include in their vision the ideal of educating students and instilling values that are considered important in a given society (Dewey, 1909).¹

Accordingly, there is wide agreement that schools play an important role in shaping schoolchildren's character, imparting in them a range of virtues and values, such as curiosity, achievement, benevolence, and citizenship. Nevertheless, the predominant mention of schools in the media as well as in academic writing refers to their role

in promoting children's academic achievement. Correspondingly, the vast majority of studies on school outcomes has focused on schoolchildren's grades. Very limited research has considered the effects that schools have on the development of children's values.

In the present study, we examined school effects on children's values, focusing on the roles of school leaders. By *values*, we refer to overarching, trans-situational goals that serve as guiding principles in people's lives (Schwartz, 1992). They are organized in personal hierarchies of importance, such that people differ in the values they consider most important. Once consolidated, typically by

Corresponding Authors:

Shaul Oreg, Cornell University, School of Industrial and Labor Relations, 396 Ives Faculty Building, Ithaca, NY 14853
E-mail: so44@cornell.edu

Yair Berson, New York University, Stern School of Business, 40 West Fourth St., New York, NY 10012
E-mail: yberson@stern.nyu.edu

early adulthood, individuals' values are relatively stable over time and across situations (Bilsky & Schwartz, 1994).

On the basis of research among samples from more than 80 countries, Schwartz (1992, 2011) introduced a two-dimensional structure of values. This structure consists of one continuum representing individuals' emphasis on stability (i.e., *conservation*) versus change (i.e., *openness to change*) and a second continuum representing individuals' focus on promoting their own interests (i.e., *self-enhancement*) versus those of others (i.e., *self-transcendence*). Although most individuals will endorse all of these values, some set the highest priority on safety and stability, for example, whereas others prioritize the experience of novelty, thrills, and excitement. Some highlight their personal growth and advancement, whereas others highlight the growth and nurturance of those around them.

Most of the research on values has considered their effects on other variables. Specifically, they have been linked with a wide range of behaviors and outcomes (Bardi & Schwartz, 2003; Boer & Fischer, 2013), including voting behavior (Barnea & Schwartz, 1998), cooperative behavior (Sagiv, Sverdlik, & Schwarz, 2011), proenvironmental behavior (Karp, 1996), occupational choices (Knafo & Sagiv, 2004), and volunteering behavior (Oreg & Nov, 2008). It is because of these broad implications for human behavior that shaping values is central in the socialization of human beings in general and in the socialization of children in schools in particular.

Likely because the malleability of values is limited, much less research has considered the factors that shape values. Childhood is the period during which values are probably most malleable, and most of the research aimed at predicting children's values has focused on genetics and parenting influences (Knafo & Schwartz, 2004; Knafo & Spinath, 2011). Very little research has examined the role of social structures in shaping individuals' values in particular and personality in general. Our focus in the present study was on schools' roles in this socialization process. Specifically, we focused on the role of school principals' values. In so doing, we contribute both to the limited research aimed at explaining the formation of values and the more well-established literature on values' effects. Yet contrary to previous research of the effects of values, most of which attended to direct relationships between individuals' values and their own responses, our focus was on the more distal and indirect effects of key individuals' values on others' responses.

As school leaders, principals have a significant impact on school outcomes (Leithwood, Harris, & Hopkins, 2008). Effects of leaders on outcomes are well established in organizations in general (Bass, 2008) and schools in particular (Leithwood & Mascall, 2008). For example, research has linked leaders' personal characteristics,

including their values, with organizational and school outcomes (Berson, Oreg, & Dvir, 2008; Oreg & Berson, 2011). The underlying premise in this research is that organizations are reflections of their leaders (Hambrick & Mason, 1984). This happens through a number of mechanisms. Leaders express their values through their emphases and actions, such as in the behaviors and consequences they choose to reward. These emphases serve as cues that shape the organization's environment (Hambrick & Mason, 1984) and could gradually shape followers' values (Bardi & Goodwin, 2011). Over time, these environments (e.g., organizational culture or climate) influence members' values through mechanisms such as acclimation, whereby people form value priorities that are compatible with the factors that are reinforced in their environments (Schwartz & Bardi, 1997).

Another mechanism through which leaders' values can come to shape the organization is the recruitment and selection of job candidates (e.g., D. Byrne, 1997). Leaders' values may be manifested in selection criteria, which in turn determine hiring decisions. Such decisions, in turn, contribute to the makeup and nature (e.g., climate, culture) of the organization and serve as a means through which leaders' values trickle down in the organization and come to characterize it as a whole (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). Accordingly, both theory and research have linked the values of top leaders with their organization's culture and climate (Schein, 1992), which in turn have been linked with organizational outcomes, such as performance (Berson et al., 2008). In the school context, a most meaningful outcome, yet to be linked with school leadership, is schoolchildren's values.

