

# Temperament and Character in Cross-Cultural Comparisons between Swedish and Iranian People and Iranian Refugees in Sweden – Personality in Transition?

Jörg Richter<sup>1</sup>, Sven Brändström<sup>2</sup>, Habib Emami<sup>3</sup>, Mehdi Ghazonour<sup>4</sup>

<sup>1</sup> University Hospital of Psychiatry and Psychotherapy, Rostock University, Germany

<sup>2</sup> Neuroscience and Locomotion, Division of Psychiatry, Linköping University, Sweden

<sup>3</sup> Shaheed Beheshti University of Medical Sciences, Department of Epidemiology, Tehran, Iran

<sup>4</sup> Department of Psychiatry, University of Umeå, Sweden

## ABSTRACT

*The aim of the study was a cross-cultural comparison of personality traits between individuals from two very different cultures and refugees who resettled several years before from one to the other. Four hundred forty four Swedish individuals of the normal population; and 100 Iranian refugees in Sweden, and a group of 335 individuals from Tehran, capital of Iran, were investigated by means of the Temperament and Character Inventory, a questionnaire to assess temperament and character. Iranians are those that are most frequently correctly classified followed by the Swedish based on temperament scores by means of a Discriminance analyses. Iranian refugees in Sweden were classified to about 50 per cent as Swedish and to slightly more than one-third as Iranians. Especially concerning character, 4 per cent only could be correctly classified as refugees. The results give some perspective on the adaptation process and personality changes in refugees several years after resettlement in another country with a complete different culture.*

**Key words:** *personality, temperament and character inventory, cross-cultural psychology, healthy adults, Iranian refugees*

---

## Introduction

Refugees who resettle in another country are often confronted with highly contrary cultural conditions in the chosen new society compared to their former

country. Unlike immigrants, who freely migrate to a host country, refugees are usually forced to leave their home countries with little preparation, assistance, or personal resources under chaotic circumstances<sup>1</sup>. Refugees often suffer from losses of personal property, family bonds, intimate relationships, income, status, and identity<sup>2</sup>. They become often physically and psychologically damaged by unhealthy conditions and traumatic events such as loss of family members, separation from relatives, starvation, rape and violence, during the process of escape and in refugee camps. Many of them suffer from a post-traumatic stress disorder or another mental illness, and consequences are observable many years later in many individuals. Because of these inconsiderate conditions as well as because of the cultural differences and prejudice in a host society, refugees' adaptation to a host society is difficult<sup>3</sup>. The asylum process itself, an unknown language, lack of social support as a new and strange member of the society, the process of the development a new social network are possible stress factors which influence the way of living and adaptation process<sup>4</sup>.

The aim of the present study was a cross-cultural comparison of personality traits between individuals from two very different countries and one group of individuals between, namely refugees, who resettled several years before the investigation from one to the other country. What happens to personality traits of refugees? Differences related to all measured traits are expected between the groups of individuals from the original home countries. Especially concerning the character traits, a process of adaptation of the refugees to their new social environment is expected that is represented by smaller differences between the refugees and the persons from the new host country than between persons from the old and the new country of the refugees.

### *Shortcoming of Cloninger's psychobiological model of personality*

Cloninger's psychobiological model of personality integrates concepts and research from neuroanatomy, neurophysiology of behaviour and learning, and from developmental and from clinical psychology<sup>5-8</sup>. A distinction between temperament and character is assumed to be related to differences in major brain systems for procedural versus propositional learning<sup>5,6</sup>. Individual differences in percept-based habits and skills (i. e. procedural learning) are taken to be the foundation of Temperament, while Character involves individual differences in self-concepts about goals and values in functional relation to experience (i. e. propositional learning). These two personality systems, Temperament and Character, are related to two major neural systems for the adaptation to the experiences on various levels, and can be described as the contrast between percept versus concept, emotion versus volition, instinct versus will, and habit versus cognition. The Temperament dimensions are defined to be genetically homogenous and independently inherited<sup>7,8</sup>. These inherited neurophysiological processes influence tendencies to activate (Novelty Seeking), maintain (Reward Dependence), or inhibit (Harm Avoidance) behaviour and influence the perception of the environment and society. According to this theory Harm Avoidance reflects a heritable bias in the inhibition or cessation of behaviours. Subjects scoring high in Harm Avoidance are pessimistic, worrying, fatigable, shy with strangers, and become tense in unfamiliar situations. Novelty Seeking is viewed as a tendency toward exhilaration in response to novel stimuli or cues. Subjects high in Novelty Seeking show an increased frequency of explanatory behaviour, impulsive decision-making, a quick loss of temper and active avoidance of frustration. The third dimension, Reward Dependence, reflects

