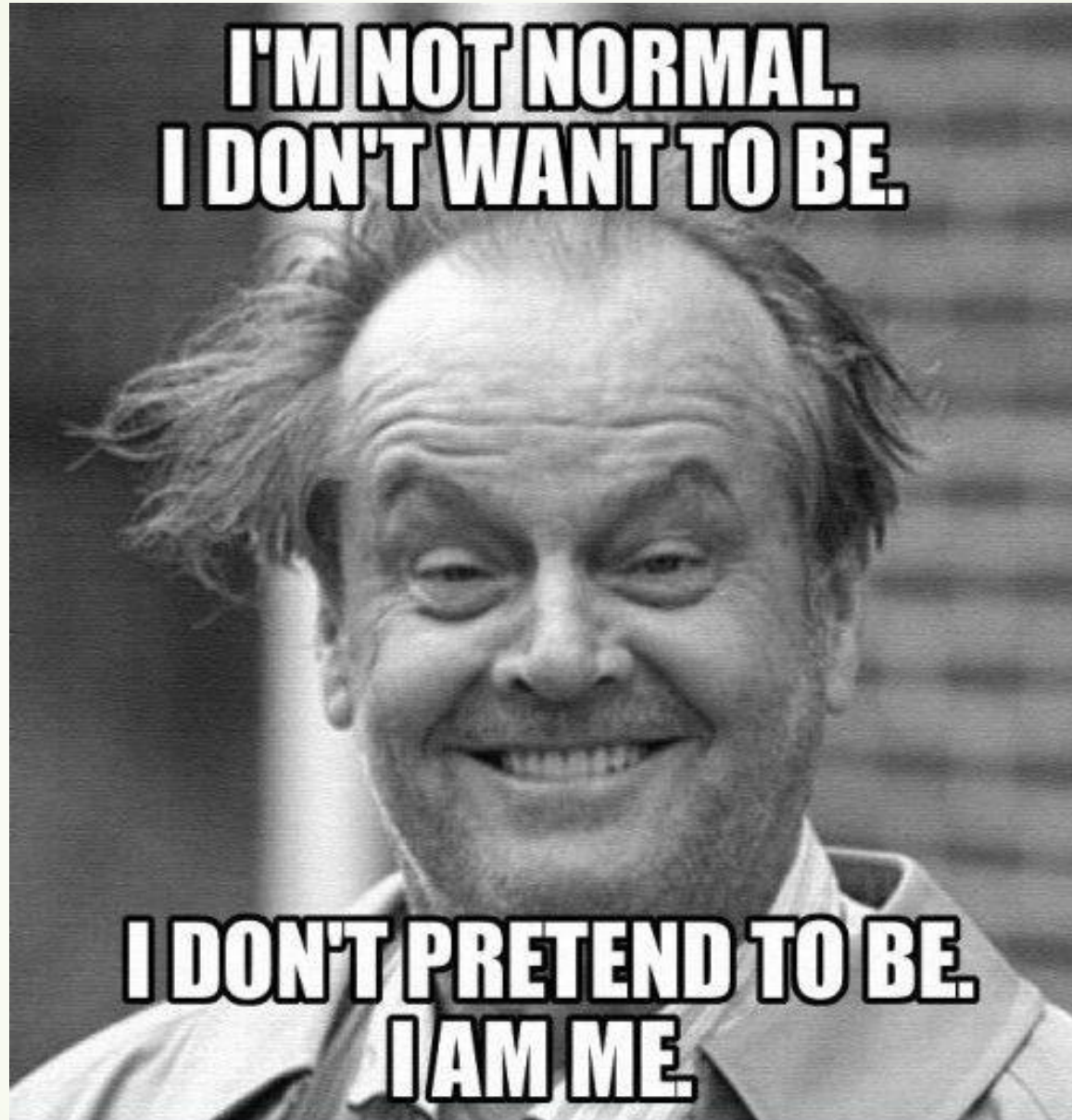


**I'M NOT NORMAL.
I DON'T WANT TO BE.**



**I DON'T PRETEND TO BE.
I AM ME.**

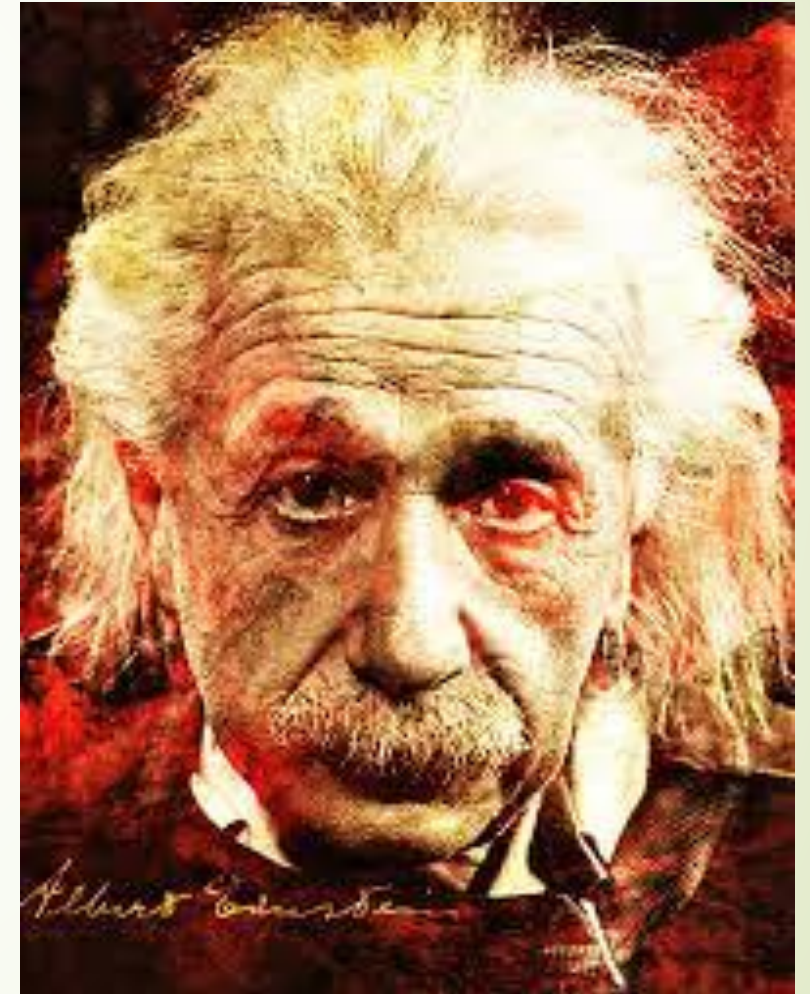


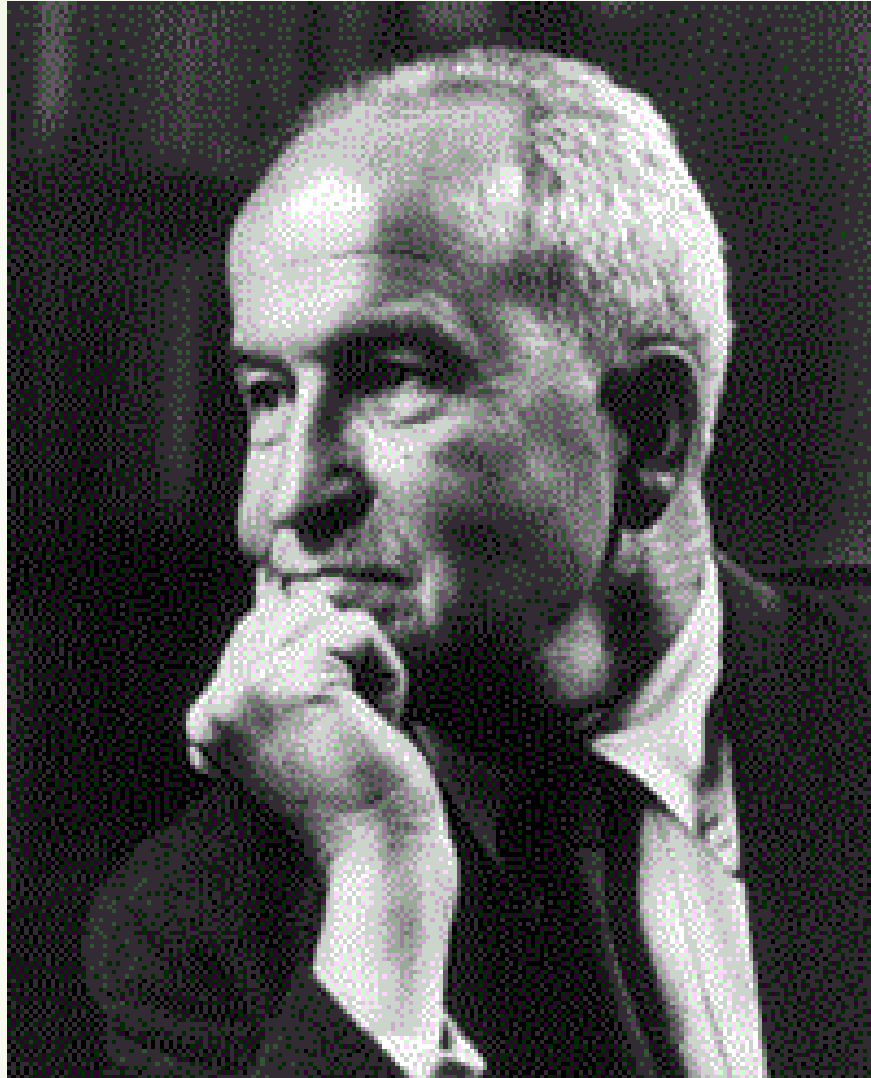
Multiple- and Single-Case Studies of Significant Samples:

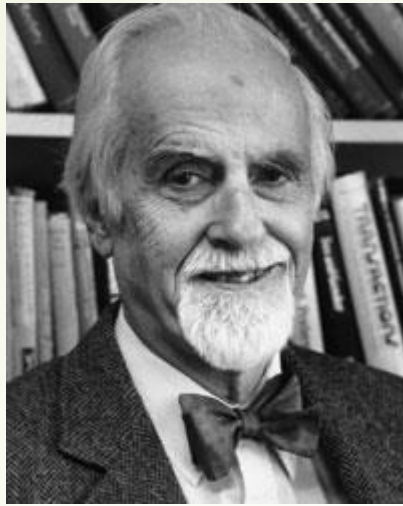
Using Empirical Nomothetic Baselines to Gauge Idiographic Uniqueness



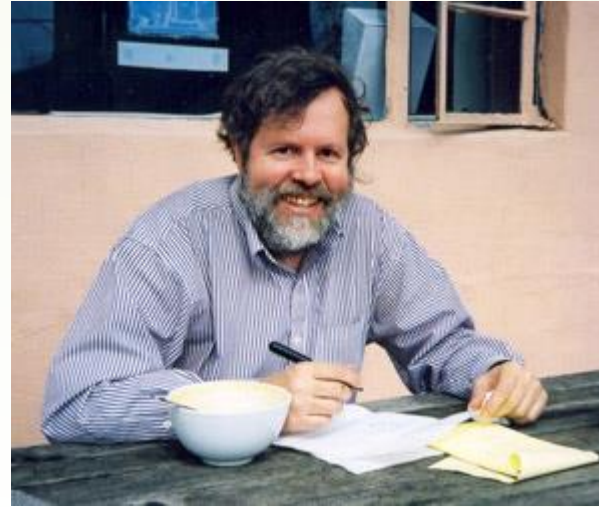
?







1998
David McClelland



1986
William Runyan



1987
Alan Elms



Idiographic versus Nomothetic



- Nomothetic – the general features of a defined set of persons
 - N.B.:
 - Later *not* defined according to neo-Kantian Wilhelm Windelband
 - But rather defined more according to Gordon Allport
 - Two sources: (a) theoretical prediction and (b) statistical averages
- Idiographic – the unique features of a particular person
 - N.B.: These features can be quantitative, not just qualitative
 - Hence, quantitative features of the individual can be contrasted with quantitative nomothetic baselines
 - Indeed, those baselines help define what is unique about a person

Significant Samples

- Definition:

- Persons who *define* the phenomenon of interest

- Hence, sample = population →

- Sampling error is zero

- Null hypothesis does not exist

- Descriptive statistics >> inferential statistics

- E.g., r , β , b , Cohen's d , etc. >> t , F , p , SE_b CI, etc.

