

Psychological Boundaries, Dream Recall, and Nightmare Frequency: A New Boundary Personality Questionnaire (BPQ)

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Summary. Hartmann's Boundary questionnaire was developed based on research regarding the personality of nightmare sufferers. Previous research showed that boundary thinness was not only related to openness to experience but also quite strongly to neuroticism. The aim of the present study was to develop a questionnaire measuring boundaries not related to neuroticism. The Boundary Personality Questionnaire (BPQ), consisting of 20 items, showed good reliability and validity by correlating with openness to experience and nightmare frequency. However, there was a strong overlap with the conscientiousness factor that warrants further investigation of the relationship between the boundary concept and the Big Five personality traits.

Keywords: Nightmare frequency; Boundary thinness; Dream recall frequency

1. Introduction

The boundary concept was formulated by Hartmann (1984; 1991) based on his research into the personality structures of people who have frequent nightmares as a life-long condition. Interviewers frequently described such persons as being "unusually open", "trusting", and "vulnerable". With time, the Boundary Questionnaire (BQ) was developed (Hartmann, 1991; Harrison, Hartmann & Bevis, 2005-06). The boundary construct refers to a broad spectrum of boundaries, e.g., boundaries between self and others (interpersonal boundaries), boundaries between self and the environment (stimulus barrier), the ease of transitions between states of awareness (wakefulness, daydreaming, hypnosis, meditation, dreaming), and the organization of mental contents. The BQ questionnaire comprises 138 items and showed high internal consistency ($r = .925$; Harrison et al., 2005-06). Overall, twelve different areas were addressed, e.g., sleep, dreams, wakefulness, unusual experiences, sensitivity, interpersonal distance, preference for neatness and precision. Answer categories ranged from 0 ("not at all true of me") to 4 ("definitely true of me"). The total score (SumBound) can range from 0 (extreme boundary thickness) to 552 (extreme boundary thinness).

Unexpectedly, the Sumbound score was not correlated to nightmare frequency in a sample consisting largely of unselected students (Hartmann, 1989). However, subsequent studies (Cowen & Lewin, 1995; Schredl, Schäfer, Hofmann & Jacob, 1999; Schredl, 2003) found substantial correlations

between boundary thinness and nightmare frequency in a student sample, for example, $r = .200$ ($p < .0001$, $N = 444$, Schredl, 2003). Dream recall frequency was also related to the total Score of the Boundary Questionnaire in the majority of studies (Hartmann, 1989; Schredl, Kleinfelchner & Gell, 1996; Schredl & Engelhardt, 2001; Schredl, Wittmann, Ciric & Götz, 2003), e.g., $r = .29$ ($p < .0001$, $N = 1236$; Hartmann & Kunzendorf, 2006-07).

Schredl (2004a) correlated the sum score of the Boundary Questionnaire with the Big Five personality dimensions (see Table 1). As previously reported by McCrea (1994), the largest correlation was found between openness to experience and thin boundaries. Based on Hartmann's findings that the SumBound is related to the psychotic scales of the Minnesota Multiphasic Personality Inventory (MMPI) but not with the neurotic dimensions ($r = .17$, depression scale; Harrison, Hartmann & Bevis, 2005-06), it was unexpected to find a substantial correlation between neuroticism and thin boundaries. McCrea (1994) carrying large-scaled factor analyses reported a factor loading of 0.63 on the factor that included openness to experience but also a factor loading of 0.44 on the factor which was strongly associated with neuroticism. In addition, Funkhouser et al. (2008) found that boundary thinness was related to impaired quality of life and various psychopathological symptoms (e.g., anger-hostility) in elderly persons. So, the question arises whether the boundary concept reflects a general personality trait or some kind of psychopathologic condition. Since the development of the Boundary Questionnaire was based on the research in nightmare sufferers, one might expect that boundary facets which are related to psychopathology have been influential in the generation of Hartmann's item pool.