the tendency to maintain or pursue ongoing behaviours. Subjects with high scores on Reward Dependence are described as sentimental, socially attached and dependent on the approval of others. Persistence, originally thought to be a component of the Reward Dependence system, is the fourth Temperament dimension and reflects the perseverance in behaviour despite frustration and fatigue.

Character is defined as individual differences in self-concepts which vary in the extent to which a person identifies the self as an autonomous individual (Self-Directedness), as an integrated part of the humanity (Cooperativeness), and as an integral part of the whole universe (Self-Transcendence). It represents the second domain of personality, which is predominantly determined by socialisation processes during the life span<sup>8</sup>. Changes in cognition and the self-concept during the development of personality are supposed to be related to personal, social, moral, and spiritual development. An individual, who is low in Self-Directedness, could be described as irresponsible, aimless, undisciplined in behaviour and of poor impulse-control in general. Cooperativeness is related to the extent to which a person identifies himself or herself as an integral part of the society as a whole. Uncooperative individuals are characterised as hostile, aggressive, hateful, and as revengeful opportunists. Self-Transcendence reflects the tendency of identification with unity of all things and is associated with deficits in transpersonal identification or conscience. Individuals low in Self-Transcendence show conventional and materialistically oriented behaviour with little or no concern for absolute ideas, such as goodness and universal harmony.

The theory does not assume that the observed phenotypic structure of Temperament represents directly the assumed underlying biogenetic structure of personality. The phenotypic structure of perso-

nality is determined by the interactions between social, environmental, and genetic influences during the whole life span.

The development of personality traits is partly determined by cultural factors of a society<sup>9</sup>. Dimensions of impact were described as tightness (between tightly and loose – focused on a single norm versus more tolerant); complexity of a society; collectivism versus individualism; and femininity versus masculinity<sup>10</sup>.

#### *Aspects of the Swedish Society*

Culture consists of a certain degree of consistency in values, basic assumption, perspectives, experiences, codes and signals. In Sweden, class stratification and the Lutheran church as ideological systems of power tended to suppress people. That caused expectations to the individuals to take actions or to do something modesty, to let other talk rather than take the command and be the one in the centre<sup>11</sup>. The Swedish culture was formed during many centuries without direct involvement in wars and national adversities. This underlines the uniqueness of the developmental conditions of the Swedish culture despite the historical, economical and social changes. Nevertheless, the continuous transformation of the cultural system has to be taken into account. It happens more or less quickly dependent on the particular phenomenon. One example in Sweden is the so-called 'informatisation', particularly expressed by the common communication style between the people. It is hardly possible to describe a national culture without any reference of change<sup>11</sup>. However a continuous change in many areas happened after the Second World War. Nowadays, such substantial features that can be observed in the Swedish society are, for example, the tendency to favour facts, agreement, harmony, conformity, movable family ties, independence, love of nature and a strict separation of public and private<sup>11</sup>.

