sociological science

Supplement to:

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Online appendix 1: Pairs of American sentaors matched on both age and public interest (Table 3)

Pair	Female Senators (year of birth)	Wikipedia page views	Newspaper mentions	Male Senators (year of birth)	Wikipedia page views	Newspaper mentions
1	Hillary Clinton (1947)	100,710	2,560,628	Al Gore (1948)	104,220	551,280
2	Barbara Boxer (1940)	23,116	124,257	Norm Coleman (1949)	21,795	169,706
3	Susan Collins (1952)	9,204	107,616	Lindsey Graham (1955)	9313	145,507
4	Olympia Snowe (1947)	12,712	90,274	Trent Lott (1941)	12,178	121,825
5	Kay Hutchison (1943)	13,444	78,760	Judd Gregg (1947)	13,300	87,122
6	Mary Landrieu (1955)	7,014	70,962	Sam Brownback (1956)	7,240	119,481
7	Claire McCaskill (1953)	8,919	67,113	Paul Wellstone (1944)	8,715	75,336
8	Elizabeth Dole (1936)	11,636	63,750	Jim Banning (1931)	11,814	52,880
9	Maria Cantwell (1958)	6,438	51,014	Mark Pryor (1963)	6,145	38,960
10	Patty Murray (1950)	5,445	48,527	Kent Conrad (1948)	5,460	76,831
11	Debbie Stabenow (1950)	5,078	42,130	Bob Menendez (1954)	5,054	7,286
12	Jeanne Shaheen (1947)	8,451	40,056	Jim DeMint (1951)	8,514	64,928
13	Amy Klobuchar (1960)	8,081	38,306	Michael Bennet (1964)	8,367	19,238
14	Lisa Murkowski (1957)	6,765	36,382	Chuck Schumer (1950)	7,353	74,166
15	Kay Hagan (1953)	7,843	35,347	Tom Coburn (1948)	7,848	85,695
16	Blanche Lincoln (1960)	5,603	34,168	John Thune (1961)	5,609	61,927
17	Barbara Mikulski (1936)	6,166	16,478	Ted Kaufman (1939)	6,098	7.259
18	Elizabeth Warren (1949)	9,250	14,238	Russ Feingold (1953)	8,507	106,627
19	Shelley Capito (1953)	1,297	10,699	Don Nickles (1948)	1,344	3,623
20	Tammy Baldwin (1962)	4,985	10,116	John Ensign (1958)	5,252	120,991
21	Carol Braun (1947)	11,748	4,273	Jim Webb (1946)	11,284	93,059
22	Jean Carnahan (1933)	2,058	3,269	Conrad Burns (1935)	2,072	9,850
23	Mazie Hirono (1947)	1,969	1,999	Jim Talent (1956)	1,989	17,469
24	Sheila Frahm (1945)	815	128	Richard Bryan (1937)	834.5	4,734
25	Jocelyn Burdick (1922)	669	22	Harlan Mathews (1927)	666	89

Online appendix 2: The importance of accounting for public interest

Why should we introduce a measure of public interest when analyzing differential media coverage? We argue that in order to begin to truly identify the presence of media bias, one has to first account for public interest (demand). Consider as an example Figure A1 below, in which we compare the coverage of notable leaders in the US, Britain, Germany, Pakistan, and Bangladesh (all of which, except for the US, have had a female Prime Minister or President). For each of these leaders we calculated his or her average number of references per year during their time in office. Since our original dataset, covering over 2000 media sources, is confined to the years 2004-2009, to produce this figure we used a subsample of 13 leading newspapers, for which data were available from 1982 to 2009. We then standardized these figures for the total number of name-references per year during this time period, to control for periodical differences in the overall volume of coverage. For example, for Margaret Thatcher, the score appearing in panel 2 is the total number of times (11,283) that her name was mentioned in the 13 US newspapers during the time she served as the British Prime Minister (from May 4 1979 to November 28, 1990), divided by the number of days she served in office (4,226), multiplied by 365 to calculate the yearly number of mentions, and standardized for the total references per day during this period (compared with the total references per day during the time in office of other British Prime Ministers).

