Holier Than Thou: Partisan Gap in Consumption of Pornography Online*

Lucas Shen† Gaurav Sood‡

December 30, 2022

Abstract

Consumption of pornography has been blamed for a variety of societal ills, including the rise in misogyny, sex crimes, and the coarsening of culture. Using passively collected browsing data from YouGov, we investigate how much pornography Americans consume online. We find that there is a sharp positive skew in the consumption of pornography, with a small number of users consuming lots of pornography and most consuming small amounts. The median American Internet user today spends X minutes per month consuming pornography, visiting Y sites per month; the 95th percentile is X and Y respectively. Lastly, we find that, unlike previous research (MacInnis and Hodson, 2015; Edelman, 2009), which relied on ecological inference, Democrats consume slightly more pornography than Republicans.

*You can download the replication materials from https://github.com/soodoku/adult

†Lucas is a Research Fellow at Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, at the National University of Singapore, lucas@lucasshen.com

‡Gaurav can be reached at gsood07@gmail.com

Consumption of pornography is associated with a variety of disturbing attitudes, beliefs, emotions, and behaviors. Consuming pornography is associated with support for violence against women (Hald, Malamuth and Yuen, 2010; Malamuth, Hald and Koss, 2012; Donnerstein, 1984), belief in rape myths (Foubert, Brosi and Bannon, 2011), increased gender role conflict, lesser sexual satisfaction (Szymanski and Stewart-Richardson, 2014; Stewart and Szymanski, 2012), poorer relationship quality (Szymanski and Stewart-Richardson, 2014; Szymanski, Feltman and Dunn, 2015), and sexually risky behaviors such as engaging in paid sex, and having extramarital sex (Wright and Randall, 2012). A lot of popular pornography also contains a healthy dose of violence. An analysis of popular pornography revealed that 88.2% of the scenes contained physical aggression, and 48.7% verbal aggression (Bridges et al., 2010). For all these reasons, there are serious concerns about consumption of pornography.

In this paper, using passive browsing data from YouGov, we investigate how much pornography Americans consume online. We find that there is a sharp skew in the consumption of pornography, with a small set of users consuming a large chunk of pornography. The median American Internet user spends X minutes per month (Y% of their time online) consuming pornography, visiting Y unique sites; the 95th percentile for time spent consuming pornography online is YY minutes.

We also use the data to shed light on an age-old debate — whether Democrats consume more pornography than Republicans or vice versa. Both parties claim the higher moral ground. And in surveys both parties think consumption of pornography is abhorrent, plausibly for different reasons. Unlike previous research, which relied on ecological inference, we find that Democrats consume slightly more pornography online than Republicans (MacInnis and Hodson, 2015; Edelman, 2009). Adjusting for background covariates like age, gender etc., further mutes the differences.

Data

We use passively observed browsing data from a YouGov survey to measure the consumption of adult content. YouGov maintains a large online panel recruited through a variety of methods. It uses matched sampling to survey respondents: The provider first draws a random sample from a large synthetic representative sampling frame, finds respondents that match the sampled individuals from its panel, and invites them to take a survey. For details and validation, see Rivers and Bailey (2009). For this particular sample, panelists also provided de-identified access to their web browsing activity via passive metering software installed voluntarily on their computers. The software, called RealityMine, can be uninstalled at any point and captures visited web URLs independent of the type of browser or browser-specific privacy settings.[1] At the time this data was made available in June, 2022, YouGov had recruited 1,200 individuals to the web tracking panel, which is currently marketed as YouGov Pulse. The passive metering component of this particular opt-in panel adds a layer of selectivity to the sampling process.

Overall, we have over 6 million web browsing records by the 1,200 individuals over the one-month period of June 2022. For each web browsing activity, we have information on the domain (e.g., wikipedia.org), the time of visit, and the time spent on the domain. Individuals are spread out over the US states and regions (see Figure SI 1.7). Our data also comes with characteristics for the 1,200 individuals. We have information on their party identification, which we use to code their partisanship. We verify this using information on whether they voted for the Republican or Democratic candidate in the 2020 presidential election (see Table SI 1.5). Most individuals reported their party identification, with 120 individuals who did not respond or say not sure/don't know. Out of the 1,080 individuals

[1]RealityMine does not save passwords or financial transactions, and personally identifying information is screened out by the survey provider.

who report party identification, the majority 82 percent lean either Republican or Democrat. The remaining 18 percent identify as independent. In the analyses focusing on splits by party, we use only those who lean either Republican or Democrat. We also have information on birth year, gender, race, and education level. Table SI 1.5 shows differences in age, gender, and race by party identification. We use these information in our analyses of pornography consumption below.

In supplementary analyses, we leverage the `piedomains` package to classify which domains are pornographic sites using **what goes under-the-hood here**. We show that our results do not change using the alternative classifiers..[2]

Measuring Consumption of Porn Online

For YouGov, we only observe data from a single machine per person. Our analyses should hold if people exhibit similar consumption patterns across devices. If that is too implausible an assumption, then we must decide on the direction of error and how it affects our analyses. We think it is likely that people would be less likely to search for pornography on machines on which they have installed passive monitoring software (though the data are de-identified). If that is so, our estimates are a lower bound of net consumption of pornography per machine. As the number of devices per person is increasing, all these numbers need to be adjusted. Next, is measurement error correlated with ideology? We have little reason to expect that, but we have no capacity to check if it is true. Thus, for current purposes, we assume that it is so.

We code pornographic content at the domain level. Our main analysis depends on the domain classifications that come with YouGov data. We code domains that YouGov categorizes as "Adult" as porn sites. These include "Adult" (e.g., xvideos.com), "Adult, Business"

[2]We also supplement our analyses using other open-source packages like

(e.g., onlyfans.com), and "Adult, Entertainment" (e.g., hentainfox.com). A fraction of web browsing activity, approximately 84k or 1.3 percent, are to porn sites. See Figure SI 1.1 and Figure SI 1.2 for the top visited domains. Certain domains are not predominately for porn consumption and we remove these from the classification of porn sites. For instance, urbandictionary.com and 4chan.org are "Adult" but not classified as porn site.[3] In the Appendix, we use a keyword classifier and a machine learning classifier. As you will see, all of these methods consistently show the same thing. All of this ignores pornography available via more conventional channels. For instance, some pornography is consumed on sites like Tumblr.

The consumption of pornography is concentrated. Traffic to the top 10 most frequented porn sites more than 12 times that of traffic to all other porn sites outside the top 10 (approximately 109 minutes vs 9 minutes, see Figures SI 1.3 to SI 1.4). For individuals who consume porn, close to 80 percent of their traffic to porn sites is concentrated in just one porn site (Figure SI 1.5). The next most frequented pornographic site constitutes less than 20 percent of total traffic. This behavior does not differ substantially party.

The majority of individuals do not consume pornography online. On average, approximately 32 percent of individuals consumed pornography online—these are individuals who consumed visited any pornography site in the sample period. In Figure SI 1.6, splitting by party does not reveal any substantial differences. We confirm this in Table SI 1.6, which reports differences in characteristics between individuals who do and do not consume pornography online. The average consumer of pornography online spends about approximately 230 minutes (standard deviation of 576 minutes), which is 10.6 percent of total browsing activity (standard deviation of 17.9 percent). These come from 233 visits to pornographic sites

[3]We manually check the top adult domains in our sample to remove obvious false positives of porn sites. Generally, if there is graphic nudity on the landing page or if the site is some form of erotica, we classify the site as a porn site.

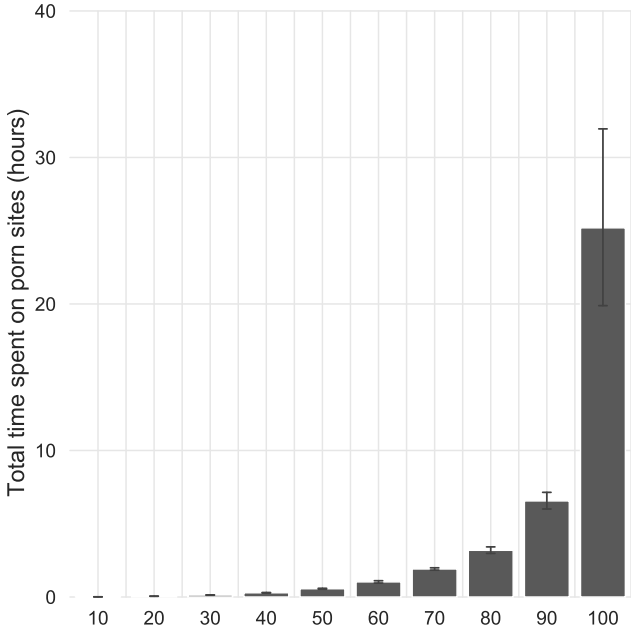
(standard deviation of 550), which is 6.9 percent of visits to all sites (standard deviation of 11.2 percent).

Based on individual characteristics, the key differences between consumers and non-consumers of pornography online is age and gender. Consumers of pornography online are younger and are more likely to be male. In addition to splits by pornography consumption, these differences can also be observed in the splits by party. Table SI 1.5 reports that individuals identifying as Republicans tend to be older and more likely to be male, in addition to some differences by regions in which they reside. In the regression analyses (**?in SI or main text?**) where we estimate whether pornography consumption differs by party, we account for these individual characteristics.

Regression Estimates for Porn Consumption by Party

Our primary dependent variables of interest are: total time spent on pornographic sites and the proportion of time spent on pornographic sites. (In the appendix, we show similar analysis for visits.)

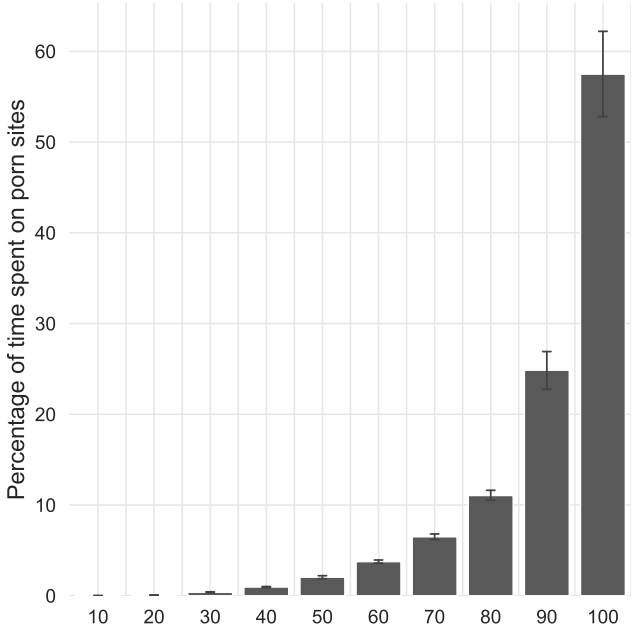
Figure 1: Distribution of Consumption of Pornography Online



Notes: Figure shows the number of hours spent on porn sites by individuals who consumed pornography in the sample period. Individuals are split into deciles with each bin containing approximately the same number of individuals. Height of bars indicate mean of each bin. Capped vertical bars are 95% confidence intervals. See Table SI 1.1 for the more tabulated values.

