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Philosophy, Self-Knowledge, and Personality in Iranian Teachers and Students of Philosophy

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ABSTRACT. Like psychology, philosophy apparently operates from a commitment to the belief that self-knowledge should be a goal of disciplinary and personal development. Iranian teachers and students of philosophy responded to a Philosophical Orientations Scale created for this study that assessed the possible content of a high school philosophy course, along with instruments measuring self-knowledge, need for cognition, the five-factor model, anxiety, depression, and perceived stress. As the authors hypothesized, self-knowledge predicted higher levels of a philosophical orientation, even after controlling for the variance explained by need for cognition and openness to experience. Philosophical orientations and self-knowledge were also correlated with psychological adjustment, and teachers scored higher than students on these two sets of constructs. These data supported the hypothesis that personal and disciplinary interests in an adaptive self-knowledge converge in philosophy.

Key words: openness to experience, need for cognition, philosophy, self-knowledge

UNDERSTANDING THE SELF was a central concern of early psychologists, and that interest continues. Robins, Norem, and Cheek (1999) located over 153,000 PsychInfo citations that were relevant to the self. This massive literature rested, in part, on the availability of a vast array of instruments for measuring two

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broad aspects of self-knowledge: “(1) an ongoing sense of self-awareness and (2) stable mental representations” (Robins et al., p. 447). Underlying this research is a conviction that the self is fundamental to optimal personality functioning because it serves as “a regulator of behavior and experience” (Robins et al., p. 447). That belief receives further confirmation in the consistent psychotherapeutic emphasis on self-knowledge as a key to psychological and behavioral adjustment (e.g., Arlow, 1995; Davanloo, 1995; Meador & Rogers, 1984; Overholser, 1996). The clear assumption has been that individuals with greater self-knowledge will be mentally healthier. For psychologists, therefore, self-knowledge is a goal that converges at the disciplinary and personal levels.

Psychology may not be alone in displaying such a convergence. Understanding the self was a central concern of early philosophers. As described by Hadot (2002), the fundamental objective of ancient philosophy was “to train people for careers as human beings” by encouraging them “to transform their personality” (p. 260). That transformation clearly involved greater self-knowledge. Democritus, for instance, was “devoted to *euthumia*, or the good disposition of the soul, equivalent to joy.” He sought this disposition “in a state of balance of the soul, which we can achieve if we adapt our actions to what we are capable of doing. Joy thus corresponds to self-knowledge” (Hadot, p. 187).

The ancient philosophical concern with the self was also sensitive to the two dimensions of self-functioning measured by contemporary psychologists. The early Greek Stoics, for example, believed that “philosophy was a unique act that had to be practiced at each instance, with constantly renewed attention (*prosokhe*) to oneself and to the present moment” (Hadot, 2002, p. 138). A concern with the “present moment” points toward “an ongoing sense of self-awareness.” “Attention to oneself” suggests a focus on “stable mental representations.”

Do personal and disciplinary interests in self-knowledge converge in philosophy? Attempts to answer that question have obvious implications for psychotherapy. In his rational–emotive therapy, for instance, Ellis (1994) developed an ABC model of psychopathology in which *activating* (A) life events lead to disturbed emotional *consequences* (C) only through the mediation of irrational *beliefs* (B). Some intellectual origins for this model rest in the work of ancient philosophers discussed by Hadot (2002), most notably in “the Greek and Roman Stoics, especially Zeno of Citium (the founder of the school), Chrysippus, Panaetius of Rhodes (who introduced Stoicism into Rome), Cicero, Seneca, Epictetus, and Marcus Aurelius” (Ellis, p. 64). Indeed, Epictetus roughly expressed the ABC model of psychopathology when he once said, “People are not disturbed by things, but by the views they take of them” (Ellis, p. 64). Evidence that personal and disciplinary interests in self-knowledge converge in philosophy, therefore, would support the conceptual foundations of rational–emotive and other similar forms of therapy.

