October 28, 2013

To give us all a relief from postings about the latest outrage from this administration we're treated today with articles on aircraft carriers in some foreign navies, the advance of LED lighting, and the claim that cheating is the favorite pastime of America's favorite pastime.

A blog named <u>War is Boring</u> starts us off with <u>Your Aircraft Carrier Is A Piece of</u> <u>Crap</u>. First the post is about Russia's Admiral Kuznetsov, then two countries, India and China, who purchased decommissioned carriers from the Russians. The close is about Brazil's purchase of a French carrier.

The Admiral Kuznetsov, Russia's only aircraft carrier, was launched in 1985 and joined the fleet in 1991. Since then the 55,000-ton, fossil-fuel-powered flattop has managed just four frontline deployments—all of them to the Mediterranean, and all of them just a few months in duration.

By contrast, American flattops typically deploy for at least six months every two years. The nuclear-powered USS Enterprise, commissioned in 1962, completed 25 deployments before leaving service in 2012.

One of Admiral Kuznetsov's major problems is her powerplant. The vessel is powered by steam turbines and turbo-pressurized boilers that Defense Industry Daily generously described as "<u>defective</u>." Anticipating breakdowns, large ocean-going tugs accompany Admiral Kuznetsov whenever she deploys.

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Renamed Vikramaditya, the flattop was due to enter service in 2008. But the poorly-managed Russian shipyard was overwhelmed by the scale of the refit. The cost doubled and trials were bumped back to September 2012. And when the crew pushed the conventionally-powered ship to her theoretical top speed of 32 knots, her boilers overheated.

"India didn't want to use asbestos as heat protection for the boilers," <u>Defense Industry Daily</u> <u>explained.</u> <i>"Instead, the boilers' designer had to use firebrick ceramics. Which, as we see, didn't work so well. Especially on a ship that Russia put up for sale in 1994, after a **boiler room explosion**." Our emphasis. ...

... Not all shitty aircraft carriers are Russian. The U.K. and France have both sold to poorer navies decommissioned flattops that probably should have been permanently retired. In 2000 the Brazilian navy acquired the former Foch from Paris for \$12 million. ...

Next we're treated to parts of the <u>Wikipedia entry on the first Chinese carrier</u>. We have only the parts about the purchase and the 17,000 mile tow to China. ... In mid-2000, the Dutch International Transport Contractors <u>tugboat</u> Suhaili with a Filipino crew was hired to take Varyag under tow. Chong Lot could not get permission from <u>Turkey</u> to transit the dangerous <u>Bosphorus</u> strait; under the <u>Montreux Treaty</u> of 1936 Turkey has obligations to permit free passage, but has certain sovereignty and refusal rights. The hulk spent 16 months under commercial tow circling in the Black Sea. High-level PRC government ministers conducted negotiations in <u>Ankara</u> on Chong Lot's behalf, offering to allow Chinese tourists to visit cash-strapped Turkey if the travel agency's ship were allowed to pass through the straits. On November 1, 2001, Turkey finally relented from its position that the vessel posed too great of a danger to the <u>bridges</u> of <u>Istanbul</u>, and allowed the transit.

Varyag was escorted by twenty-seven vessels, including eleven tug boats and three pilot boats, and took six hours to transit the strait; most large ships take an hour and a half. The Russian press reported that sixteen pilots and 250 seamen were involved. At 11:45 a.m. on November 2, the hulk completed its passage and made for <u>Gallipoli</u> and <u>Qanakkale</u> at 5.8 knots (10.7 km/h; 6.7 mph). It passed through the <u>Dardanelles</u> without incident.

