
MEDIA USE, SOCIAL STRUCTURE, AND BELIEF IN 9/11 CONSPIRACY THEORIES

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A survey of 1,010 randomly selected adults asked about media use and belief in three conspiracy theories about the attacks of September 11, 2001. "Paranoid style" and "cultural sociology" theories are outlined, and empirical support is found for both. Patterns vary somewhat by conspiracy theory, but members of less powerful groups (racial minorities, lower social class, women, younger ages) are more likely to believe at least one of the conspiracies, as are those with low levels of media involvement and consumers of less legitimate media (blogs and grocery store tabloids). Consumers of legitimate media (daily newspapers and network TV news) are less likely to believe at least one of the conspiracies, although these relationships are not significant after controlling for social structural variables. Beliefs in all three conspiracies are aligned with mainstream political party divisions, evidence that conspiracy thinking is now a normal part of mainstream political conflict in the United States.



In the last twenty years there has been a surge of scholarly interest in rumors and conspiracy theories. Only a few have conducted systematic studies of conspiracy believers or the social factors contributing to belief, but there is no shortage of thoughtful and provocative theorizing. Much of this expanding literature suggests that conspiracy theories provide clarity of vision and clear targets for addressing the confusions, frustrations, and insecurities of living in contemporary societies which are characterized by rapid social change; a multiplicity of voices and interests; multi-level, multi-polar balances of power where those at higher levels maintain control through secrecy and controlling information; declining individual autonomy; increasing risk awareness associated with technological advances and "post-scarcity" conditions; high levels of social and geographic mobility; declining trust in national governments; and post-9/11 fears of terrorist/outsider threats.¹ While these theories are stimulating and insightful, we believe there is a need to bring more systematic evidence to bear on two basic questions: Who believes conspiracy theories, and what sources of information are associated with believing conspiracy theories?

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*J&MC Quarterly
Vol. 84, No. 2
Summer 2007
353-372
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This study uses a national survey to examine the social and media correlates of belief in three conspiracy theories about the terrorist attacks on the World Trade Center buildings and the Pentagon on September 11, 2001 (hereinafter 9/11). We will frame our analysis within two academic literatures—research on the media’s role in shaping social and political beliefs and the literature on the social and political causes and functions of conspiracy theories.

Media Use and Political Beliefs

We began by searching for studies linking beliefs in conspiracies to media use, but did not find any. However, a number of studies test the relationship between media use and political knowledge. The results are mixed. This is illustrated by the studies of Weaver and Drew on voter learning and media use in four presidential campaigns. In none of the campaigns did newspaper exposure or attention or radio news exposure or attention relate to issue knowledge, and TV news exposure did only twice. This shows a meager performance of the media in creating knowledge about something they cover extensively.²

There was a classic example of the mass medium of radio producing belief—the Orson Welles dramatization of “War of the Worlds” in October 1938 that had Martians landing in New Jersey. Millions were fooled and panicked. Cantril’s study explained why.³

Yet the reaction to the “War of the Worlds” broadcast was viewed as an anomaly. Hyman and Sheatsley’s widely quoted article nine years later concluded information does not change attitudes in a predictable direction.⁴

A number of studies supported this conclusion.⁵ However, Douglas, Westley, and Chaffee found otherwise in a field experiment in two Wisconsin communities. They found that an intensive, six-month information campaign changed attitudes about mental retardation.⁶ Other studies have verified the impact of media use on political attitudes.⁷

This suggests that it is possible that media use may be related to belief in conspiracy theories and also suggests that it is worth studying. Yet taken together these studies do not tell us which media are most likely to be related to belief or what the direction of that effect might be.

Social Scientific Studies of Conspiracy Theories

The social scientific literature on conspiracy theories can be divided into two camps. The first, more psychological approach argues that there is a conspiratorial personality or paranoid style of thought, and views conspiracy theories as closely related to scapegoating and “us versus them” worldviews. This approach has roots in Hofstadter’s seminal essays of the 1950s.⁸ In this view conspiracy theorists combine close, sometimes obsessive, attention to details and documentation with great leaps of imagination through which they explain virtually all social developments and historical events in terms of concerted and conscious actions by powerful, highly organized, and secretive groups. Pipes recently added that conspiracists’ leaps of imagination follow from irrational cognitive tendencies: a strong belief that nothing is ever as it appears, a dis-

missive attitude towards evidence contradicting a given conspiracy theory, easy acceptance of flimsy or forged supporting evidence, a worldview that all human action is motivated by a will to power and that all events are orchestrated and carried off as planned, and a tendency to attribute conspiracy to those who benefit from an event.⁹

The “paranoid style” theory posits that conspiratorial thinking is more prevalent among members of marginalized (e.g., women, youth, minorities, lower SES) or declining groups for reasons of insularity, status insecurities or declining status, powerlessness, and weak communal ties. In their study of paranoia Mirowsky and Ross posit a “stairway” between belief in an external locus of control (“outcomes are determined by powerful external forces beyond their control”), to beliefs that people are generally manipulative, to a view that they are being singled out for harm (paranoia).¹⁰ Their study of two cities on the Mexico/U.S. border found that lower levels of SES and education, Mexican heritage, and being female were all associated with belief in external locus of control (and thus indirectly related to paranoia), and lower ages were associated with paranoia.