- Specific and common instance: Persons who “make history”

- E.g. eminent creators, leaders, and other “celebrities”

- However, significant samples can range in size from $N > 1000$ to $N = 1$



Significant Samples

► Examples

► Large: e.g., $N = 2012$

- Simonton, D. K. (1976). Philosophical eminence, beliefs, and zeitgeist: An individual-generational analysis. *Journal of Personality and Social Psychology*, 34, 630-640.


► Middle N : e.g., $N = 39$

- Simonton, D. K. (1986). Presidential personality: Biographical use of the Gough Adjective Check List. *Journal of Personality and Social Psychology*, 51, 149-160.

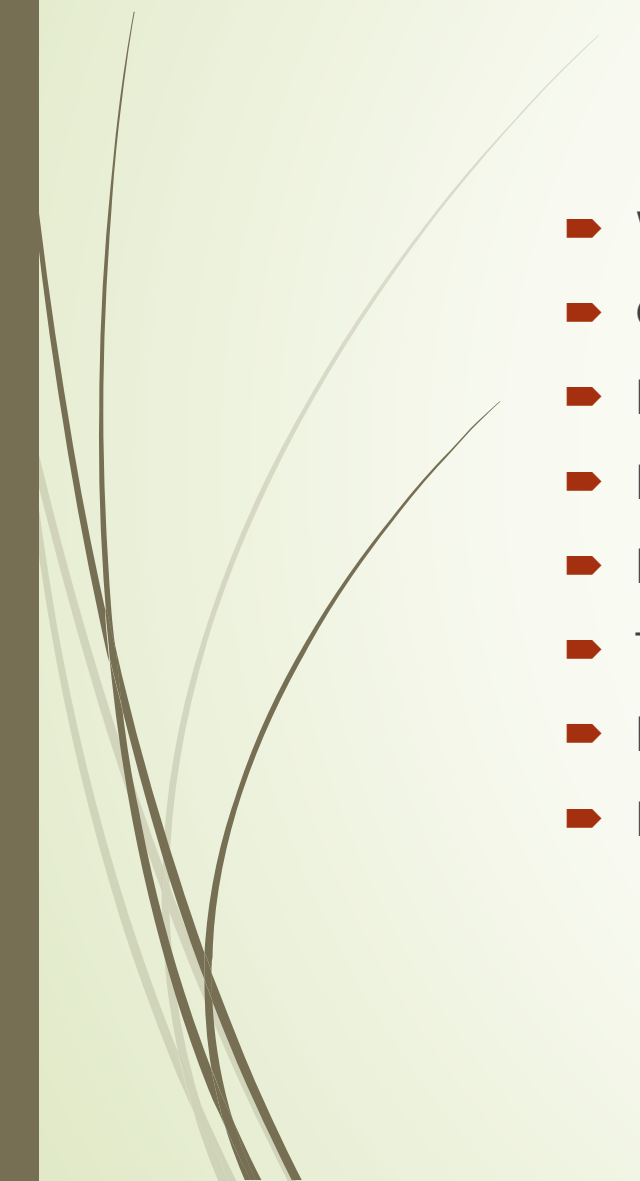
► Small N : e.g., $N = 10$

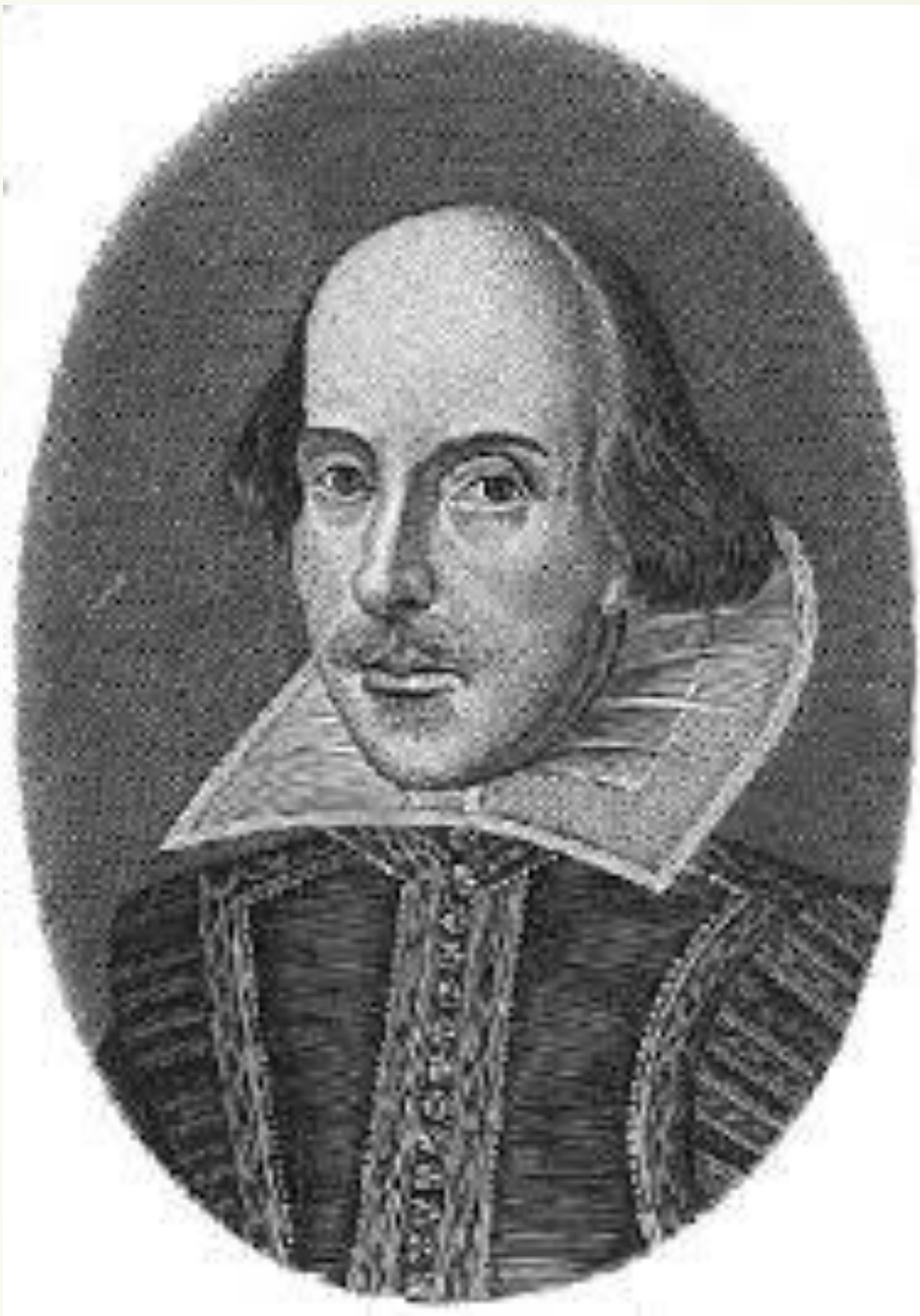
- Simonton, D. K. (1977). Creative productivity, age, and stress: A biographical time-series analysis of 10 classical composers. *Journal of Personality and Social Psychology*, 35, 791-804.

► Single case: $N = 1$...



Eight Single-Case Studies

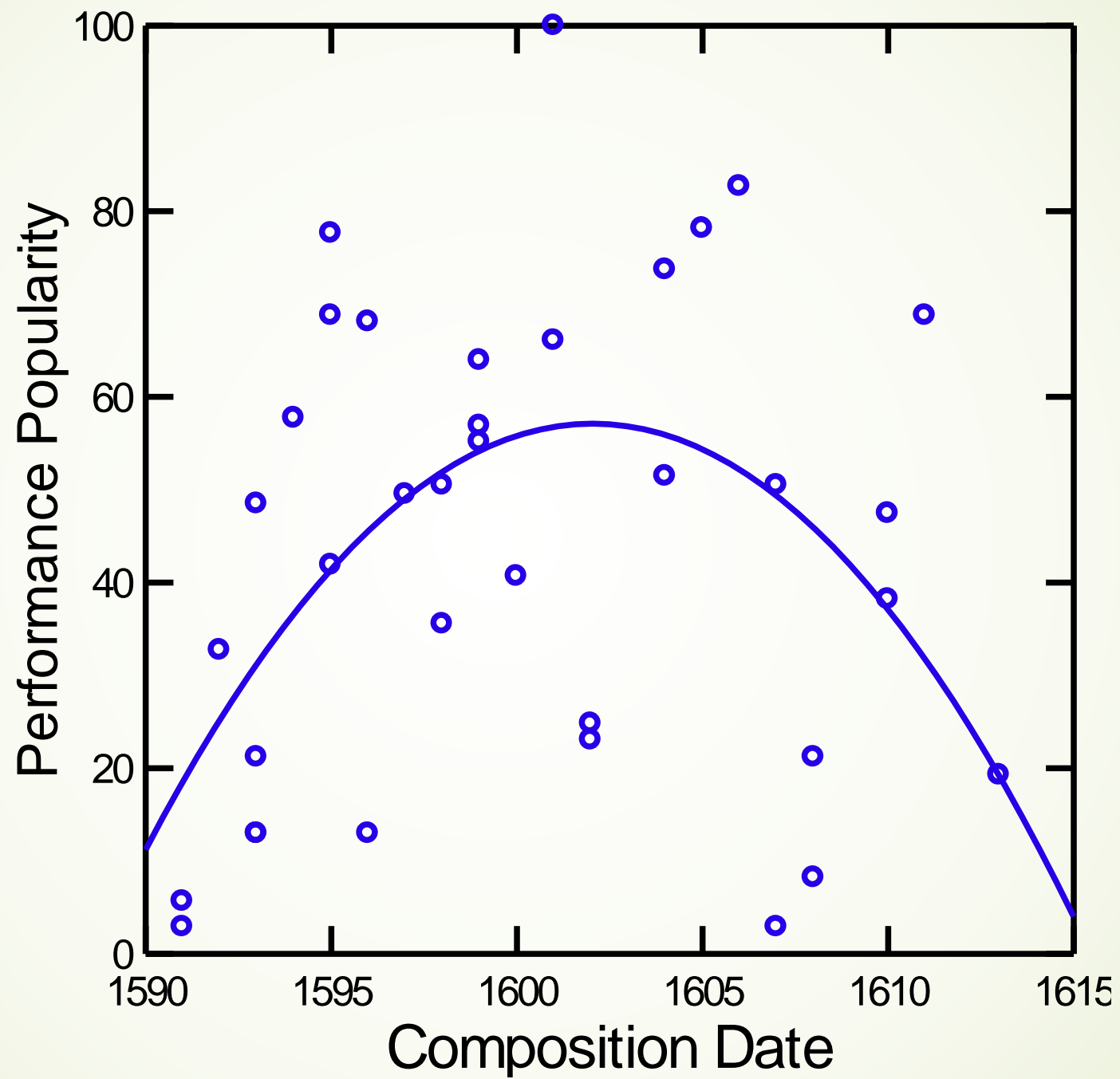
- William Shakespeare (Simonton, 1986, 1989, 1990, 1997, 2004)
 - Galileo Galilei (Simonton, 2012)
 - King George III of Great Britain (Simonton, 1998)
 - Napoleon Bonaparte (Simonton, 1979)
 - Ludwig van Beethoven (Simonton, 1987, 2015)
 - Thomas A. Edison (Simonton, 2015)
 - Pablo Picasso (Damian & Simonton, 2011; Simonton, 2007)
 - B. F. Skinner (Overskeid, Grønnerød, & Simonton, 2012)
- 

