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Moral antecedents of authentic leadership: Do moral justice reasoning, self-importance of moral identity and psychological hardiness stimulate authentic leadership?

Olav Kjellevold Olsen[1]* and Roar Espevik[2]

*Corresponding author: Olav Kjellevold Olsen, Department of Psychosocial Science, University of Bergen, Christiesgt. 12, 5015 Bergen, Norway
E-mail: Olav.Olsen@uib.no

Abstract: The aim of the present study is to explore intra-psychological moral processes as potential antecedents of authentic leadership (AL) behavior, and as such add to the scarce knowledge about underlying moral processes involved in the execution of such leadership. In a sample of Norwegian naval officer cadets ($N = 139$), mature principled moral reasoning, self-importance of moral identity (i.e. importance of being a moral person) and mental resilience in terms of hardiness are used as predictor variables, and peer ratings of AL was outcome measure. A step-wise hierarchical regression analysis showed that mature moral reasoning and internalized moral identity explained 17% of the variance in AL at composite level. At dimension-levels of AL, models explaining 15% of the variation in "transparency" (i.e. open about thoughts and feelings) and 16% of "internalized moral perspective" (i.e. moral integrity) emerged, with mature moral reasoning, internalized—and symbolized moral identity as significant predictors. For the AL dimensions "balanced processing" (i.e. activating critical voices) and "self-awareness", 8 and 10% of variance was explained, respectively, with mature moral reasoning and internalized moral identity as only significant predictors. Unexpectedly, psychological hardiness

ABOUT THE AUTHORS

Olav Kjellevold Olsen, the main author, is an associate professor at the University of Bergen, and a member of the Operational psychology research group at the Faculty of Psychology. As a former Naval Officer for 29 years, his main research interests are leadership and cooperation in military and other operational contexts—and in particular, how morals is related to successful leadership in such demanding contexts. The current study adds to this focus providing knowledge about antecedents of morally oriented authentic leadership, and thus, providing a better basis for tailoring leadership interventions.

Roar Espevik, the second author, is dean at the Royal Norwegian Naval Academy. His main research interests are operational training and team performance. The current study supports this focus by showing the importance of intra-psychological moral variables in the execution of a morally sound leadership performance in a naval operational context.

PUBLIC INTEREST STATEMENT

The last decade numbers of moral leadership failures in military and corporate organizations have demonstrated the relevance of morally sound leadership practices in order to stimulate competitiveness and trust. Authentic leadership (AL) was developed as a reaction to such moral failures, in order to secure a stronger and more consistent moral leadership practice compared to other contemporary leadership theories. Many studies also show that AL is positively related to outcomes, like trust and moral practice. However, little is known about the moral psychological processes that stimulate AL practice. What moral competencies are needed to succeed in AL? Our study shows that both a leader's ability to activate mature moral justice reasoning, and motivation to act morally in terms of moral identity stimulate AL practice, while mental resilience in terms of psychological hardiness, indicating an ability to cope with pressure, was unrelated to AL.

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was unrelated to all dimensions of AL. Thus, the study suggests that mature moral reasoning and moral motivation represent important aims for leader development among emergency leaders, and as criteria for leader selection. It also suggests that AL encompasses a genuine morals orientation, conversely to a manipulative approach.

Subjects: Military Studies; Work & Organizational Psychology; Leadership; Business Ethics

Keywords: authentic leadership; moral reasoning; moral identity; psychological hardiness
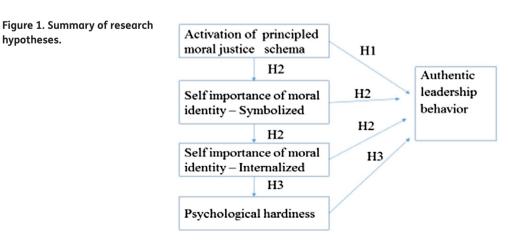
1. Introduction

