

Did Mahmoud Ahmadinejad Steal the 2009 Iran Election?

by Eric A. Brill

Ever since the disputed 2009 Iran election and the protests that followed, loud voices have insisted that the pieces are once again in place – an illegitimate jackboot regime, courageous cries for help, a whiff of WMD. Though it seems unlikely now, the United States could be back in the saddle some day, galloping off to liberate yet another nation of Muslims from Muslim oppression, rescuing a myopic and predictably ungrateful world from yet another existential threat. Just as those who questioned WMD claims before the 2003 Iraq invasion were shouted down as unpatriotic, those who question the "stolen election" claim today are dismissed as democracy-hating boosters of a thuggish theocracy. Is the charge fair?

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Introduction

Many Westerners have insisted that Mahmoud Ahmadinejad stole Iran's 2009 presidential election from Mir-Hossein Mousavi. The post-election battle has been cast as courageous Truth confronting arrogant Power. Yet no one has come forward with a credible, evidence-backed account of electoral fraud. What if, on this narrow but important question, it turns out to have been courage confronting Power and Truth – the election was valid and fair?

Charges that the Iranian government brutally mistreated protesters after the election must be taken very seriously. A protester's human rights should not depend on the merits of his position, just as our respect for a soldier should not depend on the merits of the war he is sent to fight. The question considered here, however, is not whether the government mistreated those who protested the election result, nor whether Iran's government ought to be run by different people with different policies. Nor is the question whether more candidates ought to have been declared eligible to run – a complaint not made by Mousavi until after the election. Obviously he made the list, and the exclusion of other candidates probably improved his chances. The question here is simply whether Ahmadinejad won the election, fair and square.

Here is the officially reported outcome:¹

¹ Table data reflect 45,692 ballot-box totals listed in final election report released by Iran's Interior Ministry in late June 2009 (the "Interior Ministry Report"). A comma-delimited file is available at http://thomaslotze.com/iran/Mebane_Lotze_Iran_2009_polling.csv, or find this and other data files in Excel spreadsheet format at link labeled "iranian_election.zip" on website page available at <http://thomaslotze.com/iran/index.php#Benford>. Interior Ministry spreadsheets include a "Total" column for each ballot box that, in some cases, varies slightly from the sum of the four candidates' votes plus invalid ballots. For this reason, vote totals shown in this article reflect a calculation of each ballot-box total: the sum of the four candidates' votes plus the invalid ballots. Difference between overall vote total stated in Interior Ministry Report and overall calculated vote total was not significant. Total votes in Interior Ministry Report varied slightly (.07%) from total votes reported by Interior Ministry on day after election (see, Ali Ansari, Chatham House Preliminary Report *(footnote continues on next page)*)

Iran Presidential Election – June 12, 2009

Candidate – Votes – Percent

Mahmoud Ahmadinejad – 24,525,491 – 62.6%

Mir-Hossein Mousavi – 13,258,464 – 33.8%

Mohsen Rezai – 656,150 – 1.7%

Mehdi Karroubi – 330,183 – 0.8%

Valid votes – 38,770,288 – 98.9%

Blank or invalid ballots – 421,005 – 1.1%

Total votes – 39,191,293 – 100.0%

Were these figures correct? They were reported by Iran's Interior Ministry, an institution that has been vilified and ridiculed in the Western press and in which most Iranians themselves do not express a great deal of confidence – much as they *reportedly feel* about Iran's Guardian Council, which monitors the Interior Ministry's election-related activities. But that does not matter. **What matters – a great deal – is that these figures match the vote counts reported for the 45,692 polling stations at which Iranians voted in this election. At polling stations all across Iran, observers for Mousavi monitored the voting all day long and closely watched the vote counting after the polls closed. Not one of Mousavi's 40,676 registered observers claimed on election day that he had been turned away or prevented from observing. Not one disputed the vote count at his polling station, or later claimed that he had been deceived or had lacked an adequate basis for approving. Not one alleged that the Interior Ministry reported a different vote count for his polling station. These facts – disputed loudly and often by Mousavi**

(http://www.chathamhouse.org.uk/files/14234_iranelection0609.pdf), though in the case of Mohsen Rezai, the difference arguably was significant (albeit inconsequential, since Rezai received less than 2% of the vote): Ahmadinejad's vote total decreased by .02% in final Interior Ministry Report; Mousavi's total increased by .32%; Rezai's total decreased by 3.3%; Karroubi's total decreased by 1.0%; number of invalid ballots increased by 2.8%. Later Interior Ministry Report reflected June 20 recount of 10% of ballot boxes. Unless otherwise stated, all vote-count data cited in this article are based on Interior Ministry Report data, with calculated ballot-box totals as explained above.

supporters, but not by his actual election-day observers² – are difficult to ignore. Few Westerners understand this.

This is not entirely sufficient even so, since several thousand polling stations were not observed by Mousavi representatives, and he has alleged other wrongdoing. Nonetheless, whether Ahmadinejad won the 2009 election, fairly, is a question that easily can be answered. The tests proposed below are straightforward, the necessary data have long been available, and the results ought to convince any fair-minded skeptic.

Analysis of Mousavi Complaints

By the end of election day, the three opposition candidates had filed 646 complaints with the Guardian Council, which soon claimed to have investigated them even though nearly all involved local irregularities that could have little effect on the lopsided outcome. In addition, 10% of the ballots were recounted eight days after the election, with video cameras and hundreds of opposition observers looking on. No significant discrepancy was found, and the candidate whose representatives had observed the recount (Rezai) withdrew his complaint three days later.

Mousavi ignored all of this, however, having shifted his attack to sweeping allegations such as "the way the results were pre-planned," and to a more extreme remedy: nullification of the election. Most of Mousavi's new allegations – involving subjects such as "the role of shadow institutions" and "abuse of power" – were phrased too generally to permit an investigation. Instead of supplying requested details, Mousavi encouraged his supporters to stage protest rallies, which led to harsh government crackdowns. A few complaints nevertheless were developed sufficiently to be assessed here.

² See, for example, Roger Cohen, March 22, 2010, at <http://www.nytimes.com/2010/03/23/opinion/23iht-edcohen.html?ref=opinion>, in which Mr. Cohen declared that "a historic mistake was made," and offered, as evidence, interviews with several dissatisfied Iranians and this personal observation: "Sometimes you have to smell the truth, breathe it."

Complaint: There Were More Votes Than Eligible Voters In Some Areas

Early reports indicated that the votes in two of Iran's thirty provinces slightly exceeded the number of eligible voters, which Mousavi cited as evidence of fraud. Similar "excess voting" had occurred in earlier high-turnout elections, such as the 1997 election won by the reform candidate, Mohammad Khatami.

Voters do not register in Iran,³ though few Western observers appear to have known this.⁴ In a presidential election, any Iranian age 18 or over may vote at any polling station in Iran – even outside Iran: hundreds of thousands of traveling and expatriate Iranians voted in the 2009 election (overwhelmingly for Mousavi, as it happened) at polling stations set up in 95 countries outside Iran.

Because no voter registration records exist, measuring turnout depends considerably on how one counts eligible voters (the denominator of the voter-turnout fraction) in the area measured. The less accurate the count of eligible voters, the more likely that "excess voting" will be found. Some independent calculations of 2009 voter turnout were based on 2006 census figures;⁵ others used residential data supplied by an independent Iranian news agency. The Interior Ministry said its own turnout calculations were based on birth certificate registries,⁶ while other government agencies used voting data from the 2005 presidential election. Mousavi did not disclose what data he had used. The Guardian Council claimed that all such measures had flaws, and that only one test of voter turnout was meaningful in a presidential election: Nationwide, did the votes exceed the eligible voters? Although the 2009 turnout was the highest ever for an

³ See, Homeyra Mokhtarzada, at <http://aceproject.org/today/feature-articles/a-primer-on-iran2019s-presidential-election-system>; Andres Clavel, at <http://174.36.232.8/html/index.php?id=358>.

⁴ See, Michael Slackman, June 22, 2009, at <http://www.nytimes.com/2009/06/23/world/middleeast/23iran.html>; Robert Dreyfuss, June 21, 2009, at http://www.thenation.com/blogs/dreyfuss/445128/the_next_explosion_in_iran.

⁵ See, Ali Ansari, Chatham House Preliminary Report (http://www.chathamhouse.org.uk/files/14234_iranelection0609.pdf); Reza Esfandiari and Yousef Bozorgmehr, at <http://www.iranaffairs.com/files/iranian-election.pdf>.

⁶ See, Sadeq Mahsuli (Press TV interview (June 25, 2009), reported on BBC Monitoring Service on June 30, 2009. Mr. Mahsuli was Iran's Interior Minister at the time of the interview.

election (85%), it was well under 100% and far short of the 98% turnout for the 1979 referendum held to ratify the creation of the Islamic Republic.

The measure of voter turnout also depends on the size of the measured area. "Excess voting" appears far more frequently when smaller areas are measured. An influx of students, soldiers, vacationers or commuters into a small city, for example, will affect turnout figures much more for the city than for its province. Although the American Enterprise Institute later concluded that no province-wide "excess voting" had occurred after all, Iran's Interior Minister announced that voter turnout had exceeded 100% in 48 small cities. The proportion of "excess votes" had been extremely high in some areas. For the affluent north Tehran suburb of Shemiran (the most pro-Mousavi area in all of Iran), the Interior Minister reported that the number of votes was 13 times the number of eligible voters – up from 8 times in 2005.⁷

In short, "excess voting" has long been common in Iran. It occurred more often in the 2009 election because voter turnout was higher than ever. It does not mean that fraud occurred. Nor, of course, does "excess voting" exclude the possibility of fraud. It is not easy in Iran, however, to stuff ballot boxes or vote in more than one place. Responsibility for ensuring fair elections is entrusted to Iran's Guardian Council, which monitors the election-related activities carried out by the Interior Ministry. Whether or not one respects either institution, a candidate may post an observer at every polling station to monitor compliance with elaborate procedures designed to ensure that elections are fair.

Each voter is required on election day to present an identification card, called a "shenasnameh," which bears the voter's photograph, thumb print and unique identifying number. The voter's name and number are entered into a computer and recorded in writing at the polling station, and are written again on the stub of his ballot. Before voting, the voter must press a purple-ink thumb print onto his ballot stub, which is then separated from the ballot and dropped into a "stub box." Once the ballot and

⁷ See, Sadeq Mahsuli (Press TV interview (June 25, 2009), reported on BBC Monitoring Service on June 30, 2009. Mr. Mahsuli was Iran's Interior Minister at the time of the interview.

stub have been separated, it is impossible to determine how the voter voted. Each voter's identification card is stamped to prevent him from voting more than once. A unique stamp is created for each election so that poll workers can easily spot it when they check a voter's identification card.

