



*Journal of Social Issues*, Vol. 67, No. 4, 2011, pp. 787–805

## **When Knowledge Is a Double-Edged Sword: Contact, Media Exposure, and American China Policy Preferences**

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*Globalization affords greater opportunities to learn about foreign peoples than in the past. What impacts do interpersonal contact, media exposure to and knowledge about China have on the American people's China policy preferences? Two large surveys of U.S. citizens were conducted in the summers of 2008 and 2009 to explore whether knowledge about China and prejudice against the Chinese people and the Chinese government would mediate the relationship between contact and media exposure on the one hand, and U.S. China policy preferences on the other. Results show that while knowledge played the expected mediating roles between contact and media exposure on the one hand, and prejudice against the Chinese people on the other, greater knowledge of China was actually associated with greater negativity toward the Chinese government, which in turn contributed to desires for tougher China policies. Both media exposure and interpersonal contact thus had mixed effects on China policy preferences.*

Globalization involves the experiential compression of time and space (Giddens, 1985). Airplane travel and new communications technologies such as e-mail and Skype now allow peoples once separated by oceans and continents to interact more directly and frequently with one another than ever before. Furthermore, indirect contact in the form of increasing exposure to different cultures and international events through media such as television and the Internet has also risen dramatically in recent years, affording greater opportunities to learn about

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foreign peoples than in the past. What impact do these growing interactions have on how the citizens of different countries feel and think about each other? And do these thoughts and feelings impact their foreign policy preferences?

This article explores these questions in the context of U.S.–China relations, arguably the most important bilateral relationship of the 21st century. China’s dramatic recent economic and military rise has engendered significant anxiety around the world, America included. This makes understanding the determinants of mutual perception in U.S.–China relations particularly important, especially under conditions of rapid globalization.

The Chinese government recognizes that fears about “China’s rise” could lead to the emergence of counterbalancing alliances among other countries that would undermine Chinese security. China has therefore sought to allay foreign fears by shifting the discursive terrain from one of “China’s rise” first to “peaceful rise” and then to the even more innocuous “peaceful development” (e.g., Glaser & Medeiros, 2007). And China is seeking to manage China’s international image in other ways as well. Since 2004, more than 300 Confucius Institutes have been launched around the world, aggressively promoting Chinese language education, as well as renewed international academic and cultural exchange. The underlying assumption appears to be that increased contact with and knowledge about China will improve foreign attitudes toward China.

This is reminiscent of Gordon Allport’s (1954) intergroup contact hypothesis, in which he proposed that increased contact between ethnic groups living in close proximity would increase their knowledge about each other and thereby decrease prejudice. Allport’s influential hypotheses not only led to a flourishing of social psychological research on the effects of intergroup contact on prejudice, but also to actual social policy, as busing, affirmative action, and other social policies were implemented during the U.S. civil rights movement in the attempt to reduce prejudice between American racial groups.

Decades of research and policy experiments have revealed that increased intergroup contact, under the right conditions, can lead to reductions in prejudice (Binder et al., 2009; Pettigrew & Tropp, 2006). Increased contact under the wrong conditions, however, can exacerbate conflict and prejudice. This literature is of great relevance to students of both the social psychology of globalization and U.S.–China relations. Of particular relevance to China’s recent globalization strategy, Pettigrew and Tropp (2008) have noted in a recent meta-analysis that increased knowledge does serve as a mediator of the relationship between intergroup contact and prejudice reduction.

Can we utilize theories from the social psychology of intergroup relations to better understand the dynamics of mutual perception in U.S.–China relations? If so, it may very well have implications for understanding the broader social psychology of globalization. Specifically, this article addresses the following questions, which are exploratory in nature. First, what impact does globalization have,

not just on attitudes toward foreign peoples, but on attitudes toward foreign governments? Unfortunately, when the Chicago Council on Global Affairs regularly surveys American attitudes toward foreign countries, it asks for ratings of “your feelings toward some countries and peoples,” conflating the two. Little is therefore known about the relationship between attitudes toward foreign peoples and their governments. Recent research on China, however, has suggested that Americans are much more positive toward the Chinese people than they are about its government (e.g. Gries, Crowson & Cai, 2011). Is it possible that the increased exposure that accompanies globalization fosters empathy between peoples but not necessarily between governments? For instance, will increased contact with Chinese people and knowledge about China be associated with more positive American attitudes toward the Chinese government, or more negative attitudes?

Second, might media exposure act as a type of indirect contact, increasing knowledge and improving attitudes? Third, is knowledge about China the panacea for American attitudes toward China, as Chinese policymakers appear to assume? Fourth and finally, will contact, media exposure, knowledge, prejudice, and attitudes toward the Chinese government have a significant impact on American China policy preferences?

To explore these questions, two large surveys of Americans were conducted in the summers of 2008 and 2009. Structural equation modeling (SEM) was employed to study whether knowledge, prejudice against the Chinese people, and negative attitudes toward the Chinese government would mediate the relationship between contact and media exposure on the one hand, and American China policy preferences on the other. Whereas SEM is often utilized to deductively test theory, we use it in the current research to model relationships inductively. We adopt this exploratory approach with the goal of providing researchers interested in the links between psychology and globalization with a “starting point” for thinking about how contact, knowledge, prejudice, and policy attitudes might fit together in the context of international relations.

