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ADJECTIVE MARKERS
OF POLISH INDIGENOUS
LEXICAL PERSONALITY FACTORS:
A PEER-RATING STUDY

Studies of other people's personality trait perception have been of marginal significance in the psychology of personality. Such studies usually use tools developed specifically for self-rating research. Similar studies in social psychology are limited to a high level of abstraction. On the basis of earlier Polish peer-rating psycholexical studies, a six-factor structure of dispositional adjectives has been observed, different from the structure obtained in self-rating studies. The purpose of the current study was to construct scales enabling the measurement of the adjective markers of Polish lexical personality traits based on the Big Six in a peer-rating study. Another purpose was to examine the psychometric properties of the constructed scales and identify the most important correlates. The participants were 383 people, with age ranging from 16 to 83 years. The constructed 48-adjective list allows to measure the axial traits of the Polish lexicon: Agreeableness, Impulsiveness, Conscientiousness, Extraversion, Resilience, and Intellect. Coefficients of internal consistency and stability reached satisfactory values.

Keywords: peer-rating, psycholexical approach, the Big Six.

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THE LEXICAL APPROACH TO PERSONALITY
FROM THE OBSERVER'S PERSPECTIVE

The lexical approach in the trait theory assumes that the most important characteristics responsible for individual differences between people are encoded in natural languages (Goldberg, 1981). The more important a trait is for the individual's social functioning, the more variations it has in the lexicon of a particular language, for example in synonyms and antonyms. Key dimensions and differences in personality in a particular culture/language can be identified through an examination of the structures of languages used for interpersonal communication. It is worth noting that in the so-called lexical hypothesis emphasis is placed primarily on the perceived personality traits rather than on a self-description.

Research studies may be considered psycholexical when a complete lexicon or its representative sample is used to describe dispositions (understood as a perceptual category) in a particular language/culture. Historically, early studies of the precursors of the modern Big Five/Six theory placed greater emphasis on the perspective of perceived personality traits (peer-rating, observer-rating) rather than self-rating (e.g., Fiske, 1949; Norman, 1963). Despite the fact that in at least fifty percent of psycholexical studies a peer/other-rating perspective was applied, it was treated as additional to the self-rating perspective (Di Blas & Forzi, 1998; Goldberg, 1990; Mlačić & Ostendorf, 2005; Somer & Goldberg, 1999; Singh, Misra, & De Raad, 2013; Szarota, 1995; Zhou, Saucier, Gao, & Liu, 2009). The self-rating perspective has dominated lexical research, which is reflected in the number of studies using factor analysis of self-reports as a point of reference in comparative research and treating it as the basis for constructing psychometric tools. This undoubtedly means that it was considered to be more valuable from the perspective of personality research.

Personality psychologists (as opposed to social psychologists) have shown a great interest in self-perception rather than the description of other people's perceived characteristics. A possible reason for applying the self-report model is the belief that the structure of the perception of self and others is similar. Multiple analyses on the U.S. population have greatly contributed to this approach. In the studies by Goldberg (1990, 1992) the structure of descriptions of self and others was similar with regard to the number of factors and their contents: (1) Extraversion, (2) Emotional Stability, (3) Conscientiousness, (4) Agreeableness and (5) Intellect. On the other hand, some recent studies prove that different factorial structures were identified when self-reports were compared with peer-rating. These studies show that the two types of descriptions differed in one

(Mlačić & Ostendorf, 2005) or more factors (Singh, Misra, & De Raad, 2013), even when the factors were assigned similar labels (Di Blas & Forzi, 1998).