As noted above, most of the research predicting children's values has focused on the role of parents (e.g., Knafo & Schwartz, 2004). A few small-scale studies of schoolchildren compared the values of children from different types of schools (e.g., public, private, and religious; Hofmann-Towfigh, 2007; McCartin & Freehill, 1986). These studies found that, for example, students in religious schools scored higher than those in public and private schools on conformity and traditional values and scored lower on self-direction and hedonism. Students in private schools were highest in stimulation and power values (Hofmann-Towfigh, 2007). Changes in these children's values over the school year were linked with students' demographics (e.g., age, religiosity). It is still unclear, however, what role schools play in shaping children's values. Specifically, do principals' values predict changes in children's values? And if so, what processes could explain these relationships between principals' and schoolchildren's values?

We hypothesized that principals' values would be reflected in schoolchildren's values, such that, over time,

children's values would become more similar to those of their principals. Our focus was on Schwartz's (1992) four value categories of self-enhancement, self-transcendence, openness to change, and conservation. For each value category, we proposed that principals' values would be related to schoolchildren's values 2 years later, in analyses controlling for schoolchildren's baseline values.

Furthermore, as noted above, organizations' climates and cultures constitute a mechanism through which leaders' values become associated with organizational outcomes (e.g., Berson et al., 2008). Accordingly, we proposed that one of the mechanisms through which principals' values may come to be reflected in schoolchildren's values is the school climate. We focused on dimensions of the school climate that correspond with the four value categories—namely, the degree to which the school climate reflects an emphasis on stability (corresponding to conservation values), support (corresponding to self-transcendence values), innovation (corresponding to openness-to-change values), and performance (corresponding to self-enhancement values).

We further hypothesized that children's values would predict their behaviors (Benish-Weisman, 2015; Vecchione, Döring, Alessandri, Marsicano, & Bardi, 2016). We expected each value category to covary with a corresponding type of behavior. Conservation values should covary with disciplined behavior, self-transcendence with supportive behavior, openness to change with learning-oriented behavior, and self-enhancement with achievement-oriented behaviors. The expected relationships are summarized in the model shown in Figure 1.

Method

Participants

We collected data from principals, teachers, and children in public elementary ($n = 209$) and secondary ($n = 43$) schools throughout Israel at three points in time. In Israel, elementary schools cover Grades 1 through 6, and secondary schools cover Grades 7 through 9. We collected values data from schoolchildren at two points in time, 2 years apart. Because of our longitudinal design, we collected data at Time 1 only from children in Grades 1 through 4 and in Grade 7, so that we could approach these same children again 2 years later in the same schools. Accordingly, at Time 2, we collected data from children in Grades 3 through 6 and in Grade 9.

At Time 1, 252 school principals (72.3% female, 27.7% male) and 49,415 schoolchildren (50.3% female, 49.7% male) filled out questionnaires about their personal values.² At Time 2, we obtained values data from 33,436 children, of whom 26,422 were the same children from whom we collected values data in Time 1. At Time 2, we

also collected data from homeroom teachers ($N = 1,007$) on the behaviors of 6,363 of the schoolchildren. In between these two data-collection phases, at Time 1.5 (1 year following Time 1), we collected data from 3,658 teachers (92% female, 8% male) on their school's climate. Overall, our aim was to reach 300 schools at Time 1, and acknowledging that several schools might drop out by the end of the study, we were hoping to remain within the range of 220 to 250 schools.

Of the participants, 78.7% were Jewish, and the remaining 21.3% were Arab, which very closely corresponds with the distribution of the population in Israel. In the schools sampled, the mean number of teachers was 34.32 ($SD = 17.46$), and the mean number of children was 425.42 ($SD = 211.79$). The mean of principals' tenure as principals was 7.78 years ($SD = 6.97$), and the mean teacher tenure was 16.33 years ($SD = 9.83$).

Procedure

All data were collected through questionnaires administered at the schools. Schoolchildren filled out the values questionnaires while in their classroom. A 30- to 45-min time block was secured for this process, throughout which a research assistant was present to provide instructions, answer questions, and attend to children who required assistance. This procedure was conducted twice, once for each measurement of children's values. Principals typically filled out values questionnaires in their office. Teachers were recruited to participate and filled out a school-climate questionnaire in the teachers' lounge. The median number of classes from which we collected climate data in each school was eight, and the median number of children in each class was 26. Teachers who were also homeroom teachers were approached again at Time 2. They were then asked to randomly choose up to 12 children in their class who attended the school 2 years earlier and to rate the typical class behavior of each using the class-behavior questionnaire. The median number of children rated by homeroom teachers was 7.