## STUDY 1

### Method

#### *Procedures and participants*

During the first week of August 2008, 2,785 members of a middle-American state university community completed an Internet survey. Participants were given the option of entering a draw to win tickets to home football games. The 2,584 in the final sample did not include 201 participants who completed the survey improperly, were not U.S. citizens, or were Chinese Americans (excluded because some may have only recently emigrated from China). The online survey began

with a consent form that explained to participants the nature of the study, its voluntary nature, and the anonymity of the data collected.

The final sample included 1,310 undergraduates, 460 graduate students, 200 faculty, and 614 university staff (57 of whom did not attend college). There was a remarkable balance of women ( $N = 1,289$ ) and men ( $N = 1,295$ ), and Republicans ( $N = 988$ ) and Democrats ( $N = 940$ ) (656 chose “Independent or none”). Ages ranged from 18 to 72, with a mean age of 29.72 ( $SD = 12.78$ ). In terms of ethnicity, the sample was 81% White, 3% African American, 4% non-Chinese Asian American, 4% Latino/a, 6% Native American, and 3% “other.”

### Measures

Unless otherwise noted, the questions that composed the following scales were on 7-point Likert scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). They were largely balanced in terms of positively and negatively worded items.

*Prejudice Scale.* A scale composed of four “*The Chinese people are...*” statements. Two were positive (*friendly* and *trustworthy*) and reverse coded, and two were negative (*devious* and *dishonest*). Higher values on the scale indicate greater “prejudice” or negative attitudes toward the Chinese people.

*Negative Attitudes toward the Chinese Government Scale.* A scale composed of four “*The Chinese government is...*” items, using the same four adjectives (*friendly*, *trustworthy*, *devious*, *dishonest*) used in the prejudice scale. Higher values indicate greater prejudice against or negativity toward the Chinese government.

*Containment Policies toward China Scale.* A three-item scale tapping respondents’ preferred U.S. China policy. It included “The best way to deal with China is to build up our military to counter Chinese power,” and two reverse coded items, “Our government should adopt a friendlier foreign policy toward China” and “The U.S. government should engage China through an active diplomacy that seeks to improve the relationship between our two countries.” Higher values on “containment” indicate a preference for tougher U.S. policies toward China.

*Contact quality* was measured with two items. “On the whole, my past experiences with Chinese people have been pleasant” was measured on a 7-point scale, while “How many close Chinese friends do you have?” had four response options, “none,” “a few,” “many,” and “very many.” Scores on the two items were summed to form a 2–11 scale, with higher values indicating greater contact quality.

*Knowledge about China* was measured with three multiple choice questions (correct answers underlined): “The man who began China’s economic

**Table 1.** Descriptive Statistics and Zero-Order Correlations (Study 1)

Variable	1	2	3	4	5	<i>M</i>	<i>SD</i>	$\alpha$	<i>N</i>
1. Contact quality	–	.12	–.39	–.11	–.27	7.23/7.37 <sup>a</sup>	1.39/1.37	.34/.37	2
2. Knowledge	.06	–	–.12	.13	–.14	.47/.48 <sup>b</sup>	.33/.33	.44/.41	3
3. Prejudice: Chinese people	–.42	–.08	–	.09	.36	2.63/2.63	.98/.96	.86/.85	4
4. Negative attitude: Chinese Government	–.13	.06 <sup>a</sup>	.1	–	.12	4.74/4.76	1.02/1.03	.85/.83	4
5. Containment policy: China	–.22	–.13	.28	.16	–	2.76/2.73	.95/.94	.66/.61	3

*Notes.* Development sample (min *N* = 1,281) figures are first and above the diagonal; Cross-validation sample (min *N* = 1,279) figures are second and below the diagonal.

<sup>a</sup> Correlation is not significant. All other correlations are significant at  $p < .001$  (2-tailed).

<sup>b</sup> Sum of 4- and 7-point scales. Values range from 2–11.

<sup>c</sup> Values range from 0–1.

*N* refers to the number of items in the scale.

development policy of “Reform and Opening” was (Mao Zedong/Hu Jintao/Deng Xiaoping/Jiang Zemin), “The dominant ethnicity/race in China is the (Hui/Manchu/Han/Zhuang),” and “The Tiananmen Massacre occurred in (1969/1979/1989/1999).” The sequence of the four response categories to each question was randomized. Correct answers were coded 1 and incorrect answers 0, and the three items were averaged to form a scale from 0 to 1 in which higher numbers indicate greater knowledge about China.

### Results

Replication is a fundamental principle of the scientific method. We therefore decided to randomly divide our large sample ( $N = 2,582$ ) into two samples of  $N = 1,292$  and  $N = 1,290$ . The first would be used for model development, and the second to cross-validate our final model.

#### *Descriptive statistics*

Table 1 displays the scale alphas and number of scale items for both 2008 samples. The alphas for the containment scale were fair for both samples, while the alphas for the prejudice and negative attitudes toward the Chinese government scales were both good. Our contact quality and knowledge scales had poor internal reliabilities, however. This may be due in part to the low number of items utilized to measure these factors. To help compensate for these poor alphas, we used

SEM in our statistical analyses, allowing us to model not just prediction but also measurement error.