The aim of the present study was to generate a new item pool and select those items with high correlation to the sum score (item selection method) and with low correlation coefficients to neuroticism. Testing the validity of the new questionnaire, it was expected that the score correlates highly with the openness to experience factor and substantially with nightmare frequency.

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Table 1. Correlations between Boundary Questionnaire sum score and the Big Five personality dimensions (Schredl, 2004).

| Dimension | SumBound (N = 444) | |
|------------------------|--------------------|-------|
| | r = | p = |
| Neuroticism | .334 | .0001 |
| Extraversion | .030 | .5273 |
| Openness to experience | .543 | .0001 |
| Agreeableness | .178 | .0002 |
| Conscientiousness | -.352 | .0001 |

2. Method

2.1. Participants

The sample included 59 psychology students. There were 43 women and 8 men (8 participants did not specify their gender). Mean age was 20.7 years ($SD = 2.6$). The participants were recruited at the University of Mannheim.

2.2. Materials

2.2.1 Dream questionnaire

Overall dream recall frequency was measured by a seven-point rating scale (0 = never, 1 = less than once a month, 2 = about once a month, 3 = twice or three times a month, 4 = about once a week, 5 = several times a week and 6 = almost every morning). The retest reliability of this scale for an average interval of 70 days is high ($r = .85$, $N = 196$; Schredl, 2004b). Nightmare frequency was measured by an eight-point rating scale ("How often do you experience nightmares?" 0 = never, 1 = less than once a year, 2 = about once a year, 3 = about 2 to 4 times a year, 4 = about once a month, 5 = about 2 to 3 times a month, 6 = about once a week, 7 = several times a week; Schredl, 2003).

2.2.2 Big Five Personality Questionnaire (NEO-FFI)

The NEO-FFI (Costa & McCrae, 1992) was translated into German by Ostendorf and Angleitner (1993) and comprises 60 five-point items (coded: 0 to 4) measuring the Big Five personality measures: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The mean scores (12 items) of each dimension can range from 0 to 4. The internal consistencies of the scales are high ($r = .71$ to $.85$) and construct and criteria validity findings are comparable to the English version (Ostendorf & Angleitner, 1993).

2.2.3 Boundary Personality Questionnaire

For constructing the questionnaire, a pool of 50 items was generated (see appendix). The answering categories were adapted to the categories presented in the NEO-FFI (Ostendorf & Angleitner, 1993): 0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, 4 = strongly agree. For selecting items from the original boundary questionnaire (Hartmann, 1991) and constructing new items, several issues were considered. First, items referring to sleep and dreaming were

not included. Second, items that might be associated with psychopathology (e.g., "I am unusually sensitive to loud noises and to bright lights." or "I believe I am influenced by forces which no one can understand.") were not chosen from the Boundary Questionnaire. Third, general evaluations like "People are totally different from each other." or "A good parent must be able to empathize with his/her children, to be their friend and playmate at the same time." were also not selected or newly constructed because the questionnaire was intended to include statements referring to the self-concept of the person directly, e.g., "I am a sensitive person." The sum score of the 50 items was computed.

2.3. Design and Procedure

The participants completed the dream questionnaire and the two personality questionnaires. The item selection analyses were carried out with the SAS 9.2 software package for Windows. Three criteria were used for item selection: (1) the remaining 20 items should vary regarding the mean value of the item, (2) the correlation coefficient to the sum score (50 items) should be moderate to high, and (3) the correlation coefficient to neuroticism should be minimal.

3. Results

Means and standard deviations of the 50 items are depicted in Table 2. Several items with high correlations to the sum score were also closely related to neuroticism, e.g. "I am a sensitive person." or "Negative events (e.g., death of a pet) during my childhood have distressed me for an especially long time and intensely." and, thus, were not selected. The means of the selected items range from 0.98 (item 2) to 3.20 (item 33). The internal consistency of the 20 item questionnaire amounted to $r = .740$.