On November 3, Varyag was caught in a <u>force 9 gale</u> and broke adrift while passing the Greek island of <u>Skyros</u>. Sea rescue workers tried to re-capture the hulk, which was drifting toward the island of <u>Euboea</u>. The seven-member crew (three Russians, three Ukrainians and one Filipino) remained on board as six tugboats tried to reestablish their tow. After many failed attempts to reattach the lines, a Greek coast guard rescue helicopter landed on Varyag and picked up four of the seven crew. One tug managed to make a line fast to the ship later in the day, but high winds severely hampered efforts by two other tugs to secure the ship. On November 6, Aries Lima (reported as both Dutch and Portuguese), a sailor from the tug Haliva Champion, died after a fall while attempting to reattach the tow lines. On November 7, the hulk was taken back under tow and progress resumed at about three knots.

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<u>Craig Pirrong</u> reacts to the Chinese carrier in a post from last November. In the comments, (a reader) mentions the successful Chinese landing of a J-15 jet on its new aircraft carrier as evidence of China rising. It is an advance for China, definitely. But a baby step when you consider the complexity of carrier operations, especially at a true operational tempo, with 120 sorties (takeoffs and landing) per 12 hour flight day, sometimes surging to 190 per day. The ballet of the deck is an amazing-and amazingly dangerous-thing. Especially when you start doing it with live ammunition hanging from wings and waiting on deck, and especially when you do it day after day and crews become fatigued.

The US Navy has been doing this for close to a century. The accumulated experience and knowledge will take the Chinese a generation to match. (Only four navies-the US, Japan, the UK, and France have operated carriers in a serious way.)

And by the time China catches up with that, the US will have moved on. It is already moving on. For on virtually the same day China landed a manned jet on a carrier, the US loaded an X-47B Unmanned Aerial Vehicle onto the USS Harry Truman for flight testing:

So while China takes its first steps into the 20th century doing what the US (and the UK) first did in 1945-land a manned combat jet on a CV-the US is moving into the 21st by testing unmanned combat jet on a CV.

So who is really making history? And is a gap closing, or opening?

Pirrong's forecast of drone operations on a carrier has come about. <u>Gizmodo</u> has the story of landings and takeoffs from carriers. First launch was in was in May and the first landing was in July. At the end of the article we have some links to videos of the events.

It's not often that we get to witness aviation history being made, but when we do, it's often awesome. Such is the case with <u>the U.S. Navy's X-47B</u> which just became the first unmanned aircraft to land on an aircraft carrier.

Landing a drone on an aircraft carrier was not a cheap or easy task. The so-called "Salty Dog 502" has been in training to accomplish such a feat for years now, and the program has cost the government over \$1.4 billion. It won't spend anymore, because the Navy is retiring its two X-47B's and <u>sending them to Navy museums</u> in Florida and Maryland. The aircraft deserve nothing less than being enshrined. "Your grandchildren and great grandchildren, and mine, will be reading about this historic event in their history books," Rear Admiral Mat Winter told the press ahead of the landing. "This is not trivial."

How untrivial is it? Some of the top brass say that Wednesday's accomplishment is second <u>only</u> <u>to the introduction of naval aircraft</u> way back in 1911. And the thought of robot planes zipping on and off of floating runways is probably just as scary to the people of 2013 as the idea of planes on boats was to the people of 1911. ...

Forbes article about LED lights coming into their own.

The 23-story Bank of America Plaza in Fort Lauderdale, Fla.,– known as the Las Olas City Centre – is the latest iconic skyscraper to undergo an exterior lighting makeover with the aim of reducing energy consumption without sacrificing safety or aesthetics.

Its project, spearheaded by the building's developer and manager Stiles, involved scrapping 144 metal halide fixtures on the tower's signature ziggurat, along the rooftop and several faces in exchange for a system that uses 288 Philips Color Kinetics LED fixtures. The system can change colors and is being used to promote events or causes – like what has traditionally been done with the <u>Empire State Building</u>, which underwent its own facelift several years ago.

The overall impact of the installation is a 77 percent reduction in the power draw, which will translate into an annual savings of \$26,897 in energy and operating costs.

The investment that it took to make the upgrade hasn't been disclosed, but installations like these typically pay for themselves over several years when electricity savings and rebates are taken into account. In this case, the project was part of a retrofit undertaken with the aim of earning a Gold certification for the entire building under the Leadership in Energy and Environmental Design (LEED) rating system.