Paranoid style theory strongly suggests that less legitimate and less regulated media sources, such as tabloids, Internet blogs, and radio talk shows, play a prominent role in creating conspiracy beliefs. Note, however, that because paranoid style theory focuses explanation on the socially marginal, it implies that consuming media with high levels of legitimacy or location in high status positions will have no impact on believing conspiracies compared to middling media forms and social positions.¹¹

We label the second major perspective of conspiracy theories “cultural sociology” to reflect its emphasis on the social structuring of beliefs and its social relativist bracketing of the truth claims of conspiracy theories. Like Hofstadter, cultural sociology also expects that socially marginal groups and consumers of non-mainstream media are more disposed to believing conspiracy theories, but cultural sociology places greater emphasis on the rational aspects of much contemporary conspiracy thinking.¹² Knight is representative when he says, “Indeed, a permanent, low-level and skeptical form of everyday paranoia now seems to be a necessary and understandable default approach to life in a risk society.”¹³

Goldberg believes that the pervasiveness of governmental secrecy is a major reason why conspiracy theories have proliferated.¹⁴ Witness, for example, the many covert U.S. government operations aimed at bringing down foreign governments and internal social movements. Knight argues that after JFK, MLK, and RFK assassinations; Watergate; Cointelpro; Contragate; Savings and Loan scandal; and Enron (and we must add 9/11 and the run-up to the latest Iraqi war), Hofstadter’s paranoid type only represents a small part of contemporary conspiracy theorizing and that many conspiracy theories today are “undeniably plausible.”¹⁵

In this view the media do not promote conspiracy theories so much by circulating particular rumors and conspiracies, as by raising

people's awareness and cynicism about how much goes on in the backstages of governmental and corporate power, which then "make[s] conspiracism essential to an understanding of history and society."¹⁶

From the cultural sociology perspective, conspiracy theorizing appears *less* as psychological short-circuiting that further marginalizes already disempowered groups and *more* a form of populist protest against powerful elites, often by politically engaged members of outsider groups. Fenster exemplifies this approach when he asserts, "just because overarching conspiracy theories are wrong does not mean that they are not on to something. Specifically, they ideologically address real structural inequities."¹⁷ Contrary to the "external locus of control studies," Waters found that African Americans who believe conspiracies to harm African Americans more often have a college degree or attend college and are members of a political party.¹⁸

Along the same lines, if conspiracy theories sometimes (over)simplify complex events and social conditions, they may also *assign clear responsibility* for those events and conditions, something that more legitimate political analyses often avoid by dispersing responsibility.¹⁹ For example, viewing as plausible the horrifying idea that key members of the Bush administration conspired to allow 9/11 to happen may be part and parcel of assigning them responsibility for the "foreign policy disaster" in Iraq.

Thus, we expect that 9/11 conspiracy theories are not restricted to a small group of socially and culturally isolated extremists with faulty thinking habits, but will be aligned with *mainstream* political divisions and the discourses built up around those divisions.²⁰ Specifically, we expect that Democrats more often find 9/11 conspiracy theories plausible because they fit their view that influential members of the Bush administration were looking for an excuse to invade Iraq. Furthermore, although we expect that "strong Democrats" believe the 9/11 conspiracies more than "leaning Democrats," we also expect that both leaning Democrats and Independents will believe the 9/11 conspiracies more than Republicans because *conspiracy thinking is a routine part of mainstream politics*, not limited to the political extremes.

While degree of alignment with mainstream political divisions accounts for some of the plausibility of conspiracy theories, another influential factor is captured by the distinction between "benign neglect" and "malicious intent" theories. The latter have fewer believers.²¹ Both attribute secrecy and concerted control to conspirators, but "malicious intent" theories attribute more active harm doing.

The paranoid style theory is an academic theory, but it is also an aspect of ideological control that limits populist protest and may prevent us from a more objective analysis of conspiracy theories. Hofstadter operated with a "consensus" model that pathologized conspiracy thinking and focused explanation on the marginal status and faulty thinking of conspiracy believers,²² while cultural sociology asks if some groups may reject conspiracy theories *on principle*. For example, the most educated, as part of their social conditioning or social positions, may dismiss conspiracy theories out of hand, understanding such beliefs as a lower form of thinking that undermines the legitimacy of their "rational" viewpoints or

positions of authority. Likewise, the legitimate media may incorporate this principle into their decisions on what to investigate and how to cover contentious issues. Thus, we expect that consumers of the most legitimate media will be less likely to believe 9/11 conspiracies than consumers of other mainstream media.²³

To summarize, the cultural sociology perspective focuses *less* on a paranoid cognitive style and faulty thought processes and *more* on the pervasiveness and rationality of conspiratorial thinking, and on ways conspiracy theories accurately model important aspects of dominant-subordinate relations, assign clear responsibility for important events, and are integrated into mainstream socio-political divisions. Cultural sociology also expects non-legitimate media to be more associated with conspiratorial beliefs, but in contrast to paranoid style theory it understands legitimacy to be based *less* on openness to logical criticism and *more* on the least legitimate media's tendencies to directly challenge the powerful and the most legitimate media's tendencies to dismiss conspiracy thinking on principle.

The foregoing discussions lead to these hypotheses:

Hypotheses

H1: Consumers of the least legitimate media (blogs, grocery store tabloids, and talk radio) are more likely to believe 9/11 conspiracy theories.

H2: Consumers of the most legitimate media (newspapers and network TV news) are less likely to believe 9/11 conspiracy theories.

H3: Infrequent media users (either legitimate or non-legitimate) are more likely to believe 9/11 conspiracy theories.

H4: Members of less powerful social groups are more likely to believe 9/11 conspiracy theories.

H5: Members of dominant groups are less likely to believe 9/11 conspiracy theories.

H6: Those experiencing downward economic mobility are more likely to believe 9/11 conspiracy theories.