The five panels of Figure A1 present *no* evidence that male leaders were more likely to receive disproportionate coverage compared with their female counterparts. In fact, in most cases, it was women leaders who received a higher average daily coverage. Can we therefore conclude that in the rare cases in which women do reach top-level political power positions and enter male-dominated bastions, newspapers do not discriminate against them in terms of coverage volume? We would argue that this analysis fails to account for the degree of public interest. For example, Figure A1 shows that Margaret Thatcher in the UK and Benazir Bhutto in Pakistan received substantially more coverage when compared to the men who followed them in office. However, this excess in coverage may actually be justified when considering journalistic standards of demand and supply. It may be, for example, that for various reasons Thatcher and Bhutto were relatively more interesting public figures. Perhaps they gave more lively or provocative speeches than John Major or Zafarullah Khan Jamali. Maybe they were more active in promoting significant social and political changes that were of great public interest. Or possibly, they were in office during more turbulent political times in the history of their respective countries. Finally, it may be that the mere fact that they were women in positions mostly held by men drew greater public attention and a wish to read more about them.

Similarly, it may be that Americans were simply more interested in reading about Warren Christopher than about Madeleine Albright, not because he is a man, but rather because of his actions or personality. Consider as an additional example the latest US presidential race between Donald Trump and Hillary Clinton. Lafrance (2016), who reviewed the volume of coverage for the two candidates in 50 prominent American newspapers, found that Trump received a much higher coverage volume than did Clinton. Does that mean that the media was biased toward Trump in the race? Even if we ignore coverage tone (which was, according to Lafrance, very negative for both candidates), it may be that the relative excess of coverage for Trump was at least partially motivated by journalistic considerations of public interest. A colorful and controversial figure who produces more provocative statements and actions is likely to draw greater public interest. If that is the case, one may argue that coverage differentials do not represent newspaper bias against certain individuals or groups, but rather that newspapers attempt to cater to the "collective will" of readers. That is, if writing about a more "colorful" public figure satisfies public wishes and helps in selling more newspapers, one could argue that reporters and editors are simply doing their job by awarding that figure greater coverage volume.

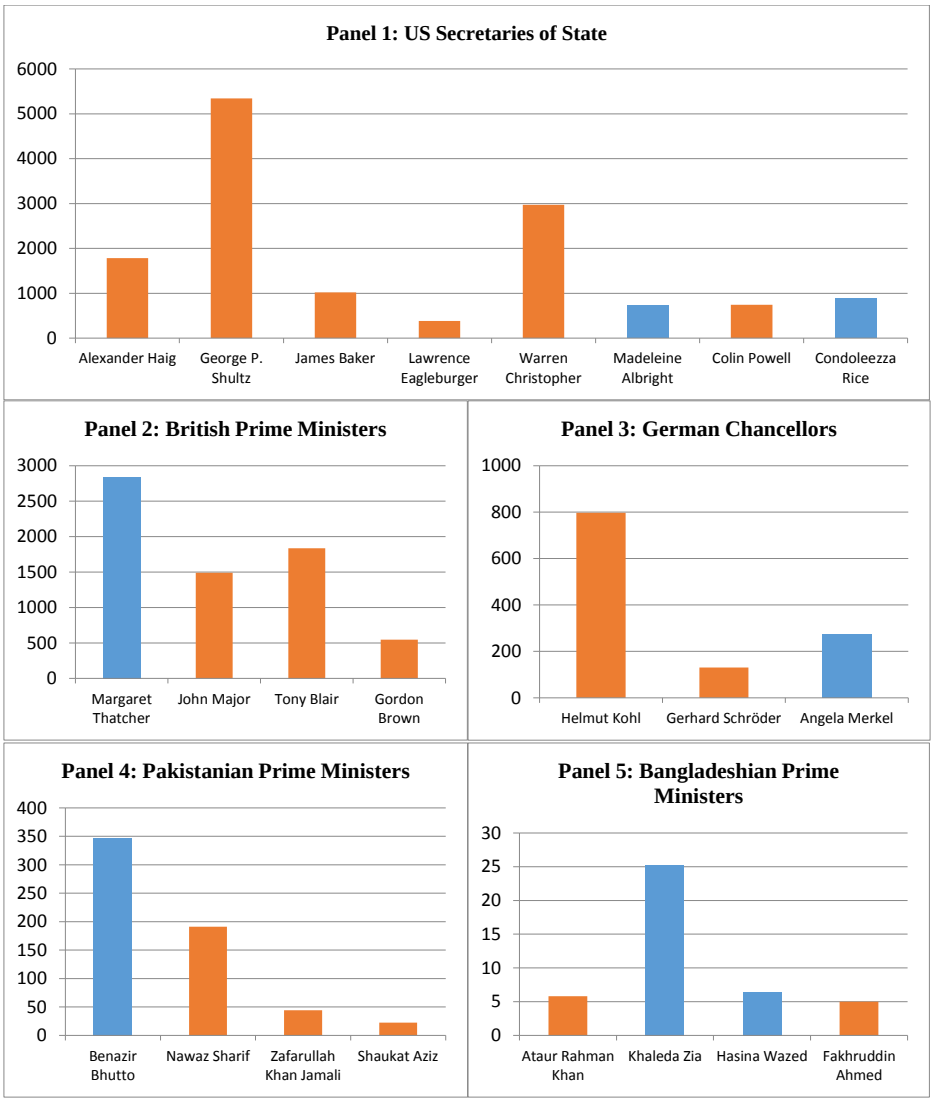
Even if this is the case, one may wonder whether such differences in charisma, achievements, and abilities that make one more "newsworthy" are not randomly distributed between men and women. If that

