

Leading yourself and leading others: Linking self-leadership to transformational, transactional, and laissez-faire leadership

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It has often been proposed that one must lead oneself before being able to lead others (e.g., Drucker, 1999; Manz & Sims, 1991; Pearce, 2007). In two studies, we empirically investigated associations among self-leadership (with subfacets) and the full range leadership model (transformational, transactional, laissez-faire leadership) in $N=447$ professionals with leadership experience (Study 1) and $N=35$ leaders with $N=151$ followers (Study 2). In both studies, leaders' self-leadership was positively associated with active styles of leading (transformational and transactional leadership) and negatively with passive styles of leading (laissez-faire leadership), as indicated by self- and follower-reports. These relationships remained even after controlling for sex, age, and leadership experience. Overall, data support the notion that effectively leading oneself is associated with effectively leading others.

Keywords: Full range leadership model; Laissez-faire leadership; Self-leadership; Transactional leadership; Transformational leadership.

If you want to lead somebody, the first critical step is to lead yourself. (Manz & Sims, 1991, p. 25)

Leadership requires self-leadership. This has been repeatedly claimed by scholars (e.g., Manz & Sims, 1991; Pearce, 2007; Reichard & Johnson, 2011) and practitioners (e.g., Dee Hock, VISA founder). Indeed, self-leadership was originally conceived as a substitute for formal leadership (Manz & Sims, 1980), and Stewart, Courtright, and Manz (2011) see self-leadership and so-called "external" leadership inextricably intertwined. Manz and Sims (1991) as well as Drucker (1999) brought forward hypotheses on the relationship between self-leadership and leadership. However, research has not focused on self-leadership skills of leaders but of followers: Manz and Sims (1991) as well as Yun, Cox, and Sims (2006) examined how leaders' leadership styles influenced their followers' self-leadership ("leading others to lead themselves"). In the current work, we empiri-

cally investigate associations among self-leadership and the full range leadership model (transformational, transactional, and laissez-faire leadership) to elucidate whether leading oneself (self-leadership) really is associated with leading others (leadership styles). According to the associations between self-leadership and leadership, we could gain new insights for leader/leadership development programs (Reichard & Johnson, 2011). If self-leadership is related to active and effective leadership (transformational and transactional leadership), the development of leaders' self-influencing strategies (effectively leading oneself) could be an important first step to effectively leading others. Moreover, we might elucidate *which* self-leadership strategies mainly drive the relationship between self-leadership and leadership. Again, leader/leadership development programmes could benefit from this. Finally, self-leadership might be better integrated into future leadership models (Pearce, 2007).

THEORETICAL BACKGROUND

Self-leadership: Leading yourself

Self-leadership as "the process of influencing oneself" (Neck & Manz, 2010, p. 4) can be understood as a skill dimension with different cognitive, affective, and motivational-volitional processes in "leading" one's thoughts and behaviours (e.g., Furtner & Rauthmann, 2010; Furtner, Rauthmann, & Sachse, 2010), which goes beyond its grounding motivational theories (self-management theory: Manz & Sims, 1980; social-cognitive theory: Bandura, 1986; control theory: Carver & Scheier, 1998; self-determination theory: Deci & Ryan, 1987). Three primary strategy dimensions, with more narrowly defined subfacets, constitute the self-leadership domain (Houghton & Neck, 2002): (1) *behaviour-focused strategies* (self-goal setting, self-reward, self-punishment, self-observation, self-cueing), (2) *natural reward strategies* (i.e., generation and maintenance of intrinsic motivation), and (3) *constructive thought pattern strategies* (visualizing successful performance, self-talk, evaluating beliefs and assumptions). The first reflects a behavioural, the second a motivational, and the third a cognitive domain.

Behaviour-focused strategies comprise self-attentional processes that shape out desired behaviours. People may thus monitor ineffective/unproductive behavioural patterns as a first necessary step to their elimination. To develop, enforce, and cultivate constructive behaviours, people have to set themselves specific (and realistic) goals they want to achieve within a certain amount of time with a given amount of resources (e.g., Locke & Latham, 1990). To keep up one's motivation in the process of goal pursuit, self-reward and self-punishment strategies can be employed. Additionally, self-cueing can be employed by using external memory devices (e.g., notes) to remind oneself of important steps, tasks, and motivations.

Natural reward strategies subsumes different processes such as (1) selecting intrinsically rewarding tasks, (2) making tasks intrinsically rewarding by incorporating pleasant aspects, (3) focusing on intrinsically rewarding elements in tasks (by simultaneously defocusing unpleasant elements), and (4) reappraising unpleasant aspects as pleasant ones within the task. They thus serve the generation and maintenance of intrinsic motivation (Neck & Manz, 2010). Working on a specific task is perceived as inherently rewarding, and natural reward strategies in self-leadership essentially refers to intrinsic motivation (Deci & Ryan, 1987).

Constructive thought pattern strategies deal with habitual patterns of positive perception and thought. Dysfunctional thoughts are identified, evaluated, and modulated (i.e., reshaped into constructive and functional thinking patterns). Further, mental imagery can be used to visualize successful execution of

tasks. Also, self-talk falls within constructive thought pattern strategies: Negative self-talk patterns are replaced by more constructive patterns of self-talk ("opportunity thinking" and taking on challenges).

These three self-leadership strategy domains must work smoothly together to generate effective and productive patterns in an individual. Self-leadership, as originally conceptualized (e.g., Manz, 1986), refers solely to intraindividual self-regulatory processes rather than interindividual processes (see Furtner et al., 2010). Recent conceptualizations also incorporate interpersonal/social aspects (e.g., Furtner, Rauthmann, Seubert, & Baldegger, 2011a; Ho & Nesbit, 2009) to understand self-leadership in a larger context (e.g., at the work place). If self-regulatory processes have some impact on interpersonal processes, then leaders' leadership styles should be influenced by their self-leadership.