In the present investigation, we sought to clarify the relationship between interests in philosophy and individual differences in self-knowledge and adjust-

ment. Philosophy is part of the high school curriculum in Iran, and the opportunity to conduct this study became available within the context of a comprehensive evaluation of that curriculum by the Iranian Ministry of Education. This assessment included the use of self-report questionnaires with items for measuring possible orientations of teachers and students to a philosophy course. Some of the items from the Philosophical Orientations Scale created for this project made it explicitly clear that development of self-knowledge was relevant to an education in philosophy (e.g., “knowing the ‘self’ and its place in the whole of being (reality) must be the core of teaching philosophy”).

Other items did not seem as directly related to self-knowledge (e.g., “the core of a logic course must be something that increases reasoning ability”). Hadot (2002) implied that all of philosophy originates in a hope to use reason to improve the self and that this hope continues today, albeit in a less obvious form than in ancient times (p. 273). The expectation, therefore, was that philosophical orientations in general would be associated with variables of relevance to greater self-knowledge and to better adjustment.

In the present study, we used four psychological scales to measure traits of relevance to philosophy and to self-knowledge. The Need for Cognition Scale identifies individuals who have “active, exploring minds and through their senses and intellect, reach and draw out information from their environment” (Cacioppo, Petty, Feinstein, & Jarvis, 1996, p. 199). The Openness to Experience Scale (Goldberg, 1999) assesses tendencies to maintain an imaginative, intellectual approach to life. These two instruments were deemed useful in evaluating a broader philosophical tendency to engage in systematic thinking, although not necessarily in thinking about the self.

More important, therefore, the Reflective Self-Knowledge Scale measures personal efforts to develop more sophisticated “stable mental representations” of the self, and the Experiential Self-Knowledge Scale operationalizes a commitment to maintaining “an ongoing sense of self-awareness” (Ghorbani, Watson, Bing, Davison, & LeBreton, 2003). Given Hadot’s emphasis on the importance of self-knowledge in philosophy, we expected that the self-knowledge scales would predict a philosophical orientation beyond any variance in tendencies toward thinking that was explained by the Need for Cognition and the Openness to Experience scales.

We used additional personality and mental health measures to assess the possibility that a philosophical orientation and self-knowledge could be linked with adjustment. Along with Openness to Experience, we administered the other dimensions of the five-factor model (Emotional Stability, Extraversion, Agreeableness, and Conscientiousness; Goldberg, 1999). Participants also responded to Depression and Anxiety scales (Costello & Comrey, 1967) and to a measure of perceived stress (Cohen, Kamarack, & Mermelstein, 1983).

For this study, Iranian teachers and students of philosophy responded to questionnaires measuring philosophical orientations, four psychological con-

structs presumably related to philosophical thinking and to self-knowledge, and additional measures of personality functioning. We tested four hypotheses:

1. If personal and disciplinary interests in self-knowledge converge in philosophy, then philosophy teachers should score higher in self-knowledge than should students.
2. Philosophical orientations should correlate positively with self-knowledge.
3. Associations between a philosophical orientation and self-knowledge should not be explained by general tendencies toward thinking as measured by need for cognition and by openness to experience.
4. Philosophical orientations and self-knowledge should be associated with personality adjustment.

Method

Participants

High school philosophy teachers and students from Tehran, Iran, volunteered to serve as the research participants. The teacher sample contained 94 women and 71 men with an average age of 35.43 years ($SD = 6.82$). Of the 397 student participants, 267 were girls, 96 were boys, and 34 did not indicate their gender. The average age of the students was 17.70 years ($SD = 0.99$). All the students were juniors and seniors who had either passed or who were passing a high school philosophy class.

Materials

All the measures were expressed in Persian and presented in two questionnaire booklets. The first booklet contained a number of sections evaluating various aspects of the philosophy curriculum in Iranian high schools. These scales were written especially for this study and thus were created in Persian. The second booklet contained the Reflective and Experiential Self-Knowledge scales (Ghorbani, Watson, Bing, Davison, & LeBreton, 2003), which were developed cross-culturally using Iranian and American samples. The adequacy of all translations was established during scale development procedures.

