German students in Austria: A psychometric pilot study
on developing a modified version of the Sociocultural Adaptation Scale

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In previous studies, the Sociocultural Adaptation Scale (SCAS) has been employed in studying migrants' and sojourners' adaptation to geographically and linguistically distant cultures. In the present study, the SCAS has been modified according to the needs of German students of psychology in Austria. In line with social identity theory and previous empirical evidence, despite the two countries' vicinity, considerable ethnic tension and adaptation problems of Germans in Austria were expected. We administered the modified SCAS to 77 women and 55 men of German descent at two Austrian universities. Factor analysis revealed three oblique dimensions, with Factor 1 pertaining to understanding Austrian culture, mentality, and values, Factor 2 addressing communication issues and Factor 3 dealing with academic requirements at the university. From the first two factors reliable subscales were derived, whereas for Scale 3 reliability was insufficient. Open questions and consecutive ratings of socio-cultural adaptation were employed towards assessing validity of the subscales. As opposed to Scale 3, Scales 1 and 2 were found to be valid measures of socio-cultural adaptation and will constitute the final version of the adapted SCAS. In line with our expectations, respondents reported considerable problems in understanding Austrian mentality and in communicating with Austrians, whereas they had no difficulties with respect to academic performance. The adapted version of the SCAS can be used as a research tool in order to study German students' adaptation to Austrian culture in more detail.

Key words: Sociocultural Adaptation Scale, Germans, students, Austria, psychometrics

Ward and Kennedy (1999) have introduced a modified version of the Sociocultural Adaptation Scale (SCAS) by Searle and Ward (1990). This scale has been designed towards measuring behavioral and cognitive components of cross-cultural adjustment among various groups of sojourners and international travellers. Ward and Kennedy (1999) based their psychometric analysis on a total of 16 cross-sectional samples, e. g., students from South-East Asia studying in New Zealand, British people in Hong Kong, or Japanese studying in New Zealand and on four longitudinal studies, comprising, for example, Malaysian, Singaporean, or Japanese students in New Zealand or young people from New Zealand working abroad. In the course of their analyses, the authors found the SCAS to be sufficiently reliable and its validity was confirmed by the fact that the scale reflected variations of socio-cultural adaptation in the course of the longitudinal studies in a meaningful way. In subsequent studies, the SCAS or part of it have been used successfully in selecting managers for overseas positions (Harvey & Novicevic, 2001), assessing adjustment in Chinese students in Great Britain (Spencer-Oatey & Xiong, 2006), or in investigating the attitudes towards language acquisition in Japanese students in the U. S. A. (Yashima, Zenuk-Nishide, & Shimizu, 2004).

By factor analysis with oblique rotation, Ward and Kennedy (1999) found a cognitive factor, pertaining to getting acquainted with word views and values of locals, to taking their perspectives as well as communicating with them, getting to know people and making friends. A second factor pertained to behavioral aspects of cultural learning by dealing with authorities and bureaucracy, getting along with unpleasant people and accommodating to practical aspects of everyday life. Simic-Yamashita and Tanaka (2010) examined the factor structure of a modified version of the SCAS in students from abroad in Japan and found a factor pertaining to university affairs, a second one dealing with practical issues of managing everyday life, and a third one,

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addressing interpersonal communication but also cognitive issues like understanding the guest country's humor. Simic-Yamashita and Tanaka (2010) also cited a study on immigrants from China to Singapore by Chen and Choi (2006), who had modified the SCAS in order to evaluate an online support program for immigrants and found three dimensions, namely social, physical, and cultural aspects of adaptation.

Ethnic tension between Austria and Germany

According to Ward, Bochner, and Furnham (2001), "the culture-distance hypothesis predicts that the greater the cultural gap between participants, the more difficulties they will experience" (p. 9). Thus, up to now, the SCAS has been employed to study sojourners' adaptation to cultures which obviously differed substantially from their own, whereas the question of adaptation to more similar cultures may have been considered obsolete. At first glance, for instance, little difficulties would be expected for Australian sojourners in New Zealand, for Irish people in Great Britain or for Germans in Austria, because intuitively, geographically adjacent cultures are considered similar, especially when almost the same language is spoken in the two cultures.