The full range leadership model: Leading others

Currently, the full range leadership model with transformational, transactional, and laissez-faire leadership is the most renowned taxonomy of leadership styles (Bass, 1985; Bass & Avolio, 1995; Judge & Piccolo, 2004; Sosik & Jung, 2010). Transactional leadership refers to exchange processes between leaders and followers, and transformational leadership aims also at further developing one's followers which goes beyond a mere transactional exchange process (Avolio, 2011). A transformational leader thereby establishes high standards and goals; gives meaning, purpose, and direction to followers and their work; leads followers with enthusiasm, inspiration, charisma, motivations, and emotions (Bass, 1990; Harms & Credé, 2010); and creates an atmosphere of intrinsic motivation where extrinsically motivated needs are reduced (Shamir, House, & Arthur, 1993). Transformational and transactional leadership are hypothesized to comprise several lower order dimensions that are based on more specific leadership behaviours (Avolio & Bass, 1999; Bass, 1985; Bass & Avolio, 1995). Transformational leadership comprises four dimensions (the four *I*s): (1) *I*dealized influence (attributes/behaviours), (2) *I*nspirational motivation, (3) *I*ntellectual stimulation, and (4) *I*ndividual consideration. Transactional leadership comprises three dimensions: (1) contingent reward, (2) active management by exception (MBE), and (3) passive MBE. Laissez-faire leadership indicates a lack of active leadership (Antonakis, Avolio, & Sivasubramaniam, 2003; Avolio & Bass, 1999) and thus is considered a particularly passive and ineffective leadership style: Leading of followers is avoided or practically nonexistent (e.g., Avolio, 2011; Bass & Avolio, 1995; Judge & Piccolo, 2004).

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Relations among self-leadership and leadership: Leading yourself and others

Thus far, there are no empirical studies that have directly linked self-leadership to transformational, transactional, and laissez-faire leadership. However, there is evidence in literature that self-leadership and leadership should be linked. One possible link is personality: extraversion, conscientiousness, and openness to new experiences are strong predictors of both transformational leadership (Judge & Bono, 2000) and self-leadership (Furtner & Rauthmann, 2010). Further, self-attention, self-observation, and self-goal setting are also relevant to both transformational leadership and self-leadership (Bass & Bass, 2008; Neck & Houghton, 2006; Tekleab, Sims, Yun, Tesluk, & Cox, 2008). Leaders with high skills in self-regulation, a core component of self-leadership, have adaptive behaviour-focused strategies at hand to reduce discrepancies between a current and prospective state (Bass & Bass, 2008; Neck & Houghton, 2006) and thus become more effective in goal pursuit (Ashford & Tsui, 1991; Day, 2000; Tsui & Ashford, 1994). According to Murphy (2002), self-regulation plays an important role in charismatic/transformational leadership.¹ This is mirrored in the finding that charismatic leaders show more self-attention and purposeful actions (Shamir, 1991; Sosik & Dworakivsky, 1998).

In the seven-stage process model of superleadership (Manz & Sims, 1991), a leader must learn how to lead him-/herself at the first stage to then function as a positive, charismatic role model for his or her followers at the second stage (e.g., transformational leaders: Barbutto, 2005). This model, which postulates that self-leadership and (transformational) leadership should be strongly connected to each other (at least in effective and charismatic leaders), remains theory as of yet and has not been empirically investigated. Moreover, Manz and Sims (1991) did not differentiate any leadership styles (albeit describing something akin to transformational leadership) so that the role of transactional or laissez-faire leadership remains unclear. Drucker (1999) ascertains an intuitive link between self-management and leadership, but also does not bring forward empirical data to bolster this postulation. Furthermore, it has been proposed that the full range leadership model is incomplete, and self-leadership (in leaders) could be a potential candidate to add to the conceptualization of "leadership". In the current work, we thus ask: Is self-leadership associated with effective and active leadership? In two studies, we empirically investigate

associations among self-leadership (with subfacets) and the full range leadership model. Throughout literature, there is evidence that self-leadership and leadership are linked to each other *within* an individual, that is, self-leaders are supposed to be also good leaders (Manz & Sims, 1991; Pearce, 2007; Stewart et al., 2011).

STUDY 1

Study 1 was designed to examine intraindividual associations among self-leadership and leadership in a sample of professionals with leadership experience. We thus ask: How do leaders perceive *themselves* on self-leadership and leadership? We see this self-focused approach as an important, first step in studying self-leadership-leadership linkages. This study, however, introduces the problem of common method variance (CMV), but different measures have been taken to control for possibly distorting effects by ex ante and ex post procedures. Study 1 served as a basis for Study 2, in which we delve deeper into the findings presented here by additionally examining ratings from followers.

Hypotheses

Self-leadership is a genuinely agentic dimension (Furtner & Rauthmann, 2010; Furtner et al., 2011a), and, given that transformational leadership is described as an active leadership style (e.g., Bass & Avolio, 1995), we hypothesized that self-leadership and transformational leadership be associated. The link between self-leadership and leadership is also supported by the personality traits self-leaders and transformational leaders share (cf. Bono & Judge, 2004; Furtner & Rauthmann, 2010; Furtner et al., 2011a; Judge & Bono, 2000): the agentic traits of extraversion and openness to new experiences (Digman, 1997). Formulating a plastic vision is a key feature of transformational leadership (cf. Bass & Bass, 2008), and this formulation requires higher self-observation and self-goal setting (Bass & Bass, 2008; Tekleab et al., 2008). Moreover, high levels of mental imagery need to be employed to visualize successful future performance (cf. Brown & Fields, 2011; Shamir et al., 1993). Moreover, it has been shown that effective and inspirational leaders show higher intrinsic motivation (e.g., Brown & Fields, 2011; Ilies, Morgeson, & Nahrgang, 2005; Shamir et al., 1993), which should be associated with natural reward strategies. Chung, Chen, Yun-Ping Lee, Chun Chen, and Lin (2011) examined associations among charismatic transformational leadership and self-leadership. They found that self-goal setting, self-observation, visualizing successful performance, evaluating beliefs and assumptions, and natural reward

strategies showed strongest associations with charismatic leadership (particularly leaders' vision). Thus, we explored which self-leadership facets largely drive the positive associations among self-leadership and leadership in self-ratings.