The correlations of the BPQ sum score with the Big Five personality dimensions of the NEO-FFI are depicted in Table 3. Reflecting the selection criteria (item should not be related to neuroticism), the BPQ sum score is not related to neuroticism but to openness to experience and to the conscientiousness factor. Whereas dream recall frequency was not related to the BPQ sum score, nightmare frequency was significantly associated with the BPQ sum score. The correlation between neuroticism and nightmare frequency was also significant ($r = .416$, $p = .0010$).

4. Discussion

The present study indicates that the boundary concept is not necessarily related to neuroticism, e.g., heightened psychopathology. The correlations between the BPQ sum score, openness to experience, and nightmare frequency indicate that the new questionnaire is valid – in addition to showing good reliability (comparable to the values of the NEO-FFI scales, cf. Borkenau & Angleitner, 1993).

Whereas McCrae (1994) and Schredl (2004) reported a moderate correlation between the original Boundary Questionnaire and neuroticism, the BPQ sum score is not related to neuroticism, e.g., indicating that boundary thinness might be conceptualized as a personality dimension that is not necessarily linked to psychopathology. Still, the correlation to nightmare frequency is significant (cf. Cowen & Lewin, 1995), but the coefficient is smaller when compared to the relationship between neuroticism and nightmare frequency. This has also been reported by Schredl (2003) using the

Table 2. Item analyses (Correlations with sum score and neuroticism).

| Item | Mean \pm SD | SumBound <i>r</i> = | Neuroticism <i>r</i> = |
|---|-----------------|------------------------|---------------------------|
| 1. Avoiding unfamiliar situations (R) | 1.58 \pm 0.93 | .105 | -.374 |
| 2. Feeling grown up (R) | 0.98 \pm 0.84 | .228 | -.023 |
| 3. Preferring clear rules (R) | 2.68 \pm 0.84 | .381 | .043 |
| 4. Relating easily | 1.61 \pm 1.16 | .290 | .027 |
| 5. Being cautious (R) | 2.34 \pm 1.14 | .198 | .068 |
| 6. Recognize well-being | 3.08 \pm 0.79 | .247 | -.318 |
| 7. Childhood experiences | 2.37 \pm 0.91 | .325 | .240 |
| 8. Plan the day ahead (R) | 2.66 \pm 0.80 | .312 | -.092 |
| 9. Clearly formulated tasks (R) | 3.11 \pm 0.63 | .323 | -.044 |
| 10. Difficulties with open-ended problems (R) | 1.39 \pm 0.89 | .138 | -.295 |
| 11. Inappropriateness to show feelings (R) | 1.86 \pm 0.96 | .255 | -.201 |
| 12. Events prior to third birthday | 0.98 \pm 1.20 | .231 | .132 |
| 13. Keeping desk tidy (R) | 1.98 \pm 1.17 | .380 | -.059 |
| 14. Taking another viewpoint | 3.03 \pm 0.67 | .437 | -.122 |
| 15. Missing someone | 2.71 \pm 1.03 | .318 | .422 |
| 16. Decision unaffected by feelings (R) | 1.00 \pm 0.83 | .297 | .337 |
| 17. Daydreaming | 1.98 \pm 0.97 | .294 | .237 |
| 18. Distressing negative events | 2.10 \pm 1.11 | .446 | .585 |
| 19. Easily hurt | 2.66 \pm 1.01 | .253 | .605 |
| 20. Planning thoroughly (R) | 2.29 \pm 0.97 | .522 | .156 |
| 21. Feeling like a child | 2.36 \pm 1.05 | .077 | .168 |
| 22. Being skeptical (R) | 1.86 \pm 0.88 | .061 | -.271 |
| 23. Dealing with money (R) | 2.59 \pm 1.13 | .345 | .389 |
| 24. Sensitive person | 2.86 \pm 0.82 | .364 | .415 |
| 25. Associative thinking | 2.68 \pm 1.07 | .382 | .171 |
| 26. Concentrated on tasks (R) | 2.15 \pm 1.00 | .112 | .439 |
| 27. Meeting new people | 3.22 \pm 0.72 | .274 | -.344 |
| 28. Let things happen | 2.37 \pm 0.91 | .283 | -.284 |
| 29. Something happens to a close person | 2.37 \pm 0.98 | .409 | .220 |
| 30. Mind wandering | 1.80 \pm 0.78 | .388 | -.170 |
| 31. Getting involved | 1.98 \pm 1.21 | .415 | .230 |
| 32. Trusting easily | 2.14 \pm 0.97 | .178 | -.269 |
| 33. Enjoying simple pleasures | 3.20 \pm 0.83 | .361 | .039 |
| 34. Clear rules (R) | 2.39 \pm 0.83 | .502 | .087 |
| 35. Sense experiences mixing | 1.05 \pm 1.21 | .261 | .101 |
| 36. Creative person | 2.53 \pm 0.92 | .447 | .007 |
| 37. New cities | 3.15 \pm 1.00 | .155 | -.257 |
| 38. Vivid imagination | 2.93 \pm 0.74 | .396 | -.183 |
| 39. Opposite sex | 1.31 \pm 1.05 | .196 | -.025 |
| 40. Forgetting appointments | 1.75 \pm 1.23 | .100 | -.170 |
| 41. Distress seeing someone suffering | 3.05 \pm 0.80 | .391 | .148 |
| 42. Understanding people | 3.31 \pm 0.53 | .323 | .200 |
| 43. Circumstances against falling in love (R) | 1.56 \pm 0.95 | .266 | -.081 |
| 44. Paying attention to details (R) | 1.95 \pm 0.84 | -.173 | -.373 |
| 45. Expressing feelings | 2.22 \pm 0.98 | .409 | .149 |
| 46. Lost in thoughts | 2.29 \pm 0.97 | .351 | .403 |
| 47. Having close friends | 2.46 \pm 1.07 | .247 | -.295 |
| 48. Missing appointments | 1.56 \pm 1.22 | .261 | .063 |
| 49. Rearrange the room | 2.56 \pm 1.00 | .463 | .066 |
| 50. Intimacy important | 3.29 \pm 0.83 | .258 | -.171 |