Geographic proximity does not exclude ethnic tension, however, and rather poses a risk factor to expatriates' acceptance by the host population, especially when citizens of an adjacent larger country move to a culturally and linguistically similar smaller one. Social identity theory of intergroup behavior (Tajfel, 1978; Tajfel & Turner, 1986) predicts that the members of a group will construct and maintain their self-esteem and positive identity by differentiating themselves from and by comparing their ingroup favorably to possible outgroups. In order to achieve this goal, if power is distributed unequally between the two groups, the less powerful group may employ cognitive strategies like derogating the outgroup, e.g., by ascribing to their members negative traits or attitudes. The more powerful group, on the other hand, will perceive the weaker one in a possibly patronizing, but overall much more favorable way.

Accordingly, van Oudenhoven, Selenko, and Otten (2010) expected asymmetrical attitudes of citizens of small countries to those of culturally similar, adjacent larger ones. The inhabitants of the smaller country (e.g., Austria) will tend to perceive the economic and political power of the adjacent larger country (e.g., Germany) as a threat to their national identity and, especially when a very similar language is spoken in both countries, the inhabitants of the smaller country will try to preserve their distinctiveness and social identity by cognitive denigration of the larger, more powerful country. In line with their hypotheses, van Oudenhoven et al. (2010) found that Austrian high-school students perceived members of the German nation as less likeable

than vice versa. They also confirmed their expectations with respect to the role of the common language spoken (for a linguistic perspective see Muhr, 2005) and found more negative attitudes towards Germany in German speaking as compared to French speaking students in Switzerland.

Similarly, as part of a large-scale research[1] on international images conducted by the Vienna University of Economics and Business, Höglinger and Kleedorfer (2008) in a study of 380 Austrians, and Moravitz (2007) in a study of 1,100 Germans found that Germans perceived Austrians in a far more likeable way than vice versa. Germans described Austrians as charming people known for their hospitality, good food, and beautiful landscape but rated them quite low on dependability, industry, and educational level. The opposite was true for the Austrians' view of the Germans, describing them as boastful and lacking warmth, though zealous, dependable, and intellectual. These findings resemble Fiske's (2000) typology of prejudice worldwide, which, among other types, pointed to "(a) paternalistic prejudices toward the incompetent but nice, subordinate outgroup; (b) envious prejudice toward the competent but cold higher-status outgroup" (p. 313).

Hofstede (1984), in his well-known study of work-related values found substantial differences between Germany and Austria on three of his four dimensions which are shown in Table 1. Hofstede (2006) applied these findings to differential student behavior in various countries. Accordingly, with respect to higher Power Distance, German students can be expected to value their professors' personal competence more than Austrians do and, as a result of higher Individualism, they will be more prone to express their personal opinions in everyday life, even at the cost of mutual harmony with their dialogue partners and higher Masculinity scores in Austrians might point to more conservative gender roles as compared to Germans. Similar findings on value-related differences between the two countries have been reported by House, Hanges, Javidan, Dorfman, and Gupta (2004).

Table 1
Hofstede's (1984) findings with respect to differences in work related values between Germany and Austria

	Power Distance	Individualism	Masculinity	Uncertainty Avoidance
Germany	35	67	59	65
Austria	11	55	75	70

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1 For a summary see http://www.wu.ac.at/werbung/download/forschungsbericht/laenderimageforschung.pdf

