

Influence of student exchange on national stereotypes, attitudes and perceived group variability

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Abstract

The present research studied changes in stereotypes, attitudes and perceived variability of national groups within a sample of U.S. college students who spent one year studying in either West Germany¹ or Great Britain. Subjects' stereotypes and attitudes toward host country members changed significantly during their stay, whereas attitudes and stereotypes toward control nationalities did not, and neither attitudes nor stereotypes further changed during the first nine months after subjects had returned home. On the other hand, perceptions of group variability changed significantly both during the stay and after departure from the host country. Although group perceptions generally became less positive over the course of the sojourn, these changes did not seem to be due to negative intergroup contact. Rather, the more contact students reported having with

¹West and East Germans are differentiated because the study was begun before the reunification.

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host country members the more positive were their attitudes and stereotypes of the groups. Results are discussed in terms of their implications for implementing student exchange programmes.

INTRODUCTION

The most important theory regarding stereotype change within social psychology is the *contact hypothesis* (Amir, 1969; Hewstone & Brown, 1986; Stephan, 1985). This hypothesis proposes that people's attitudes toward, and stereotypes of social groups are determined, to a major extent, by the experiences they have with individual members of those groups, and that such contact will, at least under certain conditions, lead to more positive intergroup perceptions. The voluminous literature concerning the contact hypothesis has investigated, in detail, the specific conditions under which such change is likely. It is now well known that contact is likely to produce attitude change when participants from both groups have equal status, the outgroup members have characteristics that disconfirm previously held stereotypes, the contact situation allows individuals to get to know each other, and the situation encourages cooperation between group members (Cook, 1984; Rothbart & John, 1985; Stephan, 1985; Stroebe, Lenkert, & Jonas, 1988). Because student exchange programmes embody many of these basic elements, at least to some degree, they represent an ideal avenue for studying the contact hypothesis in a naturally-occurring social setting.

One aspect of the influence of intergroup contact upon changes in attitudes and stereotypes that has not heretofore been fully addressed, and which may be informative for a full understanding of the influences of intergroup contact, concerns the effect that intergroup contact might be expected to have on different types of group perceptions. Whereas most previous work has addressed the effects of contact on intergroup *attitudes* (evaluations) or beliefs about the characteristics of the groups (*group stereotypes*), researchers have more recently noted that beliefs about social groups also are represented in terms of their perceived *variability*. The perceived variability of a group concerns the degree to which the group members are perceived as similar to each other or different from each other (Linville, Salovey, & Fischer, 1986; Park, Judd, & Ryan, 1991). There has not heretofore been a concerted effort to study the influence of group contact on perceived variability (but see Islam & Hewstone, 1993).

One reason to differentiate the effect of contact on different types of group perceptions is that they may be relatively independent of each other. Recent research has shown that stereotypical beliefs about social groups may be only moderately correlated with expressed attitudes toward those groups (Stangor, Sullivan, & Ford, 1991; Esses, Haddock, & Zanna, 1993). And perceptions of group variability may be at least partially independent of either stereotypes or attitudes (*cf.* Park & Judd, 1990). Such dissociations are not unexpected, because it is assumed that different types of group beliefs are represented differently in memory (Smith & Zárate, 1992; Stangor & Lange, 1994). Attitudes and stereotypes about groups are generally assumed to be represented as summary representations of the group (evaluations in the case of attitudes, and 'prototypes' or 'schemata' in the case of stereotypes).

Variability judgments, on the other hand, are known to be determined in great part by the activation of stored group exemplars (memory for individual group members; *cf.* Linville *et al.*, 1986; Linville & Fischer, 1993; Smith & Zárate, 1992).

In addition to differential effects upon each of the separate components, contact might also be expected to influence the relationship among the various components themselves. Increased contact with group members might result in the different components of the beliefs becoming more strongly inter-associated. This pattern would be expected to the extent that, for individuals with little previous experiences with the groups, different components would be determined by factors that are not related to intergroup contact (*cf.* cultural stereotypes, information from parents, peers and teachers), whereas once people have had direct experience with the group, the various beliefs all come to be influenced by the actual contact the individual has had with the group, and thus are likely to be more closely interrelated. Such a finding would be consistent with the idea that direct experience with the contacted group would produce more well-defined perceptions (*cf.* Fazio, Powell, & Herr, 1983).