H7: Respondents who are less integrated into mainstream social institutions (other than politics) will be more likely to believe 9/11 conspiracy theories. Our measures of social integration are marital status and religiosity (church attendance).

H8: Likelihood of believing 9/11 conspiracy theories will reflect mainstream political divisions. All types of

TABLE 1
Responses to Three Conspiracies, in Percent

	Very Likely	Somewhat Likely	Not Likely	Don't Know	Other
People in the federal government either assisted in the 9/11 attacks or took no action to prevent the attacks because they wanted the United States to go to war in the Middle East.	16.1	20.0	58.6	4.6	0.8
The Pentagon was not struck by an airliner but instead was hit by a cruise missile fired by the military.	6.1	6.0	80.4	7.4	0.1
The collapse of the Twin Towers in New York was aided by explosives secretly planted in the two buildings.	5.8	10.2	77.4	6.5	0.1

N=1,010

Democrats and independents will believe the 9/11 conspiracies more than Republicans.

H9: Conspiracy theories attributing more active malice to conspirators will have fewer followers.

H1, **H4**, and **H6** are posited by both theories, although, as we saw, their explanations for these predictions differ. **H3** follows from the paranoid style theory's view of conspiracy believers as most disconnected from public political and social discourse. **H2** and **H5** are the flip sides of **H1** and **H4**, but are not redundant because paranoid style theory focuses exclusively on the socially marginal to explain differences and does not expect the socially most powerful or legitimate to differ from the rest of the mainstream. **H2** and **H5** follow from cultural sociology, but not paranoid style theory. **H7** stems from the paranoid style theory's expectation that conspiracy believers are more socially isolated and/or outside mainstream institutions. **H8** follows from cultural sociology's view of conspiracy thinking as more rational and routine and tied to mainstream political struggles. So, if **H2**, **H5**, and **H8** are supported, then this will support cultural sociology. If **H3** and **H7** are supported, this will support the paranoid style theory.

Method

We conducted a national telephone survey of 1,010 randomly selected respondents in July 2006 from the Scripps Survey Research Center at Ohio University.²⁴

Our survey asked three questions on 9/11 conspiracies. The questions and percentages for each response are shown in Table 1. A little more than a third of respondents (36.4%) believe that it is at least some-

TABLE 2
Ordinal Regression: Media Sources Explaining 9/11 Conspiracies
(Significance Levels in Parentheses)

Thresholds	Government Aided 9/11			Missile Hits Pentagon			Twin Towers Bomb		
Unlikely	-0.261	(.461)		1.323	(.008)		-0.216	(.619)	
Somewhat Likely	.883	(.013)		2.117	(.000)		.846	(.056)	
Independent Variables	beta	p =	odds	beta	p =	odds	beta	p =	odds
Radio News	-.048	(.085)	.953	-.011	(.790)	.989	-.010	(.794)	.990
Talk Radio	.005	(.862)	1.005	.011	(.816)	1.011	-.031	(.483)	.969
Local TV News	-.011	(.731)	.989	.005	(.908)	1.005	.002	(.968)	1.002
Network TV News	-.036	(.221)	.965	-.031	(.481)	.969	-.059	(.141)	.943
Daily Newspaper	-.067	(.007)	.935	-.046	(.220)	.955	-.083	(.016)	.920
Newspaper Web Site	-.086	(.025)	.918	-.037	(.501)	.964	-.060	(.274)	.942
TV News Web Site	.008	(.857)	1.008	-.003	(.961)	.997	-.034	(.626)	.967
Blogs	.149	(.010)	1.161	.201	(.006)	1.222	.124	(.133)	1.132
Other Web Sites	-.015	(.703)	.985	-.013	(.823)	.987	-.084	(.172)	.919
Newsmag: Occasionally	.150	(.33)	1.162	.133	(.576)	1.142	-.178	(.418)	.836
Newsmag: Regularly	.214	(.761)	1.239	.193	(.560)	1.213	.307	(.295)	1.359
Tabloid: Occasionally	.477	(.004)	1.611	.295	(.231)	1.343	.268	(.260)	1.307
Tabloid: Regularly	.386	(.120)	1.095	.551	(.107)	1.735	1.230	(.000)	3.421
<i>Pseudo R-square</i>									
<i>Cox and Snell</i>		.042			.015			.038	
<i>Nagelkerke</i>		.051			.026			.062	

what likely that the American government assisted or took no action to stop the 9/11 attacks. Many fewer respondents believed the other two conspiracies (“Twin Towers” and “military bombs Pentagon”), 12.1% and 16.1%. This supports H9 because the two theories with fewer believers entail considerable active malice on the part of conspirators, while “government assists 9/11” is a “benign neglect” theory.²⁵

We next checked to see how closely related beliefs in these three conspiracies were to one another. We did this for two reasons. First, we reasoned that if there were a general conspiratorial *mentality*, as posited by Hofstadter and Pipes, the three questions should be strongly related. All of the questions were about the 9/11 attacks, so people with a conspiratorial mentality are likely to believe all three if they believe one. We also wanted to know if it was reasonable to combine the three items to form a 9/11 conspiracy index. To test for the latter we ran a Cronbach’s alpha—a standard reliability test that measures how closely interrelated possible index items are. The Cronbach’s alpha for these three was .593, not high enough to justify combining the measures.²⁶

TABLE 3

Ordinal Regression: Social and Political Factors and Media Sources Explaining 9/11 Conspiracies (Significance Levels in Parentheses)