Measures

Personal values. We used three scales to measure personal values. Given constraints on principals' time for participating in the study and children's difficulties in filling out long questionnaires, we used abbreviated scales. We decided on the items to include through consultation with the developer of the theory of personal values and its measurement scales (Schwartz, personal communication, January 11, 2011). We further conducted confirmatory factor analyses to validate the abbreviated scales' structures (see the Supplemental Material available

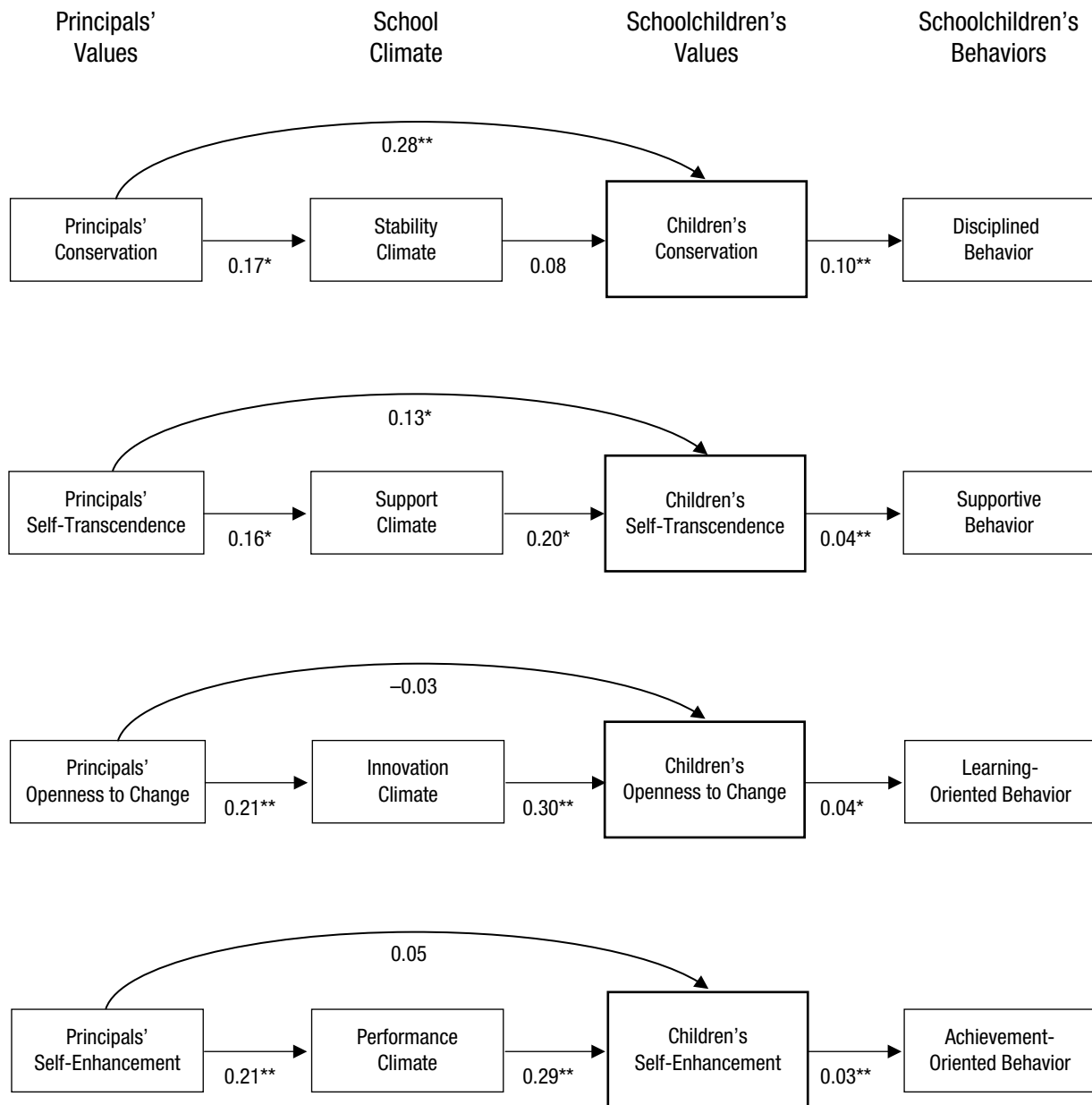


Fig. 1. Model results for the four paths showing the influence of specific principals' values on four related aspects of schoolchildren's behavior, as mediated by school climate and schoolchildren's values. Each model linked a specific value with a specific feature of the school climate and a specific behavioral outcome. The assessed dimensions of school climate involved the school's emphasis on stability, supportiveness, innovation, or performance. The effect sizes shown are standardized estimates. Analyses were conducted controlling for schoolchildren's sex, school size (number of teachers), Time 1 values, and principals' tenure (see Table 1). The model also included intercorrelations among principals' values, among the residuals of children's values, and among the residuals of children's behaviors, but these are not illustrated so as not to overcrowd the figure. The boldface outlines the key variables in the analysis. Asterisks indicate significant paths (* $p < .05$, ** $p < .01$).