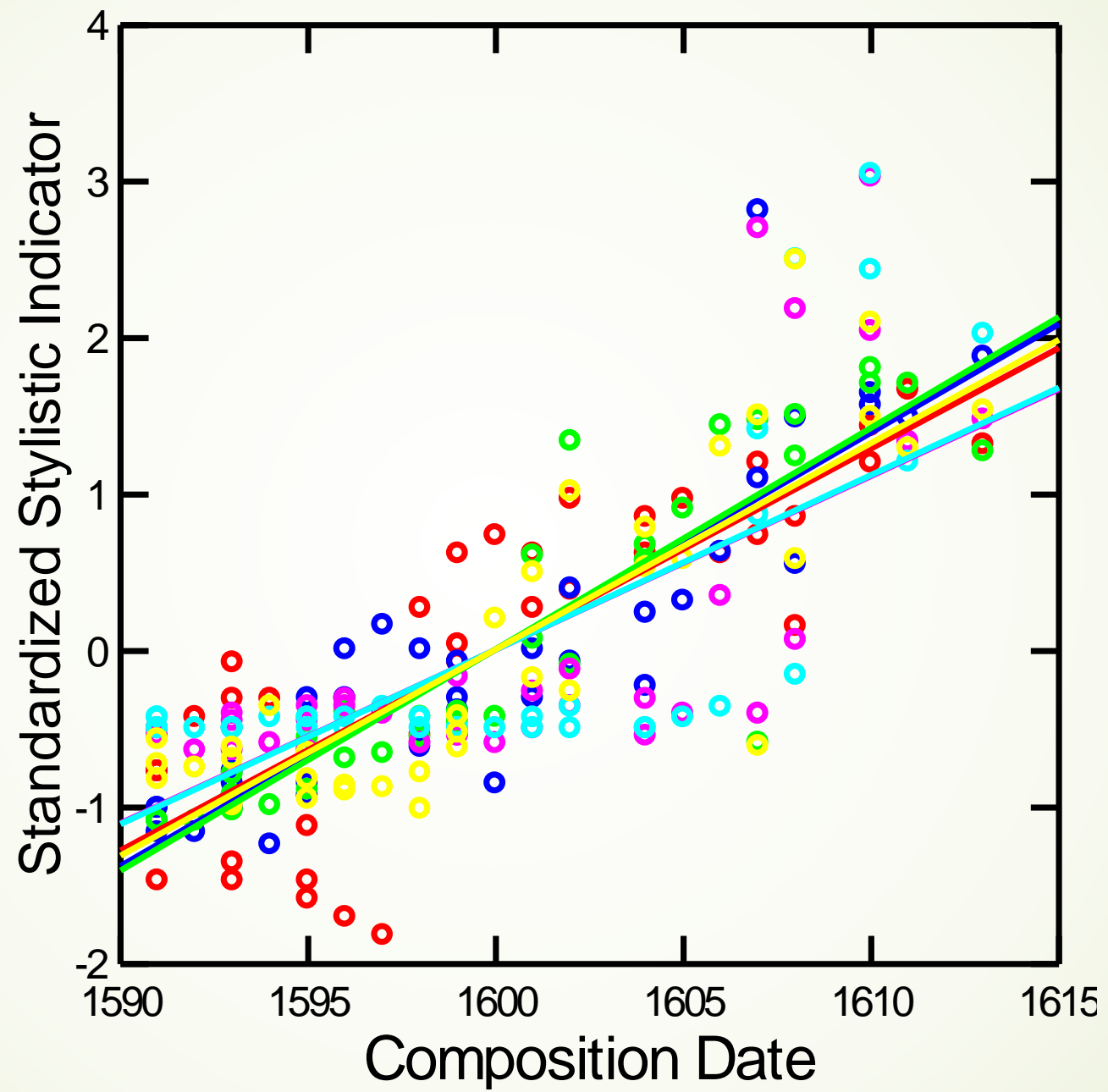




William Shakespeare

- Simonton, D. K. (1986). Popularity, content, and context in 37 Shakespeare plays. *Poetics*, 15, 493-510.
- Simonton, D. K. (1989). Shakespeare's sonnets: A case of and for single-case historiometry. *Journal of Personality*, 57, 695-721.
- Simonton, D. K. (1990). Lexical choices and aesthetic success: A computer content analysis of 154 Shakespeare sonnets. *Computers and the Humanities*, 24, 251-264.
- Simonton, D. K. (1997). Imagery, style, and content in 37 Shakespeare plays. *Empirical Studies of the Arts*, 15, 15-20.
- Simonton, D. K. (2004). Thematic content and political context in Shakespeare's dramatic output, with implications for authorship and chronology controversies. *Empirical Studies of the Arts*, 22, 201-213.









King George III of Great Britain

- Simonton, D. K. (1998). Mad King George: The impact of personal and political stress on mental and physical health. *Journal of Personality*, 66, 443-466.

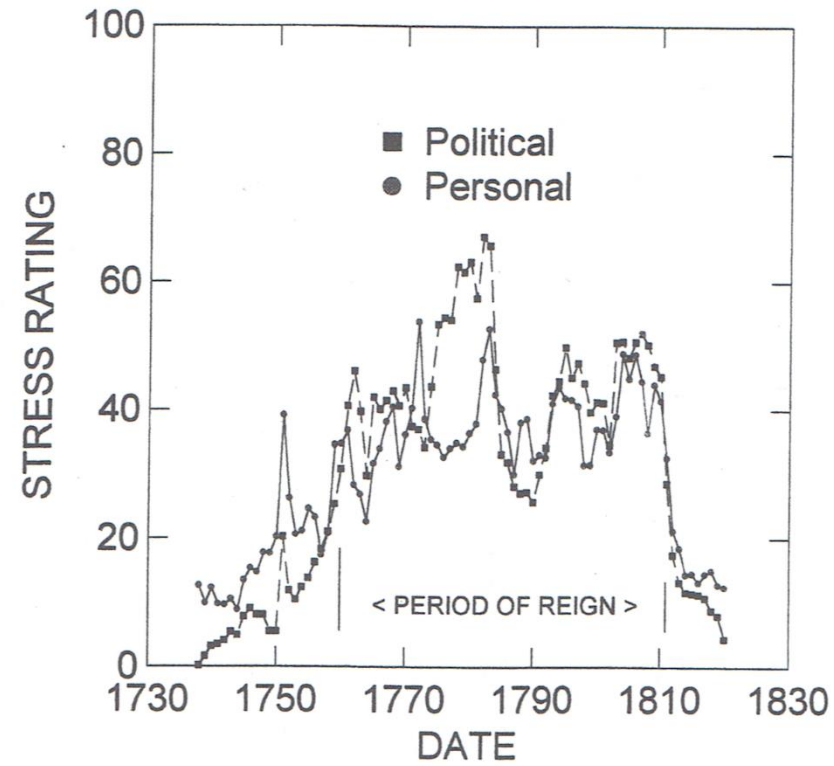


Figure 1

The fluctuations in political and personal stress in the life of King George III. The monthly data have been aggregated into yearly time units. The interval under investigation is indicated as well (i.e., the 624 months between January 1760 and December 1811, inclusively).

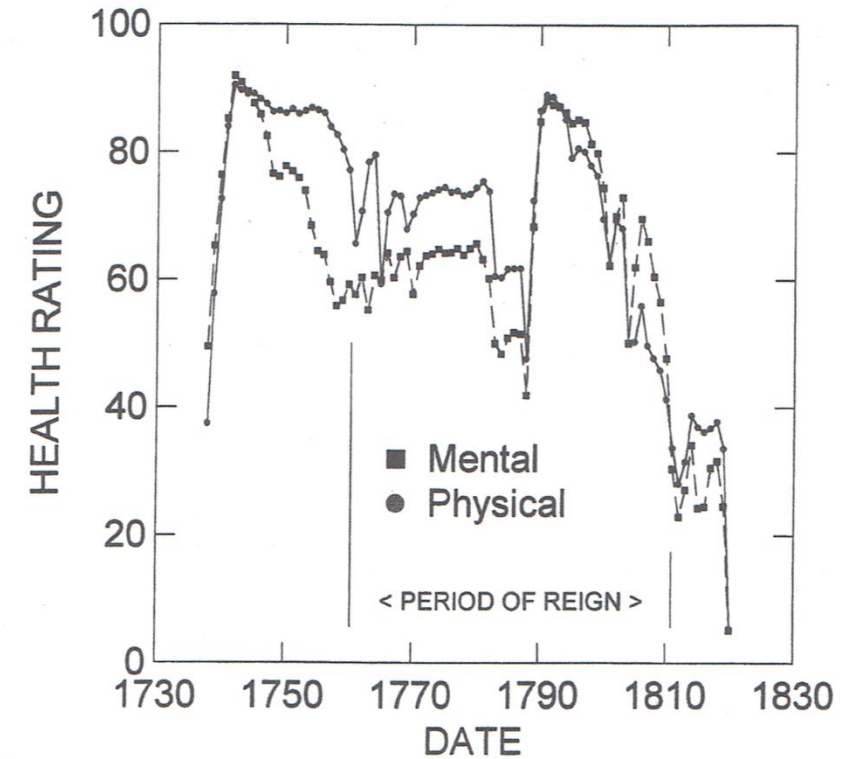


Figure 2

The fluctuations in mental and physical health in the life of King George III. The monthly data have been aggregated into yearly time units. The interval under investigation is indicated as well (i.e., the 624 months between January 1760 and December 1811, inclusively).

Table 1
Lag-9 Cross-Correlations and Probability Levels for Health
and Stress Measures

Stress	Data	Health					
		Total		Physical		Mental	
		<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Total	Raw	-.20	.000	-.22	.001	-.16	.000
	First-differenced	-.09	.019	-.11	.009	-.08	.049
	Prewhitened	-.09	.022	-.10	.009	-.08	.052
Personal	Raw	-.17	.000	-.24	.000	-.10	.012
	First-differenced	-.08	.040	-.10	.017	-.07	.095
	Prewhitened	-.10	.017	-.11	.009	-.08	.038
Political	Raw	-.16	.000	-.15	.000	-.14	.001
	First-differenced	-.07	.069	-.09	.020	-.05	.198
	Prewhitened	-.06	.112	-.08	.046	-.04	.283

Note: The exact probability levels are based on the correlation coefficients carried to three decimal places, not the coefficients above that were rounded off to two places.



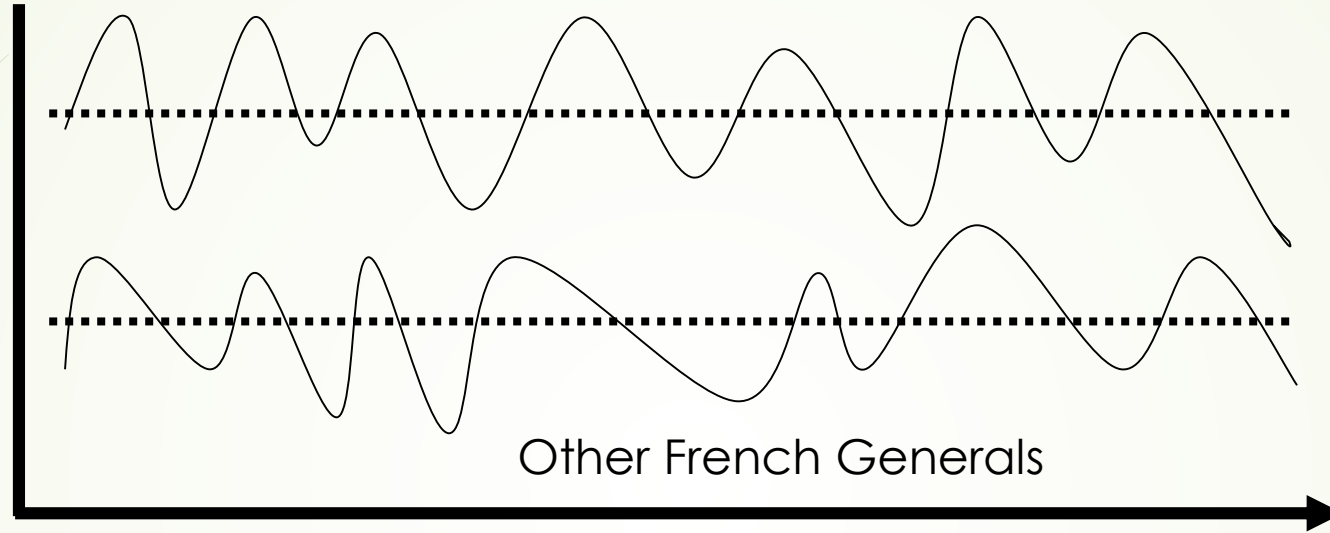


Napoleon Bonaparte

- Simonton, D. K. (1979). Was Napoleon a military genius? Score: Carlyle 1, Tolstoy 1. *Psychological Reports*, 44, 21-22.
- Cf. Simonton, D. K. (1980). Land battles, generals, and armies: Individual and situational determinants of victory and casualties. *Journal of Personality and Social Psychology*, 38, 110-119.

