

Responsiveness to authority appeals among young French and American consumers

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Abstract

The “authority effect” is a powerful social influence principle frequently used in advertising to increase compliance. Young adult consumers, however, often resent authority figures. Such resentment can result in negative reactions to authority-based persuasion attempts. This study examines the differential responsiveness to authority appeals among young adults in France and the U.S., as well as the boundary conditions within which such differential responses occur. Results show that before 9/11 Americans had more positive attitudes when the spokesperson in an ad is low (vs. high) in authority. This reverse authority effect did not obtain among French subjects, who appear to prefer recommendations from social equals, or among Americans after 9/11. Perceived source credibility and power distance moderate the effect of authority on attitudes and purchase intentions.

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1. Introduction

The “authority principle” refers to the tendency of individuals to comply with the recommendations or directives of authority figures, and is a fundamental social influence principle (Cialdini, 2001). Authority figures may vary across cultures; however, in general, they are the ones who have acquired status through education, experience, talents, or other means (Cialdini, 2001). For instance, in work places, superiors may be regarded as authority figures. Parents can be regarded as authorities by children. High ranking public officials are often regarded as authority figures. Perhaps the classic example is the controversial Milgram (1963) study, which demonstrated the shocking extremes to which individuals will go to obey authority. In the social influence literature, numerous studies have documented authority effects (e.g., Bickman, 1974; Bushman, 1988; Michener and Burt, 1975; Rasinski et al., 1985).

However, authority-based appeals have received scant attention in advertising research. Instead, more efforts have been focused on celebrity endorser effects (e.g., Goldsmith et al., 2000; Heath et al., 1994; Kamins et al., 1989; MacCracken,

1989). This could be attributed in part to the prevalent use of celebrity endorsers in practice (Agrawal and Kamakura, 1995) and to American cultural traits that promote admiration of successful persons, yet indifferent treatment of high (vs. low) power position holders (Hofstede, 2001).

The lack of research on the authority principle in advertising stands in sharp contrast to frequent use of authority appeals in advertising practice. For example, General Mills uses mothers as spokespersons for “Kix” cereal. McNeil Consumer and Specialty Pharmaceuticals features moms for their “Motrin,” children’s fever reducer. In France, work place superiors and teachers are often used as spokespersons (Mooij, 1998). In all of these cases, spokespersons are featured as authorities upon whom consumers can rely. Despite the widespread use of non-celebrity authority figures in global advertising, little is known about their effectiveness and their applicability across different segments and cultures. Thus, this study seeks to address these issues using data collected from young adults in France and the U.S.

2. Background and hypotheses

We identified three factors that are important to the effectiveness of authority-based advertisements. Under certain circumstances, authority figures may not be as persuasive as the

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authority principle would suggest. The effectiveness of authority may reside 1) within contextual factors (e.g., national culture), 2) within the authority figures themselves (e.g., source credibility), and/or 3) within decoders of messages (e.g., their orientation to power distance).

First, national culture is expected to moderate the authority effect. Cross-cultural social influence research suggests that responses to social influence strategies may also vary across national groups, depending on the fit between relevant dimension(s) of national culture and the cultural value that the influence strategy is intended to evoke (Cialdini et al., 1999; Jung and Kellaris, 2004). The authority principle, for example, may be closely related to the “power distance” (PD) dimension of national culture, which is defined as “the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally” (Hofstede, 1991). Consequently, authority figures that influence audiences in high power distance cultures may not exert as much influence in low power distance cultures. Second, source credibility is expected to moderate the influence of authority. Consistent with previous source credibility research (e.g., Grewal et al., 1994), we define credibility as “expertise” and “trustworthiness.” For authority figures to exert power, they must have credibility (Cialdini and Rhoads, 2001). Lastly, values held by audience members are expected to moderate authority effects. Hofstede's seminal work (1991, 2001) and other studies (e.g., Singelis, Triandis, Bhawuk, and Gelfand, 1995; Triandis, 1995) in the cross-cultural psychology literature provide some insights into how individual values may affect the way individuals perceive authority.

In summary, we expect authority effects to be moderated by national cultures, spokesperson characteristics, and audience characteristics. In this study, we first examine how different levels of authority influence consumer attitudes and purchase intentions. We further investigate how these authority effects are moderated by national culture, source credibility, and individuals' orientations to power distance. Fig. 1 summarizes our conceptual framework.

2.1. Authority vs. reverse authority effects

In general, the authority principle works such that the higher the level of authority portrayed in an ad, the more positive attitudes (towards ads/brands) and purchase intentions should be. Under certain circumstances, however, authority may exert a negative influence. For example, individuals who resent or distrust authority should react negatively to authority-based persuasion attempts. Resentment of authority may be more common among young people who rebel against conventional societal values or among those who question authority as part of the critical world view encouraged by higher education, or among young adults who struggle to gain independence from parents.

Moreover, in so much as authority represents an encroachment on the sovereignty of the individual, members of western cultures that place a high value on individual freedom may react negatively to authority. Resentment of authority may be a corollary of valuing freedom. Sources with less authority may

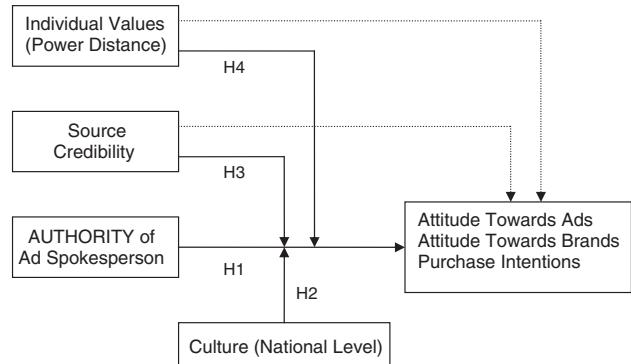


Fig. 1. Conceptual model. Dotted lines represent the relationship that are not formally hypothesized in this study.

be perceived as more trustworthy, because their motivations for making a recommendation may seem different from those of an authority figure. The low authority figure bears a greater social risk in making a recommendation and thus may elicit more positive attitudes. Hence young adults may exhibit a reverse authority effect, such that:

H1. The higher the level of authority in an advertisement, the less positive young consumers' attitudes and purchase intentions.

