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# Benevolent Autocrats<sup>1</sup>

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**Abstract:** Many high growth episodes are associated with autocrats. A large literature attributes this to the higher variance of growth rates under autocracy than under democracy. The literature offers alternative explanations for this stylized fact: (1) leaders don't matter under democracy, but good and bad leaders under autocracy cause high and low growth, (2) leaders don't matter under autocracy either, but good and bad autocratic systems cause greater extremes of high and low growth, or (3) democracy does better than autocracy at reducing variance from shocks from outside the political system. This paper details further the stylized facts to test these distinctions. Inconsistent with (1), the variance of growth within the terms of leaders swamps the variance across leaders, and more so under autocracy than under democracy. Country effects under autocracy are also overwhelmed by within-country variance, inconsistent with (2). Explanation (3) fits the stylized facts the best of the three alternatives. The empirical variance of growth literature has also identified many correlates of autocracy as equally plausible determinants of high growth variance. Stories of benevolent autocrats (either explanations (1) or (2)) have not held up well in the contemporary empirical growth literature. Cognitive and political biases help explain why benevolent autocrat stories nevertheless remain popular in policy discussions.

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Benevolent autocrats are a perpetually popular concept in economic development discussions. Some of the largest successes in development, such as China, Singapore, South Korea, Taiwan, and Hong Kong, are associated with autocrats. A plausible interpretation is that a very good and unconstrained autocratic leader can outperform a very good but constrained democratic leader.

## I. Introduction

### a. Concepts outside and on the borders of academia

The New York Times columnist Thomas Friedman said in 2010:

One-party autocracy certainly has its drawbacks. But when it is led by a reasonably enlightened group of people, as China is today, it can also have great advantages. That one party can just impose the politically difficult but critically important policies needed to move a society forward in the 21st century.

Notable development intellectuals Nancy Birdsall and Frank Fukuyama (2011, p. 51) noted the effect of the current crisis on ideas favoring autocracy (they make clear they are summarizing others' views, not their own views):

Leaders in both the developing and the developed world have marveled at China's remarkable ability to bounce back after the crisis, a result of a tightly managed, top-down policymaking machine that could avoid the delays of a messy democratic process. In response, political leaders in the developing world now associate efficiency and capability with autocratic political systems.

Some have even suggested that a "Beijing Consensus" is replacing the old "Washington Consensus" of the World Bank and IMF, suggesting "how China's authoritarian model will dominate the twenty-first century" (Halper 2010).

Forceful statements about benevolent autocrats also appear on the border between the non-academic and academic literatures, such as statements by academics in non-academic forums. Here is Gary Becker on the Becker-Posner blog for example:

Visionary leaders can accomplish more in autocratic than democratic governments because they need not heed legislative, judicial, or media constraints in promoting their agenda. In the late 1970s, Deng Xiaoping made the decision to open communist China to private incentives in agriculture, and in a remarkably short time farm output increased dramatically. Autocratic rulers in Taiwan, South Korea, Singapore, and Chile produced similar quick turnabouts in their economies by making radical changes that usually involved a greater role for the private sector and private business.

Of course, the other side of autocratic rule is that badly misguided strong leaders can cause major damage. ... Visionaries in democracies(‘)...accomplishments are usually constrained by due process that includes legislative, judicial, and interest group constraints. On the other hand, bad leaders in democracies are also constrained, not only by due process, but also in addition by the reporting of a free competitive press and television, and nowadays too by a competitive Internet.

Whether on average democracies are more conducive than autocracies to economic growth is far from well established. What is clearer is that democracies produce less variable results: not as many great successes, but also fewer prolonged disasters.<sup>2</sup>

Another example on the border between policymaking and academia was a major report called the Growth Commission Report (2008), sponsored by the World Bank but involving contributions by many prominent academics and led by another Nobel Laureate, Michael Spence. One of the strongest conclusions in the report, after studying rapid growth success stories, was that

“Growth at such a quick pace, over such a long period, requires strong political leadership.”<sup>3</sup>

The report did not define what was “strong leadership.” However, almost all of the successes it studied were autocracies, so “strong leadership” was close to “benevolent autocrat” in practice.

#### b. The academic literature on autocracy and growth

How does the academic literature relate to these statements about benevolent autocrats? The literature on autocrats and growth has long documented two stylized facts: (a) there is no robust difference in growth rates on average between autocracy and democracy, and (b) the variance of growth is higher under autocracy than under democracy. The combination means that most high growth episodes will occur under autocracy. Once (a) was established, the focus shifted to stylized fact (b).

The literature on autocracy and growth offers three main alternative explanations for the higher variance of growth under autocracy:

- (1) leaders don't matter under democracy (which produces moderate growth regardless) but very good and very bad leaders under autocracy produce very high and very low growth rates,
- (2) leaders don't matter under autocracy either, but autocratic *systems* produce very good or very bad growth rates depending on their organization and circumstances,
- (3) democratic systems do better than autocratic ones at reducing the variance of growth coming from outside shocks.

Outside the comparative political systems literature, there are also other explanations of higher variance under autocracy featuring causal variables that just happen to be correlated with autocracy.

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<sup>2</sup> <http://www.becker-posner-blog.com/2010/10/democracy-or-autocracy-which-is-better-for-economic-growth-becker.html>, 10/10/2010

<sup>3</sup> This conclusion may have reflected strong priors as well as evidence assembled in the case studies done by the Commission. The “Framework for Case Studies” prepared before the Case Studies were done, made the statement that “economic growth requires: Leadership.”

If we define high growth as a benevolent outcome, then Explanations (1) and (2) are both versions of a benevolent autocrat story. Explanation (1) is the one most consistent with the popular statements in section a. Explanation (2) is still a version allowing for benevolent vs. malevolent autocracy, but at the level of a system rather than individual leaders. Explanation (3) does not see autocracy as benevolent, since it fails to cope with volatility from outside the political system and does not offer higher growth on average.

The distinction between Explanation (3) and some non-political determinant of “the higher variance under autocracy is not relevant for the benevolent autocrat story, but is still of interest in tracing the roots of the stylized fact that first motivated the field.

The most well-known combination of theory and empirics in Explanation (1) is Olson 2000. He argues that dictators will outperform democratic leaders when they anticipate a long tenure and hence are “stationary bandits” who benefit from future growth. They perform worse than democrats when they are “roving bandits” who only benefit from instantaneous expropriation. In Olson’s words, the extent of the “encompassing interest” determines the leader’s incentives for growth creation versus expropriation. This interest is widest under autocratic stationary bandits, next widest under democracy, and most narrow under autocratic roving bandits.

Explanation (1) of the literature is also populated by studies that focus mainly on the empirics documenting the stylized fact (b), but give (1) as the interpretation of these facts. Examples of this extensive literature are Weede, 1996; Quinn and Woolley, 2001, Almeida and Ferreira, 2002 Acemoglu et al., 2003; Glaeser, La Porta, Lopez de Silanes, and Shleifer 2004, Mobarak, 2005, and Yang 2008. A representative quote is from Weede 1996, who argues that because autocrats are much less constrained than democratic leaders:

personal inclinations of autocrats might matter much more than personality differences between democratic rulers.

These studies in turn cited earlier references such as Sah 1991:

Highly centralized societies ... may get a preceptor like Lee Kwan Yu of Singapore or the late Chung Hee Park of South Korea, who have been viewed as having made substantial contributions to their societies. By the same token, such a society may get a preceptor like Idi Amin of Uganda, with correspondingly opposite consequences. ... an effect of human fallibility is that more centralized societies will have more volatile performances.

A more recent and influential work giving Explanation (1) is Jones and Olken 2005, which again is empirical (and an impressive advance over the previous empirics). They give a similar interpretation as that in the previous literature.

Democracies may be able to prevent the disastrous economic policies of Robert Mugabe in Zimbabwe or Samora Machel in Mozambique; however, they might also have constrained the successful economic policies of Lee-Kwan Yew in Singapore or Deng Xiaoping in China.

Explanation (2) in the literature stresses autocratic systems rather individual leaders. Seminal work by Bueno de Mesquita et al. (2003) stresses a “selectorate” that chooses autocratic leaders.<sup>4</sup> Besley and Kudamatsu (2009) contrast this with the individual autocracy model by showing how autocracy performs best when the individual leader matters least – namely when the survival of the selectorate does not depend on the survival of the individual leader. Bueno de Mesquita et al. emphasize the size of the “selectorate” as affecting how much they approach Olson’s “encompassing interest” in promoting future growth.

Haber 2006 also embraces the system approach and points to the high expropriation rates of many long-lived autocrats as evidence against the theory of individual “stationary bandits.” He suggests instead that autocratic systems can co-opt large segments of society by creating many organizations allied with the autocrat.<sup>5</sup> These systems achieve high growth outcomes because they confer “economic rights and opportunities on a very broad percentage of the population, as compared to dictatorships that employ strategies of terror or cronyism.”

Explanation (2) also includes work that stresses the worse systemic incentives under democracy. Przeworski et al. (2000, pp. 209-211) raise the traditional fear that democracies threaten property owners with redistribution, and so partially agree that at least some autocratic systems provide superior protection of property rights. Barro 1996 agrees that “advanced western countries would contribute more to the welfare of poor nations by exporting their economic systems, notably property rights and free markets, rather than their political systems.”

Explanation (3) of the literature combines the system approach with an analysis of how systems respond to shocks coming from outside the political systems, such as commodity price shocks, global recessions, or technological innovations. North, Wallis, and Weingast 2009 model mature democracies as allowing more political and economic competition, which adapts to shocks better than autocratic systems. North et al. see autocratic systems as creating rents that sustain a closed coalition of a small number of powerful groups; they are less diversified and less innovative than mature democracies and hence have fewer ways to absorb shocks.<sup>6</sup> Shocks could also disrupt the current coalition so that the political system would amplify rather than dampen shocks. Rodrik 2000 had previously stated a similar argument about democracy providing “shock absorbers,” including those that manage conflict between groups.

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<sup>4</sup> Acemoglu and Johnson 2005 also present an influential systemic approach to autocracy but do not discuss the issue of when autocracy works best.

<sup>5</sup> Gandhi and Przeworski 2007 have a related analysis of cooptation by long-lived autocrats, but do not discuss variations in economic performance of autocrats.

<sup>6</sup> North et al use different language than “autocracy” and “democracy,” namely Limited Access Orders and Open Access Orders. In practice, the latter maps into the most long-lived democracies (what I call here “mature democracies”). We will see below that the stylized fact about lower variance under “democracy” is driven almost entirely by these same “mature democracies.”

The autocracy and growth literature have only rarely considered the possibility that the association of political system type with high growth variance could be spurious, reflecting some other causal factor that is correlated with autocracy. Przeworski et al. 2000 is a rare exception, pointing out the higher variance of autocracies also reflects other characteristics of these societies like wars and commodity export cycles, although these authors still found an autocracy effect on variance controlling for these other factors. Some empirical papers on variance of autocracies had also considered per capita income as a determinant of variance, and they find the autocracy effect robust and the income effect weak (Weede 1996, Rodrik 2000, Acemoglu et al. 2003).

Why does it matter which explanation of the autocracy effect on growth variance (or none of them) is correct? Explanation (1) is of course the closest to the non-academic discussion of “benevolent autocrats.” Let us first compare Explanation (1)’s emphasis on individual leaders with Explanation (2)’s emphasis on systems and circumstances. In the former case, one trusts the benevolent autocrat to do good things no matter what the circumstances. In the latter case, the effect of any action by others could alter circumstances or change the systemic outcome in unpredictable directions. For example, foreign aid donors trust the benevolent individual ruler to use the money wisely. But aid could instead make the donor less accountable to the selectorate or potential revolutionaries, and thus lead to worse political economy outcomes.

To give another example of policy implications, the benevolent individual leader model may see any ill-chosen policy as the result of ignorance, and so the answer is simply more expert advice and education. For example, the World Bank Growth Commission (2010) announced on the back cover of one of its most recent reports: “The Commission’s audience is the leaders of developing countries.” Similarly, the International Growth Centre funded by UK aid and involving many prominent academics seeks to provide “demand-led policy advice based on frontier research.”<sup>7</sup> These efforts have much to recommend them for many reasons, but they also represent a common tendency in aid and think tanks to finding the ideal advice for an unconstrained leader. Theories of autocratic systems, by contrast, see “mistaken policies” as the outcome of an autocratic system (such as rent-creating policies necessary to sustain a North et al. 2009 type coalition of elites).

Next consider the difference between Explanations (2) and (3). Explanation (2) -- like Explanation (1) -- is ambiguous about whether autocratic or democratic systems deliver the best outcomes, since under autocracy one can always hope for a benevolent individual or system. Explanation (3) unambiguously prefers democratic to autocratic systems, because the former better manage the variance coming from outside shocks. In the latter case, democracy is always a better investment, delivering the same return (same growth rate) with lower risk (lower variance of growth).

If the autocracy effect on growth variance is spurious, then the growth variance stylized fact is simply not informative about pragmatic consequences of political systems. The difference between this and

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<sup>7</sup> <http://www.theigc.org/>

Explanation (3) does not affect the case for benevolent autocrats, but is of independent interest in explaining the stylized fact that motivated the literature in the first place.

### c. Outlining this paper

This paper seeks to refine the stylized facts about autocracy and growth variance to see which Explanation of the autocracy and growth literature (or possibly none) fits such facts the best. It is not a rigorous test (for example, endogeneity cannot be resolved) and so the paper should not overstate the ability to falsify or confirm alternative Explanations. However, since stylized facts now drive the autocracy and growth literature, it seems worthwhile to refine those facts to get better clarity on their consistency with the alternative Explanations.

The paper first examines the facts relevant for evaluating the leader effects of Explanation (1) versus the system explanations of Explanation (2). The paper does a variance decomposition of growth rates under leaders using leader fixed effects (sometimes also controlling for country fixed effects). The (Explanation (1)) benevolent autocrat hypothesis predicts high variance between autocratic leaders relative to variance within leader terms. The results instead find a surprisingly large role for variance within leader terms relative to between-leader differences, regardless of whether the country is democratic or autocratic. High growth under autocrats features strong mean reversion (as it does roughly to the same extent under democrats).

The most rigorous work supporting benevolent autocrats is the Jones and Olken (2005) finding that accidental deaths of leaders cause growth to shift under autocracy, but not under democracy. However, the magnitudes and transitoriness of their growth effect is not sufficient to explain the usual “benevolent autocrat” outcome.

