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Description of the Polity-data used

This note is background documentation to M. Paldam and E. Gundlach, 2017. *Why do political regimes change? A study of triggering events*. (In work). Referred to as 'paper'.

The data was downloaded as an excel file, August 3rd, from the polity home: http://www.systemicpeace.org/polityproject.html. It is the p4v2015 data file, which has 36 columns from A to AJ. We need 4: columns D (country), E (year), J (Polity), and K (Polity2).

(1) Thus, first columns A to C, F to I and above L were deleted.
(2) Then the data were sorted by year, and all data for years before 1959 was deleted. 8,405 observations remain. The 92 observations for 1959 were used for the first differences in 1960 only.
(3) The observation where Polity is: blank, 0 (no regime), -66 (foreign intervention), -77 (anarchy) and the observations where Polity is -88 (regime transition) and Polity2 is 0 was deleted. This is 317 observations, including 2 observations from 1959. Now 8,405 – 92 +2 – 317 = 7,996 observations for 1960 to 2015 remains.
(4) The Polity column is deleted, as it is now the same as Polity 2, except for the remaining cases where Polity is -88. Here we use the Polity 2 coding.

Table 1. Names used for countries that change area

Old country	In our file	Year of change	New Country	In our file
Czechoslovakia	Czech 1	1992-93	Czech Republic	Czech 2
North Vietnam	Vietnam 1	1975-76	Vietnam	Vietnam 2
North Yemen	Yemen 1	1990-91	Yemen	Yemen 2
USSR	Russia 1	1989-92	Russia	Russia 2
West Germany	Germany 1	1989-90	Germany	Germany 2

Some countries are essentially the same, but with a change of name and territory. They are listed in Table 1. The reason to use the 1 and 2 names is that it allows sorting by country and year. In two of these cases there is overlapping of 1 year, where one is deleted. Thus, we are left with **7,994** observations. This is our version of the Polity data.

We have now calculated all first differences and highlighted all sequences (red for negative and green for positive changes). A sequence is defined as a set of changes in the same direction for consecutive years. The countries are divided in three groups listed in Table 2. The frequency distribution of these data is depicted on Figure 1 and reported in Table 3. The shaded cells are for small changes. They are not analyzed in the paper.

Table 2. Countries divided in 3 groups

	Group	Countries	Observations	Changes	Larger
A	No changes	32	1,371	0	0
B	Small changes only	26	1,087	56	0
C	With larger changes	112	5,536	565	245
	All	170	7,994	621	245

