

Hand size does not correlate with brain size among US politicians: a non-partisan analysis

M. Reysaim¹ and K. M. Knoll^{2,3}

1 - Whereabouts unknown

2 - Department of Science, Northern Connecticut State University (NoCoStU, "You get what you pay for!"), USA

3 - Corresponding author, profknoll57@gmail.com

Submitted: April 25, 2016

Accepted: May 27, 2016

INTRODUCTION

The 2016 campaign season has raised a number of scientific questions, not the least of which is, "What planet is this, anyway?" Another is "What is the relationship between hand size and brain size of these candidates?" The latter question arose since Donald Trump's *magnitudine tua* ("hand size") became a topic of discussion when Vanity Fair's Graydon Carter wrote in *Spy* magazine over 25 years ago that [Mr. Trump is a "short-fingered vulgarian."](#) Sen. Marco Rubio, Mr. Trump's competitor/punching bag agreed, saying ["And you know what they say about men with small hands."](#) Mr. Trump disagreed with these characterizations, remarking ["Look at those hands, are they small hands?"](#)

Who is correct? If Mr. Trump is digitally-challenged, how does that relate to his brain size? As he has said, ["I have a very good brain."](#) Further, ["I'm, like, a really smart person."](#) Inquiring minds want to know.

METHODS

Data collection began in the field to see if the candidates measure up. Using cutting edge physiometric tools ([Bertillon 1893](#)) illustrated in Figure 1, graduate student M. Reysaim first visited Mr. Trump's South Carolina rally to gather data from the candidate. He

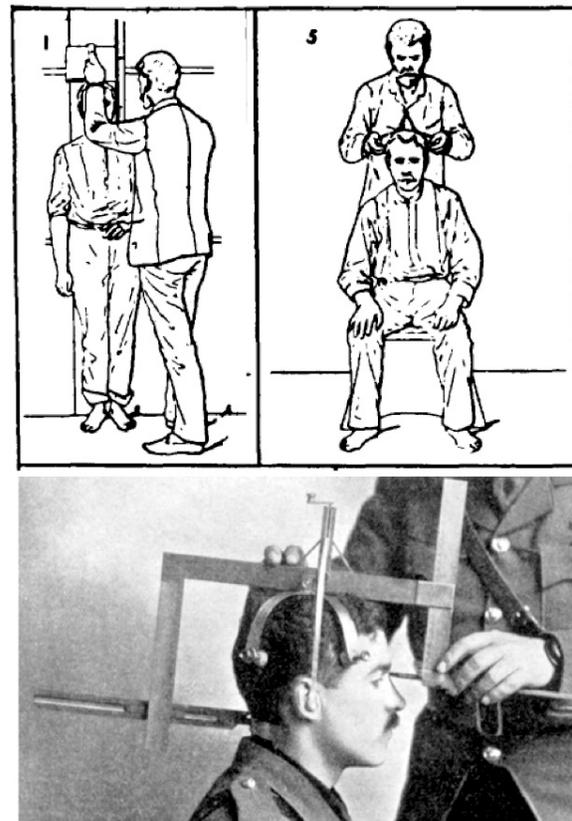


Figure 1. Drawing and photograph of in situ methods of measuring traits.

encountered some vigorous vocal opposition to his presence there and in the ensuing scuffle, M. Reysaim unfortunately disappeared along with his equipment, which was later found on ebay.

Subsequent measurements of hand, head and body length for each of the candidates as well as ex-Governor Palin (as a control) were made using online images from the safety of our NoCoStU (“Ivory towering over everybody!”) offices. After several sophisticated analyses of these numbers (pushing Excel to its limits) using published correlations of head length to brain size and height to body mass (MacPhail 1982, Roth and Dicke 2005, Guera et al. 2014), we determined the hand length and brain weight of each candidate relative to their height and body weight, respectively. The use of ratios removed biases from the relatively smaller sizes of the female test subjects. More details on calculating ratios are given in the Appendix.

The resulting show of hands (and brains) are in Figure 2.

DISCUSSION

Clearly Mr. Trump has the upper hand on everyone. Of all studied politicians, Mr. Trump’s hands stick out, as he is the right-hand man in Figure 2. Close at hand, the second-hand candidate is Sen. Rubio. Ironically Sen. Rubio remarked that Mr. Trump’s hands are “the size of someone who’s 5-2.” By that reckoning, Sen. Rubio, relative to the taller Mr. Trump, actually is “Little Marco.”

Ex-Gov. Palin, despite the correction for height, has the smallest hands, but hands that are tough. “I have caribou blood under my fingernails still,” she has said. Similarly, Gov. Perry has the smallest man-mitts, hands down. “Oops!” The remaining politicians, many of them old hands, are all hands in at the center of the graph (Figure 2), all close at hand.