Thresholds	Government Aided 9/11			U.S. Missile Hits Pentagon			Twin Towers Bomb		
Unlikely/Somewhat	1.382	(.064)		3.307	(.001)		3.771	(.000)	
Somewhat/Very	2.906	(.000)		4.296	(.000)		4.987	(.000)	
Independent Variables	beta	p =	odds	beta	p =	odds	beta	p =	odds
Radio News	-.045	(.188)	.956	.031	(.546)	1.031	.056	(.230)	1.058
Talk Radio	.020	(.602)	1.020	.045	(.416)	1.046	-.048	(.361)	.953
Local TV News	.021	(.605)	1.021	-.014	(.810)	.986	.002	(.976)	1.002
Network TV News	-.062	(.090)	.940	-.063	(.242)	.939	-.079	(.105)	.924
Daily Newspaper	-.021	(.517)	.979	-.028	(.557)	.972	-.054	(.221)	.947
Newspaper Web Sites	-.066	(.160)	.936	.005	(.944)	1.005	.016	.810	1.016
TV News Web Site	.006	(.911)	1.006	-.070	(.414)	.932	-.019	(.817)	.981
Blogs	.147	(.034)	1.158	.191	(.037)	1.210	.028	(.782)	1.028
Other Web Sites	.036	(.488)	1.037	.082	(.293)	1.085	.002	(.980)	1.002
Newsmag: Occasionally ^a	.125	(.530)	1.133	.179	(.556)	1.196	-.406	(.149)	.666
Newsmag: Often	.226	(.672)	1.254	.354	(.373)	1.425	.497	(.167)	1.644
Tabloid: Occasionally ^b	.158	(.452)	1.171	-.109	(.733)	.896	-.288	(.356)	.750
Tabloid: Often	-.177	(.575)	.838	.285	(.485)	1.330	.983	(.004)	2.672
Internet Use	-.067	(.094)	.935	-.097	(.121)	.908	-.102	(.084)	.903
African American ^c	1.183	(.000)	3.264	.795	(.054)	2.214	.790	(.042)	2.203
Asian American/Other	1.586	(.000)	4.884	1.382	(.015)	3.983	.635	(.264)	1.887
Hispanic	.476	(.171)	1.609	1.148	(.013)	3.152	.618	(.164)	1.855
High School Grad ^d	-.403	(.274)	.668	-.582	(.215)	.559	-.660	(.141)	.517
Some College	-.496	(.181)	.609	-.880	(.069)	.415	-.882	(.050)	.414
College Grad	-.584	(.135)	.558	-1.211	(.027)	.298	-.548	(.268)	.578
Postgraduate	-1.204	(.007)	.300	-1.314	(.030)	.269	-.964	(.097)	.381
Northeast ^e	-.229	(.396)	.795	.261	(.531)	1.298	-.308	(.468)	.735
Midwest	.208	(.405)	1.239	.754	(.051)	2.142	.453	(.212)	1.542
South	-.228	(.358)	.801	.068	(.864)	1.079	.412	(.242)	1.483
Church Last Week	-.539	(.005)	.583	.106	(.707)	1.107	-.423	(.111)	.658
Suburbs	-.277	(.219)	.758	-.025	(.939)	.966	.061	(.845)	1.073

Table 3 cont. next page

Spearman's correlations on the each of the three pairs of theories ranged from .331 between Twin Towers and government assisted 9/11 to .362 between Twin Towers and military bombed Pentagon. Considering the similarity of the three conspiracies, this is very modest support for

Table 3 cont.

Independent Variables	beta	p =	odds	beta	p =	odds	beta	p =	odds
Not Married	.254	(.181)	.777	.315	(.265)	.730	.602	(.022)	.546
Economy Hurting: A Little ^f	.325	(.246)	1.565	-.285	(.457)	.846	.551	(.167)	1.416
Economy Hurting: A Lot	.838	(.005)		-.372	(.377)		.788	(.064)	
Female	-.011	(.954)	.993	.319	(.273)	1.385	.732	(.010)	2.065
Age 18-24 ^s	.806	(.049)	2.186	.222	(.711)	1.207	.686	(.192)	2.061
Age 25-34	.830	(.019)	2.241	1.332	(.005)	3.691	.902	(.047)	2.542
Age 35-44	.488	(.144)	1.614	-.050	(.925)	.937	.272	(.543)	1.338
Age 45-54	.616	(.027)	1.842	.604	(.131)	1.813	.163	(.666)	1.192
Age 55-64	.307	(.292)	1.349	-.352	(.487)	.693	-.737	(.128)	.489
Strong Democrat ^h	1.118	(.003)	3.037	.707	(.175)	2.022	.676	(.149)	1.986
Lean Democrat	.877	(.018)	2.394	.188	(.726)	1.202	.428	(.361)	1.553
Independent	.421	(.250)	1.519	.272	(.605)	1.307	.183	(.689)	1.206
Lean Republican	.251	(.508)	1.294	-.746	(.252)	.478	-1.159	(.058)	.312
Don't Know Party	-.595	(.374)	.546	-1.765	(.149)	.168	-.017	(.982)	1.004
Very Liberal ⁱ	-.168	(.680)	.846	.268	(.642)	1.289	.210	(.689)	1.234
Somewhat Liberal	-.416	(.247)	.668	.442	(.403)	1.543	.053	(.914)	1.045
Middle of Road	-.585	(.064)	.558	-.131	(.790)	.870	.169	(.693)	1.186
Somewhat Conservative	-.195	(.532)	.819	-.006	(.991)	.976	-.263	(.546)	.787
Don't Know Ideology	.348	(.577)	1.452	1.472	(.078)	4.415	-.445	(.624)	.634
More Angry at Gov't	.834	(.000)	2.293	.709	(.029)	2.016	-.111	(.695)	.904
U.S. Direction: Don't Know	-.500	(.081)	.604	-.477	(.286)	.616	.018	(.962)	1.021
U.S. Direction: Right ^j	-.756	(.003)	.469	-.229	(.537)	.795	.287	(.393)	1.343
Pseudo R-square									
Cox and Snell		.276			.127			.152	
Nagelkerke		.340			.226			.251	