The present research investigated stereotype change among U.S. students who participated in student exchange programmes in the U.K. and in Germany. Thus, in addition to the theoretical implications of the research, the present study also has practical implications concerning the types of exchange programmes that are likely to prove most successful in changing group perceptions. We used a longitudinal design in which students were contacted upon arrival in the host country, at the end of their 1-year sojourn, and once more after they had returned home. The latter measure is particularly interesting in that it assesses changes in group perceptions that might occur after the contact has ended. For instance, it might be expected that individuals would selectively distort their memories for the contact situation (perhaps by remembering only the most positive aspects) after returning home. On the other hand, if changes in group perceptions are driven primarily by contact *per se*, then no changes should be expected after the contact experience has ended.

One enigma in the area of student exchange programmes is that previous research has virtually always found that attitudes toward host nations tend to become more negative over time for students who study abroad (Klineberg & Hull, 1979; Stroebe *et al.*, 1988). Although it is possible that these changes are the result of negative contact with the host country members, it is also possible that these effects are due to the fact that students who participate in exchange programmes have overly positive initial expectations about the sojourn. We compared the merits of these two explanations in three ways: First, we tracked the changes in perceptions of the host country members over time. Secondly, we compared perceptions of the host country members with those of a control, non-visited, country. Finally, we also assessed the degree to which both quantity and quality of contact (Islam & Hewstone, 1993) correlated with group perceptions.

METHOD

Subjects and Procedure

In August and September, 1990, we attempted to contact every individual of U.S. citizenship who was currently enrolled in a U.S. university, but who planned to

spend the entire 1990–1991 school year studying at either the University of Tübingen, Germany, or the University of Bristol, U.K. Students were contacted with the help of the foreign exchange office at their host university. Students completed the questionnaires in small groups within 3 weeks of their arrival in the host country. At the end of the school year (June or July, 1991), we attempted to contact all of the students who had completed the questionnaire at the arrival session. These subjects completed a second questionnaire, also in small groups, before returning home. In April 1992, after they had been back in the U.S. for about 9 months, we sent a follow-up questionnaire to the students who had completed both the arrival and the departure questionnaires.

The initial sample included 108 students in Germany and 41 students in the U.K. and constituted over 90 per cent of the American students currently studying in each of the two universities. About 20 per cent of the arrival students could not be contacted at departure, either because they did not show up at the testing session, they had returned to the U.S., or they did not have a valid telephone number or address. The departure sample included 83 students (45 men) who had been in Germany and 35 students (24 men) who had been in England. About 63 per cent of these subjects ($N=74$) also completed the follow-up questionnaire².

Dependent Variables

Attitudes

At each of the three sessions we assessed students' attitudes toward the people from both West Germany and England using three 10-point semantic differential scales: *like–dislike*, *positive–negative*, and *favourable–unfavourable*. These ratings were highly reliable (all alphas >0.90), and a mean across the three items served as the attitude measure toward the host and the control countries. Subjects always expressed their attitudes and stereotypes toward people from the host nation first, followed by the comparison country.

Stereotypes

On the basis of a pretest of students from a college population similar to the one used in the present study, a set of 16 traits was selected for use as stereotypes. Eight positive and eight negative traits, selected as being stereotypical of Germans, English and Americans, and chosen for evaluative implications on the basis of Anderson's

²Because the attrition rate was relatively high, we investigated potential differences among students who dropped out of the project. None of the reported variables from the arrival questionnaire significantly differed for subjects who did or did not complete the departure questionnaire, and none of the variables on either the arrival or the departure questionnaire differed for those who did or did not return the follow-up questionnaire. These results suggest that subject attrition was not a significant determinant of our findings. Furthermore, none of the results reported below differed by sex of student.