In order to answer the question of whether the structure of perceived personality traits differs from the structure of self-reported traits, parallel studies were carried out. They used both versions of the instructions and a full list of Polish dispositional adjectives across a full age range representation. In studies in which the qualities of other people were considered, certain variables were controlled: sex, age, and the emotional relationship to the person described (Gorbaniuk, Czarnecka, Kowalska, et al., 2011). Based on an ipsatized data analysis in the six-factor solution, the following dimensions of perceived personality traits were identified: Agreeableness (good-natured, kind, honest, helpful), Extraversion (energetic, introverted, talkative, outgoing), Conscientiousness (orderly, conscientious, disciplined), Impulsiveness (explosive, impulsive, impetuous), Resilience (resilient, tough, fearful), and Intellect (research-focused, creative, inquisitive). In the case of self-rating, when the same lexical material was used, the identified set of factors was typical for the cross-cultural Big Six (Ashton, Lee, Perugini, et al., 2004): Agreeableness, Extraversion, Conscientiousness, Emotional Stability, Honesty and Intellect (Gorbaniuk, Budzińska, Owczarek, et al., 2013). Thus, in the perception of others, Agreeableness and Honesty form a common factor while Emotional Stability becomes divided into two independent factors: Resilience and Impulsiveness. The combination of Agreeableness and Honesty is not a surprise, since they correlate relatively strongly in self-reports within the Big Six (Gorbaniuk et al., 2013). Moreover, they are part of one factor in the Big Five/Five-Factor Model (Goldberg, 1990; Costa, McCrae, & Dye, 1991). They are also treated as components of Morality (Wojciszke, 2005) or Warmth (Fiske, Cuddy, & Glick, 2007) in the dichotomous set of dimensions of social perception (together with Competence). As regards the occurrence of two separate factors named Resilience and Impulsiveness in the current study, it correspond with the results of lexical studies carried out in Italy (Di Blas & Forzi, 1998) and in China (Zhou et al., 2009), where factors with similar content were identified. It is also worth noting that Emotional Stability was the most "troublesome" factor in the perception of others in many previous lexical studies (Goldberg, 1990; Mlačić & Ostendorf, 2005).

There are numerous questionnaires that measure lexical markers of the Big Five (Goldberg, 1992; Gosling, Rentfrow, & Swann, 2003; Donnellan, Oswald, Baird, et al., 2006) or the Big Six (De Raad, Barelds, Levert, et al., 2010). Other versions of questionnaires related to them have also been used to measure the Five-Factor (Terracciano, Abdel-Khalek, Adam, et al., 2005) or Six-Factor Mo-

del of personality (HEXACO; Lee & Ashton, 2006). These questionnaires vary in terms of length (e.g., 5, 10, 20, 50, or 100 markers), the lexical material used (adjectives, sentences), and the type of description: they are used to study both self-reported personality and the perceived personality traits of others. A common feature of these questionnaires is that they primarily reflect the lexical structure of self-rating descriptions, which is treated as an observer-rating model of Anglo-Saxon origin.

The purpose of using adjectives for description based on lexical markers of the Big Five or Big Six can be varied. It is closely related to the theoretical and methodological approach of the researcher: this kind of description can be used for cross-cultural comparisons in lexical studies (e.g., Mlačić & Ostendorf, 2005). The purpose can also be to test newly developed questionnaires for coherence with the lexical dimensions (e.g., Yarkoni, 2010). Finally, adjective-based description can be used directly as a tool for measuring personality (e.g., Livosky, Stevens, Hoff, et al., 2012).

The up-to-date literature does not provide tools for measuring markers of the Big Six that would fully take the specificity of the observer's perspective into account. In particular, there is a lack of evidence focused on the specificity of the Polish indigenous lexical structure in perceived personality traits (emic personality dimensions across peer-rating). At the same time, studies in social psychology and personality psychology need to determine the degree of convergence between the results of the studies and the axes of the Polish lexicon. Without the construction of an adjective marker list based on the Big Six in the Polish language, such comparisons are difficult to carry out and a quantitative analysis is almost impossible.

RESEARCH QUESTIONS

The aim of the current research was to construct a tool for measuring the markers of the Big Six in the Polish lexicon from a peer-rating perspective. The study focused in particular on the perceived personality traits of others in order to determine the psychometric properties and identify the most important correlates. These objectives were specified in the form of the following research questions:

Q1: Is the structure of the brief Big Six marker list for measuring dispositions attributed to others consistent with the structure of the full Polish lexicon of personality?

Q2: What are the psychometric properties of the scales measuring the dimensions of the Polish lexicon of perceived personality traits?