The second booklet also contained the Goldberg (1999) 50-item version of the five-factor model, the Need for Cognition Scale (Cacioppo et al., 1996), the Costello and Comrey (1967) Depression and Anxiety scales, and the Perceived Stress Scale (Cohen et al., 1983), all of which have well-established psychometric credentials. With the exception of the Big Five measure, the reliability and validity of these instruments have been demonstrated previously with Iranian samples (e.g., Ghorbani, Bing, Watson, Davison, & LeBreton, 2003; Ghorbani, Bing, Watson, Davison, & Mack, 2002; Ghorbani & Watson, 2004; Ghorbani,

Watson, Krauss, Davison, & Bing, 2004; Watson, et al., 2002). Reactions to all of these self-report instruments occurred along appropriately worded 0 to 4 response formats.

Ghorbani and Watson (2004) translated these measures in preparation for the present or previous studies. All of these measures were translated into Persian after extensive e-mail discussions centering on the nuances of English terms. Persian translations then were back-translated into English to confirm adequacy. No major problems were experienced in the translation process.

With regard to the philosophy measures, we sought some different information from the teachers and students, but the Philosophical Orientations Scale contained 22 statements that were presented in an identical fashion to both groups. Each item specified the potential content of a philosophy course. We asked the respondents to indicate how strongly they agreed that this content should be included, using a Likert-type scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). In general terms, statements made reference to critical thinking and logic, to an exploration of existential questions, to development of a philosophical vision characterized by a deep and comprehensive contemplation of experience, and to metaphysics.

Procedure

Philosophy teachers responded to the questionnaire booklets while attending a seminar conducted by the Iranian Ministry of Education. Teachers then took student versions of these booklets back to their schools. Previous and present philosophy students responded to these instruments, and teachers mailed the student data back to the researchers. We scored all the scales in terms of the average response per item, and we used a principal components analysis with a varimax rotation to define factors of the Philosophical Orientations Scale. In line with common practice, we analyzed these Likert scale measures with parametric tests. Data analysis included an examination of mean differences between teachers and students. Correlation and multiple regression procedures also clarified the implications of all constructs.

Results

Eigenvalues greater than 1.0 and a scree test yielded the four interpretable factors for the Philosophical Orientations Scale (see Appendix). A Metaphysical Engagement factor pointed toward an active contemplation of metaphysical issues like ontology and the existence of God as a means for developing reasoning skills. The Existential Thinking factor made reference to a general consideration of the existential and epistemological realities of life. The Philosophical Self-Knowledge factor reflected a quest for knowledge about the self and its place in the world. Abstract Thinking broadly defined the final factor. Relative to

the goals of this study, Philosophical Self-Knowledge seemed most explicitly related to self-knowledge, with Abstract Thinking least relevant and with the other two factors somewhere in between.

Differences Between Teachers and Students

A multivariate analysis of variance (MANOVA) yielded differences between the teacher and student reactions to the various scales and factors, $F(1, 467) = 10.35, p < .001$. Table 1 shows that teachers scored higher than students on both Reflective and Experiential Self-Knowledge. They also scored higher on all of the Philosophical Orientation variables. No group differences appeared for Agreeableness and Extraversion. Students displayed a higher mean on Openness to Experience, but teachers scored higher on Need for Cognition, Conscientiousness, and Emotional Stability and lower on Depression, Anxiety, and Perceived Stress. Relatively low internal reliabilities for Extraversion and some of the Philosophical Orientations variables suggested a need for caution in interpreting these data.

Self-Knowledge Relationships With Philosophical Orientations

Patterns of correlation differed between the teachers and students, Box's $M = 246.27, F(136, 90167.98) = 1.70, p < .001$. Table 2 reviews the relationships among Philosophical Orientations, Self-Knowledge, Need for Cognition, and Openness to Experience measures. Reflective and Experiential Self-Knowledge were predictive of all or almost all of the Philosophical Orientations measures in both groups. For teachers, Need for Cognition and Openness to Experience did not predict any philosophy measure, but both scales were correlated positively with the Philosophical Orientations Scale and all of its factors in the student sample.

Could linkages of Self-Knowledge with interests in philosophy be explained by general tendencies toward thinking as measured by Need for Cognition and Openness to Experience? We used two-step multiple regression procedures to answer that question in each sample. We used Need for Cognition and Openness to Experience to predict each philosophy measure in the first step and the two Self-Knowledge scales in the second step. Table 3 demonstrates a significant R^2 -change value in the second step of each of these analyses. The association between Self-Knowledge and interest in philosophy, therefore, did not seem attributable to general tendencies to engage in thinking.