online). For principals, we used a version of the Portrait Values Questionnaire (PVQ5X; Schwartz et al., 2012), which is a refined and further validated version of the earlier PVQ scale (Schwartz et al., 2001). PVQ scale items are short descriptions of the goals and aspirations of hypothetical individuals. In response to each description, participants are asked to rate the degree to which they

see themselves as similar to the hypothetical individual described in the item, on a scale ranging from 1 (*not like me at all*) to 6 (*very much like me*).

For each value category, we focused on items that had the highest face validity and seemed to be most comprehensible for participants in the school context. Conservation values were assessed with 10 items that tapped

Table 1. Results of Multilevel Analyses Predicting Schoolchildren's Time 2 Values

Predictor ^a	Model 1 (control variables)				Model 2 (control variables plus principals' values and school climate)			
	Conservation	Self-transcendence	Openness	Self-enhancement	Conservation	Self-transcendence	Openness	Self-enhancement
Within-levels predictors								
Children's sex (0 = male, 1 = female)	0.10** (0.01)	0.09** (0.01)	-0.06** (0.01)	-0.06** (0.01)	0.10** (0.01)	0.09** (0.01)	-0.06** (0.01)	-0.06** (0.01)
Children's Time 1 grade (first, second, etc.)	-0.09** (0.01)	0.08** (0.01)	0.03* (0.01)	0.03** (0.01)	-0.09** (0.01)	0.08** (0.01)	0.03* (0.01)	0.03** (0.01)
Children's Time 1 values ^b	0.17** (0.01)	0.11** (0.01)	0.15** (0.01)	0.17** (0.01)	0.17** (0.01)	0.11** (0.01)	0.15** (0.01)	0.17** (0.01)
Between-levels predictors								
Intercept	0.49 (0.22)	-1.24** (0.21)	0.33 (0.27)	-0.07 (0.21)	0.29 (0.24)	-1.49 (0.24)	0.18 (0.27)	0.15 (0.24)
School size (number of teachers)	-0.03 (0.05)	0.11** (0.03)	-0.09* (0.04)	-0.03 (0.03)	-0.02 (0.05)	0.11** (0.03)	-0.05 (0.04)	-0.03 (0.02)
Principal's school tenure	-0.10 (0.09)	-0.25** (0.09)	0.02 (0.11)	0.12 (0.09)	-0.13 (0.09)	-0.26** (0.08)	0.04 (0.10)	0.10 (0.08)
Principal's values ^b	—	—	—	—	0.28** (0.08)	0.13* (0.07)	-0.03 (0.08)	0.05 (0.06)
School climate	—	—	—	—	0.08 (0.12)	0.20* (0.09)	0.30** (0.08)	0.29* (0.12)
Total between-levels <i>R</i> ²	.01	.07	.01	.01	.11	.13	.10	.10

Note: The table shows standardized estimates, with standard errors in parentheses.

^aPredictors were grand-mean centered. ^bFollowing Schwartz's (1992) guidelines for the measurement of values, we centered value scores prior to their inclusion in the analyses.

p* < .05. *p* < .01.

aspects of conformity (e.g., “It is important to him/her to follow rules even when no one is watching”), tradition (e.g., “It is important to him/her to maintain traditional values or beliefs”), and security (e.g., “Having order and stability in society is important to him/her”). Openness to change was assessed with 4 items that tapped individuals' preference for stimulation (e.g., “He/she thinks it is important to have all sorts of new experiences”) and self-direction (e.g., “Being creative is important to him/her”).

Self-transcendence and self-enhancement values are relatively heterogeneous in the content they cover (i.e., self-transcendence includes values of benevolence and universalism, and self-enhancement includes values of achievement and power). We therefore focused on the particular value in each category that is most concrete (e.g., Datler, Jagodzinski, & Schmidt, 2013; Schwartz, 1992, 2012) and most clearly manifested within the school context. Self-transcendence was therefore assessed with three items that tap benevolence (e.g., “He/she goes out of his way to be a dependable and trustworthy friend”), and self-enhancement was assessed with three items that

tap achievement (e.g., “Being very successful is important to him/her”).