Hypothesis 1a: Transformational leadership is positively associated with self-goal setting, self-observation, visualizing successful performance, evaluating beliefs and assumptions, and natural reward strategies.

We also expected positive correlations between self-leadership and transactional leadership, but not as strong as with transformational leadership because of more passive elements in transactional leading processes (Avolio, 2011; Bass & Avolio, 1995). To formulate goals, transactional leaders need self-goal setting and self-observation (e.g., Bass & Bass, 2008). Our basic assumption is: If you want or need to set goals for others and monitor their performance, you have to start with yourself and formulate a set of goals and performance criteria that you will monitor. This exactly mirrors the general perspective of our work: Leading yourself goes hand in hand with leading others. We thus expect that particularly self-goal setting and self-observation be associated with transactional leadership.

Hypothesis 1b: Transactional leadership is positively associated with self-goal setting and self-observation.

Self-leadership as a fairly agentic trait (Furtner & Rauthmann, 2010; Furtner et al., 2011a) stands in marked contrast to the passive laissez-faire leadership. Negative consequences may arise from laissez-faire leadership (e.g., Sosik & Jung, 2010), and leaders with this style can be described as rather introverted, hesitant, passive, and often not available to followers (Avolio, 2011; Bass & Bass, 2008; Makiney, Marchioro, & Hall, 1999). This suggests a negative link to self-leadership.

Hypothesis 1c: Laissez-faire leadership is negatively associated with self-leadership scales.

So far, we have formulated three hypotheses (H1a-c) stating how self-leadership facets may be differentially associated with leadership styles. However, the relationship between self-leadership and transformational and transactional leadership, respectively, could be largely driven by leadership experience, age, and sex (Avolio, 2011; Avolio & Gibbons, 1988; Fiedler, 1995; Yukl, 1998). Therefore, we hypothesized that self-leadership remains nonetheless a strong predictor of the two leadership styles with incremental predictive abilities above and

beyond controlled variables with possibly confounding effects. We thus test the incremental abilities of self-leadership in predicting leadership.

Hypothesis 1d: Self-leadership facets remain strongly associated with transformational and transactional leadership, respectively, even after controlling for leadership experience, age, and sex.

Methods

Participants and procedure

A sample of $N=447$ professionally experienced participants (260 males: 58.2%; 187 females: 41.8%; mean age = 40.04 years, $SD=11.28$, range: 19–66) was examined. Participants had sufficient leadership (1–3 years: 34.2%; 3–5 years: 13.9%; 5–10 years: 17.2%; more than 10 years: 26.8%) and professional experience (1–3 years: 7.6%; 3–5 years: 12.8%; 5–10 years: 13.2%; more than 10 years: 66.4%), but came from different branches (finance: 25%; services: 24%; health: 10%; education: 10%; industry: 28%; gastronomy: 3%) in Germany (72.5%), Austria (11.8%), Switzerland (11.2%), and Liechtenstein (4.5%). Five hundred and thirteen participants obtained a package (content: eight pages) from lab assistants. Questionnaires were returned by $n=465$ (90.6%), and from these we could use $n=447$ (87.1%) as they provided enough valid data to compute our analyses. As an incentive for participation we offered extensive feedback for all participants.

Measures

We used instruments to measure self-leadership and leadership that are all deemed valid and reliable across a wide range of contexts.

Self-leadership. Self-leadership was measured with the Revised Self-Leadership Questionnaire-Deutsch (RSLQ-D; Andressen & Konradt, 2007), a slightly revised version of Houghton and Neck's (2002) original self-leadership scale, containing 27 items to be answered on a 5-point Likert-type scale (from 1 = "totally disagree" to 5 = "totally agree"). Nine self-leadership subfacets were computed by the mean of their respective items (three items each): self-goal setting (e.g., "I establish specific goals for my own performance"), self-reward (e.g., "When I have successfully completed a task, I often reward myself with something I like"), self-punishment (e.g., "I tend to get down on myself in my mind when I have performed poorly"), self-observation (e.g., "I usually am aware of how well I'm doing as I perform an activity"), and self-cueing (e.g., "I use written notes to remind myself of what I need to accomplish") form behaviour-focused strategies; natural reward

¹ Charismatic and transformational leadership are conceptually strongly connected and sometimes even interchangeably used. For a detailed discussion, see Judge and Piccolo (2004).

strategies is both a subfacet and a strategy domain (e.g., "I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities"); visualizing successful performance (e.g., "I visualize myself successfully performing a task before I do it"), self-talk (e.g., "Sometimes I talk to myself out loud or in my head to work through difficult situations"), and evaluating beliefs and assumptions (e.g., "I think about my own beliefs and assumptions whenever I encounter a difficult situation") form constructive thought pattern strategies. The three strategy domains were computed by the mean of the respective subfacets that constitute them.

Leadership styles. Transformational, transactional, and laissez-faire leadership style were measured with the German 36-item version of Multifactor Leadership Questionnaire (MLQ Leader Form 5x-Short; German validation: Felfe, 2006), originally from Bass and Avolio (1995). The leadership items were to be answered on a frequency-based 5-point Likert-type scale (from 1 = "never" to 5 = "very often, almost always").

Nine leadership dimensions were computed by the mean of their respective items (four items each): idealized attributes (e.g., "I go beyond self-interest for the good of the group"), idealized behaviours (e.g., "I talk about my most important values and beliefs"), inspirational motivation (e.g., "I express confidence that goals will be achieved"), intellectual stimulation (e.g., "I get others to look at problems from many different angles"), and individualized consideration (e.g., "I spend time teaching and coaching") form transformational leadership; and contingent reward (e.g., "I make clear what one can expect to receive when performance goals are achieved"), active MBE (e.g., "I concentrate my full attention on dealing with mistakes, complaints, and failures"), and passive MBE (e.g., "I fail to interfere until problems become serious") form transactional leadership. Further, laissez-faire leadership (e.g., "I avoid making decisions") was also measured.