(1968) likeability ratings, were selected for use as stereotypes³. Two orders of trait terms were used.

Subjects marked on 100-mm slashes with endpoints marked *extremely* and *not at all*, where they felt each group fell on average. A single stereotyping score for each nationality was created for each subject by subtracting the average assignment of the eight negative traits from the average assignment of the eight positive traits. Subjects were also asked to indicate for each trait, using two shorter slashes, where on the dimension they felt the most extreme group members (that is the group member who was perceived to have the most of the trait and the group member who was perceived to have the least of the trait) fell. Perceived group variability was the mean range across the 16 traits, calculated for each nationality. This measure has routinely been used to provide an index of the perceived range or variability of stereotypes (Park *et al.*, 1991; Islam & Hewstone, 1993).

Predictors

In addition to the major independent variable of time of measurement (arrival, departure, follow-up), we also assessed a number of variables that might have been expected to influence group perceptions over the course of the sojourn.

Contact

Several measures assessed the amount and type of contact that students had with people from the host country during their stay. At departure subjects indicated the percentage of time (from 0 to 100 per cent) that they had spent during their visit with host country members, with fellow Americans, and with individuals of other nationalities. Students also indicated how easy or difficult they had found it to make contact with people from the host country (0 = *very difficult*, 9 = *very easy*). To assess contact with close acquaintances from the host country, students indicated the initials of the three people they had spent most time with over the past month, and then indicated the nationalities of these people, and their satisfaction with their relationship with them (0 = *not very satisfying*, 9 = *very satisfying*). We created a measure of satisfaction with contacts with individual host country members by averaging the satisfaction scores across the people mentioned who were nationals of the host country. Subjects also rated how satisfied they were with the host country members with whom they shared their living quarters.

³These traits were originally pretested to represent two positive and two negative stereotypes of each of four national groups, as follows: Americans: ambitious (p), industrious (p), individualistic (negative), materialistic (n); French: romantic (p), emotional (p), arrogant (n), traditional (n); Germans: efficient (p), intelligent (p), authoritarian (n), closeminded (n); English: cultured (p), likeable (p), selfish (n), reserved (n). Unfortunately, space limitations in the questionnaire allowed us to only present two positive and two negative stereotypes of each group and as a result the reliability of these measures, calculated using only the stereotypes appropriate to the group, proved to be low. As a result, we were forced to average across all eight of the positive and all eight of the negative traits to compute stereotype scores for each group.

Experiences

As a secondary measure of contact with host country members, the students were asked at departure to indicate five experiences that they considered to be particularly important in shaping their attitudes toward the host country and the people from the host country. Then, on the next page of the booklet, they evaluated each of the five experiences (0 = *very negative*, 9 = *very positive*). The measure of experiences was the average rating across the generated experiences.

Other Predictor Variables

Our expectation, based on predictions derived from the contact hypothesis, was that contact with host country members would be a good predictor of attitude change, in comparison to other potential predictors that did not involve actual contact with host country members. We measured a number of such variables to allow these comparisons. Subjects were asked (at arrival) about how strongly they identified ethnically with the host country (0 = *not at all strongly*, 9 = *very strongly*), and whether or not they had visited the host country prior to the sojourn. At departure, they also indicated whether their day-to-day activities in the host country were the same or different than what they usually did at home and how comfortable their housing arrangements (independently of their housemates) had been.

RESULTS**Changes in Group Perceptions Over Time**

To investigate changes in group perceptions over the course of the sojourn, the attitude, stereotype and variability measures were entered into separate 2 (sample: visited Germany, visited England) \times 2 (group rated: host nation, control nation) \times 3 (time of measurement) ANOVAs. For students in Germany, perceptions of the English served as a control, and for students in England, perceptions of Germans served as a control. The results of these analyses are summarized in Table 1.