The last decades, a number of moral leadership failures in military and corporate contexts, like the infamous Abu Grahib prisoner abuse in Iraq and the ENRON scandal, has shown that lack of moral leadership may have severe negative consequences for organizational performance (Bass & Bass, 2008). Possibly, because of such lessons, morals is today emphasized as a prerequisite for well-functioning leadership in a large number of military and corporate leadership doctrines (e.g. Statoil, 2016; The Norwegian Defence University College, 2014). In the same vein, the last 15 years have shown a strong increase in studies developing and validating leadership theories that encompasses moral behavior (e.g. Brown & Treviño, 2006; Fry, 2003; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). The concept of authentic leadership (AL) emerged as a "root construct" that aimed to supplement traditional leadership theories with a moral basis (Luthans & Avolio, 2003). Thus, apart from some notable exceptions (Algera & Lips-Wiersma, 2012; Shamir & Eilam, 2005), most conceptions of AL theory place morals at the heart of successful leadership practice (Gardner, Cogliser, Davis, & Dickens, 2011). Several studies have also shown that AL inspires moral action in followers (Hirst, Walumbwa, Aryee, Butarbutar and Chen, 2015; Laschinger & Fida, 2014). For example, Hannah, Avolio, and Walumbwa (2011) found that followers' display of moral courage and ethical behavior were positively related to AL. Other studies show that followers attribute moral characteristics to an authentic leader (Kiersch & Byrne, 2015; Leroy, Palanski, & Simons, 2012). Leroy et al. (2012) found that AL predicted followers' organizational commitment, fully mediated through perceptions of leaders' behavioral integrity. Here, it is worth noting that little research has searched for individual antecedents and underlying processes stimulating AL (Gardner et al., 2011; Sumanth & Hannah, 2014). Still, some notable exceptions exist. For example, Jensen and Luthans (2006) found that optimism, resiliency and hope predicted AL, while Peus, Wesche, Streicher, Braun, and Frey (2012) identified leader self-knowledge and internal self-consistency as antecedents of AL. However, to our knowledge only two studies have investigated individual moral processes that antecede AL. Steffens, Mols, Haslam, and Okimoto (2016) showed experimentally that a leader's collective interest orientation (as opposed to a more egocentric orientation) antecedes AL, as perceived by followers. Furthermore, Sendjaya, Pekerti, Härtel, Hirst, and Butarbutar (2016) found that a leader's level of mature moral justice reasoning predicted AL, but that this relationship was reversed when the leaders' level of Machiavellianism was high. The present study builds on this work, but expands it by adding other within-person moral competencies as potential antecedents, and a more robust method of measuring AL (second source ratings vs. self-rating). By including sub-dimensions into our investigation, in line with the recommendations of Banks, McCauley, Gardner, and Guler (2016); we also utilize a more nuanced measure of AL, possibly better capturing the underlying processes of AL. Thus, the aim of the present study is to investigate the relationship between individual variation in antecedents of moral behavior and AL. We find such focus on intra-psychological moral antecedents of AL fruitful, firstly, from an applied perspective, by adding to the scarce knowledge of which individual moral processes that underlies AL behavior—and thus, the identification of concrete competencies relevant as developmental goals in leader training, and selection criteria in recruitment processes. Secondly, by studying the assumption that AL behavior is a representation of within-person moral competencies (i.e. behavior is linked to an internalized moral orientation; Walumbwa et al., 2008), we contribute to the process of validating AL as an ethical leadership

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theory, conversely to a manipulating or neutral orientation (Bass & Steidlmeier, 1999). This may again serve as an aid for organizations searching for ethically-based leadership approaches.

2. Authentic leadership—and moral antecedents

Kernis (2003) defines authenticity as the unobstructed operation of one's true, or core, self in one's daily enterprise. This implicates that authentic leaders know oneself and act in accordance with one's true self by expressing what they really think and behave accordingly (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Gardner et al., 2011). Following Walumbwa et al. (2008), in a leadership role, such authenticity comprises four dimensions: (1) self-awareness, (2) balanced processing of information (i.e. encourage critical perspectives), (3) relational transparency (i.e. open about own ideas and emotions), and, (4) an internalized moral perspective (i.e. moral integrity). In this process, leading by example by displaying high moral standards and values is seen of paramount importance, in order to stimulate cooperation, trust and role modeling processes (May, Chan, Hodges, & Avolio, 2003). Walumbwa et al. (2008) underscore this by describing authentic leaders as people that make difficult decisions based on core values and high standards of ethical conduct. Hence, authentic leaders lead as an expression of their true and real self (Shamir & Eilam, 2005), and merge moral principles with their leadership practice (Walumbwa et al., 2008). In terms of antecedents of AL, Sumanth and Hannah (2014) suggest theoretically a series of individual moral competencies, like behavioral integrity, a strong moral identity and mature levels of cognitive moral development as predictors of a morally oriented AL, due to their demonstrated positive relationships with moral behavior. In the present study, we follow this multi-variable approach, conversely to a traditional Kohlbergian approach focusing solely on moral reasoning (Rest, 1986). More specifically, in concert with Rest (1986), we suggest that individual moral behavior, and possibly AL, is the partial result of four distinct but interlinked intra-psychological competencies: (1) ability to perceive moral challenges (i.e. moral sensitivity), (2) mature moral justice reasoning (i.e. moral judgment), (3) an intrinsic motivation to act morally (i.e. moral motivation) and (4) ability to implement moral decisions (i.e. moral character). According to Rest (1986), each of these components must be activated for moral action to occur, and may thus, be seen as an operationalization of moral intelligence, which represents an individuals' capacity to process and manage moral problems (Tanner & Christen, 2014). Hence, high scores on these four moral competencies suggest increased likeliness that a leader behaves morally, even under pressure to deviate from moral standards (e.g. Rest, Narvaez, Bebeau and Thoma, 1999a, 1999b). In the present study, we specifically investigate, as illustrated in Figure 1, how leaders' moral reasoning, moral motivation and moral character, in terms of psychological hardiness (i.e. components 2, 3 and 4) are related to AL, operationalized in terms of Walumbwa et al. (2008) four dimensions. Hence, a positive correlation between these moral competencies and levels of displayed AL may support the claim that AL represents a genuine ethical leadership approach.