Since the autocratic systems in Explanation (2) are predicted to be highly persistent within countries, the relevant test for (2) is whether country fixed effects explain a lot of the higher variance under autocracy than under democracy. While we can reject zero country fixed effects, they account for little of the higher variance of autocracy. The bulk of autocracy’s high variance is within countries, rather than across countries. The leader effects and country effects results together are not supportive of either Explanation (1) or (2), and point towards Explanation (3)

This paper next examines Explanation (3) by testing the effect of political system on within-country variance. The paper confirms the strong effect of democracy on reducing this variance, consistent with Explanation (3). However, it also finds a large number of non-political variance-producing factors, most of them strongly correlated with autocracy. Autocracy is not in general robust as a determinant of growth variance when these other controls are considered. Explanation (3) is only one of many possible stories for the higher growth variance in autocratic, poor, commodity-exporting, measurement error-prone, war-prone, financially underdeveloped, low-tech countries.

The paper then considers the question, why are “benevolent autocrat” explanations so popular in policy discussions, even though they do not fit the facts well, or have seldom undergone the scrutiny typified by this paper, or even cited academic evidence of any kind? Although we are talking about beliefs in the

policy-making community rather than among academics, it should still be of interest to the academic literature on the political economy of ideas and policies.

One insight is that a number of cognitive biases identified in the behavioral economics literature would support beliefs in benevolent autocrats even if they did not really exist. The paper discusses how cognitive biases affect the interpretations of the stylized facts identified in the first section, usually in the direction of greater belief in benevolent autocrats. Showing how cognitive biases matter does not constitute any sort of disproof of benevolent autocrats, but this does suggest the need for critical academic scrutiny of these beliefs is even greater than before.

Finally, the paper describes the history of the benevolent autocrat concept and shows how the concept's popularity may reflect not only academic testing but also attitudes toward developing societies and political interests. This history does not automatically discredit the concept, but priors should not be influenced unduly by the popularity of the concept if this popularity partly exists for non-academic reasons.

## II. Refining Stylized Facts on Autocracy and Growth

This section reviews the stylized facts and more formal evidence on benevolent autocrats to distinguish among competing stories of such autocrats.

### a. Autocracy and growth

The general result in the empirical growth literature is that there is no robust effect either way of autocracy on growth. Autocracy fails to meet even a very low bar, since there is now agreed to have been much specification searching and publication bias in the empirical growth literature, so much so that 145 different variables were found to be significant at different times (Durlauf et al. 2005).

At the same time, as mentioned in the introduction, there is a robust stylized fact that very high growth occurs principally among autocracies and not among democracies.

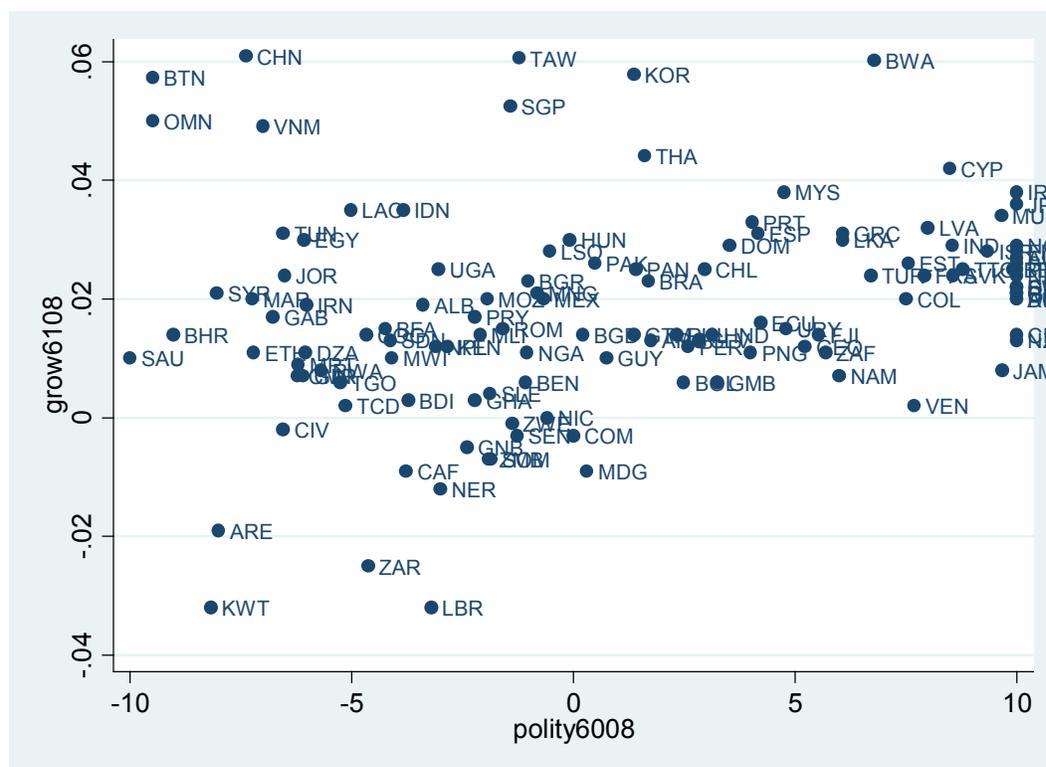
### b. Autocracy and variance of growth

Another well known finding is that the variance of growth is higher under autocracies than under democracies (Weede, 1996; Rodrik, 2000; Almeida and Ferreira, 2002; Quinn and Woolley, 2001; Acemoglu et al., 2003; Mobarak, 2005; Yang 2008; Glaeser, La Porta, Lopez de Silanes, and Shleifer (2004)). Variance here can mean either cross-section variance among autocracies compared to democracies, or average within country variance for autocracies relative to democracies. We will analyze the distinction and its implications below.

The high variance under autocracy is the obvious explanation for the stylized fact in the previous section that very high growth usually occurs under autocrats. As many authors have put it, autocracy is a gamble that could either yield a Lee Kuan Yew or a Mobutu.

Here we update and further document these results. This paper will use the standard Polity IV measure from -10 to 10, the most common measure in empirical economics for autocracy.

**Figure 1: Cross section averages of per capita growth and average Polity score from Autocracy (-10) to Democracy (10), 1960-2008**

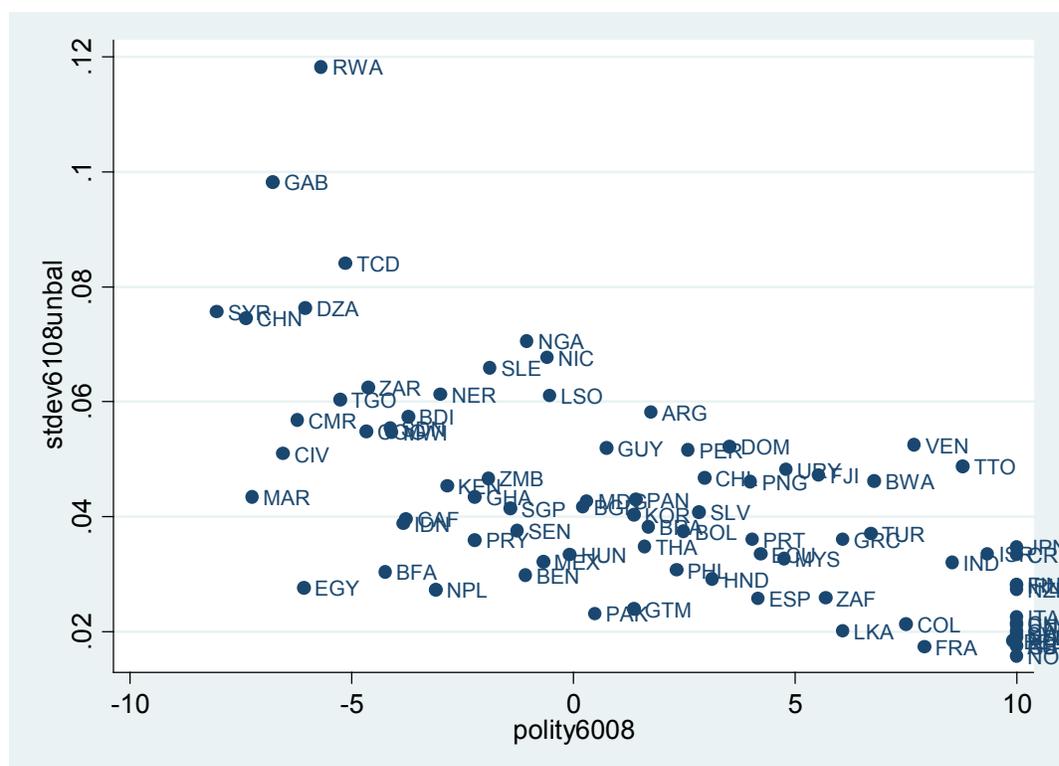


Note that the reduction in cross-section variance mainly occurs for countries at a very high level of democracy (8,9, or 10). We will use this fact in what follows.

Figure 2 shows the within-country standard deviation of growth rates graphed against average polity score, 1960-2008.<sup>8</sup> The simple correlation is  $-0.58$ . Once again, the variance is strikingly lower at the very highest values of Polity close to 10.

<sup>8</sup> In order to show better the variation in the bulk of the sample, the graph omits one outlier consistent with the inverse relationship: Liberia (Polity=-3.2040, Standard deviation of growth=.182518).

**Figure 2: Within-country standard deviation of annual per capita growth rates and Polity score, 1960-2008**



What to make of the pronounced dip in variance at the very highest level of democracy? Corvalan 2011 points out a problem with Polity that is especially relevant for our purposes. The upper limit of 10 is censored, as it encapsulates a large variety of countries and time periods. This also makes a “perfect score” of 10 not as high a standard for democracy as one might think, which devalues even more values like 7, 8, and 9. Almost a fifth of the entire pooled Polity sample is coded as 10. The US has had a 10 since 1871, despite huge changes since then in democratic rights for blacks and women. Earlier in US history, despite slavery for one eighth of the population and limited suffrage, it had a value of 9 from 1809-1844, a mysterious 10 from 1845-49, 9 again for 1850-53, and then 8 for 1854-1864. This analysis suggests that what we usually call “democracy” is at the upper limits of the Polity range.

A few exercises for this paper will be performed using a binary split for democracy and autocracy. Since the point of this paper is to skeptically re-examine the stylized facts supposed to support Benevolent Autocrats, it makes sense to choose a binary split that gives the strongest version of the democracies-have-lower-variance stylized fact that is one of the principal pieces of evidence in favor of Benevolent Autocrats. I first want to make the case as strong as possible for that hypothesis and then see if it fails other tests. Hence, I chose  $>7.5$  on Polity as the cutoff for democracy in the binary exercises.

### 1. Cross-country versus within-country variance in autocracies and democracies

Now, to analyze the variances for autocracies and democracies a bit more formally, consider a standard decomposition of the annual growth rates for country  $i$  and period  $t$  into a cross-country ( $\mu_i$ ) and within-country ( $\varepsilon_{it}$ ) component for a panel of countries, along with year dummies ( $\gamma_t$ ):

$$(1) \quad g_{it} = \mu_i + \gamma_t + \varepsilon_{it}$$

Using fixed effects for a balanced panel of 84 countries 1960-2008, we can estimate the standard error of the cross-country and within-country components:

**Table 1: Fixed effects regression for GDP per capita growth, balanced sample, annual data 1960-2008 (controlling for year dummies)**

	Autocracy	Democracy
Standard error of $\mu(i)$	0.0175	0.076
Standard error of $\varepsilon(i,t)$	0.0537	0.0256
$\rho$ = Fraction of variance of $g_{it}$ explained by $\mu(i)$	0.0966	0.0820
#observations	3120	1008
# countries	65	21

Autocracies have greater dispersion of country fixed effects than democracies. Higher autocratic variance of country effects would be supportive of Explanation (2) that stresses variation in performance of autocratic systems rather than individual leaders. However, note that the cross-country variance only accounts for a small share of the total variance.

Autocracies also have much higher standard errors for the annual within-country component. This could be supportive of the effect of good and bad autocratic leaders within each country under Explanation (1). However, it could also be supportive of Explanation (3) that democracy does better at dampening shocks from outside the political system.

The paper will test Explanation (1) further below by doing another fixed effects exercise with leader effects rather than (and also in addition to) country effects. It will then test Explanation (3) by examining the effect of autocracy on within-country variance across countries.

One complication in Table 1 is that it would show variance of estimated country fixed effects  $\mu(i)$  even if there were no true fixed effects. Under the null hypothesis of zero fixed effects, and if the error term were truly iid with standard deviation  $\sigma_{it}$ , the standard deviation of period averages of  $T$  years is the well-known expression  $\sigma_{it} / \sqrt{T}$ . For example, hypothetically under autocracies with an iid error term with true

$\sigma_{it} = .0537$  and  $T=48$ , the estimated standard deviation of “fixed effects” would be 0.78% even if they were absent. The higher intertemporal variance under autocracy would also show up as higher estimated variance of fixed effects of autocracy even if the true variances of fixed effects under autocracy and democracy were equal.

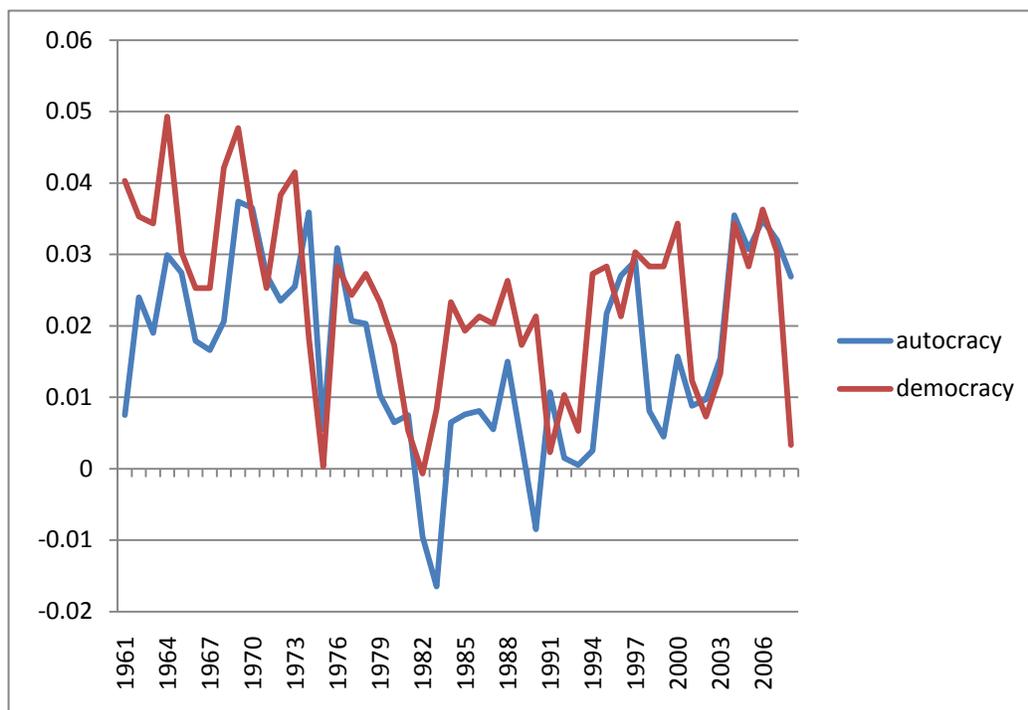
The problem gets worse the shorter is the length of period  $T$  over which the fixed effects are estimated. We will see below that this complicates the interpretation of the variance of estimated leader effects when the estimated standard deviation of  $\varepsilon(i,t,T)$  remains high and the average leader tenure  $T$  is short. There is no problem with the standard test of the null of no fixed effects, but even when we reject that null (as we do in all the regressions in this paper), the estimated variance of the fixed effects will exceed the true variance.