Reliability scores for the values measured among principals were comparable to those obtained in previous studies of values (Cronbach's *α*s—conservation: .84, openness to change: .70, self-transcendence: .58, and self-enhancement: .69). Although the alphas for self-transcendence and self-enhancement were somewhat lower than the acceptable .7 threshold, they were within the expected range for personal values (Bardi & Schwartz, 2003; Schmitt, Schwartz, Steyer, & Schmitt, 1993), in particular given the small number of items we used for each of these values. We validated this version of the scale using a separate sample (see the Supplemental Material).

We used two shorter versions of values scales to assess children's values. For children in Grade 3 and above, whose reading ability has been shown to be sufficient for filling out the PVQ (e.g., Knafo & Spinath, 2011), we used 14 of the 21 PVQ items that we used for principals. Contrary to their original mode of presentation among adults,

which is in the third person, items were revised to be in the first person (e.g., “I go out of my way to be a dependable and trustworthy friend”) to make them more comprehensible and less abstract. Conservation was assessed with six items, openness to change with four items, self-transcendence with two benevolence items, and self-enhancement with two achievement items. Interitem reliability was approximately the same at Times 1 and 2 (conservation: α s = .72 and .75; openness to change: α s = .59 and .62; self-transcendence: α s = .53 and .57; and self-enhancement: α s = .71 and .75, respectively). These alphas closely corresponded with those of other samples of children who filled out the PVQ (e.g., Benish-Weisman, 2015; Vecchione et al., 2016). As we did for principals, we validated this version of the scale using a separate sample (see the Supplemental Material).

Because first and second graders' reading ability is still developing, we measured these children's values with the Picture-Based Value Survey for Children (PBVS-C, Döring, Blauensteiner, Aryus, Drögekamp, & Bilsky, 2010), which was designed for young children and has been shown to correspond with established measures of adult values, such as the PVQ (e.g., Cieciuch, Döring, & Harasimczuk, 2013; Döring et al., 2015). Instead of verbal descriptions, the PBVS-C uses pictures to represent the various values (see Fig. 2 in Döring et al., 2010; for additional information about the scale and its administration, see the Supplemental Material). We selected 14 pictures that would correspond with the 14 PVQ items we used for the older schoolchildren: six pictures to measure conservation, four pictures to measure openness to change, and two pictures each to measure self-transcendence and self-enhancement.

Given that young children's responses to abstract items, such as pictures, often yield lower levels of internal consistency than can be expected in response to verbal scales (Lehmann, Bendebba, & DeAngelis, 1990), and because of the Q-sort ranking procedure with which the scale is administered (see also Cieciuch, Davidov, & Algesheimer, 2016; Döring et al., 2015; Uzefovsky, Döring, & Knafo-Noam, 2016), we used a multidimensional-scaling analysis, rather than Cronbach's alpha, to assess the measurement properties of the PBVS-C (Kruskal & Wish, 1978). Multidimensional scaling is used to map the relations among scale items onto a two-dimensional space and is therefore the standard procedure for validating values scales. Accordingly, we used this analysis to replicate the two-dimensional structure of values (Schwartz, 1992).³

As expected, we replicated the two-dimensional structure, finding one continuum ranging from self-enhancement values to self-transcendence values, and the second, relatively orthogonal continuum ranging from conservation values to openness-to-change values. This suggests

that children's interpretation of the pictures corresponded with the psychological content the pictures were designed to represent.

School climate. To assess the school climate, we adapted items from O'Reilly, Chatman, and Caldwell's (1991) Organizational Culture Profile (OCP). Specifically, we focused on the stability, innovation, respect for people, and outcome-orientation OCP dimensions, which corresponded with our four climate dimensions. We thus composed three items for each climate dimension (see Appendix S1 in the Supplemental Material). Reliability for these dimensions was satisfactory (α s—stability: .81, innovation: .91, supportiveness: .93, and performance: .74). (We conducted several procedures to validate this scale. These are described in the Supplemental Material.)

Schoolchildren's class behaviors. The items for assessing children's behavior in class were composed for the present study. We created descriptions of typical class behaviors that reflected each of the four behavior categories (i.e., disciplined, learning oriented, supportive, and achievement oriented; see Appendix S2 in the Supplemental Material). We used two items for the disciplined-behavior dimension and three items for each of the remaining three dimensions. For each of the children that each home-room teacher chose to rate, the teacher was asked to rate the degree to which each of the descriptions accurately portrayed the child. Reliability for the scale dimensions was satisfactory (α s—disciplined: .92, learning oriented: .87, supportive: .75, and achievement oriented: .80).

Results

Preliminary analyses

Following extant research on organizational climate (Schneider, Ehrhart, & Macey, 2013), we assigned schools' climate scores by aggregating teachers' climate ratings in each school. Aggregation is meaningful only if there is sufficient agreement among teachers in each school. Aggregation analyses of our data indicated sufficient agreement (see additional information about these analyses in the Supplemental Material). With respect to all of the variables in our model, after obtaining supporting evidence for the scales' structures (see the Supplemental Material), we parceled the items for each scale and proceeded with the test of our structural model, as described in the following section.