Figure 1. Summary of research hypotheses.

3. Moral justice reasoning and authentic leadership

In the literature, authentic leaders are described as people that reason and act morally, and thus, inspires the development of an ethical climate and followers moral perspectives (May et al., 2003; Walumbwa et al., 2008). It is further suggested that such moral behavior requires access to complex cognitive processes (May et al., 2003; Sendjaya et al., 2016). Hence, authentic leaders are portrayed as exhibiting a high moral capacity to judge dilemmas from different angles and able to take into consideration different stakeholder needs, realizing the consequences of their decisions before they act (May et al., 2003). We operationalize this cognitive complexity as activation of mature moral cognitive justice schemas, which structure and guide moral reasoning and action (Rest et al., 1999a, 1999b). According to Rest and co-workers (1999a, 1999b), the post-conventional schema (PCS) represents the most advanced and sophisticated level of moral reasoning. This compared to the less developed schemas of personal-interests (i.e. "moral is what gives me most benefits") and the maintaining norms schema (i.e. "moral is what the rules say"). The PCS encompasses universal moral principles, like justice and fairness in the processing of moral problems. This implies a level of moral reasoning that transcends social norms, laws and regulations, and subsequently secures a consistent moral perspective across various (leadership) situations, which in turn supports a stable moral behavior in line with AL (Blasi, 1980; Rest et al., 1999b). Furthermore, high PCS activation implies high moral awareness and the ability to view moral problems from various perspectives (Rest et al., 1999b); this supports AL and the challenge of judging ethically ambiguous issues from multiple angles and thus increase the likelihood that stakeholders will perceive decisions as fair, and the leadership as authentic even in conflict situations (Kiersch & Byrne, 2015). On this basis, we expect a positive relationship between high levels of PCS activation and AL, in line with Sendjaya et al.'s (2016) previous findings. Furthermore, extending Sendjaya's study, we suggest that moral antecedents are embedded within all four dimensions of AL, and not only the exclusive property of the explicit moral dimension of *internalized moral perspective*. Firstly, given that leaders dominated by PCS-activation encourage a moral discourse and an open debate on moral issues, which mobilize followers participation in decision processes and as such rises the quality of decisions being made, we expect PCS activation to support *balanced processing*. This inclusion of alternative perspectives may also grants stakeholders a voice in decision processes that creates a sense of procedural justice and moral leadership in the followers (Colquitt, Greenberg, & Zapata-Phelan, 2005). In the same vein, *self-awareness* may imply an ability to monitor and evaluate how one's behavior influences others, possibly in line with empathy and justice concerns that nurture on a meta-cognitive moral point of view in line with PCS activation (Gibbs, 2004). Finally, *transparency* includes an ability to show genuine emotions, values and thoughts (Walumbwa et al., 2008), which may be viewed as honesty and justice, by showing followers "the truth", and not hiding from them, in concordance with mature justice reasoning and behavior. On this basis, we suggest the following:

> *Hypothesis 1*: Activation of the post-conventional moral schema will predict authentic leadership—on all dimensions.

4. Self importance of moral identity and authentic leadership

According to Rest (1986), the likelihood that a mature moral judgment will transform into moral behavior increases when the individual also is motivated to act morally. Such moral desire to "do good" is also a frequent description of authentic leaders (Gardner et al., 2005; Hirst et al., 2015; May et al., 2003), portrayed as not only skilled at making mature moral judgments; but also highly motivated to act morally. Such moral motivation can be operationalized in terms of moral identity (Olsen, Eid, & Johnsen, 2006). According to Aquino and Reed (2002), moral identity as a part of our social identity forms a basis for social identification and self-definition. Subsequently, self-importance of moral identity (SIMI) is defined as the importance placed by an individual on moral norms, like fairness, care and honesty in the self-definition, e.g. how important it is to be "a good moral person" (Aquino & Reed, 2002). This is further described by Blasi (1984, p. 130) as a "good will" that represents an ultimate motivational source of consistent and sustainable moral behavior, stimulated through self-regulatory mechanisms, which implies that people with a strong moral identity are likely to activate emotions of shame or guilt if challenged by immoral temptations (Aquino & Reed,