Table 1 reports the means and standard deviations for the five scales in both samples. The table also includes the correlations among these variables. The means on contact quality and knowledge were just above and below the scale midpoints of 7 and 0.5 respectively. While the means on negative attitudes toward the Chinese government were above the scale midpoint, the prejudice and containment scales were lower. Given that the prejudice and negative government scales included the exact same four items, differing only on the subject of each sentence—Chinese “people” versus “government”—the mean differences were remarkably large,  $t(1284) = -55.92, p < .001$ . The low scores on containment indicate that while our American participants as a whole were ambivalent about the Chinese government, they did not advocate tougher China policies.

### *Structural equation models*

How should we interpret the pattern of associations also reported in Table 1? Given that the correlations are zero-order, and do not account for collinearity, we need to be careful about interpreting them. And there is the additional issue of mediation: are knowledge, prejudice, and negative attitudes toward the Chinese government mediating the impact of contact on China policy preferences? We decided to use SEM to find out. SEM has a number of advantages over multiple regression, such as modeling mediated relationships among variables and evaluating the global fit of a model containing those mediated relationships. As noted above, it also has the advantage of allowing for the modeling of both prediction and measurement error. We used AMOS 17.0 (IBM: Armonk, NY, USA) with full information maximum likelihood estimation to first test measurement and structural models on our development sample, and then to cross-validate our final structural model on our replication sample.

We first created five latent variables with two to four indicator variables and measurement error terms for each. For instance, our prejudice latent variable was indicated by our four prejudice items, with the two positive items (*friendly* and *trustworthy*) reverse coded. The error terms for the two reverse coded items were allowed to covary to address a possible method effect. We then allowed all five of our latent variables to covary. The first row of Table 2 reveals that this measurement model was a good fit to the data. We examined the fit of all of our models based on the  $\chi^2$  test and  $p$  value, the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), the Normed Fit Index (NFI), and the Root Mean Square Error of Approximation (RMSEA). Nonsignificant  $\chi^2$  values are considered a good indicator of close model fit, although with large sample sizes such as ours a significant  $p$  value is acceptable. Also, conventional cutoffs for close model fit

**Table 2.** Fitness Statistics

Model	$\chi^2$	<i>P</i>	df	CFI	NFI	TLI	RMSEA
Study 1 development sample ( <i>N</i> = 1,292)							
1. Measurement	422.83	.000	92	.952	.940	.930	.053
2. Final structural	427.21	.000	93	.952	.940	.930	.053
Study 1 replication sample ( <i>N</i> = 1,290)							
3. Cross-validation	501.41	.000	93	.935	.922	.905	.058
Study 2 development sample ( <i>N</i> = 1,342)							
4. Measurement	1002.55	.000	204	.946	.934	.928	.054
5. Fully saturated structural	1006.59	.000	205	.946	.943	.928	.054
6. Final structural	1019.83	.000	212	.946	.933	.929	.053
Study 2 replication sample ( <i>N</i> = 1,306)							
7. Cross-validation	945.30	.000	212	.944	.929	.927	.051
“Good fit” conventions		0		≥.95	≥.95	≥.95	≤.06

*Notes.*  $\chi^2$  = chi-square; *p* = significance level; df = degrees of freedom; CFI = comparative fit index; NFI = normed fit index; TLI = Tucker-Lewis Index; RMSEA = root mean square error of approximation.

are CFI, TLI, and NFI values greater than .95, and RMSEA values less than .06 (Kline, 2005; Schumacker & Lomax, 2004).

Since the measurement model was a good fit to the development data, we proceeded to test a fully saturated structural model in which contact quality served as the lone exogenous variable, containment as the final dependent variable, and knowledge and the two attitudes variables as mediators. The path from contact quality to negative attitudes toward the Chinese government was not statistically significant so was trimmed. The final structural model, displayed in Figure 1, also exhibited good model fit, as can be seen in the fitness statistics displayed in the second row of Table 2.

Figure 1 confirms the contact literature’s finding that contact directly and negatively predicts prejudice ( $\beta = -.36$ ), and that knowledge plays a weak mediating role (indirect effect =  $-.016$ ) in the relationship as well. Contact quality was positively, though weakly, associated ( $\beta = .12$ ) with knowledge, which was in turn associated with decreased prejudice ( $\beta = -.13$ ). These findings are consistent with Pettigrew and Tropp’s (2008) meta-analysis of the contact literature mentioned above, which found knowledge to be a weak but significant mediator of contact on prejudice.

Although knowledge about China was associated with *reduced* prejudice, it was associated with an *increase* in negative attitudes toward the Chinese government ( $\beta = .17$ ). In other words, the more our American participants knew about China, the less they liked the Chinese government. However, knowledge was

