

The Myth of Targeting Small, But Loyal Niche Audiences

Double-Jeopardy Effects In Digital-Media Consumption

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Higher attention traditionally has translated into higher advertising revenues for media. With a multitude of options to choose from on the Internet, however, advertisers often are tempted to turn away from outlets with mass appeal toward niche outlets, which often have loyal audiences. In this high-choice media environment, where people purportedly are consuming content per their personal preferences and attitudes, on what basis do audiences fragment? This study examines associations between users and usage of the 2,000 most popular websites in the United States. Results indicate that popularity predicts usage, and audience niches are less prevalent than commonly assumed. The findings are a cautionary tale for advertisers targeting a more loyal audience by dissociating with traditional big media, turning most of their spending toward smaller niche outlets.

INTRODUCTION

Digital media provide audiences with unprecedented choices and control over their media consumption. One common assumption is that people easily can find content aligned with their interests and thus no longer are forced to consume popular products. That premise aligns with long-tail theory, which, given unlimited consumer choice, the market share of niche products thus should increase, as demand for “hits,” or popular products, diminishes (Anderson, 2006). An implication for advertisers is to turn

their efforts away from popular outlets with mass appeal and focus on the more engaged and loyal audience niches.

This assumption, however, directly contradicts the law of double jeopardy (McPhee, 1963), according to which, barring a few exceptions, brands with lower market share have fewer buyers, who are also less loyal than buyers of popular brands. Patterns of traditional media consumption have remained consistent with double-jeopardy effects, even as choices have expanded. The author argues, drawing on the literature from media

Management Slant

- With expanded choices, advertisers are turning toward niche outlets with small, but presumably loyal and engaged audiences.
- The theory of double jeopardy, however, predicts that small audiences are generally disloyal and proposes that to grow engagement, brands need to grow their reach.
- This study’s findings confirm the presence of moderate double-jeopardy effects, refuting the myth of small but loyal audiences. The findings thus are a cautionary tale for advertisers who may look to dissociate completely from traditional big media and turn most of their spending toward smaller niche outlets to target a more engaged audience.

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economics and audience fragmentation, that double-jeopardy effects should hold for digital-media consumption as well.

The current study tested for double-jeopardy effects in Internet use by associating popularity and usage of the 2,000 most popular websites in the United States, sourced from comScore Media Metrix. These sites command the lion's share of all web traffic originating in the United States. The author analyzed the extent to which the number of users and the amount of usage related to each other for all websites in the sample, as well as for subsamples of several categories. The findings, which confirm the presence of moderate double-jeopardy effects, are a cautionary tale for advertisers who may look to dissociate completely from traditional big media and turn most of their spending toward smaller niche outlets to target a more engaged audience.

Audience Fragmentation:

Long-Tail and Double-Jeopardy Effects

In recent years, digital media have provided audiences unprecedented ways to consume media, manifesting in audience fragmentation (Webster, 2005; Webster and Ksiazek, 2012). One of the first prophecies on audience fragmentation was the seemingly intuitive long-tail theory, which posits that because of the limitless array of choices made available by the Internet, the market share of small, niche products will increase at the expense of the demand for popular products. "When mass culture breaks apart it doesn't re-form into a different mass. Instead, it turns into millions of micro cultures" (Anderson, 2006, p. 14).

Empirical studies have found some support for the general argument about expanding product choices. In one such study, researchers found that the tail availability in the online retail store may boost head sales by offering consumers the convenience of one-stop shopping for their hits and niche products (Goel, Broder, Gabilovich, and Pang, 2010). Another study analyzed the long-tail phenomenon on the Internet and showed that niche products that were not available through normal means accounted for the majority of sales (Brynjolfsson, Hu, and Smith, 2003). Other studies examined the long-tail phenomenon for video sales and found that video sales between 2000 and 2005 shifted from hits toward niche products (Elberse and Oberholzer-Gee, 2007). Investigating music sales, another study found that platinum record sales from 2002 to 2006 had dropped from 33 percent to 23 percent (Chellappa, Konsynski, Sambamurthy, and Shivendu, 2007).

Intuitive as it may be, the long-tail theory directly contradicts the theory of double jeopardy, an empirical generalization in marketing according to which, barring a few exceptions, brands with lower market share have fewer buyers, who are also less loyal than buyers of popular brands (McPhee, 1963). This thesis, which

challenges the highly intuitive idea of small but niche consumers, argues that consumers have less exposure to and familiarity with items that are less popular; the study used restaurant choices as an example (McPhee, 1963). Consumers' attitude about less popular items is based on their exposure to and familiarity with the item. Many empirical studies have supported patterns predicted by double jeopardy. Brand performance, in terms of consumer loyalty and repeat buying, thus is related directly to market share (Ehrenberg, Barnard, and Scriven, 1997).

An explanation for double-jeopardy effects is that consumers of small brands also likely consume larger brands. Buyers tend to concentrate most of their demand on the superstars because of their imperfect substitutability. This imperfect substitution causes small differences in the "talent" of the brand to be "magnified in larger earnings differences" (Rosen, 1981, p. 846). This further ensures that demand concentrates on the few most talented sellers or hits.

Double-Jeopardy Effects in Media Consumption

Double-jeopardy long since has been extended beyond consumer goods to explain media-audience behavior. Studies on television audiences in the 1980s consistently showed that prime-time shows that had higher ratings created more repeat viewing than lower rated shows. Less popular shows not only were viewed by fewer people but also were viewed less frequently than their more popular counterpart shows (Barwise, 1986; Ehrenberg and Wakshlag, 1987; Webster and Wang, 1992).