Statistical analyses

To examine associations among self-leadership and the full range leadership model, different data analytical strategies were used. First, CMV was investigated due to the cross-sectional self-report data structure which might affect findings (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, we have used several ex ante procedures to minimize the extent to which CMV would affect our data and also checked with ex post procedures how much it did affect them. As ex ante procedures, we used (1) different colours for all instruments to better distinguish them, (2) different response formats per instrument, and (3) an extensive instruction to each

instrument including an emphasis on anonymity of any responses given (Podsakoff et al., 2003). As an ex post procedure, we checked with the widely used Harman's Single Factor Test whether CMV was an issue in our data at all and whether we needed to control for this in our analyses. In this procedure, all variables or items are factor analysed, and it is checked (1) whether there is only one single factor or (2) whether one factor subsumes most of the variance from all extracted factors (cf. Spector, 2006).

Second, bivariate zero-order Pearson correlation coefficients were computed to obtain a general picture of linear relations between all variables (Hypotheses 1a-c). These analyses indicated that laissez-faire leadership should be dropped from further analyses in Study 1.

Third, the relative importance of the nine self-leadership subfacets in predicting transformational and transactional leadership, respectively, was also assessed with hierarchical multiple linear regression analyses, controlling for sex, age, and leadership experience (Hypotheses 1a-c).

Fourth, incremental abilities of global self-leadership above and beyond sex, age, and leadership experience in predicting transformational and transactional leadership was assessed with hierarchical multiple linear regression analyses (Hypothesis 1d).

Results

Preliminary analyses. Means, standard deviations, Cronbach's alphas, and correlations can be found in Table 1.

To examine the potential role of sex as a moderator in relations, we also investigated interaction main effects of sex on dependent variables (leadership styles) with self-leadership scales (global, three domains) and sex as independent variables in a total of two MANOVAs.

For global self-leadership as an independent variable, there was no significant interaction main effect of sex, omnibus $F(1032, 306) = 1.02, p = .406$. For self-leadership strategy domains (behaviour-focused strategies, natural reward strategies, and constructive thought pattern strategies), there also was no significant interaction main effect of sex, omnibus $F(1302, 36) = 1.39, p = .107$.

To examine CMV effects ex post, we conducted analyses on item and scale/facet level. On item level, self-leadership and leadership items were pooled (63 items) and factor analysed. Fifteen factors (total variance: 63%) with Eigenvalues > 1.0 were extracted, and the first factor (21% variance) did not consume more variance than the rest of the factors. On facet level, nine self-leadership and nine leadership facets were pooled and factor analysed

TABLE 1
Correlations among self-leadership, transformational, laissez-faire leadership, and sex in Study 1

Scales	M	SD	α	SL(g)	1	1a	1b	1c	1d	1e	2	3	3a	3b	3c	4
Transformational leadership	3.81	0.48	.90	.49	.39	.44	.16	.19	.41	.25	.34	.42	.33	.29	.39	-.09
Idealized attributes	3.71	0.52	.61	.34	.27	.37	.08	.13	.32	.13	.23	.32	.28	.24	.24	-.09
Idealized behaviours	3.87	0.62	.70	.38	.29	.32	.06	.19	.34	.17	.26	.36	.24	.27	.35	.01
Inspirational motivation	3.87	0.63	.77	.45	.38	.39	.23	.10	.34	.28	.34	.39	.28	.23	.30	-.08
Intellectual stimulation	3.80	0.55	.70	.43	.35	.16	.20	.33	.33	.23	.27	.39	.27	.29	.41	-.07
Individualized consideration	3.81	0.64	.74	.35	.29	.33	.12	.16	.31	.18	.25	.29	.27	.17	.27	-.13
Transactional leadership	3.21	0.44	.68	.40	.38	.37	.14	.29	.37	.23	.19	.37	.31	.30	.28	-.13
Contingent reward	3.82	0.69	.75	.42	.40	.46	.15	.22	.36	.27	.21	.38	.34	.25	.32	-.17
Active MBE	3.06	0.68	.70	.26	.27	.26	.07	.27	.29	.13	.08	.27	.23	.26	.15	-.16
Passive MBE	2.86	0.58	.39	.11	.08	.00	.06	.07	.08	.07	.11	.08	.03	.08	.08	.09
Laissez-faire leadership	2.14	0.53	.44	-.27	-.24	-.28	-.04	-.19	-.29	-.11	-.21	-.19	-.14	-.12	-.21	.04
Sex	-	-	-	-.02	-.04	-.13	.06	.03	-.11	-.03	.04	-.05	-.16	.01	.06	-
M	-	-	-	3.51	3.41	3.57	2.96	3.49	3.68	3.33	3.74	3.38	3.29	3.41	3.45	-
SD	-	-	-	0.51	0.63	0.74	1.11	0.84	0.77	1.05	0.68	0.64	0.88	0.80	0.71	-
α	-	-	-	.91	.87	.69	.93	.78	.78	.85	.55	.82	.70	.73	.73	-

N=447. SL(g)=self-leadership (global), MBE=Management by Exception; 1=behaviour-focused strategies, 1a=goal setting, 1b=self-reward, 1c=self-punishment, 1d=self-observation, 1e=self-cueing, 2=natural reward strategies, 3=constructive thought pattern strategies, 3a=visualizing successful performance, 3b=self-talk, 3c=evaluating beliefs and assumptions, 1e=sex (1=male, 2=female). Correlations larger than .11 are significant at $p < .01$. Correlations larger than .18 are significant at $p < .001$. To reduce Type I error, a more conservative significance level was chosen than $p < .05$ (see Sauley & Bedeian, 1989).