If changing just a few fixtures can result in savings of this nature, imagine what happens when you transform an entire city.

Overhauls across both Las Vegas and Los Angeles offer a vivid illustration of what's possible – especially when you consider that street lights can account for up to 40 percent of a given city's electricity bill. ...

Now we get to the piece about cheating in baseball from <u>Pacific Standard</u>. ... **1994**: Albert Belle was one of the best power hitters of any generation, and his 1994 season kicked off three straight MVP-caliber seasons. Unfortunately, those other two seasons failed to match the transcendent absurdism of Belle's '94 campaign.

In the first inning of a July 15 game against the Chicago White Sox, Belle, then of the Cleveland Indians, was accused of using a corked bat by White Sox manager Gene Lamont. The bat was confiscated and locked away in the umpires' dressing room for later inspection, which set off one of baseball's great capers.

Belle's use of corked bats was an open secret in the Indians clubhouse, and the team could illafford to lose their best hitter to a suspension. Desperate for a solution, Indians relief pitcher Jason Grimsley was enlisted to retrieve the bat. Grimsley accessed a false ceiling, crawled across it to reach the dressing room, and swapped out the bat with an uncorked one belonging to teammate Paul Sorrento. During the sixth inning of the game, the umpires' custodian noticed signs of a break-in, and the Chicago police were called in. Major League Baseball even flew in a former FBI agent to investigate the theft.

Still unaware of what exactly happened, Major League Baseball demanded the Indians produce the confiscated bat or risk the FBI getting involved. The team acquiesced, and an inspection of the bat revealed it was indeed corked. Belle was eventually suspended for seven games, but Grimsley's involvement remained secret until a 1999 interview with <u>The New York Times</u>. As for why he replaced Belle's bat with one belonging to Sorrento, the correct answer is the simple one: all of Belle's bats were corked. No one knows how any part of this story could be any more perfect. ...

War is Boring Your Aircraft Carrier Is a Piece of Crap Case studies in faulty flattops by David Axe



Admiral Kuznetsov

Imposing, flexible, able to sail fast and launch devastating air strikes at long range, aircraft carriers are the ultimate expression of national power. And many of the world's best-armed countries are acquiring them. China, Russia, India, Brazil, the U.K., France, America.

But just getting your hands on a flattop is hardly enough. For every example of a country that succeeds in deploying a functional carrier and matching air wing, there's a counter-example: a flattop hobbled by mechanical problems, stricken by age, sidelined by bad design or stuck with warplanes that simply don't work.

What follows are not the success stories. They are the case studies in flattop failure ... and object lessons for all the countries building aircraft carriers today.



Admiral Kuznetsov being monitored by a British warship.

Mother Russia's tugboat bait

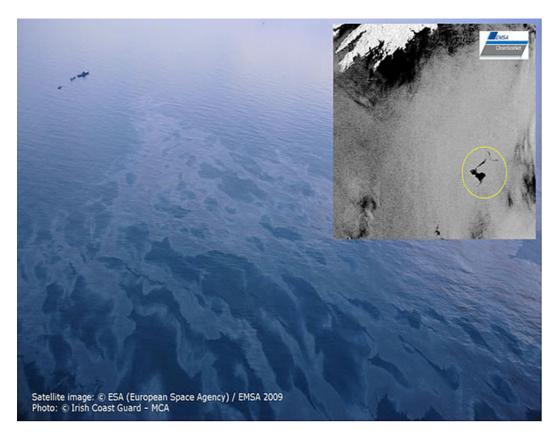
The *Admiral Kuznetsov*, Russia's only aircraft carrier, was launched in 1985 and joined the fleet in 1991. Since then the 55,000-ton, fossil-fuel-powered flattop has managed just *four* frontline deployments—all of them to the Mediterranean, and all of them just a few months in duration.

By contrast, American flattops typically deploy for at least six months every two years. The nuclear-powered USS *Enterprise*, commissioned in 1962, completed 25 deployments before leaving service in 2012.