Related studies have found that "less popular (quality) newspapers were not only read by far fewer people, but were also read less frequently by those who did read them. Conversely, publications (popular) with substantially higher circulation were read more often" (Ehrenberg, Goodhardt, and Barwise, 1990, pp. 82–83). Despite a massive increase in the number of channels, television audiences up until the early 2000s continued to demonstrate usage patterns consistent with double-jeopardy effects (Sharp, Beal, and Collins, 2009).

Studies of digital-media use also offer support for double-jeopardy effects. Researchers examined usage of 236 of the most popular television channels and websites in the United States in 2009 and found high levels of audience overlap despite fragmentation, which suggests that most people who visited niche websites also visited popular websites (Webster and Ksiazek, 2012). Another group found that visitors to a niche white-supremacist website more likely than the general population would visit *The New York Times* website (Gentzkow and Shapiro, 2010).

Through analysis of film, television, publishing, and sports, one study concluded that consumers of obscure niche media also devoted most of their attention to content with broader appeal

Studies of digital-media use also offer support for double-jeopardy effects.

(Elberse, 2013). Users of niche content are probably more omnivorous in their media diets than generally assumed (Webster, 2014). As long as users overlap between niche and hits, double-jeopardy effects should hold for Internet use.

Another explanation for double-jeopardy effects in digital-media consumption is that in high-choice environments, consumers are unable to keep up with increasing product variety. Researchers analyzed a large movie-rental dataset and found that, despite the ever-expanding variety of movies and shows, mass-appeal movies and shows retained their importance (Netessine and Tan, 2016). This analysis suggested that new movie titles appeared much faster than consumers discovered them and found no evidence that niche titles satisfy consumer tastes better than hit titles. Rather, a small number of heavy users more likely would venture into niches than light users. Other studies reviewed the early literature testing the long-tail assumption and concluded that, despite the appeal of the argument, the data only partially supported the assumption (made by Anderson, 2006) that niche products are taking up more market share (Benghozi and Benhamou, 2010).

Small, but niche audience segments also do not appear to be financially lucrative, as one study concluded after examining the business models of 69 online-only niche journalism startups in 2011 and 2012 in 10 different countries (Cook and Sirkkunen, 2013). Similarly, using a survey, third-party traffic metrics, and content analysis, another group found that the traffic performance of online news sites was affected by long-tail forces, but the impact did not transfer to the news sites' financial performance (Huang and Wang, 2014).

Three factors drive audience fragmentation (Webster and Ksiazek, 2012), which may explain why patterns of Internet use continue to show double-jeopardy effects. First, with a steady growth in the number of media outlets and products competing for public attention, media providers are concentrating their marketing efforts on hits more than on niche products. Most big media companies still follow a blockbuster strategy and invest heavily in a few likely winners, because these yield the best payoffs. Second, user preferences are distributed such that many consumers, despite their niche interests, still tend to gravitate toward content with mass appeal (*e.g.*, Taneja, Wu, and Edgerly, 2018).

Third, media measures and algorithms also exercise an influence on what users ultimately consume and how providers adapt to and manage those shifting patterns of attention (Napoli, 2014; Webster, 2010). Web traffic to certain sites, for example, is increased by the

placement of a site in search engines and the purchase of advertising (pop-up advertisements, in-page banner advertisements, etc.). These measures have an inherent popularity bias (Webster, 2010)—that is, they drive more and more users toward content that is already popular to begin with, amplifying the inequality in cultural markets (Salganick, Dodds, and Watts, 2006). Google's page-rank algorithm is a classic example of that. Trends or trending topics on social media also achieve such effects.

For reasons explicated above, the author believes double-jeopardy effects will hold on average for patterns of web use.

H1: The web audience follows the law of double-jeopardy; that is, websites with more users also have high levels of usage.

Historically, a few genres have proven exceptions to the law of double jeopardy. One study found that ethnic-minority-language television stations (Spanish) and religious television stations in the United States did not follow the law of double jeopardy (Ehrenberg *et al.*, 1990). These stations had very low reach but very high average hours per viewer. Even on the Internet, people seem to stick to content that is in their preferred languages and pertains to relevant geography (Taneja and Webster, 2016).

On the basis of the literature, one would expect that religious websites and Hispanic websites might not follow patterns of use consistent with double jeopardy. Given the growing political polarization in the U.S. electorate and the growth in ideologically charged online news operations (Prior, 2013), however, news websites' usage could depart from patterns consistent with double-jeopardy effects. If people indeed stick exclusively to content that echoes their viewpoints, one would see more niche enclaves in news than for the web overall. On the contrary, if most viewers of these niche political sites also visit larger news sites, one would see patterns consistent with double jeopardy, even on news websites.

A recent study did not find evidence of double-jeopardy effects for news websites (Nelson and Webster, 2016). Another recent study, however, found, consistent with double-jeopardy effects, that not only were fake news websites unpopular, but their audiences were quite disloyal (Nelson and Taneja, 2018).

Just as for news, either effect is possible for sports. On the one hand, fans overwhelmingly may stick to their niche interests, but on the other hand, most may continue to consume what is popular at the time. These questions need empirical investigation, for which the author posed the following research question:

RQ1: If Internet consumption follows the law of double jeopardy and websites with more users have high levels of usage, does this hold uniformly for all categories?