2.2. Impact of national culture (France vs. the U.S.)

Despite the universal use of authority across cultures, the degree of responsiveness to authority may vary (Manrai and Manrai, 1996). Cialdini et al. (1999) recently examined two social influence strategies (“social proof” and “commitment/consistency”) in collectivist versus individualist countries (Poland, USA). Both strategies were found to be effective in both countries, however differentially so. A persuasive appeal based on social proof was more effective among collectivists and an appeal based on commitment/consistency more effective among individualists. Jung and Kellaris (2004) recently examined the differential responsiveness of French versus U.S. consumers to scarcity-based ad appeals. They found a positive effect of scarcity on purchase intent, with greater proneness to scarcity effects among low context American (vs. high context French) subjects. In a study of conflict resolution, Tyler et al. (2000) found cross-national differences in reactions to authority that were explained by different levels of PD at the national level. Similarly, we expect the authority principle to manifest differently among young adults across two nations as a function of cultural values (PD).

France is classified as a high PD country and the U.S. as a low PD country (68 vs. 40 in PD index, Hofstede, 2001). In high PD countries, parents teach children obedience; teachers initiate communications in school; many levels exist in organizations; and decision making is centralized (Hofstede, 2001). The opposite norms are expected in low PD countries. Parents treat children as equals; students can freely initiate some communication in class; organizational structure is flat; and decision making is decentralized (Hofstede, 2001). Mooij (1998) pointed

how these cultural differences in PD dimension are manifested in advertising and communication strategies adopted by marketing professionals in the two countries. For example, in French advertising, the elder advises the younger (e.g., mother advises daughter). In the U.S., the younger often advises the elder (e.g., daughter advises mother). In a high PD culture, the source of communication (e.g., authority vs. common people) is important as opposed to reasoning and argument (Mooij, 1998). Further, strong boss–subordinate relationships tend to exist in high PD countries. For these reasons, one might expect a positive authority effect to be observed in a high PD country (e.g., France) and a reverse authority effect observed in a low PD nation (e.g., the U.S.). However, young adults may react more negatively to the authority-based influence attempt because their PD level is lower than that of older groups in each country (Hofstede, 2001).

Thus, on the basis of Hofstede (2001) and Mooij (1998)'s work, we anticipate that:

H2. The reverse authority effect is more prominent among young U.S. consumers than among their French counterparts.

2.3. Impact of credibility

Spokesperson's source credibility (CRED) in ads is defined as the degree to which the spokesperson is perceived to have expertise on a subject and is trusted to provide an impartial opinion about the subject (Dholakia and Sternthal, 1977; MacCracken, 1989). Lack of either expertise or trustworthiness is likely to undermine the credibility of an authority figure's advocacy (Cialdini and Rhoads, 2001). Attractiveness (refer to MacCracken, 1989), which is often included to define celebrities' credibility (e.g., Goldsmith et al., 2000), is excluded in our conception of source credibility because our focus is on non-celebrity authority figures. In the advertising literature, the impact of message source credibility on ad effectiveness has long been established (e.g., Dholakia and Sternthal, 1977; Harmon and Coney, 1982). When consumers decode an advertising message, source credibility positively affects consumers' likelihood of message acceptance (Mizerski et al., 1979). Taking source credulity as a moderator, Grewal et al. (1994) showed that positive effect of price on perceived performance risk is reduced when perceived source credibility is high (vs. low). We propose source credibility as a moderator of authority's effect on attitudes (or purchase intention): the more credible an authority figure is perceived to be, the greater the impact of the authority appeals.

H3. Spokespersons' credibility moderates the authority effect such that the reverse authority effect is lower among young consumers perceiving spokespersons as more (vs. less) credible.

2.4. Impact of power distance

Power distance refers to the extent to which individuals expect and accept the unequal distribution of power, and

tolerance of differences in hierarchy (Hofstede, 1991, 2001). High PD individuals are reluctant to refuse a request from or disagree with authority figures. They give priority to the opinions of people in authority. This suggests that those who are high in PD are more likely to accept and less likely to discount message arguments, whereas those who are low in PD are less likely to accept and more likely to discount the message arguments. Therefore, PD is expected to moderate the effectiveness of authority appeals such that individuals characterized by greater PD will be more prone to persuasive effects of authority appeals.

H4. PD moderates the authority effect such that the reverse authority effect is less among high (vs. low) PD, young consumers.

3. Study 1

3.1. Methods

An experiment involving young French and the U.S. participants varied spokesman authority (low, mid, high) using printed descriptions of radio ads. Subjects' nationality, perceptions of source credibility, and PD were measured. Dependent variables were attitudes toward the ad, advertised brand, and purchase intention.

3.1.1. Subjects

Subjects were two hundred forty-eight ($N=248$) students at universities in the United States ($n=130$) and the lower Loire Valley and mid-Pyrenees regions of France ($n=118$). One hundred thirty-five were male (54.4%) and 113 (45.6%) female. Ages ranged from 20 to 56 with an average age of 22.9 years. The French sample was slightly older on average than the American sample (23.9 vs. 22.0 years) and had a slightly higher proportion of males; the samples were matched in other important respects.