To formally test for these differences, we ran quantile regression, regressing the duration on party.

Figure 2: Percentage of Time Spent on Pornographic Sites



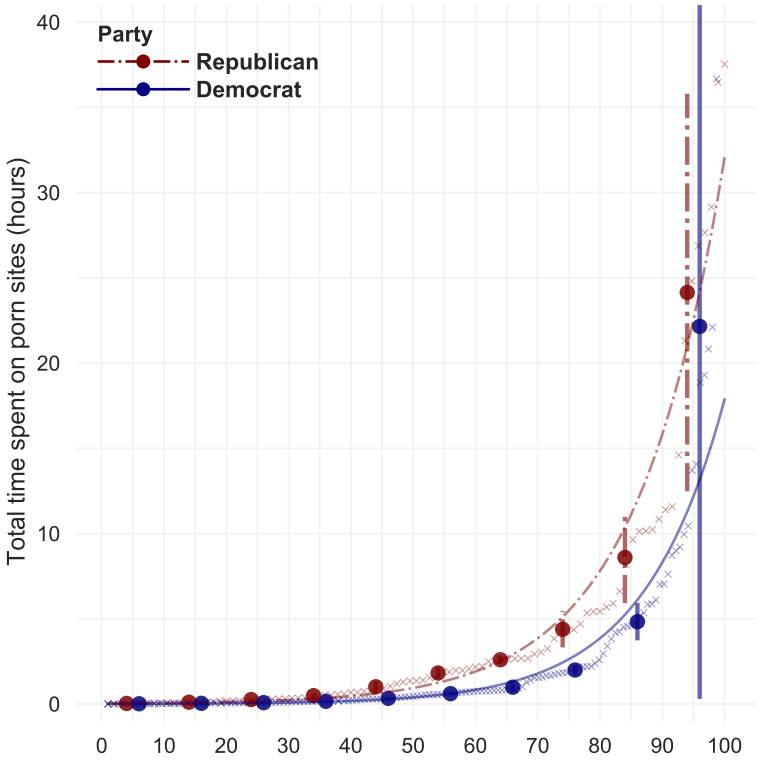
Notes: Figure shows the proportion of time spent on porn sites by individuals who consumed pornography in the sample period. Individuals are split into deciles with each bin containing approximately the same number of individuals. Height of bars indicate mean of each bin. Capped vertical bars are 95% confidence intervals. See Table SI 1.2 for the more tabulated values.

These minor differences (or lack of differences) could be because of the demographic differences we see across the party. This lack of difference also partly stems from a lack of difference in the tendency to consume pornography (see Figure SI 1.6). Next, we control for immutable characteristics like age and gender to see if that adjustment changes the picture much. Given how concentrated pornographic consumption is in our data, it is unlikely to make much of a difference and that is indeed what we find.

Discussion

Consumption of pornography is also problematic from a religious perspective. Christian theologians believe that consumption of pornography leads people away from purity and

Figure 3: Distribution of Consumption of Pornography Online by Party

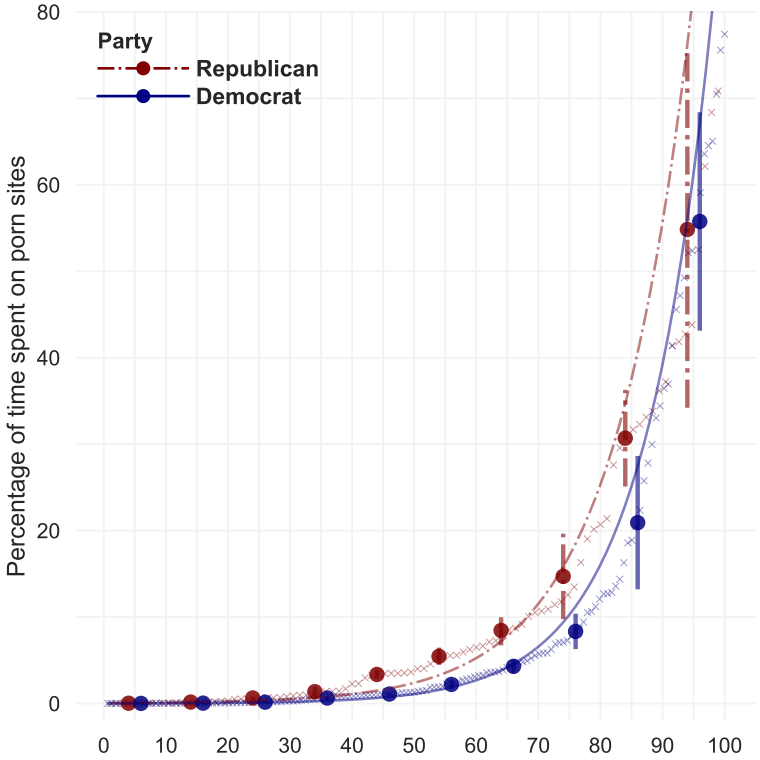


Notes: Figure shows splits by party and by percentiles for the total time spent on porn sites for individuals in the sample who consumed pornography in the sample period. Round markers and the corresponding vertical lines indicate the mean and 95% confidence intervals for each bin. The x symbols indicate actual individuals based on their percentiles. See Table SI 1.3 for the more tabulated values.

hence should be avoided.[4].

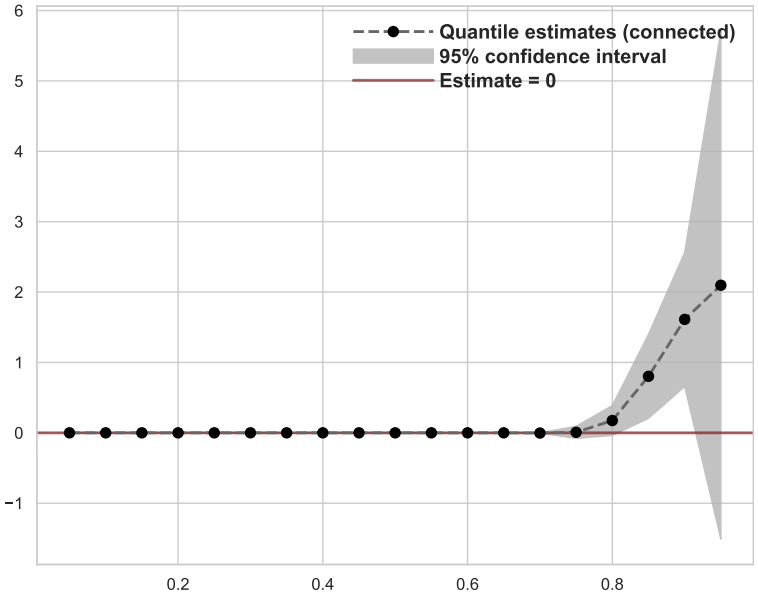
[4] https://www.churchofjesuschrist.org/study/manual/help-for-pornography-users/effect-of-pornography

Figure 4: Percentage of Time Spent on Pornographic Sites by Party



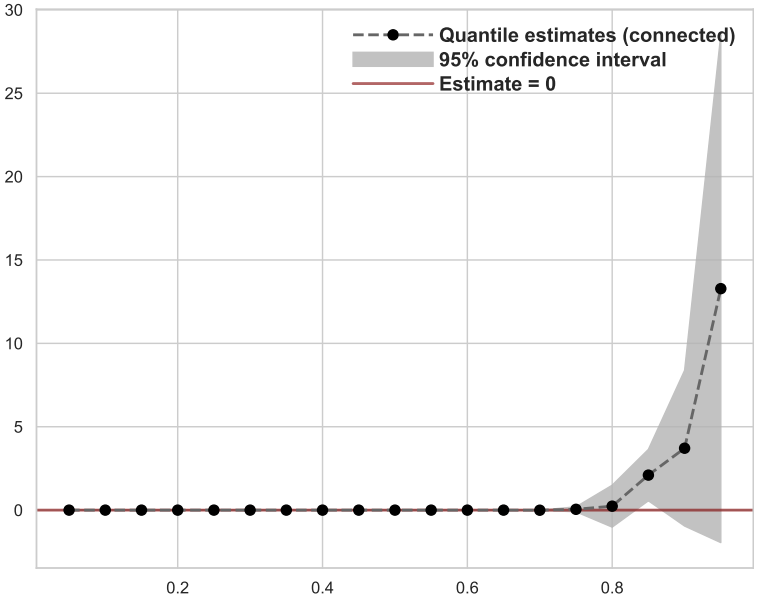
Notes: Figure shows splits by party and by percentiles for the proportion of time spent on porn sites for individuals in the sample who consumed pornography in the sample period. Round markers and the corresponding vertical lines indicate the mean and 95% confidence intervals for each bin. The x symbols indicate actual individuals based on their percentiles. See Table SI 1.4 for the more tabulated values.

Figure 5: Quantile Estimates–Hours Spent on Porn Sites by Party



Notes: Dependent variable is the number of hours individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. 95% confidence intervals constructed from robust standard errors. See Figure SI 2.1 for the same plot controlling for individual characteristics.

Figure 6: Quantile Estimates–Percentage of Time Spent on Porn Sites by Party



Notes: Dependent variable is the percentage of time individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. 95% confidence intervals constructed from robust standard errors. See Figure SI 2.4 for the same plot controlling for individual characteristics.

References

Bridges, Ana J, Robert Wosnitzer, Erica Scharrer, Chyng Sun and Rachael Liberman. 2010. "Aggression and sexual behavior in best-selling pornography videos: A content analysis update." *Violence Against Women* 16(10):1065–1085.

Donnerstein, Edward. 1984. "Pornography: Its effect on violence against women." *Pornography and sexual aggression* pp. 53–81.