All of this occurs in full view of candidates' observers at each polling station where they are present. Representatives of the Guardian Council, the Interior Ministry, the local judiciary, the local police, and members of the public also serve as observers. Many polling stations are located in schools, where local teachers often act as observers. Typically, 14 or more observers monitor all election-day activities at each polling station. Observers verify that the stub box and ballot box are empty and then sealed before voting begins. They watch all day as each voter's credentials are examined, he receives a blank ballot and presses his thumb-print onto the stub, the stub is separated from the ballot and dropped into the stub box, the voter enters a private voting booth, and finally he emerges and drops his completed ballot into the ballot box. The observers watch the ballot box closely to make sure no one except a voter drops anything into it.

When the polls close,⁸ the observers watch as the "stub box" is opened and the stubs are counted, and then as the ballot box is opened and the ballots are counted to ensure there are as many ballots as stubs. If the stubs outnumber the ballots, all ballots will be counted and the discrepancy will be noted in the election report. If the ballots outnumber the stubs, the discrepancy will be noted and the number of "extra" ballots will be randomly removed from the ballot box before the vote count begins.

The observers continue watching as the actual vote count takes place. Election officials examine each ballot to confirm that the voter's choice was clearly indicated. Challenges are discussed and resolved among the election officials and observers. The final count for each candidate is written on a government form – Form 22 – which also states how

⁸ To accommodate the record turnout, most polling stations opened at 8 AM, one hour earlier than usual, and remained open for several hours longer than legally required (10 hours, under Iran's Presidential Election Law). A few polling stations remained open until 2 AM. See, Guardian Council Report, at <http://www.iranaffairs.com/files/document.pdf>. According to one Iranian source, polling stations indeed did close early in some small Iranian villages, though only because all eligible voters in the village had voted.

many blank ballots were supplied to the polling station and how many are left. Five originals of Form 22 are signed by election officials and each observer. If a candidate's observer disagrees with the count, he will refuse to sign (and presumably will notify the candidate). One signed original of the Form 22 is placed inside the ballot box, which is then re-sealed in the observers' presence and handed over to a local election official to hold for a legally prescribed period of time.

The ballot box is not delivered to the Interior Ministry, even if a recount occurs. Many analysts mistakenly believed that the 45,692 ballot boxes in the 2009 election were to be physically transported to Tehran for counting – under "police escort" in some accounts, sometimes with stop-overs at "local wards" and "provincial committees," and even with multiple observers along for the ride. Some analysts even considered it evidence of fraud that Mousavi observers had been barred from riding along on these imaginary journeys to Tehran.

Signed originals of the Form 22 are delivered to the Interior Ministry in Tehran and three other officials. A copy is given to each observer. The Form 22 information is also transmitted electronically on election night to district or county government offices, where candidate observers also are present. Form 22 information from numerous polling stations is summed up there to yield district-level and county-level vote totals, which are then transmitted electronically (and later physically) to the Interior Ministry in Tehran. To expedite the national vote tabulation in the 2009 election, Form 22 information was also transmitted directly from each polling station to the Interior Ministry. Observers are present when any electronic transmission occurs.

The government's explanation for "excess voting" in the 2009 presidential election was the same as in previous elections: Regardless of where he lives, any eligible Iranian voter may vote at any polling station anywhere in the world. This explanation was widely ignored or distorted in post-election press coverage. Many stories reported that the Iranian government had admitted "voting errors." According to Dr. Ali Ansari, author of the frequently cited Chatham House Preliminary Analysis, the government had even conceded that "possibly 3 million votes were missing." He was referring to the Interior Ministry's announcement that "excess voting" had occurred in 48 small cities. The

Ministry spokesman had explained that local turnouts exceeding 100% had been more common this time because turnout had been extremely high; this did not mean fraud had occurred. Moreover, the spokesman had added, the outcome would have been the same even if fraud had occurred – in fact, even if all 3 million votes cast in those 48 small cities had been fraudulent.

The spokesman's last remark might have struck most listeners as harmless. But some took a dimmer view – several dimmer views, in fact, linked only by the phrase "3 million votes" and a shared suspicion that Ahmadinejad's vote-riggers were to blame for whatever foul play had occurred. Some commentators merely expressed concern about "irregularities" and "discrepancies" that "could affect 3 million votes." Others, such as Dr. Ansari, suspected that the 3 million votes were more than just "affected" – they were "missing." Still others reached precisely the opposite conclusion. There were not 3 million too few votes, but rather 3 million too many: "[T]he number of votes recorded in 50 cities exceeded the number of eligible voters there by 3 million." The "too few" and "too many" interpretations of the spokesman's remark soon were harmonized in an explanation that appealed to many Mousavi supporters: the three million votes were neither missing nor excessive – they had simply been stolen from Mousavi and given to Ahmadinejad.

If the candidates' totals were adjusted to reflect this vote theft, Ahmadinejad's 24.5 million vote total would drop to 21.5 million, within striking distance of a run-off election (19.6 million votes, 50% of the total), and Mousavi's total would jump to well over 16 million. In light of this shocking revelation, who could doubt that more misconduct would soon be uncovered? As if all of this were not bad enough, the Iranian government appeared to find nothing wrong with it – it was perfectly legal and "normal." A Guardian Council spokesman had shrugged off the government's massive fraud at another press conference, in an astonishing remark promptly reported in hundreds of stories around the world:

[T]he [opposition] candidates, who claim more than 100 percent of those eligible have cast their ballot in 80 to 170 cities, are not accurate – the incident has happened in only 50 cities...

In short, 3 million votes had been stolen from Mousavi and given to Ahmadinejad, and the Iranian government's reaction essentially had been "So what? Mousavi still falls short." Nearly as upsetting was the government's brazenness: holding press conferences to announce its own fraud.

In fact, the Iranian government had never conceded any voting errors as a result of "excess voting," nor that a single vote was missing – much less that Ahmadinejad had stolen 3 million votes from Mousavi. Nor was evidence of fraud reported for any of these 48 small cities. Vote-tossing and ballot-box stuffing had been rampant, according to Mousavi supporters, but apparently no one could remember who had done it, or where, or how. Many people had voted multiple times, but not a single example was cited. Not one of Mousavi's thousands of polling-station observers stepped forward to claim that misconduct had occurred at his polling station. These claims of vote theft, ballot-box stuffing and multiple-voting appear to have had nothing at their base but fertile imagination and ignorance (or ignoring) of Iran's "vote-anywhere" rule.

Complaint: Results Reported By Local Polling Stations Were Altered By Election Officials In Tehran

Mousavi contended that vote counts reported by polling stations were altered by the Interior Ministry in Tehran. The vote tabulation allegedly took place in locked rooms from which opposition representatives were barred. The Guardian Council denied this, and claimed that "many of [the candidates' observers] left their desks [at election headquarters] at 6 AM on [the morning after the election]." As will become clear, it is not necessary to resolve this disagreement.

Most of these "locked-room" allegations were made by persons who appeared to believe, mistakenly, that the Interior Ministry counts ballots in Tehran. Ballots are counted only at the polling stations, by local election officials, with many observers looking on (see above). The Interior Ministry's task is only to tabulate these field counts and generate county-level, province-level and national-level election reports. Even so, a risk of fraud exists. If one assumes these Interior Ministry officials were mere cat's paws of Ahmadinejad, as many Mousavi supporters insisted, they might have altered the field reports, producing "official" results that showed Ahmadinejad with a majority of the

votes (or even 62.6%, as was reported). This is precisely what Mousavi and many others alleged. Some Mousavi aides asserted that **no votes at all** were counted. Dr. Ali Ansari agreed: "I don't think they actually counted the votes, though that's **hard to prove**." Hundreds of other commentators made similar statements.

Ironically, any such mischief would be a blessing in disguise for Mousavi – an opportunity to prove his case. For the first time ever, Interior Ministry officials in the 2009 election reported a per-candidate vote count for every ballot box (see note 1). This simplified Mousavi's task. He needed merely to show that a ballot-box count reported by the Interior Ministry did not match the Form 22 ballot-box count witnessed by a Mousavi observer. The following passage, and the two paragraphs that follow it, make clear how the ballot-box-level reports issued in the 2009 election made it easy to detect vote-counting fraud:

Counting process. The two-stage counting process presents perhaps the most troubling aspect of [Iranian] elections. At each polling station, after the end of voting hours, the votes are counted and recorded on Form 22 in the presence of representatives from the candidates, the Interior Ministry, and the Guardian Council. These forms are secret, however; the results are not announced to the press or released to the candidates. Instead, in the second stage of the counting process, the forms are sent to the Interior Ministry, where the votes are tallied and published on Form 28, which reports the votes by province or county. But because there is no supervision of the preparation, there is no way to compare Form 28 to Form 22. In other words, it is possible for agents from the Guardian Council or the Interior Ministry to change the vote totals before announcing them.

This possibility had existed for every Iranian presidential election before 2009. Once the Form 22 information from a particular polling station had been reported to the Interior Ministry, it would become a small component of regional totals later reported on a Form 28. There would be no way to verify a Form 28 because the hundreds of Form 22's that had been summed up to yield its reported totals would not have been published and candidates' representatives would not have monitored the Interior Ministry's tabulation

process. A candidate's election-day observer would know only the vote count reported by his own polling station.

This changed in the 2009 presidential election. The Interior Ministry added a crucial detail to its report. Instead of reporting only county-level and province-level totals, it also reported the vote count for each ballot-box – the very same vote-count number reported on a Form 22 (see note 1). For the first time, it was possible, and quite easy, to challenge any ballot-box count: just compare the Form 22 field count with the Interior Ministry's official count.

The Guardian Council claims that it asked Mousavi "time and time again to provide the council with any evidence or examples about the discrepancy" in ballot-box counts, but that "no documents or evidence were received." Mousavi has not disputed this, nor has he ever cited a discrepancy for any of the 45,692 ballot boxes. Even if thousands of his would-be observers were improperly turned away, as Mousavi insists (see next section), tens of thousands of them observed election-day activities at polling stations all across Iran and indicated their approval of the reported result – either by signing the Form 22 or, at least, by failing to dispute the vote count reported on the Form 22. The Guardian Council claims to have "written evidence" of these approvals which "if necessary can be given to the media to inform the public," though it has not specified the nature or extent of its "written evidence." Mousavi has not asked that any written evidence be released.