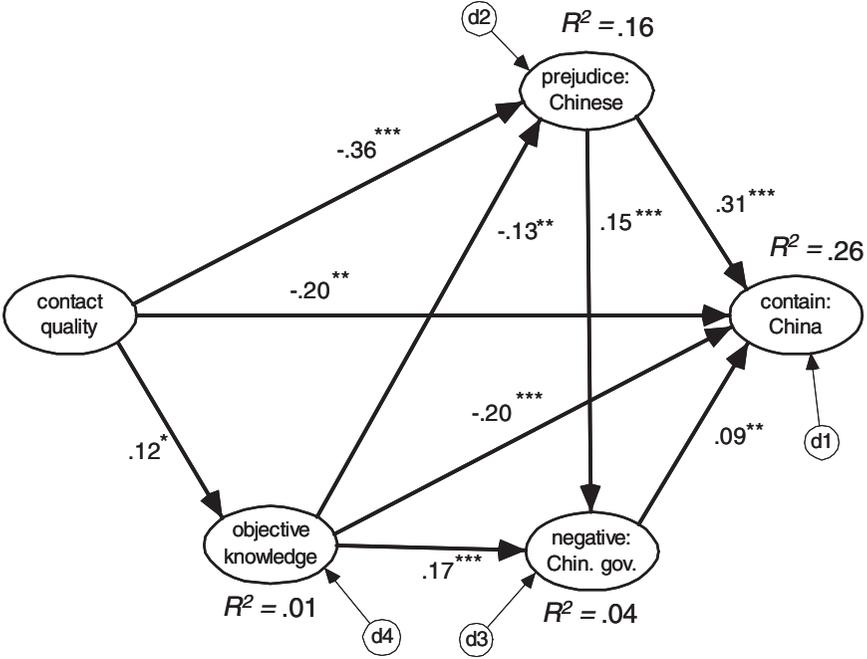


Fig. 1. Final structural model, Study 1 development sample ( $N = 1,292$ ).

Note. 16 indicator variables and their measurement error terms are not displayed. Standardized regression coefficients are presented in the figure.  
 \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

associated with decreased prejudice, which was positively associated with negative attitudes toward the Chinese government ( $\beta = .15$ ). The indirect path from knowledge to attitudes toward the Chinese government via prejudice toward the Chinese people was negative (indirect effect =  $-.04$ ). This indicated that persons scoring higher on knowledge were less likely to voice stronger containment attitudes when considered through the mediating factor of prejudice.

Perhaps most impressively, our model explains a full 26% of the variance in China policy preferences. Figure 1 reveals that all four of the other variables in the model were statistically significant predictors of containment policy preferences. It is noteworthy that of the four predictors, prejudice was the strongest ( $\beta = .31$ ) and negative attitudes toward the Chinese government was the weakest ( $\beta = .09$ ) predictor of policy preferences. This is surprising: our containment variable measured preferred policies toward China as a country, and yet it was attitudes toward the Chinese people (prejudice) rather than attitudes toward their government that had far greater explanatory power.

To cross-validate our final structural model, we ran it again on our replication sample ( $N = 1,290$ ), which had not been used during model development. The third line of Table 2 displays the resulting fit statistics, which, while not quite as good as those of the development sample, were still adequate. The  $R$ -squared values and path coefficients from the replication model, furthermore, were largely identical to those from the development sample displayed in Figure 1. A few minor differences worth noting were that the overall  $R$ -squared for containment decreased from 26% to 23%, the path from knowledge to prejudice decreased from  $-.13$  to  $-.07$ , becoming statistically nonsignificant, and the path from prejudice to contain increased from  $.21$  to  $.31$ . Overall, these fitness statistics, path coefficients, and  $R$ -squared values from our cross-validation sample give us greater confidence in the replicability of the model displayed in Figure 1.

## Discussion

Study 1 confirmed the prediction from the contact hypothesis that objective knowledge about China would mediate the relationship between interpersonal contact quality and prejudice toward the Chinese people. It also extended the contact hypothesis by demonstrating that increased knowledge does not improve all kinds of attitudes: attitudes toward the Chinese government actually *worsened* as knowledge about China increased. Study 1 also showed that both attitudes toward the Chinese people and government partially mediated the relationship between contact quality and China policy preferences in the expected directions: the more negative the attitudes toward the Chinese people and government, the more our American participants desired a tougher policy of containing China.

Given that international relations theorists devote most of their attention to the state, and largely ignore issues like prejudice, we were surprised to find that prejudice against Chinese people had a greater impact on China policy preferences than negative attitudes toward the Chinese government. But given that overall levels of prejudice toward the Chinese people were quite low in both of our samples (a mean of just 2.63 out of seven for both), it is also heartening to find that positive American attitudes toward the Chinese people appear to have a greater impact on China policy preferences than negative attitudes toward the Chinese government. Contact quality and knowledge about China, furthermore, were directly associated with desires for friendlier U.S. China policies.

One possible empirical weakness of Study 1 was that our measure of objective knowledge about China included just three multiple choice questions about China, and one of the three asked the date of the Tiananmen Square Massacre (1989). Given the normative valence of this item, it may have influenced our finding that increased knowledge about China was positively associated with more negative attitudes toward the Chinese government. A lengthier and more content-neutral test of knowledge about China is needed.

Secondly, our knowledge about China variable sought to tap objective knowledge. Perhaps a more subjective measure of knowledge as reflected in a self-report of perceived knowledge would play a different mediating role between contact and China attitudes and policy preferences.

Third and finally, Study 1 only tapped the direct interpersonal contact our American participants had with Chinese people. What about their indirect contact with China through the increased media exposure via television and the Internet that has accompanied globalization? Does media exposure act as a kind of indirect contact, improving American attitudes toward China? To address these issues and questions, and to further replicate the findings above, we conducted a follow-up survey in 2009.