3.1.2. Stimuli

The stimuli were printed descriptions of radio ads in a dialog format. The relationship of the primary spokesperson to the recipient of a recommendation was varied to represent high, mid, and low levels of authority. Three sets of ads were developed to enhance internal validity. In the first (second/third) ad, a yogurt (software/internet retailer) was recommended by a mother (teacher/boss) to a daughter (student/subordinate) under the high authority condition, by one woman (person/one employee) to another woman (person/employee) under the mid authority condition, or by a daughter (student/subordinate) to a mother (teacher/boss) under the low authority condition. The (English) text of the ads appears in Appendix A.

3.1.3. Measures

Attitude toward the ad (Aad) was measured via four, seven-point items preceded by instructions stating "The following items concern the ad itself, not the product in the ad" and by a

prompt “The *radio ad* I imagined was...” The items, taken from Madden et al. (1988) were labeled pleasant/unpleasant, likeable/unlikeable, interesting/boring, and good/bad. Responses were summed and averaged to form a composite scale ($\alpha_{\text{Combined}}=.88$; $\alpha_{\text{US}}=.89$, $\alpha_{\text{France}}=.86$).

Attitude toward the brand (Ab) was measured using the same four items, preceded by instructions stating “The following questions concern the *product* represented in the ad” and by a prompt “The *product* in the ad I imagined was...” Alpha reliability for the four item composite scale averaged .88 ($\alpha_{\text{US}}=.91$, $\alpha_{\text{France}}=.86$).

Purchase intent (INT) was measured via a one-item, seven-point Likert-type scale (very likely=7, very unlikely=1) preceded by the prompt “If it were available in your market, what is the likelihood that you might purchase the advertised product within the next twelve months?” and was summed across ads and averaged.

Source credibility, taken from Harmon and Coney (1982), was measured via six-item, seven-point semantic differential scale preceded by the prompt “The spokesperson (party) in the ad was...” In each case the party was specified (e.g., mother for high authority, women for mid authority, or daughter for a low authority condition in ad #1). The items were labeled trustworthy/not trustworthy, open-minded/not open-minded, good/bad, expert/not expert, experienced/not experienced, trained/untrained. The second item was dropped due to a low factor loading ($\alpha_{\text{Combined}}=.82$ across the three ads; $\alpha_{\text{US}}=.81$, $\alpha_{\text{France}}=.83$).

Power distance scale was adapted (4 items) from Pretest six of Jung (2002). One item that had factor loading of .26 in CFA was dropped (“Opinions of superiors should be given priority over those of my peers”). Further, six congeneric scale items (Nunnally and Bernstein, 1994) were created to adequately tap the domain of the construct. Thus, the nine items were administered to the samples and two items were further dropped due to low item to total correlation. The resulting seven item PD scale (See Appendix B) produced a unidimensional factor structure with Cronbach’s alpha of .86 ($\alpha_{\text{US}}=.89$, $\alpha_{\text{France}}=.83$).

Two additional cultural value scales were included for discriminant validity assessment purposes. *Vertical Collectivism* (VC) is a cultural pattern in which one sees oneself as part of the collective and accepts inequalities among group members; *Vertical Individualism* (VI) is a cultural pattern in which individuals are viewed as autonomous, but they are considered different in their status (Singelis et al., 1995). Both constructs were measured originally using eight item scales (Singelis et al., 1995). After one item (Children should feel honored if their parents receive a distinguished award) was dropped, the remaining seven-item VC scale had a Cronbach’s alpha of .69. For VI, one item was deleted (Some people emphasize winning; I’m not one of them) due to low factor loading. The remaining seven-item scale had a Cronbach’s alpha of .85. Demographic data (sex, age, nationality) were collected to facilitate sample description.

3.1.4. Translation and procedure

A French version of the stimuli and questionnaire was constructed via standard back-translation (Brislin, 1980), conducted by two independent, bilingual persons. Self-administered questionnaires containing the ad descriptions and measures were distributed to subjects in regular class sessions in return for course credit. French subjects received a French language version containing the ads. Each ad was followed by measures of attitude toward the ad, attitude toward the advertised brand, and purchase intent. Although each subject saw three ads, the manipulation of authority was completely between-subjects in order to avoid hypothesis guessing.

3.1.5. Integrity check

To test the integrity of the treatments, a one-way ANOVA of authority on CRED was conducted for each of the three ads, for the American and French samples separately and combined. Results show a significant main effect of authority in ads 1 and 2 ($p < .05$), but not in ad3 ($p > .10$) within as well as across the samples. Subsequently ad 3 was excluded from analysis. Tables 1 and 2 show correlations and descriptive statistics of variables when ad1 and ad2 are combined.

Table 1
Correlations and descriptive statistics in the combined data set

	Aad	Ab	INT	Sex	Nation	Age	Auth	Cred	PD	VI	VC
Aad	1										
Ab	.50***	1									
INT	.24***	.49***	1								
Sex	-.02	.04	.06	1							
Nation	-.42***	-.08	.09	.13*	1						
Age	-.10	-.10	-.06	-.15*	.23***	1					
Auth	-.13*	-.11	-.07	.04	.05	.16**	1				
Cred	.32***	.37***	.20**	-.05	-.05	-.06	.19**	1			
PD	.16**	.17**	.06	-.03	-.15*	-.13*	.09	.17**	1		
VI	.32***	.23***	.17**	-.23***	-.36***	-.06	-.06	.26***	.07	1	
VC	.27***	.13*	-.02	-.07	-.35***	-.05	-.00	.23***	.38***	.34***	1
Mean	4.12	4.84	3.67	1.46	1.48	22.91	2.02	4.41	3.51	4.39	3.43
SD	1.04	.82	1.23	.50	.50	.82	.82	.94	1.13	1.11	.88

* $<.05$; ** $<.01$; *** $<.001$ (two-tailed).