were the case, then we might expect coverage to eventually "even out" and the remaining differences between public figures of equal standing to result from journalistic bias. However, we believe that there is reason to doubt this random distribution thesis. For example, it may be that even those women who reach high-level political positions (such as parliament members) are socialized (or receive constant pressures) to express themselves in "feminine appropriate" ways, including the use of less aggressive language and self-promoting statements than their male counterparts, which in turn might render the women less newsworthy.

The issue of public interest is by no means limited to politics. Using a similar method to that presented in Figure A1, one can compare prominent men and women in fields such as entertainment, business, or sports: Oscar nominees, individuals appearing on Forbes's World Billionaires ranking, or male and female athletes with similar achievements. However, each of these comparisons presents unique challenges that put its validity in question. For example, comparing pairs of American women and men who were ranked adjacently in a given year on the Forbes World Billionaires ranking—e.g. Christy Walton and Jim Walton, both ranked 24 in 2007—introduces a problem of "fortune worth" vs. "newsworthiness". One may argue that Jim Walton simply attracts greater public interest than Christy Walton, as he is the son of Wal-Mart's founder, Sam Walton, and the Chairman of Arvest Bank, while she is "merely" the widow of Sam Walton's other son, John Walton. Indeed, many of the female names on the Fortune World Billionaires ranking belong to widows or daughters of very rich people. These widows and daughters did not make their fortune by directly working in the company they now own.

Perhaps most glaringly, when comparing the coverage of athletes with similar achievements (e.g. a male and a female athlete who won a college basketball competition), it becomes clear that due to historical, sociocultural, or physiological reasons, public interest in male and female athletes is unequal. Thus, a decision by a newspaper journalist/editor, or the editor of a newswire or "content farms" (Bakker 2012) to dedicate more coverage to a certain male athlete (e.g. Michael Jordan) than to a female athlete who has similar achievements within the same field (e.g. Sheryl Swoops) may simply reflect awareness of public interest, which, of course, may itself reflect cultural and media constructions. It would thus be justified in terms of catering to public interest—writing on those individuals about whom most people want to read—and consequently in serving commercial interests (selling more newspapers).

Figure A1: Prominent female political leaders in various countries: Mean number of yearly mentions in 13 US newspapers during time in office (standardized for total number of name-references per year during time in office), 1981-2008



Online appendix 3: Google searches for and Wikipedia page views of "Anne Hathaway." Adapted from Yoshida et al. (2015).