Figure 1. Distribution of the 245 large changes by size.
Calculated from Table 3

Figure 2. Distribution of the 245 large changes over time.
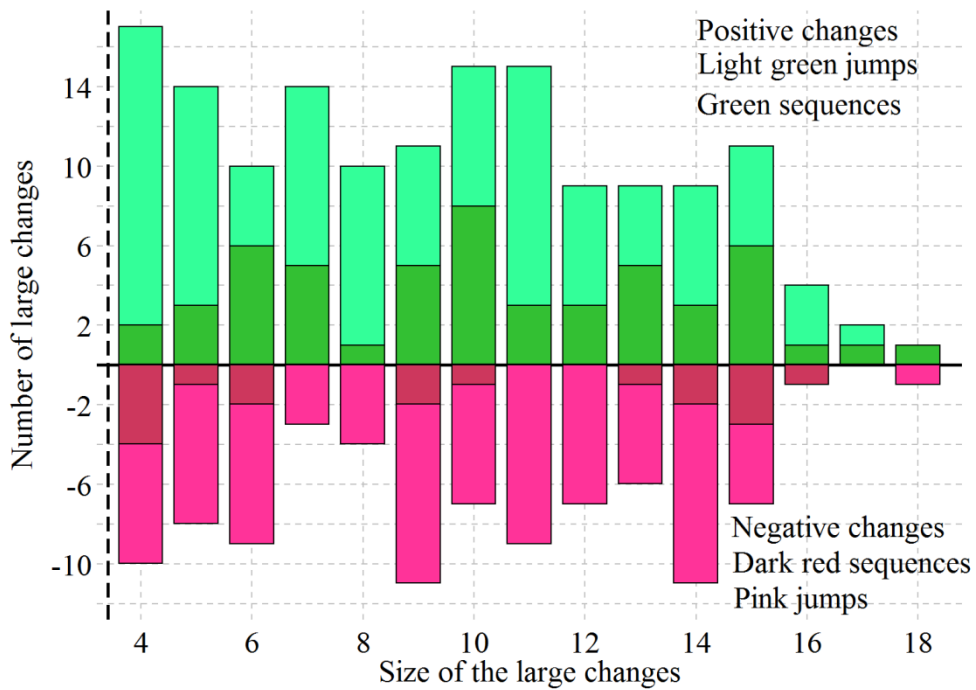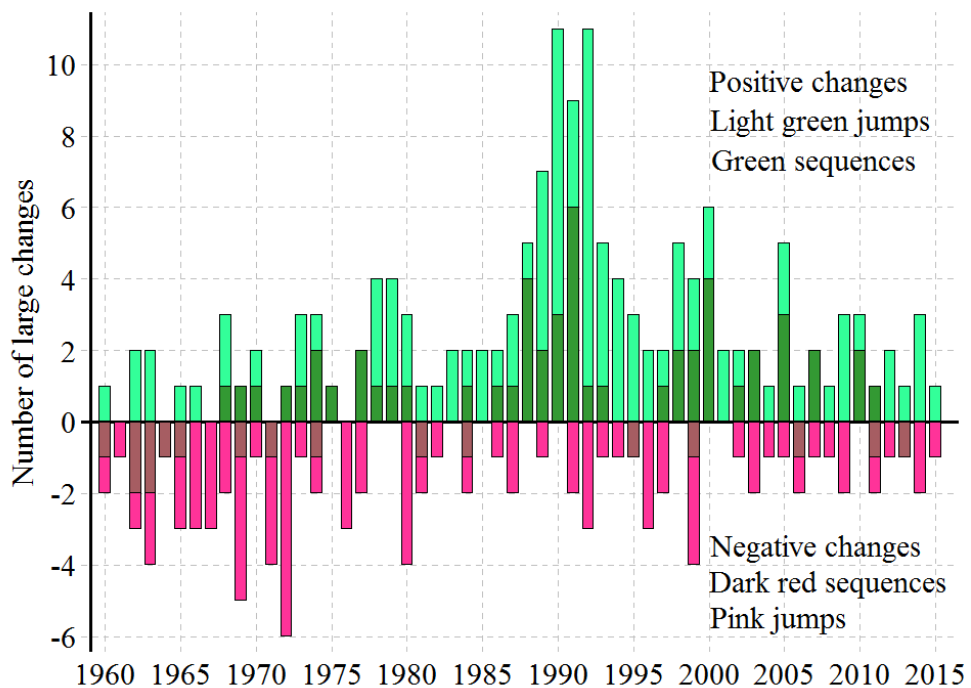Calculated from Table 4

Figure 1 is further discussed in paper. Figure 2 showed the big variation over time: 1960-76 saw a majority of negative changes – mainly in newly independent countries that started with a 'too' democratic constitution. 1986-96 saw a large wave of democratization in connection with the end of the Soviet Block. These waves are discussed in paper.

Table 3. Distribution of changes for all changes and for some intervals

Change	Group C		Group B		Change Interval	Group C		Gr. B	Large
	Jump	Sequence	Jump			Jump	Sequence	Jump	changes
-18	1				-11 down	35	7		42
-17					-4 to -10	42	10		52
-16		1			-3 to 0	110	5	24	
-15	4	3			0 to 3	193	12	32	
-14	9	2			4 to 10	61	30		91
-13	5	1			11-18	37	23		60
-12	7				Sum	478	87	56	-
-11	9				Larger	175	70	-	245
-10	6	1		
-9	9	2		
-8	4			
-7	3			
-6	7	2		
-5	7	1		
-4	6	4		
-3	10	2	2	
-2	32	3	5	
-1	68		17	
1	110		24	
2	49	5	4	
3	34	7	4	
4	15	2		
5	11	3		
6	4	6		
7	9	5		
8	9	1		
9	6	5		
10	6	8		
11	12	3		
12	6	3		
13	3	5		
14	6	3		
15	5	6		
16	3	1		
17	1	1		
18		1		

Note: There are 245 large changes. They are listed in the 7 sections of Table 4.