German expatriate students in Austria and goal of present pilot study

According to a decision of the European Court of Justice, since 2005, Austria has to grant access to universities to all citizens of the European Union under the same conditions as to Austrian citizens. Whereas Germany has strict limits with respect to the number of students being admitted to popular subjects like psychology, medicine, or economics, Austria has the tradition of granting free access to universities to anyone who has reached A-level at high school, regardless of the grades achieved in the final exams. Whereas Austria has managed to set legal limits to the number of foreign medical students admitted, no such limits could be realized for psychology or economics, resulting in growing numbers of German students admitted to these majors. According to official statistics, for example at Innsbruck university, the number of German first year students of psychology, between Winter Term 2004/05 and Winter Term 2007/08 has increased from $N = 11$ (3.4%) to $N = 136$ (51.3%). At the Alpen-Adria-Universität Klagenfurt, there has been an increase from $N = 4$ (1.8%) in Winter Term 2004 to $N = 40$ (19.7%) in Winter Term 2008/09 (Bundesministerium für Wissenschaft und Forschung, 2009). By the Winter Term 2011/12, at Innsbruck University, 171 out of 218, i.e., 78%, at Alpen-Adria-Universität Klagenfurt, 34 out of 73, i.e., 46%, and at Salzburg University even 147 out of 167 students, i.e., 88% newly admitted to a Bachelor's program of Psychology were German citizens (Bundesministerium für Wissenschaft und Forschung, 2012). This tendency is received with suspicion and concern by Austrian students and in light of limited academic resources, increasing numbers of German students are perceived as a threat by many Austrians (Euractiv, 2005; Tuffs, 2005, 2007).

Altogether, present evidence points to the probability of considerable tension between German expatriate students in Austria and their native born colleagues which should be investigated further in order to prepare countermeasures which might help reduce prejudice, to assist German students to deal with hostility, and to adapt successfully to Austrian culture. Such research might produce results which could help student counsellors, university teachers as well as student unions and Austrian authorities to give scientifically sound advice to German students having difficulties to come to terms with Austrian culture. As a first step toward these goals, we adapted the SCAS to the needs of German students in Austria and determined its factorial structure as well as its reliability and validity.

METHOD

Participants

The third author sent an e-mail to a total of $N = 781$ students of psychology at the Alpen-Adria-Universität Klagen-

furt, asking recipients of German descent *(N* = 182 among them) to participate in an online-survey. Similarly, the first author contacted by e-mail 503 students who had attended an introductory course of psychological methods which he had been teaching at the University of Innsbruck, also asking German students to participate in the online-survey. For Innsbruck, we estimate that approximately 300 Germans received our e-mail. Thus, from both universities taken together there were approximately 482 potential respondents of German descent who received our e-mails.

A total of 122 complete data sets, 77 from women and 45 from men, were obtained. Thus, the response rate was approximately 25%. The mean age of the participants was 22.8 years (SD = 3.06, with the total range of 20 to 42 years) and their mean semester of studies was 3.37 (SD = 1.79, range 1-10).

Instrument

Towards developing the 30-items Austrian-German version of the SCAS, first, from the 41-items SCAS, we deleted 16 items which, according to our impression, did not represent any difficulties for young Germans studying in Austria (e.g., "Going shopping", "Using the transport system", or "Worshipping in your usual way"). Twenty-five items were retained and translated to German and, if necessary, the wordage was slightly adapted (e.g., "Understanding the Austrian value system", "Understanding the Austrians' world view", or "Dealing with unsatisfactory service"). Finally, we added five items which addressed the specific problems German students might encounter in Austria according to the evidence cited above as well as to our own everyday experience ("Not to be perceived by Austrians as too 'direct' and 'cheeky'", "Dealing with the Austrian conception of achievement and success", "Dealing with the Austrian conception of rules and order", "Understanding Austrians' need for harmony", and "Not to be perceived by the Austrians as a 'know-it-all' type of person"). This procedure followed the explicit suggestion by Ward and Kennedy (1999), stating that "the SCAS is a flexible instrument and can be easily modified according to the characteristics of the sojourning sample" (p. 662).

The English translation of the instruction is as follows: "Please think of your first semester in Austria. To what extent did you (at least sometimes) encounter difficulties with respect to the following issues: 1 = '*Not at all difficult*', 2 = '*A little bit difficult*', 3 = '*Moderately difficult*', 4 = '*Very difficult*', 5 = '*Extremely difficult*'." The German version of the questionnaire is available from the first author upon request.

Open questions

In addition to the questionnaire, in the online survey the following open questions were asked: "We wish to learn

a bit more about the first months of your stay in Austria. Therefore we would like to ask you to let us know in a few sentences your personal experiences: (1) How well were you accepted by the Austrians, both privately and at university? (2) Though blanket judgments are to be avoided, still there are typically German and typically Austrian values, idioms and ways of communicating. What did you find out in this respect when being in contact with the Austrians? Did you encounter conflict? If yes, in what respect and for what reasons? (3) What should teaching-staff and students at Austrian universities consider and possibly change when dealing with students from Germany? (4) What else would you like to tell us?"