Q3: What are the correlates of the traits attributed to others in the basic dimensions of the lexicon of the Polish language?

The first two questions are vital for the current research. Due to the psychometric nature of this study, research hypotheses have not been formulated.

METHOD

Measures

A list of adjectives measuring
perceived personality traits

Based on the results of a principal component analysis with Varimax rotation of a list of 579 dispositional adjectives (Gorbaniuk, Czarnecka, Kowalska, et al., 2011), 60 best adjective markers were selected. They represented each of the six factors based on the results of lexical studies involving peer-rating. In order to ensure a high psychometric value of the scales, certain criteria were met in the selection of the adjectives. These included low skewness ($|As| < 1.0$), high variance of responses, and high specificity. The last of these was obtained by calculating the difference between the squared correlation of a particular item with a particular factor and the sum of squared loadings of other factors. It is worth noting that the scales that were thus created were intended to measure the axes of Polish indigenous lexical personality factors from a peer-rating perspective.

Table 1 shows the 60 adjectives used in the present study. The order of the adjective list was determined based on systematic sampling – that is, every sixth item in the list was an adjective belonging to a given factor. The respondents' task was to describe a person using all the adjectives by indicating their descriptions on a 5-point scale. The instruction was worded, for example, as follows: "Please describe a woman/man of your age whom you have known for at least two years and towards whom you do not hold extremely negative or positive emotions." There were four versions of the instruction in total; they were constructed in such a way as to match the sex of the person describing and the person being described.

Attitude measurement

Attitude towards the described person was measured with a scale consisting of four adjectives: sympathetic, unpleasant (–), likeable, and repulsive (–). These were included at the end of the list of dispositional adjectives. The reliability of the aggregate measurement of attitude was $\alpha = .92$.

Sample

The participants were 383 individuals aged from 16 to 83 years ($M = 37.7$ years, $SD = 13.6$ years). Men accounted for 49.6% and women for 50.4% of the tested population. As regards the level of education, 48.8% of the respondents declared that they had higher education, 44.9% had secondary education, and 6.2% had elementary education. A majority of the respondents (50.7%) were married, 40.5% were single, 4.7% were divorced, and 4.2% identified themselves as widowers or widows. As regards the place of residence, 24.8% of the respondents lived in the country while 75.2% lived in towns or cities.

Procedure

An interviewer visited each participant in their own home. Respondents were asked to complete a set of questionnaires within one day. A total of 17 questionnaires were discarded due to unreliability caused by incomplete data.

As mentioned before, four types of instructions describing the characteristics of other people were used in order to control the sex of the person describing and the person described. In that context, it was possible to establish that: 24% of the participants were men describing men, 25% were men describing women, 25% were women describing men, and 26% were women describing women. The described people's age range was similar to that of the respondents (16-85 years, $M = 37.7$, $SD = 13.3$).

Measurement stability was verified by administering the questionnaire once again 10-14 days later to the same sample of 59 participants. If we accept the correlation of .20 as an absolute valuable cognitive minimum, then, given two-tailed hypotheses, the power of the research procedure $1 - \beta$ is .98 (for an error of $\alpha < .05$) and .92 (for an error of $\alpha < .01$). These parameters of power allow to assume with a high degree of certainty that there are no valuable cognitive relationships between the variables in the population (if no correlation coefficients are found at $\alpha < .01$).

RESULTS

The Verification of Factor Structure Correspondence
Between the Big Six Adjective List
and the Lexical Study

Original (nonipsatized) data were used for principal component analysis. The correlation matrix determinant was 10^{-13} for all the 60 adjectives. The Kaiser-Meyer-Olkin measure of sampling adequacy was .915, and Bartlett's sphericity test was statistically significant (χ^2 = 14577.53, df = 1770, p < .001). Eigenvalues for the first ten factors of a nonrotated solution were: 14.15, 7.48, 4.50, 3.56, 2.42, 1.97, 1.53, 1.24, 1.19, 0.99, etc. The results of principal component analysis with Varimax rotation for the six-factor solution are shown in Table 1. The solution explains 56.7% of variance.