## 2. Year effects

The year effects estimated in (1) are of interest as reflecting common global factors and not the good or bad performance of leaders. Figure 3 shows these year effects mostly tend to move together for autocracies and democracies, although there are some recessions that occur in one group and not the other (2008 for example!) Of course, since democracies are overwhelmingly OECD countries and autocracies not OECD, this graph may just show the somewhat different cycles in developed and developing countries.

One caution suggested by figure 3 is that the growth rates associated with individual leaders should not be assessed in isolation without taking into account common global trends in growth rates. For example, recent good growth performance under Paul Kagame of Rwanda and Meles Zenawi of Ethiopia (both often described as benevolent autocrats) should take into account (but usually does not) the good growth performance of all autocracies/developing countries in 2003-2008.

**Figure 3: Common year effects for per capita growth in Autocracies and Democracies**



c. Decomposing variance into leader effects

As discussed in the previous section, one test of Explanation (1) is whether a major part of the variance under autocracies is explained by the variance across leaders – as opposed to variance within a leader’s time in office. The within-leader variance should be significantly reduced from the within-country variance cited above if good and bad autocrats are a major determinant of growth. The results can be compared with the same exercise for democratic leaders as a benchmark.<sup>9</sup> The end of this section will discuss endogeneity of leader transitions.

The paper first estimates this equation:

$$(2) \quad g_{ijt} = \mu_{ij} + \gamma_t + \varepsilon_{ijt}$$

where  $i$  indexes countries,  $j$  indexes leaders, and  $t$  indexes time. This specification allows leader effects to explain both cross country and within country variance. It will be estimated separately for autocracies and democracies. Under Explanation (1), this specification should do a good job of explaining the higher

<sup>9</sup> I am grateful to Alejandro Corvalan for suggesting the broad outlines of this exercise, although of course as usual the author bears responsibility for any errors.

variance in autocracies compared to democracies of  $\mu_i$  in equation (1), while reducing the excess variance of autocracies compared to democracies of the transitory component  $\varepsilon_{ijt}$ .

### 1. Results with unbalanced panels

The analysis uses two different datasets on leaders, one historical and the other contemporary. The first is the Archigos Dataset (sources and method discussed in the appendix). It is an unbalanced panel of 150 countries over 1858-2004 (total of 10480 observations). The second is the dataset from Jones and Olken (whose own work will be discussed in the next section), an unbalanced Panel of 136 countries over 1952-1999, with 3985 observations.

As in the previous exercise, democracies are restricted to the range of Polity > 7.5 in the interest of making as strong as possible the variance case for benevolent autocrats. This still leads to about a third of each sample being classified as democracies. The growth data is from Maddison to include historical periods.

**Table 2: Leader Effects in Unbalanced Panels**

	Archigos, Unbalanced Panel, 150 countries, 1858-2004		Jones_Olken, Unbalanced Panel, 107 countries, 1952- 1999	
	Democ	Autoc	Democ	Autoc
Standard deviation of leader effects on growth	4.42	5.72	2.72	3.29
Standard deviation of growth within leaders	3.97	6.30	2.47	5.11
Fraction of variance due to leader effects	0.55	0.45	0.55	0.29
Observations	2929	6556	956	2254
P-value of FE=0	0.00	0.00	0.00	0.00
Number of leaders	663	1073	253	315
Average leader term	4.4	6.1	3.8	7.2

Note: All regressions include year effects

Source for growth data: Maddison

Source for autocracy/democracy data: Polity IV

As in all the results in the paper, the null hypothesis of zero fixed effects is rejected – leader effects do exist. Contrary to the prediction of Explanation (1), leader effects are statistically significant for democracies as well as autocracies. In these two specifications, leader effects actually account for more of the variance under democracy than under autocracy. This is principally because the introduction of leader effects fails one of the tests suggested above. Table 1 showed a very high within-country annual variance for autocracies, and suggested leadership changes could account for this. However, the variance within leader terms in Table 2 is still very high. Very little of the within-country variance of growth is explained by leadership changes.

To put it another way, the variation of growth within leaders' terms swamps the variation across leaders under autocracy, and to a greater degree autocracy than under democracy. The higher growth variance under autocracy than under democracy therefore appears to have only a little to do with the variance across good and bad autocrats.

The size of the standard deviation of leader effects on its own in the first line of Table 2 seems quite impressive. However, we have to remember the mechanical effect discussed above. Estimated fixed effects covering short periods with a high annual standard error would show a high variance even if there were no true fixed effects. (Again, I should emphasize that this affects the estimated leader effect variance, not whether leader effects exist at all. Again, we reject the null that leader effects are zero in all regressions in this paper.) This mechanical effect would be stronger in autocracies than democracies because the former have higher transitory variance, offset somewhat by the shorter leader terms in democracies.

Table 3 below shows a Monte Carlo simulation of a random normal variable with a constant mean (except for year effects) and setting the true standard error of the random normal to be equal to the estimated "standard deviation of growth within leaders" in Table 2. The actual leadership changes are used to derive the "estimated leader effects" in the Monte Carlo simulation of the constant-mean random normal variable. The Monte Carlo simulation did 1000 runs with this random normal variable and the average over those runs is shown in the second line of Table 3. Even though the random normal has no true fixed effects, it shows substantial variance of estimated leader effects on growth for the reasons described above – averages over any short period show high variances of the averages. There are still non-trivial leader effects after taking this mechanical result into account. However, the Monte Carlo simulation of zero true fixed effects suggest that the numbers in the first line of Table 2 are not quite what they seem, particularly in the Jones-Olken sample.

**Table 3: Standard deviation of leader effects on growth – estimates on actual data compared to Monte Carlo simulations with no true leader effects**

	Archigos, Unbalanced Panel, 150 countries, 1858- 2004		Jones_Olken, Unbalanced Panel, 107 countries, 1952- 1999	
	Democ	Autoc	Democ	Autoc
Estimated on actual growth data	4.42	5.72	2.72	3.29
Monte Carlo estimates on random normal variable with no true leader effects	2.59	3.98	2.47	2.94

## 2. Balanced panels and controlling for country effects

As a robustness check, we will also examine results from a restricted subset of each dataset that produces a balanced panel. An unbalanced panel can produce biased results in the presence of sample selection effects. Unfortunately, the reduction in sample to achieve balance is drastic, because of lower availability of the data on leaders. For Archigos, we have 50 countries covering 1960-2004 (2250 observations). For Jones-Olken, we have 75 countries covering 1962-1999 (2850 observations).

Since one of the key tests is whether the leader effects can explain the high within-country variation of growth pointed out in Table 1, we first recalibrate that variation by re-running Equation 1 and Table 1 for country fixed effects alone, with no leader effects.

**Table 4: Stylized Facts on Variance using Balanced Panel with only Country Fixed Effects**

	Archigos, Balanced Panel, 50 countries, 1960-2004		Jones_Olken, Balanced Panel, 75 countries, 1962- 1999	
	Democ	Autoc	Democ	Autoc
Stand deviation of country fixed effects	0.752	1.689	0.959	1.858
Stand deviation of growth within countries	2.125	6.351	2.509	5.772
Fraction of variance due to country effects	0.111	0.066	0.127	0.094
Observations	765	1485	798	2052
P-value of FE=0	0.00	0.00	0.000	0.000
Number of countries	17	33	21	54
Period length for each country	45	45	38	38

Autocracies (again defining them as those with average Polity <7.5) have even higher within-country variation in the Table 4 sample than they did in Table 1, so the test becomes even sharper – do leadership changes explain high within-country variation? The results in Table 4 are also once again not good news for Explanation (2), as the higher variance of autocracy compared to democracy has very little to do with the kind of cross-country differences we expect from differential performance of persistent autocratic systems.

Table 5 (Panel a) runs equation 2 for the balanced panel. The variance within leaders in Table 5 for autocracies is almost as high as the variance within autocratic countries in Table 4, indicating that leader effects have little success at explaining the high variance of growth within autocratic countries.<sup>10</sup>

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<sup>10</sup> One big difference in results between the unbalanced and balanced panels is that leader effects show much higher variance in the Jones-Olken dataset in the balanced panel than they did in the unbalanced panel. This may partly reflect the increased noise in leader effects caused by truncating leader terms in the balanced panel compared to the unbalanced panel. The average autocratic leader term fell from 7.2 to 5.8. However, the within-leader standard deviation did not increase as much as the cross-leader variance from the unbalanced to balanced Jones-Olken panel, so the latter now has slightly more of the variance explained by leaders under autocracy than under democracy.

**Table 5: Results with Balanced Panel on Leader Effects**

	a. Leader effects, No country fixed effects				b. Leader effects relative to Country fixed effects			
	Archigos, Balanced Panel, 50 countries, 1960-2004		Jones_Olken, Balanced Panel, 75 countries, 1962-1999		Archigos, Balanced Panel, 50 countries, 1960-2004		Jones_Olken, Balanced Panel, 75 countries, 1962-1999	
	Democ	Autoc	Democ	Autoc	Democ	Autoc	Democ	Autoc
Stand deviation of leader effects	2.27	3.85	2.62	6.52	1.97	3.24	2.12	6.18
Stand deviation of growth within leader terms	2.07	6.04	2.40	5.43	2.02	5.96	2.39	5.40
Fraction of variance due to leader effects	0.55	0.29	0.54	0.59	0.49	0.23	0.44	0.57
Observations	808	1442	1054	1796	808	1442	1054	1796
P-value of FE=0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of leaders	212	164	338	310	212	164	338	310
Average term for leader	3.8	8.8	3.1	5.8	3.8	8.8	3.1	5.8

*Note: these results omit cases of multiple leaders for one year. The rule is: If there are leaders A, B, C, D in chronological order in year i where A was ruling in previous years and D is ruling in later years, drop B and C, attribute year i to A, and following years to D.*

In the balanced panel, there is a disagreement between the Archigos and Jones-Olken datasets on the explanatory power of leaders under autocracy relative to democracy. The Archigos panel shows greater explanatory power under democracy (as was true for both datasets in the unbalanced panel), while the Jones panel actually shows slightly higher explanatory power for autocratic leaders as opposed to democratic ones.

The balanced panel is appropriate for an additional exercise. Suppose that both Explanations (1) and (2) are partially correct – that there are both system effects of autocracies, but individual autocrats also matter. This suggests doing an equation with both country and leader effects. Country effects of course could also capture other fixed factors that affect growth performance.

$$(1) \ g_{ijt} = \mu_i + \mu_{ij} + \gamma_t + \varepsilon_{ijt}$$

Panel b in Table 5 shows the results controlling for country effects. The country effects makes surprisingly little difference for the results on leader effects, showing again that the results on variance of leader effects are more driven by the volatility of growth rates across more short-lived leader terms than by long-run differences such as those between countries. The leader effects are still statistically significant for democracies as well as autocracies

The variance of the leader effects for autocracies in the first row of Table 5 is quite impressive on its own, especially for Jones-Olken (again there is a disagreement between the two leader datasets on whether the explanatory power of leaders is higher under autocracy). However, once again there is the caution about the noise effect of short period averages with high annual variance of growth rates. Table 6 again runs 1000 Monte Carlo simulations of a random normal growth variable with constant mean (except for year effects assumed to be deterministic) and a standard deviation set for each column to the corresponding standard deviation of annual growth within leader terms.

**Table 6: Monte Carlo simulations Balanced Panel on Standard Deviation of Leader Effects**

	a. Leader effects, No country fixed effects				b. Leader effects relative to Country fixed effects			
	Archigos, Balanced Panel, 50 countries, 1960-2004		Jones_Olken, Balanced Panel, 75 countries, 1962-1999		Archigos, Balanced Panel, 50 countries, 1960-2004		Jones_Olken, Balanced Panel, 75 countries, 1962-1999	
	Democ	Autoc	Democ	Autoc	Democ	Autoc	Democ	Autoc
Actual data	2.27	3.85	2.62	6.52	1.97	3.24	2.12	6.18
Monte Carlo simulation with no true leader effects	1.42	3.57	1.80	3.46	1.39	3.51	1.79	3.43

### 3. Mean reversion

The low “fraction of variance explained by fixed effects” in all of these results suggests low growth persistence and high mean reversion of growth rates in both autocracies and democracies.

Easterly, Kremer, Pritchett, and Summers (1993) {EKPS 1993} pointed out low growth persistence and high mean reversion long ago, and it has been confirmed by many other studies since (for example Hausmann, Rodrik, and Pritchett (HRP) 2004). As EKPS 1993 showed, if growth rates really do follow (1) where  $\varepsilon(i,t)$  is i.i.d., then  $\rho$  will be the estimated coefficient given by regressing growth on lagged growth for this period length (it is also the correlation coefficient in this special case). A fraction  $|\rho-1|$  of

the deviation of growth from the global average (adjusted for common year effects) will disappear on average in the following period.

The high variance of growth within leader terms relative to variance across leaders suggests that growth will experience mean reversion within the terms of the leaders on average. As will be discussed more below, a cognitive bias that fails to appreciate mean reversion leads to an exaggerated view of “growth miracles” attributed to autocratic leaders – for example, expecting high growth to continue, not sufficiently appreciating how transitory these “miracles” are.