### *Aspects of the Iranian Society*

On the contrary, the Iranian culture was historically influenced by several wars. The Arabs' occupation and the change of the ancient culture of the Persian civilisation to an Arabic one have been major mechanisms up to today. The recent history of Iran represents an example of a society in transition. After the Second World war, the Pahlavi dynasty in Iran tried to adapt Iranian life style to modern society similar to western countries. From a historical perspective, the Iranian culture is characterised by purity of heart, generosity, hope and health. But the Islamic revolution in 1979 considered another orientation of influence on the culture and on the way of living and thinking. While Shahan of Iran attempted to improve the modernisation of Iran, Islamic Republic tried to »Islamicise« the Iranian culture and promotes religion as the only core value of social and political life, claiming authority over most areas of public and also over areas that would be considered as »private« life in western cultures<sup>12</sup>. Due to these reasons, an identity crisis emerged between the two different ways of living: the modern one and the traditional way. An identity crisis<sup>13</sup> emerged between »individualistic way of living« introduced by the previous political system and the present traditional way of living enforced by religious government emphasise on »martyr and sacrifice« and still provide a huge amount of problems in the society. The most devastating factor in the Iranian social life was the eight years intensive war with Iraq in the period of 1980–89. However, already from 1979 many especially intellectual Iranian citizens escaped from the country because of various reasons. War and organised violence, e.g. imprisonments and tortures, were most common reasons for many Iranians to apply for asylum in Europe and United States.

### **Samples and Methods**

The sample that was used for these analyses is composed of samples of the normal population from Sweden, Iran, and Iranian refugees resettled in Sweden.

The Swedish sample is based on 442 volunteers randomly recruited in Sweden representing the normal population. It consists of 194 males and 248 females aged from 20 to 80 (details of the sample in Table 1). Three hundred of them were randomly recruited by the population register. The additional 142 subjects were a random sample consisting of individuals who voluntarily wanted to complete the questionnaire. The data of this sample of 300 subjects were already used in cross-cultural comparisons of the TCI between Sweden, Germany, and the USA<sup>14</sup>.

A convenient sample of 100 Iranian refugees (recruited according to availability) was investigated during December 2000 and December 2001 in individual sessions (age ranged from 19 to 61 years – 34 female and 66 male). The mean age of the sample was 37, 5 years with an average period of 12,5 years of living in Sweden. The participation was voluntarily and all the subjects signed a written informed consent. However, the investigator was native Persian speaking, which enabled the study. No interpreter was used. All participants had reasonable command of Swedish language. Therefore, they completed the questionnaires in Swedish language. The Ethical Review Committee of the Medical Faculty of Umeå University approved the study protocol.

A group of 335 male and female individuals from, north, south, east and west of Tehran, capital of Iran, were selected by non probability sampling technique. They were 18 years old and older. A general physician and a nurse were trained and made contacts with the subjects at their house. In the first contact the purpose

**TABLE 1**  
CHARACTERISTICS OF THE SAMPLES

	Swedish people	Iranian people in Iran	Iranian people in Sweden
Male (N)	150	96	66
Female (N)	150	194	34
Age (years)*	34.2±12.5	29.5±10.5	37.5±7.3

\*  $F(2/681) = 24.36; p < 0.001$

and the instruction of the self-administered dimensional questionnaire were presented and a copy of that were given to everybody in the age of 18 or above in the family after they agreed to participate in the study. In the second contact, which was 3 days later, the questionnaires were collected from subjects who have completed it. Completed questionnaires of 319 subjects could be collected. Sixteen Iranian individuals rejected to complete the questionnaire because of several reasons. Three questionnaires were answered by individuals in the age under 18 which were excluded from analysis. The final analyses were done on 316 subjects.

The Temperament and Character Inventory measures the four Temperament dimensions based on Cloninger's unified biosocial theory of personality: Novelty Seeking and Harm Avoidance, both composed of four lower-order subscales; Reward Dependence, composed of three subscales; and, Persistence, as a single-scale dimension; as well as the three Character dimensions: Self-Directedness (SD) and Cooperativeness (CO), each comprising five lower-order dimensions, and Self-Transcendence (ST) with three subscales.

The inventory is a self-administered paper-and-pencil test having 240 items in a true/false format. It takes about 20 to 30 minutes to complete<sup>8</sup>. Its psychometric properties have been established separately for versions of several languages (for the Swedish version<sup>15</sup>), using established

personality theories<sup>16,17</sup>, in different patient groups<sup>18–20</sup>, and with respect to neurobiological parameters<sup>21,22</sup>. The factorial equivalence across cultures could be demonstrated based on data from Germany, Sweden, Iran and the USA indicating that the personality structure assessed by means of the TCI is relatively independent on ethnic peculiarities<sup>14,23</sup>.