Edelman, Benjamin. 2009. "Markets Red Light States: Who Buys Online Adult Entertainment?" *The Journal of Economic Perspectives* 23(1):209–220.

Foubert, John D, Matthew W Brosi and R Sean Bannon. 2011. "Pornography viewing among fraternity men: Effects on bystander intervention, rape myth acceptance and behavioral intent to commit sexual assault." *Sexual Addiction & Compulsivity* 18(4):212–231.

Hald, Gert Martin, Neil M Malamuth and Carlin Yuen. 2010. "Pornography and attitudes supporting violence against women: Revisiting the relationship in nonexperimental studies." *Aggressive Behavior* 36(1):14–20.

MacInnis, Cara C and Gordon Hodson. 2015. "Do american States with more religious or conservative populations search more for sexual content on google?" *Archives of sexual behavior* 44(1):137–147.

Malamuth, Neil M, Gert Martin Hald and Mary Koss. 2012. "Pornography, individual differences in risk and men's acceptance of violence against women in a representative sample." *Sex Roles* 66(7-8):427–439.

Rivers, Douglas and Delia Bailey. 2009. Inference from matched samples in the 2008 US national elections. In *Proceedings of the joint statistical meetings*. pp. 627–639.

Stewart, Destin N and Dawn M Szymanski. 2012. "Young adult women's reports of their male romantic partner's pornography use as a correlate of their self-esteem, relationship quality, and sexual satisfaction." *Sex Roles* 67(5-6):257–271.

Szymanski, Dawn M, Chandra E Feltman and Trevor L Dunn. 2015. "Male Partners' Pereived Pornography Use and Women's Relational and Psychological Health: The Roles of Trust, Attitudes, and Investment." *Sex Roles* 73(5-6):187–199.

Szymanski, Dawn M and Destin N Stewart-Richardson. 2014. "Psychological, relational, and sexual correlates of pornography use on young adult heterosexual men in romantic relationships." *The Journal of Men's Studies* 22(1):64–82.

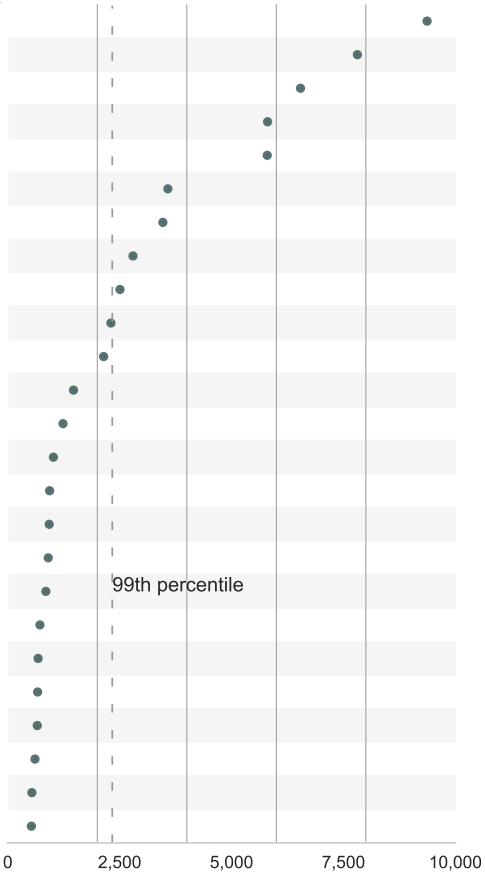
Wright, Paul J and Ashley K Randall. 2012. "Internet pornography exposure and risky sexual behavior among adult males in the United States." *Computers in Human Behavior* 28(4):1410–1416.

Supporting Information

SI 1 Supplementary Descriptive Figures and Tables

Figure SI 1.1: Top 25 Porn Sites

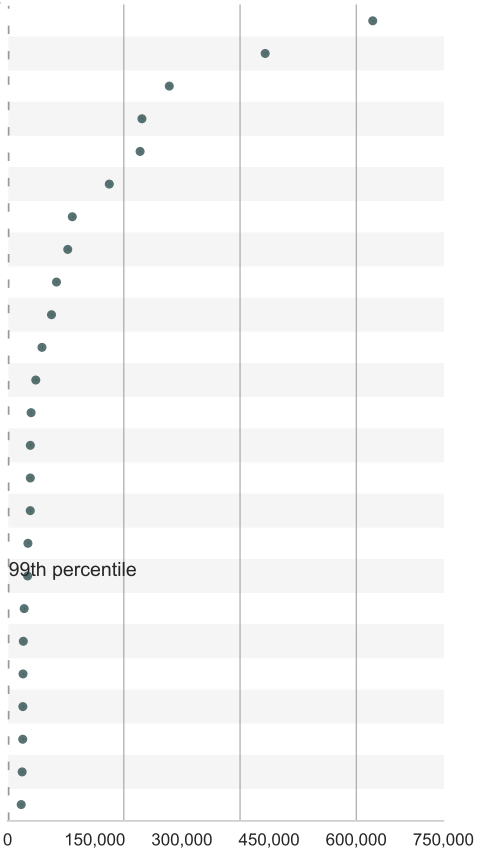
Site	Category (via YouGov)	Hours	Visits
xvideos.com	Adult	311	9,368
pornhub.com	Adult	184	7,811
xnxx.com	Adult	207	6,540
onlyfans.com	Adult, Business	53	5,805
rule34.xxx	Adult	35	5,797
fetlife.com	Adult, Business	10	3,577
xhamster.com	Adult	104	3,465
chaturbate.com	Adult	23	2,798
motherless.com	Adult	29	2,507
literotica.com	Adult	47	2,305
myfreecams.com	Adult, Streaming Media	20	2,142
hentaifox.com	Adult, Entertainment	5	1,468
imagefap.com	Adult	8	1,235
gelbooru.com	Adult	3	1,020
spankbang.com	Adult	9	935
youporn.com	Adult	32	926
stripchat.com	Adult	9	904
livejasmin.com	Adult	3	851
porzo.com	Adult	1	719
pornone.com	Adult	9	678
pornpics.com	Adult	2	667
dirtyleague.com	Adult	10	659
nhentai.net	Adult, Entertainment	4	608
hentairead.com	Adult, Entertainment	6	539
manyvids.com	Adult, Shopping	5	528



Notes: Table shows the top 25 porn sites that individuals visit in the sample period. Porn sites are as categorized by YouGov (see the Data section). The *Hours* column are the total number of hours that individuals in the sample spent on the site. The *Visits* column is total number of visits by individuals in the sample to the site. Sites to the right of the vertical dashed are the top 1 percent of porn sites.

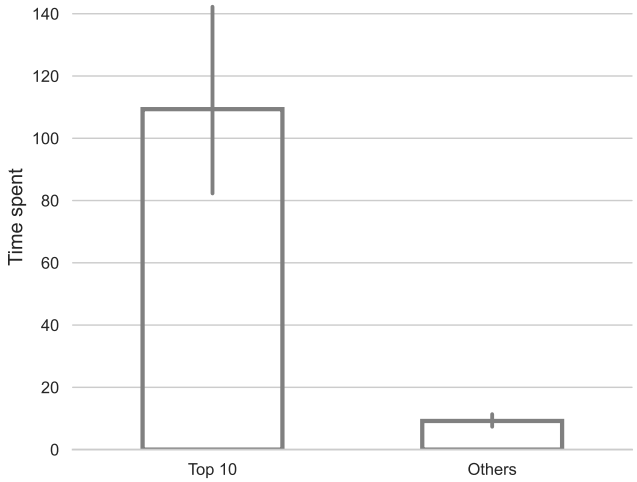
Figure SI 1.2: Top 25 (Non-Porn) Domains

Site	Category (via YouGov)	Hours	Visits
google.com	Search Engines and Portals	4,135	628,361
facebook.com	Business, Social Networking	5,701	443,263
google.com	Chat and Instant Messaging	2,664	278,233
bing.com	News and Media, Search Engines and Portals	1,471	231,155
youtube.com	Entertainment, Streaming Media	4,449	227,981
yahoo.com	Chat and Instant Messaging	1,661	174,977
twitter.com	Social Networking	1,112	111,320
amazon.com	Shopping	1,401	103,487
decipherinc.com	Business	250	84,099
live.com	Chat and Instant Messaging	1,014	75,495
reddit.com	Messageboards and Forums, News and Media	736	59,141
instagram.com	Media Sharing, Social Networking	359	48,440
google.com	Translation Sites	83	40,400
msn.com	News and Media, Streaming Media	287	39,085
yahoo.com	Entertainment, News and Media	506	39,042
aol.com	Chat and Instant Messaging	327	38,964
clarity.ms	Business, Information Technology	91	34,935
microsoftonline.com	Information Technology	195	34,335
ebay.com	Shopping	333	28,497
wikipedia.org	Education	377	26,998
walmart.com	Shopping	324	26,489
samplicio.us	Business	84	26,155
privatelink.de	Business	33	26,006
sentry.io	Business, Information Technology	61	24,969
capitaloneshopping.com	Shopping	110	23,353



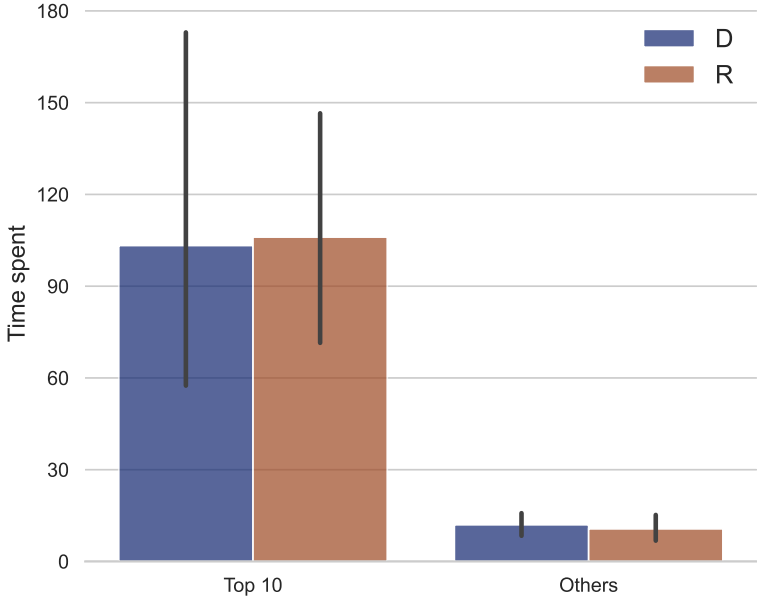
Notes: Table shows the top 25 non-porn sites that individuals visit in the sample period. The *Hours* column are the total number of hours that individuals in the sample spent on the site. The *Visits* column is total number of visits by individuals in the sample to the site. Sites to the right of the vertical dashed are the top 1 percent (of non-porn sites).