All the 60 adjectives correlated highest with the factors that they had correlated highest with in previous lexical studies (Gorbaniuk, Czarnecka, Kowalska, et al., 2011), which was a criterion in selecting them for this study. The above means that the factor structure was fully replicated in the case of those adjectives that are most strongly correlated with the Big Six factors of a complete Polish lexicon of dispositional adjectives used for describing the personality of others. The names of the factors were left unchanged: Agreeableness (AGB), Impulsivity (IMP), Conscientiousness (CON), Resilience (RES), Extraversion (EXT) and Intellect (INT) (the order of factors is dictated by their order in Table 1).

In order to quantitatively confirm the similarity of the factor structure in both studies, two types of coefficients were calculated: Tucker's coefficient of congruence, which is a measure of similarity between factor loadings, and the comparability coefficient, which is a measure of similarity between the factors' scores in current studies and those from previous studies (Gorbaniuk, Czarnecka, Kowalska, et al., 2011). Tucker's coefficients of congruence for each factor were the following: .98 (AGB), .96 (IMP), .98 (CON), .95 (RES), .95 (EXT), .91 (INT). In the light of Lorenzo-Seva and Berge's (2006) criteria, Tucker's coefficients indicate high similarity (.85-.94) or even equivalence (.95-1.00) between the compared factors. The comparability coefficients were as follows: .98 (AGB), .96 (IMP), .99 (CON), .96 (RES), .94 (EXT), .90 (INT). According to the criterion proposed by Everett (1983), the above results prove factor equivalence (.90-1.00).

Table 1

Varimax-Rotated Six-Factor Solution Derived From 60 Polish Personality Adjective Markers of the Big Six: A Peer-Rating Study

English translations	Principal components						Descriptive statistics			Polish adjectives
	1	2	3	4	5	6	*M*	*SD*	*As*	
good-natured	**.83**	-.09	.15	-.01	.07	.01	3.49	1.16	-0.45	dobroduszny
hearty	**.82**	-.18	.17	.04	.06	.09	3.59	1.16	-0.51	serdeczny
helpful	**.82**	-.08	.23	.02	.12	.02	3.55	1.12	-0.54	uczynny
sympathetic	**.76**	-.11	.13	-.11	.07	.04	3.38	1.09	-0.37	współczujący
friendly	**.80**	-.18	.19	.04	.18	.12	3.65	1.17	-0.66	przyjazny
charitable	**.76**	-.11	.19	.01	.12	.02	3.56	1.04	-0.46	dobroczynny
sincere	**.76**	-.15	.18	.07	.05	.17	3.46	1.22	-0.63	szczery
kind-hearted	**.78**	-.24	.19	.03	.13	.16	3.57	1.16	-0.54	życzliwy
truthful	**.68**	-.13	.24	.15	.03	.18	3.42	1.18	-0.50	prawdomówny
conceited	**-.63**	.29	-.19	-.02	-.13	.10	2.78	1.39	0.15	zarozumiały
irascible	-.17	**.79**	-.09	.02	.11	-.05	2.93	1.25	0.06	wybuchowy
nervous	-.17	**.79**	-.08	-.13	-.05	.02	3.05	1.28	-0.06	nerwowy
hot-tempered	-.15	**.78**	-.11	.02	.11	-.02	2.94	1.25	-0.03	porywczy
neurotic	-.14	**.77**	-.12	-.18	-.09	-.02	2.74	1.27	0.17	nerwicowy
impulsive	-.03	**.74**	-.08	.02	.20	.02	3.12	1.23	-0.20	impulsywny
hyperactive	-.19	**.73**	-.15	-.05	.03	.05	2.66	1.27	0.30	nadpobudliwy
vehement	-.15	**.74**	-.11	.14	.19	.03	2.95	1.26	-0.02	gwałtowny
choleric	-.13	**.70**	-.14	-.04	-.08	.01	2.74	1.35	0.13	choleryczny
anxious	-.15	**.63**	-.21	-.28	-.06	.00	2.88	1.18	0.13	niespokojny
composed	.29	**-.43**	.29	.33	.01	.22	3.40	1.11	-0.49	opanowany
orderly	.22	-.05	**.83**	.00	.00	.06	3.33	1.12	-0.40	uporządkowany
systematic	.23	-.07	**.77**	.05	.01	.10	3.41	1.12	-0.41	systematyczny
disciplined	.18	-.09	**.76**	.05	-.11	.12	3.46	1.12	-0.51	zdyscyplinowany
well-organized	.17	-.08	**.75**	.17	.02	.14	3.57	1.07	-0.70	zorganizowany
slovenly	-.11	.16	**-.71**	-.03	.00	.13	2.75	1.33	0.22	bałaganiarski
inaccurate	-.17	.17	**-.72**	-.02	-.11	-.08	2.45	1.20	0.50	niedokładny
undutiful	-.18	.22	**-.62**	-.04	-.24	-.09	2.15	1.18	0.81	nieobowiązkowy
conscientious	.36	-.15	**.65**	-.02	.00	.22	3.54	1.10	-0.52	sumienny
provident	.12	-.05	**.55**	.11	.04	.29	3.38	1.08	-0.60	zapobiegliwy
reckless	-.22	.33	**-.52**	-.09	-.15	-.17	2.39	1.22	0.59	lekkomyślny