SUCCESS
RATE

Napoleon



Other French Generals

HISTORICAL TIME

- **Carlyle: 85% vs. 47% or $r = .30$**
 - → 9% of the variance
- **Tolstoy: 1796-1800, 1805-1809, 1812-1815 success rates $r = .50$**
 - → 25% of the variance





Ludwig van Beethoven

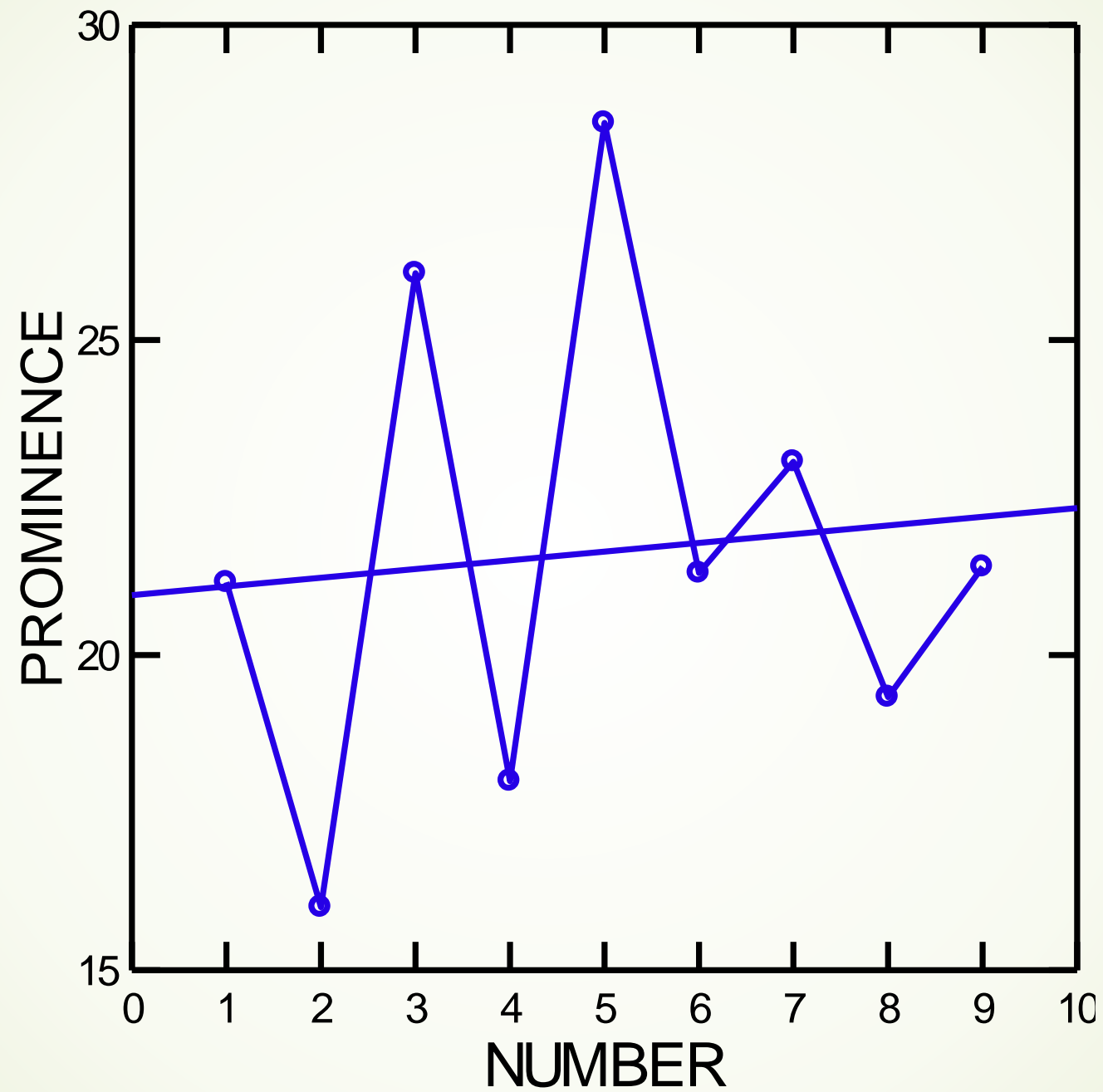
- Simonton, D. K. (1987). Musical aesthetics and creativity in Beethoven: A computer analysis of 105 compositions. *Empirical Studies of the Arts*, 5, 87-104.
- Simonton, D. K. (2015). Odds and evens in Beethoven's nine symphonies: Can a computer really tell the difference? *Empirical Studies of the Arts*, 33, 18-35.

Beethoven's Nine Symphonies:

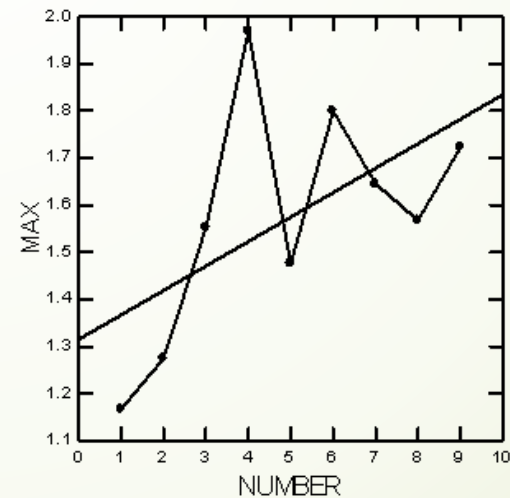
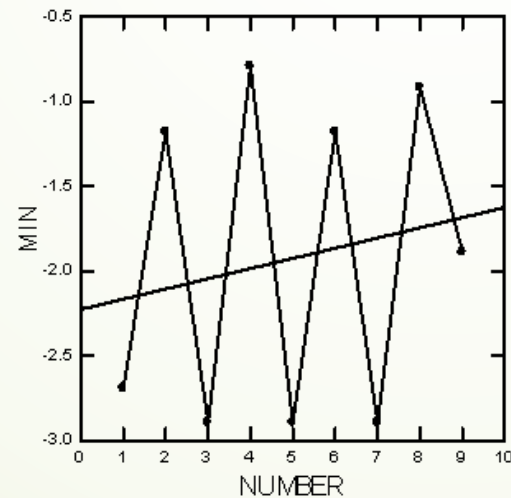
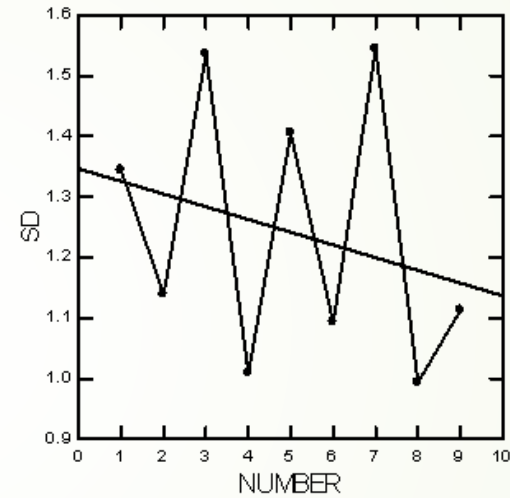
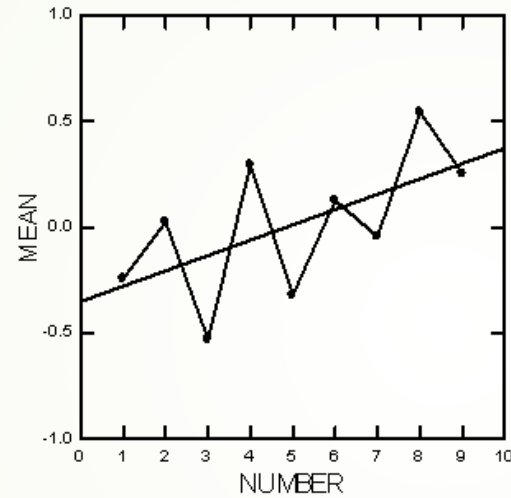
	1	2	3	4	5	6	7	8	9
Name ^a	--	--	Eroica	--	"Fate"	Pastoral	--	--	Choral
Key	C	D	E flat	B flat	C minor	F	A	F	D minor
Opus	21	36	55	60	67	68	92	93	125
Year	1800	1803	1805	1807	1808	1808	1813	1814	1824
Age ^b	29	32	34	36	38	38	42	43	53

^aThe name sometimes used for the Fifth was not Beethoven's own, hence the placement in quotes. Symphonies 1, 2, 4, 7, and 8 are usually not identified with any name.

^bBecause the composer was born on December 16, 1770, most works premiered before his actual birthday in a given year, with the exception of the Fifth and Sixth, which were first heard in a concert on December 22 (hence the seeming discrepancies in the calculations).