Figure SI 1.3: Traffic to Top 10 Porn Sites



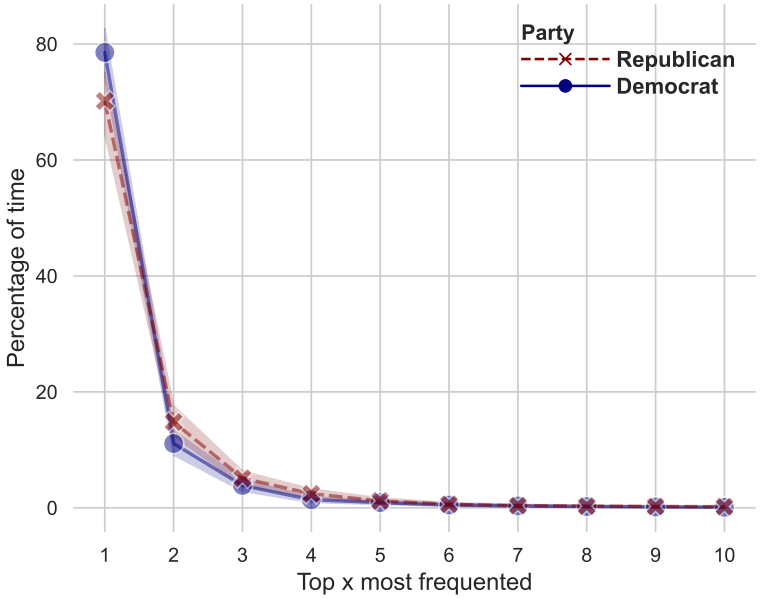
Notes: The Top 10 bar indicates traffic to the top 10 porn sites in the data (see Figure SI 1.1). The Others bar indicates traffic to all other porn sites outside of the top 10. The y-axis is the total time spent on porn sites, averaged across individuals. Time units is hours. Vertical bars are 95% confidence intervals from bootstrapped standard errors (n = 1,000).

Figure SI 1.4: Traffic to Top 10 Porn Sites by Party



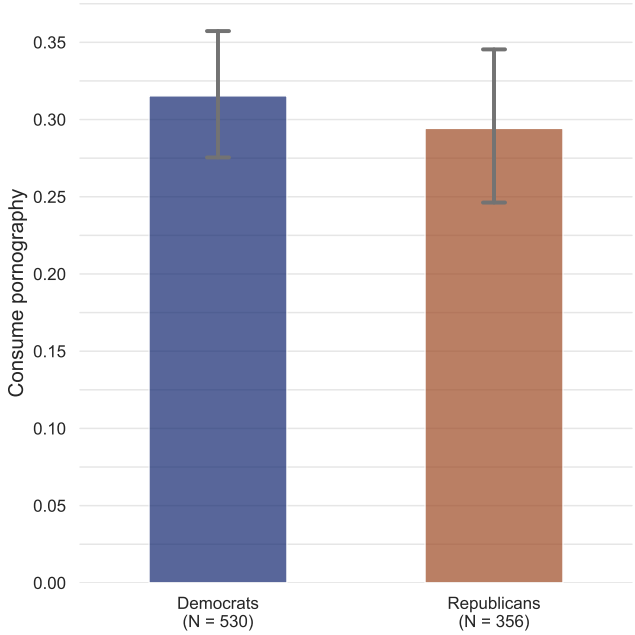
Notes: The Top 10 bar indicates traffic to the top 10 porn sites in the data (see Figure SI 1.1). The Others bar indicates traffic to all other porn sites outside of the top 10. The y-axis is the total time spent on porn sites, averaged across individuals. Time units is hours. Vertical bars are 95% confidence intervals from bootstrapped standard errors (n = 1,000).

Figure SI 1.5: Traffic to Top x Porn Sites by Party



Notes: Figure shows concentration of porn consumption based on individuals' most frequented porn sites. Shaded areas are 95% confidence intervals from bootstrapped standard errors (n = 1,000).

Figure SI 1.6: Porn Consumption by Party



Notes: Figure shows proportion of individuals in the sample who ever consumed pornography in the sample period by party. Capped vertical bars are 95% confidence intervals from bootstrapped standard errors (n = 1,000).

Table SI 1.1: Distribution of Consumption of Pornography Online

Percentile	Hours
0.00	0.00
0.10	0.03
0.20	0.08
0.30	0.19
0.40	0.41
0.50	0.73
0.60	1.47
0.70	2.38
0.80	4.53
0.90	10.09
0.95	20.04
0.96	22.04
0.97	26.76
0.98	29.10
0.99	40.76
1.00	93.96

Notes: Table shows key percentiles (each of the ten deciles plus quantiles at the right tail) and their corresponding values for the duration (hours) spent by individuals who consumed pornography in the sample period. See Figure 1 for the plot.

Table SI 1.2: Percentage of Time Spent on Pornographic Sites

Percentile	% time
0.00	0.0
0.10	0.0
0.20	0.1
0.30	0.7
0.40	1.3
0.50	3.1
0.60	4.8
0.70	8.4
0.80	14.3
0.90	36.4
0.95	58.5
0.96	63.5
0.97	64.8
0.98	69.8
0.99	74.5
1.00	87.5

Notes: Table shows key percentiles (each of the ten deciles plus quantiles at the right tail) and their corresponding values for the duration (hours) spent by individuals who consumed pornography in the sample period. See Figure 2 for the plot.

Table SI 1.3: Distribution of Consumption of Pornography Online by Party

	Hours	
Percentile	**Republicans**	**Democrats**
0.00	0.00	0.00
0.10	0.06	0.02
0.20	0.18	0.05
0.30	0.33	0.11
0.40	0.68	0.23
0.50	1.36	0.46
0.60	2.18	0.74
0.70	3.02	1.55
0.80	5.48	2.74
0.90	11.17	7.03
0.95	25.43	13.84
0.96	27.06	18.28
0.97	27.93	19.92
0.98	30.03	22.03
0.99	36.53	45.97
1.00	37.54	90.46

Notes: Table shows splits by party and by key percentiles (each of the ten deciles plus quantiles at the right tail) for the duration (hours) spent by individuals who consumed pornography in the sample period. See Figure 3 for the plot.

Table SI 1.4: Percentage of Time Spent on Pornographic Sites by Party

	% time	
Percentile	**Republicans**	**Democrats**
0.00	0.0	0.0
0.10	0.1	0.0
0.20	0.5	0.1
0.30	0.9	0.3
0.40	2.3	0.9
0.50	4.0	1.3
0.60	6.6	3.2
0.70	10.7	5.7
0.80	20.8	12.3
0.90	36.8	35.8
0.95	46.4	53.4
0.96	54.8	58.6
0.97	63.3	64.0
0.98	68.7	65.0
0.99	71.9	72.9
1.00	87.5	77.4

Notes: Table shows splits by party and by key percentiles (each of the ten deciles plus quantiles at the right tail) for the duration (hours) spent by individuals who consumed pornography in the sample period. See Figure 4 for the plot.

Table SI 1.5: Differences in Porn Consumption and Individual Characteristics by Party

			Panel A. Measures of porn consumption				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Subgroups	NA	Total	Democrat	Republican	P-val	SMD
n			1200	530	356		
Consume porn, n (%)	No	65	774 (68.2)	343 (68.5)	235 (70.6)	0.569	0.046
	Yes		361 (31.8)	158 (31.5)	98 (29.4)		
Minutes, mean (SD)		65	73.4 (342.1)	58.8 (331.7)	75.8 (277.4)	0.423	0.056
% of time, mean (SD)		65	3.4 (11.2)	2.9 (10.7)	3.5 (11.1)	0.486	0.049
Visits, mean (SD)		65	74.3 (328.9)	59.9 (298.9)	73.7 (271.1)	0.489	0.048
% of visits, mean (SD)		65	2.2 (7.1)	1.7 (6.1)	2.3 (7.1)	0.238	0.085
			Panel B. Individual characteristics				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Subgroups	NA	Total	Democrat	Republican	P-val	SMD
n			1200	530	356		
Party (7-point), mean (SD)		120	3.6 (2.2)	1.7 (0.8)	6.3 (0.8)	<0.001	5.670
2020 Pres. election, n (%)	Other/No vote	170	270 (26.2)	97 (20.2)	47 (14.1)	<0.001	3.296
	Vote Biden		419 (40.7)	369 (76.9)	8 (2.4)		
	Vote Trump		341 (33.1)	14 (2.9)	278 (83.5)		
Age, mean (SD)		0	49.5 (18.1)	48.7 (17.8)	55.4 (18.0)	<0.001	0.373
Gender, n (%)	Female	0	635 (52.9)	312 (58.9)	174 (48.9)	0.004	0.201
	Male		565 (47.1)	218 (41.1)	182 (51.1)		
Race, n (%)	Asian	0	49 (4.1)	31 (5.8)	6 (1.7)	<0.001	0.747
	Black		152 (12.7)	96 (18.1)	7 (2.0)		
	Hispanic		176 (14.7)	87 (16.4)	35 (9.8)		
	Others		61 (5.1)	29 (5.5)	9 (2.5)		
	White		762 (63.5)	287 (54.2)	299 (84.0)		
Education, n (%)	College	0	525 (43.8)	258 (48.7)	158 (44.4)	0.625	0.091
	HS		354 (29.5)	146 (27.5)	103 (28.9)		
	No HS		73 (6.1)	24 (4.5)	17 (4.8)		
	Some college		248 (20.7)	102 (19.2)	78 (21.9)		
Region, n (%)	Midwest	8	239 (20.1)	100 (19.0)	83 (23.4)	0.034	0.204
	Northeast		210 (17.6)	103 (19.6)	50 (14.1)		
	South		502 (42.1)	208 (39.6)	159 (44.8)		
	West		241 (20.2)	114 (21.7)	63 (17.7)		

Notes: Table shows splits by party for porn consumption and for individual characteristics for the 1,200 individuals. Party identification is based on a 7-point scale. We code 1–3 as "Democrat", 4 as "Independent", 5–7 as "Republican". Column (1) shows subgroups for categorical variables. Column (2) indicates the count of missing variables, if any. Columns (3)–(5) show means and standard deviations for continuous variables and count and percentage of data for categorical variables, for the full sample, Democratic individuals, and Republican individuals. Standard deviations and percentages in parentheses. Column (6) and column (7) report the p-values and standardized mean differences for Democrats vs Republicans. Given the skew in porn consumption, we also performed tests for difference in means for the measures of porn consumption by party. See Table SI 1.7.