Attitudes

There was a significant group rated \times time of measurement interaction, $F(2, 116) = 4.04$, $p < 0.02$ on the attitude measure. Attitudes toward people from the host nation, which were very positive at the outset, became significantly less positive between arrival and departure, and did not change after the return home. On the other hand, attitudes toward the control nation remained stable across all three times. These data suggest that foreign contact is indeed highly effective in changing attitudes, albeit in this case in a negative direction. It is also quite clear that attitudes toward the people of the host country at arrival are inflated, in comparison to all of the other attitude ratings. Students came to the exchange setting with extremely

Table 1. Attitudes, stereotypes and perceived variability toward host and control countries

	Arrival	Departure	Follow-up
Attitudes			
Host	7.14 _a	6.10 _b	6.14 _b
Control	6.34 _b	6.05 _b	6.08 _b
Stereotypes			
Host	5.6 _a	-0.01 _b	-0.31 _b
Control	-1.4 _b	-0.24 _b	-0.33 _b
Variability			
Host	77.6 _a	80.1 _b	77.6 _a
Control	77.4 _a	79.7 _b	72.9 _a

Note. Means within each measure that do not share a subscript are significantly different by Tukey HSD test at $p < 0.05$.

positive attitudes toward the host country members, which moderated over the course of their stay. This is not to say, however, that students became negative toward people from the host country; the expressed attitudes are still significantly higher than the neutral point of the scale (4.5). These changes over time generalized across country visited.

Stereotypes

The expressed stereotypes showed similar patterns to those found on attitudes. Subjects endorsed more positive and fewer negative stereotypes of the host country at arrival than at follow-up or departure, but stereotypes of the control nationality did not change over time. This resulted in a significant group rated \times time of measurement interaction, $F(2, 114) = 3.49$, $p < 0.05$. Again, this pattern held for both countries.

Stereotype Variability

The only significant effect on the stereotype range measure was a main effect of time of measurement, $F(2, 114) = 3.24$, $p < 0.05$. Rather than being limited to the host country, unexpectedly members of both the host and the control countries were perceived as more variable at the end of the sojourn than at either arrival or follow-up. There were no other significant effects in this analysis.

Correlations Among Group Perceptions

We also found some evidence that, as expected, the various perceptions of host country members became more highly intercorrelated over the course of the sojourn. The relevant correlations are shown in Table 2. Although the stereotype variability measures did not show significant correlations with either attitudes or stereotypes at any time, the relationship between stereotyping and attitude did increase from

Table 2. Correlations among host country perceptions

	Stereotypes	Variability
Arrival		
Attitudes	0.14	0.09
Stereotypes		-0.15
Departure		
Attitudes	0.39**	0.00
Stereotypes		0.05
Follow-up		
Attitudes	0.61**	0.01
Stereotypes		0.13

** $p < 0.01$.

$r = 0.14$ to $r = 0.39$ between arrival and departure and to $r = 0.61$ at follow-up. All three of these correlations are significantly different from each other by z test. No corresponding effects were found on stereotype-attitude correlations for the control country ($r_s = 0.34, 0.41$ and 0.50 respectively). It is interesting to note that the relationship between stereotyping and attitude was initially lower than that of the control group, but was higher than that of the control group by the follow-up session.

The hypothesis that the various perceptions become more highly consolidated through experiences with group members was also tested by comparing the correlation between stereotypes and attitudes, at arrival, for students who reported that they had or had not previously visited the host country. This correlation was significantly greater for students who reported having previously visited the host country ($r = 0.24, N = 60$) than for those who reported never having been in the host country ($r = 0.04, N = 58$). These two correlations are significantly different by z test, $p < 0.05$. Taken together, these patterns are quite consistent with the idea that beliefs about the host country were initially based upon indirect knowledge, but over the course of visiting a country come to be more highly consolidated.

Predictors of Group Perceptions

Because each of the components measured at follow-up was highly similar to its corresponding measure at departure (all $r_s > 0.59$) and because the sample size was larger for the departure sample than for the follow-up, we focused our investigations on predictions of changes in group perceptions between arrival and departure. To do so, we created residual change variables by regressing the respective departure measures onto the corresponding arrival measures. These residuals thus represent changes in each of the components over time.