Note. Selected items are highlighted in grey. (R) indicates items that are scored in the reverse direction.

Table 3. Correlations between Boundary Personality Questionnaire sum score and the Big Five personality dimensions (N = 59).

| Dimension | Mean ± SD | BPQ Score | |
|------------------------|-------------|--------------------|--------------------|
| | | r = | p = |
| Neuroticism | 1.95 ± 0.70 | .106 | .4264 |
| Extraversion | 2.40 ± 0.58 | .249 | .0574 |
| Openness to experience | 2.64 ± 0.45 | .489 | .0001 |
| Agreeableness | 2.71 ± 0.46 | .239 | .0680 |
| Conscientiousness | 2.66 ± 0.49 | -.498 | .0001 |
| Dream recall frequency | 4.24 ± 1.15 | -.067 ¹ | .6167 |
| Nightmare frequency | 3.75 ± 1.42 | .238 ¹ | .0345 ² |

Note. ¹ Spearman Rank correlations, ² one-tailed

original Boundary Questionnaire. The regression analysis carried out in the Schredl (2003) study showed that neuroticism explained a larger proportion of nightmare frequency variance than boundary thinness, but both dimensions had a significant association. One might argue that the original Boundary Questionnaires based on the nightmare research focuses on the psychopathologic aspects of thin boundaries. For example, the item "I am a sensitive person." was highly related to the sum score and to neuroticism. The present questionnaires showed a large overlap with the conscientiousness factor and this seems plausible when looking at some items taken from the original boundary questionnaire, e.g., "I keep my desk and worktable neat and well organized." as well as topics of "planning" and "keeping appointments" which are present in both questionnaires. This strong relationship was also found for the original Boundary Questionnaire (see Table 1; Schredl, 2004). It would be interesting to use larger item pools in order to select items that are not related to conscientiousness (as well as neuroticism) in order to study whether the boundary concept is solely part of the openness to experience factor.