English translations	Principal components						Descriptive statistics			Polish adjectives
	1	2	3	4	5	6	M	SD	As	
resilient	.02	.02	.01	**.60**	.01	.18	3.49	1.01	-0.59	odporny
cowardly	.02	.23	-.05	**-.65**	-.20	.02	2.34	1.12	0.52	strachliwy
tough	-.03	.13	.20	**.67**	.11	.31	3.49	1.07	-0.55	twardy
strong	.03	.09	.15	**.61**	.14	.20	3.51	1.11	-0.62	mocny
fearful	-.06	.24	.10	**-.66**	-.32	.04	2.41	1.24	0.56	lękliwy
tearful	.01	.30	.01	**-.58**	.00	.02	2.29	1.25	0.67	płaczliwy
fearless	.04	.01	.07	**.51**	.09	.37	3.13	1.08	-0.31	nieustraszony
strong character	.03	.10	.20	**.56**	.23	.34	3.59	1.17	-0.60	silny charakter
timid	.06	.18	.03	**-.48**	-.34	.06	2.39	1.27	0.55	bojaźliwy
panicky	-.18	.48	-.02	**-.59**	-.11	.04	2.50	1.25	0.55	panikarski
taciturn	.02	.05	-.05	-.02	**-.68**	.03	2.21	1.22	0.75	małomówny
withdrawn	-.05	.15	.04	-.03	**-.67**	-.01	2.39	1.18	0.58	zamknięty w sobie
fun-loving	.24	.03	-.09	.03	**.62**	.19	3.42	1.18	-0.39	rozrywkowy
exuberant	.13	.27	.07	.35	**.67**	.18	3.37	1.06	-0.39	żywiołowy
vigorous	.17	.22	.21	.26	**.63**	.16	3.51	1.06	-0.75	żwawy
slow	-.01	-.10	-.20	-.36	**-.58**	-.04	2.37	1.21	0.65	powolny
sociable	.42	-.07	.04	.07	**.56**	.21	3.87	1.06	-0.88	towarzyski
energetic	.17	.27	.11	.41	**.58**	.11	3.62	1.12	-0.73	energiczny
go-ahead	.18	.19	.03	.30	**.54**	.30	3.15	1.18	-0.16	przebojowy
dynamic	.13	.28	.05	.40	**.53**	.25	3.45	1.19	-0.57	dynamiczny
exploring	-.04	-.06	.17	.08	.17	**.69**	3.31	1.16	-0.40	badawczy
receptive	.15	-.08	.09	.13	.14	**.65**	3.39	1.07	-0.53	chłonny
intellectual	.20	-.04	.24	.01	.07	**.65**	3.19	1.19	-0.25	intelektualista
individualist	-.02	.11	-.10	.26	-.10	**.53**	3.37	1.13	-0.30	indywidualista
inquisitive	-.17	.13	.20	-.10	.05	**.48**	3.69	1.11	-0.77	dociekliwy
innovative	.17	-.01	.06	.32	.22	**.55**	3.06	1.08	-0.12	innowatorski
intelligent	.32	-.16	.23	.20	.22	**.54**	3.84	1.09	-0.89	inteligentny
creative	.32	-.11	.11	.21	.34	**.55**	3.43	1.02	-0.42	kreatywny
satirical	.07	.02	.00	.08	.30	**.33**	2.99	1.08	-0.16	satyryczny
idealistic	.32	.05	.08	.09	-.28	**.41**	3.13	1.05	-0.28	idealistyczny
eigenvalue	7.4	6.6	5.9	4.9	4.9	4.3				
% expl. variance	12.4	11.0	9.8	8.2	8.1	7.1				