## STUDY 2

### Method

#### *Procedures and Sample*

On August 12–14, 2009, 2,819 members of a mid-American state university community completed a 10-minute online Internet survey in exchange for the opportunity to enter a raffle for football tickets. Participants were informed about the topic of the study, its voluntary nature, and the protection of their privacy.

Data from 126 non-U.S. citizens, 35 Chinese Americans (who may have only recently emigrated from China), and ten respondents who did not follow instructions were dropped from further analysis. The final sample ( $N = 2,648$ ) included 614 staff, 213 faculty, 441 graduate students, and 1,380 undergraduates. It included slightly more women ( $N = 1,426$ ) than men ( $N = 1,222$ ), and slightly more Democrats ( $N = 1,059$ ) than Republicans ( $N = 906$ ) or Independents ( $N = 683$ ). However, the mean score on a 7-point liberal-conservative self-placement scale was very close to the scale midpoint of 4 ( $M = 3.78$ ,  $SD = 1.77$ ), suggesting ideological balance. The mean age of the sample was 29.49 ( $SD = 13.03$ ). 83% of the respondents were in-state, but the remaining 17% came from every state in United States; 78.4% were Caucasian/White, 3.9% were African American, 3.5% were Asian American (non-Chinese), 3.6% were Latino/Latina, and 7.6% were Native American.

#### *Measures*

As in the first study, unless otherwise noted, all questions were on 7-point Likert scales. Questions were again largely balanced and question order was randomized on each page.

*Contact quality* was measured with two items that differed slightly from those used in Study 1: “My contacts with Chinese people have been friendly” and “When you have interacted with Chinese people, has the contact been pleasant?” Both were scored on 4-point Likert-type scales.

*Media exposure.* Participants were asked, “Do you read or watch many news stories about China? How much media exposure do you have to the following types of news stories about China?” The three categories were “news about Chinese (culture / economics; trade / politics; the Chinese military).” The 7-point Likert scale for each was anchored by *none at all* and *a great deal*. Note that this is a self-report and thus subjective measure of media exposure.

*Objective knowledge about China* was measured with 10 multiple choice questions. A sample question was “Which of the following is a current leader of China?” (Hu Jintao/Jiang Zemin/Mao Zedong/Deng Xiaoping). The sequence of the four response choices was again randomized. The Tiananmen Massacre item from the first study was dropped so that all 10 questions were value neutral.

*Subjective knowledge.* Participants were asked, “How much do you know about China?” The three categories of knowledge were: “I am knowledgeable about Chinese (culture / economics; trade / politics; the Chinese military).”

The *Prejudice and Negative Attitudes toward the Chinese Government scales* used in the current study were identical to those used in Study 1.

*Containment Policies toward China Scale.* Four items were similar to the three-item scale used in Study 1. Two new items were: “The U.S. government should engage China through an active diplomacy that seeks to improve the relationship between our two countries” (reverse coded) and “The U.S. government should pursue a tougher China policy.” Higher values indicate a desire for a tougher U.S. China policy.

## Results

We again began by dividing our large sample ( $N = 2,648$ ) into two random samples. The first ( $N = 1,342$ ) was used for model development, the second ( $N = 1,306$ ) for model replication.

### *Descriptive Statistics*

The scale alphas and number of items for both 2009 samples are displayed in Table 3. As in Study 1, the internal reliabilities for the Containment Scale were

**Table 3.** Descriptive Statistics and Zero-Order Correlations (Study 2)

Variable	1	2	3	4	5	6	7	<i>M</i>	<i>SD</i>	$\alpha$	<i>N</i>
1. Contact quality	–	.17	.17	.20	–.46	–.07*	–.26	3.35/3.35 <sup>a</sup>	.51/.49	.69/.64	2
2. Media exposure	.15	–	.36	.71	–.16	.11	–.19	3.04/3.02	1.20/1.24	.85/.84	3
3. Objective knowledge <sup>c</sup>	.13	.31	–	.37	–.11	.09	–.18	44.96/44.68 <sup>b</sup>	22.43/21.92	.60/.58	10
4. Subjective knowledge	.13	.69	.32	–	–.20	.12	–.19	3.54/3.51	1.42/1.39	.88/.86	3
5. Prejudice: Chinese people.	–.41	–.17	–.10	–.14	–	.10	.35	2.69/2.66	1.02/.94	.88/.85	4
6. Negative attitude: Chinese Government	–.03 <sup>n</sup>	.15	.05 <sup>n</sup>	.15	.05 <sup>n</sup>	–	.22	4.67/4.73	1.02/1.03	.86/.85	4
7. Containment policy: China	–.23	–.13	–.17	–.10	.34	.20	–	3.15/3.18	.87/.87	.67/.66	4

*Notes.* Development sample (min  $N = 1,323$ ) figures are first and above the diagonal; Cross-validation sample (min  $N = 1,287$ ) figures are second and below the diagonal.

*N* refers to the number of items in the scale. Unless otherwise noted, all correlations are significant at  $p \leq .001$  (2-tailed); \* $p < .01$ .

<sup>n</sup> Correlation is not significant.