Adjustment Implications of Measures

Were the philosophy and philosophy-relevant variables predictive of adjustment? In both samples, the obvious answer was yes. This conclusion was warranted within the important context that correlations confirmed the theoretical mental health implications of all seven additional psychological constructs (i.e.,

TABLE 1. Means (*M*), Standard Deviations (*SD*), and Comparisons of Philosophy Teachers and Students on Philosophy, Philosophy-Related, and Additional Psychological Measures

Measure	α	Teachers		Students		<i>F</i> (1, 467)	η^2
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Philosophy							
Philosophical Orientations	.78	3.05	0.46	2.74	0.45	35.02***	.07
Metaphysical Engagement	.61	3.23	0.58	2.90	0.63	20.88***	.04
Existential Thinking	.56	3.11	0.63	2.82	0.68	13.59***	.03
Philosophical Self-Knowledge	.55	3.31	0.72	2.99	0.81	12.32***	.03
Abstract Thinking	.47	3.14	0.61	2.56	0.72	51.41***	.10
Philosophy-related psychological							
Reflective Self-Knowledge	.68	3.11	0.53	2.96	0.53	6.33*	.01
Experiential Self-Knowledge	.83	3.09	0.59	2.74	0.61	23.78***	.05
Need for Cognition	.75	2.64	0.50	2.32	0.53	28.64***	.06
Openness to Experience	.65	2.33	0.49	2.51	0.55	8.30**	.02
Additional psychological							
Agreeableness	.60	2.82	0.63	2.77	0.68	0.43	.00
Conscientiousness	.70	2.84	0.56	2.66	0.64	5.95*	.01
Extraversion	.50	2.33	0.85	2.27	0.65	0.57	.00
Emotional Stability	.70	2.03	0.64	1.84	0.72	4.83*	.01
Depression	.87	1.15	0.70	1.53	0.79	18.04***	.04
Anxiety	.79	1.57	0.77	2.03	0.78	25.96***	.05
Perceived Stress	.80	1.50	0.54	1.95	0.60	43.16***	.09

p* < .05. *p* < .01. ****p* < .001.

TABLE 2. Correlations Among Philosophy and Philosophy-Related Measures for Teachers and for Students

Variable	1	2	3	4	5	6	7	8	9
1. Philosophical orientations	—	.83***	.70***	.69***	.74***	.28***	.37***	.13	.12
2. Metaphysical engagement	.77***	—	.48***	.49***	.53***	.27**	.36***	.16	.07
3. Existential thinking	.71***	.43	—	.40***	.38***	.33***	.24***	.10	.15
4. Philosophical self-knowledge	.69***	.40***	.40***	—	.42***	.19*	.23**	.11	.05
5. Abstract thinking	.67***	.37***	.29***	.35***	—	.15	.28**	.12	.10
6. Reflective self-knowledge	.49***	.44***	.32***	.35***	.30***	—	.56***	.34***	.20*
7. Experiential self-knowledge	.44***	.34***	.35***	.29***	.27***	.53***	—	.21*	.21*
8. Need for cognition	.25***	.23***	.15*	.20***	.20***	.37***	.18***	—	.22*
9. Openness to experience	.36***	.33***	.25***	.20***	.22***	.46***	.39***	.44***	—

Note. Data for teachers are above the diagonal. Correlations for students are below the diagonal.
* $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 3. Prediction of Teacher and Student Philosophy Measures With Need for Cognition (NC), Openness to Experience (OE), Reflective Self-Knowledge (RSK), and Experiential Self-Knowledge (ESK)