Finally, the small changes (below 4) have been deleted, and the large changes have been sorted by year. Figure 2 shows these data, and they are reported in the 7 sections of Table 4. The 70 sequences are reported the sum, reported in the change column, and a string giving the annual changes.

Consider two examples: The sequence from 1959 to 1963 in Laos sums to -15. It consists of the change from 1959 to 60 that is -9. The change from 1960 to 61 that is -1. The change from 1961 to 62 that is -3, and finally the change from 1962 to 63 that is -2. The change from 1959 to 60 in Nepal is -12. It is not part of a sequence, so the polity score in 1961 is -10 as it is in 1960.

Note the order of the change within the same year: It starts with sequences, from the one with the smallest, going to the largest. The individual jumps follow – they are also in a rising order. The color code is red for negative and green for positive changes.

Table 4A. Larger changes 1960-69

Year	Country	Polity2	Jumps and sequences: sum and years				
			Change	Same	Next 1	Next 2	Next 3
1960	Laos	-1	-15	-9	-1	-3	-2
	Nepal	-10	-12				
	Korea S	8	12				
1961	Korea S	-7	-15				
1962	Myanmar	-6	-15	-14	-1		
	Senegal	-4	-6	-3	-3		
	Peru	-6	-11				
	Pakistan	1	8				
	Dominican R	8	17				
1963	Brazil	3	-14	-2	-6	-6	
	Benin	-1	-9	-3	-3	-3	
	Congo Br	-7	-11				
	Syria	-7	-5				
	Korea S	3	10				
	Peru	5	11				
1964	Congo Ki	-6	-6	-3	-3		
1965	Burundi	-5	-4	-2	-2		
	Singapore	-2	-9				
	Morocco	-9	-6				
	Sudan	7	14				
1966	Nigeria	-7	-14				
	Dominican R	-3	-11				
	Argentina	-9	-8				
	Guatemala	3	8				
1967	Sierra Leone	-7	-13				
	Uganda	-6	-13				
	Greece	-7	-11				
1968	Thailand	-2	9	5	4		
	Peru	-7	-12				
	Panama	-7	-11				
	Ecuador	5	6				
	Sierra Leone	1	8				
1969	Sudan	2	-14	-5	-4	-5	
	Ghana	-2	10	5	5		
	Somalia	-7	-14				
	Equatorial Guinea	-7	-9				
	Kenya	-7	-9				
	Malaysia	1	-9				

Table 4B. Larger changes 1970-79

Year	Country	Polity2	Jumps and sequences: sum and years					
			Change	Same	Next 1	Next 2	Next 3	Next 4
1970	Cambodia	-7	4	2	1	1		
	Lesotho	-9	-18					
	Benin	-2	5					
1971	Uruguay	3	-16	-5	-6	-5		
	Turkey	-2	-10					
	Thailand	-7	-9					
	Sierra Leone	-6	-7					
1972	Pakistan	4	7	3	4			
	Korea S	-9	-12					
	Philippines	-9	-11					
	Zambia	-9	-11					
	Ecuador	-5	-10					
	Ghana	-7	-10					
	Benin	-7	-5					
1973	Thailand	-2	10	5	5			
	Chile	-7	-13					
	Turkey	9	11					
	Argentina	6	15					
1974	Bangladesh	-2	-14	-10	-5			
	Portugal	-3	18	6	6	6		
	Greece	1	15	8	7			
	Guatemala	-3	-4					
	Brazil	-4	5					
1975	Spain	-3	16	4	4	4	4	
1976	Argentina	-9	-15					
	Thailand	-7	-10					
	Comoros	-4	-9					
1977	Burkina Faso	1	9	5	4			
	Thailand	-2	9	5	4			
	Pakistan	-7	-15					
	El Salvador	-6	-5					
1978	Peru	-2	14	5	5	4		
	Chad	-3	4					
	Senegal	-2	4					
	Dominican R	6	9					
1979	El Salvador	-4	12	2	2	4	2	2
	Ghana	6	13					
	Ecuador	9	14					
	Nigeria	7	14					