Note. Factor loadings of the items most highly correlated with the factors are in bold.

Psychometric Properties
of the Scales Used for Measuring the Big Six
From a Peer-Rating Perspective

In the following stages of the study, psychometric parameters were computed for scales that can be used in future studies to measure the Big Six traits as perceived in others. The number of items for measuring each of the factors is limited to eight that have the highest specificity factor (i.e., the items most strongly correlated with a given factor and at the same time the least correlated with other factors). Detailed data for the items included in the each scale can be found in Appendix 1.

Table 2 contains the most important descriptive statistics, detailed data on the internal consistency coefficients, stability coefficients, and correlations between scales.

Table 2

Psychometric Properties of the Peer-Rating Big Six 48-Marker Questionnaire

Scale	Reliability				Descriptive statistics				Correlations between scales				
	α	r_M	r_{tt}	$t(58)$	M	SD	As	K	AGB	EXT	CON	IMP	RES
AGB	.94	.67	.89	2.26*	3.53	0.96	-0.49	-0.60	–				
EXT	.89	.50	.85	0.77	3.61	0.81	-0.56	-0.12	.28**	–			
CON	.91	.56	.84	0.68	3.49	0.90	-0.52	-0.06	.48**	.20**	–		
IMP	.92	.58	.85	-1.49	2.89	1.01	0.02	-0.85	-.35**	.12*	-.32**	–	
RES	.83	.37	.91	2.65*	3.52	0.76	-0.49	0.05	.14**	.51**	.20**	-.12*	–
INT	.82	.36	.81	1.29	3.34	0.73	-0.22	0.07	.39**	.42**	.36**	-.10*	.46**

Note. Each scales was calculated as an unweighted average of the scale's items; α – internal consistency coefficient, r_M – mean correlation between the scale's items, r_{tt} – absolute stability coefficient, t – t-test of difference between the first and the second measurement; descriptive statistics for the scales: M – mean, SD – standard deviation, As – asymmetry, K – kurtosis; * $p < .05$; ** $p < .01$.

The internal consistency coefficients achieved entirely satisfactory values, ranging between .82 and .94. Absolute stability coefficients (Pearson's r) also achieved satisfactory values, ranging between .81 and .91. In the second factor, however, the profile indicates more favourable opinions about the persons described. A statistically significant difference at $p < .05$ between the first and the second measurement was observed for Agreeableness, $t(58) = 2.26$, $d = 0.28$, and Resilience, $t(58) = 2.65$; $d = 0.36$. An equivalent difference between these scores on a five-point scale is 0.07 (AGB) and 0.12 (RES), respectively. The observed differences can be described as low; therefore, the above indicators point towards

a satisfactory stability of the perceived personality traits measured by the constructed scales.

As indicated in Table 2, correlation between the results in different scales ranges between -.35 and .51, which is due to several reasons. Firstly, the scales were calculated as a weighted aggregation of adjectives (arithmetic mean). This does not take into account the different factor loadings of the adjectives that were most strongly correlated with the factors. A contrasting calculation would be a regression method in principal components analysis with orthogonal rotation. Secondly, the respondents may have been guided by an evaluative consistency heuristics when describing other people, especially when they lacked knowledge about a particular aspect of a described personality trait and/or when adopting a superficial approach to the task. Due to the above, the evaluative component present in a majority of adjectives (Gorbaniuk, Czarnecka, & Chmurzyńska, 2011) supports correlation between the scales (cf. Peabody & Goldberg, 1989; Saucier, 1994).