Melodic originality: Mean, Standard Deviation, Minimum, and Maximum



Beethoven's 5th, 1st movement, opening motive







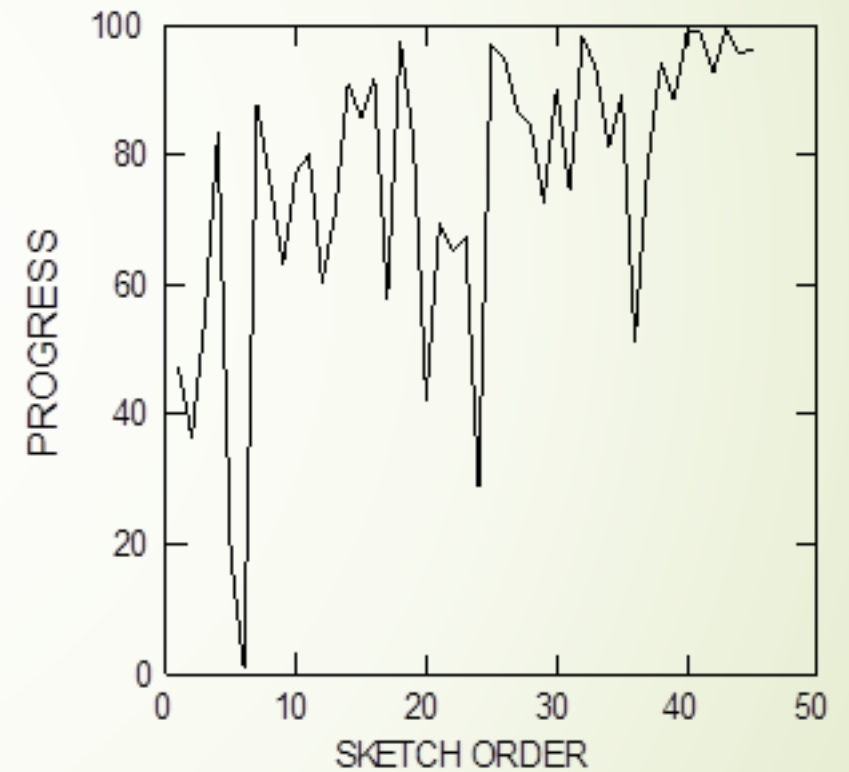
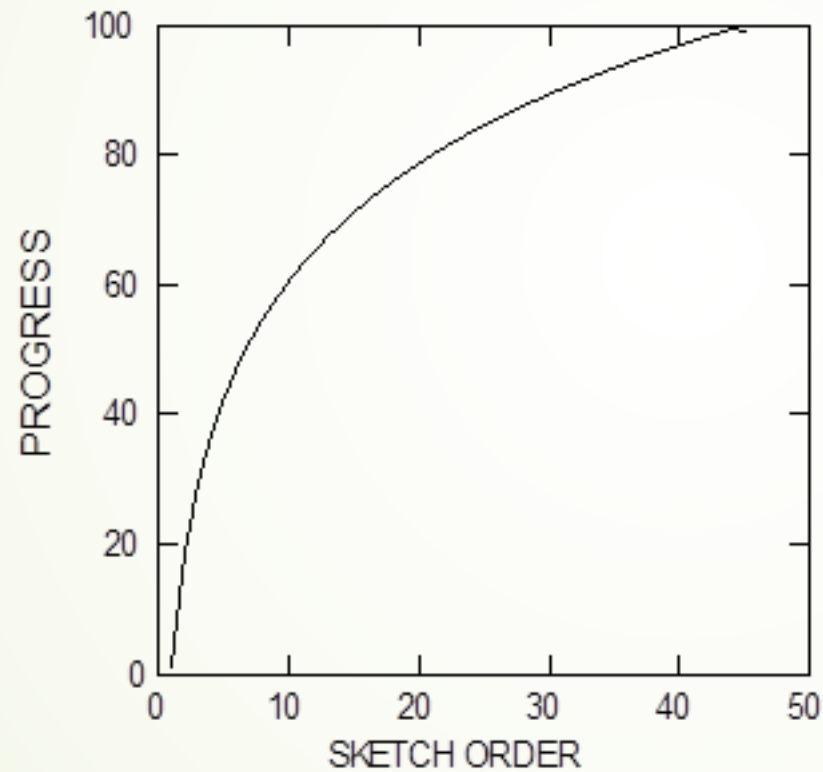
Pablo Picasso

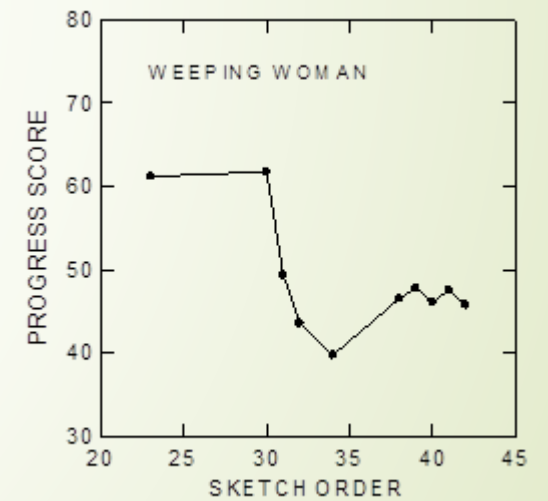
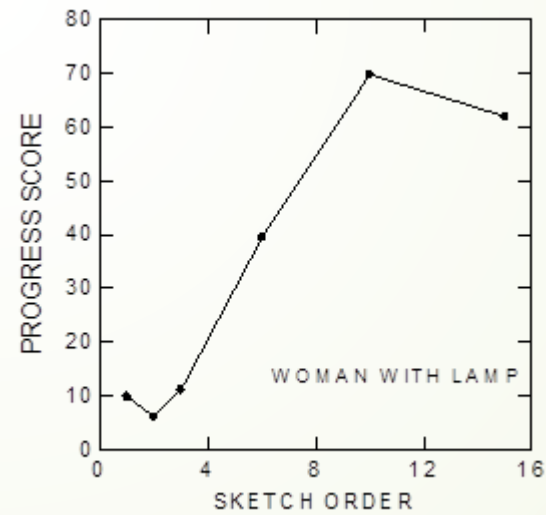
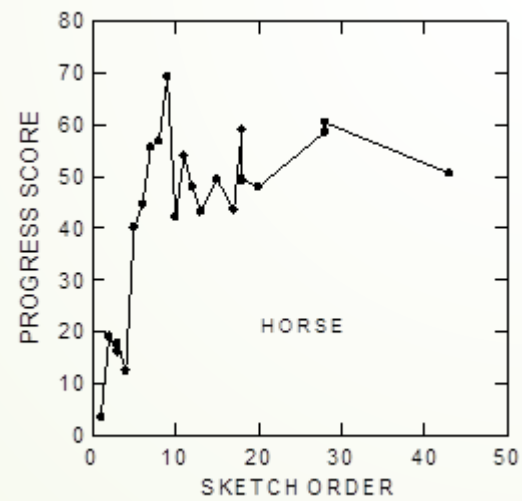
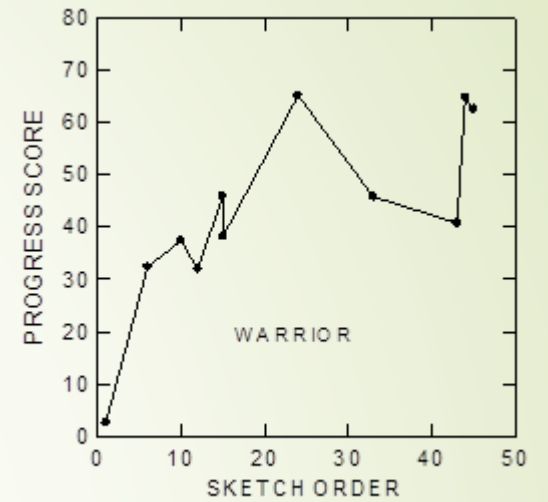
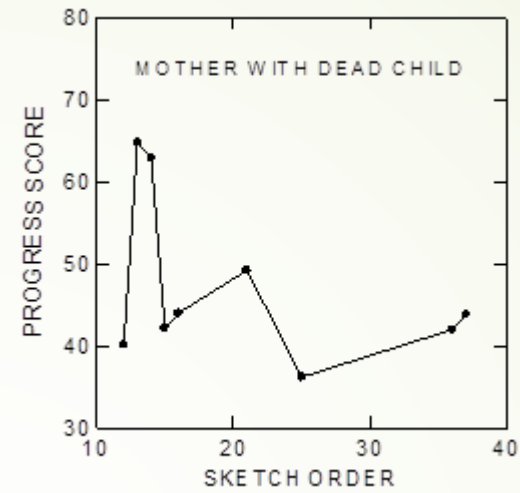
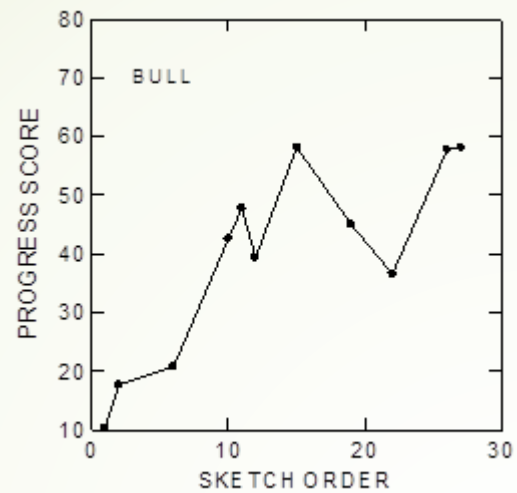
- Simonton, D. K. (2007). The creative process in Picasso's Guernica sketches: Monotonic improvements or nonmonotonic variants? *Creativity Research Journal*, 19, 329-344.
- Damian, R. I., & Simonton, D. K. (2011). From past to future art: The creative impact of Picasso's 1935 Minotauromachy on his 1937 *Guernica*. *Psychology of Aesthetics, Creativity, and the Arts*, 5, 360-369.

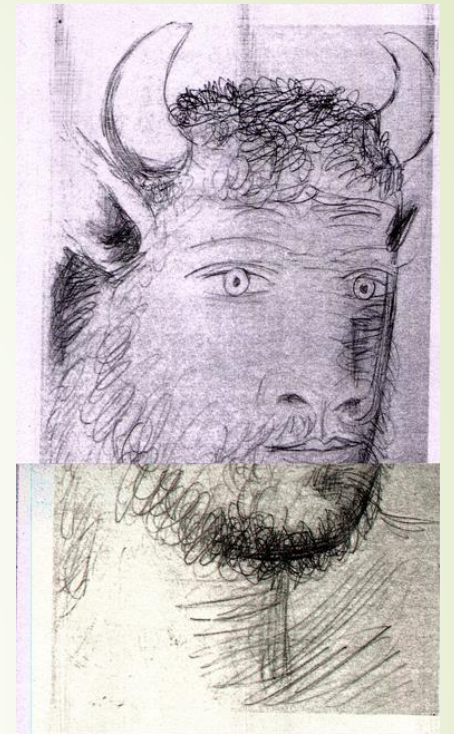
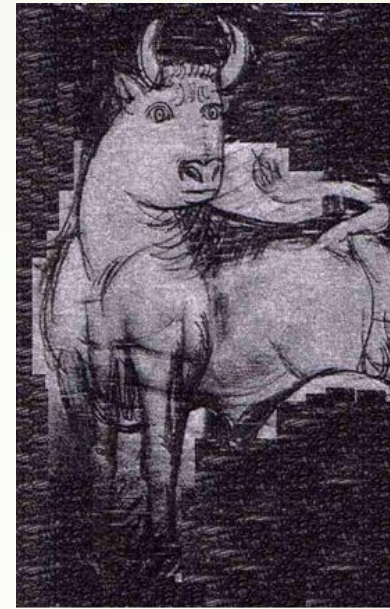
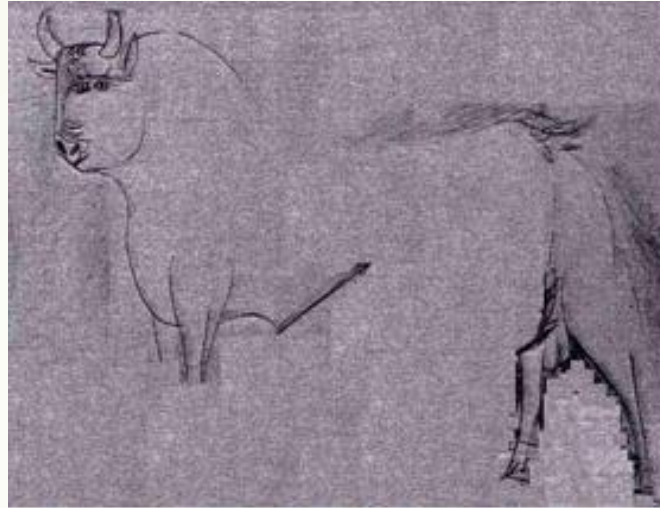
Guernica