TABLE 2
Joint factor analysis of subfacets from self-leadership and leadership in Study 1

Scales	Factors			
	I	II	III	IV
Factor I: Leadership				
TF Individualized consideration	.87	-.04	-.01	.18
TF Idealized behaviours	.81	.01	-.03	-.04
TA Contingent reward	.78	.11	-.05	.01
TF Idealized attributes	.78	-.03	-.02	.04
TF Intellectual stimulation	.74	.07	.05	-.03
Laissez-faire leadership	-.74	.11	.05	-.12
TF Inspirational motivation	.73	-.05	.29	-.02
Factor II: Self-leadership				
SL Self-talk	-.09	.83	-.07	-.03
SL Self-goal setting	.15	.73	.02	.14
SL Self-punishment	-.12	.72	-.17	.18
SL Visualizing successful performance	.03	.71	.06	-.13
SL Self-cueing	-.09	.62	.23	-.08
SL Evaluating beliefs and assumptions	.07	.60	.21	-.04
SL Self-observation	.12	.55	.22	.18
Factor III: Rewards				
SL Natural reward strategies	.20	-.05	.73	.22
SL Self-reward	-.18	.37	.64	.04
Factor IV: Management by exception				
TA Passive MBE	-.10	-.16	.30	.91
TA Active MBE	.24	.31	-.35	-.44

TF = transformational leadership, TA = transactional leadership, SL = self-leadership; Kaiser-Meyer-Olkin test of sample adequacy = .90 (i.e., good) Bartlett sphericity test: approx. $\chi^2(153) = 3206.50$, $p < .001$. Primary factor loadings are indicated in bold.

(PCA + promax). Four factors (total variance: 60 %) with Eigenvalues > 1.0 were extracted. Factors I and IV represented leadership, Factors II and III self-leadership (see Table 2). These factors were only moderately correlated, $r_s = -.13$ to .46. Thus, CMV effects can also be neglected here.

Hypotheses 1 a, b, c: Associations between self-leadership and leadership. Correlations of self-leadership and leadership can be found in Table 1. Self-leadership scales showed significantly positive correlations with transformational and transactional leadership, all $r_s > .14$, all $p_s < .01$. Passive MBE showed no correlations with self-leadership scales, except for a weak one with global self-leadership, $r = .11$, $p < .05$. Almost all self-leadership scales correlated significantly negatively with laissez-faire leadership.

Additionally, we were interested in which self-leadership facets add the most to the prediction of active leadership and thus conducted hierarchical regression analyses with sex, age, and leadership experience (Step 1) and nine self-leadership subfacets

(Step 2) as predictors, with the criterion variable being either transformational or transactional leadership, respectively. Results can be seen in Table 3.

In predicting transformational leadership,² the self-leadership subfacets added altogether 26% of variance, $\Delta F = 18.64$, $p < .001$, above sex, age, and leadership experience (see Table 3, first columns under "Transformational leadership"). Upon inspecting the standardized regression weights, especially self-goal setting, $\beta = .25$, $p < .001$, self-observation, $\beta = .16$, $p = .005$, natural reward strategies, $\beta = .21$, $p < .001$, and evaluating beliefs and assumptions, $\beta = .13$, $p = .009$, contributed to the incremental portion of variance explanation.

In predicting transactional leadership, the self-leadership subfacets added altogether 18% of variance, $\Delta F = 10.07$, $p < .001$, above sex, age, and leadership experience (see Table 3, columns under "Transactional leadership"). Upon inspecting the standardized regression weights, especially self-goal setting, $\beta = .19$, $p = .004$, self-punishment, $\beta = .12$, $p = .038$, and self-observation, $\beta = .13$, $p < .033$, contributed to the incremental portion of variance explanation.

Hypothesis 1d: Incremental abilities of self-leadership. To assess the incremental abilities of the global self-leadership factor above sex, age, and leadership experience, two hierarchical regression analyses were computed with predictor variables being sex, age, and leadership experience (Step 1) and global self-leadership (Step 2), and the criterion variable being either transformational or transactional leadership, respectively. In predicting transformational leadership, self-leadership added an increment of 22% variance, $\Delta F = 132.85$, $p < .001$, $\beta = .47$, $p < .001$, above sex, age, and leadership experience, whereas in predicting transactional leadership, it added 14% variance, $\Delta F = 66.27$, $p < .001$, $\beta = .38$, $p < .001$, above controlled variables. Further, there was a significant difference³ between the association among self-leadership and transformational leadership, $\beta_1 = .46$, and self-leadership and transactional leadership, $\beta_2 = .35$, $\beta_1 - \beta_2 = .11$, $SE = 0.03$, $p < .05$ (95%-CI [$\beta_1 - \beta_2$] = .01 to .22). These results indicate the self-leadership is able to predict leadership above other variables, most notably even leadership experience, and thus support our hypothesis.

² As can be seen in Table 4, multicollinearity was not an issue. Variance inflation factors (VIF) ranged from 1.04 to 2.12. VIFs below 5.00 (Menard, 1995) or even 10.00 (Neter, Wasserman, & Kutner, 1989) are not considered to indicate substantial problems with multicollinearity.

³ We computed significant differences between independent sample standardized regression coefficients beta with the program BetaDiff (Enzmann, 2011).

TABLE 3
Standardized regression weights from predicting transformational and transactional leadership by self-leadership subfacets in Study 1

Self-leadership subfacets	Transformational leadership		Transactional leadership		Collinearity statistic
	β	p	β	p	
Leadership experience	.29***	.000	.14*	.031	1.83
Age	.02	.764	-.02	.762	1.04
Sex	.01	.770	-.03	.511	1.78
Self-goal setting	.25***	.000	.19**	.004	2.12
Self-reward	-.05	.242	-.03	.568	1.34
Self-punishment	-.01	.849	.12*	.038	1.59
Self-observation	.15**	.005	.13*	.033	1.96
Self-cueing	.02	.615	-.00	.948	1.41
Natural reward strategies	.21***	.000	.08	.114	1.26
Visualizing successful performance	-.04	.449	.02	.713	1.90
Self-talk	.03	.558	.08	.162	1.77
Evaluating beliefs and assumptions	.13**	.009	-.00	.943	1.59

$N = 447$. VIF = Variance inflation factor. Hierarchical multiple linear regression analyses were performed (Block 1: leadership experience, age, sex; Block 2: nine self-leadership subfacets). Step 2 standardized Beta regression coefficients of self-leadership subfacets are shown. Significant variables ($p < .05$) are indicated in bold. *** $p < .001$, ** $p < .01$, * $p < .05$.