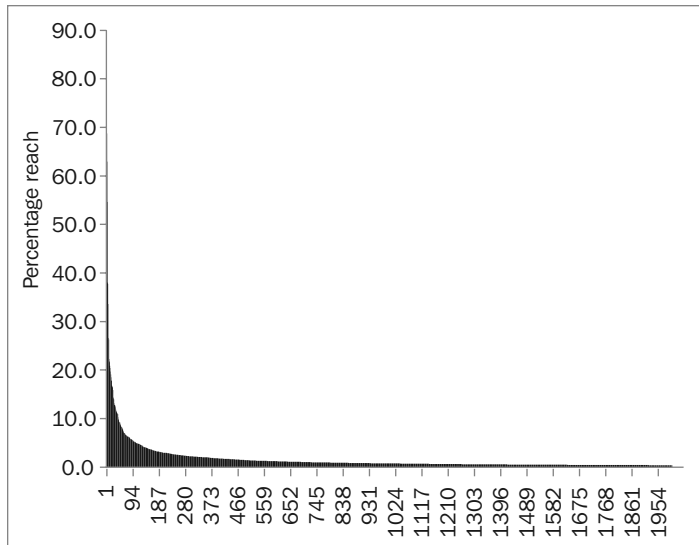


Figure 1 Percentage Reach of Top 2,000 Domains in the United States

METHOD

Data

Instead of using self-reports of media consumption, which are fraught with a variety of problems (Prior, 2009), the author decided to rely on passively collected reports of media exposure and used web traffic estimates from comScore Media Metrix. This digital-audience-measurement company measures people's Internet usage worldwide, integrating data collected from a sample of online recruited panelists, with site-centric census data from tagging web entities. The panel measurement is made up of a large group of Internet users (about one million people in the United States and two million people worldwide) with a software meter the company installs on the participants' devices.

From comScore, the author examined monthly data for the United States between January 1, 2014, and December 31, 2014 (on desktops only). Working with monthly data ensured both an adequate sample size in each month for each domain and enough observations over time for statistically reliable estimates. Given the recent popularity of Internet access via mobile devices, the author supplemented this analysis with multiplatform data, including both mobile and desktop access, for one month in 2018.

In each period, the author restricted the sample to include the 2,000 most popular domains in the United States, on the basis of unique users. This threshold ensured reliable data with low standard errors. Within these 2,000 sites, the author used the cutoff of a percentage of reach greater than or equal to 2 percent as the delineation between hit and niche content. This allowed for a fairly long tail: In the sample, the head comprised 349 websites, each with a reach greater than 2 percent, or 4,491,000 total monthly unique

visitors in the United States. The tail comprised 1,651 websites, each with a reach less than 2 percent. A graph based on January 2014 data clearly shows that the reach distribution of these 2,000 sites followed a long tail curve (See Figure 1). All other monthly graphs were similar.

Measures

Users. "Total unique visitors" is the estimated number of unduplicated individuals who visited any content of a website, category, channel, or application during the set reporting period. Unique visitors often are expressed as a site's reach, which is the percentage of the total universe of Internet users accounted for by the site's unique visitors.

Usage. The author operationalized usage for each website through three measures. "Average pages per visitor" was the average number of pages viewed during a month by persons visiting the website. "Average minutes per visitor" was the average number of minutes spent on the website per visitor. "Average visits per visitor" was the average number of visits made during the report month by those visiting the website (total visits/unique visitors).

The author relied on categorization by comScore to determine a website's genre (Taneja and Webster, 2016). Instead of analyzing each unique category of websites separately, the author made choices based on both substantive considerations and constraints posed by the data. The analysis accounts for three categories: lifestyle sites ($n = 150$), news and information sites ($n = 270$), and sports sites ($n = 40$). The author omitted categories that were not represented sufficiently. Each of these genres had a sufficient number of websites for statistical analysis, and all had enough niche websites that the author believed might not show double-jeopardy effects. Because comScore does not report the languages of the websites, the author was unable to model Hispanic websites as a separate category.

RESULTS

The author first calculated pairwise correlation analyses between users and usage. (See Tables 1–3 for the correlation coefficients between unique users and average visits per visitor, average minutes per visitor, and average pages per visitor, respectively). The author computed the correlations for each month separately. On average, the author found moderately high correlations between users and usage. The correlations between users and usage at the head of the sample (*i.e.*, within websites with a reach greater than 20 percent) were generally much larger than the correlations at the tail of the sample (*i.e.*, lower than 80 percent of the website by users). The author also ran correlations on subsamples of

Table 1 Correlation of U.S. Total Unique Visitors versus Average Pages Viewed

Statistic	Overall	Head	Tail	Lifestyle	Sports	News
Average	.2667	.5050	.0481	.0345	.2856	.1173
SD	.024	.148	.158	.192	.239	.164
Min	.238	.142	-.013	-.052	-.016	.043
Max	.309	.5948	.551	.644	.903	.637
<i>n</i>	2,000	350	1,650	150	46	272

Table 2 Correlation of U.S. Total Unique Visitors versus Average Time Spent

Statistic	Overall	Head	Tail	Lifestyle	Sports	News
Average	.3213	.5478	.0155	.0080	.2509	.1468
SD	.016	.034	.011	.023	.129	.051
Min	.302	.472	-.0003	-.019	.074	.078
Max	.360	.598	.037	.052	.409	.2219
<i>n</i>	2,000	350	1,650	150	46	272

Note: Correlations are significant at $p < .01$.

Table 3 Correlation of Total Unique Visitors versus Average Visits per Visitor

Statistic	Overall	Head	Tail	Lifestyle	Sports	News
Average	.3716**	.62415**	.1234**	.0008**	.1871**	.1173**
SD	.014	.013	.225	.035	.051	.052
Min	.344	.603	.002	-.040	.0688	.035
Max	.4077	.644	.605	.071	.2339	.232
<i>n</i>	2,000	350	1,650	150	46	272

** $p < .01$.

websites of three categories—lifestyle, news, and sports—which were much lower than for all sites on average. Overall, the low standard deviations indicate that there was little variability in the monthly correlations.

After calculating the correlations, the author built regression models to further test the associations between users and usage while simultaneously controlling for website categories and time. The dependent variables were the usage variables at the average user level—that is, average page views per user and the average minutes per user. The independent variables were

- the total unique visitors,
- total visits, and
- dummies for news, lifestyle, sports, and months.