3.2. Analysis and results

To test our expectations concerning authority effects, we ran multiple regression analyses for each sample and for the combined sample. For dependent variables, overall average values of Aad, Ab, and INT, respectively, were calculated across ads 1 and 2 and were used in the analysis. For independent variables, we included authority (Auth), Nation, Cred, PD, VC, VI, and the interaction terms (Auth*Nation, Auth*Cred, Auth*PD, Auth*VC, Auth*VI). In addition, sex and age were included as control variables. All the independent metric variables were mean centered and Auth was zero centered to avoid multicollinearity problem (Aiken and West, 1991). Thus, each of the three dependent variables was regressed on the independent variables for the combined, American, and French data set, leading to nine regression models. Variables, "nation" and "Auth*Nation" were excluded from regression models involving single country data. Multicollinearity was not a problem since variation inflation factors were all less than 2.76 with an average of 1.47 across the regressions, which is well below the cutoff point of 10 (Neter et al., 1985). Table 3 shows results for the ad and brand attitude measures.

3.2.1. Reverse authority

Results show a negative impact of authority levels on Aad ($\beta=-.27$, $t=-3.26$, $p<.001$), Ab ($\beta=-.26$, $t=-2.99$, $p<.005$) and INT ($\beta=-.14$, $t=-1.44$, $p=.075$, one-tailed) for the combined sample. This means that the higher level of authority, the more negative the attitudes and purchase intentions of the young adults across cultures. Thus H1 regarding a reverse authority effect among young adults was supported.

3.2.2. National culture

To test for a moderating influence of national culture on the reverse authority effect (H2), we used regression primarily and ANCOVA secondarily to shed light on the regression results. The multiple regression analysis revealed a marginally significant Auth*Nation interaction on Aad ($\beta_{Auth \times Nation}=.13$, $t=1.47$, $p=.07$, one-tailed) and Ab ($\beta_{Auth \times Nation}=.13$, $t=1.30$,

$p<.10$, one-tailed), but not on INT. Results suggest that reverse authority effects are slightly stronger among American (vs. French) participants. Standardized coefficients for Auth in each country attest to this interpretation. The reverse authority effect was present among the Americans ($\beta_{Auth}=-.34$, $t=-3.49$, $p=.001$ for Aad; $\beta_{Auth}=-.27$, $t=-2.67$, $p<.01$ for Ab; model not significant for INT), but not among the French (all three p 's $>.50$).

Next we ran a 3 (authority) \times 2 (nation) between-subjects ANCOVA on Aad, with CRED as a covariate. Because CRED is an important factor determining persuasion (MacCracken, 1989) and spokesperson credibility might vary across cultures, CRED had to be controlled for to evaluate the differential effect of authority across cultures. However, we first confirmed homogeneity-of-slopes assumption that CRED be linearly related to attitudes and intentions in the same fashion across all the levels of authority and nations. Violation of this assumption would render ANCOVA invalid (Green and Salkind, 2003). Subsequently, we ran a two-way ANCOVA on Aad with CRED as a covariate. Results showed a significant covariate effect ($F_{1,238}=43.04$, $p=.000$), a reverse authority effect ($M_{Low auth}=4.31$, $M_{Mid auth}=4.12$, $M_{High auth}=3.88$; $F_{2,238}=5.02$, $p<.01$), nation effect ($M_{American}=4.53$, $M_{French}=3.68$; $F_{1,238}=57.98$, $p=.000$), and authority*nation interaction effect ($F_{2,238}=4.59$, $p=.01$, partial $\eta^2=.04$), confirming H2. Separate ANCOVA analyses were also performed for each country. Results showed that when the impact of CRED is controlled for, a reverse authority effect is clearly revealed among the U.S. participants ($M_{Low auth}=4.98$, $M_{Mid auth}=4.37$, $M_{High auth}=4.26$; $F_{2,126}=8.54$, $p=.000$), but not among the French participants ($M_{Low auth}=3.63$, $M_{Mid auth}=3.87$, $M_{High auth}=3.50$; $F_{2,111}=1.82$, ns), who seem to have responded most positively under equal authority conditions. However, an Auth*Nation ANCOVA on Ab and INT did not produce a significant interaction. Additionally, we ran a 3 (authority) \times 2 (nation) between-subjects MANCOVA on Aad, Ab, and INT, with CRED as a covariate. Results show a marginally significant Auth*Nation interaction effect (Hotelling's Trace: $F_{6,468}=1.93$, $p=.074$, partial $\eta^2=.02$).

Table 2
Correlations and descriptive statistics in the French and the U.S. data

	Aad	Ab	INT	Sex	Age	Auth	Cred	PD	VI	VC	Mean (FR) ⁺	SD
Aad	1	.53***	.38***	.04	-.04	-.01	.34***	.02	.27**	.13	3.66	.90
Ab	.51***	1	.63***	-.04	-.14	-.06	.41***	.12	.29**	.11	4.77	.80
INT	.25**	.39***	1	-.08	-.13	-.05	.30***	.11	.39***	.02	3.79	1.21
Sex	.05	.14	.17	1	-.23**	.02	-.07	.04	-.17	-.03	1.53	.50
Age	.06	-.02	-.01	-.15	1	.21*	-.09	-.13	-.03	.06	23.94	5.37
Auth	-.21*	-.14	-.10	.05	.09	1	.18	.07	-.06	.15	2.07	.82
Cred	.34***	.33***	.11	-.02	.01	.21*	1	.17	.19	.22*	4.36	1.00
PD	.18*	.20*	.06	-.06	-.06	.12	.16	1	-.03	.22*	3.33	1.09
VI	.14	.15	.08	-.22**	.11	-.04	.33***	.05	1	.12	3.97	.97
VC	.17	.13	.02	-.04	-.02	-.08	.24**	.44***	.32***	1	3.10	.71
Mean (U.S) ⁺⁺	4.54	4.90	3.57	1.39	21.97	1.98	4.45	3.67	4.77	3.71		
SD	.98	.84	1.24	.49	2.70	.83	.89	1.14	1.10	.92		