The Swedish<sup>15</sup> as well as the Persian version<sup>23</sup> of the Temperament and Character Inventory were developed in several steps following established guidelines<sup>24</sup>. These procedures included translation, back-translation by independent native speakers, population testing, and revisions of items into more colloquial language.

Means and standard deviations for the higher-order dimensions of Temperament and Character were calculated. The data of the three groups have been compared by ANOVA and t-tests for dependent samples. Principle axis factor analysis with Varimax rotation with Kaiser normalization was calculated for the Temperament and Character subscales separately for each sample based on the theoretical structure of the seven-factor model. The replicability of the factors in the inventory was evaluated by orthogonal Procrustes rotation<sup>25</sup>. Factors, for which calculated coefficients have been found to be 0.80 or above, are virtually the same and tend to be judged as equal<sup>26</sup>.

Finally, a discriminant analyses were performed on the three subsamples using the dimensions of the TCI to discriminate among them. All analyses were conducted with SPSS 11.1.

## Results

The means and the standard deviations for the dimensions of the Temperament and Character Inventory differed generally between the three samples except of cooperativeness among the males (Table 2). On Novelty Seeking and Reward Dependence, Swedish and refugee males were similar and differed significantly from the Iranian males (post hoc tests, Bonferroni corrected), whereas the Iranians showed similar scores concerning Harm Avoidance, Persistence and Self Directedness. According to Self-Transcendence, male and female Iranians scored higher as the refugees and the refugees scored even higher than the Swedish. Concerning Harm Avoidance, Novelty Seeking, Persistence, and Cooperativeness we couldn't find neither significant differences between the refugees and the Swedish people nor between the refugees and the Iranian people.

Gender differences were exclusively found within the Swedish sample.

Solutions of the principal axis factor analyses with Varimax rotations of Temperament and Character subscales are shown in Tables 3 and 4. Generally, the subscales, which were related to a specific dimension, had their highest loadings on one single factor for both Temperament and Character dimensions. The Eigenvalues of the Temperament factors did not suggest a four-factor solution. Because of the international use of Persistence as fourth Temperament dimension and the results of Stallings et al.<sup>27</sup>, nevertheless, we decided to calculate the further analysis with four Temperament fac-

tors as suggested by Cloninger et al.<sup>8</sup> and by Stallings et al.<sup>27</sup>.

For Temperament, the subscale Explorative Excitability vs. Rigidity (Novelty Seeking) loaded negatively on Factor 1 (Harm avoidance).

The Eigenvalues of the Character factors of the three data sets all suggested three factor solutions as adequate. For Character, the subscale Self-Acceptance vs. Self-Striving of the Self-Directedness factor had substantial loadings on other factors in the Swedish and the Iranian samples.

The direct comparisons of factor structures of the TCI between the different language versions by means of orthogonal Procrustes rotations showed the following results (Table 5): The factor congruence coefficients for all comparisons were above .80 except those for the Persistence factor between the Swedish and the Iranians and between the Swedish and the refugees in Sweden for Reward Dependence. On average, the factor congruence is higher between the 3 samples for character compared to temperament dimensions. The results suggested a relatively high degree of similarity (factor congruence coefficients) in the factor structure of temperament and character in the three samples<sup>27</sup>.

Discriminant functions distinguished between the three samples on the dimensions as well as on the subscales level (Table 6). Classification by means of all seven-personality dimensions provides the best results. The Iranian subjects are these that are most correctly classified (classifies as Iranian people based on the personality scores) followed by the Swedish. The Iranian refugees in Sweden were classified to about 50 per cent as Swedish and to slightly more than one-third as Iranian people. Especially concerning the character, 4 per cent only could be correctly classified as refugees.