Since the necessary data have long been available to compare ballot-box counts, only two explanations for Mousavi's silence come to mind: either no such discrepancy exists, or no one has bothered to check. To exclude the second possibility, someone should make these comparisons now – ideally for every ballot box, but at least for several thousand chosen to yield a valid statistical sample. If all tested ballot-box counts match, it will follow that vote-count fraud was not committed either by the Interior Ministry or at any polling station where a Mousavi representative observed the vote count and did not dispute the reported result. This would leave only the possibility that vote counts were falsified at "unobserved" polling stations, which can be determined by comparing "unobserved" with similar "observed" ballot boxes as discussed in the next section.

All of this begs a question, of course: Haven't these ballot-box comparisons already been made? When the Interior Ministry released its official ballot-box-level reports, was there a single polling-station observer in all of Iran who did not immediately compare his copy of the Form 22 for his polling station with the Interior Ministry's count for the same ballot box? And if the two counts did not match, is there a single Mousavi observer who would not have reported the discrepancy immediately? One is tempted to answer "no" to both questions.

Finally on this point, might some of Mousavi's polling station observers have been deceived by Ahmadinejad's vote-riggers? Though this possibility cannot be dismissed entirely, it seems unlikely and Mousavi has not identified any polling station where this allegedly occurred. A typical polling station observer is smart, zealous, alert and well-trained to spot signs of polling-station fraud – that is his only reason for being there, after all. Nor can it be said that some types of polling-station fraud are undetectable even by the best of observers. The activities carried on at a polling station are not complicated or difficult to monitor. Absent at least an allegation that an observer was deceived, his approval of a field count should be considered sufficient evidence that the count was correct.

Complaint: Mousavi's Observers Were Barred At Many Polling Stations

Election rules required that each observer be registered several days in advance so that he could be issued a [special ID card](#) for presentation on election day. The Interior Ministry had [established a website](#) for this purpose, and each candidate had registered thousands of observers – 40,676 for Mousavi, 33,058 for Ahmadinejad, 13,506 for Karroubi and 5,421 for Rezai. Mousavi had filed applications for 5,016 additional ID cards, so that he would have an observer for each of the 45,692 polling stations in Iran ($40,676 + 5,016 = 45,692$). The Guardian Council did not issue ID cards for these additional Mousavi representatives because, [it claimed](#), Mousavi had failed to submit required documentation even though the deadline had been extended for him. It is not necessary to resolve this disagreement. For reasons explained at the end of this section, the vote counts at these 5,016 "unobserved" polling stations should be considered

suspect and specially tested for fraud, initially by comparing them with vote counts at comparable "observed" polling stations.

On election day, [none](#) of Mousavi's registered observers complained that he had been barred from watching when ballot boxes were sealed in the morning. Three days later, Mousavi alleged this had occurred in many places, though he did not specify where (then or later). The Guardian Council speculated that some Mousavi observers may have missed the sealing because many had [arrived late](#), often "one or two hours" after the polling station had opened. Election officials were not required to keep voters waiting until Mousavi's observers arrived, and they had not. Once again, it is unnecessary to resolve this disagreement.

Mousavi identified 73 representatives who had been turned away from polling stations. The Guardian Council investigated and confirmed this, but pointed out that none of the 73 individuals had been registered. It added that "there has been [no report of any problem](#) for those representatives who had ID cards." Mousavi did not dispute either contention. The Guardian Council did confirm that five registered observers had been ejected from polling stations for alleged violations of election rules, though its report does not indicate whom they had represented.

Next, Mousavi complained that his observers had [not been permitted to accompany](#) many of the 14,294 mobile polling stations (usually a small truck or automobile) that, as in previous elections, had traveled to small villages, rural areas, hospitals, prisons and other places where people found it impossible or inconvenient to vote at a fixed-location polling station. Mousavi did not specify (then or later) where this had occurred, or how many times. Yet again, for the reasons explained below, it is unnecessary to resolve this complaint.

Finally, some analysts complained, in effect, that Mousavi's representatives were barred from observing even after the election, because "the authorities refused to release the actual ballot boxes."⁹ It is not clear what "release" means here. Under Iran's election

⁹ See, Ansari, Ali, "Urban Myths revisited: the Iranian Presidential Election of 2009," unpublished manuscript received by this author on May 31, 2010 (May 31, 2010).

laws, when a field count is complete, the ballot box is resealed and turned over to a local election official for safekeeping for a prescribed period of time. No ballot box is ever "released" to a candidate (or anyone else) for private examination, for the obvious reason that tampering could occur. In some elections, some or all sealed ballot boxes are re-opened in the presence of election officials and candidates' representatives, and the ballots inside are recounted. An extensive partial recount occurred in the 2009 election, for example: eight days after the election, thousands of sealed ballot boxes were reopened and millions of ballots were **recounted** – approximately 10% of the total votes. The Guardian Council had declared that all ballots must be recounted if the 10% recount revealed a significant discrepancy from the election-day count, but the **discrepancy was slight**. Thousands of video cameras taped the recounts and all candidates were invited to send observers. Rezai sent hundreds; Mousavi and Karroubi declined to send any. Mousavi **objected to any recount**, whether partial or full, insisting that the election must be nullified and done over.

Although Mousavi made few specific complaints about excluded observers, some supporters later made sweeping allegations. Two months after the election, Ali Reza Beheshti, a top Mousavi aide, **insisted** that only 25,000 Mousavi observers had been issued ID cards, not 40,676. It has not been possible to investigate this allegation because Mr. Beheshti has neither disclosed his shorter list nor disputed any particular name on the Interior Ministry's much-longer list. Mr. Beheshti also alleged that many registered Mousavi observers were barred from entering their assigned polling stations, or later were obstructed or asked to leave. He did not explain why Mousavi had not complained on election day about the exclusion or obstruction of any registered observer, nor did he identify any excluded observer when he made this allegation.

Many Mousavi supporters have argued that Mousavi should not be expected to identify excluded observers or the polling stations that excluded them. An observer and his family might be punished if he were to claim that he was barred or witnessed fraud. Under this argument, at any polling station for which the Interior Ministry cannot produce a Form 22 signed by a registered Mousavi observer, the vote count must be considered invalid – even if the Form 22 was signed by observers for all other opposition candidates (Karroubi and Rezai had 18,927 registered observers).

If a Form 22 lacks the signature of a Mousavi observer (as many of the 45,692 Form 22s undoubtedly do) many explanations are possible – some innocent, others not. Perhaps the observer was arrested on election morning. Or someone may have beaten him, or threatened him or his family, or bribed him. He may have been improperly turned away at his polling station. Perhaps he was allowed to enter but was unfairly ordered to leave, or was blocked from observing. Possibly he witnessed fraud. Despite his broad allegations of wrongdoing, Mousavi has not identified a single registered observer who experienced any such form of mistreatment on election day, or any other form. Nonetheless, many of his supporters now argue that the Interior Ministry must prove that none of this occurred at a polling station, or else the votes cast at that polling station may not be counted.

Many innocent explanations come to mind for the absence of a signature on a Form 22. The Mousavi observer may have fallen ill or had a family emergency, or decided to depend on other candidates' observers to watch for fraud. He may have learned that the local election officials were staunch Mousavi supporters. Perhaps the observer was present all day and saw no wrongdoing, but forgot to sign the Form 22. Maybe he witnessed no fraud but was reluctant to sign because he had daydreamed, or even fallen asleep, for part of the day. Maybe he refused to sign simply because he did not want to validate Ahmadinejad's election. Any one of these reasons, or many others, could explain an unsigned Form 22 at a particular polling station. Mousavi's observers inevitably would need to supply details.

So why not start with that? It is impossible to evaluate Mousavi's allegations of misconduct if he refuses to supply details. One who claims electoral fraud is expected to specify who, what, where, when – not merely allege that many wrongs were done to many people in many places at many times, and then insist that the government prove that none of these wrongs was done to anyone, anywhere, at any time. A responsible government must establish fair election procedures and make it possible, without difficulty, for its citizens to verify that the procedures have been followed. If the government does not, a challenger may rightfully complain even if he has no concrete

proof of electoral fraud. But if the government has satisfied this obligation, as Iran's government did in the 2009 election,¹⁰ the burden fairly shifts to those who allege fraud. They must examine the available information and specify improprieties so that their charges can be investigated. At which polling stations was Mousavi's registered observer barred from watching the ballot-box sealing, or turned away entirely, or ejected or obstructed after he arrived? At which polling stations did Mousavi's representative refuse to approve the count because he believed it was incorrect or had witnessed fraud? Which mobile polling stations were Mousavi's designated observers not allowed to accompany? If Mousavi's complaints are valid, he must have all of this information readily available. To start, he might simply compare his list of 25,000 Mousavi observers to the Interior Ministry's list of 40,676 Mousavi observers – identify the 15,000 missing names so that, for example, other observers at those polling stations can be asked whether they remember seeing Mousavi's observers on election day.

Ironically, though Mousavi should supply evidence to support his allegations of fraud, it may be sufficient initially to require no evidence at all – to classify as "unobserved" every polling station at which a Mousavi observer did not sign a Form 22, regardless of the reason. This "unobserved" category would include each of the 5,016 polling stations for which Mousavi's proposed observer was not issued an ID card, and might include hundreds or thousands of others. Presumably Mousavi's staff already knows all polling stations in this "unobserved" category, or can quickly identify them by contacting his election-day observers. If so, Mousavi's unresolved "excluded observer" complaints provide him yet another opportunity to make his case. **If Ahmadinejad's percentages were substantially higher at "unobserved" polling stations than at comparable "observed" polling stations, most neutral analysts would be suspicious.** Although no two polling stations served statistically identical populations, statisticians should be able to identify sets of roughly comparable "unobserved" and "observed" polling stations, and

¹⁰ See the section above entitled "Complaint: There Were More Votes Than Voters in Some Areas" for a detailed description of Iran's election-day procedures for verifying voters' identities, voting, vote-counting and count-reporting, including the observation rights granted to each candidate throughout the process. See also the section above entitled "Complaint: Results Reported by Local Polling Stations Were Altered by Election Officials in Tehran" for a detailed description of how a candidate may verify that a field count reported by a polling station has not been altered by the Interior Ministry in Tehran.

then compare the Ahmadinejad/Mousavi percentages. Mousavi himself could start the inquiry with a rough spreadsheet comparison: compare Ahmadinejad's and Mousavi's percentages at all "unobserved" polling stations to their percentages at all "observed" polling stations. Once each polling station has been designated as "unobserved" or "observed," such a rough comparison could be made in a matter of seconds. A more systematic comparison could be performed if any sign of fraud should appear.