Discussion

In Study 1, we investigated with self-reports intraindividual associations among leaders' self-leadership and their leadership. We found that self-leadership and transformational and transactional leadership were positively associated with each other. However, self-leadership showed negative associations with laissez-faire leadership. Moreover, self-leadership remained strongly associated with leadership styles above controlled variables of leadership experience, age, and sex. All in all, our hypotheses were confirmed by the data. However, Study 1 was limited to leaders' self-reports only, and it would be more informative to also employ followers' perceptions. Therefore, a second study was conducted to investigate associations among leaders' self-leadership with follower-ratings of leaders' leadership.

STUDY 2

Study 2 was designed to further examine associations among self-leadership and leadership in a sample of leaders and followers. We thus ask: Are leaders' self-ratings of self-leadership related to followers' other-ratings of those leaders on leadership dimensions? We thus completely avoid self-referential data that may impose CMV effects on results and can more stringently examine the link between leaders' self-leadership and their leadership as perceived by followers. Furthermore, more detailed information on leadership was sampled in Study 2 as additional styles (i.e., combinations of basic leadership styles) were examined. We employ multilevel analysis, a much acclaimed conceptual point of view and

methodological tool (Reichard & Johnson, 2011; Waldman & Yammarino, 1999; Yammarino, Dionne, Chun, & Dansereau, 2005), to tease apart the relations among leaders' self-rated self-leadership and followers' ratings of their leadership (see also Markham & Markham, 1995; Reichard & Johnson, 2011).

Hypothesis

Findings from Study 1 served as a basis for Study 2. We thus hypothesized that leaders' self-ratings of their self-leadership is positively associated with followers' other-ratings of "active" leadership styles (active leadership, transformational leadership, active transactional leadership, transactional leadership) of those leaders, and negatively with followers' other-ratings of "passive" leadership styles (passive leadership, laissez-faire leadership). Specifically, we contend that Hypotheses 1a-c hold true also for Study 2. Because intrinsic motivation of leaders is associated with being personally expressive in leading (Barbuto, 2005; Furtner, Rauthmann, & Sachse, 2011b; Ilies et al., 2005; Shamir et al., 1993), we can expect that natural reward strategies from self-leadership, a dimension strongly referring to intrinsic motivation, would be highly manifestive within followers' perceptions of their leaders' leadership.

Methods

Participants and procedure

A sample of $N = 35$ leaders (31 men, four women; mean age = 41.33 years, $SD = 12.25$, range: 27-60;

mean leading experience = 13.74 years, $SD = 11.78$) and $N = 151$ followers (82 men, 60 women, nine without sex indication; mean age = 37.55 years, $SD = 12.64$, range: 18–67; mean working experience = 7.56 years, $SD = 8.54$) was examined. Leaders and followers were from diverse branches (finance: 25.7%; services: 40%; industry: 34.3%) in Switzerland (51.4%), Liechtenstein (22.9%), Germany (14.3%), and Austria (11.4%). More than 50 leaders were contacted by telephone to enquire whether they and their followers would like to participate in an online study involving leadership and self-leadership. From the 35 leaders who complied, online data was collected. Amongst others,⁴ leaders rated themselves on self-leadership (leaders' self-view), and 3–6 followers rated their leaders on leadership (followers' other-view of leaders). As an incentive for participation we offered extensive feedback for all participants.

Measures

For self-leadership self-ratings, leaders rated themselves on the RSLQ-D (see Methods in Study 1). For leadership other-ratings, followers rated their leaders on the MLQ Rater Form (5x-Short). Active leadership consisted of transformational leadership, contingent reward, and active management by exception; active transactional leadership consisted of contingent reward and active management by exception; passive leadership consisted of passive management by exception and laissez-faire leadership.

Statistical analyses

Means-as-outcomes regressions in multilevel modeling (MLM) were employed to examine associations among leaders' self-leadership self-ratings (Level 2) and their followers' other-ratings of their leadership (Level 1) in nested data (follower-ratings are nested within their respective leaders). Followers' ratings Y_{ij} were dependent variables at the individual level (Level 1 outcomes) and leaders' ratings Z_j independent variables at the group level (Level 2 predictors). This mirrors our theoretical hypothesis that leaders' self-leadership will affect their leadership, as indicated by other-perceptions of their followers.

In total, 84 models were computed to examine the associations among leaders' self-leadership self-views on Level 2 (global self-leadership; three self-leader-

⁴ Additionally, leaders completed self-ratings on leadership and followers ratings of their leaders on self-leadership (with a shortened nine-item version of the RSLQ-D). No findings with these data are reported here as the purpose of Study 2 is solely to demonstrate how leaders' self-rated self-leadership is associated with their followers' other-ratings of leaders' leadership styles. The other data are presented in Furtner et al. (2011a).

ship strategy domains; nine self-leadership subfacets) and followers' other-views of their leaders' leadership styles on Level 1 (active leadership styles; passive leadership styles). For the prediction of the six leadership styles by self-leadership subfacets, stepwise regressions with backward elimination were computed which eliminated statistically irrelevant self-leadership predictors based on the Akaike information criterion (AIC) as an index of model fit. The AIC should be lower for the backward models than for the full model. The full models contain all nine self-leadership predictors, whereas the backward models contain only those deemed statistically relevant.

Results

Correlations. Bivariate zero-order correlations and descriptive statistics among leaders' self-leadership self-ratings and followers' other-ratings of their leaders' leadership (aggregated across followers/judges to a mean other-rating for each leader) can be found in Table 4. Generally, significant negative correlations ($ps < .05$) are found between self-leadership scales (global self-leadership; behaviour-focused strategies) and passive leadership. Natural reward strategies show significant positive associations ($ps < .05$) with active, active transactional, and transactional leadership.

Predicting followers' perceptions of leaders' leadership styles from leaders' self-leadership ratings. MLM findings (unstandardized regression coefficients) are summarized in Table 5. There were some marginally significant results, but we focus only on the significant findings here ($ps < .05$). Generally, leaders' natural reward strategies were a predictor of followers seeing them as transformational and transactional leaders.