* $<.05$, ** $<.01$, *** $<.001$ (two-tailed); upper triangle represents correlations among French subjects and the lower triangle represents correlations among the U.S. subjects; ⁺ is mean value for French subjects; ⁺⁺ is mean value for U.S. subjects.

Table 3
Multiple regression results

Dependent variables	Independent variables	Combined		U.S. sample		French sample	
		β	t	β	t	β	t
1. Attitude towards ads	Model 1-1			Model 1-2		Model 1-3	
Intercept	—	12.099***	—	5.408***	—	8.260***	
Sex	.094	1.640 [†]	.102	1.222	.100	1.024	
Nation	−.366	−5.830***	—	—	—	—	
Age	.067	1.150	.103	1.257	.033	.335	
Auth	−.270	−3.255***	−.337	−3.488***	−.052	−.453	
Cred	.296	4.997***	.402	4.538***	.249	2.468**	
PD	.103	1.703*	.197	2.094*	.039	.396	
VC	.004	.064	−.062	−.638	.081	.823	
VI	.111	1.744*	.035	.381	.178	1.828*	
Auth × Nation	.132	1.470 [†]	—	—	—	—	
Auth × Cred	.067	1.145	.129	1.439 [†]	.028	.287	
Auth × PD	.088	1.502 [†]	.090	.985	.147	1.505 [†]	
Auth × VC	.038	.587	.016	.158	.060	.566	
Auth × VI	−.067	−1.059	−.044	−.463	−.114	−1.075	
2. Attitude towards brand	Model 2-1			Model 2-2		Model 2-3	
Intercept	—	17.526***	—	7.674***	—	15.730***	
Sex	.099	1.608 [†]	.174	2.025*	−.006	−.063	
Nation	−.010	−.148	—	—	—	—	
Age	−.010	−.156	.040	.482	−.079	−.880	
Auth	−.264	−2.986**	−.265	−2.668**	−.031	−.293	
Cred	.348	5.486***	.359	3.948***	.325	3.551***	
PD	.223	3.453***	.250	2.592**	.238	2.682**	
VC	−.057	−.811	−.102	−1.028	.034	.375	
VI	.131	1.930*	.066	.699	.197	2.241*	
Auth × Nation	.125	1.296 [†]	—	—	—	—	
Auth × Cred	−.004	−.059	.051	.557	−.066	−.744	
Auth × PD	.114	1.818*	.120	1.277 [†]	.134	1.515 [†]	
Auth × VC	.026	.379	−.052	−.515	.126	1.310 [†]	
Auth × VI	−.057	−.840	−.031	−.310	−.089	−.930	

Notes: [†] $p<.10$ (one-tailed); * $p<.05$ (one-tailed); ** $p<.01$ (one-tailed); *** $p<.001$ (one-tailed).

Sex: male=0, female=1; Nation: USA=0, France=1; Auth: low=−1, mid=0, high=1.

Model 1-1, Combined sample: $R^2=.35$; Adjusted $R^2=.31$; $F_{13,223}=9.17$; $p\text{-value}=.000$.

Model 1-2, U.S. sample: $R^2=.28$; Adjusted $R^2=.21$; $F_{11,116}=4.03$; $p\text{-value}=.000$.

Model 1-3, French sample: $R^2=.19$; Adjusted $R^2=.10$; $F_{11,97}=2.13$; $p\text{-value}=.025$.

Model 2-1, Combined sample: $R^2=.26$; Adjusted $R^2=.22$; $F_{13,222}=5.94$; $p\text{-value}=.000$.

Model 2-2, U.S. sample: $R^2=.24$; Adjusted $R^2=.17$; $F_{11,116}=3.28$; $p\text{-value}=.001$.

Model 2-3, French sample: $R^2=.35$; Adjusted $R^2=.27$; $F_{11,96}=4.60$; $p\text{-value}=.000$.

In sum, a reverse authority effect was manifested most strongly on attitude towards ads among the young U.S. adults when effect of CRED is controlled for as shown in Fig. 2. Thus, H2 seems to be supported concerning attitudes, but not purchase intentions.

3.2.3. Credibility

As expected, perceptions of source credibility positively influenced Aad ($\beta=.30$, $t=5.00$, $p<.001$), Ab ($\beta=.35$, $t=5.49$, $p<.001$), and INT ($\beta=.20$, $t=2.89$, $p<.01$) for the combined data. The positive impact of credibility on attitudes was also significant among both American and French subjects when analyzed separately. To test our expectation that the reverse authority effect is likely to be attenuated for those respondents who view the spokespersons as more (vs. less) credible, we used both regression and ANOVA analyses. The Auth × Cred interaction term positively influenced Aad among the American subjects ($\beta_{\text{Auth} \times \text{Cred}}=.13$, $t=1.44$, $p=.076$, one-tailed), but the

interaction term was not significant in other regression models. Next, participants were divided into low vs. high credibility groups using median value and then a 3 (Auth) × 2 (Cred: low vs. high) × 2 (Nation) ANOVA on Aad was run.