2002; Shao, Aquino, & Freeman, 2008). More so, Aquino and Reed (2002) divide SIMI into two dimensions: *internalized*, representing the private self, and *symbolized*, representing the public self. Given the emphasis on moral motivation and behavior in AL theory, and the imperative that this behavior has a within-person basis (Gardner et al., 2011; Shamir & Eilam, 2005), we expect a positive relation between both dimensions of SIMI and AL, as found by Olsen et al. (2006) in relationship to transformational leadership. Furthermore, in addition to the explicit moral dimension of *internalized moral perspective*, we expect SIMI to stimulate balanced processing, as a driver for including followers in decision-making and reach decisions that best balance all stakeholders' interests, in line with procedural as well as distributional justice (Colquitt et al., 2005). In the same vein, "*transparency*", as standing out as honest and open, and "*self-awareness*" as sensitivity about how other people are affected by our behavior, may be stimulated by a strong moral motivation. At this backdrop, we suggest as follows:

> *Hypothesis 2*: Self-importance of moral identity, internalized and symbolized, predicts authentic leadership, on all dimensions—above the effect of PCS activation.

5. Authentic leadership and psychological hardiness

Rest (1986) underscores that mature moral judgments and high moral motivation may still fall short in explaining moral behavior. In the same vein, Algera and Lips-Wiersma (2012) suggest that even if a leader has high moral standard, external pressures, like those of the market, will challenge the leader's capacity to act morally. Thus, authentic leadership has been related to an ability to sustain authentic moral behaviors when confronted with extreme adversity (May et al., 2003); resilient dealing with difficult moral issues and ability to overcome social pressures to deviate from demanding moral alternatives. In the present study, we operationalize this ability as psychological hardiness (Maddi & Kobasa, 1984). Hardiness is usually defined as a combination of three-related personality qualities or traits: (a) a belief in one's own ability to influence a situation, (b) an internal motivation for the various areas of life, including work, interpersonal relations, and self, and (c) an appreciation of new experiences as opportunities for learning (Maddi & Kobasa, 1984). Together, these three attributes constitute a personality style that has been associated with resilience and high performance under a wide range of stressful conditions (Andrew et al., 2008; Maddi, 2004). Thus, we suggest that an individual high on hardiness will be more likely to implement a moral decision into action, even during pressures to choose more self-serving alternatives, and as such maintain an authentic leadership. On this basis, we suggest:

> *Hypothesis 3*: Psychological hardiness predicts authentic leadership, on all dimensions, above the effects of post-convention moral schema activation and self-importance of moral identity.

6. Method

6.1. Sample

The participants were sub-lieutenants and lieutenants at the Royal Norwegian Naval Academy (RNoNA) Mean age of the total sample of 164 was 23.28 years (SD = 2.48; range 19–36 years), 9.1% (15 cadets) were women. 5.5% (nine cadets) chose not to participate and 4.9% (eight cadets) were absent due to service requirements. In addition, 4.9% (eight cadets) only responded to some of the tests, reducing the valid sample to 139. All participants had a minimum of one year of officer candidate school before entering the academy, and an average of 2.3 years of service background at the testing point. They were all screened to ensure good physical and mental health, as well as cognitive aptitude, prior to admission.

6.2. Procedure

The present study applies a convenience sampling process, including an officer cadet sample. The Navy Staff of Education, and the ethics board of the Royal Norwegian Naval Academy (RNoNA) first approved the study. At the basis of this approval, in order to reduce self-sampling biases, all cadet

officers at the academy were gathered receiving written information and a briefing about the main purpose of the study. At the basis of this briefing, they were asked to participate. They were informed that participation was voluntary, and that they could withdraw from the study at any time. At the point of data collection, the officers had completed about 9 months of joint intensive leadership training including an 11-week exercise sailing a tall mast ship across the Atlantic and back during the storm season, two weeks' winter training and two weeks' military ranger training. During these highly demanding exercises, the cadets systematically rotated in filling all leadership positions, from squad leaders up to commanding officer, as well as filling the roles of ordinary crew members (led by their colleagues). Hence, the context can be described as high on complexity (e.g. difficult to predict events), time-urgency, interdependency and risk related to errors—over an extended period of time, which may increase the relevance of AL, reduce the likeliness of impression management, and thus provide a particularly good basis for accurate evaluations of AL, compared to other organizational contexts. The leadership evaluations in the present study are based on each cadet's performance in the leadership roles during these 9 months, as seen by those cadets who were led. Thus, the cadets conducted (based on their experiences as followers) and received (based on their performance as leader) peer-ratings of leadership behavior from their fellow squad-members, using a Norwegian translation of the Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008). The average number of raters in the sample was 7.1 (i.e. each leadership measure is the average of approximately seven followers' evaluations). At the same measuring time (after finishing the 9 months training) each officer also completed the Defining Issues Test 2 (DIT-2) (Rest et al., 1999a), the Self-Importance of Moral Identity inventory (SIMI) (Aquino & Reed, 2002) and the Hardiness scale (Johnsen, Eid, & Bartone, 2004), all representing stable intra-psychological dispositions.

