

A (very short) quantitative analysis of The Roots' discography

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1 Introduction and methods

This brief study observes the relationship between three variables – year, length and score – in the discography of The Roots. Data was taken from each album's Wikipedia page on Friday 28 November 2014; extended plays and collaborative albums were excluded due to the absence of data on critical reception. Live and compilation albums were also excluded in order to focus on albums with solely *original* content.

Year refers to the year in which the album was released, *length* refers to the length of the album to the nearest minute and *score* relates to the album's critical reception. All scores except those on an alpha scale ('A+', 'A', 'B'...) were included and converted to a 100-point scale (or, percentages). Simple linear regression was used to model the relationships between each independent variable (IV) and dependent variable (DV).

2 Data analysis

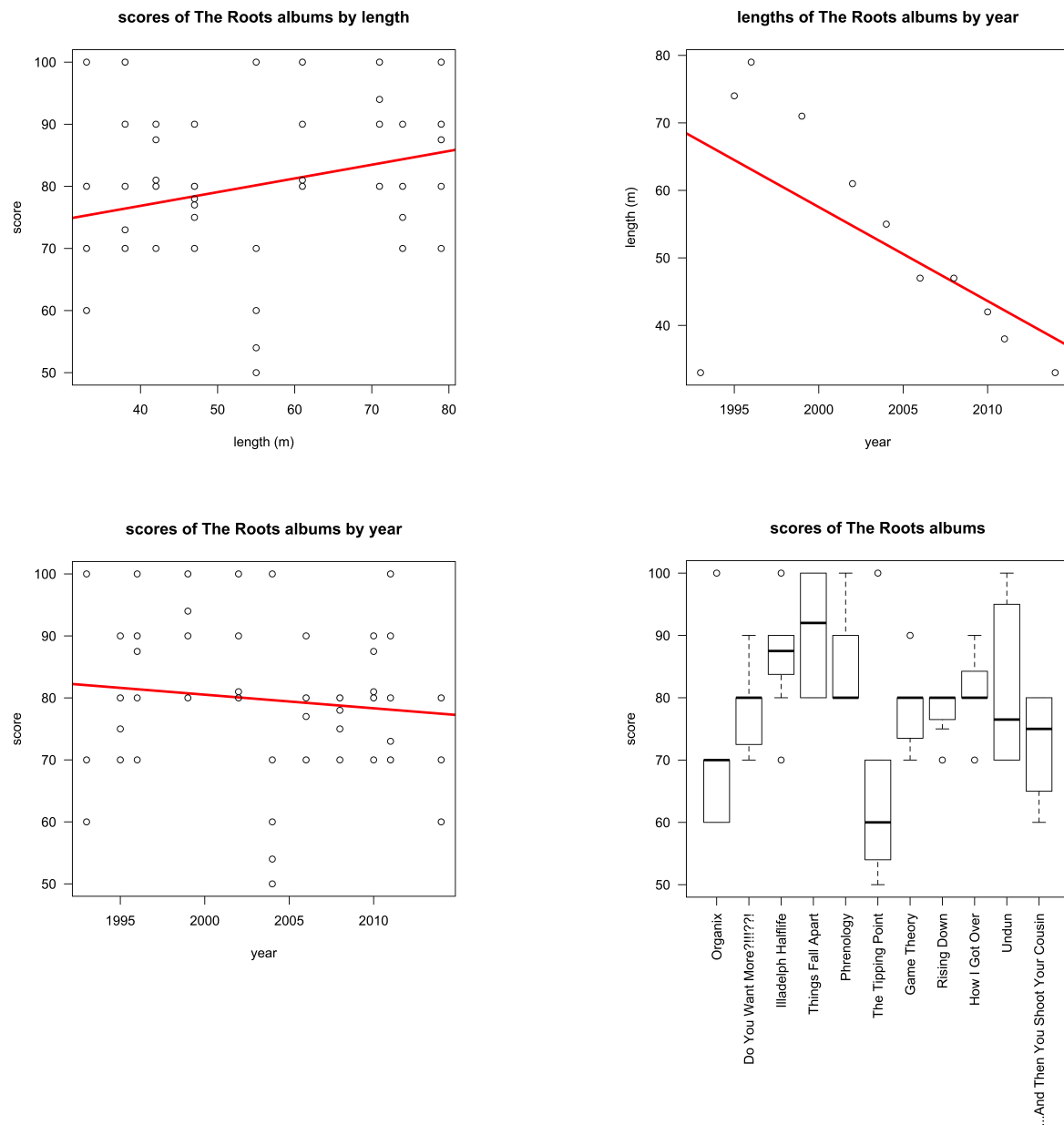
There was a significant correlation (p-value: 0.00684) between length (IV) and score (DV). The regression line had a slope of 0.22, meaning that, on average, for every extra minute, an additional 0.22% was scored.