The author transformed all of the amount and count variables by taking their logarithms to the base 10 (*i.e.*, unique users, total

and average page views, total and average minutes) or square roots, for total visits, to symmetrize their distributions. Base 10 revealed more symmetric distributions than taking natural logs (See Tables 4 and 5 for results summary).

The author introduced predictors in succession to build a series of models. In the first model (See Tables 4 and 5, Model 1), the parameter estimate for unique (log) was positive and significant, as expected. The author then introduced the category dummies for news, lifestyle, and sports sites. The parameter estimated for the logarithm of unique users (unique (log)) in the second model remained similar but slightly stronger, whereas the parameters for news and lifestyle categories became negative, and the parameter for sports was only slightly positive.

In the next model (Model 3), the author introduced months as additional covariates through time dummies. The parameters of the other dependent variables were negative, except for sports, which had a weak positive but significant estimate. All of them did little

Table 4 Regression Models to Explain Double Jeopardy in Long Tail with Log Average per Viewer as the Dependent Variable

Statistic	Model 1		Model 2		Model 3		Model 4	
	β	T	β	T	β	T	β	T
Unique (log)	.191**	24.89	.203**	26.65	.205**	26.85	.033**	5.85
News			-.198**	-24.05	-.199**	-24.10	-.227**	-37.28
Lifestyle			-.128	-12.02	-.128**	-12.02	-.089**	-11.33
Sports			.058	3.14	.057	3.10	-.131**	-9.48
Months					†	†	†	†
Visits (root)							.504**	140.72
Control								
Intercept	0.315**	12.21	0.310**	12.17	0.301**	10.96	0.063**	3.23
Adjusted R ²	.025		.052		.053		.482	

Note: N = 24,000. The dependent variable is the logarithm of average total pages viewed in millions.

† After adding monthly data as an independent variable, the author found that there were no significant effects on beta values of the independent variables and controls.

**p < .01.

Table 5 Regression Models to Explain Double Jeopardy in Long Tail with Log Average Time Spent as the Dependent Variable

Statistic	Model 1		Model 2		Model 3		Model 4	
	β	T	β	T	β	T	β	T
Unique (log)	.262**	33.07	.264**	33.27	.266**	33.49	.083**	14.23
News			-.084**	-9.82	-.084**	-9.87	-.115**	-18.60
Lifestyle			-.125**	-11.28	-.125**	-11.28	-.084**	-10.43
Sports			.167**	8.61	.166**	8.57	-.035**	-2.47
Months					†	†	†	†
Visits (root)							.536**	147.14
Control								
Intercept	-.052*	-1.98	-.040	-1.51	-.058	-2.05	-.309*	-14.83
Adjusted R ²	.043		.055		.056		.503	

Note. N = 24,000. The dependent variable is the logarithm of average total minutes in millions.

† After adding monthly data as an independent variable, the author found that there were no significant effects on beta values.

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

to reduce the magnitude or significance of the parameter associated with unique users (log). The author derived the effect sizes for all independent and dependent variables for each model by back-transforming the logged parameter estimates into normal form. In Model 1 (See Tables 4 and 5), for instance, for the average page views, for every 1 percent increase in unique users, the average page views would increase by 19 percent ($1.01 \times .191$) (See Tables 6 and 7 for effect sizes corresponding to the models in Tables 4 and 5).

In general, regardless of the dependent variable used and the covariates employed, the author found that unique visitors had a positive association with usage. With an increase in a website's unique users, one would expect a significant increase in the website's average page views or the average time spent per user. The author expected lifestyle and news sites to have a slightly lower number of page views or time spent (both average and aggregate)

when unique visitors were held constant but expected sports to have a slightly higher number (See Tables 4 and 5).

When the author controlled for average visits, however, the effect for sports also reversed (See Model 4 in Tables 4 and 5). This suggests that average visits per user moderated the effect of category. In other words, a visit preceded page views or time spent, and the latter were contingent on how often a user visited a website, which was more often for some sports websites than news or lifestyle. The fact that the correlation of visits with unique users was higher for sports than both lifestyle and news supports this intuition.

These correlations and the regression models overall suggest that the number of unique users was related positively to usage of the website. Hypothesis 1 thus is supported. For the three individual categories studied, the author found no evidence for

Table 6 Effect Sizes Corresponding to Models in Table 5

Model	Unique (Log)	News	Lifestyle	Sports	Visits (Root)	Month
3	0.205	0.632	0.744	1.140	n/a	†
4	0.033	0.592	0.814	0.729	2.191	†

Note: † After adding monthly data as an independent variable, the author found that there were no significant effects on beta values.

Table 7 Effect Sizes Corresponding to Models in Table 6

Model	Unique (Log)	News	Lifestyle	Sports	Visits (Root)	Month
3	1.845	0.824	0.749	0.749	1.465	†
4	1.210	0.767	0.824	0.922	2.435	†

Note: † After adding monthly data as an independent variable, the author found that there were no significant effects on beta values.