Group/Measure	Step 1			Step 2				
	ΔR^2	Predictor	β	t	ΔR^2	Predictor	β	t
Teachers	.02	NC	.13	1.33	.21***	RSK	.07	0.62
		OE	.00	0.03		ESK	.43	4.08***
	.03	NC	.16	1.63	.22***	RSK	.03	0.30
		OE	.00	0.02		ESK	.47	4.55***
	.01	NC	.09	0.94	.12**	RSK	.25	2.14*
		OE	.04	0.44		ESK	.17	1.50
	.01	NC	.12	1.25	.05*	RSK	.17	1.41
		OE	-.04	-0.42		ESK	.11	0.92
	.02	NC	.11	1.09	.11**	RSK	-.06	-0.52
		OE	.08	0.85		ESK	.37	3.35***
Students	.13***	NC	.13	2.48*	.16***	RSK	.31	5.65***
		OE	.28	5.24***		ESK	.21	4.08***
	.11***	NC	.11	2.11*	.10***	RSK	.30	5.16***
		OE	.27	5.10***		ESK	.12	2.15*
	.05***	NC	.07	1.22	.08***	RSK	.14	2.33*
		OE	.19	3.40**		ESK	.22	3.82***
	.05***	NC	.15	2.79**	.09***	RSK	.23	3.96***
		OE	.09	1.71		ESK	.14	2.53*
	.06***	NC	.14	2.45*	.05***	RSK	.17	2.80**
		OE	.15	2.70**		ESK	.12	2.11*

* $p < .05$. ** $p < .01$. *** $p < .001$.

the remaining four factors of the Big Five plus Depression, Anxiety, and Perceived Stress).

For the sake of brevity, an efficient summary of these data can be accomplished by describing the overall pattern of results. We obtained 35 correlations between the philosophy variables and the additional psychological variables. For teachers, 17 of these outcomes proved to be statistically significant. Agreeableness was correlated positively with four of the philosophy variables, and Conscientiousness was correlated with three. Significant relationships ranged from .17 ($p < .05$) between Agreeableness and Metaphysical Engagement to .33 ($p < .001$) between Agreeableness and Philosophical Self-Knowledge. A negative correlation appeared between Anxiety and Philosophical Self-Knowledge ($-.23$, $p < .05$), and all but the Abstract Thinking factor of the Philosophical Orientations Scale were associated with lower levels of Depression ($-.25$ to $-.38$, $p < .01$). All five of the philosophy variables displayed inverse linkages with Perceived Stress ($-.21$ to $-.33$, $p < .001$).

Only 15 of these 35 relationships proved to be reliable for the student sample. With regard to the remaining Big Five factors, Agreeableness was correlated positively with all five Philosophical Orientations variables, and Extraversion and Conscientiousness displayed direct linkages with four of the five. Relationships ranged from .10 ($p < .05$) between Agreeableness and Abstract Thinking to .23 ($p < .001$) between Metaphysical Engagement and Conscientiousness. Metaphysical Engagement ($-.11$, $p < .05$) and Existential Thinking ($-.11$, $p < .05$) were also negatively correlated with Depression.

We obtained 28 correlations between the four philosophy-relevant psychological and the seven additional psychological variables. For teachers, 16 of these relationships were statistically significant. All four philosophy-relevant variables were associated with higher levels of Agreeableness and Conscientiousness, with relationships ranging from .19 ($p < .05$) between Need for Cognition and Agreeableness to .40 ($p < .001$) between Reflective Self-Knowledge and Agreeableness. Openness to Experience predicted less Anxiety ($-.41$, $p < .001$), and Depression displayed negative correlations with Reflective Self-Knowledge ($-.33$, $p < .001$), Experiential Self-Knowledge ($-.29$, $p < .01$), and Openness to Experience ($-.53$, $p < .001$). Perceived Stress was also correlated negatively with Experiential Self-Knowledge ($-.21$, $p < .05$) and with Openness to Experience ($-.47$, $p < .001$).

For students, 21 of these 28 relationships were reliable. All four philosophy-relevant variables predicted higher values of Agreeableness and of Conscientiousness, all but Openness to Experience were correlated directly with Extraversion, and Openness to Experience was associated with greater Emotional Stability. These correlations ranged from .12 ($p < .05$) between Openness to Experience and Emotional Stability to .36 ($p < .001$) between Reflective Self-Knowledge and Agreeableness. All four philosophy-relevant psychological variables also were associated with less Depression ($-.18$ to $-.30$, $p < .001$) and less

Perceived Stress ($-.11$ to $-.19$, $p < .05$). A negative correlation appeared between Openness to Experience and Anxiety ($-.18$, $p < .001$).