Monotonic versus Nonmonotonic









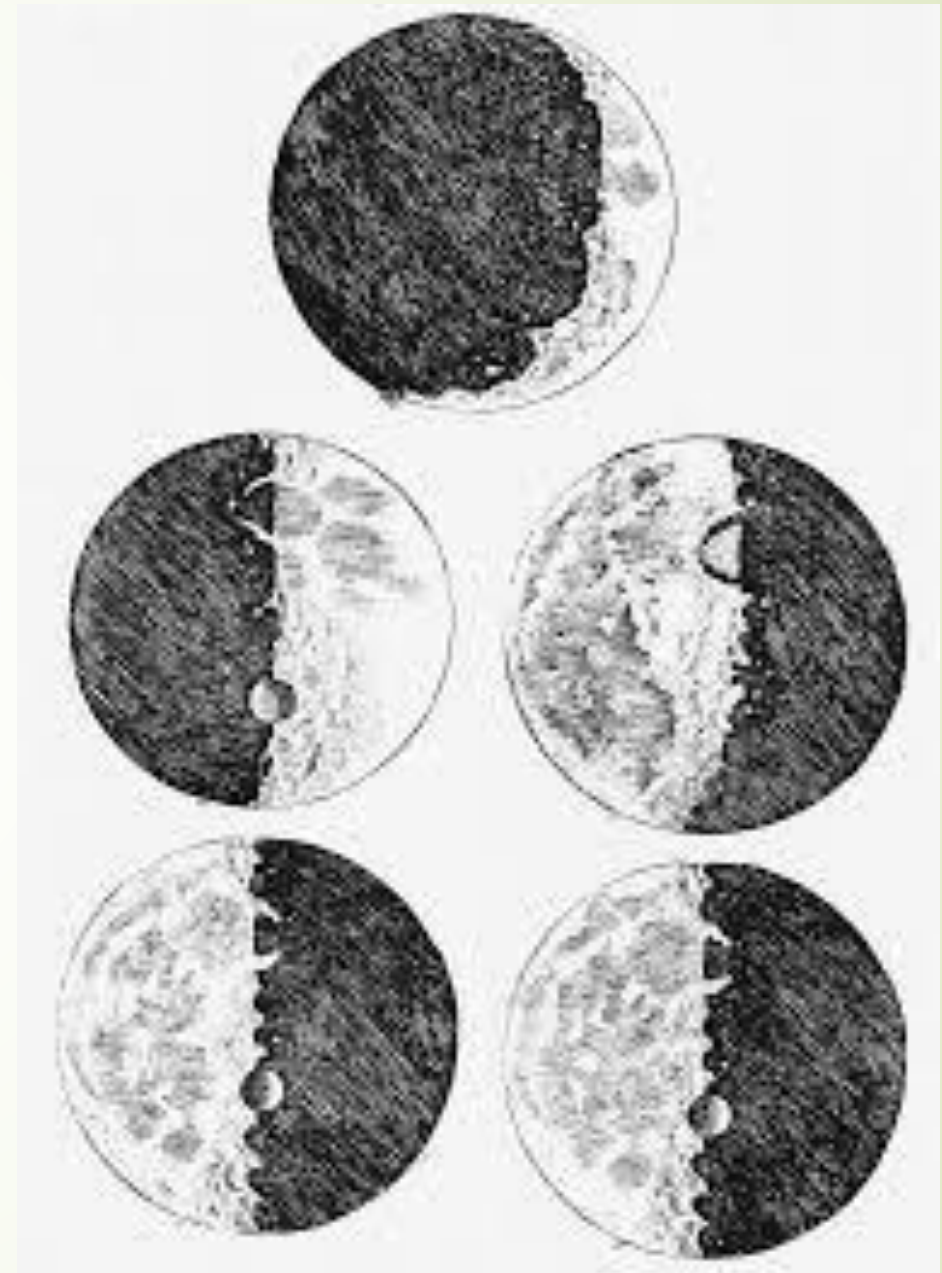
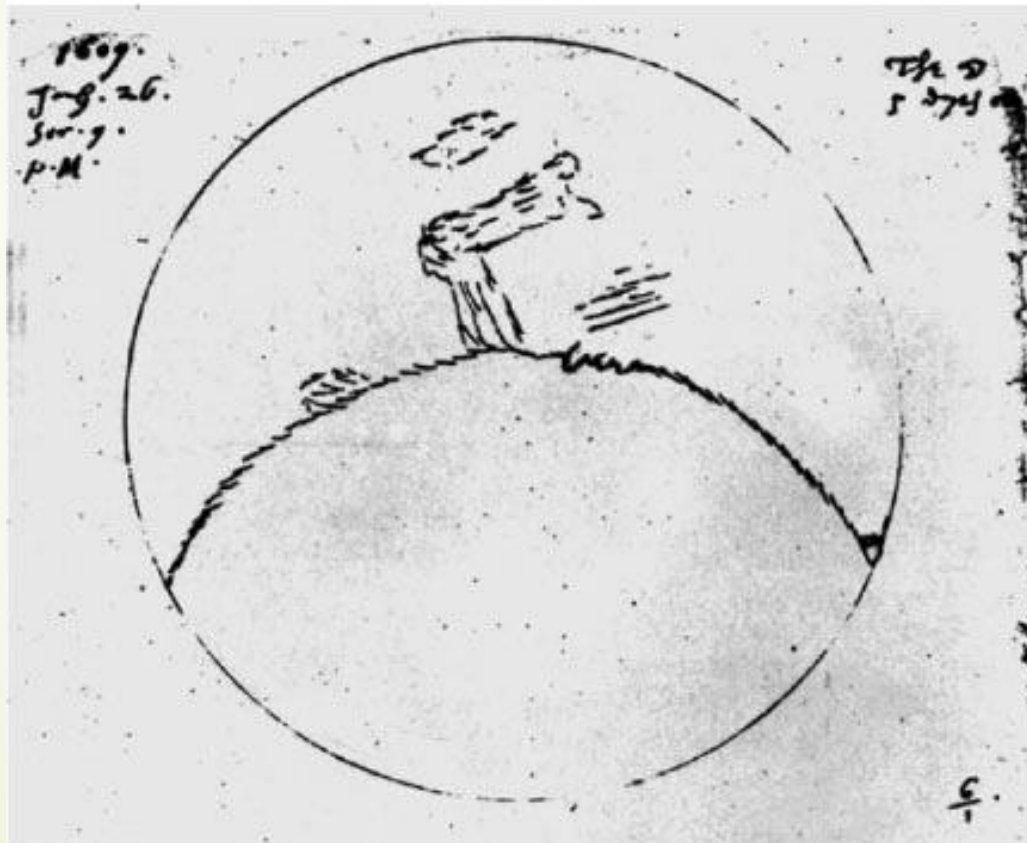


Galileo Galilei

- Simonton, D. K. (2012). Foresight, insight, oversight, and hindsight in scientific discovery: How sighted were Galileo's telescopic sightings? *Psychology of Aesthetics, Creativity, and the Arts*, 6, 243-254.

Harriot versus Galileo

Figure 13



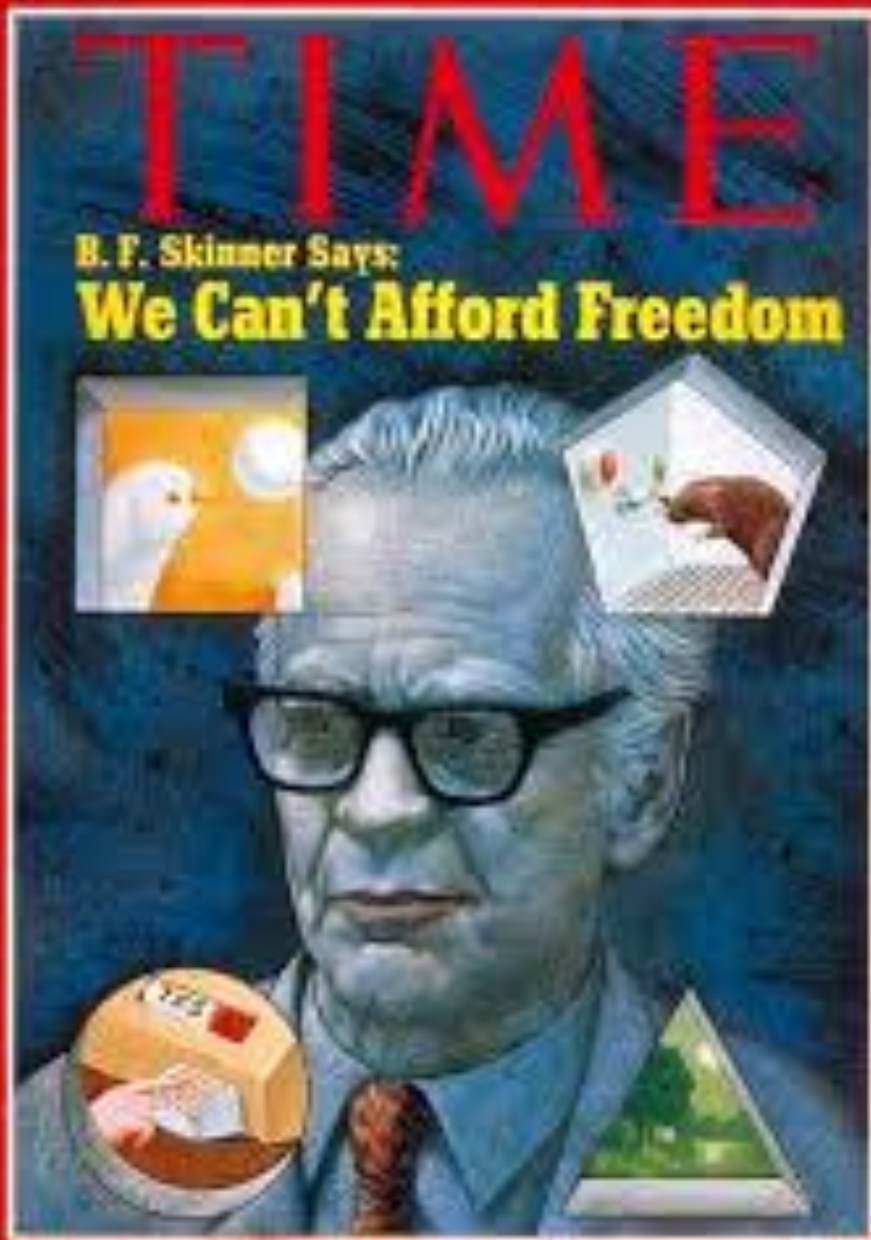
Murillo versus Cigoli

Figure 14



Figure 21

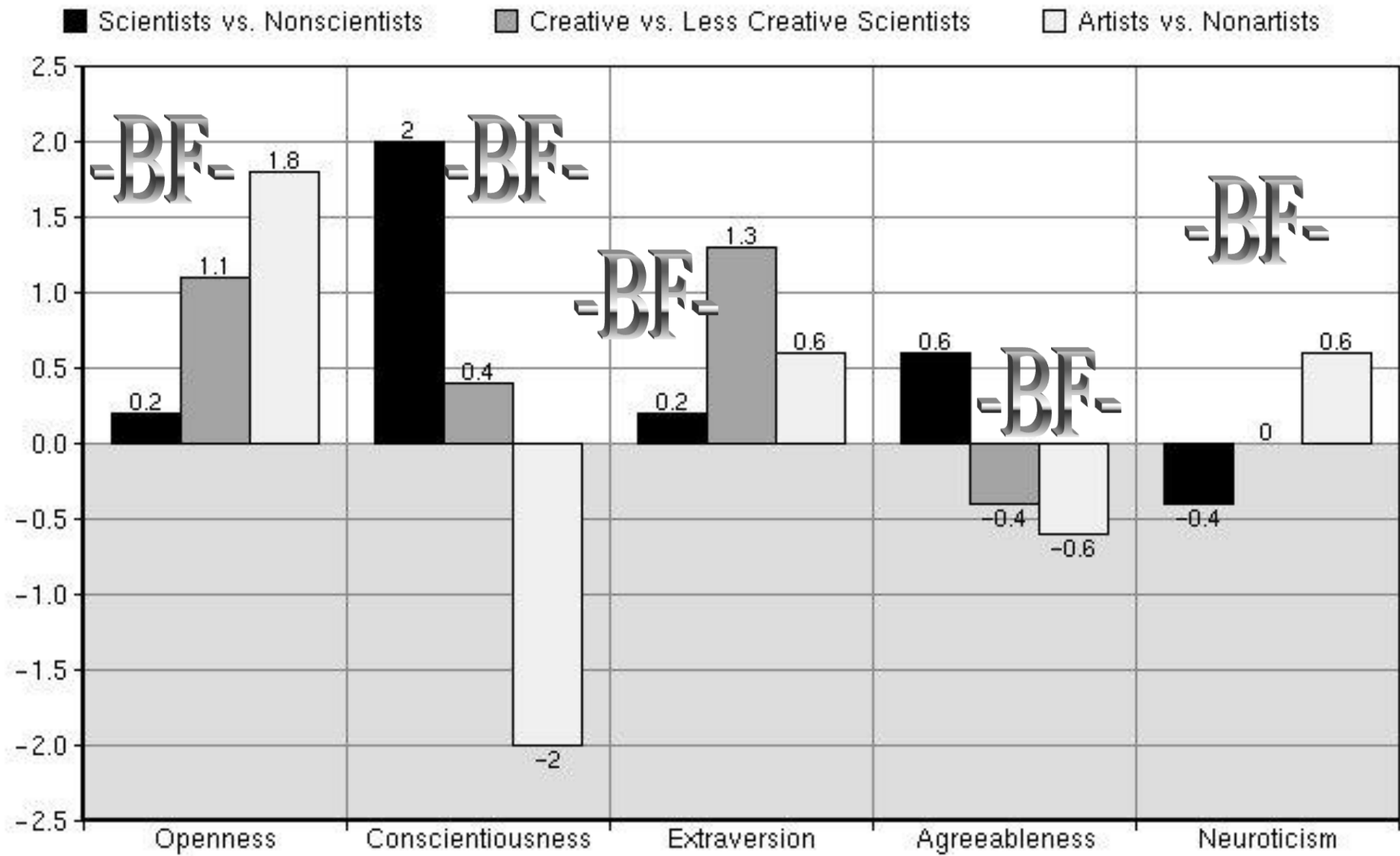






B. F. Skinner

- Overskeid, G., Grønnerød, C., & Simonton, D. K. (2012). The personality of a nonperson: Gauging the inner Skinner. *Perspectives on Psychological Science*, 7, 187-197.