**TABLE 2**  
PERSONALITY SCORES BY COUNTRY AND BY GENDER (ONE-WAY ANOVA, t-TEST)

		Male	Female	Differences t/p
Novelty Seeking	Swedish people	21.70±5.86	21.77±5.95	-0.01/0.922
	Iranian people in Sweden	20.67±5.72	19.21±3.99	1.33/0.187
	Iranian people in Iran	16.88±5.29	17.25±5.32	-0.56/0.575
F / p		21.84/ <0.001	28.72/ <0.001	
Harm Avoidance	Swedish people	12.21±5.29	14.32±6.32	-3.14/0.002
	Iranian people in Sweden	17.82±9.50	15.21 ±7.28	1.53/0.130
	Iranian people in Iran	16.45±6.31	17.31±6.43	-10.08/0.281
F / p		20.91/ <0.001	9.28/ <0.001	
Reward Dependence	Swedish	13.81±3.37	16.35±3.52	-6.40/ <0.001
	Iranians in Sweden	13.30±3.49	14.63±3.26	-30.01/0.003
	Iranians in Iran	14.80±30.00	16,61±3,31	0.42/0.672
F / p		4.61/0.011	11.46/ <0.001	
Persistence	Swedish people	4.15±20.02	3.73±1.73	1.93/0.054
	Iranian people in Sweden	3.39±2.02	3.82±1.77	-1.10/0.277
	Iranian people in Iran	5.13±1.56	4.86±1.74	1.28/0.201
F / p		17.17/ <0.001	19.31/ <0.001	
Self-Directedness	Swedish people	30.82±6.05	32.31±6.79	-20.00/0.046
	Iranian people in Sweden	25.42±12.84	30.53±9.69	-20.04/0.044
	Iranian people in Iran	27.69 ±6.71	27.78±7.13	-0.11/0.912
F / p		11.19/ <0.001	16.60/ <0.001	
Cooperativeness	Swedish people	31.90±5.32	340.06±4.20	-3.90/ <0.001
	Iranian people in Sweden	31.73±6.74	32.94±3.67	-1.28/0.203
	Iranian people in Iran	320.08±4.85	320.09±5.55	-0.01/0.995
F / p		0.09/ .913	6.85/0.001	
Self-Transcendence	Swedish people	10.37±50.07	13.26±5.84	-4.58/ <0.001
	Iranian people in Sweden	15.50±6.45	16.29±5.74	-0.61/0.532
	Iranian people in Iran	20.55±5.16	20.79±5.62	-0.35/0.726
F / p		104.62/<0.001	73.71/<0.001	
Age	Swedish people	32.73±11.40	35.70±13.32	-20.07/0.033
	Iranian people in Sweden	38.41±7.33	35.71±70.07	1.77/0.080
	Iranian people in Iran	31.87±11.27	28.28±9.98	2.63/0.009
		8.49/ <0.001	20.32/ <0.001	

**TABLE 3**  
 FACTOR ANALYSIS OF TEMPERAMENT BY COUNTRY (PRINCIPLE COMPONENT ANALYSIS WITH VARIMAX ROTATION WITH  
 KAISER NORMALIZATION)

	Swedish people				Iranian people in Sweden				Iranian people in Iran			
	HA	NS	RD	PS	HA	NS	RD	PS	HA	NS	RD	PS
Harm Avoidance 1	0.79				0.78	0.30			0.77			
Harm Avoidance 2	0.76				0.72		0.32	0.40	0.75			
Harm Avoidance 3	0.76				0.78	0.36			0.74			
Harm Avoidance 4	0.64			-0.35	0.81				0.72			
Novelty Seeking 1	-0.46	0.41		0.39	-0.87				-0.33	0.65		
Novelty Seeking 2		0.73			0.44	0.71				0.62		
Novelty Seeking 3		0.61				0.75				0.57		
Novelty Seeking 4		0.75				0.72				0.68		
Reward Dependence 1			0.85					0.93				0.64
Reward Dependence 3			0.39	0.58	-0.81					0.45	0.61	
Reward Dependence 4	0.37							0.71	0.90			0.85
Persistence	-0.31							0.57	-0.56			0.86
Eigenvalue	2.91	1.91	1.39	0.97	5.06	1.73	1.16	0.94	2.84	1.81	1.40	1.07
% of variance	22.41	17.00	10.57	9.86	35.74	15.96	11.55	10.80	21.00	16.71	11.31	10.22