RESULTS

On the SCAS, the single scores on the above mentioned response scale ranging from 1 to 5, a mean score of 2.14 *(SD* = 0.60, range 1.07-4.2) was achieved. Men and women did not differ significantly from each other with respect to their total scores *(t*(120) = 0.567, *p* = .572). Age was not correlated with total score *(r* = .069, *p* = .447), while students in a higher semester had perceived more problems during their initial time in Austria than those in lower semesters *(r* = .224, *p* = .013). With respect to reliability, internal consist-

ency was assessed for the total score, yielding a Cronbach's α of .914 which indicated satisfactory reliability. Item-total correlations were highest for the items "20. Understanding the Austrians' worldview" *(r*_{jt} = .663), "15. Adapting to local etiquette" *(r*_{jt} = .630) and "6. Understanding Austrian jokes and humor" *(r*_{jt} = .627) while they were lowest for the items "14. Living away from family members and friends back home" *(r*_{jt} = .114), "16. Confirming with the requirements at university" *(r*_{jt} = .197) and "3. Dealing with Austrian bureaucracy " *(r*_{jt} = .235). The means and standard deviations of all thirty items are shown in Table 2.

It can be seen from the table that not being perceived as a "know-it-all" type of a person, making true friends, dealing with unpleasant persons or unsatisfactory service as well as understanding the Austrian worldview and political system and living away from one's relatives were perceived as causing the largest amount of difficulties. On the other hand, according to the mean ratings, getting used to the Austrian pace of life, dealing with university staff as well as conforming to the requirements at university and making oneself understood caused comparably little difficulty.

In the next step, following the procedure employed by Ward and Kennedy (1999) and Simic-Yamashita and Tanaka (2010), we investigated the questionnaire's dimensionality by a principal axis factor analysis with Promax

Table 2
Descriptive statistics of test items (English translation) and rotated component matrix from principal axis factor analysis with Promax rotation

	M	SD	Mentality	Communication	Studies & University
20. Understanding the Austrians' world view[a]	2.57	1.25	.89		
13. Dealing with the Austrian conception of achievement and success[a]	1.92	1.23	.78		
9. Understanding the Austrian value system[a]	2.06	1.07	.76		
23. Seeing things from the Austrians' point of view[a]	2.36	1.12	.73		
24. Understanding cultural differences between Austria and Germany[a]	2.20	1.02	.70		
29. Not to be perceived by the Austrians as a "know-it-all" type of a person[a]	2.71	1.36	.64		
8. Dealing with the Austrian conception of authority[a]	2.11	1.25	.62		
25. Being able to see two sides of an intercultural issue[a]	1.99	0.95	.61		
6. Understanding Austrian jokes and humor[a]	2.02	1.17	.50	.35	
26. Dealing with the Austrian conception of rules and regulations	2.07	1.21	.49		.34
27. Understanding the Austrians' need for harmony	1.81	1.07	.48		.35
21. Taking a local perspective on the culture[a]	2.22	0.99	.41		
2. Getting used to the Austrian pace of life	1.49	1.03	.40		.38
19. Understanding the Austrian political system[b]	2.72	1.14	.38		
11. Relating to members of the opposite sex[a]	1.70	1.02	.37		
4. Not being perceived by the Austrians as being too resolute and outspoken	1.94	1.07	.36		.32
30. Having fun with Austrians	1.75	1.00	.31		
1. Communicating with Austrians[a]	2.22	1.10		.82	
22. Making true friends in Austria[a]	2.66	1.38		.59	
12. Understanding the local accent[a]	2.50	1.19		.57	
5. Talking about yourself with Austrians[a]	2.28	1.26	.30	.54	
7. Dealing with someone who is unpleasant, cross, or aggressive[a]	2.63	1.17	.46		
14. Living away from family members and friends back home	2.52	1.34	-.31	.40	
17. Dealing with Austrian staff at university[a]	1.69	0.98			.65
3. Dealing with Austrian bureaucracy[a]	2.28	1.18			.60
18. Expressing your ideas in a way which makes it easy for others to accept them[a]	1.92	0.88			.59
16. Confirming with the requirements at university[a]	1.77	0.99			.51
28. Dealing with unsatisfactory service[b]	2.40	1.08			.44
15. Adapting to local etiquette	1.86	0.97	.35		.36
10. Making yourself understood	1.66	0.90			

