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**WHAT KIND OF SELF-  
AWARENESS FOLLOWS  
GROWTH: FACETS OF  
REFLECTION AT DIFFERENT  
LEVELS OF EGO DEVELOPMENT**

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## **WHAT KIND OF SELF-AWARENESS FOLLOWS GROWTH: FACETS OF REFLECTION AT DIFFERENT LEVELS OF EGO DEVELOPMENT**

A theory of ego development (ED), established by Jane Loevinger (1966), remains one of the strongest theoretical approaches to exploration of personality development. The ego development process seems to be somehow determined by the more particular mechanisms. The author and her followers often marked the self-awareness, or reflection, as one of such mechanisms that advances a person through the stages. At the same time, the general perspective of the links between the ego level and the basic personality characteristics is still less than clear. The below research is aimed to clarify how different types of reflection, basic personality dimensions and satisfaction with life indicators proceed and interact at the different stages of the personality evolution process. A sample of 259 adolescents and youths, participants of a summer school in Russia, aged from 14 to 25, answered on the Washington University Sentence Completion Test, the Differential Test of Reflection, the Big Five Questionnaire, and Satisfaction with Life scale. The positive and negative facets of reflection behaved ambiguously through the different stages of ED. There was an ascending linear dependence between the productive (Systemic) type of reflection and the ED level. At the same time, non-productive types of reflection (Quasi-Reflection and Introspection), although they were positively associated with Neuroticism and negatively linked to Satisfaction with Life, had no significant connections with the Ego Development level.

Keywords: ego development, personality maturity, personality reflection, self-awareness

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## INTRODUCTION

A theory of ego development (ED), established by Jane Loevinger (1966), remains one of the strongest theoretical approaches to exploration of personality development. According to the theory, nine stages embrace the personality growth process across the lifespan (see beyond). From the very first publications, the author describes ego development as a domain of personality evolution that much differs from intellectual growth or adjustment. Ego development is the progress of cognitive and emotional complexity, psychosocial maturity and moral judgement capacities. Passing through the stages, a person obtains and applies the more complicated and compound concepts to explain daily experiences. Advantages of being at higher level, e.g., increase in abstract reasoning, interpersonal awareness, moral reasoning (see more in Gilmore & Durkin, 2001), allow the researchers of the field to consider the level of ego development as an indicator of personality maturity. At the same time, “it is a mistake to idealize any stage” (Loevinger, 1966, p. 200): while each has potential for growth, it also has its weaknesses and paradoxes.

Despite the holistic position of Loevinger in defining the term (Loevinger, 1983), ego development seems to be somehow determined by the more particular mechanisms. The author and her followers often marked the self-awareness, or *reflection*, as such mechanism that advances a person through the stages (e.g., Pfaffenberger, Marko, & Combs, 2011; Westenberg, Blasi, & Cohn, 2013). Thus, the data of Westenberg and Block (1993) shows a strong and positive link between the ego development and mindedness, i.e., a capacity to reflect and examine the motives in self and others, as well as to be introspective concerning inner experience and self-knowledge. Helson and Roberts (1994) confirm this statement and demonstrate that complexity and accuracy in understanding the motives of self and others raises with the ego development level and predicts it during adulthood. A Cramer’s research (1999) brings to light a conscious aspect of behavioral control that raises through the stages. A research of Lane et al. (1990) shows a moderate and significant correlation between the level of emotional awareness and the level of ego development. Studies based on similar approaches reported the concordant findings (e.g. Diehl, Coyle, & Labouvie-Vief, 1996; Sheldon & Kasser, 1995).

At the same time, a holistic approach to the reflection itself seems to be even less reliable than that to the ego development. Whereas it is most likely that the ontogenetic history of reflection unfolds coherently from phase to phase in childhood (Rochat, 2003), the outcomes by adolescence age might be much less uniform. Mor and Winquist (2002) share that suspicion mentioning the strong relation between the self-focused attention and negative affect in their meta-analysis of numerous studies. The same attitude toward the possible ambiguity of the reflection process is associated with the term *ruminat*ion, i.e., excessive attention to one’s negative affects and undesirable consequences of the present state (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). As a possible solution, Leontiev and Osin (2014) proposed a model to differential assessment of reflection. One positive (Systemic Reflection) and two negative varieties (Quasi-Reflection and Introspection – see beyond) form the model to gain adequacy in representation of the phenomenon.