Table SI 1.6: Differences in Porn Consumption and Individual Characteristics by Porn Consumers

			Panel A. Measures of porn consumption				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Subgroups	NA	Total	Non-Consumers	Consumers	P-val	SMD
n			1200	774	361		
Minutes, mean (SD)		65	73.4 (342.1)	0.0 (0.0)	230.8 (576.3)	<0.001	0.566
% of time, mean (SD)		65	3.4 (11.2)	0.0 (0.0)	10.6 (17.9)	<0.001	0.833
Visits, mean (SD)		65	74.3 (328.9)	0.0 (0.0)	233.5 (550.8)	<0.001	0.599
% of visits, mean (SD)		65	2.2 (7.1)	0.0 (0.0)	6.9 (11.2)	<0.001	0.870
			Panel B. Individual characteristics				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Subgroups	NA	Total	Non-Consumers	Consumers	P-val	SMD
n			1200	774	361		
Party (7-point), mean (SD)		120	3.6 (2.2)	3.6 (2.2)	3.6 (2.1)	0.580	-0.037
2020 Pres. election, n (%)	Other/No vote	170	270 (26.2)	145 (22.1)	110 (34.9)	<0.001	0.287
	Vote Biden		419 (40.7)	281 (42.8)	114 (36.2)		
	Vote Trump		341 (33.1)	230 (35.1)	91 (28.9)		
Age, mean (SD)		0	49.5 (18.1)	51.3 (18.2)	46.1 (17.1)	<0.001	-0.295
Gender, n (%)	Female	0	635 (52.9)	487 (62.9)	109 (30.2)	<0.001	0.695
	Male		565 (47.1)	287 (37.1)	252 (69.8)		
Race, n (%)	Asian	0	49 (4.1)	37 (4.8)	9 (2.5)	0.059	0.193
	Black		152 (12.7)	86 (11.1)	58 (16.1)		
	Hispanic		176 (14.7)	113 (14.6)	55 (15.2)		
	Others		61 (5.1)	36 (4.7)	20 (5.5)		
	White		762 (63.5)	502 (64.9)	219 (60.7)		
Education, n (%)	College	0	525 (43.8)	363 (46.9)	131 (36.3)	0.002	0.244
	HS		354 (29.5)	228 (29.5)	115 (31.9)		
	No HS		73 (6.1)	46 (5.9)	22 (6.1)		
	Some college		248 (20.7)	137 (17.7)	93 (25.8)		
Region, n (%)	Midwest	8	239 (20.1)	147 (19.2)	78 (21.7)	0.659	0.081
	Northeast		210 (17.6)	140 (18.3)	60 (16.7)		
	South		502 (42.1)	328 (42.8)	146 (40.6)		
	West		241 (20.2)	152 (19.8)	76 (21.1)		

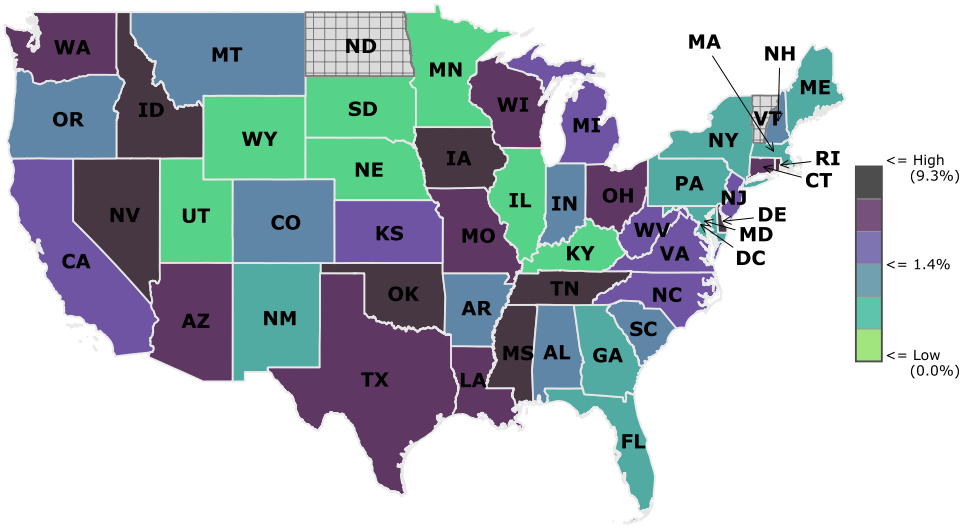
Notes: Table shows splits by consumers of porn for porn consumption and for individual characteristics for the 1,200 individuals. 65 of the 1,200 individuals did not clocked any browsing activity and are in the first panel. These 65 individuals are not substantially different in characteristics than those included in the sample (see **TABLE ??**). Party identification is based on a 7-point scale. We code 1–3 as "Democrat", 4 as "Independent", 5–7 as "Republican". Column (1) shows subgroups for categorical variables. Column (2) indicates the count of missing variables, if any. Columns (3)–(5) show means and standard deviations for continuous variables and count and percentage of data for categorical variables, for the full sample, non-consumers of porn, and consumers of porn. Standard deviations and percentages in parentheses. Column (6) and column (7) report the p-values and standardized mean differences for non-consumers vs consumers.

Table SI 1.7: Differences (in Medians) in Porn Consumption

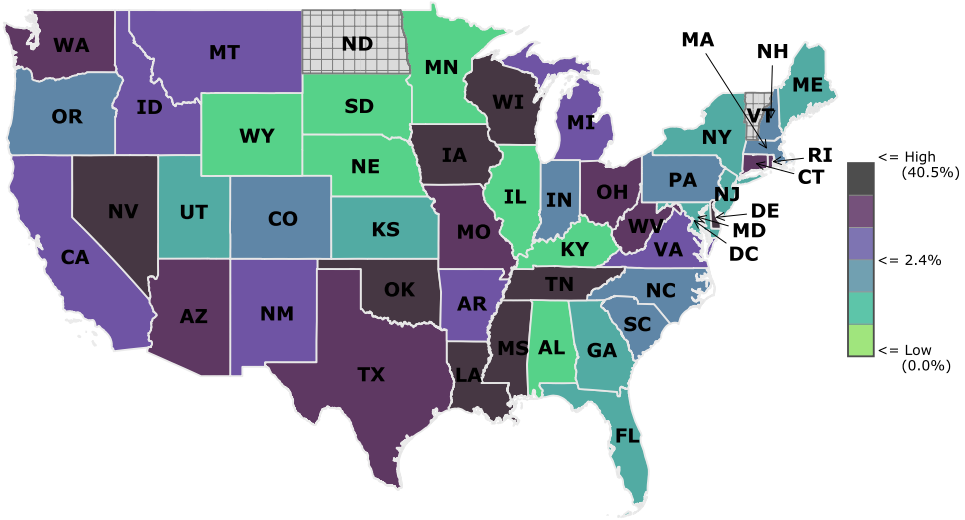
			Measures of porn consumption				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Subgroups	NA	Total	Democrats	Republicans	P-val	SMD
n			1200	530	356		
Minutes, median [Q1,Q3]		65	0.0 [0.0,4.8]	0.0 [0.0,3.1]	0.0 [0.0,3.6]	0.981	0.056
% of time, median [Q1,Q3]		65	0.0 [0.0,0.1]	0.0 [0.0,0.1]	0.0 [0.0,0.1]	0.842	0.049
Visits, median [Q1,Q3]		65	0.0 [0.0,8.0]	0.0 [0.0,6.0]	0.0 [0.0,8.0]	0.933	0.048
% of visits, median [Q1,Q3]		65	0.0 [0.0,0.2]	0.0 [0.0,0.1]	0.0 [0.0,0.2]	0.916	0.085

Notes: Table shows splits by party for porn consumption and for individual characteristics for the 1,200 individuals. This table focuses on differences in medians. Party identification is based on a 7-point scale. We code 1–3 as "Democrat", 4 as "Independent", 5–7 as "Republican". Column (1) shows subgroups for categorical variables. Column (2) indicates the count of missing variables, if any. Columns (3)–(5) show the medians, the first quartiles, and the third quartiles, for the full sample, Democrats, and Republicans. 1st and 3rd quartiles in brackets. Column (6) and column (7) report the p-values and standardized median differences for Democrats vs Republicans. See Panel A of Table SI 1.5 for differences in means.

Figure SI 1.7: Porn Consumption by State



(a) Percentage of visits to porn sites



(b) Percentage of duration on porn sites

Notes: Darker shades indicate higher values. Values for each state are percentage of visits to and time spent on porn sites averaged across individuals of the states. Baseline values are for all web browsing activity. North Dakota and Vermont have no data (shaded out).