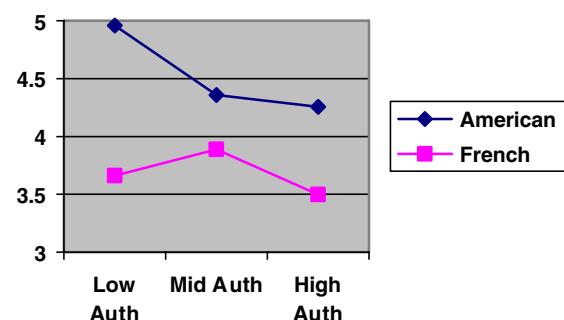


Fig. 2. Impact of authority and nation on Aad: based on adjusted means controlling for CRED.

Results show significant main effect of authority ($M_{\text{low}}=4.26$, $M_{\text{mid}}=4.12$, $M_{\text{high}}=3.82$; $F_{2,221}=4.22$, $p=.01$), credibility ($M_{\text{low}}=3.78$, $M_{\text{high}}=4.35$; $F_{1,221}=21.80$, $p=.000$), and nation ($M_{\text{American}}=4.50$, $M_{\text{French}}=3.63$; $F_{1,221}=49.47$, $p=.000$). The Authority \times Cred interaction was approaching statistical significance ($F_{2,221}=1.89$, $p=.15$). The three way interaction term was not significant, implying a similar authority \times Cred interaction pattern in both countries. Similar three-way ANOVA on Ab or INT were conducted, but the results were not statistically significant. Fig. 3 depicts an Auth \times Cred interaction effect on Aad, which shows a stronger reverse authority effect for the low (vs. high) CRED group.

In addition, a 3 (authority) \times 2 (CRED) ANOVA on Aad, Ab, or INT was conducted for each country. Results revealed a significant main effect of CRED ($M_{\text{low}}=3.33$, $M_{\text{high}}=4.06$; $F_{1,104}=9.54$, $p=.003$) and a significant Auth \times Cred interaction effect ($F_{2,104}=3.58$, $p=.03$) on INT among French subjects with clear non-crossover ordinal interaction (similar, but more distinctive than Fig. 3). Thus H3 received partial support.

3.2.4. Power distance

As expected, PD positively influenced respondents' Aad ($\beta=.10$, $t=1.70$, $p<.05$, one-tailed), Ab ($\beta=.22$, $t=3.45$, $p=.001$), and INT ($\beta=.15$, $t=2.15$, $p=.03$) for the combined data. The positive impact of PD was also significant among both American ($p's < .05$ except for INT, in which the model was not significant) and French ($p's < .05$ except for coefficient for Aad) subjects. To test our expectation that PD should attenuate reverse authority effect, we used both regression and ANOVA. Regression results show that PD did attenuate reverse authority effect on Aad ($\beta_{\text{Auth} \times \text{PD}}=.09$, $t=1.50$, $p<.10$, one-tailed) and Ab ($\beta_{\text{Auth} \times \text{PD}}=.11$, $t=1.82$, $p<.05$, one-tailed) but not on INT for the combined data set. The moderating effect of PD seems to be more consistent among French subjects (all three $p's < .10$, one-tailed) than American subjects (ns for Aad; $p<.10$, one-tailed for Ab; regression model ns for INT). Thus, our expectations were met with mixed support.

Next, subjects were divided into low vs. high PD groups via median split and then a 3 (Auth) \times 2 (PD: low vs. high) \times 2 (Nation) ANOVA on Aad was run. Results show main effects of PD ($M_{\text{low}}=3.91$, $M_{\text{high}}=4.21$; $F_{1,235}=5.97$, $p=.02$), nation ($M_{\text{American}}=4.46$, $M_{\text{French}}=3.66$; $F_{1,235}=44.00$, $p=.000$), and interaction effect of Auth \times Nation ($F_{2,235}=3.06$, $p<.05$) and

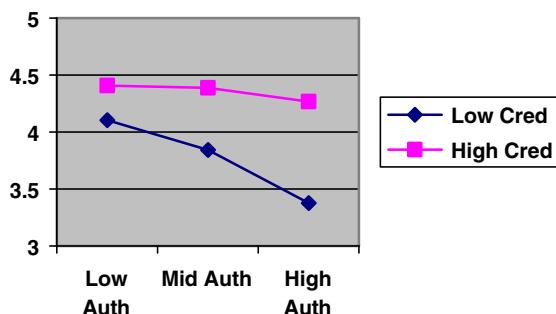


Fig. 3. Impact of authority and credibility on Aad — French and U.S. combined data.

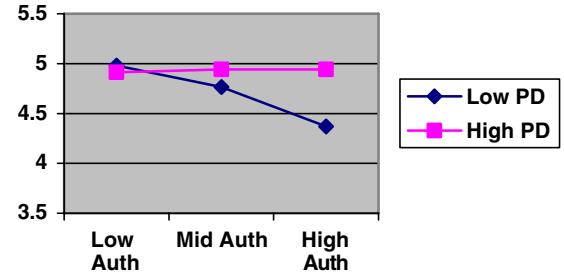


Fig. 4. The interactive influence of authority by power distance on brand attitudes (Ab) — French and U.S. combined data.

Auth \times PD ($F_{2,235}=2.34$, $p<.10$). Auth \times PD interaction effect was found to be more significant when the three-way ANOVA was run on Ab ($F_{2,234}=3.24$, $p<.05$), which is shown in Fig. 4. The three-way ANOVA model on INT was not significant. Thus ANOVA seem to provide provisional support for our expectations regarding a moderating effect of PD.

