Ring Trials Handwriting Analysis

Evaluation graphological ring trial handwriting analysis 001: Comparison between graphological evaluation and self-assessment as well as foreign-assessment

Organization, operation and evaluation

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Ring Trial Participants

Eight graphologists from Germany and Austria

Research Materials

- 53 questionnaires of self-assessment

- 53 handwriting samples of self-assessors

- 144 questionnaires of foreign-assessments by colleagues, acquaints or relatives (for every subject at least two foreign-assessments)

- Eight independent evaluations by the graphologists, done on the same scale as the questionnaires

Description of the population of the self-assessors

- 53 persons (19 male and 34 female)

- Age: 20 subjects from 20-40 years / 23 subjects from 41-60 / 7 subjects from 61-80 / 3 subjects from 81-100

- Level of education: 15 subjects with professional training level and 38 with the higher education

- Origin of the subjects/writers: Germany

Description of the self-assessment and foreign-assessment tests

- The psychological test that is used as a reference for the graphological ring trial comes from the department of Psychology of Hamburg University. The researches have been using it as an additional instrument for the application selection within the framework of the advanced training „Inhouse Conflict Consultant".

- Method to determine the personality traits: Factor analysis

- The aim of the test is to establish an especially quick and practical procedure

Procedure

In a period of nine months the ring trial organization looked for 53 candidates, who were ready to deliver samples of their handwritings, to fill out the self-assessment test questionnaire with 12 questions and to provide at least two persons for the foreign-assessment. The latter is the questionnaire with 16 questions. The evaluation of all filled out questionnaires has been done by the ring trial organization.

The involved subjects have provided copies of their handwriting samples together with the additional information about their sex, age and education. The task of the ring trial participants (graphologists) was to evaluate nine defined personality traits on the following scale (in accordance with the questionnaires):

• Weak grade of a personality parameter: 0-3 points (0-4 points for the characteristic „integrity")

• Sufficient grade of a personality parameter: 4-8 points (5-10 points for the characteristic „integrity")

• Strong grade of a personality parameter: 9-12 points (11-16 points for the characteristic „integrity")

The results of the handwriting analysis by the participants were delivered to the ring trial organization for evaluation.

Measured personality parameters in ring trial 001

personality parameters	F1: Empathy	F2: Conflict skills	F3: Creativity	F4: Balance	F5: Integrity	S1: Inner security	S2: Own initiative	S3: Conflict optimism	S4: Flexibility
Max. Score / parameter	12	12	12	12	16	12	12	12	12
Evaluation by self-assessment (Questionnaire)						X	X	X	X
Evaluation by foreign-assessment (Questionnaire)	X	X	X	X	X				
Evaluation though handwriting analysis	X	X	X	X	X	X	X	X	X

Graphological evaluation methods used in ring trial 001

Manual graphological evaluation on the same metric scale that was used in the reference tests.

Brief definitions of examined traits

1. Empathy: Attention and respectful perception of different views.
2. Conflict skills: Level of ability to face possible conflicts and to withstand resistance.
3. Creativity: Ability to develop possible action options and problem solutions, ability to respond flexibly to different situations and conditions
4. Balance: Level of prudent behavior in stressful and difficult situations, degree of irritability.
5. Integrity: Degree of loyalty and tolerance of ambiguity.
6. Inner security: Interpersonal dependency, degree of self-awareness and self-confidence, personal sovereignty.
7. Own initiative: Strength coming from inner drive and energy, level of joy and proactivity regarding challenges.
8. Conflict optimism: How positive and optimistic are one own feelings towards conflicts?

9. Flexibility: How important are variety and surprises? How important is the knowledge about anticipated things?

Notes regarding semantics

The understanding of people filling out questionnaires of personality tests and of graphologists examine the same defined parameters (personality traits) as determined by the test, show that questionnaire questions or defined parameters are not simply stimuli to which respond occurs uniformly. Each question or parameter meets its own semantic meaning environment that can cause different evaluations of the same thing. By introducing many test persons and more than one acquainted and graphological foreign-assessor per self-assessor we were trying to cushion the error variance created by semantic understanding.

