

# Study on the Relations between One's Personality Dimensions and his Personality Judgment about Friend based on Reality Distortion

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**Abstract**—Judgment is affected by many agents and distortion in this assessment is unpreventable. Personality dimensions are among those factors that interfere with the distortion. In this research, the relations between personality dimensions of subject and his judgment on friends' personality dimensions is investigated. One-hundred friend couples completed both NEO Five Factor Inventory (NEO-FFI) and Ahvaz Reality Distortion Inventory (ARDI) to make judgments about themselves and their friends. Observations show that judge's Agreement and Neuroticism dimensions are impressed by reality distortion. On the other hand, this reality distortion interferes with one's evaluation of his friend's Agreement, Neuroticism, and Conscientiousness dimensions. Conscientiousness with suppressive effect on judge's other dimensions plays the irrelevant role on personality judgment. Therefore, observer-rating tools which are used as a conventional criterion seem to be not valid because of the reality distortion due to judge's personality dimensions.

**Keywords**—Personality Dimensions, Reality Distortion, Judgmental Accuracy

## I. INTRODUCTION

**M**AKING a judgment about the others is dependent upon the criteria which everyone considers for judging. The criteria for judging the others are various and are affected by many factors [1]. Judgment on the personality, is an attempt to gain the knowledge about psychological characteristics, such as personality facets which help to explain about how was and will be the person's behavior, in the past and in the future [2].

In addition to social and external factors such as the situation in which we need to make a decision or judge something; and internal factors such as person's memory and mood, permanent personality characteristics also impress the judging process [3-4]. While making a judgment about the

others, we may probably consider ourselves as a benchmark for evaluating their behaviors [5]. Some researchers investigated the errors in judgment (error paradigm) and some others studied the accuracy of judgment (accuracy paradigm) [6]. However, there are a limited number of studies on the possible relations between people's personality dimensions and their judgment about the others. Therefore, objective of this research is considering the role of five main personality dimensions (i.e. Neuroticism, Extroversion, Openness to Experience, Agreement, and Conscientiousness) in the evaluation of others' personality dimensions based on reality distortion which happens in people's judgment. So the hypothesis of this study is that: 1) there is a relation between one's personality dimensions and his evaluation of others' personality dimensions; and 2) this relation can be assigned to a measure of reality distortion.

## II. METHOD

In this research, volunteer undergraduate and graduate students from different areas of study in the universities of Tehran in the academic year 2007-08 are considered, via random sampling method. Two-hundred subjects with a mean age of 22 years (17 to 30,  $SD=2.6$ ), Thirty-nine female friend couples and sixty-one male friend couples, are asked to complete both NEO Five Factor Inventory (NEO-FFI) [7] and Ahvaz Reality Distortion Inventory (ARDI) [8]. Each subject completes four questionnaires (one self-report from NEO-FFI, one self-report from ARDI, one observer-rating of his/her friend from NEO-FFI, and one observer-rating from ARDI). In fifty percent of the cases, self-reports are completed prior to observer-ratings. If there is a difference between self-report of a subject and a friend's rating about that subject, we may assume that at least one of these reports is not completely illustrating the reality. So, by using reality distortion scale, we try to measure the differences between the subject's self-judgment and evaluation of his friend. This means that we subtract the subject's self-report results from the results of his friend's rating of the subject. This may help us to avoid using routine criteria.

The differences between subject's self-evaluation and friend's evaluation of the subject may be due to subject's

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biases and his personality traits, reality distortion by friend, or both of these factors. We can thus recognize and eliminate the part of these differences which is assignable to the reality distortion by friend. In the next step, we can put the distortion-free differences, which can be due to subject's personality effect on his judgment, into a relation with judge's personality. For this purpose, the grades obtained from subject's personality dimensions and his evaluation of friend are subtracted from each other and the differences are put into the focus of attention for further analysis. The differences are put into the relation with the reality distortion scale. Each of these differences are put into regression with reality distortion grades and regression residuals are obtained as a part of disagreement between subject's and friend's views, which are independent from reality distortion by friend.