Table 8 Users and Usage of Specific Sites

Website	Genre	% Reach	Average Minutes	Average Visits	Average Views
Facebook	Social media	80	113	22	226
Yahoo	Portal	63	303	3	132
CNN	News	43	31	5	11
<i>New York Times</i>	News	31	4	2	13
ESPN	Sports	22	12	3	28
Major League Baseball	Sports	13	5	2	17
<i>Slate</i>	News	6	4	2	3
NBA	Sports	4	6	2	7
Breitbart News	News	2	7	2	18
FIFA	Sports	2	18	2	9
PGA Tour	Sports	1	4	2	10
<i>Mother Jones</i>	News	1	3	4	3
RealClearPolitics	News	1	3	2	13
Baidu	Search engine	0.9	41	6	27
UOL	Portal	0.3	73	3	47
Mail.ru	Portal	0.7	37	17	15
Hotstar	Portal	0.2	112	3	68
Average	–	15.9	45.6	4.8	38.1

Source: comScore Media Metrix U.S., multiplatform, July 2018.

or against double jeopardy for lifestyle sites but moderate evidence in favor of double-jeopardy effects for news and sports. Although the author found that users predicted usage to a lesser extent for these sites than they did for all sites, he found no effect of niche-based loyalties, either. If the latter were the case, one would have seen negative associations between users and usage for these sites. Overall, double jeopardy (higher popularity drives higher usage) was supported better for more popular sites (the top 20 percent sites at the head of the distribution) than for less popular sites.

The analysis presented so far was done with data from desktops only (including laptops). Given the recent growth in mobile

Internet access, the author conducted some basic analysis with comScore multiplatform data, which included data from both computers and mobile devices, including both mobile web and apps from July 2018. The author found that the effect of including mobile Internet use in the data was consistent with the double-jeopardy effects he found with the desktop-only data. The correlation between users (unique visitors) and usage (visits) was .434, and the correlation between users and time spent was .393; both numbers were slightly higher than that observed for desktop data alone.

To provide more context to these correlations, the author reports the user and usage statistics for July 2018 (which include both

mobile and desktop browsing) for a select sample of 12 popular as well as niche websites, chosen across categories (See Table 8). The author also included four non-English-language websites, with content focusing on countries outside the United States (See Table 8). As is explained later, these emerged as notable exceptions to the double-jeopardy rule.

Finally, the author reports the duplication in viewers for a select sample of visitors to 14 sites of varying popularity (See Table 8). As the author later elaborates, this analysis helps discern the gains advertisers would achieve in campaign reach from advertising in niche websites in addition to popular websites.

DISCUSSION

With the mainstreaming of cultural consumption on digital media and the burgeoning abundance of choices, many shifts in patterns of cultural consumption have been predicted. These challenge the law of double jeopardy, an underappreciated empirical generalization about consumer behavior. Motivated by this tension, the current study theoretically argues for why one would expect Internet use patterns to be consistent with double-jeopardy effects. The author empirically associated usage with popularity for a large slice of U.S. Internet consumption and found moderate support for the double-jeopardy thesis. In this section, the author dwells further on his findings and suggests implications for advertising to audiences in the digital-media marketplace.

First, despite the study's overall support, the author found that double-jeopardy effects were much stronger in the head rather than the tail or, in other words, stronger among popular sites. The presence of the long tail does reduce somewhat the magnitude of double-jeopardy effects compared with those observed in traditional media, but the author did not witness evidence of the niche enclaves of parallel cultures that the long-tail theory and many new-media scholars predict. That is, even at the tail of Internet consumption, correlations, although very weak, were positive. The findings indicate that these correlations were driven by immensely popular sites with massive reach and large visitations (See Tables 1–3).

The drop in the reach of websites was far more dramatic than the corresponding drop in time spent once one moves past the handful of extremely popular sites (See Table 8). This is consistent with what prior work has observed: "Large and small brands differ greatly in how many people buy them, but not in how loyal they are" (Ehrenberg and Goodhardt, 2002, p. 40).

Examining the correlations for each of the categories, the author found that for lifestyle, the correlations were weak compared with all websites but still positive. This is because, on average, out of 2,000 sites, only 10–15 lifestyle sites lay in the head, but about 145–150 lifestyle sites lay in the tail. News, with about 70 websites in

the head and about 200 websites in the tail, had higher correlations than lifestyle.

This study's result thus differs from another recent study that found a much lower correlation between users and usage for news websites (Nelson and Webster, 2016). That study included all news websites ($n = 816$) measured by comScore; its dataset thus had a very short head and a disproportionately long tail increasing the measurement error. Finally, on average, there were about 12 sports sites in the head, whereas the tail contained about 34 sites, and therefore the correlation between users and usage was higher than for both news and lifestyle.

The largely popular sports sites include ESPN and Fox Sports, which had

- 31,613,000 unique visitors and 23,349,000 unique visitors, respectively;
- 39.7 and 15.9 average pages viewed, respectively; and
- 57.4 and 17.2 average minutes spent, respectively.

In the tail, one sees websites such as PGA Tour, which was ranked in the bottom 5 percent of the 2,000 sites. In most months, the site had roughly 1,006,000 unique visitors, with 19.6 average page views and 15.5 average minutes spent.

It is interesting to note, however, that during April, when the Masters Golf Tournament runs, PGA Tour had an increase in the number of unique visitors (1,055,000) and had 22.8 average page views and 16.81 average minutes spent. This is an example of how month affected the betas of sport in Model 3 of the regression tables. What confirms double jeopardy is the increase in usage of the PGA Tour website in April, accompanied by a corresponding increase in users. Thus, at a time when golf was relatively more popular, not only were more people flocking toward the sport, but they were paying more attention to it. On the contrary, in a routine month, when only so-called "golf loyalists" would visit the site, one sees not only a lower user number but also lower usage. These month-on-month variations are consistent with double-jeopardy effects.

As already noted, many people (sometimes exclusively) browse the web through mobile devices. The author found that results for double-jeopardy effects were consistent when mobile data were included. A plausible explanation is that the average user has a relatively small number of apps on his or her device, most of which likely are very popular apps that correspond to popular websites, such as Facebook, Twitter, Tumblr, Pinterest, Weather App, CNN, and ESPN. For an average user with 30 apps on his or her device, 15 likely are niche, but 15 likely are popular apps that most people have installed. These popular apps most likely have the most users

The author found that results for double-jeopardy effects were consistent when mobile data were included.

and usage. The remaining apps, conversely, likely reflect people's niche interests; hence, when seen in the aggregate, their usage should be low on average, especially because there are so many of these niche apps.