Discussion

Philosophy appears to be much like psychology in assuming that a disciplinary and personal advancement of self-knowledge should promote well-being. Hadot's (2002) analysis of the historical origins of philosophy has this implication, and the present data clearly support his position. In a sample of Iranian teachers and students of philosophy, a Reflective Self-Knowledge Scale measured tendencies to develop "stable mental representations" of the self, and an Experiential Self-Knowledge Scale recorded personal efforts to maintain "an ongoing sense of self-awareness." Both instruments were correlated positively with a Philosophical Orientations Scale that essentially measured interests in philosophy. Such linkages appeared not only with a Philosophical Self-Knowledge factor that was obviously germane to the issue, but also with other, more tangentially relevant dimensions of philosophical concerns such as Abstract Thinking.

Philosophical Orientations and self-knowledge variables were also associated with a broad range of personality characteristics. In both samples, higher levels of Agreeableness and Conscientiousness and lower levels of Depression were especially consistent predictors of both sets of constructs. Numerous other measure-specific and group-specific relationships were observed as well. All these outcomes depicted interests in philosophy and tendencies toward self-knowledge as conducive to adjustment. Correlations, of course, cannot establish causation. Adjustment could have facilitated a more self-knowing and philosophical approach to life rather than vice versa. Some unidentified and unexamined additional variable could have produced these relationships as well. Such caveats are important to remember, but these data nevertheless were consistent with the hypothesis that philosophy and self-knowledge are related to psychological well-being.

At a theoretical level, we found that Need for Cognition and Openness to Experience were two constructs that seemed potentially relevant to the philosophical quest for self-knowledge. Each was, in fact, correlated positively with the two Self-Knowledge scales and with personality adjustment in both samples. With teachers but not students, however, neither instrument displayed a significant correlation with any index of Philosophical Orientations. Teacher data for these two scales were slightly less variable, and this may have contributed to the difference. However, our most important observations were that one or both of two Self-Knowledge scales remained consistent predictors of all five Philosophical Orientations variables when entered into multiple regressions after Need for Cognition and Openness to Experience. Findings for teachers and students, therefore, pointed toward the centrality of self-knowledge to interests in philosophy.

Other differences appeared between students and teachers. The discovery that students scored higher on Openness to Experience was in line with previously

reported age cohort contrasts, as were the higher Conscientiousness and Emotional Stability averages of the teachers (Roberts, Robins, Caspi, & Trzesniewski, 2003). All other group differences may similarly have reflected cohort effects and could have been observed with virtually any comparison between groups with the same age differences. Additional implications of these data may still deserve some consideration, however. Philosophy teachers scored higher on all of the Philosophical Orientations variables, suggesting that these measures did serve as valid operationalizations of an interest in and an understanding of philosophy. Higher teacher scores on Reflective and Experiential Self-Knowledge, along with their lower Depression, Anxiety, and Perceived Stress scores, also conformed with the suggestion that philosophy is related to the adjustment of greater self-knowledge.

This investigation supplied additional proof of the usefulness of the two Self-Knowledge scales. Again, these measures explicitly operationalized the two dimensions of self-functioning that underlie the vast array of instruments devised by psychologists to study the self: "(1) an ongoing sense of self-awareness and (2) stable mental representations" (Robins et al., 1999, p. 447). Previous research also has established that Reflective and Experiential Self-Knowledge predict not only self-reported psychological characteristics, but also peer-reported traits and academic performance in the university classroom (Ghorbani, Watson, Bing, Davison, & LeBreton, 2003). Moreover, self-knowledge is relevant not only to the basic scientific concerns of psychological researchers, but also to the applied scientific goals of therapists (Arlow, 1995; Davanloo, 1995; Meador & Rogers, 1984; Overholser, 1996). Again, any evidence that self-knowledge is a disciplinary and personal goal of philosophy seems to support the assumptions underlying many forms of therapy (Ellis, 1994). Therefore, as valid measures of theoretically and practically important concepts, the Reflective and Experiential Self-Knowledge scales appear to deserve additional research attention.

An obvious limitation of these data involves the lower internal reliabilities observed for some of the measures. The Extraversion Scale, especially, displayed a discouragingly low alpha, perhaps suggesting problems in the translation or, perhaps more likely, in the inclusion of items that were less than optimal for the Iranian cultural context. Lower internal reliabilities for some of the Philosophical Orientations factors were not unusual for constructs defined by a smaller number of statements, but caution is needed in interpreting these results.