Primary analyses

Given the multilevel nature of our data, we tested our model (Figs. 1 and 2) using Mplus (Version 7; Muthén &

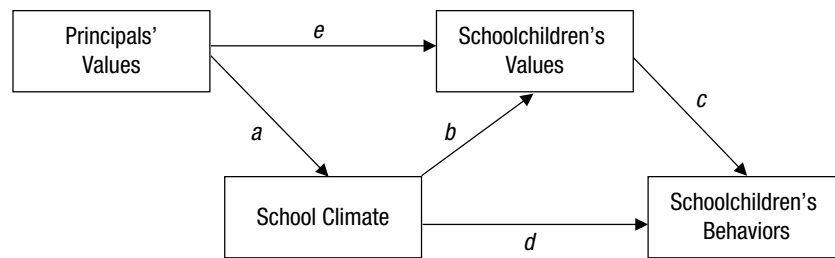


Fig. 2. Diagram showing model paths for which indirect effects were calculated (see Table 2).

Muthén, 2012). Mplus allows partitioning of variances into within- and between-groups variance and testing of structural equations at each level of analysis. This method of analysis allowed us to map the sources of variation in students' values and behaviors while simultaneously accounting for both individual-level factors (within participants; e.g., children's Time 1 values) and class- and school-level factors (between participants; e.g.,

principals' values and school climates). Furthermore, Mplus makes it possible to test within-groups covariation while controlling for covariation among classes and schools (B. M. Byrne, 2012). We tested all of the path predictions in our model while controlling for intercorrelations among values and behaviors. In addition, the program produced estimates for both direct and indirect effects, as was necessary for testing our mediation model.

Table 2. Results of the Tests of Indirect Effects on Schoolchildren's Values and Behaviors

Indirect effect	Estimate	SE	90% confidence interval	95% confidence interval
Principals' conservation → stability climate → children's conservation → conformist behavior				
<i>ab</i>	0.005	0.009	[-0.0083, 0.0234]	[-0.0118, 0.0280]
<i>ad</i>	-0.002	0.007	[-0.0144, 0.0109]	[-0.0170, 0.0141]
<i>ec</i>	0.009**	0.003	[0.0469, 0.0136]	[0.0039, 0.0213]
<i>bc</i>	0.005	0.007	[-0.0070, 0.0177]	[-0.0094, 0.0204]
<i>abc</i>	0.000	0.001	[-0.0007, 0.0019]	[-0.0009, 0.0024]
Principals' self-transcendence → support climate → children's self-transcendence → supportive behavior				
<i>ab</i>	0.010*	0.006	[0.0012, 0.0209]	[0.0002, 0.0024]
<i>ad</i>	0.005	0.005	[-0.0016, 0.0148]	[-0.0032, 0.0171]
<i>ec</i>	0.001†	0.001	[0.0001, 0.0020]	[0.0000, 0.0023]
<i>bc</i>	0.002*	0.001	[0.0004, 0.0041]	[0.0002, 0.0045]
<i>abc</i>	0.000	0.000	[0.0000, 0.0007]	[0.0000, 0.0006]
Principals' openness → innovation climate → children's openness → learning behavior				
<i>ab</i>	0.010*	0.005	[0.0033, 0.0186]	[0.0024, 0.0208]
<i>ad</i>	0.004	0.005	[-0.0026, 0.0137]	[-0.0040, 0.0160]
<i>ec</i>	0.000	0.000	[0.0000, 0.0003]	[-0.0006, 0.0004]
<i>bc</i>	0.002*	0.001	[0.0004, 0.0035]	[0.0002, 0.0040]
<i>abc</i>	0.000	0.000	[0.0000, 0.0004]	[0.0000, 0.0005]
Principals' self-enhancement → performance climate → children's self-enhancement → achievement behavior				
<i>ab</i>	0.016*	0.009	[0.0040, 0.0336]	[0.0023, 0.0381]
<i>ad</i>	0.013*	0.006	[0.0044, 0.0251]	[0.0032, 0.0277]
<i>ec</i>	0.000	0.000	[-0.0003, 0.0009]	[-0.0005, 0.0011]
<i>bc</i>	0.002*	0.001	[0.0004, 0.0005]	[0.0002, 0.0055]
<i>abc</i>	0.000	0.000	[0.0000, 0.0009]	[0.0000, 0.0010]

Note: For a diagram depicting the path labels used in naming the indirect effects, see Figure 2. The assessed dimensions of school climate involved the school's emphasis on stability, supportiveness, innovation, or performance. Mplus (Muthén & Muthén, 2012) does not provide standardized indirect effects in multilevel models. The effects reported are therefore nonstandardized. Confidence intervals were calculated and significance levels were determined using the Monte Carlo method (Selig & Preacher, 2008).