Complaint: Many Candidates Had Unfairly Been Declared Ineligible

Some commentators complained that many candidates had unfairly been declared ineligible by Iran's Guardian Council and, therefore, Ahmadinejad's election could not be considered valid. A prominent *New York Times* columnist, Thomas Friedman, believed this was reason enough to dismiss the election even before it had taken place.

This may have been a valid complaint for the excluded candidates, and it reflects a shortcoming of Iranian democracy.¹¹ But did it affect Mousavi? Obviously he made the list, and the exclusion of other reform candidates probably improved his chances. This may explain why Mousavi himself did not raise this point until after the election. One must wonder whether he would have raised it if he had won.

Though unfiltered democracy plainly calls for it, it is not clear that an election with many candidates will always reveal the voters' will. During the 2008 US presidential campaign, John McCain once joked that he would be overjoyed if the Democratic Party found itself unable to choose between Hillary Clinton and Barrack Obama. In different circumstances, other US presidential candidates may have privately wished for the opposite. One wonders, for example, whether Al Gore in 2000 might have been willing to set aside his unquestioned love of democracy for just a day in order to exclude Ralph Nader from the Florida ballot.

Insistence that the Guardian Council should have approved more reform candidates brings to mind the old saying: "Be careful what you ask for." In the 2005 presidential

¹¹ Some argue that the American system of choosing candidates has flaws of its own, since it emphasizes one's ability to attract massive funding and the support of one of just two political parties. Whatever its faults, Iran's system has yielded between 3 and 10 candidates for each presidential election.

election, the Guardian Council had rejected two reform candidates, Mohsen Mehralizadeh and Mostafa Moeen, an action roundly criticized in the Western press and in a strongly worded [public letter](#) from Iran's Supreme Leader. The Guardian Council reversed its decision the next day, increasing the number of approved candidates from five to seven. The three reform candidates in that election – Mehralizadeh, Moeen and Mehdi Karroubi – shared 36% of the vote, led by Karroubi's 17%. Because no candidate had received a majority, a run-off election was held between the two top vote-getters: Hashemi Rafsanjani (21%), and Mahmoud Ahmadinejad (19%). Many reformist supporters stayed home.

Complaint: Voter Turnout and Ahmadinejad's Percentages Showed Suspicious Uniformity

Some Mousavi supporters argued that the reduced variation in voter turnout across provinces indicated fraud. This charge was statistical gimmickry, made possible by a 35% surge in voter turnout:

The [Chatham House Preliminary Analysis] claims that the fact that the variation in participation across provinces has dropped is evidence of fraud. Anyone familiar with elementary statistics knows that the standard deviation of any variable limited to 100% from above would drop as its mean increases. (At the limit, when the mean is 100%, the [standard deviation] would be zero!) So, because the participation rate increased by about 35%, it is [hardly surprising](#) that the [standard deviation] fell by 23%.

In addition, while the provincial range had narrowed for the reason this writer explains, it nevertheless remained quite wide: from [63% to 99%](#).

Many other Mousavi supporters added a variation of this "uniform turnout" argument, asserting that Ahmadinejad's vote totals showed a suspicious uniformity across provinces:

I continue to find these figures unlikely. There is very little variation in Ahmadinejad's numbers across provinces, except in two cases. In past elections the numbers have been [all over the place](#).

A *Time* magazine writer was **no less perplexed**:

Support for Ahmadinejad was strangely consistent across the country, a real change from previous elections, when candidates drew different levels of support in different regions.

This claim was not supported at all by the vote count. Ahmadinejad's provincial percentages ranged widely in 2009, from a low of 44% to a high of 77% (see note 1) – the same spread as his 40-73% range in 2005. Nor was the 2005-to-2009 swing in Ahmadinejad's percentages uniform across provinces: it varied **from -13% to +35%**.

One also wonders what figures this *Time* writer had in mind when he wrote that "Ahmadinejad squeaked into the presidency in a second round of voting [in 2005]...If the results this time are legitimate, it means two-thirds of Iran's voters have become more conservative over the past four years." Ahmadinejad had "squeaked into" the winner's circle with over 61% of the vote in 2005, 22% more than Hashemi Rafsanjani and less than one point below his percentage in 2009 – hardly support for the suspicious trend this *Time* writer claims to have spotted.

Another writer claimed to see suspicious uniformity in Ahmadinejad's performance across economic and ethnic lines: "The 98 percent correlation in Ahmadinejad's vote across areas of vast economic and ethnic diversity is inconceivable." The writer cited no authority, and one cannot imagine what might support such an extreme claim. Ahmadinejad won only 34% of the vote in the affluent north Tehran suburb of Shemiran, for example, but 72% in the working-class south Tehran districts of Pakdasht and Islamshahr (see note 1). Eighty percent of the districts won by Mousavi (38 out of 46) were populated predominantly by **non-Persian minorities**, while Ahmadinejad did best in heavily Persian provinces.¹² Ahmadinejad polled well nearly everywhere, but economic and ethnic variations nevertheless remained.

¹² For example, Ahmadinejad's percentage was 70%+ in Qom, Fars, Markazi, Chaharmahal, Kerman, Semnan, and all three Khorosan provinces. See, Interior Ministry Report, at sources cited in note 1.

Another "statistical" allegation was made by several analysts: "How is it that Mr. Ahmadinejad's margin of victory remained constant throughout the ballot count?"¹³

There are several answers, the first being the simplest: it didn't. When Iran's official news agency first announced Ahmadinejad's apparent victory on election night (in response to Mousavi's premature "victory" announcement – see below) it reported that Ahmadinejad had received 69% of the 5 million votes counted so far – a percentage that gradually dropped to less than 63% as additional batches of approximately 5 million votes each were reported at roughly 90-minute intervals throughout the night.¹⁴ As the number of reported votes increased, the candidates' overall percentages naturally were affected less and less by each additional batch. Some analysts found it suspicious that batch percentages did not vary substantially from one to the next, but that was hardly surprising since each batch consisted of vote counts from thousands of polling stations. A few commentators alleged that the reported result for each polling station was very close to Ahmadinejad's 62.6% final percentage, but those allegations were baseless: the Interior Ministry did not report individual polling station results until several days later. When it did, a cursory examination of ballot box reports would show this allegation had no merit. Ahmadinejad's percentages from different polling stations ranged from 0% to 100%, as did Mousavi's, in each case with many thousands of different percentages spanning the full range in between.¹⁵

¹³ See, Michael Slackman, June 22, 2009, at <http://www.nytimes.com/2009/06/23/world/middleeast/23iran.html>; Glenn Kessler, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/15/AR2009061503235.html>.

¹⁴ See, Ansari, Ali, "Urban Myths revisited: the Iranian Presidential Election of 2009," unpublished manuscript received by this author on May 31, 2010 (May 31, 2010).

¹⁵ See, Interior Ministry Report, at sources cited in note 1. For a statistician's more detailed criticism of this allegation, see, Nate Silver, June 12, 2009, at <http://www.fivethirtyeight.com/2009/06/statistical-evidence-does-not-prove.html>.

Complaint: The Result Is Not Plausible Because It Conflicts Sharply With Many Predictions and Post-Election Analyses

Many Western analysts¹⁶ had assumed that the anticipated sharp increase in voter turnout boded well for Mousavi. This assumption reflected several others, including the widespread belief that many voters had sat out the 2005 run-off election to express their dissatisfaction with both candidates, Ahmadinejad and Hashemi Rafsanjani. That assumption, in turn, was based on a belief held even longer by many analysts: the high percentage vote for Mohammad Khatami in 1997 (69%), and his even stronger showing in 2001 (78%), reflected a "liberal inevitability" in Iran, the eventual opening of Iranian society that would occur once another candidate appeared who deserved the support of this vast but dormant voting bloc. Mousavi appeared to be that candidate. Many analysts also assumed that those who had voted for Mehdi Karroubi and other reform candidates in the first-round 2005 election would vote this time for either Karroubi or Mousavi. Finally, many analysts considered it a myth that Ahmadinejad was strongly supported by rural voters. After all, many rural voters had supported Khatami in 1997 and 2001, and Karroubi in 2005.

The short answer to these chagrined analysts is that none of this matters any longer. The only question now is whether Ahmadinejad won the election fairly – not why Iran's voters failed to behave as predicted. It is not enough to say, as these analysts essentially do: "The election result was so different from what I'd expected that no explanation other than fraud comes to mind. Therefore, the government must prove that fraud did not occur." The burden of proof ultimately is on those who claim fraud, not on those who deny it. Few would insist on enough evidence to make a major dent in Ahmadinejad's 11 million vote margin – just something beyond disappointment, suspicion, rumor and conjecture. If hundreds or thousands of ballot boxes were stuffed,

¹⁶ Though many Western journalists visited Iran shortly before the 2009 election, many of them cited as sources, and still do, Iranian expatriates living in the United States and Western Europe. This reliance is understandable, since few Western journalists read, write or speak Persian. It is worth noting that 82% of Iranians living in these countries voted for Mousavi; only 12% voted for Ahmadinejad. See, Szrom Expatriate, at <http://www.irantracker.org/analysis/2009-iranian-presidential-election-expatriate-and-foreign-voting-results>.

surely someone can identify at least one. Which polling stations forced voters to use "false pens" with disappearing ink? Where, exactly, were ballot boxes left unsealed and open? If any of Mousavi's on-site observers noticed any of this, why did none of them report it?