3.3. Discussion

The data for the study 1 were collected about one year before the 9/11 calamity, an event that highlighted national security, authority of government, and compromise of personal freedom for the greater good. The calamity and aftermath may have made people more sensitive to the importance of national security and more willing to accept the infringement of personal freedom and human rights by benevolent (domestic) authority. As a result, people may have become more likely to accept intervention by the authorities: e.g., security checks in airports. Does this mean that PD may have shifted upwards across different sectors of society, resulting in a possible attenuation of reverse authority effects among young adults? A longitudinal study is needed to answer this inquiry. Study 2 was conducted almost two years after the 9/11 tragedy, using the same design as study 1, but with different subjects of the same age group.

4. Study 2

4.1. Subjects, design, and procedure

Data were collected in 2003, three years after study 1 and two years after the 9/11 disaster. Participants were 169 undergraduate students enrolled in marketing classes in the U.S. Study design was similar to that used in study one: between subjects, using two ads (yogurt and software) to represent each of three (low, mid, high) authority conditions. Independent and dependent variables were identical to those in study 1.

4.2. Results

To examine changes in responsiveness to authority appeals over time among U.S. participants, we again used regression, supplemented by ANCOVA to shed light on regression results. The same regression procedure explained in study 1 was followed.

Regression analyses revealed that reverse authority effect was not present among the post 9/11 American participants (p 's > .40). A one-way ANCOVA of authority on Aad with Cred as a covariate also confirmed the regression results ($M_{low}=4.57$, $M_{mid}=4.51$, $M_{high}=4.55$; $F_{2,165}=.12$, $p>.10$).

In comparing American subjects across time periods, we first notice that the two groups were not statistically different in their ages (21.9 vs. 22.4 yrs), work experience (6.1 vs. 6.3 yrs), or sex composition (male/female: 61%/39% vs. 62%/38%). Further, multiple groups CFA shows evidence that PD is invariant across the two groups. Due to evidence of measurement invariance across time, standardization within each sample is omitted and the two data sets were combined prior to regression and ANCOVA analyses. To see if the reverse authority effect is reduced over time, we first ran multiple regression analyses as in study 1. We observed a significant Auth (low/mid/high)*Time (2000/2003) interaction effect on Aad ($\beta_{Auth \times Time}=.24$, $t=3.15$, $p<.001$, one-tailed) and Ab ($\beta_{Auth \times Time}=.21$, $t=2.68$, $p<.01$, one-tailed), supporting our speculation. Next, we ran a 3 (Auth) \times 2 (Time) ANCOVA on Ads with CRED as a covariate. We found a significant Auth * Time interaction ($F_{2,292}=6.67$, $p=.001$; refer to Fig. 5), which corroborates regression results. Thus, the analyses present evidence of a change in response to authority appeals across time periods in the anticipated direction.

To see if PD changed over time, we first compared latent variable PD in a multiple CFA model. PD is greater in 2003 U.S. sample than in 2000 U.S. sample ($p<.001$). Due to the measurement invariance, we directly compared mean composite scale score; large two independent samples Z-tests indicate statistically significant changes in the American cultural values between time 1 and time 2. At least within our samples in the three year span, PD has increased from 3.67 (SD=1.14) to 4.16 (SD=1.15) with $Z=3.67$ ($p<.001$, two-tailed). Thus our speculation concerning cultural change was confirmed.

4.3. Discussion

We observed no authority effect among Americans at time 2. We suspect that the most significant contributor to this change would be an increase in power distance attendant to the 9/11 calamity. We further suspect that the 9/11 calamity may have elevated the perceived importance of governmental effort in

national security and authorities in charge of the job, shifting PD to higher levels among young adults. Our speculation was supported by the observed increase in PD across time periods. As people united under the causes of defending freedom and fighting terrorism, they may have become more receptive to the idea of personal sacrifice for the common good (e.g., standing in long lines for airport security checks or compromising privacy and freedom in the Patriot Act), which would have elevated their sense of respect for authority.

5. Summary

This research examined authority effects experimentally in a consumer advertising context using a cross-national sample of young consumers from France and the U.S. Results of study 1 show a reverse authority effect across two cultures, with a stronger effect among American (vs. French) participants. Both perceptions of spokesperson credibility and power distance positively influenced attitudes and purchase intentions. Furthermore, credibility appears to moderate the impact of authority on attitudes and intentions. Most interestingly, power distance moderated authority effects among both nationalities. Study 2 shows that the reverse authority effect observed before 9/11 disappeared among post 9/11 Americans. In addition, compared to Americans in time 1, those in time 2 exhibited a higher power distance.

6. Theoretical and managerial implications

To the best of our knowledge, this study is the first to examine the authority principle cross-culturally in an advertising context. By introducing national culture and individual level cultural values in explaining authority-based influence attempts, we shed light on how membership in a culture and a person's individual cultural values interact to form attitudes and purchase intentions. Specifically, we show that power distance at the level of an individual is important in understanding variations within a culture. In fact, individual-level power distance allowed us to predict attitudes and purchase intentions consistently within each culture: the higher (lower) power distance, the more (less) effective the authority based influence attempt. Thus, future studies that involve authority appeals should consider power distance and the interaction of PD with other possible influencers.

Our research suggests that caution should be taken in predicting authority effects in specific segments of the market that might undergo drastic cultural shifts that could have positive or negative impact on the direction of authority appeals. In either case, our study suggests that prediction would be enhanced if we detect the direction of a PD value shift. For example, whereas downward shifts in power distance would predict a greater likelihood of reverse authority effects, upward shifts would predict greater likelihood of positive authority effects.

Our study also presents advertisers with some provisional implications. Results imply that the classic authority principle is not likely to be effective in all the segments of the market.