†*p* < .1. **p* < .05. ***p* < .01.

It also provided indexes of the model's fit. (We provide the Mplus syntax for our analysis in Appendix S3.)

The model's fit was satisfactory (comparative fit index, or CFI = .93, root-mean-square error of approximation, or RMSEA = .017; see Fig. 1). Estimates of the direct effects in our model are presented in Table 1 and Figure 1. To assess the unique variance in children's values explained by our predictors (i.e., principals' values and the school climates), we compared a model in which only the control variables were entered (Model 1) with one that included both the controls and our predictors (Model 2). We provide effect sizes and estimates of the variance explained by each set of variables (R^2) in Table 1. By subtracting the percentage of variance explained in Model 1 from that explained in Model 2, one can see that principal values and school climates account for between 6% (for self-transcendence values) and 10% (for conservation values) of the variance in schoolchildren's values.

We also assessed the indirect effects between predictors and outcomes. Indirect effects are calculated by multiplying the coefficients of the paths that link a given variable with a subsequent one (Hayes, 2009). For example, the indirect effect of principals' values on children's values through the school climate in Figure 2 was calculated by multiplying the coefficients in path *a* and path *b*. Indirect effects are significant when all paths of the direct effects and the multiplication of the paths between them are significant (Hayes, 2009).

Because the multiplication of direct paths does not usually form a normal distribution, we used a Monte Carlo resampling simulation to test the significance of and determine confidence intervals for the indirect effects (Selig & Preacher, 2008). We report the indirect effects, standard errors, and confidence intervals in Table 2. As can be seen in the table, for all but conservation values, the indirect effects of principals' values on children's values through the school's climate (path *ab* in Fig. 2) were significant. Several other indirect effects of principals' values and of school climates on children's behaviors were also significant (see Table 2).

For all four value categories, principals' values were either directly or indirectly (through school climate) related to increases in schoolchildren's corresponding values (Fig. 1 and Table 1). In other words, over the 2 years of our study, children's values became more similar to those of their principal. For three of the four value categories—self-transcendence, openness to change, and self-enhancement—the effect of principals' values was mediated by the school climate (bottom three rows in Fig. 1). These indirect effects were all statistically significant.

Thus, principals' self-transcendence was associated with schools' emphasis on supportiveness, which in turn was associated with increases in children's self-transcendence values. Principals' openness values were

associated with schools' emphasis on innovation, which in turn was linked with increases in children's openness values. And principals' self-enhancement values were associated with schools' emphasis on performance, which was then linked with increases in children's self-enhancement values.

For self-transcendence, beyond the mediated effect through climate, there remained a direct effect of principals' values on children's values. Conservation was the only value for which principals' effects were not mediated through climate, and there was only a direct effect (top row in Fig. 1). Although principals' conservation values were positively associated with the degree to which schools' climate was characterized as secure and stable, the school climate was not linked with schoolchildren's values. The direct effect of principals' conservation on children's conservation suggests that some other, unmeasured, variable may have served as the mechanism through which principals' values came to effect schoolchildren. We elaborate on this possibility in the Discussion.

To test the stability of school effects for each value category (i.e., principal values and school climate), we tested the moderating effects of principal demographics (i.e., sex, age, ethnicity), none of which were statistically significant. Given our sample size, we had at least reasonable power for these tests. The nonsignificant moderation effects therefore suggest that school effects were not dependent on principals' demographics.

Finally, in support of our hypotheses about the relationships between children's values and behavior, these relationships were significant ($p < .01$) for all four value categories. Children's conservation values were linked with teachers' ratings of these children's conformity and discipline, self-transcendence values were linked with supportive behaviors, openness-to-change values were linked with learning-oriented behavior, and self-enhancement values were linked with achievement-oriented behavior.

Discussion

Our findings support the notion that schools play an important role in shaping children's values and ultimate behavior. Over the 2 years of our study, we found that children's values grew closer to principals' values. With the exception of conservation values, this correspondence was mediated by schools' climates. Principals' personal outlook on life is reflected in the overall school atmosphere, which over time becomes reflected in schoolchildren's personal outlook and eventual behavior.

For conservation, principals' values had only a direct effect on the change in children's values, without the indirect effect through school climate. We can think of two possible explanations for this: One has to do with schools' religiosity, and another has to do with the

dimensionality of our climate measure. We describe both possibilities and some additional tests we conducted to address them in the Supplemental Material.