Note. Only loadings greater than .30 are shown. [a] Items retained in the analysis on the basis of their factor loadings. [b] Items retained on the basis of their factor loadings but excluded by item analysis.
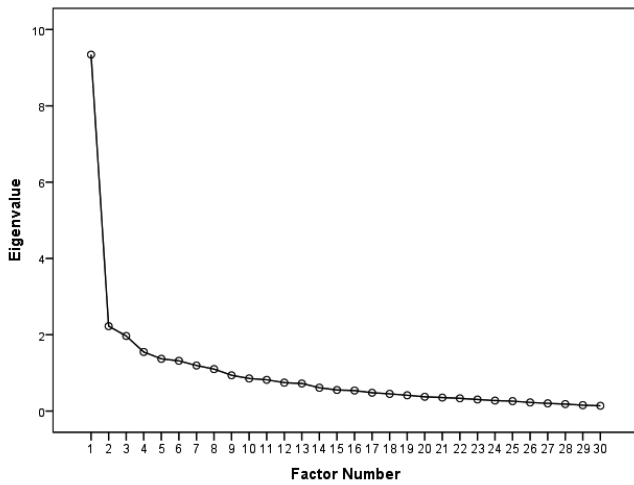
Figure 1. Scree plot resulting from the factor analysis of the Sociocultural Adaptation Scale.

rotation and Kaiser normalization. As the resulting factors could be expected to be correlated, an oblique method of rotation was chosen. A Kaiser-Meyer-Olkin (KOM) value of .837 (cf., Kaiser, 1974) and a highly significant Bartlett's test of sphericity ($\chi^2(435) = 1731.4$, $p < .001$) indicated that, according to the variables' correlational structure, the present data were suitable for factor analysis. According to the Kaiser-Guttman criterion (Guttman, 1954; Kaiser & Dickman, 1959), we first extracted a total of eight factors with eigenvalues larger than 1; the first eight eigenvalues were as follows: 9.34, 2.22, 1.97, 1.55, 1.37, 1.32, 1.19, and 1.10. As most of these factors were uninterpretable on the basis of their content, however, in a second step we decided to use the scree criterion (Cattell, 1966) in order to determine the number of factors. The scree diagram is shown in Figure 1.

Based on the scree plot and the fact that the forth factor would have been uninterpretable, we decided to extract three factors, together explaining 45.1% of the variance. The rotated component matrix can be seen from Table 2 and the right upper part of Table 3 gives the intercorrelations of the three factors and the correlations of the factor scores with age and semester of studies. It can be seen that the three fac-

tors are moderately and significantly intercorrelated whereas age is uncorrelated with all three factor scores. Low, but significant correlations indicate, however, that the higher the semester, the more difficulties with respect to Mentality (Factor 1) and Communication (Factor 2) were reported.

Quite clearly, Factor 1 (Mentality) refers to difficulties understanding Austrian culture, values, and way of life, whereas Factor 2 (Communication) addresses problems in everyday contact to the Austrian native population. Factor 3 (Studies and University) is dealing with academic issues, to classroom behavior, and to dealing satisfactorily with Austrian authorities and bureaucracy.

Next, the items having their principal loadings on the respective factors were used to constitute the subscales of the questionnaire. For this purpose, only items having principle loadings on one of the factors exceeding .30 were employed. Additionally, items having substantial secondary loadings were excluded (i.e., secondary loadings amounting to 70% or more of the respective primary loading). Items retained by this rationale are marked by [a] in Table 2. Further, from these items scales were formed corresponding to the three factors. For each scale, Cronbach's α was computed in order to assess internal consistencies as a measure of reliabilities. From Scale 1, Item 19 was deleted in light of its poor item-total correlation ($r_{jt} = .26$) and in order to improve reliability. After this step, for Scale 1, an α = .89 was achieved. For Scale 2, a Cronbach's α = .76 resulted and could not be improved by the deletion of items. In the case of Scale 3, an initial α = .66 was slightly improved to α = .67 by eliminating Item 28.