Reference categories are: ^a Never; ^b Never; ^c Whites; ^d Less than a high school degree; ^e West; ^f Not hurt by recent economic changes; ^g 65 and over; ^h Strong Republican; ⁱ Very conservative; ^j U.S. in wrong direction.

the presence of a distinct conspiratorial type of person. We also found that 56.9% believed none of the three conspiracies, 26.9% believed only one, 10.6% two, and only 5.7% all three. Thus, all the evidence pointed to treating each item separately.

We tested the bivariate relationships between each of the media sources and the conspiracy theories. Reporting only those relationships where both gamma and Spearman's correlations were significant at $p < .05$, respondents who used radio news, network TV news, daily newspapers, and newspaper Web sites more often were less likely to believe the "government assists 9/11" conspiracy, while those who used blogs and grocery store tabloids were more likely to believe that conspiracy. Those who read tabloids and blogs more often were more likely to believe the "military bombs Pentagon" conspiracy. Those who viewed network TV news and daily newspapers more often were less likely to believe the "Twin Towers" conspiracy, while those reading tabloids were more likely to believe that theory. All of these associations support **H1** and **H2**, which predicted that the most legitimate media sources would be negatively associated and non-legitimate sources positively associated with conspiracy beliefs.

We then conducted two regressions for each dependent variable. The first set of regressions, shown in Table 2, used frequency of consuming eleven types of media to explain belief in the 9/11 conspiracies. The second set of regressions (Table 3) added several social and political factors, and two on general political attitudes.

All but two of the media variables asked how many days a week the respondent got news from that source. These were treated as interval level measures. For the other two, grocery store tabloids and news-magazines, respondents were asked if they never, occasionally, or regularly read these media. These ordinal level variables were entered as arrays of dummy variables.

The social structural variables included in the second set of regressions were race, gender, education, marital status, suburban residence, region, age, church attendance, sense of being hurt personally by the economic decline, and Internet use. Internet use adds some collinearity with the Internet variables, but in the context of the other independent variables it is a good proxy for social class that controls for the "digital divide."

Each of the social structural variables used had statistically significant or close to significant bivariate relationships ($p < .05$) with one or more of the dependent variables using gamma or chi-square. Those who were more likely to believe each of the three conspiracy theories were Democrats, liberals, African Americans, those with less than a college education, unmarried people, those who said the economic downturn has affected them, and those under age 35. Those who didn't go to church in the past week were more likely to believe the "government assists 9/11" conspiracy and the Twin Towers conspiracy.

Interval and ordinal variables, such as age, that did not have linear relationships with all of the dependent variables were entered as arrays of dummy variables. The legends of Tables 2 and 3 identify the reference categories for those arrays. We also included questions on party identification, political ideology, whether the respondent is angrier at the government now, and whether they think the United States is headed in the right direction.

We first wanted to see which, if any, media sources were associated with belief in the conspiracies, controlling for the other media sources. Because the independent variables were ordinal level measures we conducted ordinal regressions using the Polytomous Universal Model (PLUM) in SPSS.²⁷

The first dependent variable we looked at was the belief that the government assisted or knowingly allowed the 9/11 attacks to happen. Table 3 reports the log odds for the two thresholds of the dependent variable and the betas, significance levels, and odds ratios for each of the interval level independent variables and k-1 categories of each of the categorical (nominal or ordinal) variables, where k equals the number of categories in that variable. Looking at the direction of the betas and their significance levels in Table 2 we can see that at a .05 level of significance, reading daily newspapers and newspaper Web sites are negatively associated with believing that the government assisted the 9/11 attacks, and getting news from blogs and occasionally reading a tabloid are positively associated with this conspiracy, controlling for the other media.²⁸ This pattern fits **H1** and **H2** that predict believers will rely more on low legitimacy news sources and that non-believers rely more on the most legitimate sources.

The odds ratios for the interval level independent variables (most of the media variables) correspond to a one unit increase in the independent variables. Thus, the estimated odds ratio of .935 for reading daily newspapers means that a one unit increase (one more day a week) corresponds to a .935 likelihood of choosing "somewhat or very likely" over "unlikely" and "very likely" over "somewhat or unlikely."²⁹

Model 2 found that blogs were the only news source related (positively) to believing a U.S. Air Force missile bombed the Pentagon on 9/11. Model 3 shows that believing that bombs planted in the Twin Towers caused them to collapse was positively associated with reading tabloids and negatively associated with reading daily newspapers.

Looking at the three models together we find that, as predicted by **H1**, those who get their news from the least legitimate media sources, like Web logs and tabloids, are more likely to believe the 9/11 conspiracy theories, and as predicted by **H2**, those who read the most legitimate media source, daily newspapers, are less likely to believe two of the three 9/11 conspiracies. However, note that the relationship between most media sources and belief in 9/11 conspiracies is not statistically significant. This contradicts views that most conspiracy believers are highly marginalized or segmented in their media consumption, implied by the paranoid style theory.