Contact with Host Country Members

The most basic prediction of the contact hypothesis is that contact with host country members will influence group perceptions. However, it was also expected that different types of contact might have differential effects upon the different

Table 3. Correlations between measures of contact and group beliefs at departure

	Attitudes	Stereotypes	Variability
Experiences	0.39**	0.25**	0.05
Time with host	0.30**	0.06	0.00
Ease of contact	0.37**	0.17	0.07
Close friendships	0.12	0.33**	0.26**
Housemate satisfaction	0.39**	0.21*	-0.09
Ethnic identification	0.02	-0.06	-0.05
Prior visit	-0.10	0.06	0.04
Activity comparison	-0.06	-0.17	-0.05
Housing satisfaction	0.13	0.10	0.00

Note. The variables in the columns are residualized scores indexing change in group perceptions between arrival and departure.

* $p < 0.05$; ** $p < 0.01$.

components. The relevant correlational and regression analyses are presented in Tables 3 and 4.

The correlations in Table 3 show that, as predicted by traditional versions of the contact hypothesis, attitudes toward the host country were associated with having positive experiences in the country, with time spent and ease of contact with host country members, and with satisfaction with the people that one lived with. Perceived stereotypes of the host country were associated with positive experiences, close friendships, and housemate satisfaction. These patterns are similar in the regression analyses shown in Table 4. The pattern of predictors is, however, quite different for the variability measure. Variability is predicted only by satisfaction with specific close friends who were host country members.

Other Predictors

Taken together, the present results are highly consistent with the hypothesis that contact with host country members is related to more positive (or less negative) attitude change over the course of the sojourn. The importance of contact is further

Table 4. Regression analyses predicting three dependent measures

	Attitudes	Stereotypes	Variability
Experiences	0.30***	0.23*	0.01
Time with host	0.19	-0.00	-0.07
Ease of contact	0.03	0.04	0.14
Close friendships	0.00	0.25*	0.23*
Housemate satisfaction	0.27**	0.15	-0.17
R^2	0.30	0.17	0.08

Note. Figures are standardized regression coefficients. The variables in the columns are residualized scores indexing change in group perceptions between arrival and departure.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 5. Correlations among attitudes, stereotypes, variability and desire to return to the host country (all variables measured at departure)

	Desire to return to country to:		
	Study	Visit	Live
Attitudes	0.16	0.45**	0.49**
Stereotypes	0.27**	0.33**	0.29**
Variability	0.13	-0.10	0.20*

* $p < 0.05$; ** $p < 0.01$.

emphasized by the finding that other variables that did not involve contact with host country members were nonsignificant predictors of attitude change. As shown in Table 3, neither ethnic identification with, a prior visit to, comparison of host country versus home activities nor housing satisfaction (exclusive of housemates) predicted attitude change.

Outcomes of Stereotype Change

Although it was not the primary purpose of the present research to assess the outcomes of attitude change, we did include several measures of desire to visit the country again. Table 5 shows that both attitudes and stereotypes highly predict the degree to which the students said they would be interested in returning to visit or live (and for stereotypes, study) in the host country, whereas perceived variability was not as highly predictive overall. This pattern of results leads to the question of whether perceived variability predicts outcome measures above and beyond that of the more traditional measures of stereotypes and attitudes, or whether it is redundant with them. To answer this question, we conducted a single regression analysis in which desire to return to live in the host country was simultaneously predicted by attitudes, stereotypes and variability. Suggesting that perceiving host country members as highly variable is indeed positively related to other perceptions, this analysis showed that greater perceived variability was significantly ($p < 0.05$) associated with a desire to return to live in the host country even when attitudes and stereotypes were controlled.

DISCUSSION

The present results, using a naturalistic test of intergroup contact in a student exchange setting, provide support for the expectation that intergroup contact produces different patterns of change on different types of group perceptions. First, a unique contribution of the present research was the inclusion of a follow-up measure, collected 9 months after the contact period was over. We found no residual change in either the attitude or the stereotyping measures after subjects returned home. Whereas it might have been expected that the students would have selectively forgotten or distorted their experiences to be more positive over time, no such effect

was observed. Thus it seems that perceptions of attitudes and stereotypes of the visited countries, although highly malleable during the contact experience, may be less likely to further change later. This result is of course highly supportive of the role of intergroup contact as a determinant of changes in group perceptions—stereotypes and attitudes changed during the contact period, but did not change after the contact period had ended.