Table 4C. Larger changes 1980-89

Year	Country	Polity2	Jumps and sequences: sum and years			
			Change	Same	Next 1	Next 2
1980	Honduras	1	7	2	3	2
	Turkey	-5	-14			
	Burkina Faso	-7	-12			
	Guyana	-7	-8			
	Suriname	-1	-6			
	Iran	-2	8			
	Uganda	3	10			
1981	Iran	-4	-4	-2	-2	
	Ghana	-7	-13			
	Nepal	-2	7			
1982	Suriname	-6	-5			
	Bolivia	8	15			
1983	Turkey	7	12			
	Argentina	8	16			
1984	Chad	-4	-4	-1	-3	
	Guatemala	-6	10	1	5	4
	Nigeria	-7	-14			
	Nicaragua	-1	4			
1985	Brazil	7	10			
	Uruguay	9	16			
1986	Philippines	1	14	7	7	
	Uganda	-7	-10			
	Sudan	7	14			
1987	Korea S	1	11	6	5	
	Fiji	-3	-12			
	Zimbabwe	-6	-7			
	Suriname	-1	5			
	Taiwan	-1	6			
1988	Russia 1	-6	12	1	2	9
	Chile	-1	14	5	9	
	Haiti	-7	15	1	1	13
	Hungary	-2	17	5	6	6
	Pakistan	8	12			
1989	Romania	-2	13	6	7	
	Czech 1	-6	15	1	14	
	Sudan	-7	-14			
	Jordan	-4	5			
	Algeria	-2	7			
	Paraguay	2	10			
	Poland	5	11			
	Panama	8	16			

Table 4D. Larger changes 1990-93

Year	Country	Polity2	Jumps and sequences: sum and years			
			Change	Same	Next 1	Next 2
1990	Gabon	-6	5	3	2	
	Suriname	2	6	3	3	
	Cape Verde	-2	11	1	10	
	Nepal	5	7			
	Nicaragua	6	7			
	Cambodia	1	8			
	Fiji	5	8			
	Mongolia	2	9			
	Albania	1	10			
	Comoros	4	11			
	Bulgaria	8	15			
1991	Togo	-5	5	2	2	1
	Angola	-3	6	4	2	
	Ghana	-4	6	3	3	
	Congo Br	-1	13	7		
	Madagascar	2	15	8	7	
	Niger	1	15	8	7	
	Haiti	-7	-14			
	Thailand	-1	-4			
	Bangladesh	6	11			
	Benin	6	13			
	Zambia	6	15			
1992	S Africa	6	4	1	2	1
	Peru	-3	-11			
	Algeria	-7	-5			
	Tajikistan	-6	-4			
	Albania	5	4			
	Azerbaijan	1	4			
	Burundi	-3	4			
	Cameroon	-4	4			
	Paraguay	7	5			
	Mongolia	9	7			
	Taiwan	7	8			
	Thailand	9	10			
	Guyana	6	13			
	Mali	7	14			
1993	Malawi	-8	15	1	14	
	Azerbaijan	-3	-4			
	Peru	1	4			
	Ethiopia	1	9			
	CAR	5	11			
	Lesotho	8	15			