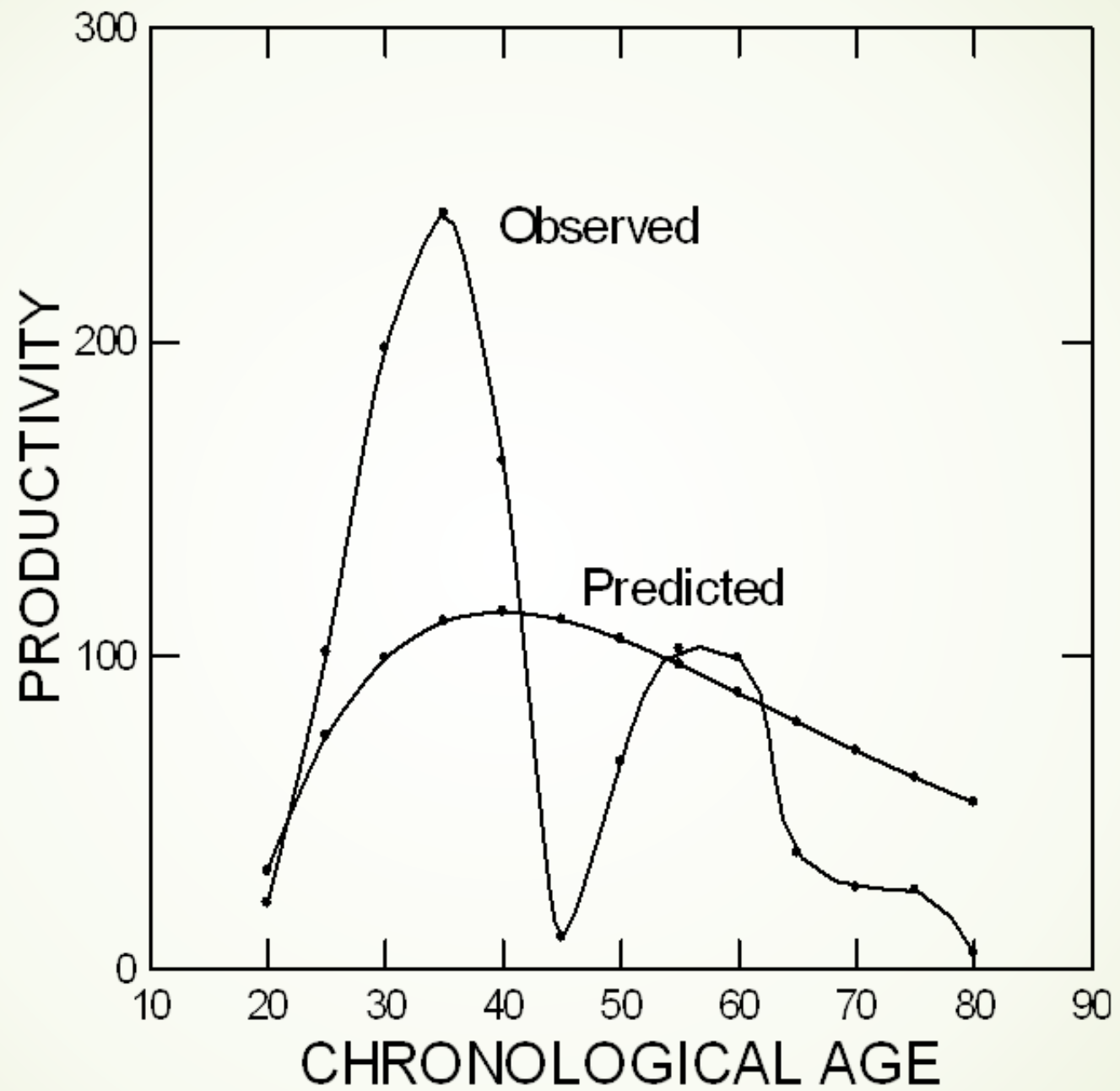


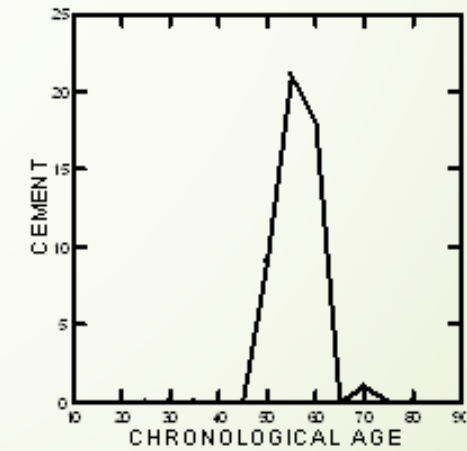
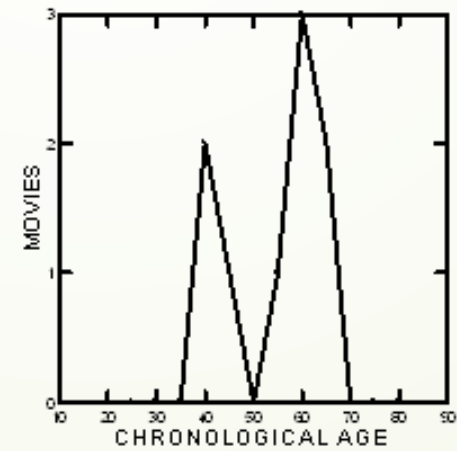
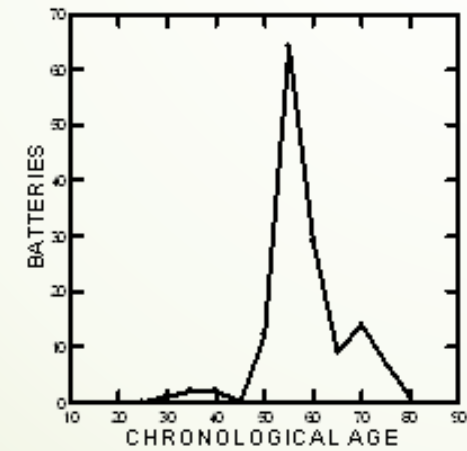
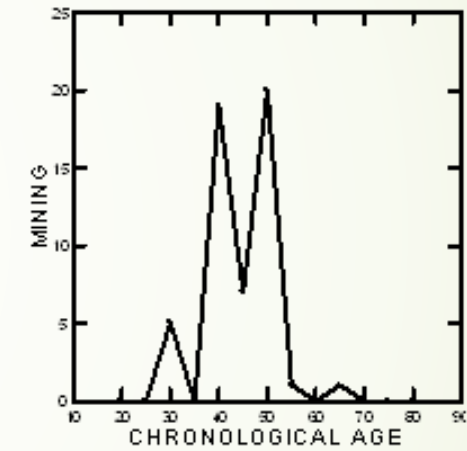
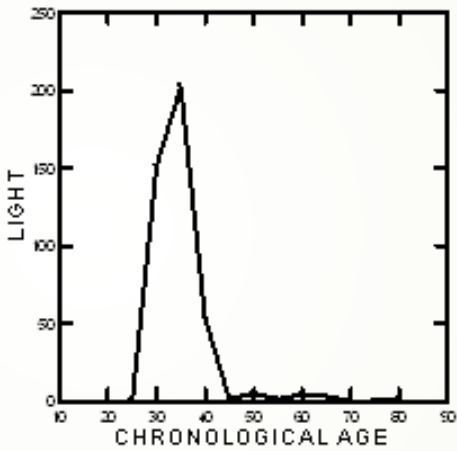
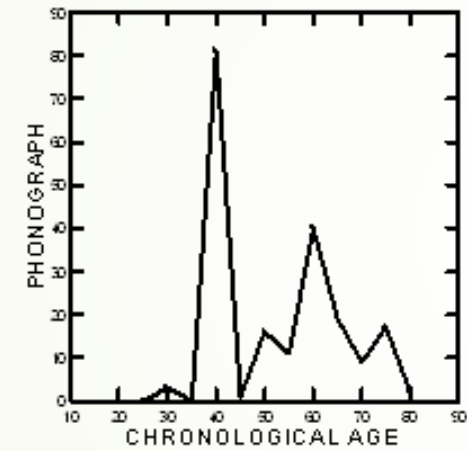
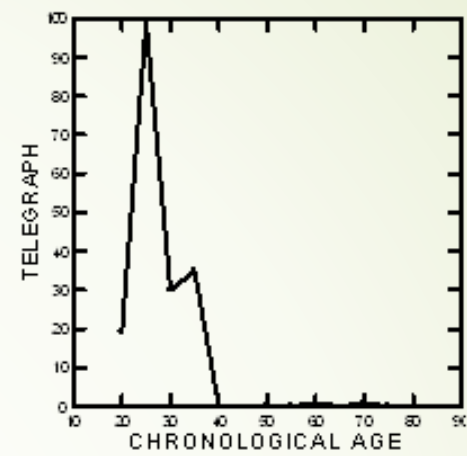
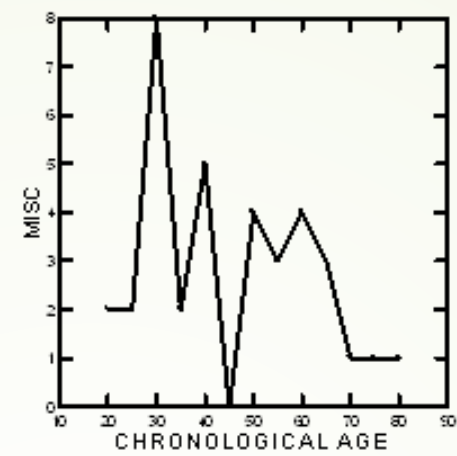
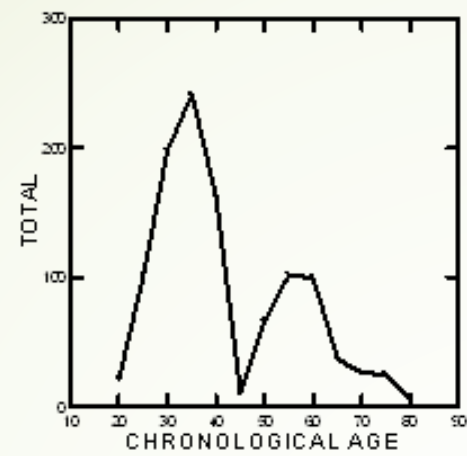
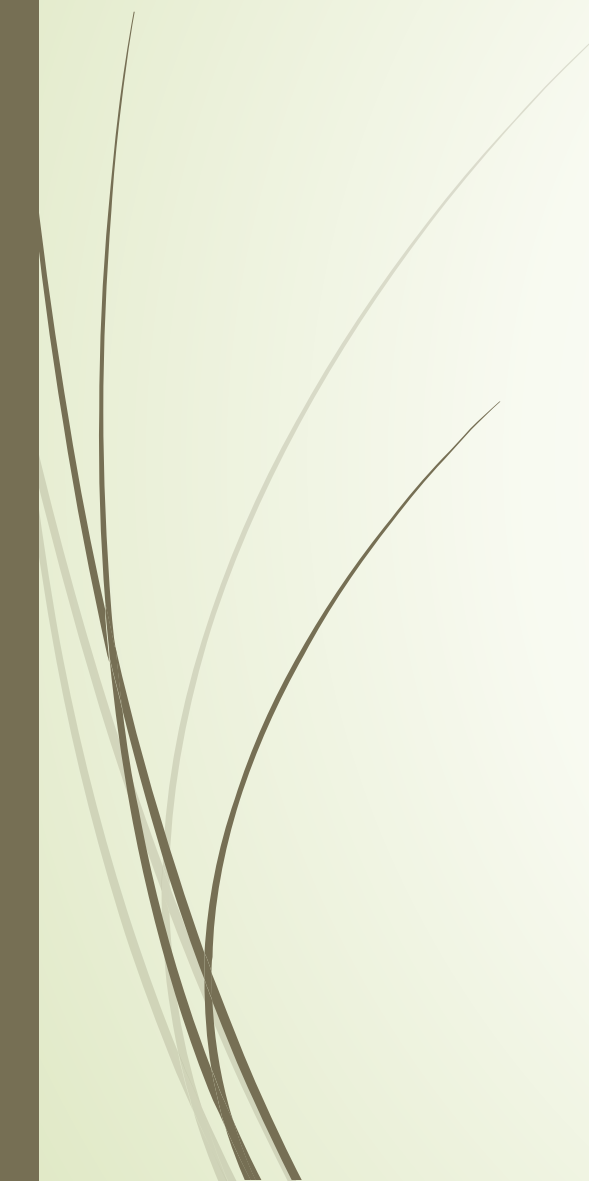