To summarize, even though the original Boundary Questionnaire has been used in a large number of studies (see: Hartmann, Harrison & Zborowski, 2001), it seems promising to study the various aspects of the boundary concept in a more detailed way by analyzing large item pools. Based on the non-significant finding regarding the relationship between boundary thinness, as measured by the BPQ and dream recall frequency, it would be interesting to study whether different aspects of the boundary concepts are differently related to sleep and dream parameters.

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Appendix A

Item pool for constructing the Boundary Personality Questionnaire (German)

1. Ich vermeide Situationen, die mir unbekannt sind.
2. Ich fühle mich ganz und gar erwachsen und kann mir nicht mehr vorstellen, wie es als Kind war.
3. Ich mag klare Regeln und Ordnung in meinem Leben.
4. Ich vertraue Menschen, die ich neu kennen lerne, schnell persönliche Themen/Probleme an.
5. Solange ich jemanden nicht wirklich gut kenne, bin ich immer vorsichtig, was ich ihm oder ihr erzähle.
6. Ich merke schnell, wenn es einer andern Person schlecht geht.
7. Erlebnisse meiner Kindheit sind mir noch sehr nahe.
8. Es ist mir wichtig, dass ich weiß, was an einem Tag auf mich zukommt, damit ich alles planen kann.
9. Ich bevorzuge klare Aufgabenstellungen.
10. Offene, kreative Aufgaben zu lösen fällt mir schwer.
11. Ich finde es unangebracht, meine Gefühle in der Öffentlichkeit zu zeigen.
12. Ich kann mich an Dinge erinnern, die sich vor meinem 3. Geburtstag ereigneten.
13. Ich achte darauf, dass mein Schreibtisch und mein Arbeitsplatz immer ordentlich und aufgeräumt sind.
14. Ich liebe es, Dinge aus einem anderen Blickwinkel zu betrachten oder mich in die Lage anderer Menschen zu versetzen.
15. Wenn ich einen wichtigen Menschen vermisste, fühle ich mich körperlich schlecht.
16. Wenn ich eine Entscheidung treffe, lasse ich mich nicht von Gefühlen beeinflussen.
17. Ich verwende viel Zeit zum Tagträumen oder Fantasieren.
18. Negative Ereignisse (z.B. Tod des Haustieres) in meiner Kindheit, haben mich besonders lange und intensiv belastet.
19. Kommentare von anderen über mich können mich sehr leicht verletzen.
20. Ich plane immer alles genau durch.
21. Ich fühle mich manchmal noch als Kind.
22. Ich bin sehr misstrauisch bei Menschen, die ich erst seit kurzem kenne.
23. Ich kann mein Geld gut einteilen, sodass ich nie ohne Geld dastehe.
24. Ich bin eine sehr sensible Person.
25. Meine Gedanken sind oftmals von Assoziation und Gedankensprüngen geprägt.
26. Ich kann mich gut auf eine Sache konzentrieren, ohne mich von Details ablenken zu lassen.
27. Ich finde es spannend, neue Menschen kennen zu lernen.
28. Ich lasse neuartige Situationen einfach auf mich zukommen und reagiere spontan.
29. Geschieht einem meiner Freunde oder meinem Partner etwas, ist es fast so, als würde es mir selbst passieren.
30. Wenn ich an einem Projekt arbeite, mag ich keinem vorgegebenen Konzept folgen, sondern lasse meinen Gedanken lieber freien Lauf
31. Wenn ich etwas lese, werde ich so von dem Gelesenen vereinnahmt, dass ich manchmal Mühe habe zur Realität zurückzukehren.
32. Ich entwickle sehr leicht Vertrauen zu Menschen.
33. Ich kann mich auch für die einfachen Dinge des Lebens begeistern (z.B. für einen Schmetterling).
34. Ich mag klare Regeln – nur solche ermöglichen ein gutes Zusammenleben.
35. Sinneseindrücke vermischten sich bei mir schon oft; zum Beispiel glaubte ich schon eine Farbe zu riechen, einen Klang zu sehen oder einen Geruch zu hören.
36. Ich bin ein kreativer Mensch.
37. Ich mag es, neue Städte kennen zu lernen.
38. Ich habe eine starke Vorstellungskraft.
39. Ich kann mir leicht vorstellen, jemand vom anderen Geschlecht zu sein.
40. Ich vergesse leicht Termine und Geburtstage.
41. Es belastet mich sehr, wenn ich jemanden leiden sehe.
42. Ich bemühe mich immer, andere Menschen zu verstehen.
43. Ich kann mich nicht in jemanden verlieben, wenn die äußeren Umstände dagegen sprechen.
44. Ich achte eher auf Details als auf das Ganze; z.B. fallen mir Details in Bildern oder Kunstwerken sofort ins Auge.
45. Es ist mir wichtig, meinen Gefühlen immer Ausdruck zu verleihen und sie nicht zu unterdrücken.
46. Manchmal bin ich in Gedanken versunken und vergesse meine Arbeit.
47. Ich habe viele enge Freunde mit denen ich auch über sehr persönliche Dinge reden kann.
48. Ich bin oft unpünktlich.
49. Ich liebe es, mein Zimmer neu zu gestalten (z.B. Möbel umstellen oder neu dekorieren).
50. Intimität spielt in meiner Partnerschaft oder in engen Freundschaften eine große Rolle.