Table 4E. Larger changes 1994-99

Year	Country	Polity2	Jumps and sequences		
			Change	Same	Next 1
1994	Gambia	-7	15		
	Mexico	4	7		
	Guinea-Bissau	5	11		
	Mozambique	5	11		
	Haiti	7	14		
1995	Armenia	3	-13	-4	-9
	Algeria	-3	4		
	Guinea	-1	4		
	Tanzania	-1	4		
1996	Belarus	-7	-14		
	Niger	-6	-14		
	Zambia	1	-5		
	Guatemala	8	5		
	Sierra Leone	4	11		
1997	Tajikistan	-5	5	1	4
	Congo Br	-6	-11		
	Cambodia	-7	-8		
	Iran	3	9		
1998	Nigeria	-1	10	5	5
	Indonesia	-5	13	2	11
	Burundi	-1	4		
	Cambodia	2	9		
	Armenia	5	11		
1999	Haiti	2	-9	-5	-4
	Ivory Coast	-1	10	5	5
	Croatia	1	13	6	7
	Pakistan	-6	-13		
	Comoros	-2	-6		
	Lesotho	2	-6		
	Djibouti	2	8		
	Niger	5	11		

Table 4F. Larger changes 2000-09

Year	Country	Polity2	Jumps and sequences: sum and years				
			Change	Same	Next 1	Next 2	Next 3
2000	Comoros	-1	6	1	5		
	Lesotho	4	6	2	2	2	
	Peru	5	8	4	4		
	Burkina Faso	-3	10	1	9		
	Senegal	8	9				
	Yugoslavia	7	13				
2001	Ghana	6	4				
	Zambia	5	4				
2002	Burundi	2	7	3	1	2	1
	Nepal	-6	-12				
	Kenya	8	10				
2003	Liberia	1	12	7	2	2	1
	Congo Ki	1	13	9	2	1	1
	CAR	-1	-6				
	Guinea-Bissau	-1	-6				
2004	Iran	-6	-9				
	Algeria	2	5				
2005	Haiti	3	7	5	2		
	Kyrgyzstan	3	7	6	1		
	Mauritania	-5	10	1	2	7	
	Ethiopia	-3	-4				
	Bhutan	-5	5				
	Guinea-Bissau	6	7				
2006	Fiji	-3	-10	-9	-1		
	Thailand	-5	-14				
	Nepal	6	12				
2007	Thailand	-1	9	4	5		
	Pakistan	2	10	7	3		
	Bangladesh	-6	-12				
2008	Mauritania	-5	-9				
	Bhutan	3	8				
2009	Niger	-3	-9				
	Venezuela	-3	-8				
	Zimbabwe	1	5				
	Gabon	3	7				
	Bangladesh	5	11				

Table 4G. Larger changes 2010-15

Year	Country	Polity2	Jumps and sequences: sum and years				
			Change	Same	Next 1	Next 2	Next 2
2010	Kyrgyzstan	4	6	1	5		
	Niger	3	9	6	3		
	Iraq	3	12				
2011	Bahrain	-8	-5	-3	-2		
	Tunisia	4	11	8	1	1	1
	Madagascar	3	-4				
2012	Guinea-Bissau	1	-5				
	Yemen 2	3	5				
	Somalia	5	12				
2013	Bangladesh	4	-4	-1	-3		
	Venezuela	4	7				
2014	Thailand	-3	-10				
	Turkey	3	-6				
	Guinea-Bissau	6	5				
	Afghanistan	-1	6				
	Fiji	2	6				
2015	Burundi	-1	-7				
	Tanzania	3	4				

Finally, all larger in the 7 sections of Table 4 are counted in Table 5. The last row is a check that the counts tally with Table 3.

Table 5. Count of sequences and jumps

Period	Sequence		Jump		Sum
	Negative	Positive	Negative	Positive	
1960-69	8	2	19	9	38
1970-79	2	10	17	10	39
1980-89	2	10	11	18	41
1990-99	2	16	15	40	73
2000-09	1	12	10	13	36
2010-15	2	3	5	8	18
Sum	17	53	77	98	245
As Table 3	70		175		245
Average	53/70 = 0.76		98/175 = 0.56		