SI 2 Consequence of Using Alternate Ways of Measuring Pornography and Alternative Analyses

SI 2.1 Keyword Classifier

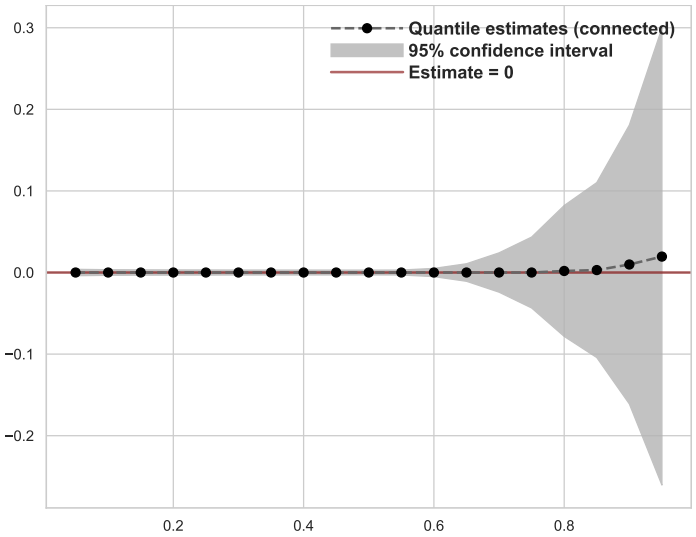
Our first classifier is based on just the domain name and domain suffix. In particular, we use a calibrated keyword classifier. The features of the model are whether any of the following keywords are present in the domain name:

> cumshot, dildo, anal, adult, porn, mature, sex, xx, bbw, slut, whore, tits, titty, titties, pussy, sperm, gay, cheat, booty, ebony, asian, brazilian, fuck, cock, cunt, lesbian, shemale, boob, naughty, fatty, bitch, granny, jizz, faggot, horny, bukakke, bdsm, vagina, smut, x-rated, lusty, erotic, cunnilingus, blowjob, panty, hentai, latex, fetisch, fetish, erotik, bondage, naked, strip, teen, stocking, coitus, deprav, tube, perverse

SI 2.2 Machine Learning Classifier

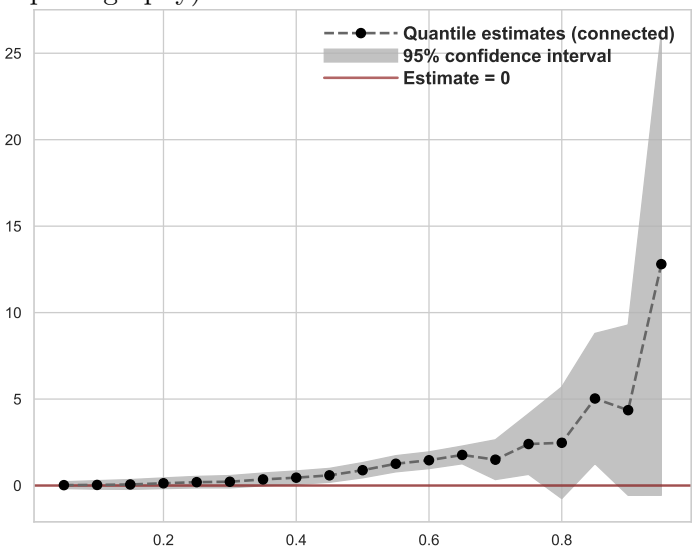
SI 2.3 Alternative Analyses of Time Spent on Pornography

Figure SI 2.1: Quantile Estimates–Hours Spent on Porn Sites by Party (with covariates)



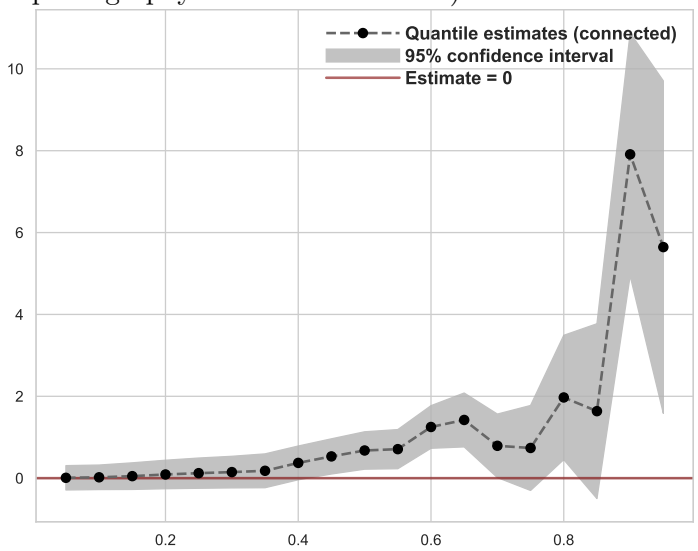
Notes: Dependent variable is the number of hours individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure 5 for the same plot without covariates.

Figure SI 2.2: Quantile Estimates–Hours Spent on Porn Sites by Party (for individuals who consumed pornography)



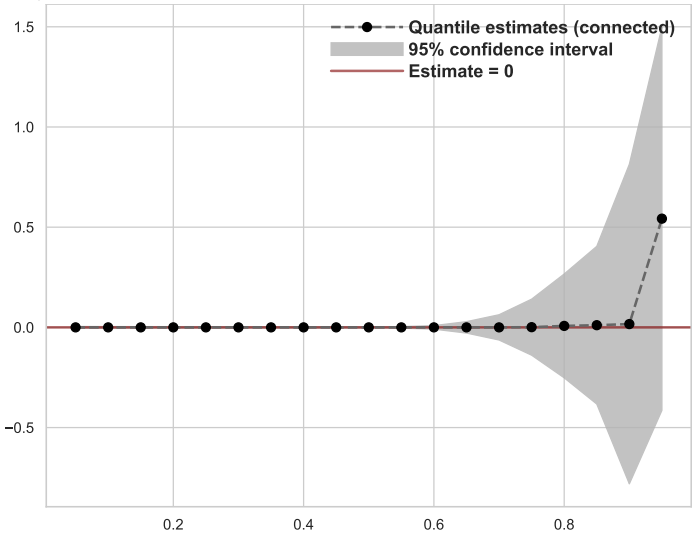
Notes: Dependent variable is the number of hours individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. 95% confidence intervals constructed from robust standard errors. See Figure 5 for the same plot for the full sample.

Figure SI 2.3: Quantile Estimates–Hours Spent on Porn Sites by Party (for individuals who consumed pornography and with covariates)



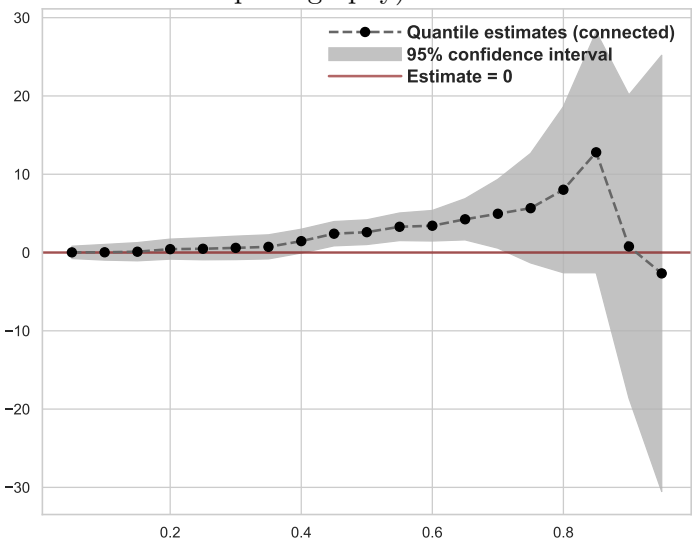
Notes: Dependent variable is the number of hours individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure SI 2.1 for the same plot for the full sample.

Figure SI 2.4: Quantile Estimates–Percentage of Time Spent on Porn Sites by Party (with covariates)



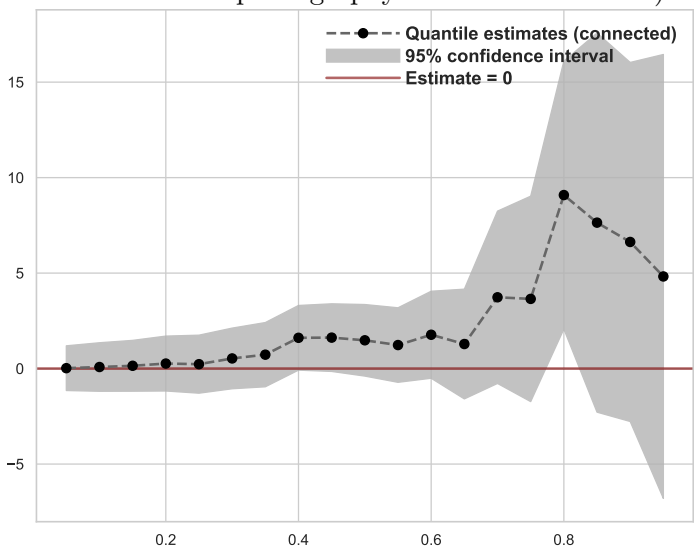
Notes: Dependent variable is the percentage of time individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure 6 for the same plot without covariates.

Figure SI 2.5: Quantile Estimates–Percentage of Time Spent on Porn Sites by Party (for individuals who consumed pornography)



Notes: Dependent variable is the percentage of time individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. 95% confidence intervals constructed from robust standard errors. See Figure 6 for the same plot for the full sample.

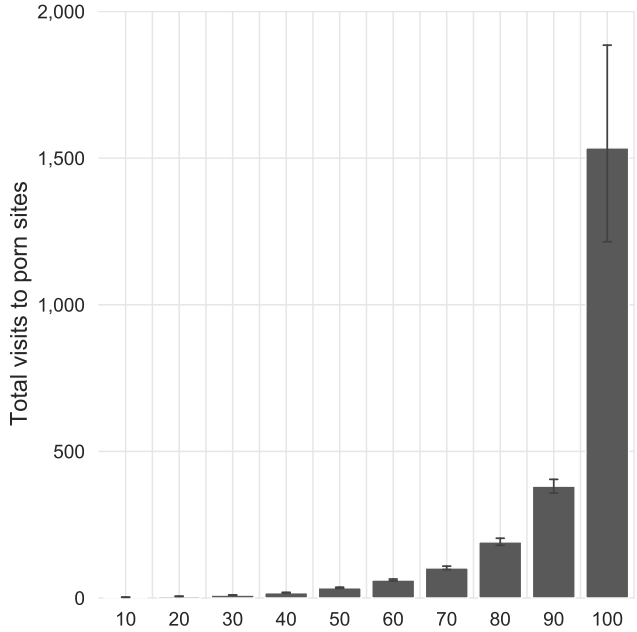
Figure SI 2.6: Quantile Estimates–Percentage of Time Spent on Porn Sites by Party (for individuals who consumed pornography and with covariates)



Notes: Dependent variable is the percentage of time individuals in our sample spent on porn sites. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure SI 2.4 for the same plot for the full sample.