### Goals and Hypotheses

The below research intends to fill the gap in our understanding of reflection as a key mechanism of personality growth. It is aimed to clarify how different types of reflection, basic personality dimensions and satisfaction with life indicators proceed and interact at the different stages of the personality evolution process. To reach the goals we tested several hypotheses. First, the positive

and negative facets of reflection will manifest separately through the different stages of ego development and show orthogonal connections. Thus, we expect positive associations between the ED level and Systemic Reflection, and negative associations between the ED level and the non-productive types of reflection (Quasi-Reflection and Introspection). Second, there will be a linear dependence between Systemic Reflection and Ego Development level: the higher the ego stage, the higher the Systemic Reflection level would be. At the same time, we expect a reverse linear dependence for the link between the negative types of reflection (Quasi-Reflection and Introspection) and the stage of Ego Development. Supporting the well-grounded critical review of Gilmore and Durkin (2001), we fourthly predict a positive association between the Ego Development level and Openness to Experience, as well as with Satisfaction with Life. Following the findings on rumination and other non-productive types of reflection that we described above, we also predict a negative association between the ED level and the Neuroticism trait.

## **METHOD**

### **Participants and Procedure**

The sample was compounded of participants of summer school for pupils and students that took place in 2014 in Russia and attracted representatives of different regions of the country. Age of respondents varied from 14 to 25 ( $M=20.03$ ,  $SD=3.92$ ), and the whole size of the sample was 259, including 67% of female participants. During face-to-face contact, the respondents filled in a paper-and-pencil form in quiet and comfortable conditions of auditoriums. They were motivated by promise to deliver consistent feedback after the school end to those who wish and by rewarding with a participant badge (which was also utilized to distinguish those who had been already recruited to the survey from those who had not). Several volunteers recruited respondents from the different school workshops through the first week of classes.

### **Measures**

**Ego Development.** Psychometrically strong and theoretically well grounded, the Washington University Sentence Completion Test (WUSCT) remains one of the most reliable and valid instruments for measuring personality development (Gilmore & Durkin, 2001; Holt, 1980; Loevinger, 1979; Redmore & Waldman, 1975). The main target of the test is cognitive conceptions, both conscious and implicit, that respondents use to interpret life experiences. The beginning of each of the 36 sentences (e.g., “My mother and I...”, “Women are lucky because...”, “Sometimes he wished that...”) induces a respondent to proceed with a personalized answer. Conceivably, the structure and substance of the answer vary depending on a latent pattern of the current ego development level. A rater translates qualitative answers into quantitative data using specific coding procedures described in the manual (Hy & Loevinger, 1996). Because of rate procedure, one piece of data ranged from 2 to 9 attributes to each respondent and so indicates the level of Ego Development. The first, symbiotic, stage is pre-verbal and cannot be assessed using the test. Other eight stages are the following: Impulsive (E2), Self-Protective (E3), Conformist (E4), Self-Aware (E5), Conscientious (E6), Individualistic (E7), Autonomous (E8) and Integrated (E9). We created a carefully translated Russian version of the test. For the current study, a short form of the WUSCT composed of first 18 items was used, and that is ordinal for research needs (Holt, 1980; Loevinger, 1985).