Nearly all published reports of election-rigging activities have come from unnamed individuals, whose faces one never sees, recounting serious misconduct by unnamed individuals at unidentified places at unspecified times. Even when allegations are made by defectors who have burned their bridges behind them, they have not identified the wrongdoers or offered other evidence, and sometimes stop claiming fraud altogether.¹⁷ Many reports are so detailed that one can scarcely imagine they could have been fabricated, but the vivid details invariably fail to include any information that would permit the story to be verified.¹⁸

¹⁷ In a March 19, 2010 interview with the *Wall Street Journal* (available at <http://planet-iran.com/index.php/news/12779>), a defecting Iranian diplomat, Mohammad Reza Heidari, claimed that unnamed "superiors" had pressured him to falsify the vote count at Iran's Oslo embassy polling station. See, also, Warrick, Joby and Miller, Greg, "Iranian technocrats, disillusioned with government, offer wealth of intelligence to U.S.," *Washington Post*, at <http://www.washingtonpost.com/wp-dyn/content/article/2010/04/24/AR2010042402710.html> (April 25, 2010). In another interview five weeks later, however, Mr. Heidari did not even mention this serious charge when he described his election-day activities: "On election day, I was in charge of the ballot box at the [Oslo, Norway] embassy and I never thought this was going to happen. Large numbers of Iranian expats voted in the election and Mousavi won in our precinct. Then the government in Iran reacted violently to people inside the country who were asking that their votes to be counted. These horrific scenes and seeing for ourselves the government killing our youth on the streets made me resign my post [seven months later]." See, InsideIran.org, "Q&A: Mohammad Reza Heidari on why diplomats like himself and other Iranian government officials are now opposed to the state," *InsideIran.org*, at <http://www.insideiran.org/featured/qa-mohammad-reza-heidari-on-why-diplomats-like-himself-and-other-iranian-government-officials-are-now-opposed-to-the-state/> (April 28, 2010).

¹⁸ See, Hilsom, Lindsey, "Interviewing a Former Iranian Basij Militia Member," *Channel 4 News – World News Blog*, at <http://blogs.channel4.com/snowblog/2009/12/16/interviewing-a-former-iranian-basij-militia-member/> (December 16, 2009). The unidentified interviewee describes blatant voter fraud in an unnamed Iranian town, aimed at carrying out the Supreme Leader's directive that Ahmadinejad be re-elected. He recalls the detailed orders given to him and other (unidentified) Basij militiamen by an unidentified commander at an unidentified military base in an unspecified place. These included detailed instructions for counting votes. For example, he was ordered to throw away all ballots that had been cast by college students, since they were more likely to have voted for Mousavi. He did not explain how he determined whether a ballot had been cast by a college student, nor why he did not simply throw away votes for Mousavi regardless of who had cast them.

Why the 2009 election did not conform to analysts' expectations nevertheless deserves a longer answer as well. Several analysts argued that the strong support for Mohammad Khatami in 1997 and 2001 did not necessarily represent the voters' endorsement of his reformist agenda:

Mohammad Khatami was not swept to office in 1997 on a tide of liberalism or commitment to any ideological stance, but rather because he appeared to be an honest, charismatic anti-establishment figure and one untainted by official corruption. The fact that he was a black-turbaned seyed, a descendant of the Prophet Muhammad, and a disciple of the late father of the Islamic revolution, Ayatollah Khomeini, likely also played well with the religious masses. The personality and style of the candidate himself, and not merely his policy agenda, was the crucial factor in propelling Khatami to his landslide victory.¹⁹

By contrast, Mousavi had no clerical credentials, nor even a black turban. Fairly or not, both Mousavi and Karroubi also were tainted by charges of corruption. In his debate with Karroubi, Ahmadinejad charged that Karroubi had accepted bribes and suggested that his comparatively lavish life style may have been financed in less than honorable ways. Mousavi was tainted by his association with Hashemi Rafsanjani and his sons, about whom various charges of corruption had been widely circulated. An important reason for Mohammad Khatami's success in 1997 had been the perceived contrast between him and Rafsanjani, then the outgoing president, who even then was believed by many Iranians to be corrupt. Mousavi allied himself with the very same person from whom Khatami had carefully distinguished himself. While this alliance did not mean that Mousavi himself was corrupt, it greatly boosted Ahmadinejad's chances of being perceived as the corruption-free candidate. In a poll conducted on the day before the election, when respondents were asked which candidate was "more honest," Ahmadinejad led Mousavi by 31%.

¹⁹ See, Reza Esfandiari and Yousef Bozorgmehr, at <http://www.iranaffairs.com/files/iranian-election.pdf>; Abbas Barzegar, June 13, 2009, at <http://www.guardian.co.uk/commentisfree/2009/jun/13/iranian-election>.

In addition, more than a few voters may have questioned Mousavi's passion for the job, since he had largely dropped out of public life 20 years earlier and had devoted most of his time since then to artistic pursuits, becoming a well-regarded abstract painter in the process. While Mousavi supporters often cited his long absence from public life as proof of his above-the-fray political purity, undecided voters may have seen only a diffident man who had barely been coaxed away from his painter's easel just months earlier and now "mumbles and rushes through his speeches."

Nor was it safe to presume that voters who had supported reform candidates in the first-round 2005 election would vote for either Karroubi or Mousavi in 2009. Some analysts argued that Karroubi's success in 2005 was largely attributable to his promise to spread Iran's oil wealth among the people – a prospect that appealed to many rural voters who may or may not have supported Karroubi's reformist agenda. With this plank of his platform diminished in 2009 – in no small part because Ahmadinejad had appropriated it in the meantime – Karroubi was predictably less appealing to many rural voters, whose strong religious convictions might well have led them to Ahmadinejad rather than Mousavi.

Ahmadinejad helped poor and rural voters along this path by visiting nearly every district in the country at least once during his first term, and by spreading oil-funded governmental benefits even more far and wide – development projects in rural areas, cash and potatoes to impoverished farmers, low-interest loans to young married couples and small entrepreneurs, increased salaries for government workers, a law providing insurance to three million female rug weavers. This time-honored political practice probably induced many poor and rural voters to express their appreciation for Ahmadinejad on election day, in much larger numbers than most analysts had predicted.

Complaint: Ahmadinejad's High Percentage Was Not Believable, Especially in Cities and Opponents' Home Provinces

Numerous commentators wrote that it raises "red flags" or is "simply bizarre," or "makes no sense" and "seems odd" that so many Iranians could have voted for Ahmadinejad, especially in certain areas. "No one in their right mind can believe" the

results, said Grand Ayatollah Hossein [Ali Montazeri](#), one of Iran's most highly respected clerics (and a harsh critic of the government even before he had been passed over as Supreme Leader after the death of Imam Khomeini in 1989). Some analysts were [even more skeptical](#) because Ahmadinejad's reported percentage had been so high (62.6%). (Many might draw the opposite conclusion from this: vote-riggers who are said to have total control over the number might be safer to pick a lower percentage – not 50.01%, of course, but something in the range of, say, 54-55% would raise far fewer eyebrows than 62.6%.) The best expression of exasperation came from Farideh Farhi, an Iran analyst at the University of Hawaii, who said she ["simply, simply cannot believe"](#) this happened.

[Some pre-election polls had appeared to justify the optimism of Mousavi supporters.](#) In the first of eight pre-election voter surveys by University of Tehran pollsters, this one conducted between May 19 and May 21, Ahmadinejad had held an [overwhelming 44% lead](#) over Mousavi (63% to 19%). A [survey conducted by a Western polling organization](#) during the same time frame also indicated a solid (though smaller: 20%) Ahmadinejad lead. Both surveys, however, had been conducted before or just after the list of approved candidates was announced. By June 1, just half-way through the three-week election campaign, Mousavi had already narrowed the gap in the University of Tehran poll to a mere 9% (39% to 30%). [But his jubilant supporters failed to notice, or else refused to believe, that the trend then reversed – especially after the June 3 televised debate between the two candidates.](#) By June 11, Ahmadinejad's margin in the University of Tehran poll had widened to 30% (57% to 27%), slightly higher than his 29% margin later reported for the next day's election.

[Some skeptical analysts nevertheless felt that other pre-election polls had been more reliable.](#) Ms. Farhi, for example, believed the official vote count had been ["pulled out of a hat"](#) because it conflicted sharply with ["secret Iranian government polls"](#) disclosed [six days before the election by *Newsweek's* Mazier Bahari.](#) Those secret polls reportedly showed that Mousavi would receive 16-18 million votes to Ahmadinejad's 6-8 million – a 21 million vote difference from the vote count later reported by the Interior Ministry. Even ["a large majority of \[Iran's Revolutionary Guards\] also plan to vote for Mousavi,"](#) Bahari had reported – quite a surprise, [most analysts agreed](#), since that large group had been considered strong supporters of Ahmadinejad. Ahmadinejad's prospects appeared

so bleak even to himself, Bahari had added, that he had "gone into a crouch," had "barred staffers from talking to reporters," and was "doling out cash to those who attend his speeches, fueling inflation." Bahari's anonymously-sourced report of "secret Iranian government polls," and his comments, soon were cited by many other writers around the world.

The greatest skepticism focused on certain large cities and the home provinces of opposition candidates. Juan Cole found Ahmadinejad's majority in Tehran province "so unlikely as to raise real questions," even though Ahmadinejad had been the mayor of Tehran, had won the province by a 10% larger margin in 2005,²⁰ and had attracted larger crowds than Mousavi to his Tehran campaign rallies. Three days before the election, for example, Mousavi supporters formed a well-publicized "human chain" stretching across Tehran, estimated to include between 18,000 and "at least 100,000" people.²¹ Though it was mentioned in far fewer press accounts, a Tehran rally held for Ahmadinejad on the same day drew a crowd estimated at between 180,000 and 1,000,000 people.²²

And how, Professor Cole and others wondered,²³ did Ahmadinejad manage to do so well (56%) in East Azerbaijan, Mousavi's home province? One possibility: thanks to some election-year governmental largesse credited largely to Ahmadinejad, students at the provincial university in Tabriz now could obtain a college degree with courses taught

²⁰ See, Interior Ministry Report, at sources cited in note 1; Reza Esfandiari and Yousef Bozorgmehr, at <http://www.iranaffairs.com/files/iranian-election.pdf>.

²¹ See, BBC News, June 9, 2009, for low crowd estimate of 18,000 people, at http://www.bbc.co.uk/persian/iran/2009/06/090608_bd_ir88_green_chain.shtml; see, Abbas Barzegar, June 13, 2009, for high crowd estimate of "at least 100,000" people, at <http://www.guardian.co.uk/commentisfree/2009/jun/13/iranian-election>. Mr. Barzegar, who was in Tehran that day, is the source of the "high" estimate for both rallies (see note 22).