On the other hand, these regressions did not allow us to test the impact of low levels of overall media consumption on conspiracy beliefs, as called for by **H3**, so we created an index of all eleven media variables and created dichotomous variables with cuts at the lowest 5% and the lowest 10% of media consumers.³⁰ When we crosstabulated the low media consumption variables with the three conspiracy theories and computed gammas, we found that both low media consumption

variables were associated with two of the theories: "government assists 9/11" and "military bombs Pentagon." The associations were strongest for the lowest 5% of media consumers, with 60.8% choosing that it was "somewhat" or "very likely" that the government assisted the 9/11 attacks and 38.3% choosing that it was somewhat or very likely that the military bombed the Pentagon. This supports **H3** drawn from the paranoid style theory's depiction of conspiracy believers as being least integrated into public political discourse.

Social and Political Factors

In this section we discuss the full regression models summarized by Table 3, focusing on similarities among the three conspiracy theories. The full regressions have a large number of predictor variables. Because any given variable is likely to share its explanatory power with several other variables we occasionally note variables that are just over $p < .05$, but focus our discussion on those where $p < .05$.

First, as predicted by **H4**, believers of all three 9/11 conspiracies are more likely to be members of less powerful social groups or categories. The particulars vary across 9/11 conspiracies, but racial minorities (African Americans, Hispanics, Asian American/Other), younger ages, lower education levels, and females have positive associations ($p < .05$) with at least one conspiracy theory even after controlling for a large number of media and social correlates. Gender is only associated with the Twin Towers conspiracy (women more likely to believe), age 18-24 is only (positively) associated with "government assists 9/11," and Hispanic ethnicity is only (positively) associated with "military attacks Pentagon." Lower education levels, Asian American/Other, and African American are positively associated with "government assists 9/11" and one of the other two conspiracy theories. Age 25-34 is positively associated with all three conspiracy theories.

To test **H5** we looked at education as a proxy of social class. Twin Towers has little relationship with education, but the other two conspiracy theories do. The pattern of relationships for the "military bombs Pentagon" theory more closely fits **H4** in that the rate of belief among the lowest level of education is more different from other education levels than is the rate for the highest level of education. A good way to see this is to switch the reference category to postgraduate and compare this to the Table 3 model which has "less than a high school degree" as the reference. With less than high school as the reference we see that postgraduates and college grads are statistically different and those with some college are close to statistically different ($p = .069$). With "postgraduate" as the reference (not shown), only those with less than high school are statistically different and the other three education levels are not close to having a statistically significant difference. This means that the big difference in rates of belief is between the lowest level of education and the rest.

However, when we look at "government assists 9/11," we find support for **H5** because it is the postgraduates that are most different from the other educational groups. The Table 3 model shows that with

less than high school as the reference only postgraduates are statistically different, but with postgraduate as the reference (not shown) less than high school, high school, and some college are statistically different, and college grads are very close to statistically different ($p = .051$). This is rather compelling evidence that for this conspiracy theory it is the most highly educated that resist or reject the theory, more than it is that those with the least educational capital are attracted to it.

Respondents most affected by recent economic problems are more likely to believe that the government assisted the 9/11 attacks, thus supporting **H6**. People who are less integrated into organized religion, measured by lower church attendance, are more likely to believe that the government assisted the 9/11 attacks. And unmarried respondents are more likely to believe the Twin Towers conspiracy. These last two support **H7** that those least integrated into mainstream social institutions will be more likely to believe conspiracy theories. Thus far, we have found some support for all of the first seven hypotheses.

All three of the conspiracies are aligned with mainstream political divisions (party affiliations). This is clearest for the “government assisted 9/11” theory, but is true of the other two as well. Keeping in mind that “strong Republicans” is the reference category, we see from the odds ratios that the “government assists 9/11” theory has a linear relationship with party identification with the likelihood of believing greatest among strong Democrats (3.037), leaning Democrats next (2.394), Independents next (1.519), etc.

Table 3 masks the relationship between party identification and belief in the other two theories. This is because strong Republicans are actually *more* likely to believe those theories than leaning Republicans. A better test would be to make all Republicans the reference category. When we did this, strong Democrats ($p = .013$) were more likely than Republicans to believe the military bombs Pentagon theory, and strong Democrats ($p = .003$), leaning Democrats ($p = .014$), almost the Independents ($p = .055$) were more likely than Republicans to believe Twin Towers. Thus, all three conspiracy theories were associated with mainstream political divisions and two of the three have associations with moderate political identities (leaning Democrats and Independents) compared to political opponents (Republicans). This is quite strong support for cultural sociology’s view that conspiracy thinking is a normal part of mainstream political conflict in this United States.

With all the social structural and political controls included, the only media sources that remain statistically related with the conspiracy theories are the blogs with “government assists 9/11” and “military bombs Pentagon” and the tabloids with “Twin Towers.” Yet social and political variables and media use are related. For example, newspaper reading and TV news watching increase with age. Is it then age or media use that accounts for attitudes about conspiracies? Our cross-sectional study cannot answer this question.

Media Influences after Social and Political Controls

While significance levels decline for the blogs between Tables 2 and 3, the odds ratios are almost the same, indicating that the strength of the relationship stays the same with controls. When you combine this robustness with the fact that relatively few people get news from blogs (12.1%) and the breadth of the support for the “government assists 9/11” theory (which is associated with reading blogs), blogs may play an important role in developing political conspiracy theories. Finally, we note that if we compare the pseudo-R squares between Tables 2 and 3 we see that the social and political variables have considerably more explanatory power than the media variables.