### III. RESULTS AND DISCUSSIONS

Table I shows statistical results for the subjects according to the grades of NEO-FFI five personality dimensions and reality distortion in self-reports and observer-ratings. It is evident that subject's Openness and Agreement are higher comparing to his judgment on his friend. The reality is also more distorted about friend in comparison to self-evaluation of the subject.

For examining the assumption and data analysis, first the

TABLE I

VALUES FOR THE GRADES OF SUBJECT'S SELF-EVALUATION AND FRIEND'S EVALUATION OF THE SUBJECT FOR PERSONALITY DIMENSIONS AND REALITY DISTORTION

	Variable	Domain of Variation	Mean	SD
Subject's Self-Evaluation	Neuroticism	41	22.75	7.40
	Extroversion	40	30.20	6.43
	Openness to Experience	25	32.10	4.98
	Agreement	40	29.00	6.41
	Conscientiousness	36	31.66	7.29
	<b>Reality Distortion</b>	22	27.42	4.63
Friend's Evaluation of the Subject	Neuroticism	38	20.76	6.58
	Extroversion	31	30.61	5.91
	Openness to Experience	27	28.98	5.20
	Agreement	31	28.68	6.34
	Conscientiousness	46	31.44	7.75
	<b>Reality Distortion</b>	28	29.56	5.54

relation between subject's personality dimensions and his evaluation of the others is considered. Therefore, the canonical correlation analysis is utilized. Comparing the analysis results from canonical correlation with Pillai's criterion, Hotelling's trace, and Wilk's Lambda indicates that there is a relation between the two sets of variables of subject's personality dimensions and his evaluation of friend's

personality dimensions. This description confirms the first part of the assumption. Considering the significance of the tests ( $P \leq 0.01$ ) for the variables of the study, this assumption is verified that subject's personality dimensions have a relation with his evaluation of friend's personality dimensions.

In Table II it is indicated that the differences between self-report of subject and his friend's observation just in Neuroticism and Agreement make significant correlations with reality distortion scale. Since friend's self-report grades are subtracted from subject's evaluation to obtain the difference grades, the positive correlation between the difference in Neuroticism dimension and subject's reality distortion suggests that the more are the common results between two friends' evaluations, we can state that the subject describes himself with more accordance with the reality. This is because that Neuroticism describes the traits more sensibly. The negative correlation between the difference in Agreement dimension and subject's reality distortion, on the other hand, implies that the more are the common results between two friends' evaluations, the more is reality distortion in subject's self-report. This is due to the relation between the Agreement dimension and the inclination to social desirability. This finding is in accordance with Ref. [6]. However, three other personality dimensions (i.e. Extroversion, Openness, and Conscientiousness) do not have a significant correlation with the reality distortion scale, which is in agreement with Ref. [9]. This can be justified by considering that observable dimensions such as Extroversion are more easily recognized than other dimensions.

Next step includes keeping aside what is in relation with

TABLE II

PEARSON CORRELATION BETWEEN REALITY DISTORTION BY FRIEND AND THE SUBTRACTION OF SUBJECT'S SELF-EVALUATION FROM FRIEND'S EVALUATION OF THE SUBJECT

Subtraction in:	Reality Distortion
Neuroticism	0.22*
Extroversion	-0.17
Openness to Experience	0.18
Agreement	-0.26*
Conscientiousness	-0.06

reality distortion from the difference between subject's self-report and friend's evaluation of the subject, in order to consider the relation between the regression residual and subject's personality. For this purpose, the differences are first turned into reality distortion grades. Then each of these differences are put into regression analysis with reality distortion grades and regression residuals are obtained as a part of disagreement between subject's and friend's views, which are independent from reality distortion by friend. The relation between these friend's distortion-independent differences and subject's self-report is considered by canonical correlation analysis. Analysis of the canonical correlation between these two sets of variables leads to

formation of five pairs of canonical variables and five canonical correlations in Table III.