On the Likert type scale ranging from 1 to 5, on Scale 1 a mean of $M = 2.16$ ($SD = 0.80$, range 1.00-4.80), on Scale 2 a mean of $M = 2.46$ ($SD = 0.88$, range 1.00-4.60), and on Scale 3 a mean of $M = 1.91$ ($SD = 0.71$, range 1.00-4.00) was achieved, indicating that the largest amount of adaptational difficulties was reported with respect to aspects of communication, whereas the least amount of difficulties was encountered with respect to meeting the academic challenges at university. Men and women differed on none of the scales significantly (Scale 1: $t = -0.985$, $p = .326$; Scale 2: $t = -0.972$, $p = .333$; Scale 3: $t = 0.886$, $p = .378$).

In the left lower part of Table 3, the intercorrelations of the scales and their correlations with age and semester of

Table 3
Pearson correlations of factors scores from oblique rotation (right upper part) and of the three scales (left lower part) with each other and with age and semester of studies ($N = 122$)

	Mentality	Communication	Studies & University	Age	Semester
Mentality	-	.66*	.58**	.16	.27**
Communication	.57**	-	.42**	-.03	.22*
Studies & University	.27**	.20*	-	.04	.04
Age	.13	-.06	-.06	-	.25**
Semester	.31**	.20*	-.08	.25**	-

* $p < .05$. ** $p < .01$

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studies are given. A similar pattern as for the factor loadings in the right upper part of the table emerged, although, as a result of excluding items with substantial multiple loadings, the intercorrelations of the scales are lower than those of the factors.

Towards assessing convergent validity, the answers to the open questions were subjected to a content analysis by three raters independently of each other and were rated on a five-point Likert type scale, 1 indicating *extremely good* and 5 indicating *extremely poor* socio-cultural adaptation. As a measure of the three raters' degree of agreement, we computed intra-class correlation (ICC). Following the recommendation by Bortz & Döring (2005), the consistency method was employed, in order to adjust for each raters' tendency to give consistently higher or consistently lower ratings and an ICC = .83, 95% CI [.77, .88], indicated satisfactory agreement among the three raters. The average of the three ratings correlated with Scale 1 (Mentality) with $r = .469$ ($p < .01$), with Scale 2 (Communication) with $r = .547$ ($p < .01$), and with Scale 3 (Studies and University) it correlated with $r = .156$ (n.s.). Thus, Scales 1 and 2 can be regarded sufficient indicators of the students' socio-cultural adaptation, whereas the questions on university life addressed by Scale 3 address a different issue.

In accordance with psychometric results, the answers[2] given to the open questions in the first place revealed communication problems, i.e., difficulties understanding the Austrian language and lack of contact with Austrian fellow students. Some of the students also reported that they had frequently experienced open discrimination and anti-German racism from their Austrian fellow students or they expressed difficulties in understanding Austrian mentality, culture, and political life. As far as academic performance was concerned, no problems were reported. On the contrary, many respondents expressed their concern (and sometimes contempt) about the demands at Austrian university being too low as compared to Germany and some also addressed organizational problems they had encountered, sometimes also deploring a lack of strictness in dealing with guidelines, both on the part of university staff and on the part of their Austrian fellow students.

DISCUSSION

Descriptive results obtained by the newly adapted instrument as well as the replies to our open questions agree

with the expectations derived from social identity theory and with the previous findings by Höglinger and Kleedorfer (2008), and van Oudenhoven et al. (2000) with respect to the prejudiced perceptions of Germans by the Austrians. In line with the "competent but cold" (Fiske, 2000, p. 313) stereotype of less powerful towards more powerful societies, our German expatriate respondents reported most difficulties with respect to not being "perceived as a 'know-it-all' type of a person" (Item 29, Scale 1) and encountered their Austrian colleagues' rejection or even open discrimination by experiencing the great difficulties in "making new friends in Austria" (Item 22, Scale 2) and in "dealing with someone who is unpleasant, cross, or aggressive" (Item 7, Scale 2).