As for brain sizes, all three female politicians are high-minded (Figure 2) and Sen. Paul seems to have a mind of his own. Rather surprising, ex-Gov. Palin tops the brain chart, having the most massive brain relative to her body mass. Though one cannot

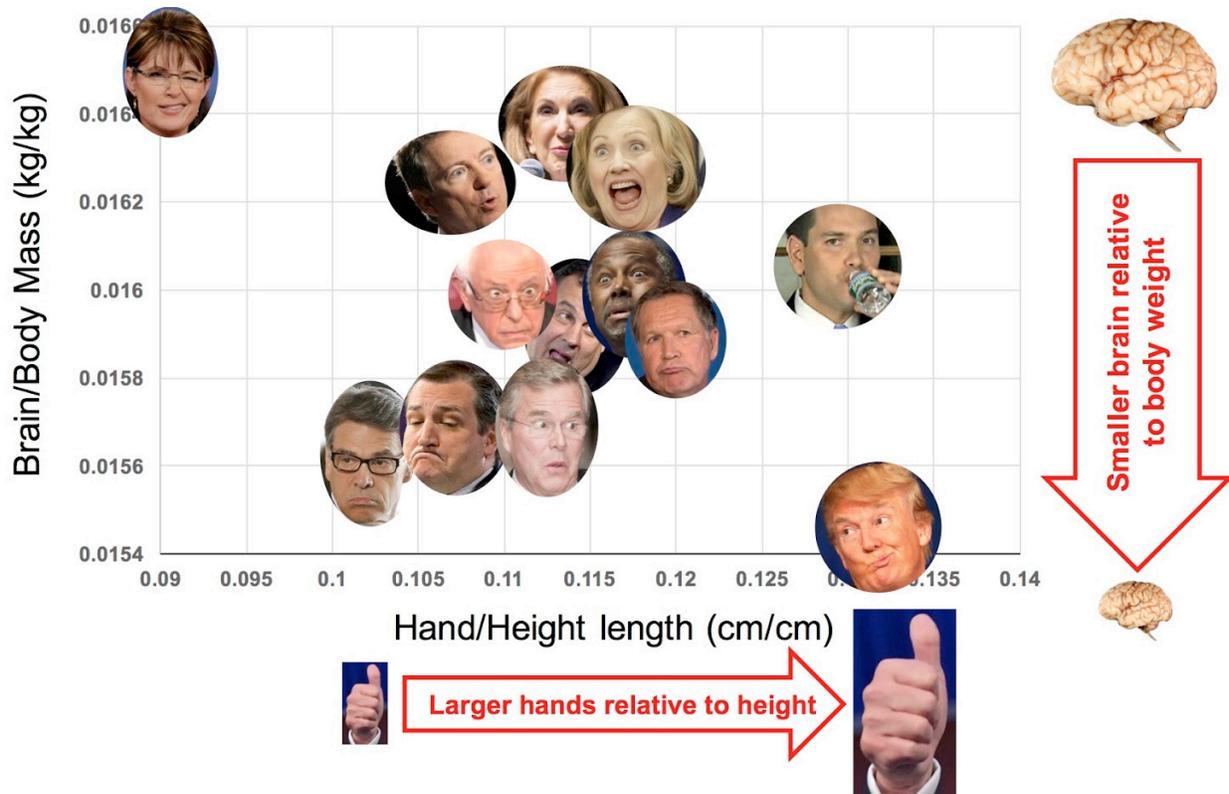


Figure 2. Brain/Body Mass (kg/kg) ratio and Hand/Height length (cm/cm) ratio of selected past, present, and probably future presidential candidates.

discount the possibility that she is at the head of the class (though she often seems to be there in a corner with a tall pointed hat on), another possibility is that she has an exceptionally small body mass. She is frequently called a lightweight or featherweight, so perhaps this accounts for these data.

Though Dr. Carson said “I believe we have this enormous brain,” our data suggest, with the exception of Sen. Paul, he is incorrect about himself and the other the male candidates. Most male candidates are rather middle minded. Gov. Perry, however, is left in the bushes, though Gov. Bush is slightly brainier. His position does not necessarily make him small minded and Mr. Trump apparently noticed that Gov. Perry is a bear of very little brain, remarking, “He should be forced to take an IQ test before being allowed to enter the GOP debate.”

Mr. Trump, sits alone at the bottom of the brain drain. Not showing awareness of his location on the intellectual totem he suggests “My IQ is one of the highest.” Gov. Perry noted correctly that Trump is “small-minded.” Dr. Carson said, “I’m the only one who has removed half a brain,” and these data show that Mr. Trump has half a mind to agree. However, ex-Gov. Palin perhaps summarizes Mr. Trump’s mental capabilities best, “Because they know that he who was the one, now, with tee-time on the mind, he is so over it.”

Though Sen. Rubio asked “And you know what they say about men with small hands?”, his expected answer is not what our data show. Men with the smallest (Gov. Perry) and largest (Mr. Trump) hands

are equally endowed with the smallest minds. As we have always known, “Small things enthrall light minds” (Ovid, 43 BC-18 AD).

APPENDIX - DETAILED METHODS

Hand length, height and head length were measured from photos found online. Photos had to show the person standing straight (for height), the hand fully extended and in line with the body (to mitigate foreshortening), and the head had to be photographed from the front and at the height of the head (to avoid foreshortening). The goal was to get a Hand:Height ratio since a height to weight relationship could be made from a literature reference (Guerra et al. 2014) Measuring hand lengths and height in the same photo would be difficult as it would tend to introduce relatively large measurement errors (hands being so much smaller than height). Consequently, hands and heads were measured in the same photo and heads and height were measured in the same photo and then the needed ratio could be calculated. Two to eight measurements were made for each image.

The ratios of Hand:Height and Head:Height were calculated and those ratios averaged. Those ratios were multiplied to give the Hand:Height ratio. The heights of each candidate are available online and from that the length of the hand could be calculated. Body mass was calculated as in Guerra et al. (2014) and brain mass from body mass as in MacPhail (1982).