<sup>a</sup> 4-point scale; <sup>b</sup> 100-point quiz scale.

fair, in the mid .60s, and very good for our Prejudice and Negative Attitudes toward the Chinese Government Scales, again in the mid to high .80s. The biggest differences from Study 1 were our contact and objective knowledge variables, whose internal reliabilities both improved dramatically. The alphas for our contact quality items doubled from the .30s to the .60s, which is really quite good for a two-item scale. The alphas for our Objective Knowledge Scale also increased dramatically, from the low .40s to around .60. The two new three-item scales for Media Exposure and Subjective Knowledge had very good internal reliabilities in the mid to high .80s.

The means and standard deviations reported in Table 3 again reveal low average levels of prejudice (an average of just 2.7 on a 7-point scale) but slightly negative attitudes toward the Chinese government (an average of 4.7). On average, 2009 participants still preferred a friendlier policy toward China (3.2 out of 7), but not as much as participants had in Study 1 (2.7 out of 7). Average interpersonal contact quality was quite high (3.4 out of 4), and media exposure somewhat low (3 out of 7). Participants scored slightly below the scale midpoint (3.5 out of 7) on Subjective Knowledge. Finally, both samples averaged 45 out of 100 on the 10-item objective knowledge multiple choice quiz. Given that there were only four response choices for each of the ten questions, and pure chance would have resulted in a score of 25%, our respondents on average cannot be said to be very objectively knowledgeable about China. Fortunately, a healthy standard deviation of 22 ensures that we have sufficient variation in our Objective Knowledge scale for it to constitute a useful measure.

*Structural equation models*

The zero-order correlations reported in Table 3 reveal that the data in the current study largely replicates Study 1 findings in regard to the possible effects that contact has on prejudice, negative attitudes toward the Chinese government, and preferences toward containment. We again used AMOS 17.0 with full information maximum likelihood estimation to perform SEM, exploring the pattern of relationships among the seven variables.

We first created seven latent variables with indicator variables and measurement error terms for each. Because our Objective Knowledge variable is based on a 10-item quiz, we first created three parcels of three or four averaged quiz items each to better manage the overall number of parameters in the model. We again allowed the error terms for the pairs of reverse coded items in the Prejudice, and Negative Attitudes toward the Chinese Government, and Containment Policy toward China scales to covary to address a method effect. Because we suspected a method effect due to the similar wordings and high correlations between our new Subjective Knowledge and Media Exposure scales, we also allowed the error terms for the pairs of culture, economics and trade, and politics and military items to covary. We then allowed all seven of our completed latent variables to covary. The fourth line in Table 2 reveals that this measurement model was a good fit to the data.

We then proceeded to test a fully saturated structural model in which Contact Quality and Media Exposure were the exogenous variables, Containment Policy the final dependent variable, and the two knowledge and two attitudes variables acted as sequential mediators. Line five of Table 2 reveals that this fully saturated structural model was also a good fit to the development sample data. Nevertheless, six statistically nonsignificant paths were then trimmed. The final structural model, displayed in Figure 2, had slightly better model fit, as can be seen in the sixth line of Table 2.

Figure 2 reveals dual paths from direct and indirect contact to China policy preferences. Direct interpersonal contact was again associated with reduced prejudice toward the Chinese people, and had no impact on attitudes toward the Chinese government. And indirect media exposure to China had a greater indirect impact on policy preferences via negative attitudes toward the Chinese government than through prejudice.

Surprisingly, media exposure had *both* positive and negative impacts on China policy preferences in the model. On the positive side, the direct path from media exposure to containment policy was small and negative ( $\beta = -.11$ ), indicating that greater media exposure was associated with less desire for tougher containment policies against China. Furthermore, the indirect path from media exposure to subjective knowledge to prejudice also reduced desires to contain China. On the negative side, however, media exposure was associated with greater objective

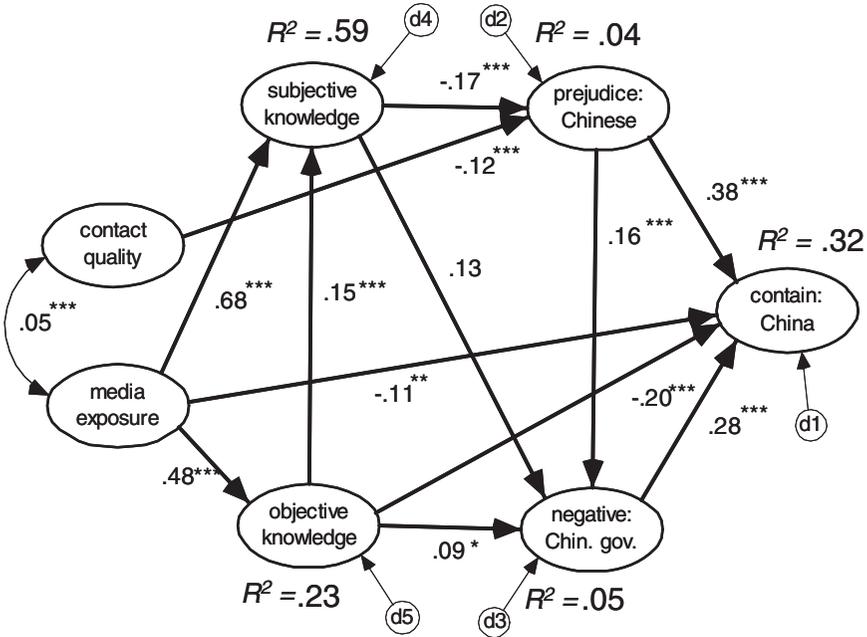


Fig. 2. Final structural model, Study 2 development sample ( $N = 1,342$ ).