Correlates
of Dispositions Attributed to Others

The results also show that demographic characteristics such as the age and sex of the respondents correlated very weakly with attributing traits to others and statistically significant associations explain only about 1% of variance (see Table 3). Moreover, the age and sex of the described person correlated weakly with the dispositions attributed to him or her: the older the person, the less conciliatory ($r = -0.14$), the more introvert ($r = 0.11$), and the less intellectually efficient ($r = -0.11$) they were perceived to be. Furthermore, women were perceived as having lower resilience than men ($r = -0.18$).

Table 3
Correlates of Dispositions Attributed to Others

Scales	Describing person (observer)		Described person (actor)		Attitude	
	Age[a]	Sex[b]	Age[a]	Sex[b]	r[a]	β[c]
AGB	-.11[*]	.03	-.14[**]	-.01	.72[**]	.69[**]
EXT	-.09	.00	-.11[*]	.04	.29[**]	.10[*]
CON	.09	-.03	.06	.05	.36[**]	-.02
IMP	-.01	.04	.05	.04	-.26[**]	-.16[*]
RES	.03	.11[*]	.03	-.18[**]	.24[**]	.05
INT	-.09	.00	-.11[*]	-.05	.39[**]	.07

Note. a – Pearson's *r* correlation coefficient, b – point-biserial correlation coefficient; c – standardized coefficients of multiple regression (attitude is a response variable); * $p < .05$; ** $p < .01$.

The variable that was most strongly related to the attribution of all the Big Six personality traits was the observer's attitude to the described person; it explained between 7% (IMP) and 52% (AGB) of variance in perceived personality traits (see Table 3). If we have a positive attitude to the observed person, we tend to regard them as characterized by higher Agreeableness, Extroversion, Conscientiousness, Resilience, and Intellectual Ability as well as lower Impulsivity (and other way round if the attitude is negative). The multiple correlation coefficient between attitude and personality trait attribution is $R = .82$ [$F(6, 376) = 129.47$, $p < .001$].

DISCUSSION

A Summary of the Results

The results confirmed the six-factor structure of the most strongly correlated adjectives and ones that are the most specific to the dimensions of the perception of others in the Polish lexicon of personality (Gorbaniuk, Czarnecka, Kowalska, et al., 2011). The selected list of 48 markers is a representative sample of the Big Six for perceived personality traits in the Polish lexicon. The constructed scales show satisfactory reliability in terms of internal consistency and absolute stability.

Weak correlations were found between the perceived dispositions and demographic characteristics of the observer and the person described. Because the study was correlational in nature, there is no direct evidence for a causal relationship between attitude towards people (positive vs. negative) and opinion about their personality traits. There is no doubt, however, that these variables are closely related (2/3 of shared variance). The trait that is the most laden with attitude (or a personality trait crucial in establishing an attitude towards the observed person) is Agreeableness. Extraversion and Impulsiveness are other traits that correlate (although weakly) with attitude. The above evidence indicates that the attitude towards a person may have a significant impact on dispositions attributed to a person and the observer's objectivity in the assessment of personality traits is highly debatable.

Areas of Application
of the Big Six Markers

The constructed list of the Big Six markers has cognitive value for the following reasons. It primarily focuses on a study in which the connections are established between the already used (or newly developed) psychological tools for measuring personality and the Big Six of Polish lexicon of perceived personality traits. Some researchers may wish to explore to what extent these tools replicate the semantic relationships between the descriptors of stable human characteristics encoded in the evolution of Polish society. Assuming that the lexical dimensions coincide with the dimensions of implicit personality theory (Borkenau, 1992), any questionnaires measuring the perceived traits of others must inevitably activate these implicit theories – to the extent to which the lexical material used in the questionnaire makes this possible.