²² See, Al Jazeera, June 9, 2009, for low crowd estimate of 180,000 people, at <http://english.aljazeera.net/news/middleeast/2009/06/20096932010636766.html>; see, Abbas Barzegar, June 13, 2009, for high crowd estimate of 600,000 to 1,000,000 people, at <http://www.guardian.co.uk/commentisfree/2009/jun/13/iranian-election>. Mr. Barzegar, who was in Tehran that day, is the source of the "high" estimate for both rallies (see note 21).

²³ See, Juan Cole, June 13, 2009, at http://www.juancole.com/2009_06_01_juancole_archive.html, and Juan Cole, June 15, 2009, at <http://www.juancole.com/2009/06/provincial-election-returns.html>.

entirely in Azeri, their native language – which Ahmadinejad speaks, as he reminded voters during each of his several campaign visits, sometimes by quoting Azeri poetry.²⁴ Ahmadinejad probably had learned the Azeri language during the eight years he had spent as a **government official** in two Azeri-majority provinces. Another unfortunate coincidence may have diminished Mousavi's home-town advantage still further: the Supreme Leader (Ali Khamenei) is also an Azeri. And more: "Mousavi is not only from the same town as Khamenei, but according to locals is **actually related** to the Supreme Leader." Azeri voters probably had surmised that Khamenei favored the non-Azeri Ahmadinejad over Khamenei's fellow Azeri townsman and possible kinsman, Mousavi. At least some of those Azeri voters must have wondered whether they should too. In a **poll** taken three weeks before the election, Ahmadinejad held a 2-to-1 lead over Mousavi among Azeri voters (31% to 16%), though many voters remained undecided. Even with all this in his favor, Ahmadinejad's percentage in East Azerbaijan was nearly 12% lower than it had been in 2005.²⁵

Skepticism ran just as high in the home province of Mehdi Karroubi. He described his dismal showing in Lorestan as "so ridiculous and so unbelievable that one cannot write or talk about it." Karroubi's frustration and suspicion were understandable. His nationwide vote total (330,183) was a small fraction of what he had received in 2005 (5,070,114). A possible explanation: Karroubi was a legitimate contender in 2005, a predictably **wasted vote** in 2009. For this very reason, Mousavi backers had strongly encouraged supporters of Karroubi and Rezai to vote instead for Mousavi (though Rezai voters were more likely to switch to Ahmadinejad). Their poor showings may reflect the success of that effort. Another possibility: Lorestan voters simply preferred Ahmadinejad. He'd won 50% of their votes in 2005, after all, and now he was the

²⁴ See, Robert Fisk, June 14, 2009, at <http://www.independent.co.uk/opinion/commentators/fisk/robert-fisk-iran-erupts-as-voters-back-the-democrator-1704810.html>; Flynt Leverett and Hillary Mann Leverett, June 15, 2009, at http://www.newamerica.net/publications/articles/2009/ahmadinejad_won_get_over_it_14722.

²⁵ See, Interior Ministry Report, at sources cited in note 1. See, also, Reza Esfandiari and Yousef Bozorgmehr, at <http://www.iranaffairs.com/files/iranian-election.pdf>.

incumbent as well: every president of Iran who has run for re-election has won, always in a landslide.²⁶

Complaint: The Announcement of Ahmadinejad's Victory Was Suspiciously Premature

Mousavi complained that the Interior Ministry declared Ahmadinejad's victory prematurely in the early morning after the election, long before the estimated 40 million ballots could have been counted.²⁷ Iran's official news agency had jumped the gun even more, announcing Ahmadinejad's victory on election night after only 5 million votes had been reported, showing Ahmadinejad with 69% of the vote.²⁸ According to Mousavi, these premature announcements proved the government had decided long ago that Ahmadinejad would be the "winner" no matter what the ballots might show. Mousavi found this especially irksome because, he said, an official had informed him on election night that he had won and should prepare himself accordingly. This may have been what persuaded Mousavi to announce his own "victory" on election night, before either of the government announcements. Mousavi's premature announcement predictably induced his ecstatic supporters to take to the streets in celebration, though their enthusiasm was soon dampened by the conflicting pre-announcement of Ahmadinejad's victory issued by Iran's official news agency.

This charge almost certainly has no merit. Most obvious, any election-riggers worth their salt would wait for the "cover" of a completed vote count before announcing that their preferred candidate had prevailed. Nor would they pointlessly ruffle the feathers of the pre-determined loser by misleading him to believe he had won. Most important, the timing of these announcements provided no support for Mousavi's key argument: that

²⁶ These include Khamenei in 1985 (86%), Rafsanjani in 1993 (63%), and Khatami in 2001 (78%).

²⁷ See, Warren Strobel, June 17, 2009, at <http://www.mcclatchydc.com/homepage/story/70269.html>; Glenn Kessler, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/15/AR2009061503235.html>.

²⁸ This election-evening announcement was made approximately two hours after most polling stations had closed (see, Roger Cohen, June 14, 2009, at <http://www.nytimes.com/2009/06/15/opinion/15iht-edcohen.html?ref=opinion>), though a few still remained open (some as late as 2 AM) to accommodate the record turnout (see, Guardian Council Report, at <http://www.iranaffairs.com/files/document.pdf>).

the premature announcement was proof of fraud because 40 million ballots could not have been counted so quickly. The Interior Ministry's job was not to count ballots (see above), but rather to tabulate the field counts reported by 45,692 polling stations, a far less time-consuming task. The field counts certainly could have been completed well before the morning announcement, and routinely had been in previous elections. After all, election-evening field counts were conducted simultaneously at 45,692 polling stations across Iran, in nearly all cases under the watchful eyes of opposition observers.

Complaint: Ongoing Protests and Brutal Repression Prove That Most Iranians Support Opposition

Although the opposition's pre-election rallies were carried out with little interference, police and militia cracked down very hard on post-election protesters, reportedly injuring many of them and killing several. The opposition described this response as both a brutal suppression of human rights and a tacit admission that the election had been stolen from Mousavi. The government claimed its harsh reaction was justified because the marchers had become violent after the election, setting fire to buildings and vehicles, throwing rocks, and beating police and militiamen. In short, protesters considered themselves the vanguard of true democracy, while the government considered them violent anti-democrats who could not accept that their candidate had lost a fair election.

Mousavi's supporters held several large protest rallies immediately after the election, and smaller but still sizable rallies during the last half of 2009. The December 21 funeral of Ayatollah Hossein Ali Montazeri, a highly respected cleric and often fierce critic of the government, served as a rallying point for the opposition. The year closed with a multi-day protest held during the Muslim holiday of Ashura, culminating with a large opposition rally on December 27, which was followed by a larger pro-government demonstration three days later. As had occurred before the election, Western press coverage focused narrowly on the opposition rally. According to a guest op-ed published a week later in the *New York Times*, opposition sources had estimated the December 27 protest crowd in the "tens of thousands" and other sources had estimated "2,000 to 4,000." A third source, said to be an opponent of Ahmadinejad, had estimated the

crowd at the December 30 pro-government rally at 1,000,000 people. The last of these estimates may have surprised readers, since most Western news accounts had reported a much smaller pro-government crowd. The most extreme example had appeared in a long article by Michael Slackman published by the *New York Times* on January 1, 2010. In an otherwise detailed account of the preceding five days' events, Mr. Slackman estimated the December 27 protest crowd at "tens of thousands," but did not even mention that a pro-government rally had occurred.

Nor did the Western press always report accurately the views of Iranians about the election and the protests that followed. Many writers relied heavily on Twitter feeds and similar input from computer-savvy Iranians. For example, Marc Ambinder, writing in *The Atlantic*, cautioned his readers not to "equate the size of one's twitter follower universe with authority," but promptly ignored his own advice: "I'd judge [this Twitter source] as reliable because none of the other twitterers are arguing with its conclusion, and there is some independent corroboration for some of what it has to say." Among other gory events, Ambinder's Twitter source reported "militia with ax, chopping ppl like meat," after which "they pull the dead into trucks – like factory." Other reports were less upsetting: "All shops was closed – nowhere to go," and "we lost internet." Though Ambinder did not mention which of these Twitter tweets had been corroborated, his readers may have feared the worst.

Other data suggest that many Iranians held different views of the election and the post-election protests. According to a poll taken shortly after the election, 76 percent of Iranian voters, including most of those who said they who had voted for Mousavi, believed that the election had been fair. This percentage rose to 83% in a second poll taken approximately two months later.²⁹ Many Iranians felt that opposition protesters

²⁹ WorldPublicOpinion.Org, February 3, 2010 (<http://www.worldpublicopinion.org/pipa/articles/brmiddleeastnafricara/652.php?nid=&id=&pnt=652&lb=>). Some have argued that government-supportive responses in these polls reflect the effectiveness of the government's brainwashing efforts or the respondents' fear of being punished for critical answers. But respondents' answers to several other questions were predictably unlikely to please government leaders – for example, most respondents (in the later WPO poll) said they were somewhat or very dissatisfied with Iran's current system of government; one in six even said the Supreme Leader had too much power and expressed a favorable view of the United States. (*WorldPublicOpinion.Org*, February 3, 2010).

were deliberately provocative at times, and that police and militia reactions were not excessive. For example, although most [Western news reports](#) criticized the Iranian government for its harsh response to the December 27 protest during Ashura, an important Muslim holiday, many Iranians instead [blamed the opposition](#) for having scheduled a protest rally during that important Muslim holiday. It was predictable, many Iranians felt, that the burning of police vehicles and chants of "Death to the Leader" would lead to violence. Contrary to the expectations of some opposition leaders, it may be that few neutral Iranians interpreted the government's harsh response as an effort to hide its own illegitimacy.

Complaint: Shutdown of Electronic Communications Prevented Opposition from Monitoring Election

Though reports differ greatly on the extent and duration, both sides acknowledge that various forms of electronic communication were shut down by the Iranian government on election day. The government attributed this to technical problems. Opposition candidates and their supporters argued, more persuasively, that the shut-down was intended to make it more difficult for them to coordinate election-day activities.

Whatever the reason, it is not clear that the communications shut-down had any material effect on election day. By law, campaigning had ended two days earlier. At the least, land-line telephones and all modes of transportation were operating normally throughout the day. Mousavi did not suggest that the shut-down had prevented any of his observers from reaching their polling stations, or from performing their duties while they were there. Get-out-the-vote efforts may have been hampered to some extent, but all candidates were probably affected much the same. In fact, since get-out-the-vote efforts usually focus on less-motivated voters, the communications shut-down may have harmed Ahmadinejad more than Mousavi.