Whereas for Scale 1 (Mentality) of the newly adapted version of the SCAS good reliability has been achieved, Cronbach's alpha for Scale 2 (Communication) is marginally acceptable and still may be regarded as sufficient for examining groups of participants, e.g., for research and evaluation purposes (cf., Lienert & Raatz, 1998). For Scale 3 (Studies and University), however, reliability was low.

Three independent ratings of the answers to the open questions, for which good inter-rater agreement was achieved, confirmed sufficient convergent validity for Scales 1 and 2, but suggested that Scale 3 does not measure socio-cultural adaptation. This finding is in line with the fact that German students in Austria consistently report no difficulties in managing their studies, but on the contrary tend to criticize the Austrian university system for setting the standards too low. Also considering the poor reliability of Scale 3, we suggest to exclude it from the questionnaire and to use only Scales 1 and 2 for measuring socio-cultural adaptation of German students in Austria. According to the results of item analysis, as summarized in Table 2, Scale 1 (Mentality) will comprise eleven and Scale 2 (Communication) will comprise five items.

As far as factorial validity is concerned, the theory according to which the SCAS has been constructed by Ward et al. (2001) suggests a cognitive and a behavioral factor. Accordingly, Factor 1. is pertaining to cognitive issues and roughly compares to the first, cognitive factor found by Ward et al. (2001), whereas Factors 2 and 3 pertain to behavioral aspects and cultural learning, corresponding to Ward et al.'s (2001) second factor. The first factor found by Simic-Yamashita and Tanaka's (2010), resembles Factor 3 (Studies and University) of the present study, whereas the remaining two factors in both studies pertain to intercultural understanding and everyday life. In the latter case, however, resemblance of the respective scales is less clear than it is the case for Ward et al.'s (2001) study and there is least agreement with Chen and Choi's (2006) Chinese finding of a social, physical, and a cultural factor. With respect to the first two studies, however, although the factors found in the present study are not identical with the ones reported previously, taking cultural differences into account, there is suf-

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2 All the answers were considered for content analysis. For the present study, open questions are relevant only as an indicator of the adapted SCAS's convergent validity. Thus, apart from the above mentioned ratings of the respondents' degree of socio-cultural adaptation, no further content analysis has been performed.

ficient evidence pointing to factorial validity of the present version of the SCAS.

Whereas studies on construct validity are still missing, a research currently proposed will use the present version of the SCAS as one of the outcome measures of an intercultural training, aiming at reducing mutual prejudice among Austrian and German students, and thus can be expected to yield data in this respect. Significant (though small), positive correlations of study semester and scores on Mentality and Communication subscales point to increased difficulties in later semesters after an initial euphoria. Although longitudinal studies would be needed to examine this point, it may be speculated that German sojourners experienced the more subtle aspects of being excluded from the locals' social life and of being prejudiced against not before their second or third year in the host country. This may have influenced their retrospective evaluations of their experiences during their first semester which were asked for in the SCAS instruction. Alternatively, but contrary to the authors' everyday experience, the positive correlation of study semester and reported initial difficulties of course could also be interpreted as a sign towards increasing tolerance and reduced tension among German and Austrian students during the past years.

One limitation of the present pilot study pertains to the small and non-representative sample of psychology students who were recruited from only two Austrian universities. Future research will be necessary towards attempting to replicate the present findings on a larger scale.

The present research has shown that socio-cultural adaptation of Germans in Austria can be measured by a reliable and valid instrument which may be useful in future research. In accordance with our expectations, the German adaptation of the SCAS was able to detect considerable difficulties among Germans studying psychology in Austria in adapting to the Austrian culture. These difficulties pertained both to cognitive issues like understanding Austrian mentality as well as to communicative skills and getting along smoothly in private life. This finding seems noteworthy, because traditionally difficulties in cross-cultural adaptation were expected and investigated among ethnic groups which were characterized by obvious and large differences in culture and language. Whereas, up to now, virtually no evidence pertaining to the psychological situation of German students in Austria has been collected, the present study should be a first step into this direction by providing a research tool for further investigation.

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