6.3. Measures

6.3.1. Moral reasoning

The Defining Issues Test 2 (DIT-2) (Rest, 1979, 1999a) is designed to activate and measure the domination of moral schemas. The participants are presented with five moral dilemmas, like the following:

> A small village in northern India has experienced shortages of food before, but this year's famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh's family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man's warehouse. The small amount of food that he needs for his family probably wouldn't even be missed.

Each of the five dilemmas is followed by 12 arguments that are typical representations of Kohlberg's stages two to six of moral cognitive development. In addition, mixed into these items are meaningless statements used to ensure that the participants are not attending to superficial cues and idiosyncratic response sets (with sum score above 10 as exclusion criteria). Argument examples from the dilemma above are: (a) "Isn't it only natural for a loving father to care so much for his family that he would steal?" (b) "Are laws getting in the way of the most basic claim of any member of a society?" Participants are asked to rate the importance of each of the 12 items according to its value in making a decision about the dilemma presented. The scale is a five-point Likert scale ranging from "no importance" to "great importance". The participants are then asked to rank order the four items that they consider the most important in making their decision by distributing four points to the most important, three points to the second most important, two points to the third and one point to the fourth. By this procedure of rating and ranking as highly important the arguments that best fit their preferred schemas for making moral judgments, the participants demonstrate the level at which they most likely make moral decisions. The presumption of the DIT-2 is that the fundamental structure of moral judgments assessed by the test can be encompassed in three developmental schemas, represented by three indexes presented as percentage scores. The post-conventional

score (*P*-score), which is the most frequently utilized assessment of moral judgment development on the DIT-2, is expressed as the percentage of principled reasoning utilized by the participant in judging the dilemmas. The internal consistency in the present sample was acceptable (Cronbach $\alpha \geq .72$), and a Norwegian translation of the test was utilized (Olsen et al., 2006).

6.3.2. Self-importance of moral identity scale (SIMI)
The Self-Importance of Moral Identity scale was used to measure the importance of moral traits to the officer's self-concept (Aquino & Reed, 2002). The scale is two-dimensional and consists of 10 items (scored on a Likert scale from 1 = "disagree strongly" to 5 = "agree fully"). Five items measure Symbolization (S), which is a representation of the public part of the moral self-concept (sample item: The kinds of books and magazines that I read identify me as having these [moral] characteristics), while five items measure Internalization (I), which represents the private part of the moral self-concept (sample item: Having these [moral] characteristics is an important part of myself). Aquino and Reed (2002) report a satisfactory construct validity and internal consistency. In the present study we utilized a Norwegian version (Olsen et al., 2006), and the Cronbach's alpha values were .72 and .74 for the Internalization and Symbolization dimensions, respectively.

6.3.3. Hardiness
Hardiness was measured using a Norwegian translation (Johnsen et al., 2004) of the short form of the Dispositional Resiliency Scale reported by Bartone (1995). This 15-item instrument (rated on a four-point scale, with anchors at 0 (not at all true) and three (completely true) measures the hardiness dimensions of control, commitment and challenge, and has demonstrated adequate reliability and validity in previous studies on Norwegian samples (e.g. Eid, Johnsen, Bartone, & Nissestad, 2008). Examples of items are: (a) "Most of my life gets spent doing things that are meaningful" and; (b) "By working hard you can nearly always achieve your goals". The scale contains six items that are negatively keyed. After reversing these negatively keyed items, a total hardiness score can be obtained by summing responses to all items. In the present study, the Cronbach's alphas for the total hardiness scale ranged from .62 to .73. Although somewhat low, these reliability estimates are still comparable to estimates found in the literature, usually in the range of .6 to .7 (e.g. Hystad, Eid, Laberg, & Bartone, 2011).

6.3.4. Authentic leadership questionnaire (ALQ)
A Norwegian version of the 16-item Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) was used to measure authentic leadership. This instrument measures the four components (1) relational transparency (e.g. "My leader admits mistakes when they are made"), (2) moral perspective (e.g. "My leader demonstrates beliefs that are consistent with actions"), (3) balanced processing (e.g. "My leader listens carefully to different points of view before coming to conclusions") and (4) self-awareness (e.g. "My leader shows that he or she understands how specific actions impact others"). The respondents were asked to rate the behaviors of their officer colleagues on a scale from one (not at all) to five (frequently, if not always). Cronbach αlpha's (internal consistency) was .69 and .67 for transparency and internalized moral perspective, respectively, .64 for "balanced processing" and .57 for "self-awareness". The translation into Norwegian was done by bilingual translators using a translation-back translation procedure.