Whereas attitudes and stereotype ascriptions showed similar patterns over time, the stereotype variability measures produced a very different pattern, such that subjects perceived greater variability among host country members at departure than at either arrival or follow-up. And, although attitudes and stereotypes were predicted by experiences and overall contact with host country members, perceived group variability was influenced only by satisfaction with host country members who were close friends. It is possible that these findings indicate that, as proposed by some models of group variability (*cf.* Linville *et al.*, 1986), variability judgments are determined by the activation of specific group exemplars at the time of judgment. It is possible that close friends from the host country are easily accessed from memory and thus particularly likely to influence these judgments. Although these conclusions must be tempered by the finding that perceptions of the members of the control country also unexpectedly changed over time, they do suggest that it is worth continuing to study the role of contact upon perceived group variability. This conclusion is also supported by the finding that perceived variability predicted a desire to return to live in the host country, above and beyond attitudes and stereotypes.

Our results also demonstrate that one outcome of intergroup contact is that the various components of intergroup beliefs become more highly consolidated over the stay. Although corresponding patterns were not found for correlations with perceived variability, there was a highly significant increase in the observed correlation between stereotypes and attitudes across the three time periods. These results are consistent with previous research showing that direct experience with attitude objects leads to stable, well-developed attitudes (e.g. Fazio *et al.*, 1983).

Although our findings of overall attitude change replicated previous research showing that attitudes and stereotypes become more negative over time (*cf.* Stroebe *et al.* (1988) for a review), the present study helps explicate the factors underlying these changes. For one, the use of an appropriate comparison group in the form of a control nationality makes it clear that this decrease is due to the fact that students come to the host country with overly positive perceptions of the host country, which are moderated during the course of the stay.

We also found strong evidence that, as explicitly predicted by the contact hypothesis, the amount of contact that our students reported having with host country members was a strong predictor of subsequent *positive* attitudes toward the host country members. This pattern was found on a number of measures of contact, including quality of contact experiences in the host country, time spent with host country members, ease of making contact with host country members, and housemate satisfaction. These findings showing the importance of intergroup contact are particularly salient in comparison to variables that were found *not* to be predictors of attitude change. For instance, we found no relationships for ethnic identification with the host country, previous visits to the country, or housing satisfaction, exclusive of housemates. In conjunction with the results reported by

Stroebe *et al.* (1988) who also found very few relationships between non-contact related measures and attitudes, it appears that contact with host country members is indeed the best predictor of positive cultural experiences and attitude change in student exchange programmes.

Although the benefits and limitations of cross-cultural interaction have been discussed by a number of writers (Church, 1982; Brein & David, 1971; Klineberg & Hull, 1979; Stroebe *et al.*, 1988), these previous analyses have often not been theoretically driven. The present research, on the other hand, was explicitly derived from the predictions of the contact hypothesis. Our data suggest a number of potential issues in this regard. For one, we should not expect that intercultural exchange programmes will necessarily increase the positivity of intergroup attitudes. In fact it is possible that students should be forewarned that the sojourn may not be as positive as they might expect. Second, we can expect that attitudes and stereotypes will become more crystallized over the course of the exchange. Finally, although reported attitudes and stereotypes toward host country members may not improve, it is possible that effects on perceived group variability, although possibly only short-term, may typically be more positive.

As predicted by the contact hypothesis, the most important facet of the success of the exchange programme is likely to be the extent to which the individual has meaningful direct contact with host country members. Programmes that are arranged such that students can have direct intergroup contact will be most successful in promoting positive attitude change. In this regard, it is notable that not a single one of our students, at departure, reported having had too much contact with host country members, whereas over 55 per cent reported having had too little contact with them.

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