Appendix B

Item pool for constructing the Boundary Personality Questionnaire (English translation)

1. I avoid situations that are unfamiliar to me.
2. I feel completely grown up and can no longer imagine how it was being a child.
3. I prefer clear rules and orderliness in my life.
4. To persons I newly meet I relate personal topics/problems easily.
5. As long as I do not know somebody really well, I am cautious about, what to tell her or him.
6. I recognize easily if another person does not feel well.
7. Childhood experiences are very close to me.
8. It is important to me that I know what lies ahead this day so I can plan everything.
9. I prefer clearly formulated tasks.
10. Solving open-ended, creative tasks is difficult for me.
11. I find it inappropriate to show my feelings in public.
12. I can remember events that happened prior to my third birthday.
13. I keep my desk and worktable always neat and tidy.
14. I love it to view things from another viewpoint or to put myself in another person's place.
15. If I miss a significant other, I feel physically unwell.
16. When I come to a decision I do not let myself be influenced by feelings.
17. I spend a lot of time daydreaming or fantasizing.
18. Negative events (e.g., death of a pet) during my childhood have distressed me for an especially long time and intensely.
19. Remarks of others about me can hurt me easily.
20. I always plan everything thoroughly.
21. Sometimes I feel like a child.
22. I am very sceptical regarding people I just met.
23. I can apportion my income so that I am never without money.
24. I am a very sensitive person.
25. My thinking is often characterized by associations and mental leaps.
26. I can concentrate well on one task without being distracted by details.
27. For me, it is thrilling to meet new people.
28. I always just let things happen and respond spontaneously.
29. When something happens to one of my friends or my partner, it almost feels like it happens to me.
30. When I work on a project, I don't tie myself to down to a definite outline. I rather like to let my mind wander.
31. When I read something, I get so involved it can be difficult to get back to reality.
32. I trust people easily.
33. I can enjoy the simple pleasures of life (e.g., a butterfly).
34. I prefer clear rules – only clear rules guarantee living together peacefully.
35. I have often had the experience of different senses coming together. For example, I have felt that I could smell a color, or see a sound, or hear an odor.
36. I am a creative person.
37. I like it to get to know new cities.
38. I have a vivid imagination.
39. I can easily imagine myself to be someone of the opposite sex.
40. I forget appointments and birthdays easily.
41. It is very distressing to see someone who suffers.
42. I always try to understand other persons.
43. I cannot fall in love with someone if circumstances do not match.
44. I pay attention more to details than to the whole, e.g., details in paintings and art work catch my eye easily.
45. To me it is important to always to express my feeling and not to suppress them.
46. Sometimes I am lost in thoughts and forget about my work.
47. I do have close friends to whom I can talk about private issues.
48. I often miss appointments.
49. I like to rearrange my room, (e.g., to relocate the furniture, to decorate in a new way).
50. Intimacy plays an important role in my partnership or close friendships.