One of *Admiral Kuznetsov*'s major problems is her powerplant. The vessel is powered by steam turbines and turbo-pressurized boilers that Defense Industry Daily generously described as "<u>defective</u>." Anticipating breakdowns, large ocean-going tugs accompany *Admiral Kuznetsov* whenever she deploys.

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Almost 2,000 men. Twenty-five latrines. Do the math. Training and morale are so poor that in 2009 *Admiral Kuznetsov* sailors apparently botched an at-sea refueling, <u>spilling hundreds of tons of fuel</u> into the Irish Sea, pictured at left.

And even when the ship functions as intended, her design limits her utility. *Admiral Kuzentsov* does not have steam catapults like American flatttops do. Instead, her Sukhoi fighters launch into the air off a bow ramp. The fighters must stay light, meaning they can carry only a few airto-air missiles and a partial fuel load. Their patrol endurance is measured in minutes rather than hours.

English Russia summed up the Russian aircraft carrier's fundamental limitations succinctly. "Actual aircrafts visit this ship pretty rarely."

Moscow appreciates its flattop problem and has vague plans to replace *Admiral Kuznetsov* sometime in the 2020s, by which time planners can realistically expect to have deployed the decrepit old lady maybe two or three more times.



Vikramaditya

But the Russians promised us she would work

Admiral Kuznetsov's ill repute did not deter the Indian and Chinese governments from acquiring second-hand Russian carriers. China's *Liaoning*, a rebuilt sister ship of *Admiral Kuznetsov*, began limited testing in the summer of 2012, serving a mostly educational role while a Chinese shipyard <u>slowly built a new carrier from scratch</u>.

Outfitted with the same faulty powerplant and performance-limiting bow ramp, *Liaoning* is unlikely to venture far from shore or send her lightly-loaded J-15 fighters—copies of Russian Sukhois—into serious combat. In a rare pique, Chinese state media denounced the J-15s as "<u>flopping fish</u>."

India's experience has been even worse. In 2004 New Delhi inked a \$1.5-billion deal for the 1982-vintage Russian flattop *Admiral Gorshkov*. In Russian service, the 45,000-ton vessel had carried a few helicopters and small Yakovlev jump jets; the Indians paid to have the flight deck expanded and a bow ramp fitted to accommodate up to 16 MiG-29 fighters.

Renamed *Vikramaditya*, the flattop was due to enter service in 2008. But the poorly-managed Russian shipyard was overwhelmed by the scale of the refit. The cost doubled and trials were

bumped back to September 2012. And when the crew pushed the conventionally-powered ship to her theoretical top speed of 32 knots, her boilers overheated.

"India didn't want to use asbestos as heat protection for the boilers," <u>Defense Industry Daily</u> <u>explained.</u> "Instead, the boilers' designer had to use firebrick ceramics. Which, as we see, didn't work so well. Especially on a ship that Russia put up for sale in 1994, *after a boiler room explosion.*" Our emphasis.

More repairs. More delays. More money. "The problems revealed during sea trials last year have been fixed," Russian Deputy Prime Minister Dmitry Rogozin vowed in late 2013, by which point *Vikramaditya* was expected to enter active service in India in the spring of 2014.

"Active service" being a relative term. If Russia's own experience with its crappy carriers is any indication, the Indian ship will spend most of her time in port being repaired between brief forays into near waters. New Delhi is building a new carrier from scratch that should eventually complement the Russian hand-me-down.



Sao Paulo. Wikimedia Commons photo

The floating museum

Not *all* shitty aircraft carriers are Russian. The U.K. and France have both sold to poorer navies decommissioned flattops that probably should have been permanently retired. In 2000 the Brazilian navy acquired the former *Foch* from Paris for \$12 million.

Commissioned into French service in 1963, the 33,000-ton, non-nuclear *Foch* carried 40 fighters and helicopters. Unlike Russian flattops, *Foch* had a steam catapult, allowing her to boost heavily-laden planes off her deck.