Testing growth persistence within leader terms is another form of testing the Explanation (1) form of the benevolent autocrats hypothesis. If good and bad dictators have large effects on growth rates, we should expect persistence within leader terms. If democratic leaders are less important than autocratic ones, we should see lower persistence within leader terms under democracy.

Rather than require the stringent assumptions necessary to deduce mean reversion directly from the estimates above, we can estimate mean reversion within leader terms directly. We simply calculate the correlation between growth and lagged growth directly within leader terms, starting with Year 1 to Year 2, then Year 2 to Year 3, etc. (The sample of leaders available for this calculation of course falls off as we get to later years.) The closer to zero and farther from one is this correlation, the lower the persistence of growth differences between leaders, and the higher is mean reversion.

We again split between democratic and autocratic leaders, and use both the Archigos and Jones-Olken datasets. Table 7 shows some noisiness in the calculation from year to year, but the order of magnitude of the correlation is far below unity (indicating that mean reversion is strong) and shows no systematic differences between democratic and autocratic leaders. The benevolent autocrats hypothesis finds no support from the test of growth persistence within leader terms.

**Table 7: Persistence of growth within leader terms, democratic and autocratic leaders**

Year of leader	Archigos dataset				Jones-Olken dataset			
	<u>Democratic</u>		<u>Autocratic</u>		<u>Democratic</u>		<u>Autocratic</u>	
	Correlation g(t), g(t-1)	Obs						
2	0.37	282	0.33	324	0.51	141	0.22	190
3	0.41	213	0.30	257	0.41	105	0.31	159
4	0.31	179	0.32	232	0.52	68	0.42	125
5	0.44	146	0.33	195	0.76	45	0.29	100
6	0.48	100	0.48	157			0.45	82
7	0.40	67	0.26	125			0.46	78
8	0.21	57	0.10	104			0.19	67
9	0.41	46	0.74	98			-0.07	63
10			0.46	88			0.46	56
11			0.03	82			0.27	51
12			0.36	70			0.58	44
13			0.36	63			0.25	40
14			0.42	55				
15			0.29	50				
16			0.67	46				
17			0.38	41				

*Note: the calculations omit leaders who are classified as moving from autocracy to democracy during their term, or vice versa. Only correlations with a sample of 40 or more leaders are shown*

To sum up this section, we find from growth variance decomposition and persistence no robust evidence in favor of dominant leader growth effects under autocracy relative to democracy. These results do not support Explanation (1) of higher growth variance under autocracy.

A major issue in interpreting these results is that leader changes are likely endogenous, so that we have no assurance that “leader effects” are causal. One plausible story is that streaks of below average growth would be associated with subsequent leader replacement, while streaks of above average growth would go together with leaders remaining in power (under both autocracy and democracy). If this is true, the endogeneity of leader transitions would bias upwards the estimates of “leader effects” relative to their true causal effects. Hence, the above estimates could be interpreted as an upper bound on leader effects, and so their small explanatory power under autocracy is not consistent with a major role for benevolent and malevolent autocrats under Explanation (1). One complicating issue is that the magnitude of bias may differ between autocracy and democracy.

These results are intended to replace the current stylized facts on autocracy and growth variance with a more refined version of stylized facts. A more rigorous analysis of plausibly exogenous leader effects by Jones and Olken (2005, 2009) will be discussed next.

#### d. Evidence that Leaders Matter from a Natural Experiment

Jones and Olken (2005, 2009) have produced some of the most important and careful evidence of the exogenous effects of individual autocrats. The random (i.e. exogenous) death from natural causes of an autocratic leader changes the five-year average growth rate by a significant amount (either positively or negatively). Deaths of democratic leaders have no statistically significant effect.<sup>11</sup>

As described in the introduction, Jones and Olken (2005) mostly seem to interpret their results in terms of Explanation (1). Democracy prevents bad autocrats from acting on their intentions but also may constrain benevolent autocrats from achieving high growth. More generally, the authors cast their findings in terms of a large debate:

this research also informs a separate and very old literature in history and political science that considers the role of national leaders in shaping events. Deterministic views suggest that leaders have little or no influence, while the Great Man view of history, at the other extreme, sees history as the biographies of a small number of individuals. Tolstoy believed this debate methodologically impossible to settle [Tolstoy 1869]. Using exogenously-timed leader deaths, the analysis in this paper presents a methodology for analyzing the causative impact of leaders. We reject the hypothesis that leaders are incidental. We find that leaders do matter, and they matter to something as significant as national economic growth.

Jones and Olken (2009) repeat the message: “our findings suggest ‘agency at the top.’” In a subsequent survey, Jones (2009) amplifies this: “leaders can be actively good for growth – e.g. ...choosing pro-growth trade policies... Lee Kwan Yew of Singapore might suggest such a view” and “Since leaders matter, the decisions they make – i.e., their policies – appear to matter.”

The magnitudes of the Jones\_Olken leader effects are non-trivial – “a one standard deviation change in leader quality leads to a growth change of 1.5 percentage points.” This is from the five year period preceding the leader’s accidental death to the five years after, controlling for year and country effects. The previous sections also found leader effects but found they were swamped by within-leader variation, leading to strong mean reversion after high growth episodes.

To examine how important regression to the mean might be in the Jones-Olken results, this paper uses the Jones-Olken data set of leader deaths and growth rates to assess the relationship between  $g(t,t+5)$  and  $g(t+5,t+10)$ , where  $t$  marks the date of the leader’s accidental death. Table 8 shows the results. Regressing the second on the first across the set of episodes of leader deaths, there is a statistically significant coefficient of .35, implying that .65 of the growth deviation from the world mean disappears in the following five year period. Their result was a change (in absolute value) of 1.5 percentage points from

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<sup>11</sup> . Their 2009 paper reinforced “leaders matter” by showing successful assassination of an autocrat raises the probability of a transition to democracy by 13 percent. Assassination is obviously endogenous but they achieve identification through the exogenous difference between successful and failed assassination attempts.

$g(t-5,t)$  to  $g(t,t+5)$ ; the results in this paragraph suggest that this effect would fade out rapidly. It thus falls short of explaining much of the “Lee Kuan Yew” magnitude of success, where growth is 3-4 percentage points higher than the world mean over a period of many decades.

Of course, it could be that the low persistence of growth from  $g(t,t+5)$  to  $g(t+5,t+10)$  could reflect further leadership changes that had new effects on the growth rate.<sup>12</sup> To test this, the variable “leader changes” is defined as average number of leader changes per year in the 10 year period after the accidental death (not including the initial leadership change with the death). Another form of the variable is to define it as a dummy equal to one if “leader changes” is nonzero, and zero otherwise. To test whether mean reversion reflects further leader changes, the variable is interacted with the lagged growth term. Table 8 shows that the coefficient on the interaction term is the wrong sign for additional leadership changes to explain mean reversion, and is not statistically significant.

The Table 8 result is mainly illustrative as further leadership changes after the exogenous leader death are likely to be endogenous, unlike the clean natural experiment of the exogenous leader deaths analyzed by Jones and Olken.

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<sup>12</sup> I am grateful to Ben Olken for suggesting this possibility.

**Table 8: Regression to the mean after leader deaths in Jones-Olken data**

Dependent variable: growth from t+5 to t+10, where t is accidental death of leader

Regression on following independent variables:

Growth from t to t+5	0.347*** (0.122)	0.243 (0.153)	0.193 (0.150)
average # of leader changes per year, t to t+10		-0.0462 (0.0291)	
Growth*Leader changes per year		0.332 (0.671)	
Dummy =1 if any further leader changes from t to t+10			-0.0211** (0.0104)
Growth*Leader change dummy			0.142 (0.210)
Constant	0.0108** (0.00479)	0.0225*** (0.00747)	0.0284*** (0.00888)
Observations	51	49	49
R-squared	0.156	0.221	0.224

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: Jones-Olken (2005) database on leaders and growth rates, 1950-2000

e. Considering the general growth variance literature

If neither Explanation (1) nor (2) fits the stylized facts that well, what about Explanation (3)? The high within-country variance driving the overall higher growth variance under autocracy fits Explanation (3), that mature democracies have stabilizers that reduce the impact of shocks coming from outside the political system.

However, Explanation (3) also has to pass another set of tests. Autocracy is correlated with other factors that could also predict higher variance of growth rates. Many such factors are covered by well-developed theories and a body of empirical evidence confirming theoretical predictions. This perspective has received remarkably little attention in the literature on autocracy and growth. Przeworski et al. 2000 is a rare exception, pointing out the higher variance of autocracies also reflects other characteristics of these societies like wars and commodity export cycles. The general empirical literature on explaining the variance of growth rates has also considered other such factors, as mentioned above. If autocracy is not

robust to controlling for other factors, then Explanation (3) is weakened. The stylized fact about higher growth variance under autocracy could be partially or entirely accidental.

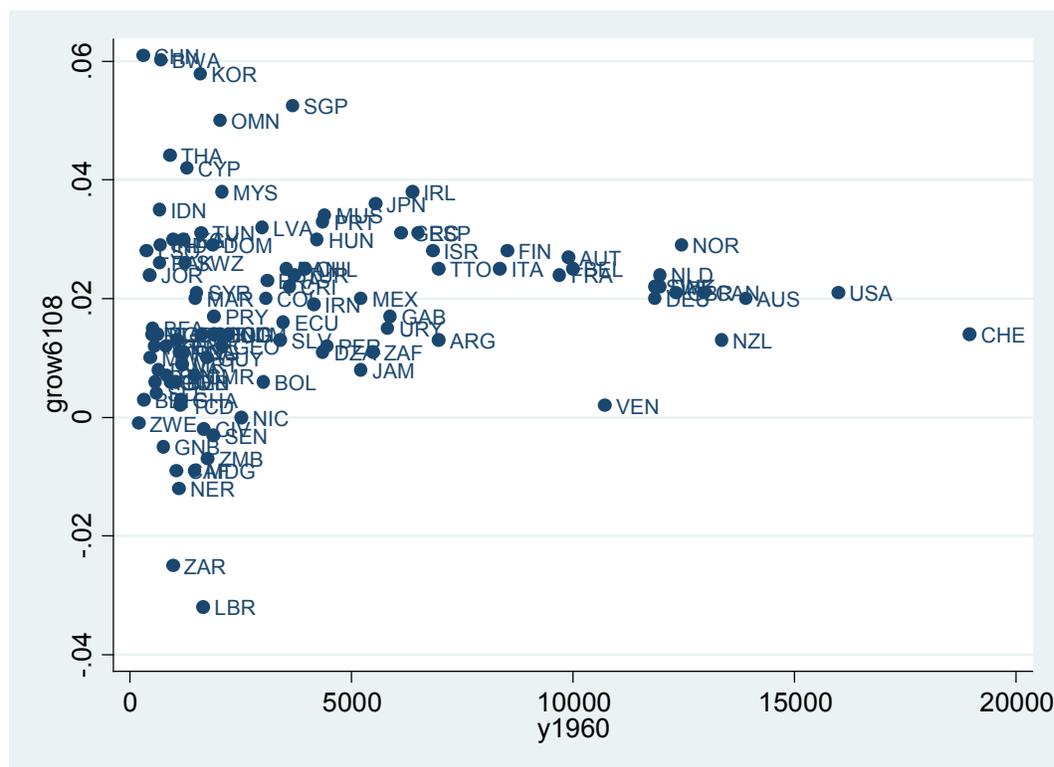
### 1. Other determinants of growth variance

The classic paper by Acemoglu and Zilibotti 1997 has a persuasive story for why diversification only happens in richer economies, and they cite the high variance of low income economies as supporting evidence (confirmed with the dataset for this paper in figure 4 below). Part of the story uses financial deepening as countries get richer as an important channel by which diversification occurs. Since autocracy is highly correlated with both low income and little financial deepening, it may also be proxying for the latter in an unconditional association with high growth variance.

The shape of Figure 4 has actually been well known in the growth literature for many years. In terms of the neoclassical model, the usual interpretation was that upper income countries are already at their steady state growth rate. Low income countries with other favorable conditions (such as high human capital or growth-promoting economic policies) have rapid convergence to the upper income countries. However, low income countries without favorable conditions could actually be already at or above their own conditional steady state and they either don't grow rapidly or they contract.

Since income and technology adoption are strongly correlated, models of technology adoption are also helpful in understanding higher growth variance at low income. In Parente and Prescott 2000, technological catch-up generates higher growth in those initially far behind the frontier than in those high income countries already at the frontier. However, some low-income countries have high barriers to technology adoption, generating low growth. The overall prediction is higher variance of growth at low income (far from technological frontier) than at high income (already at the frontier).

**Figure 4: Initial Income, 1960, and Growth Rates, 1960-2008**

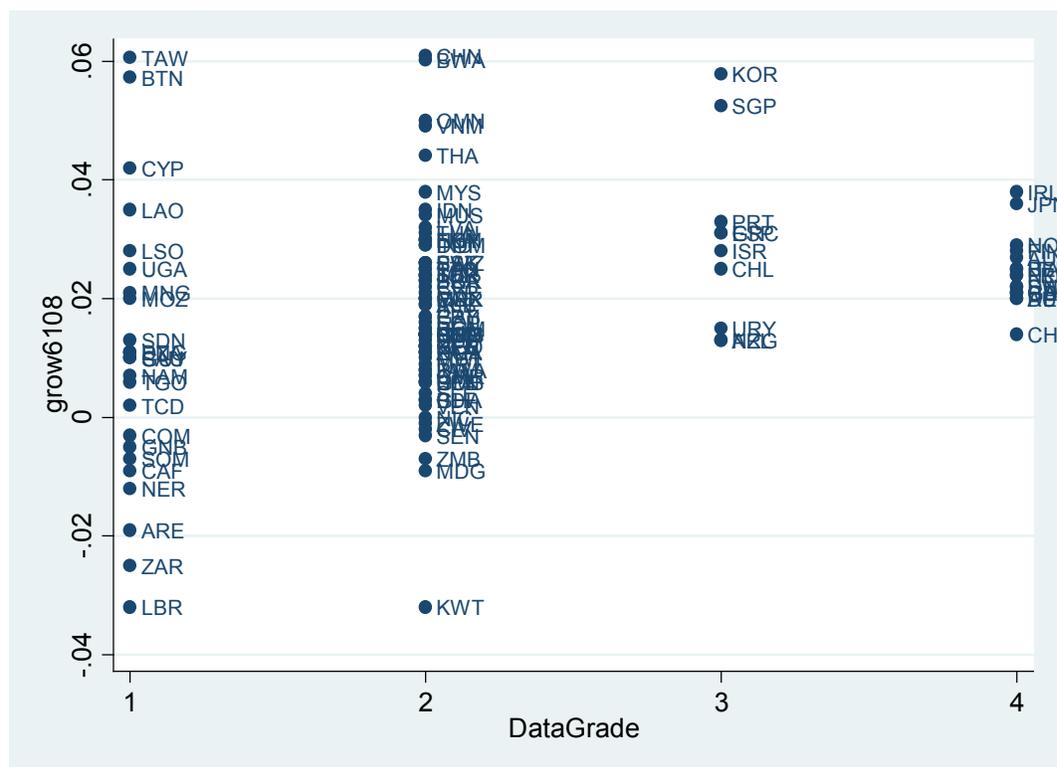


The general empirical literature on variance of autocracies does control for per capita income, and they find the autocracy effect robust and the income effect weak (Weede 1996, Rodrik 2000, Acemoglu et al. 2003). However, the problem with any results on autocracy and variance is that there are so many variables besides income that are correlated with autocracy and predict high variance. In this section, I will control for a full set of variables suggested by the literature.