6.4. Analysis strategy
The data were analyzed using SPSS, version 22. Descriptive statistics was calculated in terms of distribution, and Pearson product-moment correlations were computed to reveal internal relations between the variables and preliminary source for determining predictions of AL (Aron, Aron, & Coups, 2006). A step-wise hierarchical multiple regression analysis was conducted, entering age as a control variable in step 1, the P-score index for moral reasoning in step 2, Self-importance of moral identity, internalization and symbolization in step 3, and hardiness as global index, in step 4, in order to investigate how much each moral antecedent explained of variation of AL and its four dimensions.

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7. Results

7.1. Descriptive statistics

In order to explore hypotheses 1–3, zero-order correlations were first examined, as shown in Table 1. The results show that the global index of AL correlates positively with PCS activation ($r = .32$, $p < .01$), and moral identity in terms of both Symbolized MI ($r = .25$, $p < .01$) and Internalized MI ($r = .23$, $p < .01$). Follow-up analysis showed positive correlations between all four facets of AL and PCS activation ($.25 < r < .28<$, $p < .01$). Further, Symbolized MI was correlated with the AL facets internalized moral perspective ($r = .32$, $p < .01$), and transparency ($r = .25$, $p < .01$), while Internalized MI correlated with self-awareness as well ($r = .16$, $p < .05$). Among the independent variables, the AL dimensions transparency and internalized moral perspective showed high correlation ($r = .76$, $p < .01$), as did balanced processing and self-awareness ($r = .69$, $p < .01$). Finally, no correlation was found between age and psychological hardiness towards AL.

7.2. Morals and authentic leadership (global index)

Table 2 presents the results of the hierarchical regression analysis examining the hypothesized relationship between AL and PCS activation (moral reasoning), moral identity and psychological hardiness as intra-psychological antecedents of moral behavior. The analysis showed that age was unrelated to AL, but PCS activation a significant predictor of AL in all steps. Adding measures of MI to the equation in step 3 further increased the model, while psychological hardiness did not increase the model in step 4.

7.3. Morals and the facets of AL

In order to explore the hypothesized positive relationship between each of the four dimensions of AL and the antecedents of moral behavior, we followed up the investigation by running four series of hierarchical regression analyses, with each of the AL dimensions as dependent variable, presented in Table 3. The results show that all dimensions of AL are related to moral antecedents, to varying degrees. Among the moral antecedents, PCS activation contributes in explaining the variance of all AL dimensions, and adding MI to the equation increases the explained variance for all of the dimensions. In the last step, the inclusion of psychological hardiness did not increase the explained variance for any of the dimensions.

Table 1. Mean scores (M), Standard deviations (SD) and correlations among study variables											
Variables	M	SD	1	2	3	4	5	6	7	8	9
Demographics											
1. Age	23.28	2.48	–								
Authentic leadership											
2. Moral perspective	2.45	.37	−.20	–							
3. Transparency	2.52	.42	−.13.	.76**	–						
4. Balanced processing	2.42	.38	−.01	.50**	.43**	–					
5. Self-awareness	2.33	.39	.03	.53**	.50**	.69**	–				
Moral Antecedents											
6. PCS activation	39.74	13.20	.00	.28**	.25**	.28**	.25**	–			
7. MI Symbolized	2.84	.67	.05	.32**	.25**	.15	.10	.16*	–		
8. MI Internalized	3.85	.72	−.07	.19*	.26**	.13	.16	−.02	.22**	–	
9. Hardiness	29.58	3.54	.02	.13	.01	.09	.08	.20*	.22**	−.34**	–

*$p < .05$
**$p < .01$
$N = 139$ Norwegian Cadet Officers.

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Table 2. Hierarchical regression analyses predicting authentic leadership from age, moral reasoning, moral identity and psychological hardiness (N = 139)

Model and predictor variable	R^2	ΔR^2	Adjusted R^2	B	SE	β
Model 1	.01		.00			
Age				−.01	.011	−.08
Model 2	.11*	.10**	.09			
Age				−.11	.10	−.08
PCS activation				.01	.00	.32**
Model 3	.19**	.08**	.17			
Age				−.01	.10	−.08
PCS activation				.01	.00	.30**
MI Symbolized				.07	.04	.14
MI Internalized				.10	.04	.22*
Model 4	.20	.08	.17			
Age				−.01	.01	−.08
PCS activation				.01	.00	.28**
MI Symbolized				.05	.04	.11
MI Internalized				.12	.04	.26**
Hardiness				.01	.01	.10

*$p < .05$.