**Personality Reflection.** There is a sufficient amount of instruments measuring different aspects of reflection (e.g. Sheldon, 1996; Govern & Marsch, 2001). Little of them, however, try to distinguish the positive and negative facets of the phenomenon and to cover relatively stable

personality dimensions at once. One certain approach, nevertheless, attempts to take over the ambiguity of reflection using a single instrument (Leontiev & Osin, 2014). The Differential Test of Reflection contains of 30 items in Russian and divides into three subscales, which are mostly orthogonal. A Systemic Reflection scale is composed of 12 items (e.g., “I usually think of causes of what happens to me”, “When I analyze my own actions, I learn something new about myself”, “It is useful to stop once in a while to better understand the situation as a whole”). The scale reflects a capacity of self-distancing in different situations and a disposition to analyze oneself and others from different points of view. A scale of Qwasi-Reflection measures a person’s inclination to reflect upon facts and details that do not refer to actual life situation or to the subject as an active agent, and a tendency to muse on “what would be if...” scenes. It contains of nine items (e.g., “I love to dream of what I do not have”, “I tend to lapse into day-dreaming”, “I often dream up of what my life would be otherwise”). The last (Introspection) scale of nine items (e.g., “Sometimes attending to my own experiences distracts me from my work”, “I tend to ruminate for a long time about what is going on”, “When something is not going well for me, it’s difficult for me to stop thinking about it”) reflects a tendency to ruminate on mostly negative self-feelings and experiences. All items proceed with 4-grades Likert’s scale (“no”, “more no than yes”, “more yes than no”, “yes”).

**Big Five Factors of Personality.** A Russian version of Big Five Questionnaire made by Caprara et al. (Caprara et al., 1993; Osin et al., 2015) was used to measure five basic dimensions of personality – Extraversion (E), Agreeableness (A), Conscientiousness (C), Neuroticism (N) and Openness to Experience (O). It is also contains a scale of Social Desirability (L). The test contained of 80 items (e.g., “I identify myself as an active and energized person” (E), “I am a friendly person” (A), “If I do not succeed in doing something, I tend to keep on until I deal with it” (C), “I often notice that I am nervous” (N), “I am a person who always seeks for new experience” (O), “I was always confident in all my actions” (L)).

**Satisfaction with Life.** In addition, we measured satisfaction with life using the Russian version of Diener’s Satisfaction With Life 5-item scale (Diener et al., 1985; Osin & Leontiev, 2008). The items (e.g., “In most ways my life is close to my ideal”) estimate global life satisfaction that refers mostly to a cognitive, judgmental assessment of a person’s quality of life according to his chosen and subjective criteria.

## RESULTS

**Descriptive Statistics.** The means, standard deviations and Cronbach’s alpha coefficients for the study’s measures are presented in Table 1. We gave the ego development descriptions separately in Table 2.

Table 1  
Descriptive Statistics of Adolescents and Youths Outcome Measures (N = 259)

Variable	Female		Male		Total		Cronbach's Alpha
	M	SD	M	SD	M	SD	
Systemic Reflection	40.39	5.23	39.76	6.49	40.32	5.39	0.85
Introspection	26.46	5.57	24.88	4.71	26.29	5.47	0.85
Quasi-Reflection	28.97	5.26	26.94	5.78	28.74	5.36	0.83
Big Five – Extraversion	41.93	7.43	40.85	7.80	41.79	7.46	0.88
Big Five – Agreeableness	54.73	7.01	53.45	7.01	54.51	7.00	0.87
Big Five – Conscientiousness	42.58	8.63	43.45	7.58	42.60	8.55	0.87
Big Five – Neuroticism	43.26	9.72	37.94	10.47	42.59	10.03	0.91
Big Five – Openness	62.80	7.25	59.48	6.47	62.34	7.21	0.86
Big Five – Social Desirability	32.04	7.12	31.00	7.12	31.83	7.14	0.81
SWLS	22.82	5.17	22.02	6.03	22.65	5.32	0.74

Only nine protocols rated at the E3 Self-Protective stage were found, and those were excluded from the final analysis. We scored no participants below E3 Self-Protective and beyond E7 Individualistic stage. In our data, the E5 Self-Aware level turned out to be modal, and that is usual for urban samples (Holt, 1980).