**TABLE 4**  
 FACTOR ANALYSIS OF CHARACTER SUBSCALES BY COUNTRY (PRINCIPLE COMPONENT ANALYSIS WITH VARIMAX ROTATION WITH KAISER NORMALIZATION)

	Swedish people			Iranian people in Sweden			Iranian people in Iran		
	CO	SD	ST	CO	SD	ST	CO	SD	ST
Cooperativeness 1	0.72			0.68	0.33		0.46	0.45	
Cooperativeness 2	0.65					0.61		0.50	0.53
Cooperativeness 3	0.61			0.58	0.45		0.71		
Cooperativeness 4	0.58			0.82			0.68		
Cooperativeness 5	0.54	0.38		0.81			0.62		
Self-Directedness 1		0.71			0.84		0.40	0.66	
Self-Directedness 2		0.78			0.87		0.37	0.66	
Self-Directedness 3		0.69			0.92			0.66	
Self-Directedness 4	0.54				0.69		0.64		
Self-Directedness 5		0.72			0.94			0.76	
Self-Transcendence 1			0.79	-0.30		0.77			0.72
Self-Transcendence 2			0.75	.036		0.73			0.82
Self-Transcendence 3			0.75			0.68			0.67
Eigenvalue	3.11	1.90	1.52	2.01	5.00	1.82	2.08	3.78	1.17
% of variance	17.77	17.67	14.74	18.70	32.95	16.32	18.66	18.72	16.75

**TABLE 5**  
 FACTOR CONGRUENCE COEFFICIENTS BETWEEN THE DATA SETS

	Swedish people – Iranian people in Sweden	Iranian people in Sweden – Iranian people	Swedish people – Iranian people
Harm avoidance	0.92	0.93	0.94
Novelty Seeking	0.84	0.86	0.88
Reward Dependence	0.61	0.86	0.80
Persistence	0.92	0.84	0.65
Self Directedness	0.94	0.87	0.91
Cooperativeness	0.87	0.87	0.82
Self-Transcendence	0.90	0.97	0.93

## Discussion

The aim of the data analysis was the investigation of personality traits in comparisons of three samples – Swedish, Ira-

nian, and Iranian individuals resettled in Sweden based on the psychobiological theory and the seven-factor model of personality<sup>12,13</sup>. As expected there were substantial differences between the groups

**TABLE 6**  
DISCRIMINANT ANALYSIS WITH RESPECT TO GROUP SIZES BASED ON TEMPERAMENT,  
CHARACTER, AND PERSONALITY

Count/predicted in %	Swedish people	Iranian people in Sweden	Iranian people in Iran	Correctly classified
<b>Temperament</b>				
Swedish people	69.3	0.7	30.0	
Iranian people in Sweden	51.0	12.0	37.0	
Iranian people in Iran	26.0	0.3	73.6	Ø 62.9
<b>Character</b>				
Swedish people	80.0	0.0	20.0	
Iranian people in Sweden	52.0	4.0	44.0	
Iranian people in Iran	19.7	0.0	80.3	Ø 69.1
<b>Personality</b>				
Swedish people	84.7	1.7	13.7	
Iranian people in Sweden	47.0	15.0	38.0	
Iranian people in Iran	10.0	1.0	89.0	Ø 76.4

on all seven personality dimensions and dependent on gender of the individuals. The differences between the Swedish and the Iranian individuals were, on average, bigger compared those with the refugees.