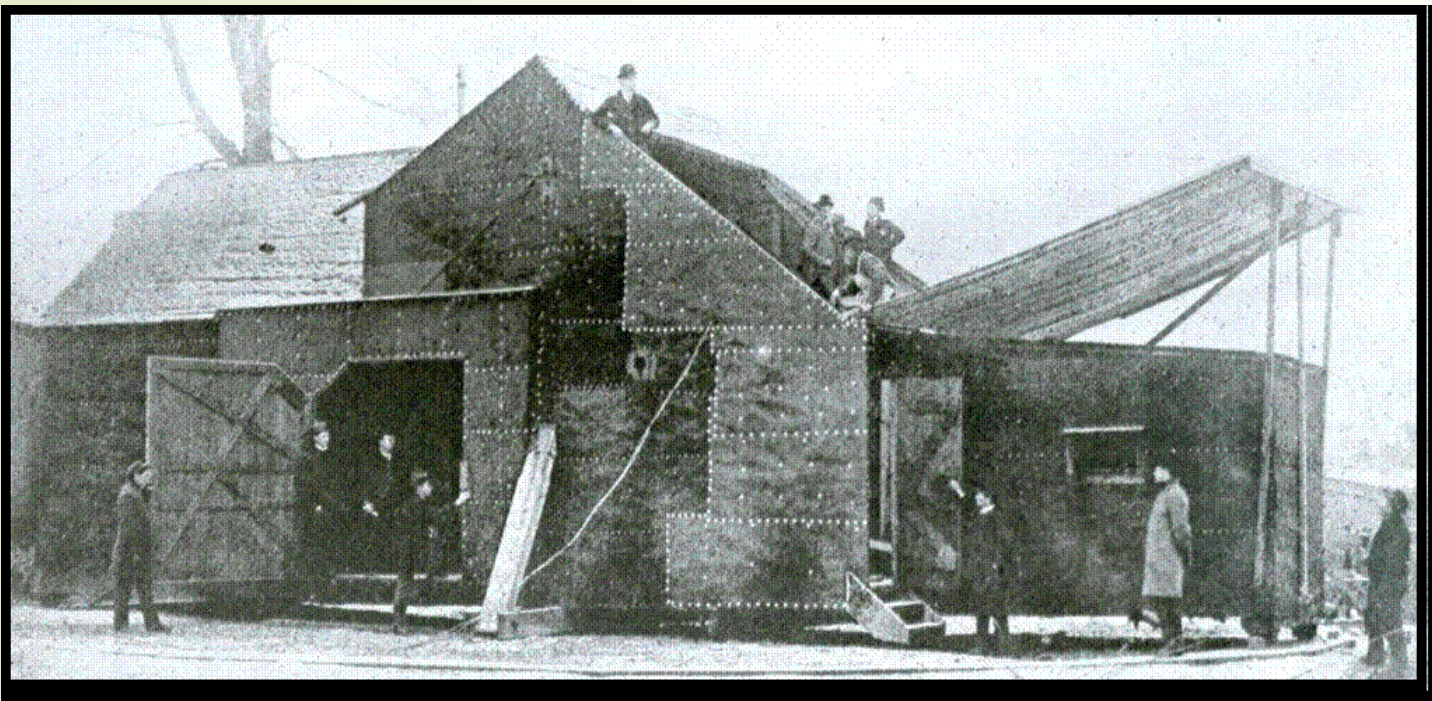


Thomas Alva Edison

- Simonton, D. K. (2015). Thomas Alva Edison's creative career: The multilayered trajectory of trials, errors, failures, and triumphs. *Psychology of Aesthetics, Creativity, and the Arts*, 9, 2-14.

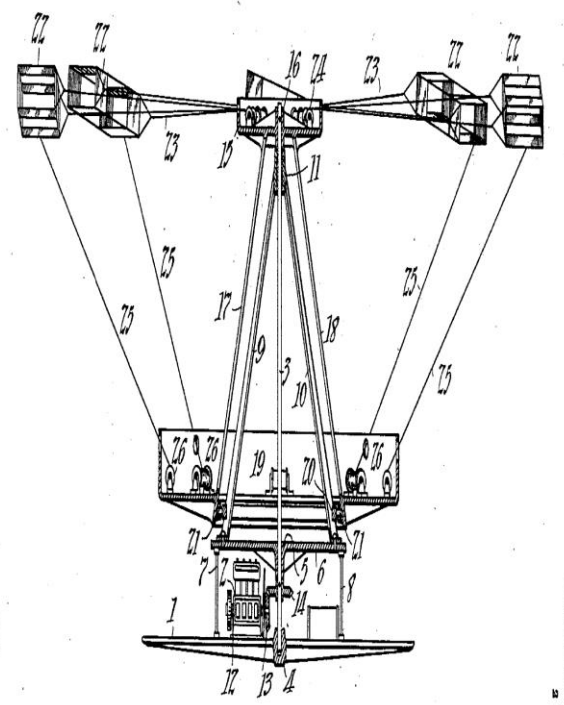




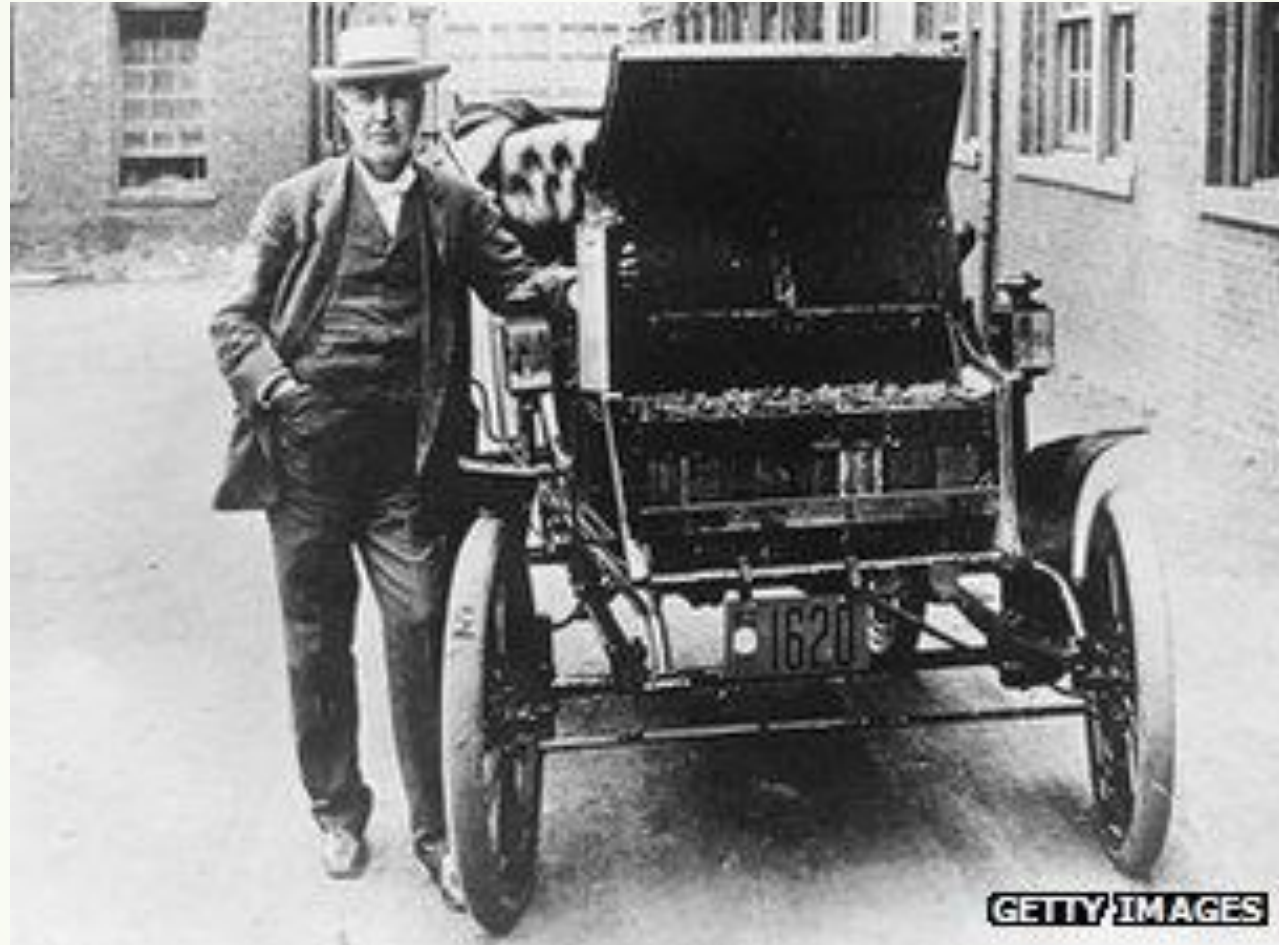




Patented Sept. 20, 1910.
By James T. H. Smith
Attorney at Law



970,616.
 T. A. EDISON.
 FLYING MACHINE.
 APPLICATION FILED NOV. 16, 1908.
 Patented Sept. 20, 1910.
 2 SHEETS-SHEET 1.



GETTY IMAGES



Thanks to my $N = 1$ samples of significant “research subjects” ...

- William Shakespeare (1564-1616) English dramatist and poet
- Galileo Galilei (1564-1642) Italian astronomer and physicist
- King George III of Great Britain (1738-1820) British monarch
- Napoleon Bonaparte (1769-1821) French general and politician
- Ludwig van Beethoven (1770-1827) German composer
- Thomas A. Edison (1847-1931) United States inventor
- Pablo Picasso (1881-1973) Spanish painter and sculptor
- B. F. Skinner (1904–1990) United States psychologist