Table 2  
Frequencies of Participants Scoring at Each Stage of Ego Development (N=259)

Ego development Stage	Frequencies	Percentage, %
E3 Self-Protective	9	3.47
E4 Conformist	63	24.32
E5 Self-Aware	105	40.54
E6 Conscientious	66	25.48
E7 Individualistic	16	6.18
Total	259	100

**Bivariate Correlations.** We tested the correlations between the measured variables. As presented in Table 3, all types of Reflection performed differently. While the Systemic Reflection had no noticeable links with Extraversion, Conscientiousness, Social Desirability and Life Satisfaction, two other types of Reflection did. At the same time, the Systemic Reflection indices were the only that had an evident connection with Openness to Experience factor. The Spearman's rho correlations between the Ego Development level and other outcomes showed the

significant associations between the Ego Development stage and Systemic Reflection ( $\rho = .263$ ,  $p < .001$ ), as well as between ED and Openness to Experience ( $\rho = .199$ ,  $p < .001$ ). Other types of reflection showed no significant associations with the ED level.

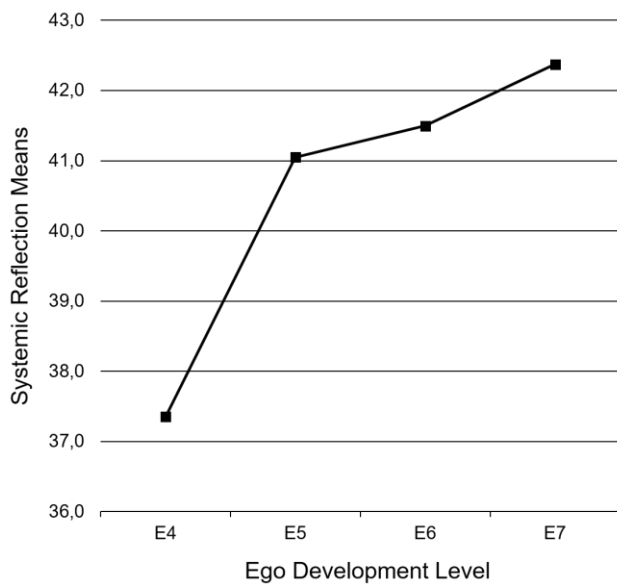
Table 3  
Pearson's Correlations of Outcome Measures

Variable	<i>r</i>		
	Systemic Reflection	Introspection	Quasi-Reflection
1. Introspection	.408**	—	—
2. Quasi-Reflection	.338**	.462**	—
3. Big Five – Extraversion	-.067	-.228**	.029
4. Big Five – Agreeableness	.130*	.065	.108
5. Big Five – Conscientiousness	.086	-.159*	-.250**
6. Big Five – Neuroticism	.210**	.559**	.332**
7. Big Five – Openness	.343**	.017	.176**
8. Big Five – Social Desirability	-.122	-.301**	-.126*
9. SWLS	.034	-.242**	-.165**

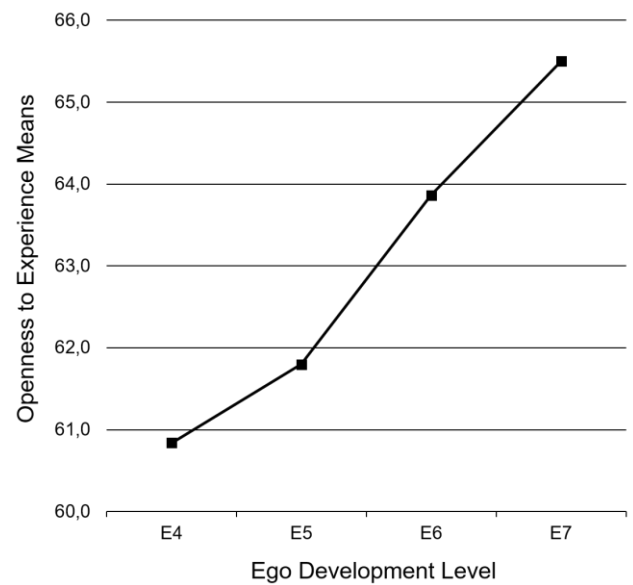
\* $p < .05$  \*\* $p < .001$

**ANOVA and General Linear Modelling.** A One-way ANOVA was conducted to compare the effects of Ego Development level on all measures. There were significant effects of ED on Systemic Reflection [ $F(3, 246) = 9.76$ ,  $p = .000$ ] and on Openness to Experience [ $F(3, 246) = 3.19$ ,  $p = .024$ ] at the  $p < .05$  level for the four conditions (levels from E4 to E7). Other effects were not significant.