Whereas the male refugees were more likely to be similar to either the Swedish or the Iranian subjects according to temperament dimensions, the female refugees differed neither from the Swedish nor from the Iranian women. On character dimensions Cooperativeness and Self-Transcendence the refugees of both sexes scored between the Swedish and Iranian individuals. These results suggested that the refugees underwent an assimilation process and an adaptation to the new society, which even affect personality traits. The nowadays Swedish culture is to describe as more tolerant, more complex, more individual centred, and more feminine compared to the Iranian society. This is reflected, e.g., by that the male refugees and the Iranian reported less Self-Directedness than the Swedish, whereas the fe-

male refugees reported a similar Self-Directedness like the Swedish women. The rather feminine oriented Swedish culture is probably furthermore reflected by the rather indifferent expression of the most of the temperament scores of the female refugees. Probably, their adaptation was more successful than that of the male refugees. The results of the discriminant analysis also support the successful adaptation process of many of the refugees in terms of a higher similarity of their personality to the Swedish people compared to the Iranians. The frequency of correctly classified subjects of the Iranian and of the Swedish sample was significantly higher compared to these of the Iranian refugees in Sweden (Table 6).

Even though first generation immigrants often identify with the culture of their country of origin and with their religious rituals in a rather conservative way, personality traits, especially character traits, seem to be affected and changed within the socialisation process in the

new host country. One possible explanation for this finding could be that Iran is characterised by a masculine culture in contrast with the feminine culture in Sweden as mentioned above.

Additionally, the factor structures within the data of the three samples were equivalent for both Temperament and Character, even in their deviations from the putative structure of Cloninger's model (Tables 3, 4). Only the Temperament dimension Reward Dependence had a consistent loading from the subscale Exploratory Excitability vs. Stoic Rigidity of the dimension Novelty Seeking. Within the Character dimensions, there was also one subscale Self-Acceptance vs. Self-Striving, which had consistent loading on a theoretically non-predicted factor (mostly Factor 1 Cooperativeness)<sup>12,13</sup>. The

comparison of the factor structures using orthogonal Procrustes rotation supported a relatively high equivalence of individual components of most of the personality dimensions across cultures.

The interpretation of our results is limited by the varying sample sizes and different sampling methods. One additional problem is caused by the cross-sectional design of the study. A longitudinal investigation, starting before the escape from the home country and samples matched by gender, age, education and profession would, of course, provide data of higher impact. Nevertheless, our study gives some insight on the adaptation process and personality changes in refugees several years after resettlement in another country with a complete different culture.