For active leadership, the regression model with self-cueing (–) and natural reward strategies (+) as predictors provided a better AIC than the full model with all nine self-leadership subfacets as predictors (AIC backward = 185.85; AIC full model = 198.13); for transformational leadership, the regression model with self-observation (–), self-cueing (–), and natural reward strategies (+) (AIC backward = 262.63; AIC full model = 272.03); for active transactional leadership, the regression model with self-cueing (–) and natural reward strategies (+) (AIC backward = 198.88; AIC full model = 209.36); for transactional leadership, the regression model with self-cueing (–) and natural reward strategies (+) (AIC backward = 129.15; AIC full model = 140.29); and for laissez-faire leadership, the regression model with self-cueing (+) and natural reward strategies (–) (AIC backward = 233.30; AIC full model = 244.41).

TABLE 4
Correlations between leaders' self-leadership self-ratings and followers' other-ratings on leaders' leadership (aggregated across followers) in Study 2

Self-leadership scales (leaders' self-ratings)	Descriptives			Correlations with leadership rated by followers					
	M	SD	α	1	2	3	4	5	6
Self-leadership (global)	3.61	0.34	.81	.09	–.05	.25	.03	–.34*	–.17
Behaviour-focused strategies	3.39	0.48	.79	–.14	–.28	.02	–.28	–.42*	.03
Self-goal setting	3.89	0.56	.67	.02	–.01	.06	–.09	–.27	–.12
Self-reward	2.57	0.83	.95	–.16	–.21	–.11	–.25	–.26	–.05
Self-punishment	3.60	0.75	.80	–.07	–.17	–.01	–.22	–.29†	.05
Self-observation	3.45	0.72	.70	–.11	–.26	.07	–.17	–.29†	.10
Self-cueing	3.49	0.97	.81	–.28	–.30	–.18	–.25	–.05	.19
Natural reward strategies	3.74	0.56	.41	.34*	.25	.42*	.41*	–.06	–.31†
Constructive thought pattern strategies	3.71	0.40	.69	–.07	–.14	.03	–.16	–.30†	–.06
Visualizing successful performance	3.68	0.51	.61	.13	–.02	.24	.11	–.25	–.21
Self-talk	3.56	0.58	.51	–.06	–.11	.00	–.16	–.27	–.06
Evaluating beliefs and assumptions	3.90	0.55	.73	–.21	–.16	–.16	–.28	–.14	.13
M	–	–	–	3.63	3.92	3.48	3.29	2.72	2.51
SD	–	–	–	0.39	0.56	0.34	0.28	0.28	0.31

$N = 35$ leaders, $N = 151$ followers. 1=active leadership (transformational leadership, contingent reward, active management by exception), 2=transformational leadership, 3=active transactional leadership (contingent reward, active management by exception), 4=transactional leadership, 5=passive leadership (passive management by exception, laissez-faire leadership), 6=laissez-faire leadership. Findings with $p < .10$ are indicated in bold for better readability. *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$.

Discussion

In Study 2, we investigated leaders' self-perceptions of their self-leadership and other-perceptions by followers who judged their leaders on leadership. A consistent finding was that self-rated natural reward strategies of leaders were a strong predictor of whether they were seen as more active (i.e., transformational and transactional) and less passive leaders, whereas leaders' use of self-cueing was an indicator of being seen by followers as more passive leaders. In sum, our hypothesis that leaders' self-leadership influences their leadership styles, as perceived by their followers, was met.

GENERAL DISCUSSION

Is self-leadership associated with leadership?

Findings from Study 1 support our hypothesis that self-leadership and active styles of leadership are linked (Manz & Sims, 1991; Pearce, 2007). However, self-leadership was negatively related to laissez-faire leadership. These relations can be explained with the fact that both self-leadership and active leadership styles rely on common, agentic traits such as extraversion and openness to experiences (e.g., Bono & Judge, 2004; Felfe & Schyns, 2006; Furtner & Rauthmann, 2010; Furtner et al., 2011a; Judge & Bono, 2000).

Self-leadership did predict both transformational and transactional leadership, but not uniformly so. Transformational leadership can be seen as a more

complex leadership style than transactional leadership (Avolio, 2011; Mumford, Marks, Connelly, Zacharo, & Reiter-Palmon, 2000). However, transactional leadership can be almost fully explained in terms of self-observation and self-goal setting, while transformational leadership is in addition explained by natural reward strategies and constructive thought pattern strategies (Chung et al., 2011). Self-leadership was also able to predict leadership above the control variables sex, age, and leadership experience. Specifically, self-goal setting and natural reward strategies were the strongest predictors for transformational leadership which hints that transformational leaders must first generate inspirational visions for themselves in order to carry them on to others, whereas self-goal setting and self-observation were the strongest predictors for transactional leadership which might refer to the goal-setting and observational processes transactional leaders must use in order to set goals, and monitor themselves, their followers, and the context in which transactions occur. The incremental abilities of self-leadership are an interesting finding because leadership experience has been declared as all-important for leader development (Fiedler, 1995). This stems from the notion that leadership, and even self-leadership, can be learned and acquired as a set of specific skills (Avolio & Gibbons, 1988; Furtner, Sachse, & Exenberger, 2012; Gibbons, 1986; Yukl, 1998). Good (self-)leaders learn more about themselves and integrate the learned information into their cognitive and behavioural systems—an important prerequisite in becoming better and better (Bennis & Nanus, 1985).