For example, Acemoglu and Zilibotti 1997 also suggested that financial underdevelopment and undiversified economies lead to higher variance. I measure financial development with a standard measure, Domestic Credit to GDP, and lack of diversification with two measures: share of agriculture in the economy, and share of commodity exports in GDP. A particularly striking example of a commodity export is oil, which features not only volatile world prices but also volatile oil output for each oil producer. Oman is an oil producer with high growth, while Kuwait and UAE are oil producers with negative growth.

Another seldom discussed stylized fact is that data quality is worse at low income where most of the autocrats are. Using Summers-Heston's 4-point grading system, Figure 5 shows (unsurprisingly) how lower quality data on growth has higher cross-section variance of growth outcomes. Taiwan and Bhutan are successes with the worst quality data, Zaire and Liberia are disasters in the same category. Taiwanese success and Liberian disaster are certainly not a pure artifact of bad data, but the success and disaster could be exaggerated, adding to the variance of growth under autocrats-with-lousy-data.

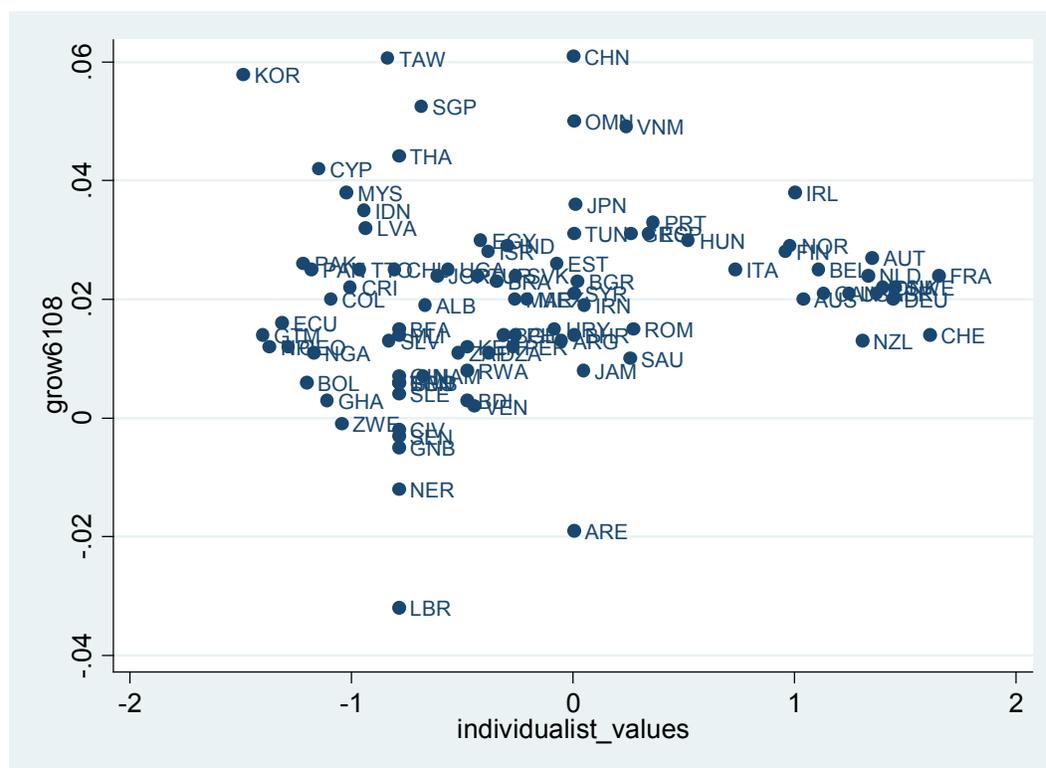
**Figure 5: Per capita growth and data quality from Summers-Heston (4 is highest grade, 1 lowest)**



normalized to have mean zero and standard deviation 1 in the direction of more individualism, and then a summary measure averaged any or all of the 3 measures available for each country..

Figure 6 shows growth and individualist values. The association of collectivist values with high cross-section variance of growth rates is just as strong as the association of autocracy with growth variance. One plausible mechanism linking growth variance and values would be through reverse causality: collectivist values that would favor income redistribution evolve as an insurance mechanism in very volatile environments, which also produce highly variable growth.

**Figure 6: Per capita growth 1960-2008 and Individualist Values (see appendix 1 for details of calculation)**



This analysis of values suggests that the stylized fact associating high growth variance with autocracy could also reflect reverse causality, and not only the effect of benevolent or malevolent autocrats. Few of the autocracy and growth variance studies cited above address causality. When they do address causality, they instrument only for autocracy in a cross-country regression for within-country growth variance, leaving income as an endogenous right hand side variable (understandable, since successfully instrumenting for two RHS variables is rarely possible). Leaving unaddressed the endogeneity of income (which may be proxying for other variables correlated with income), however, still leaves unresolved the identification of the causal parameter from autocracy to growth variance.

So far we have been discussing economic volatility, but what about political volatility? Low income countries are not only likely to be autocratic, but also to feature political instability like civil wars (or

there may be a direct link from autocracy to these). Civil wars often feature steep economic declines during the war, followed by rapid growth after the end of the war. The timing of the war and its end during the period we are considering (1960-2008) could produce rapid growth for wars that end earlier in the period but negative growth for countries that are at war for most of the period or in the latter half of the period. Cyprus and China (Cultural Revolution) are coded as having a civil war in the first half of the period, followed by rapid growth (obviously not the only factor in China, but neither should it be ignored). Liberia and Democratic Republic of the Congo are in the reverse position of having a civil war in the latter part of the period.

Easterly and Kraay (2000) have another (unsurprising) insight into high growth variance: small countries have higher variance than large countries. This could be a mechanical effect: if sectors or sub-sectors have fixed start-up costs and/or gains from specialization, then small economies will have fewer sectors and sub-sectors, i.e. be less diversified, and thus will be more volatile in response to industry-specific shocks. Easterly and Kraay link the higher variance also to greater openness of small states and greater sensitivity to terms of trade shocks. It is notable that some of the famous success stories (Hong Kong and Singapore) are small, as are some less famous successes (Bhutan and Cyprus), while some of the disasters (Liberia, Guinea-Bissau and Niger) are also small.

This survey of the variance literature for developing countries is far from complete. As an example, Easterly, Islam, and Stiglitz 2002 suggest that low income countries have far more variable macroeconomic policies (budget deficits, money growth, and inflation) than richer countries. A related finding by Bruno and Easterly (1998) shows that very high inflations are associated with negative growth, while stabilization from high inflation goes with high positive growth; virtually all of their examples of high inflations are from poor (mostly autocratic) countries. The classic paper by Ramey and Ramey (1995) also related growth volatility to the volatility of government spending (higher in poor countries). Having already a long list of correlates of low income associated with the variance of growth, I refrain from following up on this macro literature in the rest of the paper.

## 2. Growth variance regressions

To shed light on Explanation (3), this section examines the simple and partial correlations of autocracy and the other factors mentioned above with within-country growth variance.

Table 9 shows bivariate regressions of the within-country standard deviation of per capita growth on each of these variables, entered one at a time (so each line of Table 9 is a separate regression). All determinants of growth variance given here are statistically significant (initial income and civil war at the 5 percent level, all others at the 1 percent level).

**Table 9: Bivariate Regressions of Standard Deviation of Per Capita Growth within Countries, 1960-2008 on Right Hand Side Variables Shown, One at a Time**

VARIABLES	Coefficient and Standard Error	Observations	R-squared
Polity Score Averaged over 1960-2008	-0.00204*** (0.000337)	123	0.231
Secondary Enrollment, 1960	-0.000457*** (8.17e-05)	116	0.151
Individualist Values Index (increase means more individualist)	-0.0114*** (0.00265)	92	0.115
Civil War Dummy	0.0145** (0.00592)	123	0.065
Data Grade (from 1=worst quality to 4=best quality)	-0.0135*** (0.00194)	123	0.213
Log initial income 1960	-0.00504** (0.00222)	118	0.045
Share of agriculture in GDP, 1960-2008	0.000507*** (0.000174)	120	0.089
Average log population 1960-2008	-0.00430*** (0.00152)	123	0.065
Domestic credit to GDP, average 1960 to 2008	-0.000346*** (6.76e-05)	122	0.150
Commodity Exports to GDP, averaged 1960-2008	0.000952*** (0.000270)	120	0.219

Constant term included in each regression, not shown  
Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The large literature on growth regressions has demonstrated that there is no easy answer to separating out the partial correlation of one particular variable from a long list of other equally plausible variables (see

Durlauf et al. 2005, Levine and Renelt 1992). The scope for specification searching leads to results that are not credible. The same situation complicates this exercise.

Indeed, it is not hard with the above variables to produce regressions either showing autocracy to be statistically significant with other controls or statistically insignificant. Table 10 shows that democracy is (unsurprisingly) insignificant when adding all of the (very collinear) controls above, and continues to be insignificant as the most insignificant alternative controls are dropped. However, it is also possible to eventually drop enough insignificant controls to attain a significant negative coefficient on democracy.

For example, Regression 7 in Table 10 shows growth variance driven by a plausible and statistically significant combination of democracy, civil war, small population, and commodity exporting. Unfortunately, there are many other plausible and statistically significant combinations, some of which do not include autocracy. Autocracy does not pass the strictest tests to be robustly significant relative to other determinants of variance. It fails Levine and Renelt's (1992) Extreme Bounds Analysis (from Leamer). It could do better on the Bayesian Model Averaging suggested by Sala-i-Martin et al. 2004, but this method has been shown to be itself not robust relative to small changes in datasets (Ciccone 2010).

**Table 10: Multivariate regressions of standard deviation of per capita growth 1960-2008 on RHS Variables shown**

	1	2	3	4	5	6	7
Polity Score on Democracy	-0.000762 (0.000697)	-0.000945 (0.000683)	-0.000947 (0.000680)	-0.00116* (0.000587)	-0.000720 (0.000616)	-0.000826 (0.000582)	-0.0013*** (0.000365)
Civil War Dummy	0.0103* (0.00567)	0.00916 (0.00574)	0.00895 (0.00566)	0.00850* (0.00483)	0.0115** (0.00577)	0.0121** (0.00553)	0.0149** (0.00624)
Average log population	-0.00178 (0.00152)	-0.00208 (0.00150)	-0.00195 (0.00156)	-0.00176 (0.00131)	-0.00303** (0.00148)	-0.00340** (0.00133)	-0.00401*** (0.00131)
Commodity Exports to GDP	0.000824* (0.000457)	0.000777* (0.000428)	0.000777* (0.000426)	0.000688* (0.000371)	0.000716** (0.000354)	0.000733** (0.000344)	0.000570** (0.000287)
Share of agriculture in GDP	0.000582 (0.000377)	0.000610* (0.000345)	0.000588* (0.000317)	0.000362 (0.000273)	0.000264 (0.000254)	0.000314 (0.000238)	
Data Grade	0.00775** (0.00387)	-0.00733* (0.00387)	-0.00714* (0.00370)	-0.00230 (0.00279)	-0.00222 (0.00271)		
Secondary Enrollment	0.000185* (0.000107)	0.000246** (0.000122)	0.000262* (0.000135)	0.000127 (0.000113)			
Individualist Values Index	0.00452 (0.00416)	0.00389 (0.00364)	0.00388 (0.00365)				
Domestic credit to GDP	5.80e-05 (8.70e-05)	3.56e-05 (8.89e-05)					
Log initial income	7.21e-05 (0.00393)						
Constant	0.0638 (0.0426)	0.0688*** (0.0239)	0.0678*** (0.0250)	0.0606*** (0.0218)	0.0851*** (0.0242)	0.0849*** (0.0243)	0.102*** (0.0212)
Observations	82	83	83	111	118	118	120
R-squared	0.545	0.528	0.527	0.477	0.419	0.416	0.401

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \*p&lt;0.1

The non-result on autocracy is not evidence AGAINST Explanation (3), since the t-tests on autocracy have low power under these circumstances, and non-robustness is common in cross-country regressions with unclear specifications. The evidence could still be consistent with autocracy dampening variance or with the other competing hypotheses.

To conclude this first section, this survey finds the stylized facts to be inconsistent with the most extreme form of the benevolent autocrat concept --Explanation (1) --- or the more common autocratic system approach – Explanation (2). Explanation (3) may or may not fit stylized facts on partial correlations of autocracy and within-country growth variance.

So why is the “benevolent autocrat” such a popular idea relative to such evidence (or lack of interest in checking such evidence), especially in policy discussions on the border of academia, think tanks, and governments? Why would the concept be appealing even apart from evidence? The next section discusses how cognitive biases tend to support beliefs in benevolent autocrats.

### III. Cognitive biases and Benevolent Autocrats

Another source of popularity of benevolent autocrats is that many cognitive biases documented in behavioral economics (following the seminal work of Kahneman and Tversky) tend to reinforce beliefs in benevolent autocrats, even if benevolent autocrats did not exist. Of course, it does not logically follow that any belief in benevolent autocrats is the result of a cognitive bias (such an unfounded conclusion would itself reflect the cognitive bias discussed in section a below). Cognitive biases are only one of the possible explanations for such beliefs; another possibility is that theory and evidence support the benevolent autocrat hypothesis, as was considered above.