Appendix C - Boundary Persönlichkeitsfragebogen (PBQ)

Dieser Fragebogen umfasst 20 Aussagen. Lesen sie bitte jede der Aussagen aufmerksam durch und denken sie darüber nach ob diese Aussage auf sie zutrifft. Zur Bewertung steht ihnen eine fünffach abgestufte Skala zur Verfügung.

- 0 bedeutet "Starke Ablehnung"
- 1 bedeutet "Ablehnung"
- 2 bedeutet "Neutral"
- 3 bedeutet "Zustimmung"
- 4 bedeutet "Starke Zustimmung"

Bitte bewerten sie die Aussagen zügig, aber sorgfältig und lassen sie keine Aussage aus. Es gibt keine richtigen oder falschen Antworten. Wenn sie sich nicht sicher sind, kreuzen sie die Antwort an, die am ehesten auf sie zutrifft.

| | | Starke Ablehnung | Ablehnung | Neutral | Zustimmung | Starke Zustimmung |
|----|--|------------------|-----------|---------|------------|-------------------|
| 1 | Ich fühle mich ganz und gar erwachsen und kann mir nicht mehr vorstellen, wie es als Kind war. | 0 | 1 | 2 | 3 | 4 |
| 2 | Ich mag klare Regeln und Ordnung in meinem Leben. | 0 | 1 | 2 | 3 | 4 |
| 3 | Ich vertraue Menschen, die ich neu kennen lerne, schnell persönliche Themen/Probleme an. | 0 | 1 | 2 | 3 | 4 |
| 4 | Es ist mir wichtig, dass ich weiß was an einem Tag auf mich zukommt, damit ich alles planen kann. | 0 | 1 | 2 | 3 | 4 |
| 5 | Ich bevorzuge klare Aufgabenstellungen. | 0 | 1 | 2 | 3 | 4 |
| 6 | Ich achte darauf, dass mein Schreibtisch und mein Arbeitsplatz immer ordentlich und aufgeräumt sind. | 0 | 1 | 2 | 3 | 4 |
| 7 | Ich liebe es, Dinge aus einem anderen Blickwinkel zu betrachten oder mich in die Lage anderer Menschen zu versetzen. | 0 | 1 | 2 | 3 | 4 |
| 8 | Ich plane immer alles genau durch. | 0 | 1 | 2 | 3 | 4 |
| 9 | Meine Gedanken sind oftmals von Assoziation und Gedankensprüngen geprägt. | 0 | 1 | 2 | 3 | 4 |
| 10 | Geschieht einem meiner Freunde oder meinem Partner etwas, ist es fast so, als würde es mir selbst passieren. | 0 | 1 | 2 | 3 | 4 |
| 11 | Wenn ich an einem Projekt arbeite, mag ich keinem vorgegebenen Konzept folgen, sondern lasse meinen Gedanken lieber freien Lauf. | 0 | 1 | 2 | 3 | 4 |
| 12 | Wenn ich etwas lese, werde ich so von dem Gelesenen vereinnahmt, dass ich manchmal Mühe habe zur Realität zurückzukehren. | 0 | 1 | 2 | 3 | 4 |
| 13 | Ich kann mich auch für die einfachen Dinge des Lebens begeistern (z.B. für einen Schmetterling). | 0 | 1 | 2 | 3 | 4 |
| 14 | Ich mag klare Regeln – nur solche ermöglichen ein gutes Zusammenleben. | 0 | 1 | 2 | 3 | 4 |
| 15 | Ich habe eine starke Vorstellungskraft. | 0 | 1 | 2 | 3 | 4 |
| 16 | Es belastet mich sehr, wenn ich jemanden leiden sehe. | 0 | 1 | 2 | 3 | 4 |
| 17 | Ich kann mich nicht in jemanden verlieben, wenn die äußeren Umstände dagegen sprechen. | 0 | 1 | 2 | 3 | 4 |
| 18 | Es ist mir wichtig, meinen Gefühlen immer Ausdruck zu verleihen und sie nicht zu unterdrücken. | 0 | 1 | 2 | 3 | 4 |
| 19 | Ich bin oft unpünktlich. | 0 | 1 | 2 | 3 | 4 |
| 20 | Ich liebe es, mein Zimmer neu zu gestalten (z.B. Möbel umstellen oder neu dekorieren). | 0 | 1 | 2 | 3 | 4 |