The fact that climates in which stability was encouraged did not predict children's conservation, and yet principals' conservation values were directly related to changes in children's conservation values, suggests that there may be mechanisms other than climate that we did not measure that could explain this effect of principals on children. As noted in the Introduction, one such mechanism may be the recruitment and selection of teachers. Like many other important decisions they make, principals' selection of teachers is also influenced by principals' values. Indeed, ample evidence exists for the correspondence in the personal characteristics of recruiters and the applicants that they select (D. Byrne, 1997). Principals are therefore likely to select teachers who hold values similar to their own. Through their direct contact with the schoolchildren, these teachers may then influence schoolchildren's values. Although for the other three value types, we found support for the mediating role of school climate, this does not exclude the possibility that this alternative mechanism may also mediate the effects of principals' values in conjunction with the school climate. Extending the current findings, future studies of schoolchildren's values may explore teachers' roles in shaping schoolchildren's values.

Given the nonexperimental nature of our research, we cannot rule out other causal explanations of the observed relationships between principals' values and the change in children's values. One such explanation has to do with the former part of our model, pertaining to the relationship between principals' values and the school climate. Although there is a theoretical basis to suggest that principals' values shape the school climate through principals' decisions and actions in the school (e.g., Hambrick & Mason, 1984), and although our study's design, whereby principals' values were collected a year before the data on the schools' climates, more closely corresponds with the directionality we proposed, we cannot rule out that the causality may also run the other way, whereby processes of selection may be responsible for our findings (e.g., Arieli, Sagiv, & Cohen-Shalem, 2015). Specifically, principals may be hired based, in part, on their fit with the school climate. It seems likely, however, that both directions of causality take place: Principals' selection into schools may be influenced by their fit to the school climate, and once selected, principals' values contribute to the further shaping of the school climate. A similar point about such a reciprocal effect of leaders on organizations has been made in other contexts (Berson et al., 2008).

Another alternative explanation could be that through parents' choice of school, principals' values may serve as

a proxy to parents' values. Because children's school assignments in Israel are determined primarily by one's location of residence, parents cannot directly choose their children's school. But some parents, especially those of higher socioeconomic status (Holme, 2002), factor in schools' reputation when choosing where to live. This reputation may, in turn, be related to the principal's values or the school's climate. Parents' choice of school may therefore lead to some correspondence between parents' values and those of the school principal. Thus, the convergence in our study of children's values with those of the principal may reflect the convergence of children's values with those of their parents. Although we do not have data on parents' values, we do have data on the aggregate socioeconomic status of the parents in each school (an index issued by the Ministry of Education), which have been shown to covary with values (Inglehart, 1981). Replicating our results while controlling for the aggregate socioeconomic standing of the school should lend further support to our rationale about schools' role in shaping children's values. Indeed, the inclusion of schools' aggregate socioeconomic status did not remove any of our hypothesized effects. Although this analysis does not directly account for parents' values, it does at least somewhat alleviate concerns about this alternative explanation of our findings. Future research should examine parents' values together with principal and school attributes to more directly assess the relative contribution of each.

Our findings complement research about parents' values in explaining the processes through which children's values develop. Recent research has been devoted to systematically studying children's values (Döring et al., 2015). Such research has focused on establishing the structure of children's values, whereas in the present study, we aimed to explain their development. Furthermore, our findings provide new evidence for the important role that school principals have in shaping school outcomes and evidence for effects beyond those on student achievement. More generally, our research extends previous investigations of leaders' personality (e.g., Zaccaro, 2007) by showing that it can affect meaningful outcomes more distal and far-reaching than followers' attitudes and behaviors.

A central implication of our findings has to do with principals', policymakers', and other key stakeholders' awareness of the impact that principals have, not only on schoolchildren's achievement but also on a most basic aspect of their identity—their values. Whether intentional or not, principals' personal outlook on life infiltrates their actions and decisions at school and ultimately contribute to the development of schoolchildren's values. As our findings demonstrate, a key process through which this infiltration occurs is through the climate that characterizes the school. Whether this impact of a principal's

values on the school and schoolchildren is good or bad depends on the observer's own values. But the existence of these effects should alert principals to the substantial impact they have on children's socialization to society. Education administrators who take part in the selection and placement of school principals should be similarly aware of the role that principals' values play in how schools are run and in children's development.

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The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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Supplemental Material

Additional supporting information can be found at <http://pss.sagepub.com/content/by/supplemental-data>

Notes

1. Certainly, although this view is generally held, there are individuals who believe that schools should focus on enhancing academic skills and leave value-related education to parents (for a discussion, see Klaassen & Smit, 2001).
2. At both time points, data were missing for some of the variables; however, the number of missing responses was less than 0.3% of the sample size.
3. This two-dimensional structure is the core of what Schwartz (2012, abstract) described as the "circular structure" of values.

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