This section will reiterate the stylized facts already mentioned above and discuss the way they are interpreted. The fallacies discussed below are very well known to academic economists, so this section is primarily discussing how these cognitive biases affect the non-academic audience (which is hopefully itself still of interests to academics).

#### a. Reversing conditional probabilities

This well known bias confuses the conditional probabilities  $P(A|B)$  and  $P(B|A)$ . Another way of putting it is that individuals violate Bayes’ theorem relating these conditional probabilities by neglecting  $P(A)$  -- also known as the “neglecting base rate bias” (Tversky and Kahneman 1982c, 1982d). Bayes’ theorem reminds us how the bias is most extreme when  $P(A)$  is low relative to  $P(B)$ :

$$P(A | B) = \frac{P(B | A)P(A)}{P(B)}$$

In the non-probabilistic world of deductive logic, this is the fallacy of affirming the consequent. The fallacious reasoning goes: if A then B, I observe B, therefore A.

To take an example already mentioned from the World Bank Growth Commission “Growth at such a quick pace, over such a long period, requires strong political leadership.” The Growth Commission was observing a high probability  $P(\text{Strong leadership}|\text{Rapid Growth})$ . But of course, this is not the relevant probability if one wants to know whether to recommend strong leadership – one needs instead to know the probability  $P(\text{Rapid Growth}|\text{Strong Leadership})$ , which turns out to be very different.

Commentators throughout development history have observed that big successes like South Korea, Singapore, Taiwan, and China had or have strong autocrats during their successful periods (as measured by rapid growth), which reinforces a belief in benevolent autocrats. But conditioning on success does not generate the right probability.

For purposes of illustration of this problem in Table 11, a big growth success is defined as more than 4 percent per capita over 1960-2008, and a big growth failure as less than -0.5 percent average growth over the same period (the first dividing line from above picks out the usual suspects as successes; the seemingly arbitrary dividing line from below is chosen to make the number of big failures equal to the number of big successes).

We have 124 cases. Table 11 shows the breakdown of big successes and big failures by level of autocracy (defined as in the previous section).

<b>Table 11:</b> <b># Developing Countries</b> <b>In each category</b> <b>1960-2008</b>	Big Growth Failure	Not Big Growth Success or Big Failure	Big Growth Success
Autocracy	10	70	9
Democracy	0	12	1

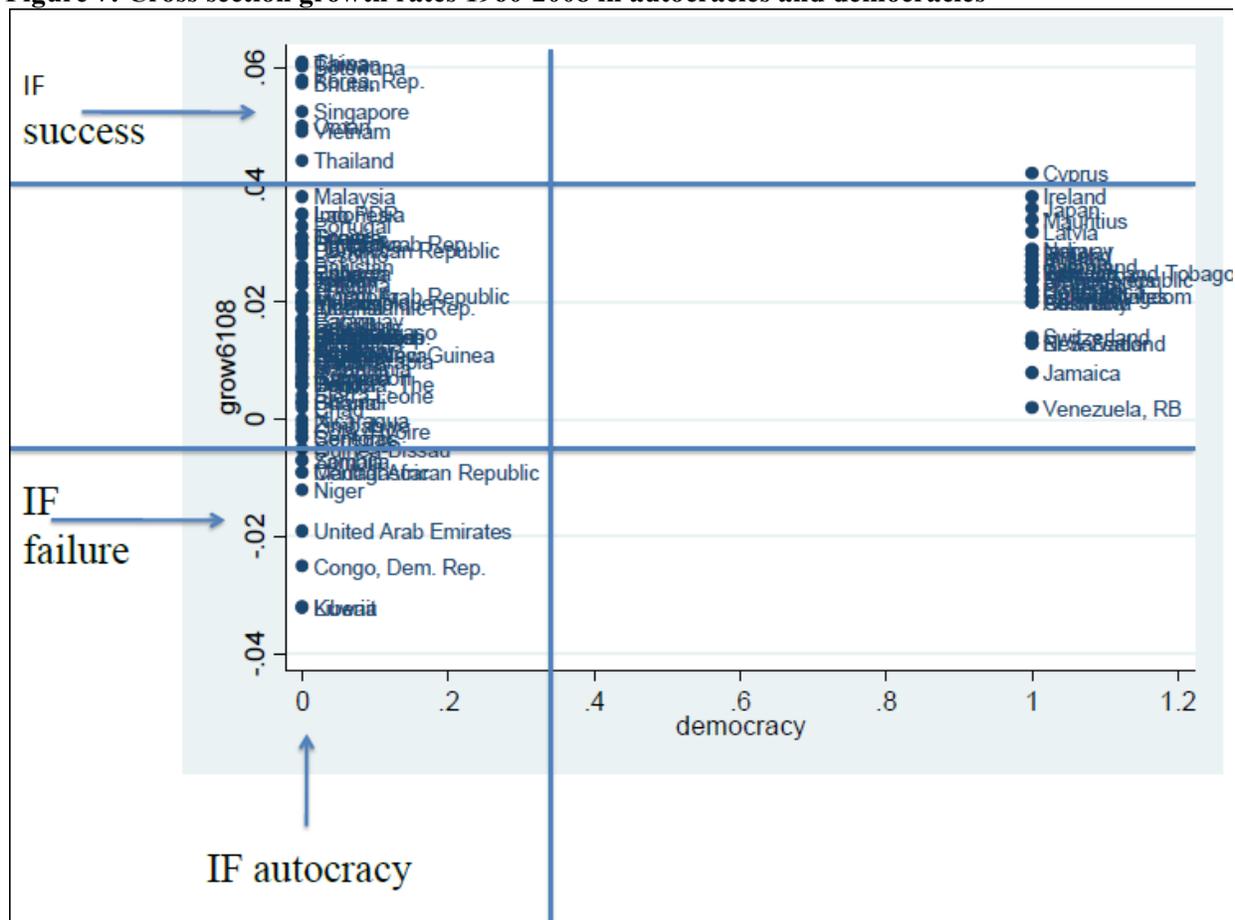
The probability that you are an autocrat IF you are a growth success is 90 percent. This probability seems to influence the discussion in favor of autocrats, as the example of the World Bank statement showed. However, the relevant probability is whether you are a growth success IF you are an autocrat, which is only 10 percent.

The reason for the large difference in conditional probabilities in terms of Bayes’ Theorem is that major growth success has a low base rate probability, only about 9.8 percent, relative to a large probability of autocracy (87 percent). Correct Bayesian updating of the probability of success on observing an autocrat

would have elevated the probability of success only slightly, to 10.1 percent. The fallacy of confusing the probabilities neglects the low base rate in Bayesian terms (or there may simply be a direct confusion between the reverse conditional probabilities).

As figure 7 shows (it is a dichotomous version of Figure 1, where democracy= Polity>7.5), conditioning on success only picks up the upper tail of the more diffuse autocracy distribution. Figure 7 shows also that one could have made just as strong an argument associating autocracy with failure by using the reversed conditional probability (all failures are autocracies). However, as the next section shown, successes are much more visible than failures.

**Figure 7: Cross section growth rates 1960-2008 in autocracies and democracies**



#### b. Availability heuristic

The availability heuristic identified and empirically confirmed by Tversky and Kahneman (1982b) and others leads to an upward bias of the probability of an event that is very vivid in the subjects' minds. One way this can happen are with an event that is over-reported relative to its actual frequency. "Availability" refers to how easily a particular event springs to mind in a test subject being asked about the probability of the event.

For our purposes here, the issue is whether successful autocrats are over-reported relative to failed autocrats. The purpose is NOT to test whether over-reporting itself reflects some cognitive bias, since there are many possible reasons for over-reporting some countries. Rather the purpose is just to see whether over-reporting of successful autocrats exists relative to failed ones, which will then influence the availability heuristic. For the same reason, the results feature the unconditional reporting levels, NOT conditioning on some obvious factors like population size. For the purposes of availability bias, each country is treated as an equally weighted experiment in autocracy and success, it does not matter WHY there is over-reporting of some of these experiments relative to others.

This paper constructed a database of number of mentions of countries in both popular media and academic journals, as well as using an existing database by Das et al. (2010). The tables below report the results for developing countries only.

We get abundant confirmation that successful autocracies are over-reported relative to their failed counterparts, as illustrated in Table 12 with New York Times stories 1960-2008 by country. What seems to happen is that big success is greatly over-reported relative to big failures. There is little evidence that autocracy per se is over-reported independently of success or failure, but over-reporting success will lead to over-reporting autocracy as shown in figure 7 above.

Availability bias suggests that the probability of success under autocracy will be exaggerated because of the abundant availability of information on successful autocrats, compared with little notice of failed autocrats.

**Table 12: Average Articles per country (New York Times, 1960 to 2008) in each category of Growth and Autocracy**

		Growth 1960-2008			Total
		Big Failure	Not Big Success or Big Failure	Big Success	
Democracy, 1960-2008	Autocracy	5,705	14,890	41,952	16,805
	Democracy		16,222		15,908
	Total	5,705	15,095	38,970	16,685

To test the robustness of the results on availability, we run the same exercise on a variety of popular media and academic development journals, as shown in Table 13. Because there are not enough examples of Democracy with Big Success or Big Failure, we limit the exercise to autocracies. We estimate the cross-section equation for the period 1960-2008:

$$\text{Log}(\text{country article counts}_i) = D_{\text{Big Failure}} + D_{\text{Not Big Success or Failure}} + D_{\text{Big Success}} + \varepsilon_i$$

Table 13 shows the estimated magnitude and statistical significance of DBig Success- DBigFailure (i.e. the difference in average articles per country between those in Big Success category and those in Big Failure category among autocracies). The strongest results are with general media, i.e. that most relevant for public policy debates (New York Times and Foreign Affairs). The results are not quite as strong or as large with academic development journals, only bordering on statistical significance, but the magnitudes are still large.

**Table 13: Results for article counts mentioning country names, by country in set of growth successes and failures in sample of all autocracies, 1960-2008**

<i>Log(# articles 1960-2008, except where otherwise noted)</i>	<i>Log difference in number of articles between success and failure</i>	<i>Standard Error</i>	<i>P-Value</i>	<i>Observations</i>	<i>Multiple by which average articles on success are more numerous than articles on failure</i>
New York Times	1.406	0.647	0.033	84	4.1
Foreign Affairs, keyword search, 1960-Present	1.276	0.623	0.044	86	3.6
Foreign Affairs, topic search, 1960-Present/1	1.462	0.664	0.030	89	4.3
Journal of Development Economics	0.921	0.411	0.028	86	2.5
Journal of Development Economics (keyword "Growth")	0.831	0.424	0.053	86	2.3
World Development	0.787	0.403	0.054	86	2.2
World Development (keyword: "Growth")	0.799	0.410	0.055	87	2.2
World Bank count of academic articles by country 1985-2005	1.851	0.957	0.057	85	6.4

*/1 This category had some zeroes, so the log transformation is log(1+#articles)*

### c. Leadership attribution bias

A large literature on the “fundamental attribution error” finds that test subjects tend to attribute an outcome too much to individual personality, intentions, and skill and not enough to situational factors. Some of the early examples of finding were Jones and Harris 1967, who ran an experiment assigning individuals randomly to write pro-Castro or anti-Castro letters. The test subjects observing this said that

the pro-Castro letter writers already intended to be more pro-Castro even though they knew assignment was random.

That even random outcomes are attributed to intentions or skill is a striking feature of many experiments. Another early experiment showed the performance of actors doing a task in view of test subjects (Lerner 1965). The test subjects were told that payments would be given randomly to the actors, unrelated to performance, and the experimenter designed it so that performance was equivalent between all actors. Test subjects gave a higher performance rating to those actors receiving payments, even though they knew the payments were random.

Langer (1982) further surveyed and confirmed observers' tendency to view uncontrollable outcomes (including chance) as if they were controlled by the agents (sometimes the agents are the observers themselves) in psychological experiments. She called this the "illusion of control."

This bias shows also in attributing too much of a group outcome to the personality of the leader rather than characteristics of the group. Weber et al. (2001) ran an experiment of two groups trying to solve coordination problems in which one of each group was randomly designated the "leader." One of the groups was larger than the other, and this was the true cause of differential success at solving coordination problems. However, observers spuriously attributed the different outcomes to "leadership effectiveness."

Wolfers (2007) shows a similar bias in how voters attribute outcomes to governors of US states. Incumbents are blamed even for outcomes that are obviously beyond their control, such as a fall in oil prices in an oil-producing state. Patty and Weber (2007) have a similar result that "voters over-emphasize outcomes relative to the actual ability of the leader to influence outcomes." (Of course, this kind of voter irrationality could itself be an argument in favor of autocracy, except that the autocratic selectorate may also suffer from the same kind of irrationality. For the moment, take this as a large scale experiment confirming leadership attribution bias.)

#### d. The "Hot Hand" fallacy

The "Hot Hand" fallacy (Gilovich, Vallone, and Tversky 2002) is the false perception that a basketball player who has just made a string of baskets is more likely to make the next basket than his average skill would predict. The counterpart story for our purposes is that even if a streak of high growth were random, the leader in power is likely to be dubbed a benevolent autocrat and the high growth expected to continue.

Another way of stating this bias is that it fails to appreciate regression to the mean (Kahneman and Tversky 1982d) – that unusually good performance is temporary and will like revert to average performance. As mentioned above, Easterly, Kremer, Pritchett, and Summers 1993 and Hausmann, Rodrik, Pritchett 2007 showed growth rates to feature low persistence and high mean reversion in general. The empirical results above showed how high was the transitory noise in growth rates under autocracy, and specifically demonstrated that there was high mean reversion within the term of an autocrat.

If current and past high growth is attributed to an autocrat, the Hot Hand fallacy will make things even worse by giving him credit for the spuriously predicted high growth in the future as well. For example, China is routinely projected to continue at its current high growth indefinitely under the current

leadership, making today's leaders appear even more exceptional. Correcting the "Hot Hand" fallacy means that high growth today should instead be expected to move back towards the global mean on average across all high growth cases (as confirmed in the results above).

Of course, the same will work in reverse with the malevolent autocrat with a string of bad growth rates, which observers expect to continue and hence make the bad autocrat seem even worse. This bias thus tends to exaggerate the difference between "good" and "bad" autocrats.

#### e. The "Law of Small Numbers"

A closely related issue is what Tversky and Kahneman (1982a) called the "Law of Small Numbers." In contrast to reliance on the Law of Large Numbers to obtain precision on averages, the "Law of Small Numbers" draws conclusions prematurely on too small a sample. This will be worse with autocracy than with democracies, as the former have a larger transitory component to their growth rates.