Conclusion

Analyzing a 2006 national survey, we measured several media, social, and political correlates of three conspiracy theories on the 9/11 attacks. We discussed two social scientific perspectives which converged on some hypotheses (with differing interpretations), but also generated several different hypotheses. As expected, we found evidence of robust positive associations between belief in conspiracy theories and higher consumption of non-mainstream media (blogs and tabloids), membership in less powerful groups, and personal economic decline. These findings support both the paranoid style and the cultural sociology theories of conspiracy theorizing.

We also found support for hypotheses that were uniquely generated by each of the two theories. The paranoid style theory expects that conspiracy belief will be highest among those least integrated into mainstream social institutions and into the public discourse of the mass media. We found support for both of these hypotheses with the unmarried, those not attending religious services, and the least consumers of a broad range of media associated with at least one of the conspiracy theories.

Cultural sociology’s unique hypotheses were also supported. Controlling for other media sources, the most legitimate media source (daily newspapers) was negatively associated with two of the three conspiracy theories, and another high legitimacy media (network TV news) was negatively associated with one conspiracy. Also, the pattern of associations between education levels and the “government assists 9/11” conspiracy fits the claim that the educational differences stem more from the highest status group dismissing conspiracy theories than the most marginalized embracing them. The paranoid style theory focuses primarily on the socially marginal to explain variation in conspiracy beliefs, and these findings demonstrate a need for future studies to focus more on the influence of the most legitimate media forms and dominant groups’ reactions to conspiracy beliefs. Likewise, at least two of the three conspiracy theories are associated with mainstream political divisions that pit even moderate Democrats and Republicans against each other.

Thus, our findings support both paranoid style and cultural sociology theories. Previous research has been done primarily within frameworks that are closer to the paranoid style theory. An important

example of this tendency is the convention of conducting multivariate analyses on *indexes* of conspiracy theories. This work has developed valuable concepts such as the distinction between “benign neglect” and “malicious intent” conspiracy theories, but it is geared towards uncovering social and psychological *commonalities* across theories, which will tend to confirm the paranoid style. But if the cultural sociology perspective is correct that conspiracy thinking is a widespread and chronic part of normal politics and that the plausibility of each conspiracy theory has a particular social logic, then future studies should focus more on the particularity of each conspiracy theory in its connections to social divisions and solidarities, political beliefs, and sources of dissemination. Finally, future surveys ought to include questions that probe in more detail into respondents’ particular media sources.

NOTES

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5. Wilbur Schramm and Richard F. Carter, "Effectiveness of a Political Telethon," *Public Opinion Quarterly* 23 (spring 1959): 121-26; Shirley A. Star and Helen McGill Hughes, "A Report on an Educational Campaign: The Cincinnati Plan for the United Nations," *American Journal of Sociology* 55 (January 1950): 389-400; Bernard R. Berelson, Paul F. Lazarsfeld, and William N. McPhee, *Voting* (Chicago: University of Chicago Press, 1954); Angus Campbell, Phillip E. Converse, Warren E. Miller, and Donald E. Stokes, *The American Voter* (NY: Wiley, 1960); Paul F. Lazarsfeld, Bernard Berelson, and Hazel Gaudet, *The People's Choice* (NY: Columbia University Press, 1948).

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11. Peter Knight, *Conspiracy Nation: The Politics of Paranoia in Postwar America* (NY: New York University Press, 2002), Ch 2.

12. Anita M. Waters, "Conspiracy Theories as Ethnosociologies: Explanation and Intention in African American Political Culture," *Journal of Black Studies* 28 (September 1997): 112-25; Skip Willman, "Spinning Paranoia: The Ideologies of Conspiracy and Contingency in Postmodern Culture," in *Conspiracy Nation: The Politics of Paranoia in Postwar America*, ed. Peter Knight (NY: New York University Press, 2002), 21-39; Fran Mason, "A Poor Person's Cognitive Mapping," in *Conspiracy Nation: The Politics and Paranoia in Post War America*, ed. Peter Knight (NY: New York University Press, 2002), 40-56; Knight, *Conspiracy Culture: From Kennedy to the X Files*; David Hellinger, "Paranoia, Conspiracy and Hegemony in American Politics" in *Transparency and Conspiracies: Ethnographies of Suspicion in the New World Order*, ed. Harry G. West and Todd Sanders (Durham, NC: Duke University Press, 2003), 204-32.

13. Peter Knight, "ILOVEYOU: Viruses, Paranoia and the Environment of Risk," in *The Age of Anxiety: Conspiracy Theory and Human Sciences*, ed. Jane Parish and Martin Parker (Oxford: Blackwell, 2001), 24.

14. Robert Alan Goldberg, *Enemies Within: The Culture of Conspiracy in Modern America* (New Haven: Yale University Press, 2001).

15. Knight, *Conspiracy Culture: From Kennedy to the X Files*, 24.

16. Goldberg, *Enemies Within: The Culture of Conspiracy in Modern America*, 256.

17. Fenster, *Conspiracy Theories: Secrecy and Power in American Culture*, 67.

18. Waters, "Conspiracy Theories as Ethnosociologies: Explanation and Intention in African American Political Culture," 115.

19. Hellinger, in "Paranoia, Conspiracy and Hegemony in American Politics," 208, says that conspiracy theories "introduce subjectivity and individualized forms of accountability into otherwise impersonal, structural forces that, according to social scientists, journalists, and historians, move our world."

20. This study is not a good test but we hypothesize that conversely, conspiracy theories that are more "free floating," that are not much connected with the major contours of social and political divisions, will have fewer followers, and believers will more closely fit the characteristics of a paranoid style. See Max Weber, "The Social Psychology of the World Religions," in *From Max Weber: Essays in*

Sociology, ed. and trans. by H. H. Gerth and C. Wright Mills (NY: Oxford, 1946); Ann Swidler, *Talk of Love: How Culture Matters* (Chicago: University of Chicago Press, 2001).