## REFERENCES

1. COHON, J. D., *J. Int. Migration Rev.*, 15 (1981) 255. — 2. TIMBERLAKE, E. M., K. O. COOKE, *Soc. Work*, 29 (1984) 108. — 3. LIPSON, J. G., *West. J. Nurs. Res.*, 14 (1992) 10. — 4. GHAZINOUR, M., J. RICHTER, M. EISEMANN, *J. Nerv. Ment. Dis.*, 191 (2003) 595. — 5. CLONINGER, C. R. Brain networks underlying personality development. In: CARROLL, B. J., J. E. BARRETT (eds.): *Psychopathology and the brain*. (Raven Press, New York, 1991). — 6. CLONINGER, C. R., S. B. GILLIGAN; *J. Psychiat. Res.*, 21 (1987) 457. — 7. CLONINGER, C. R., D. M. SVRAKIC, T. R. PRZYBECK, *Arch. Gen. Psychiatry*, 50, (1993) 975. — 8. CLONINGER, C. R., T. R. PRZYBECK, D. M. SVRAKIC, R. D. WETZEL: *The Temperament and Character Inventory (TCI): A guide to its development and use*. (Center for Psychobiology of Personality, St. Louis, MO, 1994). — 9. TRINDIS, H. C., E. M. SUH, *Ann. Rev. Psychology*, 53 (2002) 133. — 10. HOFSTEDE, G., W. A. ARRINDELL, D. L. BEST, M. DeMOOIJ, M. H. HOPPE: *Masculinity and femininity. The taboo dimensions of national cultures*. (Sage, Thousand Oaks, CA, 1998). — 11. DAUN, Å., *Ethnol. Scand.*, 28, (1998), 5. — 12. MOHAMMADI, A. S., A. MOHAMMADI, *Small Media, Big Revolution: Communication, Culture and the Iranian revolution*. (University of Minnesota Press, Minneapolis – London, 1995). — 13. AHMADI, F., N. AHMADI: *Iranian Islam and the Concept of the Individual*. (Uppsala University, Sociological Department, 1995). — 14. RICHTER, J., S. BRÄNDSTRÖM, T. R. PRZYBECK, *Psychol. Reports* 84 (1999) 1315. — 15. BRÄNDSTRÖM, S., P. SCHLETTE, T. R. PRZYBECK, M. LUNDBERG, T. FORSGREN, S. SIGVARDSSON, P. O. NYLANDER, L. G. NILSSON, R. C. CLONINGER, R. ADOLFSSON, *Compr. Psychiatry*, 39 (1998) 122. — 16. HEATH; A. C., R. C. CLONINGER; N. G. MARTIN, *J. Pers. Soc. Psychology*, 66 (1994) 762. — 17. McCOURT, W. F., R. J. GURRERA, H. S. CUTTER, *J. Nerv. Ment. Dis.*, 181 (1993) 309. — 18. JOFFE, R. T., R. M. BAGBY, A. J. LEVITT, J. J. REGAN, J. D. PARKER, *Am. J. Psychiatry*, 150 (1993) 959. — 19. MULDER, R. T., P. R. JOYCE, *Psychol. Reports*, 75 (1994) 1315. — 20. SVRAKIC, D. M., C. WHITEHEAD, T. R. PRZYBECK, C. R. CLONINGER, *Arch. Gen. Psychiatry*, 50 (1993) 991. — 21. JOYCE, P. R., R. T. MULDER, C. R. CLONINGER, *Am. J. Psychiatry*, 151 (1994a) 195. — 22. JOYCE, P. R., R. T. MULDER, C. R. CLONINGER, *J. Aff. Dis.*, 30 (1994b) 35. — 23. RICHTER, J., S. BRÄNDSTRÖM, H. EMAMI, P.-O. NYLANDER (2002) *The Temperament and Character Inventory (TCI) – A cross-cultural tool*. Poster presented at the XXV. International Congress of Applied Psychology, Singapore. — 24. BRISLIN, R. W. (ed.): *Translations: Applications and research*. (Wiley, Halsted, New York, 1976). — 25. McCRAE, R. R., A. B. ZONDERMAN, P. T. COSTA jr., M. H. BOND, S. V. PAUNONEN, *J. Pers. Soc. Psychology*, 70 (1996) 552. — 26. TEN BERGE, J. M. F.: *Optimizing factorial invariance*. (VRB, Groningen, The Netherlands, 1977). — 27. STALLINGS, M. C., J. K. HEWITT, C. R. CLONINGER, A. C. HEATH, L. C. EAVES, *J. Pers. Soc. Psychology*, 70 (1996) 127.

*J. Richter*

*University Hospital of Psychiatry and Psychotherapy, Rostock University,  
Gehlsheimer Str. 20, D-18147 Rostock, Germany*

## **MEĐUKULTURALNA USPOREDBA TEMPERAMENTA I OSOBNOSTI IZMEĐU ŠVEĐANA, IRANACA I IZBJEGLICA IZ IRANA U ŠVEDSKOJ – TRANZICIJA OSOBNOSTI?**

### **S A Ž E T A K**

Svrha ovog rada je međukulturalna usporedba osobnih karakteristika između osoba iz dvije vrlo različite kulture i izbjeglica koje su izbjegle iz jedne kulture u drugu nekoliko godina ranije. Korišten je upitnik *Temperament and Character Inventory*, na uzorku od 444 osobe iz Švedske, 100 iranskih izbjeglica i u Švedskoj i 335 osoba iz Teherana, glavnog grada Irana. Diskriminantnom analizom Iranci su najčešće točno klasificirani, zatim Šveđani. Izbjeglice u Švedskoj su klasificirane kao Šveđani u 50%, i nešto više od jedne trećine kao Iranci. Posebno je determiniran karakter izbjeglica, s oko 4%. Rezultati daju informaciju o procesu adaptacije i promjene osobnosti među izbjeglicama nekoliko godina nakon preseljenja u drugu zemlju s potpuno drugačijom kulturom.