We performed general linear modelling to factors that had significant associations with the Ego Development level and One-way ANOVA effects. Both factors (Systemic Reflection and Openness to Experience) showed significant linear dependencies ( $p < .001$  and  $p < .01$  consequently) with the ED level. The Figure 1 and Figure 2 demonstrate this dependency graphically.



*Figure 1.* Results of General Linear Modelling for the Ego Development Level and Systemic Reflection. Contrast Estimate = 3.468; Standard Error = .979;  $p < .001$ ; Confidence Interval between 1.540 and 5.395



*Figure 2.* Results of General Linear Modelling for the Ego Development Level and Openness to Experience. Contrast Estimate = 3.587; Standard Error = 1.359;  $p < .01$ ; Confidence Interval between .910 and 6.264

## DISCUSSION

The goal of this article was to clarify how the facets of Reflection, Big Five dimensions and Satisfaction with Life measures proceed through the stages of Ego Development. As we expected, adolescents and youths ED trajectory appeared to be followed by the productive Systemic type of reflection. We also proved that Systemic Reflection increased linearly through the stages in our sample. Moreover, progress in that type of reflection had a sudden increase beyond E4 Conformist level. These findings adjust with Loevinger's theory (Loevinger, 1983), and thus empirically demonstrate the role of productive reflection in the personality evolution process on post-conventional stages (see more in Pfaffenberger et al., 2011).

We also presumed that non-productive types of Reflection would show a decreasing linear dependency with the ED level. Although that hypothesis was not confirmed, negative reflection types manifested separately from the Systemic type. They had stronger associations with Neuroticism and no significant links with the Ego Development stage. If we add to this another piece of our data showing that Quasi-Reflection and Introspection had negative significant correlations with Satisfaction with Life, we might assume that Systemic Reflection is the only kind that follows the personality maturity process. At the same time, a tendency to ruminate or to be focused on "what would be if" situations, regardless of their attribution to the self-awareness process, appeared to be irrelative to the personality growth. Some made corresponding presumptions conceptually (e.g., Manners & Durkin, 2000), but our data had some preliminary empirical confirmations of such statements. Moreover, we rejected the hypothesis of negative connection between the Neuroticism factor and Ego Development. Our data showed no



significant correlations between the variables despite the theoretical assumptions made earlier in literature.

Another hypothesis referred to a role of Openness to Experience in the process of ego development. Past researches reported of that tendency several times (e.g., Kurtz & Tiegreen, 2005; Lilgendahl, Helson, & John, 2013), and we confirm that the Openness to Experience factor was significantly linked to the ED level. In contrast to data on Systemic Reflection, the Openness to Experience means had no evident leaps but enlarged gradually through the stages. Still it does not mean that the personality maturity level equals to the level of Openness, but Openness may constitute a necessary condition for transition beyond the conventional stage.

**Limitations.** As we mentioned, the E5 Self-Awareness level was modal in our sample, and that makes evidence of an advanced level of personality maturity of our participants. That is why such association between ED and Systemic Reflection might not reveal itself in general population. Therefore, the findings need to be verified with more broad samples. Moreover, only a longitudinal design of study can demonstrate whether productive types of reflection maintain the personality development process, and whether non-productive types of reflection impede to it.

**Conclusion.** Different kinds of reflection behaved ambiguously through the ego development process in our sample. The Systemic Reflection, as well as the Openness to Experience trait, followed the personality growth in our data. At the same time, non-productive types of reflection, although they were positively associated with Neuroticism and negatively linked to Satisfaction with Life, had no significant connections with the Ego Development level. The subject requires a further investigation to prove this preliminary data in causal terms.

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