Note. 23 indicator variables and their measurement error terms are not displayed. (Ten objective knowledge items were parceled into three indicator variables, to reduce the overall number of parameters in the model). Standardized regression coefficients are presented in the figure.  $*p < .05$ ;  $**p < .01$ ;  $***p < .001$ .

knowledge of China, which was again associated with slightly more negative views of the Chinese government, which in turn was associated with greater preference for a tougher China policy. A similar path via subjective knowledge and attitudes toward the Chinese government was also associated with greater containment scores.

Figure 2 also reveals that objective and subjective knowledge were not that strongly related ( $\beta = .15$ ), and that subjective knowledge had a greater impact on prejudice reduction than did objective knowledge. In other words, when it comes to prejudice, it is not what the respondents actually know but what they think they know.

Like media exposure, knowledge was associated with both positive and negative impacts on China policy preferences. The only direct relationship was a negative one, with objective knowledge associated with a reduction of desires to contain China ( $\beta = -.20$ ). Also on the positive side, subjective knowledge was associated with reduced prejudice ( $\beta = -.17$ ), which was accompanied by desires

for a friendlier China policy ( $\beta = .38$ ). On the negative side, both objective and subjective knowledge were associated with small increases ( $\beta = .09$  and  $.13$ ) in negative attitudes toward the Chinese government, which were connected to increased desires for tougher China policies ( $\beta = .28$ ).

Finally, it is worth noting that, as with Study 1 data, our explanatory variables were once again able to account for a considerable amount of the overall variance in China policy preferences. Indeed, our R-squared for containment increased from 26% in Study 1 to a full 32% in the current study. It is also worth noting that prejudice was again a stronger predictor of China policy preferences than negative attitudes toward the Chinese government.

Finally, we sought to replicate the final 2009 structural model in the current study by running it on our replication sample, which had not been used during model development. The seventh and final line of Table 2 displays the resulting fit statistics, which while not quite as good as those from the development sample, were still adequate. The R-squared values and path coefficients from the replication model were remarkably similar to those from the development sample. The only noteworthy difference was that subjective knowledge became a much stronger predictor of negative attitudes toward the Chinese government than objective knowledge, with the former path increasing from  $\beta = .13$  to  $\beta = .20$ , and the latter falling from  $\beta = .09$  to  $\beta = .00$  and statistical nonsignificance. This suggests that not just prejudice but also attitudes toward the Chinese government are more impacted by what we think we know than by what we actually know.

## Discussion

Study 2 both replicated and extended the findings from Study 1. In all four data sets, contact quality was associated with decreased prejudice, which in turn powerfully predicted China policy preferences in a positive direction. This finding not only aligns with the extensive contact literature, but also suggests that to the extent that Confucius Institutes can promote *high-quality exchanges* between American and Chinese *people*, they will have a positive impact on U.S.–China relations.

Study 2 also extended the findings from Study 1. First, media exposure appears to act as a type of extended or indirect contact impacting knowledge, attitudes, and policy preferences. However, the impact of media exposure on China policy preferences in the current study was mixed. The direct impact of increased media exposure was a small but significant desire for a *friendlier* U.S. China policy. This finding should serve as an important rebuttal to those Chinese who claim that the American media is unambiguously negative about China and that this is why Americans do not support friendlier China policies. In fact, the over 5,000 Americans in all four of our samples on average did desire friendlier China policies, and greater media exposure appears to have directly contributed to

this preference. That said, increased media exposure was associated with greater objective and subjective knowledge about China, both of which were positively associated with more *negative* attitudes toward the Chinese government.

Second, our measures of objective and subjective knowledge were significantly, though weakly, associated with more negative views of the Chinese government. Knowledge was thus associated with greater desires for *tougher* China policies via participants' attitudes toward the Chinese government. Like media exposure, however, increased knowledge had mixed effects, also contributing to desires for *friendlier* China policies, both directly from objective knowledge, and indirectly via prejudice reduction.

### General Discussion

Do the increased interpersonal contact and media exposure accompanying globalization, and greater knowledge about China lead to more positive American attitudes toward the Chinese people and government, and preferences for a more accommodating American China policy? The Chinese government appears to be betting heavily that they do, investing a tremendous amount of time and money into cultivating increased contact between Chinese and Americans through international interpersonal exchanges, and greater knowledge about China through Confucius Institutes.

The evidence from our 2008 and 2009 surveys is mixed, however. On the positive side, contact quality is associated with dramatic reductions in prejudice against the Chinese people, as predicted by the contact hypothesis (Allport, 1954). And decreased prejudice, in turn, is strongly associated with desires for a friendlier China policy. Furthermore, as predicted by the contact literature, the impact of interpersonal contact on prejudice was mediated by knowledge. The impact of knowledge was small but in the expected direction: the more a participant knew (or believed he/she knew) about China, the less prejudice the person felt toward the Chinese people.