Only the first canonical correlation with a value of 0.52 is

TABLE III  
CANONICAL CORRELATION BETWEEN PERSONALITY DIMENSIONS AND  
REGRESSION RESIDUALS

Canonical Correlation	Wilk's Lambda	Square Root of Chi	Degree of Freedom	Significance
0.52	0.64	42.58	25	0.02
0.27	0.87	12.64	16	0.60
0.17	0.95	5.19	9	0.82
0.15	0.96	2.37	4	0.70
0.04	0.99	0.17	1	0.68

significant, and presents a 27% variance of subject's personality variables and reality distortion. This shows the necessity of the analysis of the relation between the two sets based on just one pair of the canonical variables. Canonical loads and coefficients relevant to the first pair of canonical variables are presented in Table IV.

Neuroticism and Agreement loads, pertaining to subject's personality, are significant in value. The correspondence in these sub-scales coefficients and loads indicate the originality of this relation. Regarding Extroversion and Openness it can be seen that the canonical loads are weak and the corresponding coefficients are close to zero. As a result, we can conclude that the existing correlation is just the reflection of a minor correlation between these two sub-scales and other sub-scales.

The canonical load pertaining to Conscientiousness is close to zero. However, its corresponding canonical coefficient is negative and significant. Therefore, this sub-scale plays suppressive role in the relation between the two sets. Although this dimension does not have a considerable relation with the second set (regression residuals), helps to improve the relation between the two sets, by eliminating the invalid variances of other sub-scales in the first set (subject's personality). In the second set, the loads of three sub-scales of Neuroticism, Agreement, and Conscientiousness are significant. Neuroticism has the most effect on the canonical variables in

the second set with a negative sign. After that, Agreement and Conscientiousness are effective with a positive sign and considerable differences from Neuroticism values. As a result, it can be interpreted that people with high Neuroticism, low Agreement, and high Conscientiousness have less reality distortion in evaluation of their friends. This may be justified by considering that neurotic people are more careful in their judgments, as they are more sensitive and exhibit less distortion. People with low Agreement make less distortion because they are in a lower grade of the social desirability traits. High Conscientiousness is also a sign of people's morality in their judging process.

#### IV. CONCLUSIONS

To evaluate the effect of friend's personality dimensions on his judgment on subject's personality, a criterion of judgment accuracy should be available. Considering that the accuracy of subject's self-judgment is unknown, it is tried to eliminate disturbing factors in the research and get to the objective without a criterion. Therefore, by calculating the difference between self-report by subject and observer-rating by subject's friend, the obtained difference from the evaluations can be assigned to reality distortion scale affected by friend and the effect of friend's personality on his judgment about subject. It can be concluded that self-evaluation is affected by reality distortion in Neuroticism and Agreement dimensions. Distortion in the friend's evaluation of the subject in Neuroticism, Agreement, and Conscientiousness dimensions is also effective in friend's judgment about the subject.

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TABLE IV  
LOADS AND COEFFICIENTS FOR THE FIRST CANONICAL CORRELATION

	Subject's Personality		Regression Residuals	
	Canonical Load	Standardized Canonical Coefficient	Canonical Load	Standardized Canonical Coefficient
Neuroticism	<b>-0.80</b>	<b>-0.76</b>	<b>-0.90</b>	<b>-0.81</b>
Extroversion	0.25	-0.04	0.07	-0.23
Openness	-0.12	0.04	-0.03	0.01
Agreement	<b>0.67</b>	<b>0.56</b>	<b>0.57</b>	<b>0.30</b>
Conscientiousness	<b>-0.07</b>	<b>-0.50</b>	<b>0.42</b>	<b>0.27</b>

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