**$p < .01$.

Note: B = unstandardized regression coefficient, $β$ = standardized regression coefficient. $n = 139$.

Table 3. Hierarchical regression analyses predicting facets of authentic leadership from age, moral reasoning, moral identity and psychological hardiness

Facets of authentic leadership

Predictor	Transparency		Moral		Balanced process		Self awareness	
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.02		.00		.00		.00	−.02
Age		−.15		−.03		−.06		
Step 2	.06**		.08**		.08**		.06**	
Age		−.15		−.03				−.06	
PCS act.		.25**		.28**		.28**		.25**
Step 3	.10**		.10**		.03		.05*	
Age		−.15		−.04		−.05		−.00
PCS act.		.22**		.24**		.27**		.26**
MI Inter		.22**		.15		.14		.22**
MI Symbol		.17*		.26**		.06		−.02
Step 4	.00		.01		.01		.02	
Age		−.15		−.04		−.06		−.01
PCS act.		.22**		.23**		.26**		.23**
MI Inter		.22**		.18*		.18*		.29**
MI Symbol		.17*		.23**		.02		−.07
Hardiness		.00		.08		.11		.15
Total R^2	.18**		.19**		.12**		.13**	
Adjusted R^2	.15**		.16**		.08**		.10**	

*$p < .05$.

**$p < .01$.

Note: $β$ = Standardized regression coefficient. $n = 139$.

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8. Discussion

The main aim of this study was to explore the impact of a series of intra-psychological antecedents of moral behavior on AL, and thus, adding knowledge about the within-person moral processes that underlies this form of leadership behavior. Given that most AL theory suggests that authenticity presupposes an overlap between intrinsic moral processes and praxis (Gardner et al., 2011), we included three intra-psychological antecedents of moral behavior (Rest, 1986) as operationalization of internalized moral competency. Our assumption is that AL requires leaders that are both able to make mature moral justice judgments, highly motivated to act morally, and able to implement moral decisions, even during opposition. We further suggest that a missing or a negative relationship between these moral competencies and AL could indicate that AL fails to capture a genuine ethical orientation. However, in concert with hypothesis 1, and partially hypothesis 2, the results show a consistent and direct relationship between AL and leaders' mature moral reasoning in terms of PCS activation—and moral motivation, in terms of self-importance of moral identity. Thus, the study supports the suggestion that AL nurtures on both mature moral perspective taking and a strong motivation to act morally. It further support the claim that AL represents an ethical leadership theory (Avolio & Gardner, 2005), encompassing a genuine morals component that may separate the saints from the villains in leadership positions (Bass & Steidlmeier, 1999), and runs contrary to claims that AL is not intrinsically ethical (Algera & Lips-Wiersma, 2012). As such, this underscores the relevance of AL as a useful tool in leadership development in organizations focused on ethical conduct, and particularly in contexts encompassing temptations and pressures to deviate from ethical standards.

Following Rest et al. (1999b), principled justice reasoning, here as PCS activation, represents an ability to apply an unbiased moral point of view in justice judgments that enables leaders to balance the interests of all stakeholders in the organization, and thus stimulate trust, commitment and co-operation. Accordingly, the results of our study indicate that AL includes an ability to establish and maintain a sense of fairness among followers, in line with Kiersch and Byrne's (2015) findings of a relationship between AL and followers' perception of justice and justice climate. Notably, contrary to Sendjaya et al. (2016), our study finds a direct relationship between mature moral reasoning (PCS activation) and AL, on all dimensions. This difference in findings may be a result of the different measures of moral reasoning used in the two studies. As outlined by Rest et al. (1999b), the Defining Issues Test is a recognition test that activates both explicit and implicit cognitive processing, contrary to tests that rely on explicit verbal responses. Thus, it is possible that our study provides a more representative index of the leaders' moral reasoning, which in turn corresponds better with the moral challenges related to justice judgments embedded in AL. It is further noteworthy that PCS activation is directly linked to all the AL dimensions. This indicates, as proposed in hypotheses 1 and 2, that a moral challenge is embedded in all of the dimensions of AL, similar to previous findings related to transformational leadership (Olsen et al., 2006), and is not exclusively the property of the internalized moral perspective dimension. This could be seen as a strengthening of the argument that AL rests on a moral basis, but also questions the relevance of an explicit morals dimension in the ALQ (Walumbwa et al., 2008). Here, it should also be noted that previous studies have shown that the DIT test measuring PCS activation is very robust against attempts to "fake good" (Rest, 1979). Taken together with our finding of a strong relation between PCS activation and AL, this suggests that the DIT may represent a useful tool in leader selection processes. Furthermore, it is noteworthy that the strength of the relationship between the moral antecedents and the ALQ results are at the same levels as Olsen et al. (2006) previously reported for the Multifactor Leadership Questionnaire (MLQ) measuring transformational leadership. On this basis, it could be argued that AL overlaps with rather than extending the MLQ in terms of capturing a morals component, and thus does not fully meet a previously stated ambition of filling a role as a "root construct" that supplements other leadership theories by providing extra ethical validity to leader assessments (Avolio, Gardner, Walumbwa, Luthans, & May, 2004).