The Brazilians renamed her *Sao Paulo* and, for the first four years, busily sailed the secondhand vessel in a series of regional exercises—practicing with her upgraded A-4 fighters, sailing with the American carrier USS *Ronald Reagan* and even qualifying Argentinian planes for deck operations. *Sao Paulo* was, and remains, Latin America's only aircraft carrier.

But her age began to show, despite Brazil spending an additional \$100 million on upkeep. Onboard fires in 2005 and 2012 killed two sailors and left the flattop "barely functioning beyond flag-flying and light duties," according to *Warships International Fleet Review*. "The Brazilian defense ministry admitted the ship's effectiveness is extremely limited." Today the A-4s rarely fly.

Sao Paulo's replacement is still in the planning stages: a brand-new carrier to enter service some time in the 2020s, around the same time that Russia, China and India all hope to have new and better—that is to say, safe and functional—flattops of their own.

Wikipedia Chinese aircraft carrier Liaoning

Sold at auction

In April 1998, Ukrainian Trade Minister Roman Shpek announced the winning bid of <u>US</u>\$20 million from Chong Lot Travel Agency Ltd., a small company based in Hong Kong. They proposed to tow *Varyag* out of the Black Sea, through the <u>Suez Canal</u> and around southern Asia to <u>Macau</u>, where they would moor the ship and convert it into a floating hotel and gambling parlor. It would be similar to the attractions <u>Kiev</u> in <u>Tianjin</u> and <u>Minsk</u> at <u>Minsk World</u> in <u>Shenzhen</u>.

Before the auction was closed, officials in Macau had warned Chong Lot that they would not be permitted to berth *Varyag* in the harbor. The sale was carried out anyway. Chong Lot is owned by Chin Luck (Holdings) Company of Hong Kong. Four of Chin Luck's six board members live in <u>Yantai</u>, China, where a major Chinese Navy shipyard is located. Chin Luck's chairman is a former career military officer with the <u>People's Liberation Army</u>.

Towed to China



Varyag under tow in İstanbul on the way to China to be refitted as Chinese aircraft carrier Liaoning

In mid-2000, the Dutch International Transport Contractors <u>tugboat</u> *Suhaili* with a Filipino crew was hired to take *Varyag* under tow. Chong Lot could not get permission from <u>Turkey</u> to transit the dangerous <u>Bosphorus</u> strait; under the <u>Montreux Treaty</u> of 1936 Turkey has obligations to permit free passage, but has certain sovereignty and refusal rights. The hulk spent 16 months under commercial tow circling in the Black Sea. High-level PRC government ministers conducted negotiations in <u>Ankara</u> on Chong Lot's behalf, offering to allow Chinese tourists to visit cash-strapped Turkey if the travel agency's ship were allowed to pass through the straits. On November 1, 2001, Turkey finally relented from its position that the vessel posed too great of a danger to the <u>bridges</u> of <u>Istanbul</u>, and allowed the transit.

Varyag was escorted by twenty-seven vessels, including eleven tug boats and three pilot boats, and took six hours to transit the strait; most large ships take an hour and a half. The Russian press reported that sixteen pilots and 250 seamen were involved. At 11:45 a.m. on November 2, the hulk completed its passage and made for <u>Gallipoli</u> and <u>Canakkale</u> at 5.8 knots (10.7 km/h; 6.7 mph). It passed through the <u>Dardanelles</u> without incident.

On November 3, *Varyag* was caught in a <u>force 9 gale</u> and broke adrift while passing the Greek island of <u>Skyros</u>. Sea rescue workers tried to re-capture the hulk, which was drifting toward the island of <u>Euboea</u>. The seven-member crew (three Russians, three Ukrainians and one Filipino) remained on board as six tugboats tried to reestablish their tow. After many failed attempts to

reattach the lines, a Greek coast guard rescue helicopter landed on *Varyag* and picked up four of the seven crew. One tug managed to make a line fast to the ship later in the day, but high winds severely hampered efforts by two other tugs to secure the ship. On November 6, Aries Lima (reported as both Dutch and Portuguese), a sailor from the tug *Haliva Champion*, died after a fall while attempting to reattach the tow lines. On November 7, the hulk was taken back under tow and progress resumed at about three knots.