Notes regarding „impression management" and „self-deception"

Occasionally psychology finds evidence for the fact that people deliberately want to establish a certain impression of themselves in their environment. Particularly in regard to personality questionnaires the notion circulates that people are not responding honestly but in a „socially desirable" way. In many cases there is also the concept of „self-deception": People are not only deceiving others by impression management but also themselves about their „real personality" what can be observed in the answers given in personality questionnaires.

Taking a close and critical look to this notion, the question comes up what exactly is the concept of the „real personality" and how can it be understood and measured in an objective way without interferences in regard to semantic hurdles, a variety of self-presentation processes and many different external perceptions.

The diversity of social roles of an individual however should be regarded as primarily next to the importance of various self- and foreign-concepts per role. Thus, the question of „self-deception" hardly counts anymore because different images of oneself belong to each personality as an integral part. Seen from this perspective, different self-concepts, which can be detected for example by means of questionnaires or graphological assessments, are part of personality research.

EVALUATION OF RING TRIAL 001
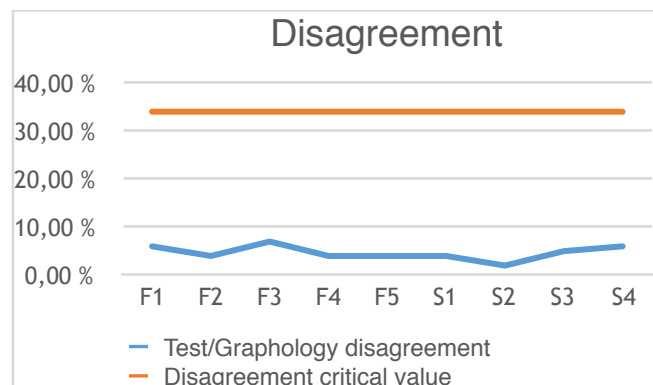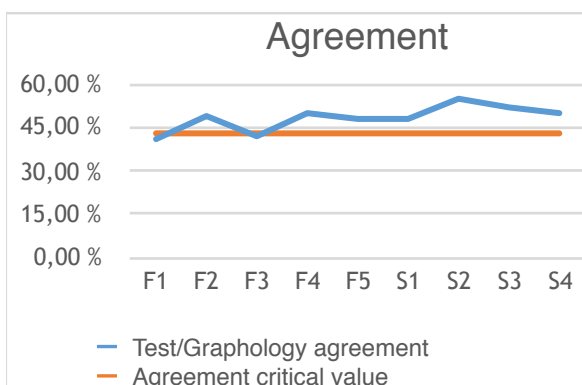
1. Zone-based agreement

In the evaluation of the questionnaires of self- and foreign-assessment are existing three zones per parameter with the following meaning:

1. Meaning of lower third of possible test score: Parameter (personality trait) is not strongly existing (weakness)
2. Meaning of middle third of possible test score: Parameter (personality trait) is sufficiently existing (under construction)
3. Meaning of upper third of possible test score: Parameter (Personality trait) is strongly existing (strength)

In the below following evaluation the level of agreement respectively disagreement according to binomial distribution can been studied between the graphological assessment and the foreign-assessments (turquoise) as well as between the graphological assessment and the self-assessment (pink).

Except for scale F1 (empathy) and F3 (creativity) the agreement of eight graphologists compared with the foreign- and self-assors is above the critical value of agreement with 43% and far below the critical value of disagreement with 34%. To summarize: Agreement exceeds disagreement by far. The agreement between the graphological assessment and the self-assessment however is higher than the agreement between the graphological assessment and the foreign-assessments.

Parameter	Agreement between test and graphology	Agreement critical value	Disagreement between test and graphology	Disagreement critical value
F1	41,00 %	43,00 %	6,00 %	34,00 %
F2	49,00 %	43,00 %	4,00 %	34,00 %
F3	42,00 %	43,00 %	7,00 %	34,00 %
F4	50,00 %	43,00 %	4,00 %	34,00 %
F5	48,00 %	43,00 %	4,00 %	34,00 %
S1	48,00 %	43,00 %	4,00 %	34,00 %
S2	55,00 %	43,00 %	2,00 %	34,00 %
S3	52,00 %	43,00 %	5,00 %	34,00 %
S4	50,00 %	43,00 %	6,00 %	34,00 %