Further, our study finds, as suggested in hypothesis 2, that moral motivation, in terms of strength of moral identity, adds to the effect of moral reasoning in predicting AL. Firstly, this indicates that

authentic leaders integrate ethical standards in their self-concept, and are subsequently likely to engage in moral behavior and to be focused on moral values, even when other (tempting) values are to be sacrificed (Aquino & Reed, 2002). Secondly, given that both PCS activation and MI have been found to predict moral behavior (Blasi, 1980; Shao et al., 2008), the results indicate that AL encompasses moral behavior, not only moral cognitive processes. This finding seems in line with Sendjaya et al. (2016) finding that Machiavellianism, as a negative operationalization of moral motivation, moderates the effect of moral reasoning on AL. Interestingly, at a global level of AL, only internalized MI was found to contribute to AL. This indicates that the moral processes integrated in AL are genuine and intra-psychologically based, and therefore, evidence of an intrinsic ethical component in AL—contrary to claims that there is no reason to expect that an authentic leader is more benevolent and ethical than others (Algera & Lips-Wiersma, 2012). In addition, MI symbolized, seen as the motivation to publicly display one's moral values, emerged as a significant predictor of both transparency and internalized moral perspective. This suggests that in order to be perceived as a morally oriented and transparent leader, it is not sufficient to be morally oriented "on the inside", but also oriented towards displaying this moral orientation in the public domain. Taken together, this finding indicates that AL is the result of both a genuine internalized moral orientation and an ability to promote these values openly.

Finally, unexpectedly in relation to hypothesis 3, psychological hardiness as operationalization of moral implementation competency had no impact on AL. It is possible that this lack of relationship can be a result of an already established moral obligation and determination to act morally stemming from high PCS activation and a strong moral identity. Thus, the effect of hardiness in terms of robustness and ability to withstand opposition during implementation of a moral decision may be overlapped by such strong moral motivation. This may fit in well with claim that high levels of principled moral reasoning lead to a strong sense of moral duty, which bridges a gap between moral reasoning and behavior.

Some limitations to this study deserve mentioning. First, we acknowledge that the convenience sampling process and the relatively small sample of mainly male military cadets means that the findings may not apply to other organizations, or across gender. However, given that the study investigates the relationships between intra-psychological variables and AL, the negative effect may be rather limited in terms of generalizability compared to e.g. prevalence studies. It is also worth noting that the current sample, in terms of emergency workers (e.g. work with high acute physical risk, complex work environment, severe consequences related to errors), represent a large work population, supporting the practical relevance of the findings. Second, even though the cadets are exposed to each other as followers, peers and leaders (they rotate in taking the various roles during the training programs) during a long and intense training period, and have great knowledge of each other, it would be desirable for similar studies to include leaders outside training settings, from various organizational settings, to strengthen validity.

8.1. Conclusion: Authentic leadership—a matter of morals

To sum up, this study offers support for the idea that although moral behavior is often seen as a core value in itself, it is also intimately linked to the ability to perform AL behavior in military leaders. By including measures of moral reasoning, moral motivation and psychological hardiness, this study elaborates and expands on previous investigations by Sendjaya et al. (2016). Our investigation has demonstrated a stronger and more direct link between moral reasoning and AL than the finding of only an indirect relationship by Sendjaya et al. (2016). By adding the four sub-dimensions of AL to the investigation, we also contribute to a more nuanced understanding of the moral processes that support the various aspects of AL. The present study underscores the importance of nurturing mature moral reasoning and an internalized moral motivation, as well as an ability to display these moral values, as part of the development of AL. It further indicates that these moral variables could represent a fruitful perspective in recruitment and selection processes.

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Author details
Olav Kjellevold Olsen[1]
E-mail: Olav.Olsen@uib.no
ORCID ID: http://orcid.org/0000-0002-7674-7229
Roar Espevik[2]
E-mail: roar.espevik@uib.no
[1] Department of Psychosocial Science, University of Bergen, Christiesgt. 12, 5015 Bergen, Norway.
[2] Department of leadership development, Royal Norwegian Naval Academy, Bergen, Norway.

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