The <u>Suez Canal</u> does not permit passage of "dead" ships — those without their own on-board power source — so the hulk was towed through the <u>Strait of Gibraltar</u>, around the <u>Cape of Good</u> <u>Hope</u>, and through the <u>Straits of Malacca</u>. The tugs towing the hulk maintained an average speed of 6 knots (11 km/h) over the 15,200-nautical-mile (28,200 km) journey, calling for bunkers and supplies at <u>Piraeus</u>, Greece; <u>Las Palmas, Canary Islands</u>; <u>Maputo</u>, Mozambique; and <u>Singapore</u> en route. They entered Chinese waters on February 20, 2002, and arrived March 3 at <u>Dalian</u> Shipyard in northeastern China. China continued to assert that *Varyag* would be a casino. When Macau awarded new casino licenses in February 2002, Chong Lot was not among successful bidders. The hulk was tied up at Dalian. The total cost of acquiring the hulk was over US\$30 million: US\$25 million to the Ukrainian government for the hull, nearly US\$500,000 in transit fees, and some US\$5 million for the towing.



Streetwise Professor <u>A Little Perspective</u> by Craig Pirrong

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Gizmodo <u>The X-47B Drone Has Landed on a Carrier, And War May Never Be the Same</u> by Adam Clark Estes

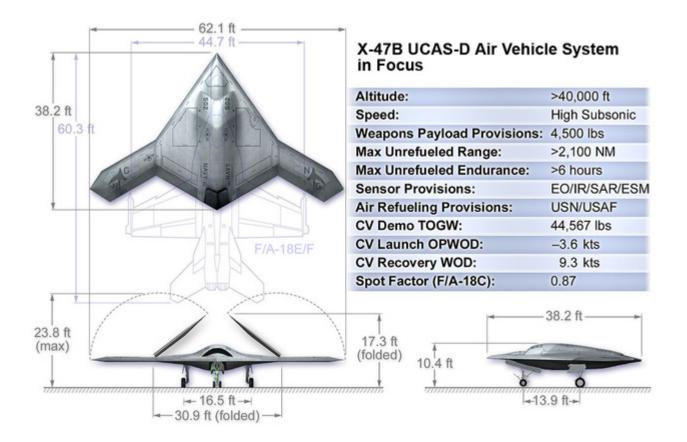


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Landing a drone on an aircraft carrier was not a cheap or easy task. The so-called "Salty Dog 502" has been in training to accomplish such a feat for years now, and the program has cost the government over \$1.4 billion. It won't spend anymore, because the Navy is retiring its two X-47B's and <u>sending them to Navy museums</u> in Florida and Maryland. The aircraft deserve nothing less than being enshrined. "Your grandchildren and great grandchildren, and mine, will be reading about this historic event in their history books," Rear Admiral Mat Winter told the press ahead of the landing. "This is not trivial."

How untrivial is it? Some of the top brass say that Wednesday's accomplishment is second <u>only</u> to the introduction of naval aircraft way back in 1911. And the thought of robot planes zipping on

and off of floating runways is probably just as scary to the people of 2013 as the idea of planes on boats was to the people of 1911.



Nevertheless, Wednesday's landing was just <u>one of many milestones</u> the X-47B has hit in recent years. The Northrop Grumman drone is a big drone with a 62-foot wingspan, though it can fold its wings into a more compact shape. The two aircraft have more or less been in nonstop testing since <u>their first flights</u> in 2011 and made its first "catapult takeoff" from land six months ago. The operation moved to the aircraft carrier earlier this year, and in May, the X-47B made <u>its first catapult takeoff from the deck</u> and made nine touch-and-go landings.