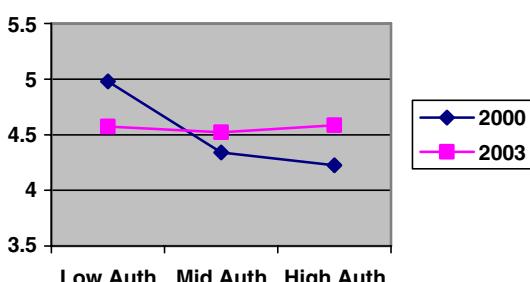


Fig. 5. The influence of authority in two time periods on Aad: based on adjusted means controlling for CRED.

Marketers need to know whether or not authority sources will have a positive impact on their target segments. This caution will be especially relevant for marketers who target young or adolescent consumers who view low authority figures more favorably. Additionally, our results enlighten marketers contemplating authority-based ads in countries with different perceptions of power distance. Marketers in multi-national companies should not blindly rely on country level power distance scores; instead, they should examine the effectiveness of authority country by country, segment by segment, and adopt a different level of authority as appropriate.

7. Limitations and future research directions

Despite insights gained from this study, several unanswered questions remain. Limits to generality stem from the demographic composition of our sample. We used university students, whose relative youthfulness may be a contributing factor to the reverse authority effect. Future study can include subjects from diverse age, income, education, and occupational groups. According to Hofstede (2001), education and occupation are negatively correlated with power distance. Thus, their impacts on authority appeals should be examined. Second, we argued that the 9/11 calamity might have caused a shift in cultural values, which might have caused a more positive orientation to authority and authority-based influence attempts. We propose that the observed differences represent a zeitgeist effect (all members' shift in value due to radical system-wide change in society). However, we acknowledge that our observations are not immune to the influence of unknown, extraneous variable(s). Third, the observed effects may stem from the specific nature of the relationships among speakers represented in the simulated ads. That is, subjects' reactions may have stemmed from specific attitudes towards parents and teachers (the nature of relationships), rather than to "authority figures" in general. Future study might attempt to corroborate

our findings using different authority figures that are less vulnerable to the nature of relationships.

The present research documents cross-cultural variations in reverse authority effects among young adults in two cultures. Further investigation is required to explain the underlying source of such effects, as well as the circumstances under which one can expect positive versus negative effects of authority-based appeals. We offer the present findings in hope of fueling wider interest in this topic and commend on-going investigation to future research.

Appendix A. Test ads

Ad #1: Imagine a radio advertisement in which (a mother/one woman/a daughter) is speaking to (her daughter/another woman/her mother). She tells her about "Soiegourt," a new brand of yogurt. She says that it comes in a variety of interesting flavors, that it has fewer calories than Yoplait, but that it tastes richer. It sells for about the same price. At the conclusion of the ad, of course, (the mother/she/the daughter) recommends that (her daughter/the other woman/her mother) try the new brand. "I tried it last week and it was great!"

Ad #2: Imagine a radio advertisement in which (a teacher/one person/a student) is speaking to (a student/another person/a teacher) about a new software product called "MicroPass-2000." This product is designed to manage multiple passwords (mots de passe). It works in conjunction with other software products such that a user need remember only one password for all applications. It is easy to use and the cost is surprisingly low. At the conclusion of the ad, of course, (the teacher/the speaker/the student) recommends that (the student/the other person/the teacher) consider buying this software — "I installed MicroPass on my home PC and it works great!"

Ad #3: Finally, please imagine a radio advertisement in which (a boss/one employee/a subordinate) is speaking to (his subordinate/another employee/his boss). He tells him about an internet site at which clothing can be purchased: www.smartdress.com. The site features name-brand clothing at discount prices, delivered to your home or office at no extra charge. All items are guaranteed. At the conclusion of the ad, of course, (the boss/he/the employee) recommends that (his subordinate/the other employee/his boss) visit the site — "I did and I think you'd love it."

Inside parenthesis indicate the power distance, either "high" "mid," or "low" authority conditions, respectively.

Appendix B

Power distance scale: scale items retained, factor loadings, CFA model fit statistics, and reliabilities ($N=248$)

	Combined sample ($N=248$)		U.S. sample ($N=130$)		French sample ($N=118$)	
	F1	Lx	F1	Lx	F1	Lx
1. I find it difficult to disagree with someone in a higher position than mine. +	.71	.64	.75	.68	.67	.58
2. It is difficult for me to express my opinions to superiors. +	.77	.70	.80	.73	.73	.64
3. If a boss doesn't ask for my comments, I would rather keep silent. +	.71	.66	.72	.68	.67	.62
4. I tend to conform to the wishes of someone in a higher position than mine.	.85	.81	.88	.88	.83	.83
5. It is difficult for me to refuse a request if my superior asks me.	.72	.67	.72	.68	.70	.65
6. I tend to give priority to the opinions of people in authority.	.74	.69	.74	.68	.73	.70
9. I tend to find it hard to disagree with authority figures.	.68	.60	.79	.75	.62	.53
% Variance explained	55.02%		59.80%		50.54%	
Cronbach α	.86		.89		.83	

(continued on next page)

Appendix B (continued)

Data set	χ^2	df	p	χ^2/df	RMSEA	GFI	AGFI	RMR	CFI	IFI	SR > 2
Combined sample	66.35	14	.000	4.74	.12	.93	.86	.13	.92	.93	None
American sample	45.46	14	.000	3.25	.13	.91	.82	.12	.93	.93	None
French sample	34.24	14	.002	2.45	.11	.92	.85	.16	.93	.93	None

Three scale items denoted as + are adopted from pretest 6 of Jung (2002). F1 = Factor loadings from principal component analysis of seven-point Likert-type scale items. Lx = Standardized factor loadings from CFA. |SR| stands for absolute value of standardized residual.

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