21. William Paul Simmons and Sharon Parsons, "Beliefs in Conspiracy Theories Among African Americans: A Comparison of Elites and Masses," *Social Science Quarterly* 86 (September 2005): 582-598.

22. Knight, *Conspiracy Nation: The Politics of Paranoia in Postwar America*.

23. Hellinger, in "Paranoia, Conspiracy and Hegemony in American Politics," quote on 213, studied the response of the *New York Times*, *Washington Post*, and *Los Angeles Times* to Gary Webb's story in the *San Jose Mercury News* linking profits from the sale of cocaine to Los Angeles street gangs to funding the CIA-organized Contras in Nicaragua, and concluded, "Instead of pursuing additional leads...coverage emphasized shortcomings in Webb's reporting, disparaged its diffusion on the Internet and 'call-in' radio shows and alleged that believers (i.e., African Americans) were more gullible than most other Americans."

24. We sample first by randomly selecting zip codes proportionate to population. We then select the NXX code (the first three digits of the seven-digit number) which has the most numbers serving this zip code. Then we randomly select the last four digits. If the first call does not result in a completed interview, we add one number and try again. Only after twenty attempts to obtain an interview from the selected NXX codes is the NXX rejected and a new zip code selected. Our experience is that this sampling strategy, which essentially stratifies by local geographic units (zip codes), has considerably less bias in terms of race and urban dwelling than random digit dialing. The advantage of this strategy in terms of geographic spread can be seen in the fact that in this survey we completed interviews in 92% of the U.S. telephone area codes.

25. Belief in "government assists 9/11" theory only required that key members of the Bush administration opportunistically failed to act on intelligence reports that al-Qaeda was planning attacks. This does, however, involve a major shift in the motivations attributed to the Bush administration, from possible neglect or incompetence to high immorality and treason. This imputed opportunism fits with evidence that Bush officials had intelligence warnings that al-Qaeda was planning to strike, lack of evidence of any alliance between the Iraqi regime and al-Qaeda, insider reports that Bush focused on the ties immediately after the 9/11 attacks, and the failure to find weapons of mass destruction, all of which certainly increased its plausibility.

26. Compare our alpha of .59 to the .78 reported by Goertzel for ten diverse conspiracies ranging from flying saucers to the government creating the AIDS virus in a lab. Ted Goertzel, "Belief in Conspiracy Theories," *Political Psychology* 15 (1994): 731-42. The differences are probably in part an artifact of an arguably flawed technique: on theoretical grounds Cronbach's alpha increases with more items, holding the mean correlation coefficient constant.

27. The alternative of treating the dependent variables as interval level measures and using OLS regression introduces bias similar to

“ceiling and floor” effects on the dependent variable that has led most analysts to switch to logistic or probit maximum likelihood methods when using dichotomous dependent variables. This bias is greatest when the dependent variables are highly skewed and at least two of our three dependent variables qualify as being highly skewed. See Christopher Winship and Robert Mare, “Regression Models with Ordinal Variables,” *American Sociological Review* 49 (August 1984): 512-25, for a comparison of the relative merits of using OLS vs. ordinal logistic or probit regression with ordinal dependent variables and a real world example of misleading results from using OLS regression with an ordinal dependent variable.

PLUM extends general linear modeling to ordinal level dependent variables. It uses a “cumulative odds” approach to measuring ordinality. Multivariate OLS regression estimates an intercept and beta weights for each of the independent variables which tell how much the predicted value of the dependent variable changes with each one unit increase in the independent variable controlling for the other independent variables. PLUM estimates each threshold between the ranked categories of the dependent variable (thresholds are analogous to the intercept in OLS regression) and a beta weight for each independent variable that is the change in the log odds for *each* of the thresholds. (To keep the beta weights as interpretable as possible, the PLUM formulas *subtract* the beta weights times independent variable scores from the threshold estimates.) For excellent introductions to PLUM, see Anna A. O’Connell, *Logistic Regression Models for Ordinal Response Variables* (Thousand Oaks, CA: Sage, 2006); and Marija J. Norusis, *SPSS 14.0 Advanced Statistical Procedures Companion* (Upper Saddle River, NJ: Prentice Hall, 2005), 69-90.

28. Because PLUM estimates the natural log of the cumulative odds, the threshold estimates are not easily interpretable. On the other hand, untransformed betas for each of the independent variables register the direction of the relationships between independent and dependent variables.

29. The odds ratios (the columns labeled “odds”) in Table 2 are exponentiations of the betas. As with logistic regression, these are much more easily interpretable measures of the magnitude of the relationships than log odds, but in ordinal regression they must be related to the thresholds to make sense. Ordinal regression models the impact of independent variables as “proportional” or “parallel” across thresholds of the dependent variables. Our dependent variables have three categories and thus two thresholds, one between unlikely and somewhat likely, and the other between somewhat likely and very likely. PLUM uses a “cumulative odds” method of modeling the thresholds. This means that for the first threshold PLUM models the log of the odds of respondents choosing “unlikely” and the second threshold models the cumulative log odds of respondents choosing “unlikely” or “somewhat likely.” The independent variables are assumed to have the same impact on each of the thresholds. This is an assumption that was tested for and confirmed in all the models presented here.

30. This was a simple summated index which added together each of the nine interval variables scores that range from 0 to 7 and conservatively coded "occasionally" as a two and "regularly" as a four with tabloids and newsmagazines.