Appendix D - Boundary Personality Questionnaire (BPQ)

This questionnaire comprises 20 items. Please read each statement carefully and consider whether this statement is correct of you. A five-point scale is provided for your estimation.

- 0 designates "Strongly disagree"
- 1 designates "Disagree"
- 2 designates "Neutral"
- 3 designates "Agree"
- 4 designates "Strongly agree"

Please assess the statements quickly but carefully. There are no right or wrong answers. If you are doubtful, please mark the answer that fits most.

| | | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|----|--|-------------------|----------|---------|-------|----------------|
| 1 | I feel completely grown up and can no longer imagine how it was being a child. | 0 | 1 | 2 | 3 | 4 |
| 2 | I prefer clear rules and orderliness in my life. | 0 | 1 | 2 | 3 | 4 |
| 3 | To persons I newly meet I relate personal topics/problems easily. | 0 | 1 | 2 | 3 | 4 |
| 4 | It is important to me that I know what lies ahead this day so I can plan everything. | 0 | 1 | 2 | 3 | 4 |
| 5 | I prefer clearly formulated tasks. | 0 | 1 | 2 | 3 | 4 |
| 6 | I keep my desk and worktable always neat and tidy. | 0 | 1 | 2 | 3 | 4 |
| 7 | I love it to view things from another viewpoint or to put myself in another person's place. | 0 | 1 | 2 | 3 | 4 |
| 8 | I always plan everything thoroughly. | 0 | 1 | 2 | 3 | 4 |
| 9 | My thinking is often characterized by associations and mental leaps. | 0 | 1 | 2 | 3 | 4 |
| 10 | When something happens to one of my friends or my partner, it almost feels like it happens to me. | 0 | 1 | 2 | 3 | 4 |
| 11 | When I work on a project, I don't tie myself to down to a definite outline. I rather like to let my mind wander. | 0 | 1 | 2 | 3 | 4 |
| 12 | When I read something, I get so involved it can be difficult to get back to reality. | 0 | 1 | 2 | 3 | 4 |
| 13 | I can enjoy the simple pleasures of life (e.g., a butterfly). | 0 | 1 | 2 | 3 | 4 |
| 14 | I prefer clear rules – only clear rules guarantee living together peacefully. | 0 | 1 | 2 | 3 | 4 |
| 15 | I have a vivid imagination. | 0 | 1 | 2 | 3 | 4 |
| 16 | It is very distressing to see someone who suffers. | 0 | 1 | 2 | 3 | 4 |
| 17 | I cannot fall in love with someone if circumstances do not match. | 0 | 1 | 2 | 3 | 4 |
| 18 | To me it is important to always to express my feeling and not to suppress them. | 0 | 1 | 2 | 3 | 4 |
| 19 | I often miss appointments. | 0 | 1 | 2 | 3 | 4 |
| 20 | I like to rearrange my room, (e.g., to relocate the furniture, to decorate in a new way). | 0 | 1 | 2 | 3 | 4 |