It is common practice to declare a country a "growth miracle" after a few years of high growth. For example, Chile under Pinochet was declared a "growth miracle" twice: first from 1977-1981, and again from 1984-89 (in between the two was a financial crisis and a severe contraction), with about 6 percent per capita growth in both periods.

Flexibly selecting on any short interval of high growth under autocracy as a "growth miracle" is likely to capture a high transitory realization. Calling it a "miracle" ignores this problem, apparently suffering from the "Law of Small Numbers."

These results help understand why short periods of rapid growth are not only common and but inexplicable. As the Hausmann, Pritchett, Rodrik (2005) study of "Growth accelerations" found, "Of the 110 countries included in the sample, 60 have had at least one acceleration . . ." And yet "most growth accelerations are not preceded or accompanied by major changes in economic policies, institutional arrangements, political circumstances, or external conditions. . . those determinants do a very poor job of predicting the turning points." They define a growth acceleration as being a change of 2 percentage points per capita from one seven year period to the next, and found 81 of them in the data. While they found both democratic and autocratic growth accelerations, this paper finds the latter in their database (using the classification of autocracy in this paper) to be larger: an acceleration of 5.2 percentage points, compared to 3.2 percentage points for democracies. This is the basis of mostly spurious popular reports of "growth miracles."

Surprisingly, the Law of Small Numbers is still a non-trivial problem even with much longer time periods. The World Bank Growth Commission identified the successes that it would study as those that had high growth over any 25 year period, creating a selection bias towards having a large transitory component (not only by country, but also by endogenous selection of time period to get the highest growth possible for any 25 year period). Since autocracies have larger transitory variance than democracies, this procedure was very likely to pick out autocratic successes. Indeed, only one of the thirteen successes in the Growth Commission report fit the definition of democracy used in this paper

(Japan, 1950-1983)<sup>13</sup>. The 25 year average of the transitory component for autocracies has a 95% confidence interval of (-.023,.023). Easterly (2009) showed that the Growth Commission methodology even did poorly identifying the countries with the highest permanent growth rates when the latter are parametrized in a Monte Carlo simulation to fit the actual variances of permanent and transitory factors in growth. The simulation found that more than a third of the successes picked on average by this method would NOT be in the top permanent growth rates.

To conclude this section, the interaction between stylized facts and well-known cognitive biases would produce beliefs in benevolent autocrats even if they did not exist. While repeatedly cautioning that this does not automatically discredit any particular belief in benevolent autocrats, it does suggest an explanation why the beliefs in this concept is much stronger than the evidence would support.

#### IV. The political economy of the benevolent autocrat idea

There is increased interest in the political economy of ideas in development, as economists debate which type of research is more likely to influence policy (see Banerjee and Duflo 2011). Politicians and public policy experts may also have political motivations for adopting ideas (see the literature on the idea of cash transfers in the Progres program in Mexico, as well as the general debate on the policy impacts of randomized trials versus macroeconomic research, e.g. Cohen and Easterly 2010).

The benevolent autocrat idea has been around for a long time. Its long popularity could certainly be partly explained by its political convenience for those in power. It is hard to see how it could be otherwise – autocrats and those whose interests are aligned with autocrats are not bound by academic rules for accepting and promoting ideas, and it would be hard to imagine they would be neutral on a theory that helps justify their hold on power. The section above on cognitive biases suggests that there is some scope for popular beliefs to be manipulated by selective use of evidence.

Similarly, the acceptance of the benevolent autocrat idea is also going to be influenced by the perceived need for paternalistic intervention, which reflects attitudes towards the would-be subjects of the autocrat. The point is NOT that the idea of benevolent autocrats should be disqualified by association with paternalism, colonialism, racism, or political motivations. Rather, the point is that the concept's popularity in the policy community does not reflect ONLY rigorous scientific testing (so such testing is even more important).

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<sup>13</sup> Hong Kong and Malta were successes that Polity IV does not cover. Freedom House coverage begins in 1973. Freedom House classified Malta (whose successful period was identified as 1963-1994) as “partly free” from 1982-1987, otherwise “free”; Malta became independent in 1964. Hong Kong was never independent but appears on Freedom House’s list of territories, where it was classified as “partly free” in all periods except a “free” classification in 1975-1979.

a. Political convenience during colonial and Cold War eras

A convenient historical starting place is John Stuart Mill in his classic *On Liberty* (1869), which argued strongly for democratic rights for the individual. However, he made an exemption for what we would today call developing countries:

We may leave out of consideration those backward states of society in which the race itself may be considered as in its nonage. Despotism is legitimate ... in dealing with barbarians, provided the end be their improvement... Liberty has no application to any {such} state of things.”

That even such a radical as Mill would express this double standard shows how easy it was to justify colonialism for so long, when racist and paternalistic attitudes were nearly universal among Europeans.

It is not widely known that the modern field of development economics arose in the 1940s BEFORE the end of the colonial era. A British colonial official named Lord Hailey in 1941 thought that development would be a useful justification for the autocratic colonial power: “A new conception of our relationship...may emerge as part of the movement for the betterment of the backward peoples of the world.” Hailey made a distinction between economic rights for colonial subjects (good) and political rights (not so good). The idea of a benevolent autocrat granting “economic freedom” but not “political freedom” has had enduring appeal up to the present.

Jan Smuts, the Prime Minister of South Africa in a speech to the UN Founding Conference in 1945 described colonial subjects as “dependent peoples, still unable to look after themselves.” Although we now know colonialism ended only a few years later, this was not the expectation at the time.

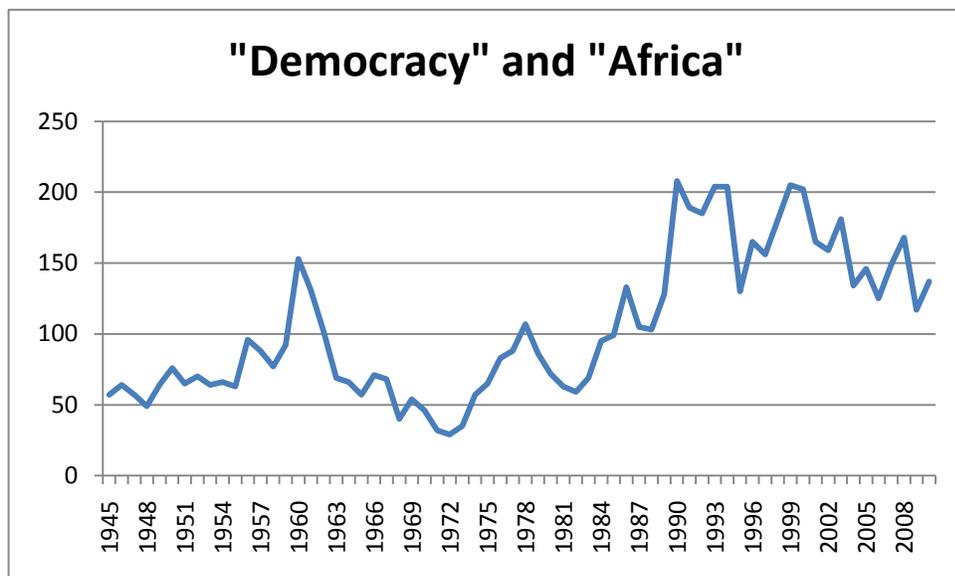
Such attitudes may explain why autocracy was initially popular in development economics. At best, there was an indifference to whether aid-receiving countries are autocratic or democratic. This was formalized in the Articles of Agreement of the IMF and the World Bank in 1944, which banned all political considerations in aid allocation decisions (this ban is still in force today, although applied unevenly).

After the end of the colonial era, the neutrality about political systems – and the benevolent autocrat concept -- may still have been politically convenient. The US government notoriously tolerated autocracy in Cold War allies for strategic reasons. In discussions of development policy (usually dominated by the US government or World Bank), democracy was a taboo subject.

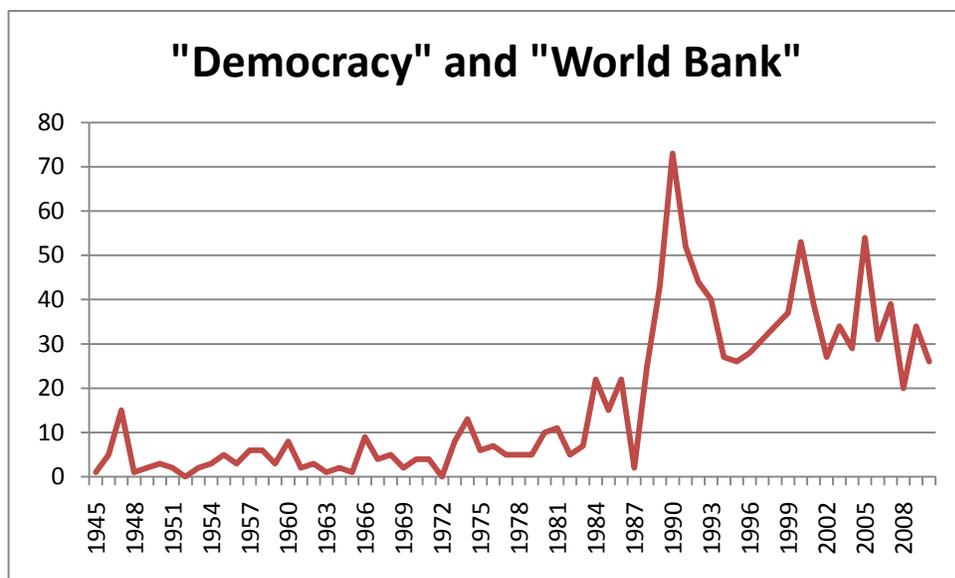
This is even more clear now because of the dramatic break after the end of the Cold War in 1989. The taboo on democracy in aid agency discussions suddenly lifted. Figures 8a and 8b shows the sharp upward shift in 1990 as measured by New York Times stories per year that contained a discussion of both the keyword “democracy” and a development-related keyword – either “Africa” or “World Bank.”

**Figure 8: Number of New York Times stories per year mentioning keywords shown.**

Panel a:



Panel b:



Although democracy was no longer a taboo topic in development policy discussions after 1990, the debate on benevolent autocrats was far from resolved.

## b. Political convenience for aid agencies

Since the end of the Cold War, USAID and some bilateral agencies have given aid to programs in some countries under the rubric of “democratization.” Yet even these agencies seem to have a split personality, as aid agencies continue to give large aid flows to regimes classified by most indices as autocracies. Table 16 shows the largest flows to autocracies over 2004-2008 by donor and by recipient:<sup>14</sup>

**Table 16: Examples of Aid Going to Autocracies**  
**Sum 2004-2008, Billion US\$**

<b>Donors</b>		<b>Recipients</b>	
United States	\$46	China	\$15
Japan	\$23	Vietnam	\$12
Germany	\$16	Sudan	\$10
World Bank (IDA)	\$14	Egypt	\$9
France	\$14	Cameroon	\$9
United Kingdom	\$10	Rwanda	\$5
EC	\$9	Tunisia	\$3

The “benevolent autocrat” idea is convenient in many ways for aid agencies and other supporters of aid. Most aid-receiving nations are autocratic, and thinking of the autocrat as mostly “benevolent” (another common euphemism is “developmental”) takes the focus off autocracy and puts it back on a more appealing image such as the needy populations of those nations. In turn, opponents of aid might find it convenient to promote the idea of “malevolent autocrats,” to imply that the autocrat is the cause of poverty and that aid would do little good. As in the classic analysis of Deborah Stone (1989), the non-academic policy community are warring over alternative “causal stories” that lead to their preferred policy recommendations. In this case, both sides would have some political motivations to exaggerate the role of leaders for good or ill, consistent with the benevolent autocrat concept. Once again, this does not automatically discredit the concept, but it is useful to look out for political interests as one possible source of the non-academic popularity or unpopularity of ideas.

Another well-known phenomenon in the political economy of official aid is for aid agencies to disburse all of their lending budget every year. Not only that, but aid has never been able to consistently resolve what to do about needy people unlucky enough to have a dictatorial government. The concept of “benevolent autocrat” removes the quandary and opens the door to meeting disbursement targets regardless of variation in democratic practices by the recipient.

<sup>14</sup> Sudan is a strange case here as donors like the US government obviously do not approve of the Bashir regime. The aid is flowing as part of the peace agreement with South Sudan.

### c. Action preference

Another possible reason for some preferences for benevolent autocrats is that they seem to provide a way to act forcefully on development outcomes. The action preference has an amusing demonstration in one very narrow circumstance -- how soccer goalkeepers defend against penalty kicks (Bar-Eli et al. 2007). Empirically, the most successful strategy is for the goalkeeper not to act at all: to stay unmoving in the middle. However, a surprisingly large number of goalkeepers prefer to act instead, guessing which way the ball is going and diving to that side. This provides very partial confirmation for the widespread anecdotes in political economy about how action in response to a tragic problem is preferred to inaction regardless of the evidence for payoff from action.

An autocrat with a plan for development will be more appealing to non-academic development professionals who urgently wish for the end of poverty, much more than a democratic system that doesn't have as much role for expert guidance of government actions.

For example, later Nobel Laureate Gunnar Myrdal said in 1956:

Central planning ...HAS to be staged by underdeveloped countries with weak administrative apparatus and a largely illiterate and apathetic citizenry...the alternative to making the heroic attempt is continued acquiescence in economic stagnation which is politically impossible ...this is why [planning] is unanimously endorsed by experts in the advanced countries.

The extreme degree of central planning advocated by Myrdal in the 1950s has long been out of favor. However, the current recommended approach to development for poor countries is partly captured by a World Bank process called Poverty Reduction Strategy Papers (PRSP), which each country is supposed to prepare. Although a long way from Myrdal, the kind of strategy recommended seems to envision planning by a relatively unconstrained executive:

...define medium- and long-term goals ...establish indicators of progress, set annual and medium-term targets. ... take into account what is known of the linkages between different policies, their appropriate sequencing, and the expected contribution of policy actions to the attainment of long-term goals and intermediate indicators. ...in light of the diagnosis, the targets, their estimated costs, available resources. (Sourcebook on World Bank PRSP web site today)

In general, technocratic views of development give action-oriented experts much more of an active role. However, if experts already know the answer, then there is not much room left for democratic determination of economic policy. As James Buchanan said, policy-oriented economists and other public intellectuals may prefer to be "proffering policy advice as if they were employed by a benevolent despot."