The second area of application of the markers list may be in treating it as a reference point in studies focusing on the specificity of perception of particular populations, for example specific groups (voters, consumers; Gorbaniuk, Toczyńska, Osiak, et al. 2012), professionals (politicians, journalists; Caprara, Barbaranelli, & Zimbardo, 2002), ethnic groups, or nonhuman subjects such as animals (Gosling, Kwan, & John, 2003), brands (Bosnjak, Bochmann, & Hufschmidt, 2007), countries (Gorbaniuk & Omiotek, 2011), and the like. Tools based on lexical material that contain dispositional descriptors are frequently used in such studies and their authors aim to systematize the key perceptual dimensions. Taking psychological knowledge into account, research questions in such studies on a higher level of abstraction can be reduced to the following: to what extent are the semantic fields of adjectives and the relationships between them modified by the specificity of the object of description, and to what extent do they confirm the hypothesis of systematic discrepancies (Shweder & D'Andrade, 1979)?

The third potential area of application of the constructed list of markers may be research on the perceived personality traits of others. The authors are of the opinion that a description of personality is not equivalent to the personality of a particular person (cf. Saucier, Hampson, & Goldberg, 2000). Moreover, psycholexical studies are more closely linked with social psychology than with the psychology of personality. Nevertheless, many researchers believe otherwise, and if they believe that studying the structure of natural languages allows to discover the structure of human personality (the lexical hypothesis), then they may wish to use the scale created in the current study. This tool fully reflects the cultural specificity of the Polish lexicon of personality and its scales measure the

principal semantic axes of dispositional descriptors in the Polish language in studies involving peer-rating. However, it is important that the use of psychometric tools in research should be preceded by theoretical and methodological reflection.

LIMITATIONS

Selected Big Six markers were tested in a peer-rating study; however, this is only a fraction of observer-rating perception. In future research, it may be beneficial to apply the created tool in exploring the perception of people with various degrees of familiarity, such as spouses, family members, friends, colleagues, acquaintances, etc. (cf. De Vries, Lee, & Ashton, 2008). There have been such studies in the past, but they were carried out in different cultural contexts, by means of instruments from culture-specific lexical research using self-rating tools. One other limitation of the current study is the fact that participants with higher education were overrepresented in the selected sample compared to the education distribution in the general population.

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APPENDIX 1

Polish Markers of Perceived Personality Traits
(PM-PPT)

Agreeableness (AGB): *dobroduszny* (good-natured), *serdeczny* (warm), *uczynny* (helpful), *współczujący* (sympathetic), *przyjazny* (friendly), *dobroczynny* (charitable), *szczery* (sincere), *życzliwy* (kind-hearted)

Extraversion (EXT): *małomówny* (taciturn)*, *zamknięty w sobie* (withdrawn)*, *rozrywkowy* (fun-loving), *żywiołowy* (exuberant), *żwawy* (vigorous), *powolny* (slow)*, *towarzyski* (sociable), *energiczny* (energetic)

Conscientiousness (CON): *uporządkowany* (orderly), *systematyczny* (systematic), *zdyscyplinowany* (disciplined), *zorganizowany* (well-organised), *bałaganiarski* (slovenly)*, *niedokładny* (inaccurate)*, *nieobowiązkowy* (undutiful)*, *sumienny* (conscientious)

Impulsivity (IMP): *wybuchowy* (irascible), *nerwowy* (nervous), *porywczy* (hot-tempered), *nerwicowy* (neurotic), *impulsywny* (impulsive), *nadpobudliwy* (hyperactive), *gwałtowny* (vehement), *choleryczny* (choleric)

Resilience (RES): *odporny* (resilient), *strachliwy* (cowardly)*, *twardy* (tough), *mocny* (strong), *lękliwy* (fearful)*, *płaczliwy* (tearful)*, *nieustraszony* (fearless)*, *silny charakter* (strong character)

Intellect (INT): *badawczy* (exploring), *chłonny* (receptive), *intelektualista* (intellectual), *indywidualista* (individualist), *dociekliwy* (inquisitive), *innowatorski* (innovative), *inteligentny* (intelligent), *kreatywny* (creative)

* reverse-scored
Note. Suggested adjective order on the list: alternating representation of each of the six scales. Response range: 5-point. Questionnaire available in PDF at: http://www.kul.pl/spplab