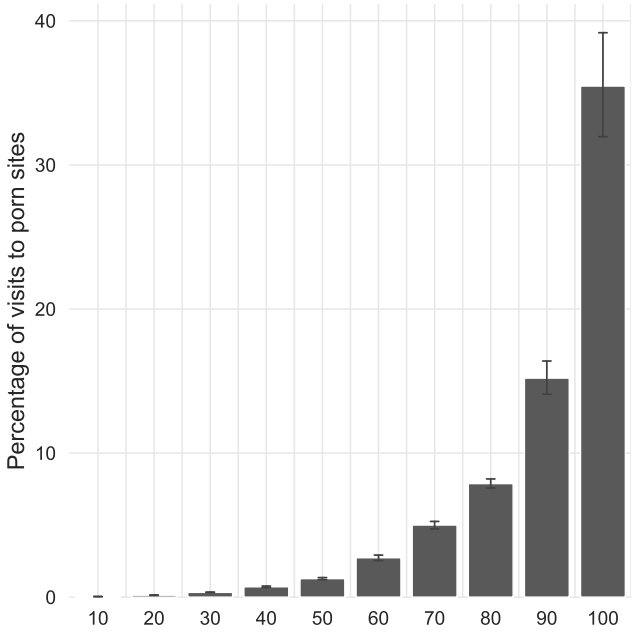
SI 3 Analyses of Visits

Figure SI 3.1: Distribution of Traffic to Pornography Online



Notes: Figure shows the number of visits to porn sites by individuals who consumed pornography in the sample period. Individuals are split into deciles with each bin containing approximately the same number of individuals. Height of bars indicate mean of each bin. Capped vertical bars are 95% confidence intervals. See Table SI 3.1 for the more tabulated values.

Figure SI 3.2: Percentage of Traffic to Pornography Online



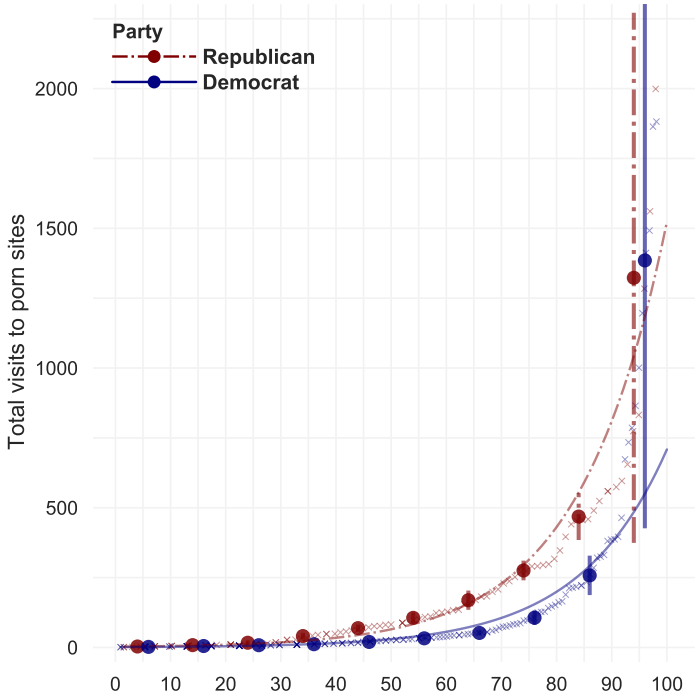
Notes: Figure shows the proportion of visits to porn sites by individuals who consumed pornography in the sample period. Individuals are split into deciles with each bin containing approximately the same number of individuals. Height of bars indicate mean of each bin. Capped vertical bars are 95% confidence intervals. See Table SI 3.2 for the more tabulated values.

Table SI 3.1: Distribution of Traffic to Pornography Online

Percentile	Visits
0.00	1
0.10	4
0.20	7
0.30	12
0.40	25
0.50	46
0.60	77
0.70	134
0.80	262
0.90	524
0.95	1158
0.96	1459
0.97	1841
0.98	2315
0.99	2830
1.00	4264

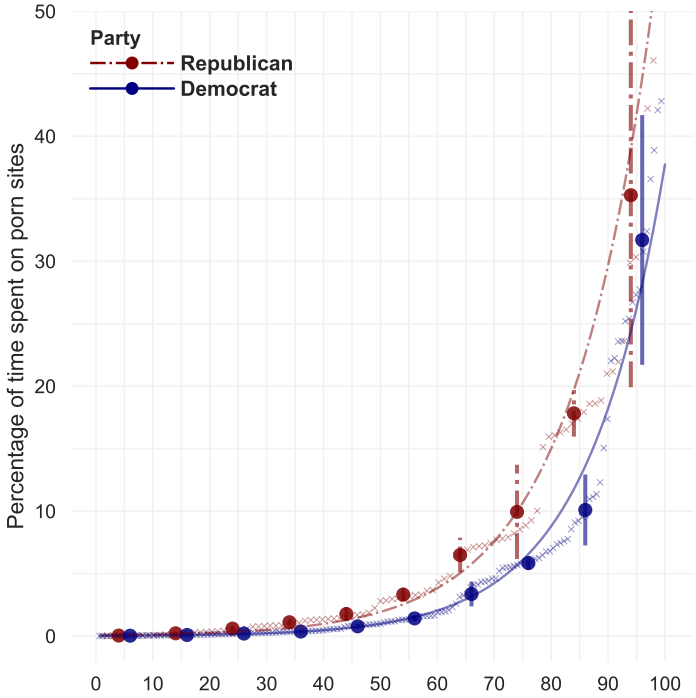
Notes: Table shows key percentiles (each of the ten deciles plus quantiles at the right tail) and their corresponding values for traffic to porn sites by individuals who consumed pornography in the sample period. See Figure SI 3.1 for the plot.

Figure SI 3.3: Distribution of Traffic to Pornography Online by Party



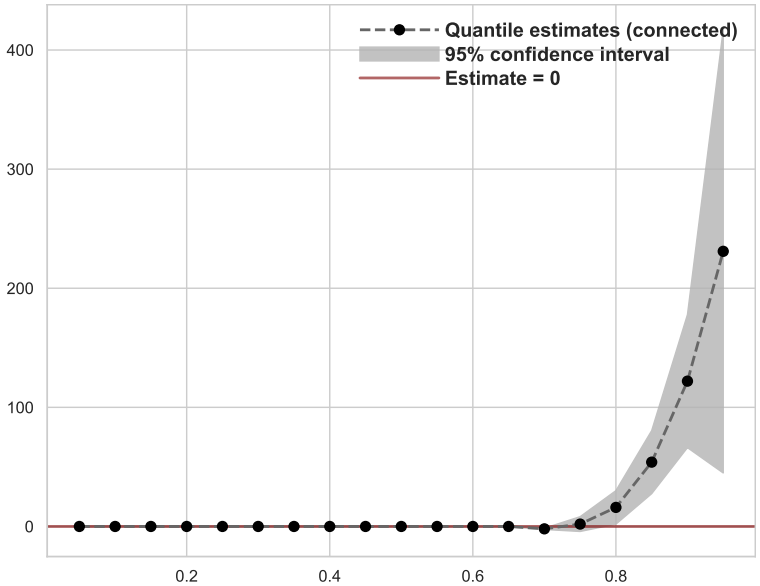
Notes: Figure shows splits by party and by percentiles for visits to porn sites for individuals in the sample who consumed pornography in the sample period. Round markers and the corresponding vertical lines indicate the mean and 95% confidence intervals for each bin. The x symbols indicate actual individuals based on their percentiles. See Table SI 3.3 for the more tabulated values.

Figure SI 3.4: Percentage of Traffic to Pornographic Sites by Party



Notes: Figure shows splits by party and by percentiles for visits to porn sites for individuals in the sample who consumed pornography in the sample period. Round markers and the corresponding vertical lines indicate the mean and 95% confidence intervals for each bin. The x symbols indicate actual individuals based on their percentiles. See Table SI 3.4 for the more tabulated values.

Figure SI 3.5: Quantile Estimates–Traffic to Porn Sites by Party



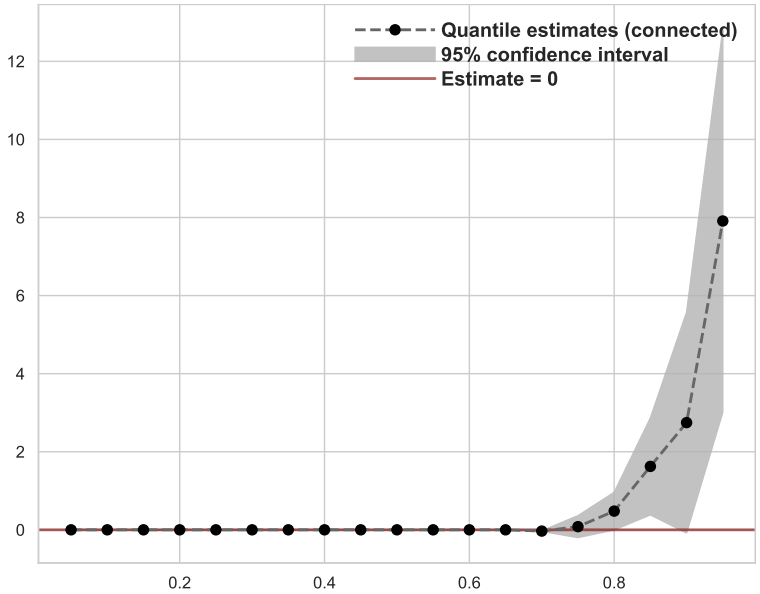
Notes: Dependent variable is the number of visits to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. 95% confidence intervals constructed from robust standard errors. See Figure SI 3.7 for the same plot controlling for individual characteristics.

Table SI 3.2: Percentage of Traffic to Pornographic Sites

Percentile	% visits
0.00	0.0
0.10	0.1
0.20	0.2
0.30	0.5
0.40	1.0
0.50	1.6
0.60	3.7
0.70	6.3
0.80	9.7
0.90	22.0
0.95	31.4
0.96	38.0
0.97	42.3
0.98	46.1
0.99	48.6
1.00	59.9

Notes: Table shows key percentiles (each of the ten deciles plus quantiles at the right tail) and their corresponding values for traffic to porn sites by individuals who consumed pornography in the sample period. See Figure SI 3.2 for the plot.