James C. Scott in his classic *Seeing Like A State* concurs that expert specialists prefers autocrats: "Political interests can only frustrate the social solutions devised by specialists with scientific tools adequate to their analysis. As individuals, high modernists might well hold democratic views...but such convictions are external to, and often at war with, their high-modernist convictions." (p. 94)

Economists today are increasingly discussing political motivations that influence acceptance or rejection of ideas in the public policy arena. (See Boettke (2010) and Zingales (2009), for example, for a discussion of why Keynesian ideas are politically popular.)

Ideas about development policies in rich democratic countries are particularly vulnerable to political influences, as the costs of mistaken ideas fall on non-voting populations of poor countries, while the benefits are concentrated on issue lobby groups in the rich countries who have political power (for example, either pro-aid or anti-aid lobbying groups). Moreover, the mapping from issue lobbies to ideas may lead politicians to embrace and promote ideas as a way of signaling that they share the concerns of a particularly potent issue lobby, regardless of the merits of the idea itself or even whether the politicians themselves accept the idea. Attempts to “educate the politicians” may have little effect without an appreciation of these deeper incentives.

## V. Conclusion

This paper has suggested a number of cautions about jumping too quickly to benevolent autocrat explanations of growth successes under autocracy, based on the higher variance of growth under autocracy. A more careful look at stylized facts is largely inconsistent with either a story (Explanation (1)) that stresses good and bad individual autocrats, or the more common story (Explanation (2)) that stresses good and bad autocratic systems.

The paper next shows the interaction between well-known cognitive biases and stylized facts would predict beliefs in benevolent autocrats even if they did not exist. Furthermore, the benevolent autocrat story has been around for a long time and has proved very adaptable to many different political motivations. This paper has repeatedly cautioned that these arguments do not automatically disprove the benevolent autocrat story. People who have certain cognitive biases and political motivations are likely to believe in benevolent autocrats. It does not follow that people who believe in benevolent autocrats have political motivations and cognitive biases. (Equating the two is itself the reversing conditional probabilities cognitive bias.)

The benevolent autocrat story for any ONE autocrat and growth outcome is ultimately non-falsifiable: there is just one observation and many possible stories. Those with strong priors in favor of benevolent autocrats are still likely to go with that story for any one episode (China!).

The point of this paper is that such strong priors exist for many bad reasons as well as good ones, and that economists should retain their traditional skepticism for stories that have little good theory or empirics to support them.

## Bibliography

- Acemoglu, D., Johnson, S., Robinson, J., Thaicharoen, Y., 2003. Institutional causes, macroeconomic symptoms: volatility, crises and growth. *J. Monetary Econ.* 50, 49–123.
- Acemoglu, Daron and James Robinson, 2005, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, Cambridge UK
- Acemoglu, Daron and Fabrizio Zilibotti, Was Prometheus Unbound by Chance? Risk, Diversification, and Growth. *The Journal of Political Economy*, Volume 105, Issue 4, August 1997, 709-751.
- Aghion, Philippe, George-Marios Angeletos, Abhijit V. Banerjee and Kalina Manova,(2007), —Volatility and Growth: Credit Constraints and Productivity-Enhancing Investment, MIT mimeo.
- Almeida, H., Ferreira, D., 2002. Democracy and the variability of economic performance. *Econ. Polit.* 14, 225–245.
- Bar-Eli, Michael Ofer H. Azar, Ilana Ritov, Yael Keidar-Levin, Galit Schein, Action bias among elite soccer goalkeepers: The case of penalty kicks, *Journal of Economic Psychology*, Volume 28, Issue 5, October 2007, Pages 606-621
- Birdsall, Nancy and Francis Fukuyama, *The Post-Washington Consensus: Development After the Crisis*, *Foreign Affairs*, March-April 2011, pp. 45-53.
- Barro, Robert. 1996. “Democracy and Growth.” *Journal of Economic Growth* 1(4): 449-486.
- Besley, Timothy and Masa Kudamatsu, “Making Autocracy Work”, in Elhanan Helpman (ed), *Institutions and Economic Performance*, Cambridge: Harvard University Press, 2009
- Boettke, Peter. *Economics for Yesterday, Today, and Tomorrow*. Adam Smith Lecture from The Association of Private Enterprise Education, April 2010
- Bruno, Michael and William Easterly, Inflation Crises and Long-run Growth, *Journal of Monetary Economics*, 41, (February 1998): 3-26..
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow, *The Logic of Political Survival*, Cambridge, MASS: MIT Press, 2003.
- Chaves, Isaiás N. and James A. Robinson, *The Political Consequences of Civil Wars*, mimeo, Harvard University, November 2010.
- Caballero, Ricardo J. *Macroeconomics after the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome*, forthcoming *Journal of Economic Perspectives*, September 2010
- Caplan, Bryan. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. 2007. Princeton, NJ: Princeton University Press.
- Collier, Paul. 2009. *Wars, Guns, and Votes: Democracy in Dangerous Places*. Harper 2009.
- Corvalan, Alejandro. *From Income to Democracy*, December 2010, NYU mimeo

- Denizer, Cevdet A., Murat F. Iyigun, and Ann Owen (2002), Finance and Macroeconomic Volatility, *Contributions to Macroeconomics*, 2 (1, Article 7), 1-30.
- Duflo, Esther, Glennerster, Rachel and Kremer, Michael, Using Randomization in Development Economics Research: A Toolkit (December 12, 2006). MIT Department of Economics Working Paper No. 06-36. Available at SSRN: <http://ssrn.com/abstract=951841>
- Easterly, William. The Indomitable in Pursuit of the Inexplicable, in Shahid Yusuf, ed., *Development Economics through the Decades: A Critical Look at Thirty Years of the World Development Report*, World Bank, 2009
- Easterly, William and Aart Kraay, Small states, small problems? Income, growth, and volatility in small states, *World Development* Vol. 28, No. 11, pp. 2013±2027, 2000
- Easterly, William, Roumeen Islam, and Joseph E. Stiglitz (2002), —Shaken and Stirred: Explaining Growth Volatility, in *Annual World Bank Conference on Development Economics* edited by Boris Pleskovic and Nicholas Stern, World Bank and Oxford University Press, Washington, D.C., 191-211.
- Gandhi, Jennifer and Adam Przeworski. 2007. “Dictatorial Institutions and the Survival of Autocrats.” *Comparative Political Studies*. 40: 1279-2301.
- Gilovich, Thomas, Robert Vallone, and Amos Tversky, “The Hot Hand in Basketball: On the Misperception of Random Sequences”, in Thomas Gilovich, Dale Griffin, and Daniel Kahneman, *Heuristics and Biases: The Psychology of Intuitive Judgment*, Cambridge University Press: Cambridge UK, 2002.
- Halper, Stefan. *The Beijing consensus: how China's authoritarian model will dominate the twenty-first century*, Basic Books, 2010
- Hofstede, Geert H., 1980. *Culture’s Consequences: International Differences in Work-Related Values*. Sage, Thousand Oaks, CA.
- Hofstede, Geert H., 2001. *Culture’s Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*, second ed. Sage, Thousand Oaks, CA.
- Jones, E. E. and Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, 3, 1-24
- Kahneman, Daniel and Amos Tversky, “On the psychology of prediction,” in Daniel Kahneman, Paul Slovic, and Amos Tversky, editors, *Judgment under uncertainty: heuristics and biases*, Cambridge University Press: Cambridge UK, 153-160, 1982
- Langer, Ellen J. “The illusion of control,” in Daniel Kahneman, Paul Slovic, and Amos Tversky, editors, *Judgment under uncertainty: heuristics and biases*, Cambridge University Press: Cambridge UK, 231-238, 1982
- Lerner, Melvin J., Evaluation of performance as a function of performer's reward and attractiveness, *Journal of Personality and Social Psychology*, Volume 1, Issue 4, April 1965, Pages 355-360

- Licht, Amir N., Chanan Goldschmidt, and Shalom H. Schwartz (2007), Culture rules: The foundations of the rule of law and other norms of governance, *Journal of Comparative Economics*, 35 659–688
- Lo, Andrew W. and Mark T. Mueller, WARNING: Physics Envy May Be Hazardous To Your Wealth! Mimeo, MIT, March 2010
- Manski, Charles F. ,POLICY ANALYSIS WITH INCREDIBLE CERTITUDE, Department of Economics and Institute for Policy Research, Northwestern University, February 2011
- McTeer, William, White, Phillip G, Persad, Sheldon. Manager/coach mid-season replacement and team performance in professional team sport, *Journal of Sport Behavior*. Mar 1995, Vol. 18, Iss. 1; pg. 58
- Olsen, Mancur. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*, Oxford University Press, 2000
- Parente, Stephen and Edward Prescott, *Barriers to Riches*, MIT Press: Cambridge MA, 2000.
- PERSSON, TORSTEN AND GUIDO TABELLINI, Democratic capital: The nexus of political and economic change, *American Economic Journal: Macroeconomics*, 2010.

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*The Journal of Economic Perspectives*, Vol. 7, No. 3 (Summer, 1993), 51-69.

- Przeworski, Adam, Michael E. Alvarez, Jose Antonio Cheibub, Fernando Limongi, *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge University Press: Cambridge UK.
- Ramey, Garey and Valerie Ramey, Cross Country Evidence on the Link between Volatility and Growth *American Economic Review*, Dec. 1995.
- Rodrik, Dani "Institutions for High-Quality Growth: What They Are and How to Acquire Them," *Studies in Comparative International Development*, vol. 35, no.3, Fall 2000. NBER Working Paper version
- Rodrik, Dani "Growth Strategies," in P. Aghion and S. Durlauf, eds., *Handbook of Economic Growth*, vol. 1A, North-Holland, 2005.
- RODRIK, DANI AND ROMAIN WACZIARG, Do Democratic Transitions Produce Bad Economic Outcomes? *American Economic Review Papers and Proceedings*, Vol. 95, No. 2, May 2005.
- Sah, R.K., 1991. Fallibility in human organizations and political systems. *J. Econ. Perspect.* 5, 67–88.

- Scott, James C. *Seeing Like A State: How Certain Schemes to Improve the Human Condition have Failed*. Yale University Press: New Haven, 1999
- Schwartz, Shalom H., 1999. Cultural value differences: Some implications for work. *Applied Psychology International Review* 48, 23–47.
- Schwartz, Shalom H., 1994. Beyond individualism/collectivism: new cultural dimensions of values. In: Uichol, Kim, Triandis, Harry C., Kagitcibasi, Cigdem, Choi, Sang-Chin, Yoon, Gene (Eds.), *Individualism and Collectivism: Theory, Method, and Applications*. Sage, Thousand Oaks, CA.
- Silva, Gisele Ferreira da (2002), —The Impact of Financial System Development on Business Cycles Volatility: Cross-Country Evidence, *Journal of Macroeconomics*, 24(2), 233 -53.
- Stone, Deborah A. 1989. Causal Stories and the Formation of Policy Agendas, *Political Science Quarterly*, Vol. 104, No. 2. (Summer, 1989), pp. 281-300.
- Tabellini, Guido, “The Scope of Cooperation: Values and Incentives,” *Quarterly Journal of Economics*, Vol. 123, 2008, pp. 905–950.
- Tversky, Amos and Daniel Kahneman, “Belief in the Law of Small Numbers,” in Daniel Kahneman, Paul Slovic, and Amos Tversky, editors, *Judgment under uncertainty: heuristics and biases*, Cambridge University Press: Cambridge UK, 23-31, 1982a
- Tversky, Amos and Daniel Kahneman, “Availability: A heuristic for judging frequency and probability,” in Daniel Kahneman, Paul Slovic, and Amos Tversky, editors, *Judgment under uncertainty: heuristics and biases*, Cambridge University Press: Cambridge UK, 163-178, 1982b
- Tversky, Amos and Daniel Kahneman, “Evidential impact of base rates,” in Daniel Kahneman, Paul Slovic, and Amos Tversky, editors, *Judgment under uncertainty: heuristics and biases*, Cambridge University Press: Cambridge UK, 153-160, 1982c
- Weede, E., 1996. Political regime type and variation in economic growth rates. *Constitutional Polit. Econ.* 7, 167–176.
- World Bank Growth Commission, *The Growth Commission Report*, Washington DC, 2008.
- Yang, Benhua. Does democracy lower growth volatility? A dynamic panel analysis, *Journal of Macroeconomics* 30 (2008) 562–574

## Appendix: Measuring Individualist Values

*Schwartz:*

*“Embeddedness/Autonomy:* This dimension concerns the desirable relationship between the individual and the group. Embeddedness refers to a cultural emphasis on the person as embedded in the group and committed to maintaining the status quo, propriety, and restraint of actions or inclinations that might disrupt group solidarity or the traditional order. The opposite pole of autonomy describes cultures in which the person is viewed as an autonomous, bounded entity who finds meaning in his or her own uniqueness.”

In earlier work, Schwartz developed an inventory of 57 items intended to include all the motivationally distinct values likely to be recognized across cultures. A survey questionnaire asking respondents to rate each of these value items as “a guiding principle in MY life” was administered to respondents on every inhabited continent, anonymously, in their native language. Separate multidimensional scaling analyses of the value items established that 45 items have reasonably equivalent meanings in each country. Only these items are used as markers for cultural orientations. This is critical in order to avoid a situation in which apparent differences might be due to different understandings of the concepts across groups.

Means of ratings of each of the 45 value items within each sample were computed. A multidimensional scaling analysis of the correlations between the sample means confirmed the presence of the cultural orientations and their link to the value items selected a priori to represent each orientation. Orientation scores are the average importance of the value items that represent each orientation. For cross-national comparisons, sample differences in scale use were eliminated by centering the importance ratings of all seven orientations within each sample around its mean. Crucially, the analyses are at the country (culture) level, not the individual level—individuals are unaware of the societal average value emphases (for more detail see [Schwartz, 1999, 2004; Smith et al., 2006](#)). Culture scores in the present study are based on a sample of over 15,000 urban teachers who teach the full range of subjects in grades 3–12 in the most common type of school system, surveyed in 1988–1998.

*Hofstede:*

[Hofstede’s \(1980, 2001\)](#) study originated in an audit of company morale among the employees of the IBM corporation around the world at two points of time: around 1968 and around 1972. Factor analysis of country mean scores in 50 countries and three regions produced the four dimensions mentioned above. Hofstede asserts that comparing IBM subsidiaries shows national culture differences with unusual clarity because they were so homogeneous in terms of employer, kind of work, and education level ([Hofstede, 2001](#)).