The X-47B was never armed, but the two drones will change warfare as we know it. Just imagine: now the Navy can launch unmanned aerial vehicles that can fly for dozens of hours without refueling from anywhere in the world. Although the test planes will gather dust in a museum, the technology that made the carrier takeoffs and landings possible will be applied to the rest of the drone fleet. The Navy will start accepting proposals for a new carrier-ready drone next month and hope the aircraft will be in service in three to six years.

http://www.youtube.com/watch?v=3Q4deCcKuVA First launch May 13, 2013

http://www.youtube.com/watch?v=z5Qq6dOV1zY First landing July 10, 2013

http://www.youtube.com/watch?v=_KxZa8W_H4M Video of X-47B landing and launch

Forbes LED Lighting Creeps Toward Tipping Point



The 23-story Bank of America Plaza in Fort Lauderdale, Fla., – known as the Las Olas City Centre – is the latest iconic skyscraper to undergo an exterior lighting makeover with the aim of reducing energy consumption without sacrificing safety or aesthetics.

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The overall impact of the installation is a 77 percent reduction in the power draw, which will translate into an annual savings of \$26,897 in energy and operating costs.

The investment that it took to make the upgrade hasn't been disclosed, but installations like these typically pay for themselves over several years when electricity savings and rebates are taken into account. In this case, the project was part of a retrofit undertaken with the aim of earning a Gold certification for the entire building under the Leadership in Energy and Environmental Design (LEED) rating system.

If changing just a few fixtures can result in savings of this nature, imagine what happens when you transform an entire city.

Overhauls across both Las Vegas and Los Angeles offer a vivid illustration of what's possible – especially when you consider that street lights can account for up to 40 percent of a given city's electricity bill.



The Las Vegas transformation involves updating more than 80 percent of the city's streetlights to GE Evolve LED Roadway fixtures (more than 41,000 in all). The technology lasts approximately 11 years (7 more than the legacy lighting system) and is estimated to produce annual energy cost savings of about \$1.7 million, by reducing consumption by 20 million kilowatt-hours. (The installation will also save another \$1 million in maintenance expenses.)

The costs for this upgrade aren't being disclosed either, although part of it is being covered by an energy efficiency rebate from the local utility, NV Energy. In addition, GE helped coordinate a recycling program for the old fixture that resulted in a credit that is being applied to the cost of the new LED technology.

The Los Angeles retrofit, which began more than four years ago, is considered the most ambitious one to date. The system includes more than 210,000 lamps; 140,000 of them have already been updated along more than 4,500 miles of streets. The rest, which are primarily decorative, are being updated in phase 2.

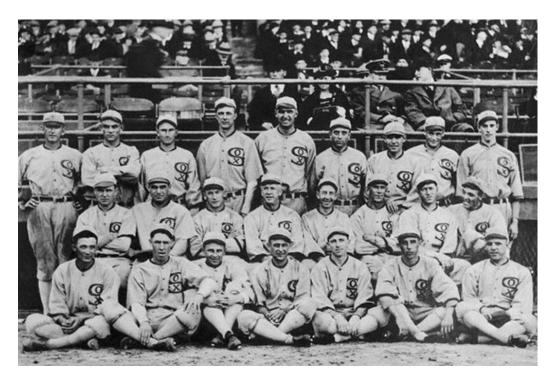
The metrics of this effort, which was supported by the Clinton Climate Initiative, have been far more public.

The overall project cost was estimated at \$57 million, which was paid for with a combination of power rebates, the Street Light Assessment Fund, and a \$40 million loan that will be paid back over seven years with the savings generated by the end technology.

For perspective, in 2008, the city paid \$16 million for the electricity to keep its street lights lit. It is saving almost half that amount, \$7.5 million, through the retrofit.

Despite savings of this sort, LED lighting will only account for about 5 percent of all the technologies used in retrofit projects this year, estimates Navigant Research. By 2017, however, its share will probably hit 40 percent; it will pass the halfway mark by 2021. One big factor is lower LED pricing, which is helping compress the payback periods.