Figure SI 3.6: Quantile Estimates–Percentage of Traffic to Porn Sites by Party



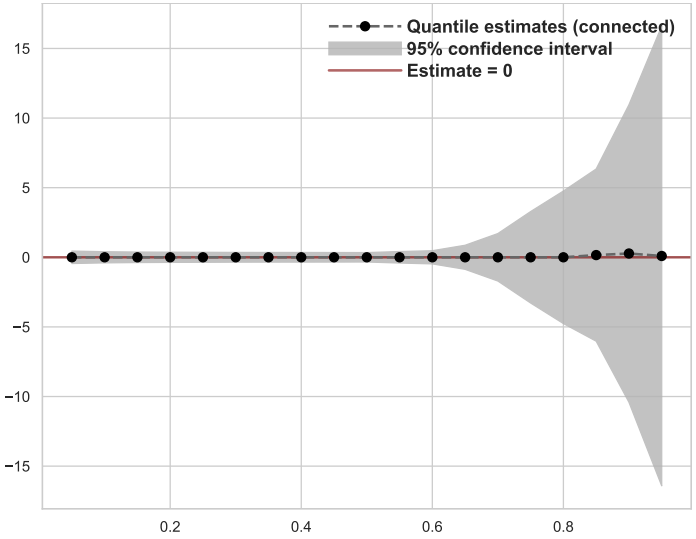
Notes: Dependent variable is the percentage of traffic to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. 95% confidence intervals constructed from robust standard errors. See Figure SI 3.10 for the same plot controlling for individual characteristics.

Table SI 3.3: Distribution of Traffic to Pornography Online by Party

	Visits	
Percentile	**Republicans**	**Democrats**
0.00	1	1
0.10	5	4
0.20	10	6
0.30	27	9
0.40	53	15
0.50	85	26
0.60	129	40
0.70	227	74
0.80	335	157
0.90	564	386
0.95	900	1,030
0.96	1,317	1,352
0.97	1,600	1,600
0.98	2,023	1,879
0.99	2,399	2,500
1.00	2,560	3,976

Notes: Table shows splits by party and by key percentiles (each of the ten deciles plus quantiles at the right tail) for traffic to porn sites by individuals who consumed pornography in the sample period. See Figure SI 3.3 for the plot.

Figure SI 3.7: Quantile Estimates–Traffic to Porn Sites by Party (with covariates)



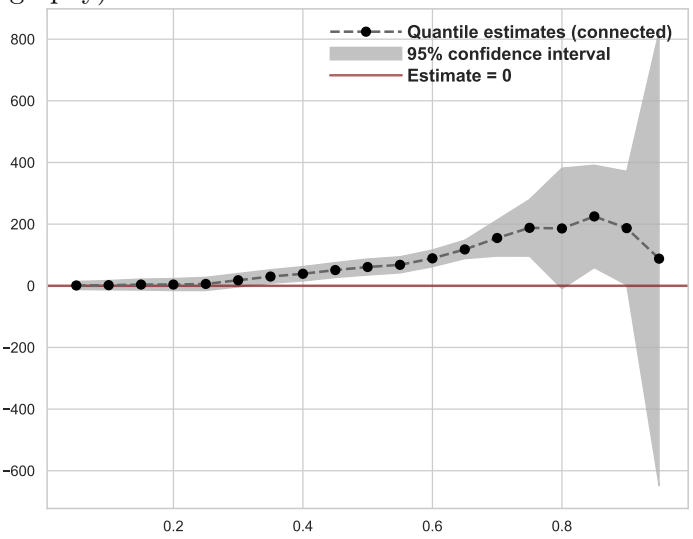
Notes: Dependent variable is the number of visits to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure SI 3.5 for the same plot without covariates.

Table SI 3.4: Percentage of Traffic to Pornographic Sites by Party

	% visits	
Percentile	**Republicans**	**Democrats**
0.00	0.0	0.0
0.10	0.1	0.1
0.20	0.4	0.1
0.30	0.8	0.3
0.40	1.4	0.5
0.50	2.8	1.0
0.60	4.3	1.9
0.70	7.7	4.6
0.80	16.0	7.0
0.90	21.1	18.8
0.95	30.5	27.4
0.96	32.7	29.9
0.97	42.6	33.6
0.98	46.5	38.6
0.99	52.8	42.4
1.00	53.5	59.9

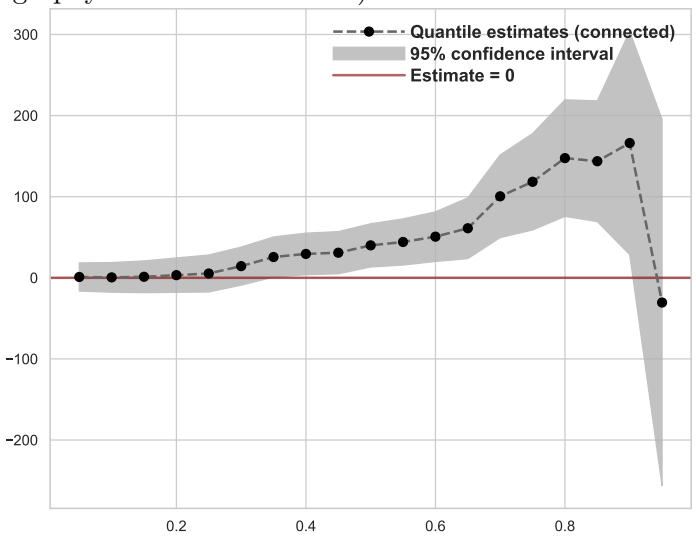
Notes: Table shows splits by party and by key percentiles (each of the ten deciles plus quantiles at the right tail) for traffic to porn sites by individuals who consumed pornography in the sample period. See Figure SI 3.4 for the plot.

Figure SI 3.8: Quantile Estimates–Traffic to Porn Sites by Party (for individuals who consumed pornography)



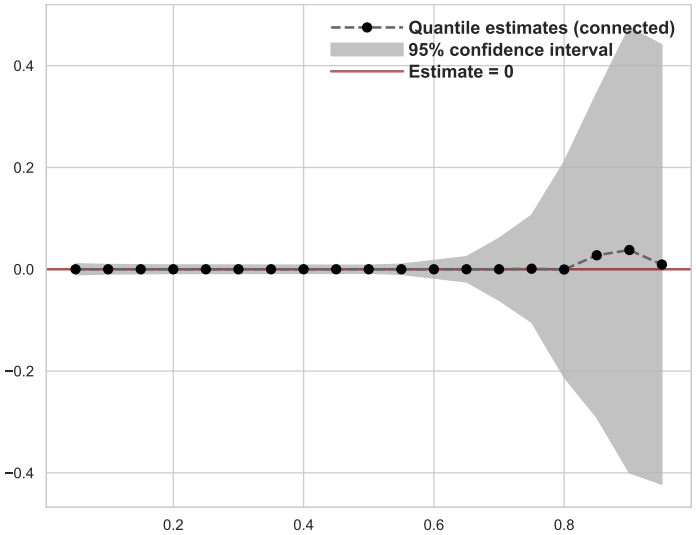
Notes: Dependent variable is the number of visits to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. 95% confidence intervals constructed from robust standard errors. See Figure SI 3.5 for the same plot for the full sample.

Figure SI 3.9: Quantile Estimates–Traffic to Porn Sites by Party (for individuals who consumed pornography and with covariates)



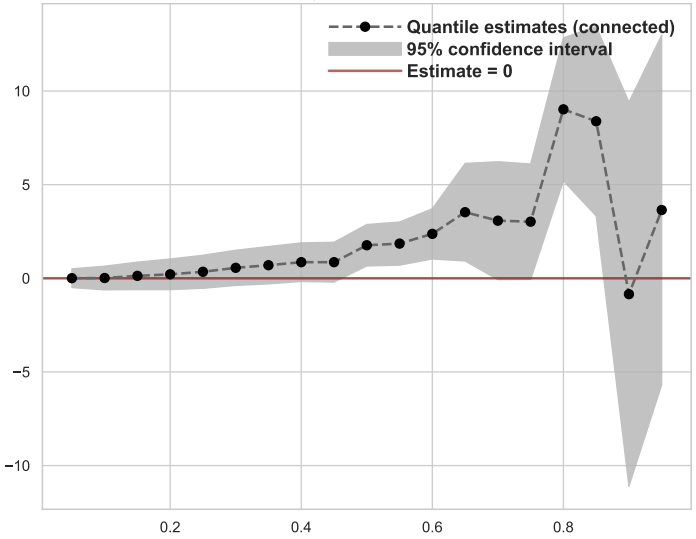
Notes: Dependent variable is the number of visits to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure SI 3.7 for the same plot for the full sample.

Figure SI 3.10: Quantile Estimates–Percentage of Traffic to Porn Sites by Party (with covariates)



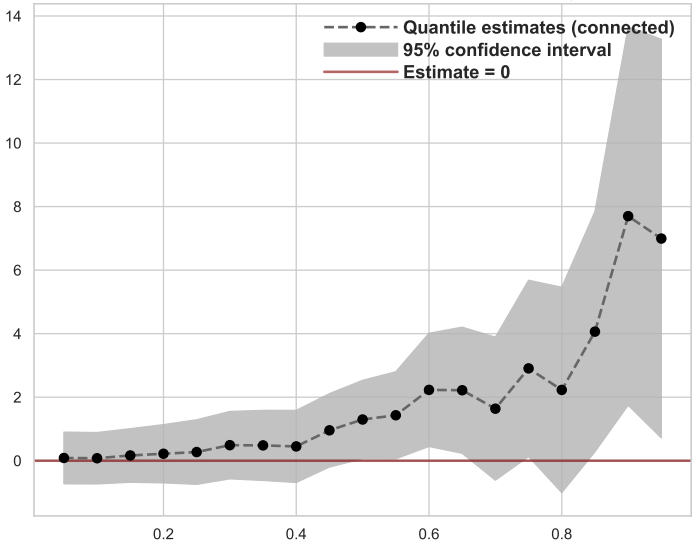
Notes: Dependent variable is the percentage of traffic to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure SI 3.6 for the same plot without covariates.

Figure SI 3.11: Quantile Estimates–Percentage of Traffic to Porn Sites by Party (for individuals who consumed pornography)



Notes: Dependent variable is the percentage of traffic to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. 95% confidence intervals constructed from robust standard errors. See Figure SI 3.6 for the same plot for the full sample.

Figure SI 3.12: Quantile Estimates–Percentage of Traffic to Porn Sites by Party (for individuals who consumed pornography and with covariates)



Notes: Dependent variable is the percentage of traffic to porn sites by individuals in our sample. Each point indicates the difference between Republicans and Democrats and corresponds to a quantile regression at the quantile indicated by the x-axis. Only includes individuals who consumed pornography in the sample period. Covariates included on the right-hand side are: gender (Female/Male), race (White/Black/Hispanic/Asian/Others), education level (no HS/HS graduate/some college/college graduate), age and its quadratic, and region (NE/MW/S/W). 95% confidence intervals constructed from robust standard errors. See Figure SI 3.10 for the same plot for the full sample.