Complaint: Statistical Analysis of Vote Counts Shows Fraud Occurred

Though several statistical challenges to the election result have been discussed above, some esoteric "digit frequency" analyses deserve a closer look. It happens that the digits 1 through 9 do not appear with equal frequency as the first significant digit in numbers

found in many (not all) real-life data sets. Instead, the lower the digit, the more likely it will appear as the first significant digit in such a number. The likely frequency of each digit can be calculated under what is known as [Benford's Law](#). If human tampering is suspected, sometimes this can be detected by comparing the first-digit frequency of 1 through 9 in the data with the frequency one would expect under Benford's Law. Benford's Law analysis can also ferret out computer-generated numbers. For example, under Benford's Law, the digit 1 would be expected to appear roughly 30% of the time as the first significant digit, far more often than it would appear in a randomly generated batch of numbers.

Several statisticians analyzed voting data from the 2009 Iran election under Benford's Law³⁰ and similar "digit frequency" statistical models.³¹ Based on his "first digit" Benford's Law analysis of county-level data,³² Professor Boudewijn Roukema concluded that the number of vote counts starting with 7 for Karroubi (who received less than 1% of the vote) was large enough to indicate that fraud had occurred. Ahmadinejad's county-level totals also struck Roukema as suspicious – too many 2's, not enough 1's. Professor Walter Mebane pointed out, however, that Benford's Law has not proved useful in many elections when one analyzes the first significant digit of a vote-count number. It nonetheless is useful, [Dr. Mebane believes](#), if one analyzes the second significant digit. He did so, analyzing both district-level data and ballot-box level data. Though he found nothing suspicious in the district-level data, Dr. Mebane concluded,

³⁰ See, Walter Mebane, June 29, 2009, at <http://www-personal.umich.edu/~wmebane/note19jun2009.pdf>; Benjamin Roukema, June 16, 2009, at <http://arxiv.org/abs/0906.2789>.

³¹ See, Bernd Beber and Alexandra Scacco, June 20, 2009, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/20/AR2009062000004.html?hpid=opinionsbox1>. See, also, Thomas Lotze (<http://thomaslotze.com/iran/index.php#Benford>); Walter Mebane, June 29, 2009, at <http://www-personal.umich.edu/~wmebane/note19jun2009.pdf>; Benjamin Roukema, June 16, 2009, at <http://arxiv.org/abs/0906.2789>; See, also, Reza Efsandiari and Yousef Bozorgmehr, at <http://www.iranaffairs.com/files/iranian-election.pdf>, at page 15, which includes a critical review of several "digit frequency" analyses. Lotze concludes that these statistical analyses do not support a finding of fraud.

³² Although Dr. Roukema (<http://arxiv.org/abs/0906.2789>) stated that he had analyzed "district-level" data, it is clear from the number of vote totals analyzed in his study that he instead had analyzed county-level data. This had no bearing on the validity of Dr. Roukema's results.

with "well beyond 99%" certainty, that the ballot-box counts for Ahmadinejad, Karroubi and Rezai showed suspicious distortions; Mousavi's did not. Professor Mebane believed that fraudulent vote counting was the most likely explanation for the suspicious Ahmadinejad results, though he stressed the need for additional information and further investigation before drawing any firm conclusions.

Less restrained than Professor Mebane were two other statisticians, Bernd Beber and Alexandra Scacco – then graduate students at Columbia University, now professors at New York University. They analyzed province-level data and focused on the final digit, and the final two digits, of each vote-count number.³³ Their conclusion, prominently displayed on the *Washington Post's* op-ed page: "a bet that the numbers are clean is a one in two-hundred **long shot**."

It is not difficult to invalidate the analyses of "digit frequency" statisticians who found Iran's 2009 election results to be suspicious, starting with Beber/Scacco. Essentially as they explain, if a person is asked to write down, say, 100 freely chosen five-digit numbers, certain combinations of the final two digits in those numbers are more likely than others – for "human" reasons that have nothing to do with statistical probability. For example, 23 is more likely than either 64 or 17 because "**people have trouble generating non-adjacent digits**." Therefore, if pairs of "adjacent digits"³⁴ appear

³³ Professor Mebane and others argue that Benford's Law analysis is not a useful predictor beyond the second significant digit of a number. See, Walter Mebane, June 29, 2009, at <http://www-personal.umich.edu/~wmebane/note19jun2009.pdf>; Walter Mebane, July 18, 2006, at <http://www.umich.edu/~wmebane/pm06.pdf>; Carter Center, February 25, 2005, at <http://www.cartercenter.org/news/documents/doc2023.html>. Nonetheless, the statistical probability of particular digits or digit pairs appearing at lower significant-digit positions can easily be calculated (see note 34). See, Bernd Beber and Alexandra Scacco, June 20, 2009, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/20/AR2009062000004.html?hpid=opinionsbox1>.

³⁴ Beber and Scacco define "adjacent digits" to include a pair consisting of the same digit twice (for example, 44). Under this definition, there are 29 "adjacent digit" pairs (29% of the 100 possible pairs). Beber and Scacco stated the odds at 30% in their *Washington Post* op-ed, which they presumably intended as an approximation. The probability of a particular single digit (0 through 9) appearing as the last digit of a number is exactly 10% (1 in 10). See, Bernd Beber and Alexandra Scacco, June 20, 2009, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/20/AR2009062000004.html?hpid=opinionsbox1>.

substantially more frequently than is statistically likely (29%), we may suspect that a human being has chosen the digit pairs. Similarly, if a particular single digit (0 through 9) appears as the final digit of a number substantially more or less frequently than 10% of the time, we may suspect that a human being has chosen the digit. Beber and Scacco looked at 116 numbers, vote totals for each of the 4 candidates in 29 provinces. They found that "adjacent digit" pairs appeared suspiciously often (38%), that 7 appeared suspiciously often as the final digit (17%), and that 5 appeared suspiciously infrequently (4%). They concluded, with 99.5% certainty, that the vote counts reported by Iran's Interior Ministry had been "manipulated."

But not one of those 116 numbers could possibly have had any "human" input. Each province-level total, after all, is merely the sum of all ballot-box totals in the province. Ballot-box totals are the basic elements of all higher-level totals: district, county, province, and nation. If the province-level total does not match the sum of its ballot-box totals, we indeed will suspect that "manipulation" occurred, but we will not need a statistician to tell us that. Simple arithmetic will do. If we instead assume that the would-be "manipulator" will be careful enough to make sure that each province-level total matches the sum of the province's ballot-box totals, he will have no choice when he writes down the province-level total. If the hundreds of ballot-box totals add up to a number that ends in 64 or 17, or some other unappealing pair of "non-adjacent digits," then that is what he must write down, however strong may be his subconscious urge to write down 23 or some other pleasing pair of "adjacent digits." The same is true for any other "aggregated" vote total, such as the county-level totals analyzed by Dr. Roukema and the district-level totals analyzed by Dr. Mebane.

Whether or not Beber/Scacco had recognized this fatal flaw, their 99.5% certainty of fraud plummeted sharply once they had reviewed county-level data: "After we wrote our op-ed using the province-level data, we've now also done some preliminary tests with the county-level data. In the latter dataset, the last digits **don't appear fraudulent.**" They also acknowledged that each province-level total matched the sum of its county-level totals, which left them no apparent basis for their earlier op-ed conclusion.

Despite this setback, and though they acknowledged that "this is just speculation," Beber and Scacco laid out a possible scenario that illuminates a slight overstatement two paragraphs above. The analysis there presumes that one starts with lower-level numbers (for example, county-level), aggregates them into higher-level numbers (province-level), and then statistically tests the higher-level numbers. It concludes that the higher-level numbers cannot have been manipulated because they are aggregated numbers. But what if one were to start by manipulating the top-level numbers and then work backwards to "harmonize" their lower-level components? Perhaps, Beber and Scacco speculate, Ahmadinejad's Interior Ministry henchmen decided on election night to "adjust" his province-level numbers. For one reason or another, they decided to give him five million votes more than he needed to avoid a run-off election, making the number-adjusters' task that much more daunting. These large adjustments would need to be spread over many provinces to minimize the risk of detection. For the same reason, each province's adjustments would need to be spread over many counties. Most of that county-level burden, though, would be borne by the first and second digits of vote-count numbers, where adjustments would have the greatest quantitative impact. The final two digits – the only digits that Beber and Scacco would look at – would need to be adjusted for only one county per province, just to fine-tune the sum, and a single-county adjustment was not detectable under the Beber/Scacco model.

The Interior Ministry's manipulators managed to stay under the Beber/Scacco radar when they adjusted county-level numbers. It appears they had more than a passing familiarity with the statistical model that Beber and Scacco would employ to check their work. Whether haste or hubris was to blame, however, the manipulators had failed to apply their impressive knowledge when adjusting the province-level numbers, and so Beber and Scacco had uncovered their plot before they even turned to the county-level adjustments. In addition, though Beber and Scacco do not mention this, the manipulators' number-doctoring chores had just begun. Once county-level numbers have been adjusted to harmonize them with doctored province-level numbers, district-level numbers must then be adjusted to harmonize them with the now-doctored county-level numbers, and then thousands of ballot-box numbers, in turn, must be adjusted to harmonize them with the new district-level numbers. This would require a great deal

more work, and pose a far greater risk of detection by Beber and Scacco or a sharp-eyed Benford's Law analyst. The prospects of this "working backwards" scenario may be brighter than they appear here, but Beber and Scacco do not explain why that is so.

But what about Professor Mebane's "second digit" analysis of ballot-box data under Benford's Law? He might argue that ballot-box counts reflect no aggregation that would eliminate the possibility of human tampering. Dr. Mebane concluded that divergences from Benford's Law were "insignificant" for Mousavi but "highly significant" for Ahmadinejad, Karroubi and Rezai. Other causes might explain the Karroubi and Rezai results, but he saw only one possible explanation for Ahmadinejad's suspicious results: fraudulent vote counts.

As explained above, a regional vote count cannot possibly have been "manipulated" if it matches the sum of its underlying ballot-box totals. For essentially the same reason, if we determine independently that ballots in a box were properly cast and counted, Benford's Law analysis can prove no more about that ballot-box count – nor about any data set that includes it – than it can prove about a regional vote count. Just as the latter number is an aggregate of ballot-box counts, a valid ballot-box count is merely the written-down sum of votes in the box, and so the ballot-box count cannot reflect human tampering. Dr. Mebane's ballot-box level tests cannot be considered meaningful, therefore, so long as his data include ballot-box counts whose validity has been independently established. If, as suggested above, we treat a ballot-box count as valid if a Mousavi observer approved it in writing (an "observed" ballot box), and conservatively classify all other ballot boxes as "unobserved," it might be useful for Dr. Mebane to conduct "second digit" Benford's Law tests exclusively on the "unobserved" ballot boxes. If the result appears suspicious, a more thorough investigation for fraud can be conducted, using non-statistical methods as Dr. Mebane himself recommends in such circumstances.