Notable Exceptions

As already noted, the literature repeatedly has found exceptions to the double-jeopardy rule. In the author's data, foreign-focused websites are one such exception. Unlike television, most websites are accessible globally. Users in the United States thus can access websites such as the Spain-based *El Mundo* or the Brazilian portal UOL. The appeal of these websites in the United States likely is limited to diasporic audiences (Taneja and Webster, 2016).

The author identified several such websites in this study's dataset. In July 2018, *Indiatimes.com*, the website of the leading Indian newspaper *Times of India*, had a reach of 1.4 percent, but an average user spent 13 minutes. Likewise, for the Chinese search giant Baidu, its reach was 0.8 percent, but the average user spent 27 minutes on the site. Both these sites, whose reach corresponds well to the size of the Indian and Chinese diasporas in the United States, have time spent disproportionate to their reach. This pattern is quite similar to the one earlier studies have observed for Spanish-language television channels in the United States. The four websites in this study that were clear exceptions to double-jeopardy rule (See Table 8) focused on China, Brazil, India, and Russia respectively.

Explaining Double Jeopardy

The literature suggests that double jeopardy is an outcome of a statistical selection, whereby if people had to choose between a well-known brand and its lesser-known (perfect) substitute, more people obviously would choose the well-known brand (Ehrenberg and Goodhardt, 2002). Well-known brands, however, do not become well-known randomly. Several factors that shape digital-media consumption and help certain websites accumulate larger audiences than others also accentuate double-jeopardy effects.

First, media measures influence what users consume. In an online environment, because of the easy visibility of popularity measures among users, popular content tends to gain more

popularity even more easily than it did on traditional media. This is the popularity bias that most digital-media measures and recommender systems possess (Webster, 2010).

Second, the product variety online expands at a much faster pace than users can keep up with. By one estimate (Qmee, 2013), 70 new web domains are added every single minute, which translates to 100,800 domains every day. The size of the Internet is expanding so rapidly that domains are appearing much faster than users can discover them, and hence few users likely will consume these niche sites. Users more likely will stick with popular sites, even if these new domains fall under the category of website they are consuming. This trend suggests that double-jeopardy effects will continue.

Additionally, websites that want big payoffs in popularity usually focus on topics that appeal to mass audiences. Sports sites such as ESPN focus mainly and heavily on football, baseball, college football, hockey, and basketball. All of these sports have mass appeal. These sites do not churn out articles as frequently on sports such as curling or swimming because neither have mass appeal but instead are niche sports. This is also why PGA Tour is considered a niche: Golf lacks mass appeal in the traditional sense.

Likewise, for news sites, CNN focuses on stories of mass appeal in the United States overall. *National Post*, conversely, is a Canadian news website that fewer people, primarily Canadian Americans, consume; most do so in addition to consuming CNN. The Internet in itself could be considered to be a kind of online water cooler, where users meet and interact. This phenomenon also drives usage of popular sites. Websites that produce content with mass appeal more often have their content posted and shared on social-media sites. Because of this, this content generates more clicks, thus leading to even more usage.

The author found that popular sites drove overall correlations. What about these sites makes them so popular? When looking at websites such as Facebook, CNN, and ESPN, the author found that their content is updated constantly. In contrast, websites in the tail of the data seem to have stagnant content—even if it is niche content. A hypothetical example is someone's blog on orchid tending and care. There is only so much one can write about orchid tending in one day or week. It only takes an average person a few minutes to read said post. Once the user has read it, what else on that site is there to do? Such a site would have not only a small user base but also smaller usage.

On the basis of the rankings of the sites, the sites with new content were more popular, especially if they had customizable platforms. A good example of this is the popular site Reddit. The site is organized into areas of niche interests called sub-Reddits, which include topics such as television, books, and even a sub-Reddit on

Table 9 Duplication of Viewing

Website	Reach (%)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Yahoo	63.0		47	36	31	17	7	3	2	2	2	2	2	0	0
2. CNN*	42.1	71		43	33	18	9	4	2	2	2	2	2	0	0
3. <i>The New York Times</i>	29.9	75	61		35	21	12	5	3	2	3	3	3	1	1
4. ESPN	26.4	73	53	40		32	10	5	4	3	4	3	3	1	1
5. Major League Baseball	14.7	74	53	43	58		11	6	5	4	6	4	4	1	1
6. <i>Slate</i>	5.7	79	69	64	48	27		8	7	2	5	7	5	2	2
7. Breitbart News	2.3	81	67	63	54	41	20		8	4	9	8	12	6	3
8. FiveThirtyEight	1.5	79	62	64	73	46	27	13		10	10	10	8	1	4
9. FIFA	1.5	63	49	38	54	36	8	6	10		4	3	3	1	4
10. PGA Tour	1.5	79	69	55	72	63	21	14	10	5		7	7	3	4
11. <i>Mother Jones</i>	1.4	80	71	71	53	39	30	13	11	4	8		14	3	5
12. RealClearPolitics	1.2	80	71	66	61	45	25	23	10	3	9	16		4	5
13. Infowars	0.3	73	60	58	69	60	33	51	8	6	18	12	19		14
14. U.S. Tennis Association	0.3	81	74	75	69	60	42	28	22	25	20	29	22	15	
Average	13.7	76	62	55	55	39	20	14	8	5	8	8	8	3	3

Note: Columns 1–14 represent the horizontal (row) percentage—that is, the percentage of visitors who visited a website (in rows) who also visited the corresponding website in the column. The bottom row is the average of each column.

orchid tending. Reddit is an example of changing content but also of how customizable hit websites are now. Likewise, sites such as Facebook, Pinterest, and Twitter allow users to pick and choose who and what to follow, and this determines the type of content people get exposed to.