Agreement

- Test/Graphology agreement
- Agreement critical value

Disagreement

- Test/Graphology disagreement
- Disagreement critical value
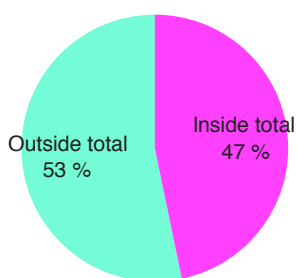
2. 95%-confidence interval

specifies the precision of the estimations of the above determined parameters (F1-F5 and S1-S4). Knowing the confidence interval one can quantify how likely it is that new calculated means of another sample size from the same population will be inside the range of the confidence interval.
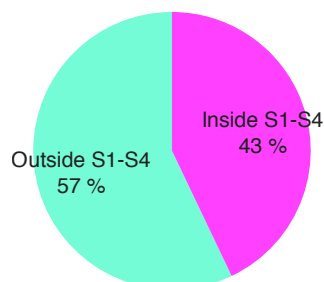
In ring trial 001 we made comparisons between the

a) means of the foreign-assessments (F1-F5, turquoise area) and the graphological assessments and the

b) means of the self-assessments (S1-S4, pink area) and the graphological assessments

and got the following results regarding the confidence intervals:

Measured parameters by graphologists	n (amount of analyzed handwritings)	thereof **inside** the confidence interval	thereof **outside** the confidence interval	Outside the confidence interval (above)	Outside the confidence interval (below)
F1: Empathy	53	22	31	27	4
F2: Conflict skills	53	23	30	14	16
F3: Creativity	53	26	27	19	8
F4: Balance	53	31	22	9	13
F5: Integrität	53	30	23	13	10
Sum F1-F5		132	133		
S1: Inner security	53	19	34	9	25
S2: Own initiative	53	28	25	17	8
S3: Conflict optimism	53	29	24	4	20
S4: Flexibity	53	15	38	4	34
Sum S1-S4		91	121		
Sum F1-F5, S1-S4		355	387		

- ● Inside total ● Outside total
- ● Inside S1-S4 / Outside S1-S4
- ● Inside F1-F5 / Outside F1-F5

Outside total 53 % / Inside total 47 %

Outside S1-S4 57 % / Inside S1-S4 43 %

Outside F1-F5 50 % / Inside F1-F5 50 %
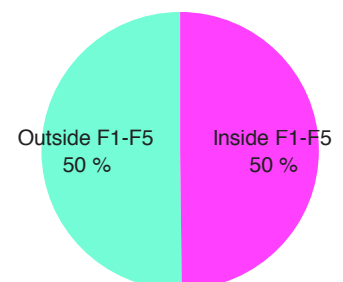
3. Correlation of standardized means

Parameter	Correlation of standardized means
F1: Empathy	0,22
F2: Conflict skills	0,16
F3: Creativity	0,18
F4: Balance	0,18
F5: Integrität	0,16
S1: Inner security	0,17
S2: Own initiative	0,37
S3: Conflict optimism	0,28
S4: Flexibity	0,21

In addition to the agreement between the three different evaluation zones (compare evaluation 1) the correlation of the standardized means have been analyzed in ring trial 001: Regarding the correlation between the parameters of foreign- respectively self-assessment and the graphological assessment an average correlation with scales S2 and S3 exists. All other scales only show week correlations (below r = 0.3).

4. Kendall's Concordance Coefficent

was used to measure the level of agreement within the eight graphologists. The range spreads from 0 (max. disagreement / discordance) to 1 (max. agreement / concordance). The evaluation of Kendall's concordance coefficient in ring trial 001 shows the following results:

Parameter	Kendall's Concordance Coefficent	Statistical Significance	Good level
F1: Empathy	0,58	0,17	0,5
F2: Conflict skills	0,46	0,17	0,5
F3: Creativity	0,64	0,17	0,5
F4: Balance	0,46	0,17	0,5
F5: Integrität	0,60	0,17	0,5
S1: Inner security	0,51	0,17	0,5
S2: Own initiative	0,63	0,17	0,5
S3: Conflict optimism	0,41	0,17	0,5
S4: Flexibity	0,71	0,17	0,5

Kendall Concordance

- Kendall Concordance
- Statistical Significance
- Good Level