TABLE 5
Multilevel models (means-as-outcomes regressions) and stepwise regressions with leaders' self-ratings on self-leadership (Level 2 predictors) and followers' other-ratings of leaders' leadership styles (Level 1 outcomes) in Study 2

Scales	1		2		3		4		5		6	
	γ	SE	γ	SE	γ	SE	γ	SE	γ	SE	γ	SE
Self-leadership (global)	.09	(.16)	.594									
Self-leadership strategy dimensions												
Behaviour-focused strategies												
Natural reward strategies	-.05	(.13)	.711									
Constructive thought pattern strategies	.19	(.11)	.095									
Self-leadership subfacets	-.11	(.17)	.499									
Self-goal setting												
Self-reward	.05	(.13)	.724									
Self-punishment	.00	(.08)	.972									
Self-observation	.04	(.10)	.659									
Self-cueing	-.09	(.11)	.421									
Natural reward strategies	-.13	(.07)	.082									
Visualizing successful performance	.26	(.13)	.058									
Self-talk	.01	(.16)	.950									
Evaluating beliefs and assumptions	.01	(.15)	.935									
Stepwise regressions	-.05	(.13)	.697									
Self-reward												
Self-punishment												
Self-observation												
Self-cueing	-.15	(.05)	.003									
Natural reward strategies	.19	(.08)	.022									

γ =unstandardized regression coefficients, SE =standard error. 1=active leadership (transformational leadership, contingent reward, active management by exception), 2=transformational leadership, 3=active transactional leadership (contingent reward, active management by exception), 4=transactional leadership, 5=passive leadership (passive management by exception, laissez-faire leadership), 6=laissez-faire leadership. Findings with $p < .10$ are indicated in bold for better readability. *** $p < .001$, ** $p < .01$, * $p < .05$, $p < .10$.

We found in Study 2 that leaders' natural reward strategies were a consistent predictor of being seen as a more active leader, and generally there were tendencies to negative associations between leaders' self-leadership and passive leadership as perceived by followers. If leaders can employ natural reward strategies, this seems to influence leadership behaviour in a positive way. Intrinsically motivated leaders may inspire their followers (via inspired motivation), and this is a hallmark of active, transformational leadership (Barbuto, 2005).

Is there a superleadership?

It should be asked whether self-leadership and leadership are actually distinct constructs or whether there might be a meta-trait referred to as "super-leadership" (Manz & Sims, 1991) in which self-leadership strategies and active (i.e., effective, productive, desirable) leadership behaviours are encompassed and blended into one macro-construct. Our findings indicate that self-leadership and transformational leadership are empirically distinct as (1) self-leadership factors correlated only moderately with active leadership and (2) self-leadership and leadership factors emerged as distinct factors within pooled factor analyses to investigate CMV. Furthermore, there is a conceptual distinction between self-leadership and leadership: self-leadership should be seen as a resource (or antecedent) for effective leadership (Reichard & Johnson, 2011), not as a component or even the same (cf. Manz & Sims, 1991; Stewart et al., 2011). Reichard and Johnson (2011) describe self-leadership as an ability that can be individually developed. Similarly, Chung et al. (2011) could show that "self-leadership skills acted as supplement/enhancer of charismatic leadership behaviours" (p. 308), thus further supporting that self-leadership is something distinct from leadership. In essence, super-leadership could not be seen so much as a structural trait, but rather as a conglomerate of intrapersonal (e.g., self-leadership) and interpersonal (e.g., active leadership behaviours) processes that interlock in a developmental perspective to bring forth effective leadership.

Merits, limitations, and prospects

First, the putative link between self-leadership and leadership has been stipulated by multiple practitioners and scholars, yet empirical investigation is scarce (Drucker, 1999; Manz & Sims, 1991; Pearce, 2007; Reichard & Johnson, 2011). Second, our findings are of interest to broader theoretical accounts of what leadership is and how it manifests. Self-leadership may serve as an integral variable in future leadership conceptualizations despite its cur-

rent neglect. Third, our findings are also relevant for practice as leader development can be fostered by integrating self-leadership trainings (see Reichard & Johnson, 2011, p. 35). Moreover, we found that especially natural reward strategies are linked to active leadership, so that particularly intrinsic motivation should be developed in leaders (Furtner et al., 2011a, 2011b). Fourth, self-leadership research has not explicitly focused on multilevel approaches although intriguing insights could be gained (cf. Markham & Markham, 1995; Reichard & Johnson, 2011; Yammarino et al., 2005).

This work lays first and important groundwork in empirically establishing that self-leadership and leadership go hand in hand. However, some limitations prevail, and future studies should replicate, corroborate, and extend findings. First, we employed cross-sectional designs which do not allow us to draw conclusions on causal/temporal processes, such as that effective self-leadership is an antecedent of effective leadership. This must be addressed by longitudinal designs, incorporating self- and other-ratings as well as objectively sampled work-related criteria variables with multiple measurements in time (and/or across contexts).

Second, it should be examined which behaviours leaders with natural reward strategies manifest that lead others to judge them as active leaders. Behavioural manifestations of self-leadership have been neglected so far, and it is interesting to explore which self-leadership behaviours exactly account for associations with leadership.

Third, conceptualization and measurement of self-leadership needs to be improved. We have used the most established self-leadership questionnaire that has been used in a wide range of studies (e.g., Furtner & Rauthmann, 2010; Konradt, Andressen, & Ellwart, 2009; Stewart et al., 2011), but propose that an integrative operational definition of self-leadership and its subfacets (conceptualization) as well as sound psychometrical tools for valid and reliable assessment (measurement) are in dire need (cf. Furtner et al., 2011a, 2011b).

Fourth, the concept of "leadership" should be further developed. Bass and Avolio (1993), Pearce (2007), and Yukl (1998) criticize the full range leadership model as being too simplistic. Our findings suggest that self-leadership may be a possible construct that could be included in future integrated and holistically oriented leadership models (Pearce, 2007).

CONCLUSION

We have empirically investigated associations among self-leadership and the full range leadership model in two studies (intraindividual perspective in Study 1;

self-views of leaders and follower-views of leaders in Study 2). Leaders' self-leadership is positively related to active leadership styles (transformational and transactional leadership) and negatively to passive leadership (laissez-faire leadership). Pearce (2007, p. 357) states accordingly that "if leaders are not competent self-leaders, their capacity for managing stress and influencing others effectively, is, at best, diminished". Thus, there is some truth in the notion: "If you want to lead somebody, the first critical step is to lead yourself" (Manz & Sims, 1991, p. 25).

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