On digital media, niche loyalties thus could play out within larger platform websites. If someone is interested in orchid tending, he or she can subscribe to or like any type of Facebook page, Twitter handle, or Pinterest board that discusses orchid tending. This further increases the discrepancy of total unique visitors, time spent, and page views between niche sites in the tail and hits in the head. The customizability of these hit sites should allow for less time in the niche sites, furthering double-jeopardy effects. The nature of data analyzed in the current study is unable to account for the effects of such features.

Industry Implications

Having argued the case for double-jeopardy effects and the plausible mechanisms underlying these usage patterns, the author now reflects on some implications for the field of advertising, media, and marketing. First, for media planners, the presence of double-jeopardy effects suggests that websites that have high reach, owing to higher time spent per user and higher average visits, also provide a higher frequency as a bonus (see also McDowell and Dick, 2005). In other words, advertising on popular sites should enable advertisers not only to build reach but also to

achieve frequency—the latter is conventionally seen as the appeal of niche outlet audiences. Unless campaigns aim for an exceptionally high frequency, niche websites are not recommended.

On the basis of July 2018 multiplatform data, for example, adding PGA Tour to a campaign plan with ESPN only provided an incremental reach of 0.5 percent. This is because in that month, 72 percent of all users who visited PGA Tour also visited ESPN. For a fixed number of impressions, therefore, advertising on ESPN could suffice for both reach and frequency objectives. Likewise, adding a niche news site such as *Mother Jones* for a plan with *The New York Times* provides virtually no additional reach.

To illustrate these inordinately high levels of duplication between visitors of select niche websites across categories and popular sites, the author constructed a table (See Table 9) adapted from duplication-of-purchase tables common in marketing research (See Mansfield, Romaniuk, and Sharp, 2003). Because the websites are sorted both vertically and horizontally in descending order of their reach (popularity), one observes, moving left to right or top to bottom, that as the website's popularity reduces, visitors' duplication with popular sites increases.

To illustrate that progression, a fairly high number of visitors to niche news websites, such as Breitbart News, *Mother Jones*, or *Slate* also visit CNN. By contrast, the duplication between any pair of two hit websites, such as Yahoo, CNN, and ESPN, is much lower. Advertisers therefore should limit their spending on niche properties, such as PGA Tour or FIFA, without compromising

on high-reach ones, such as ESPN. That said, for certain brands, websites such as PGA Tour and FIFA could be excellent fits. It would be valuable to budget for some spending on these sites (in addition to large websites), especially when their content resonates with the brand.

A second implication is for media brands, in this case website owners trying to grow their audiences or attract advertisers. In doing so, they often focus on exclusive niches of audiences with specialized interest. Consider the PGA Tour website directing its efforts at golf loyalists to increase their frequency of visiting and time spent on the website. On the basis of this study's findings, the author reiterates what many seminal studies on the topic have stated repeatedly, that this focus on growing loyalty alone likely will not be fruitful. "The constraint is that marketing inputs cannot increase purchase frequency (loyalty) by much or for long, unless the brand's penetration is also increased and usually by much more" (Ehrenberg and Goodhardt, 2002, pp. 40–41). The recommendation that follows is that it is imperative to direct one's marketing effort at growing reach if one has to grow loyalty, both in terms of behavior (*i.e.*, repeat visitors) and in terms of attitudes.

These results have implications for the currency status of various audience measures. Traditionally, audience attention measured as exposure—usually measured as number of impressions, a product of reach and frequency through third-party systems, such as Nielsen and comScore—has served as an advertising currency. Theories such as the long tail, however, have revived interest in these small audience niches among content producers and advertisers alike. Sections of the industry consequently have emphasized alternative currency measures based on audience engagement, to replace exposure (see Napoli, 2011). Nielsen Social, a rating based on aggregated interactions that a piece of content has had across Twitter, Facebook, and other popular social-media platforms, is the latest instantiation of these alternative currencies.

Advertisers—especially those marketing to niches—may consider evaluating online-media properties purely on their ability to engage with an audience on the basis of the social-media interactions these generate. The author's analysis, however, suggests that even in digital media the overall popularity of the outlet, measured by reach, and therefore exposure-based metrics, will remain important currencies in evaluating the advertising worth of media properties. The author therefore recommends a continued focus on reach, especially if high reach likely will increase time spent and thus actually could increase overall engagement, even measured through alternative metrics.

In conclusion, it would suffice to say that although there always will be some demand for niche entities on the Internet, popular sites generate the most usage. Sites that focus on a few popular

topics or products in their category will benefit most. Audiences will continue to fragment even more. Because of double-jeopardy effects, attracting a large audience remains necessary to gain their loyalty. **JAR**

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REFERENCES

- ANDERSON, C. *The Long Tail: How Endless Choice Is Creating Unlimited Demand*. New York: Random House Business Books, 2006.
- BARWISE, T. P. "Repeat Viewing of Prime-Time TV Series." *Journal of Advertising Research* 26, 4 (1986): 9–14.
- BENGOZI, P., and F. BENHAMOU. "The Long Tail: Myth or Reality?" *International Journal of Arts Management* 12, 3 (2010): 43–53.
- BRYNJOLFSSON, E., Y. J. HU, and M. D. SMITH. "Consumer Surplus in the Digital Economy: Estimating the Value of Increased Product Variety at Online Booksellers." *Management Science* 49, 11 (2003): 1580–1596.
- CHELLAPPA, R., B. KONSYNSKI, V. SAMBAMURTHY, and S. SHIVENDU. "An Empirical Study of the Myths and Facts of Digitization in the Music Industry." Workshop on Information System Economics, December 8–9, 2007, Montreal, Canada.
- COOK, C., and E. SIRKKUNEN. "What's in A Niche? Exploring the Business Model of Online Journalism." *Journal of Media Business Studies* 10, 4 (2013): 63–82.
- EHRENBURG, A., and G. GOODHARDT. "Double Jeopardy Revisited, Again." *Marketing Research* 14, 1 (2002): 40.
- EHRENBURG, A., and J. WAKSHLAG. "Repeat-Viewing with People Meters." *Journal of Advertising Research* 27, 2 (1987): 9–13.
- EHRENBURG, A., N. BARNARD, and J. SCRIVEN. "Differentiation or Salience." *Journal of Advertising Research* 37, 6 (1997): 7–14.
- EHRENBURG, A., G. J. GOODHARDT, and T. P. BARWISE. "Double Jeopardy Revisited." *Journal of Marketing* 54, 3 (1990): 82–91.