On the negative side, knowledge also mediated the impact of contact on attitudes toward the Chinese government, but in the opposite direction: more knowledge about China was accompanied by more *negative* attitudes toward the Chinese government. Given the strong impact of ideology on American attitudes toward China (Gries, et al., 2011; Gries, Cai, & Crowson, 2010), this finding may not be surprising. It does, however, suggest that extensions of the contact hypothesis beyond attitudes toward social groups (i.e., prejudice) to other types of attitudes (such as attitudes toward governments) need to be sensitive to the specific intergroup context. Greater knowledge can be a double-edged sword.

On balance, however, our surveys suggest that the Chinese government has made a good investment in international exchange and education about China. Contact quality and knowledge reduced prejudice, which is accompanied by desires

for a friendlier China policy. This positive effect on policy preferences counteracts the negative impact of knowledge on attitudes toward the Chinese government, and their negative impact on policy preferences. As noted above, we find it surprising that prejudice had such a strong impact on China policy preferences. Although this finding requires further confirmation, it is heartening, as on average Americans have a very favorable view of the Chinese people.

All survey designs have their strengths and weaknesses. Our survey respondents were all from one university community, and the majority was from a single mid-American state (many students were from other states, however). We therefore need to be cautious about generalizing from such data about levels of say, anti-Chinese prejudice, to all Americans. However, our core interest is not in the *absolute* levels of specific opinion, for which nationally representative survey data would be more appropriate. Instead, our interest is in the “patterns of associations” among different variables. Our design therefore emphasizes construct or internal validity. Nonetheless, we believe we have also achieved a reasonable degree of external validity. This is not a small student-only sample, but a large, diverse sample of American adults well balanced in terms of age, gender, and ideology.

This study has focused on purely situational determinants of American attitudes toward China. Previous scholarship has demonstrated that individual differences in identity and ideology have a major impact on American attitudes toward China. For instance, Americans higher in nationalism or cultural conservatism are on average more negative about China than their compatriots who are low on those traits (Gries & Crowson, 2010). Indeed, the powerful role of ideology in shaping American attitudes toward China may help explain how it is that Americans who know so little about China nonetheless have coherent attitudes toward China. Gries, Crowson, Sandel, and Cai (2010) found that both individual differences variables such as personality and ideology and situational variables such as media exposure impacted changing American attitudes toward China before and after the 2008 Beijing Olympics. Future scholarship, however, could take the next step to explore person by situation interactions. For instance, does increased media exposure to China contribute to greater negativity toward the Chinese government equally among all Americans, or might it differentially impact those high and low in nationalism? Similarly, does increased interpersonal contact with Chinese reduce prejudice among American cultural conservatives and cultural liberals alike? Future work should seek to combine the analysis of such individual differences and situational variables.

We hope that these inductive findings can serve as the basis for future theorizing in the social psychology of globalization. Specifically, we believe our empirical results have implications for addressing the broad issues of what social psychological factors contribute to the positive and negative effects of globalization (Chiu, Gries, Torelli, & Cheng, 2011). Our normative desire is that such scholarship can help *increase* integrative and *decrease* exclusionary reactions to

foreign cultures (Chiu & Cheng, 2007). Defensive and exclusionary reactions to foreign cultures perceived as threats to one's own culture will only contribute to xenophobia and the likelihood of increased international conflict. Inclusionary responses to globalization, by contrast, will increase intercultural understanding and learning, and promote cooperation in the 21st century.

## References

- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., . . . Leyens, J. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology, 96*(4), 843–856. doi:10.1037/a0013470
- Chiu, C.-y., & Cheng, S. Y.-y. (2007). Toward a social psychology of culture and globalization: Some social cognitive consequences of activating two cultures simultaneously. *Social and Personality Psychology Compass, 1*, 84–100. doi:10.1111/j.1751-9004.2007.00017.x
- Chiu, C.-y., Gries, P. H., Torelli, C., & Cheng, S. Y.-y. (2011). Toward a social psychology of globalization. *Journal of Social Issues, 67*, 663–676. doi:10.1111/j.1540-4560.2011.01721.x
- Giddens, A. (1985). *The nation state and violence*. Cambridge: Polity Press.
- Glaser, B. S., & Medeiros, E. (2007). The changing ecology of foreign policymaking in China: The ascension and demise of the theory of “peaceful rise”. *The China Quarterly, 190*, 291–310. doi:10.1017/S0305741007001208
- Gries, P. H., Cai, H., & Crowson, H. M. (2010). The spectre of Communism in US-China Policy: Bipartisanship in the American subconscious. *The Chinese Journal of International Politics, 3*, 397–413. doi:10.1093/cjip/poq014
- Gries, P. H., & Crowson, H. M. (2010). Political orientation, party affiliation, and American attitudes towards China. *Journal of Chinese Political Science, 15*, 219–244. doi:10.1007/s11366-010-9115-1
- Gries, P. H., Crowson, H. M., & Cai, H. (2011). God, guns, and... China? How ideology impacts American attitudes and policy preferences toward China. *International Relations of the Asia-Pacific*. doi:10.1093/irap/lcr012
- Gries, P. H., Crowson, H. M., Sandel, T., & Cai, H. (2010). The Olympic effect on American attitudes towards China: Beyond personality, ideology, and media exposure. *Journal of Contemporary China, 19*, 213–231. doi:10.1080/10670560903444181
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford Press.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751–783. doi:10.1037/0022-3514.90.5.751
- Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*(6), 922–934. doi:10.1002/ejsp.504
- Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum.

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