Any caveat based on the lower internal reliability of a Philosophical Orientations factor nevertheless should be framed within a broader context. Our purpose in this project was not to develop a philosophy scale. Instead, our goal was to test the hypothesis that self-knowledge was, in general terms, relevant to interests in philosophy. The full Philosophical Orientations Scale displayed adequate internal reliability, and correlations of this scale with Reflective and Experiential Self-Knowledge yielded unambiguous evidence in favor of the hypothesis. With regard to the four Philosophical Orientations factors, only in the teacher sample did one correlation with a Self-Knowledge Scale prove to be nonsignificant. This

relationship with Reflective Self-Knowledge still approached significance and was obvious for the Philosophical Orientations factor with the poorest internal reliability. With a better Abstract Thinking measure, even this result might have been reliable.

Another concern might be expressed over the small magnitude of some of the Philosophical Orientations relationships. Rarely did these data explain much variance, a fact that was undoubtedly due in part to the poorer internal reliabilities and restricted ranges of some of these measures. At the same time, however, philosophy must be only one way in which people seek greater self-knowledge. Religion may be another, and in previous research, Reflective and Experiential Self-Knowledge were, in fact, correlated positively with religious commitments in an Iranian sample (Watson et al., 2002). Other sources of self-knowledge may exist as well. Therefore, the smaller magnitude of some of these correlations may have reflected differences in how people seek self-knowledge.

In addition, philosophers readily admit their limitations. As Hadot (2002) notes, "The philosopher is cruelly aware of his . . . impotence in a world which is torn between two states of unconsciousness: that which derives from the idolatry of money, and that which results in the face of the misery and suffering of billions of human beings" (p. 281). Hadot nevertheless concludes his arguments by quoting an ancient philosopher: "Do not wait for Plato's Republic, but be happy if one little thing leads to progress, and reflect on the fact that what results from such a little thing is not, in fact, so very little" (Marcus Aurelius as quoted by Hadot, p. 281).

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APPENDIX

Factors Obtained From the Philosophical Orientations Scale*

Metaphysical Engagement: eigenvalue = 4.36, % variance explained = 20.66%

1. Ontology or metaphysics, which examines being or reality in a deep and comprehensive way, must be the core of teaching philosophy. (.66)
2. Philosophical contemplation is one of the most important factors in the development and maturity of the mind and feeling of each person. (.62)
3. The core of philosophy must be the philosophical proof of God's existence and knowing his traits. (.57)
4. The core of a logic course must be something that increases reasoning ability. (.39)
5. Critical thinking or the ability to analyze and understand perspectives must be the core of a philosophy course. (.38)
6. Teaching philosophy must make philosophical questions and concerns come alive rather than just educate students in philosophy. (.32)

Existential Thinking: eigenvalue = 1.39, % variance explained = 6.61%

1. The core of a philosophy course must be to train thinking in a general way. (.63)
2. A personal encounter with important problems like freedom and responsibility, self-awareness, and the goal of life must be the core of philosophical teaching. (.59)
3. The philosophy course, before all else, must show the relationship of philosophy with the basic and hidden needs of each person, such as the meaning of life. (.58)
4. The core of a philosophy course must examine the extent and limits of knowing in the human mind (epistemology). (.48)

Appendix continues on next page

APPENDIX (continued)

Philosophical Self-Knowledge: eigenvalue = 1.31, % variance explained = 6.24%

1. Knowing the "self" and its place in the whole of being (reality) must be the core of teaching philosophy. (.72)
2. Revealing basic questions of the mind such as the meaning of life, death, and being of the "me" must be at the core of teaching philosophy. (.62)
3. The core of a philosophy course must facilitate the development of a comprehensive and consistent worldview in students. (.51)

Abstract Thinking: eigenvalue = 1.16, % variance explained = 5.51%

1. The core of a philosophy course must concern the development of an explanatory perspective (trying to see beyond ordinary things). (.67)
 2. The ability to question must be at the core of a philosophy course. (.59)
 3. Knowing what questions cannot be answered by the scientific method must be the core of a philosophy course. (.39)
 4. The core of a logic course must increase abilities to examine reason. (.38)
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*Loadings on factors are listed in parentheses at the end of each item.

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