- ELBERSE, A. *Blockbusters: Hit-Making, Risk-Taking and the Big Business of Entertainment*. Melbourne: Scribe, 2013.
- ELBERSE, A., and F. OBERHOLZER-GEE. "Superstars and Underdogs: An Examination of the Long Tail Phenomenon in Video Sales" (Working Paper 07-015), Harvard Business School, 2007.
- GENTZKOW, M., and J. M. SHAPIRO. "Ideological Segregation Online and Offline." Working Paper 15916, National Bureau of Economic Research, 2010.
- GOEL, S., A. BRODER, E. GABRILOVICH, and B. PANG. "Anatomy of the Long Tail: Ordinary People with Extraordinary Tastes." Paper presented at the conference of the Association of Computing Machinery, New York, February 4-6, 2010.
- HUANG, J. S., and W.-C. WANG. "Application of the Long-Tail Economy to the Online News Market: Examining Predictors of Market Performance." *Journal of Media Economics* 27, 3 (2014): 158-176.
- MANSFIELD, A., J. ROMANIUK, and B. SHARP. "Competition among International Tourist Destinations: Applying the Duplication of Purchase Law." Paper presented at the meeting of the Australia and New Zealand Marketing Academy, Adelaide, Australia, December 1-3, 2003.
- MCDOWELL, W. S., and S. J. DICK. "Revealing a Double Jeopardy Effect in Radio Station Audience Behavior." *Journal of Media Economics* 18, 4 (2005): 271-284.
- MCPHEE, W. N. *Formal Theories of Mass Behavior*. New York: Free Press, 1963.
- NAPOLI, P. M. *Audience Evolution: New Technologies and the Transformation of Media Audiences*. New York: Columbia University Press, 2011.
- NAPOLI, P. M. "Automated Media: An Institutional Theory Perspective on Algorithmic Media Production and Consumption: Automated Media." *Communication Theory* 24, 3 (2014): 340-360.
- NELSON, J. L., and H. TANEJA. "The Small, Disloyal Fake News Audience: The Role of Audience Availability in Fake News Consumption." *New Media & Society* 20, 10 (2018): 3720-3737.
- NELSON, J. L., and J. G. WEBSTER. "Audience Currencies in the Age of Big Data." *International Journal on Media Management* 18, 1 (2016): 9-24.
- NETESSINE, S., and T. TAN. "Is Tom Cruise Threatened? Using Netflix Prize Data to Examine the Long Tail of Electronic Commerce." Wharton Business School, University of Pennsylvania, 2016.
- PRIOR, M. "The Immensely Inflated News Audience: Assessing Bias in Self-Reported News Exposure." *Public Opinion Quarterly* 73, 1 (2009):130-143.
- PRIOR, M. "Media and Political Polarization." *Annual Review of Political Science* 16, 1 (2013): 101-127.
- QMEE. (2013). "Online in 60 Seconds" [Infographic]. Retrieved from <http://blog.qmee.com/wp-content/uploads/2013/07/Qmee-Online-In-60-Seconds2.png>
- ROSEN, S. "The Economics of Superstars." *American Economic Review* 71, (1981): 845-858.
- SALGANIK, M. J., P. S. DODDS, and D. J. WATTS. "Experimental Study of Inequality and Unpredictability in an Artificial Cultural Market." *Science* 311 (2006): 854-856.
- SHARP, B., V. BEAL, and M. COLLINS. "Television: Back to the Future." *Journal of Advertising Research* 49, 2 (2009): 211-219.
- TANEJA, H., and J. G. WEBSTER. "How Do Global Audiences Take Shape? The Role of Institutions and Culture in Patterns of Web Use." *Journal of Communication* 66, 1 (2016): 161-182.
- TANEJA, H., A. X. WU, and S. EDGERLY. "Rethinking the Generational Gap in Online News Use: An Infrastructural Perspective." *New Media and Society* 20, 5 (2018): 1792-1812.
- WEBSTER, J. G. "Beneath the Veneer of Fragmentation: Television Audience Polarization in a Multichannel World." *Journal of Communication* 55, 2 (2005): 366-382.
- WEBSTER, J. G. "User Information Regimes: How Social Media Shape Patterns of Consumption." *Northwestern University Law Review* 104, 2 (2010): 593-612.
- WEBSTER, J. G. *The Marketplace of Attention: How Audiences Take Shape in a Digital Age*. Cambridge, MA: The MIT Press, 2014.
- WEBSTER, J. G., and T. B. KSIAZEK. "The Dynamics of Audience Fragmentation: Public Attention in an Age of Digital Media." *Journal of Communication* 62, 1 (2012): 39-56.
- WEBSTER, J. G., and T.-Y. WANG. "Structural Determinants of Exposure to Television: The Case of Repeat Viewing." *Journal of Broadcasting and Electronic Media* 36, 2 (1992): 125-136.