Professor Mebane found another significant correlation that does not involve Benford's Law analysis – a ballot-box-level correlation between (1) low invalid-ballot

percentages;³⁵ and (2) high Ahmadinejad vote percentages.³⁶ Although other commentators offer benign explanations for this correlation, some merit initially appears in Dr. Mebane's more skeptical view. First, if the vote-counters prefer Ahmadinejad and are not watched carefully enough by Mousavi's observer, they might count an ambiguous ballot, or even a plainly invalid ballot, as a vote for Ahmadinejad. This will have the dual effect of increasing Ahmadinejad's percentage and decreasing the invalid vote percentage, resulting in precisely the correlation Dr. Mebane detected. Second, an unusually low invalid-ballot percentage might mean that ballots were added for Ahmadinejad. Ballot-box stuffers rarely recognize the need to add some invalid ballots as well, and so the invalid-vote percentage drops as fraudulent but "valid" ballots for the favored candidate are stuffed into the box.

The response should be familiar: vote counters indeed were watched closely by Mousavi representatives, or so they represented by witnessing the field counts and not disputing the reported results. The miscounting of invalid ballots or the addition of ballots for Ahmadinejad, especially on the grand scale necessary to make a difference in the 2009 election, almost certainly would have been detected. Disputes over questionable ballots are often the most hotly contested matters in the vote validation and count process, an otherwise dull chore. It is unlikely that a Mousavi observer will have approved a vote count if he believed that more than a few, if any, invalid ballots had been counted as Ahmadinejad votes, or if he suspected that the ballot box had been stuffed while he was not watching.

³⁵ Invalid ballots generally include all those on which the voter's intent to vote for a particular candidate cannot be determined. They include, for example, ballots that are blank, that have an indistinct mark for a candidate, that include votes for multiple candidates, on which a vote has been scratched out or erased, or which are physically spoiled.

³⁶ See, Walter Mebane, June 29, 2009, at <http://www-personal.umich.edu/~wmebane/note19jun2009.pdf>, at Figure 2 and associated text. Dr. Mebane made a distinct argument based on a correlation between his "second digit" Benford's Law findings and the percentage of invalid ballots at a polling station (see, Walter Mebane, June 29, 2009, at <http://www-personal.umich.edu/~wmebane/note19jun2009.pdf>, at Figure 1 and associated text). It is not necessary to address that argument unless and until Dr. Mebane performs the separate Benford's Law tests on "unobserved" ballot boxes as discussed above. Nonetheless, to avoid confusion, the reader should note that this correlation is different from the correlation (discussed in this paragraph and below) that Dr. Mebane finds between low levels of invalid ballots and high vote percentages for Ahmadinejad.

Conclusion

No credible evidence published so far indicates that Ahmadinejad stole Iran's 2009 presidential election – or, for that matter, that any fraud at all occurred. The second point is important because many commentators have grudgingly accepted Ahmadinejad's legitimacy only because his margin was large enough that they believe he would have won even without cheating.³⁷ Nearly as telling, there appears to have been no serious effort by Mousavi or his supporters to find such evidence. Shortly after the election, Mousavi claimed in his newspaper (*Kaleme*) that 10 million people had voted without showing proper identification, but his complaint to the Guardian Council mentioned only 31 such voters. Widespread ballot-box stuffing was alleged, but not a single stuffed ballot box has been identified. Wholesale buying and selling of votes was alleged, but Mousavi has identified only four instances, in each case without any evidence. Thousands or millions of Mousavi votes were said to have been thrown away, replaced by thousands or millions of Ahmadinejad votes, but no one has identified any of the perpetrators, nor mentioned exactly where or how this was accomplished. Vote counts from the field, approved by tens of thousands of Mousavi's observers, were said to have been altered by the Interior Ministry in Tehran, but no one has identified a single ballot box where this occurred – even though the data have long been available to compare the counts for all 45,692 ballot boxes. The silence of Mousavi's polling station observers is especially deafening. Most or all of them may believe that electoral fraud occurred all over Iran, but apparently each is equally adamant that it did not occur where he spent election day.

Nor have independent critics maintained their initial enthusiasm. The Chatham House Preliminary Analysis never advanced beyond its self-described "preliminary" stage, despite the author's own suggestion that his brief analysis "be followed up should the

³⁷ Many post-election commentators presented the possibilities as massive fraud or minor fraud; the possibility of a fair election was not among the choices. See, for example, American Foreign Policy Project, "June 2009 Elections and After," *American Foreign Policy Project website*, at <http://www.americanforeignpolicy.org/who-rules-iran/june-2009-elections> (June 22, 2009): "We may never know for sure exactly what happened in Iran on June 12, 2009 - whether Ahmadinejad's victory was outright stolen or merely padded."

fully disaggregated 'by polling station' data be released during the ongoing dispute." Precisely that data was released just days later (see note 1), but no "follow up" has appeared. The response of nearly all pro-Mousavi analysts to the published ballot-box data has been largely the same: silence. Statisticians such as Roukema, Beber and Scacco appear to have ignored it entirely. Even the few who have examined ballot-box-level data – Professor Mebane, for example – have overlooked or ignored its real significance. For the first time ever in an Iranian presidential election, it was a simple matter to find evidence of vote-count fraud: just compare the Interior Ministry count with the field count approved by a Mousavi observer, for any ballot box or for all of them. It is fair to ask why no one has done this, or why they have not published their findings if they have.

Despite the absence of evidence – or perhaps because of it – Mousavi's demand has never changed: Don't investigate the election; just toss it out and do it over. One wonders how Americans would have reacted if Al Gore had demanded this in 2000. Mousavi has never explained what would happen if a second election were held and it yielded the same result. Would he demand another do-over, and then another, until Iran's voters get it right? Even his most ardent supporters eventually would insist on evidence. If eventually, why not now? It is not fair to the 24 million Iranians who appear to have voted for Ahmadinejad – nor is it democratic – for a government to "compromise" with a defeated candidate by nullifying an election without a sound basis for doing so. The loser has a right to complain about an unfair election, but the winner, and those who voted for him, have an equal right to insist that a valid election be respected. One side will always be disappointed with an election result – but that is democracy, not fraud. Fraud requires evidence, not merely surprise, disappointment and suspicion.

All of this matters outside Iran as well. One suspects that Western leaders acknowledge Ahmadinejad's legitimacy when they talk privately with their foreign counterparts, but many of them posture in public. Even those officials who have been comparatively restrained in their public statements on the election (US Secretary of State Hillary

Clinton, for example) welcome support from election-doubters for confrontational stances they take toward Iran on other grounds.³⁸ Most Western media outlets routinely refer to the election as tainted, and many writers insist that policy toward Iran must reflect this.³⁹ Those who disagree are often described as regime apologists, or naive at best. But they are merely accepting the election result. It is time others did too.

³⁸ See, for example, Mark Landler, February 15, 2010, at <http://www.nytimes.com/2010/02/16/world/middleeast/16diplo.html>, and Mark Landler, February 16, 2010, at <http://www.nytimes.com/2010/02/17/world/middleeast/17diplo.html?scp=7&sq=hillary%20dictatorship%20iran&st=cse>.

³⁹ See, for example, Robert Kagan, January 27, 2010, at <http://www.washingtonpost.com/wp-dyn/content/article/2010/01/26/AR2010012602122.html>; Richard Haass, January 22, 2010, at <http://www.newsweek.com/id/231991>; Alan Kuperman, December 23, 2009 (on-line publication date), at <http://www.nytimes.com/2009/12/24/opinion/24kuperman.html?scp=1&sq=kuperman&st=cse>; Daniel Pipes, February 2, 2010, at <http://article.nationalreview.com/423580/how-to-save-the-obama-presidency-bomb-iran/daniel-pipes>; John Bolton, July 2, 2009, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/01/AR2009070103020.html>; Max Boot, July 2, 2009, at <http://www.commentarymagazine.com/blogs/index.php/boot/72122>. See, also, each of the following, whose authors had concluded that harsh measures against Iran (bombing) were called for even before the 2009 election: Thomas McInerney, April 24, 2006, at <http://www.weeklystandard.com/Content/Public/Articles/000/000/012/101dorxa.asp>; Joshua Muravchik, November 19, 2006, at <http://articles.latimes.com/2006/nov/19/opinion/op-muravchik19>. Undoubtedly it pleased these writers to receive support from staunch anti-war advocates who normally oppose them instinctively. See, for example, Justin Raimondo, at <http://original.antiwar.com/justin/2009/06/21/iran's-green-revolution-made-in-america/>, and at <http://original.antiwar.com/justin/2009/06/14/irans-election-none-of-americas-business/>. The long-time webmaster of Antiwar.com was more strident in his denunciation of the 2009 Iran election than any other writer mentioned in this note, though he nonetheless emphasized that he "anticipate[s] with horror the prospect of war with Iran." One suspects these writers were grateful for Mr. Raimondo's fervent support of their position on the election, but were confident they could fashion a proper remedy without further assistance from him.

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in this article reflect a calculation of each ballot-box total: the sum of the four candidates' votes plus the invalid ballots. Difference between overall vote total stated in Interior Ministry Report and overall calculated vote total was not significant. Total votes in Interior Ministry Report varied slightly (.07%) from total votes reported by Interior Ministry on day after election (see, Ansari, Chatham House Preliminary Report (http://www.chathamhouse.org.uk/files/14234_iranelection0609.pdf), though in the case of Mohsen Rezai, the difference arguably was significant (albeit inconsequential, since Rezai received less than 2% of the vote): Ahmadinejad's vote total decreased by .02% in final Interior Ministry Report; Mousavi's total increased by .32%; Rezai's total decreased by 3.3%; Karroubi's total decreased by 1.0%; number of invalid ballots increased by 2.8%. Later Interior Ministry Report reflected June 20 recount of 10% of ballot boxes. Unless otherwise stated, all vote-count data cited in this article are based on Interior Ministry Report data, with calculated ballot-box totals as explained above.

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