For every extra year (IV), on average, the length (DV) reduced by 1.39 minutes. However, this correlation was not significant (p-value: 0.0538). The lack of significance may have been due to a notable outlier – the debut album was 33 minutes, compared with 74 minutes for the sophomore and 79 minutes for the third.

On average, for every extra year (IV), the score (DV) reduced by 0.22%. However, this was also shown not to be significant (p-value: 0.259). An additional plot has been generated for this observation, but with the x-axis relabelled with the albums corresponding to each year, and in boxplot form.

Below is a summary of the findings.

IV	DV	correlation	significant
length	score	+ve	y
year	length	-ve	n
year	score	-ve	n



album	year	publication	score	length
Organix	1993	Allmusic	60	33
Organix	1993	RapReviews	70	33
Organix	1993	Rolling Stone	60	33
Organix	1993	Sputnikmusic	70	33
Organix	1993	Winston-Salem Journal	100	33
Do You Want More?!!!!?!?	1995	Allmusic	80	74
Do You Want More?!!!!?!?	1995	NME	70	74
Do You Want More?!!!!?!?	1995	Philadelphia Daily News	75	74
Do You Want More?!!!!?!?	1995	Rolling Stone	70	74
Do You Want More?!!!!?!?	1995	The Source	80	74

album	year	publication	score	length
Do You Want More?!!!!?!	1995	Spin	80	74
Do You Want More?!!!!?!	1995	Sputnikmusic	90	74
Illadelph Halflife	1996	Allmusic	80	79
Illadelph Halflife	1996	Los Angeles Daily News	100	79
Illadelph Halflife	1996	Los Angeles Times	87.5	79
Illadelph Halflife	1996	The Philadelphia Inquirer	87.5	79
Illadelph Halflife	1996	Rolling Stone	70	79
Illadelph Halflife	1996	The Source	90	79
Illadelph Halflife	1996	Spin	90	79
Things Fall Apart	1999	Allmusic	90	71
Things Fall Apart	1999	Los Angeles Times	100	71
Things Fall Apart	1999	NME	80	71
Things Fall Apart	1999	Pitchfork Media	94	71
Things Fall Apart	1999	Rolling Stone	80	71
Things Fall Apart	1999	USA Today	100	71
Phrenology	2002	Allmusic	90	61
Phrenology	2002	Blender	100	61
Phrenology	2002	The Guardian	80	61
Phrenology	2002	Mojo	100	61
Phrenology	2002	Pitchfork Media	81	61
Phrenology	2002	Q	80	61
Phrenology	2002	Rolling Stone	80	61
Phrenology	2002	Slant Magazine	80	61
Phrenology	2002	Spin	80	61
The Tipping Point	2004	Allmusic	70	55
The Tipping Point	2004	Los Angeles Times	50	55
The Tipping Point	2004	Pitchfork Media	54	55
The Tipping Point	2004	Rolling Stone	60	55
The Tipping Point	2004	USA Today	100	55
Game Theory	2006	Allmusic	90	47
Game Theory	2006	The Guardian	80	47
Game Theory	2006	Mojo	80	47
Game Theory	2006	Pitchfork Media	77	47
Game Theory	2006	Rolling Stone	70	47
Game Theory	2006	Spin	80	47
Game Theory	2006	URB	70	47
Rising Down	2008	Allmusic	80	47
Rising Down	2008	Blender	80	47
Rising Down	2008	Los Angeles Times	75	47
Rising Down	2008	Mojo	80	47
Rising Down	2008	Pitchfork Media	78	47
Rising Down	2008	Rolling Stone	70	47
Rising Down	2008	Slant Magazine	80	47
Rising Down	2008	Spin	80	47
How I Got Over	2010	Allmusic	80	42

album	year	publication	score	length
How I Got Over	2010	Chicago Tribune	87.5	42
How I Got Over	2010	The Guardian	80	42
How I Got Over	2010	Pitchfork Media	81	42
How I Got Over	2010	Rolling Stone	70	42
How I Got Over	2010	The Skinny	80	42
How I Got Over	2010	Spin	80	42
How I Got Over	2010	URB	90	42
Undun	2011	Allmusic	90	38
Undun	2011	Chicago Tribune	100	38
Undun	2011	The Independent	100	38
Undun	2011	The Observer	80	38
Undun	2011	Pitchfork Media	73	38
Undun	2011	Rolling Stone	70	38
Undun	2011	Slant Magazine	70	38
Undun	2011	Spin	70	38
...And Then You Shoot Your Cousin	2014	Allmusic	70	33
...And Then You Shoot Your Cousin	2014	Exclaim!	80	33
...And Then You Shoot Your Cousin	2014	The Guardian	80	33
...And Then You Shoot Your Cousin	2014	New York Daily News	60	33
...And Then You Shoot Your Cousin	2014	Rolling Stone	70	33
...And Then You Shoot Your Cousin	2014	Slant Magazine	80	33
...And Then You Shoot Your Cousin	2014	Spin	60	33
...And Then You Shoot Your Cousin	2014	XXL	80	33