Pacific Standard <u>A Brief History of America's Favorite Pastime's Favorite Pastime</u> *If there's one thing that knits together the history of baseball, it's cheating.* by Thomas Rios



Baseball is America's pastime because the history of both is best told as a cheater's fable. The difference is that baseball's history of cheating doesn't involve quite so much mass genocide and enslavement. What it lacks in unprecedented campaigns of dehumanization, it more than makes up for in delightfully bizarre tales of grown-ass men gaming a game by means both elaborately stupid and stupidly elaborate.

Even a shorthand history would include magic elixirs crafted by monkey-obsessed mountebanks, a multi-generation odyssey of landscaping slicksters, and near-countless attempts to alter the rotational mathematics of a leather-bound ball via means found in most any medicine cabinet. The collective view of such skylarkings was best summed up when former Chicago Cubs first baseman Mark Grace said, "If you're not cheating, you're not trying." At its core, a meaty riff on Manifest Destiny meant to minimize specific transgressions by way of philosophical non-argumentation. That's as American as it gets.

The slapstick hilarity of such low-stakes scheming in a silly kid's game most likely invented by opium-tripping leisure-crats actually transcends the modern hysteria over cheating in sports of every kind. Even at its worst, the history of cheating in baseball reads like an acid-tinged neo-Spaghetti Western full of mad scientists, mobsters, and mystery men. It's as great as it sounds.

Circa 1880s: Future Hall of Fame pitcher James Francis "Pud" Galvin becomes baseball's first confirmed user of performance-enhancing drugs. His cocktail of choice was the Brown-Séquard elixir, a concoction of testicles harvested from dogs, guinea pigs, and, maybe, monkeys. The harvester was Charles-Édouard Brown-Séquard, an elderly physiologist and neurologist who

claimed hypodermic injections of his elixir-prolonged human life. Galvin was praised for his forward-thinking ways in an <u>1889 edition of the *Washington Post*</u> and died at the age of 45.

1919-1921: Chicago White Sox first baseman Arnold "Chick" Gandil had a plan. His team was slated to face the Cincinnati Reds in the 1919 World Series and, thanks to his underworld connections, Gandil knew there was money to be made by throwing the series. The scheme found favor with several teammates who were fed up with team owner Charles Comiskey, a notorious miser. With financial backing from New York mobster Arnold "The Brain" Rothstein, the White Sox dropped the series 5-3 to the Reds.

Whispers of a fix spread before the series even began, but they failed to gain traction until 1920 when a grand jury was convened to investigate. Dubbed the Black Sox Scandal, the trial fell apart when signed confessions from multiple players went missing, which led to an acquittal. However, the damage to baseball's reputation prompted team owners to appoint federal judge Kenesaw Mountain Landis as the first commissioner of baseball just prior to the 1921 season.

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Landis was a harsh, bombastic jurist, and the owners granted him unprecedented power over the sport. He promptly banned all eight accused players from baseball. To this day, the culpability of those individual players is a matter of heated debate. Landis cared little for counter-arguments, however, and used his power to ensure none of the accused players ever made a living playing baseball again. Gandil went on to become a plumber.

1936-Present: Three consecutive generations of the Bossard family have presided over Comiskey Park, home stadium of the Chicago White Sox. Emil Bossard came first in 1935 and used his encyclopaedic knowledge of the stadium to begin what would become the family business. His greatest hits include using scoreboard signals to tip off the <u>visiting team's pitches</u> and moving the stadium's portable outfield fences back to stifle opposing home run hitters.

Next up was Gene, who supposedly invented the frozen baseball trick and routinely waterlogged the infield to aid the team's groundball pitchers: a tactic that earned Comiskey Park the nickname "Bossard's Swamp." Stories of tilted foul lines and grass cut to manipulate the speed of ground balls also abound. Current White Sox groundskeeper Roger Bossard says there are <u>17 tricks of the trade</u>, but won't reveal all of them. Many of those dirty tricks were invented by the Bossard family: the greatest cheaters in sports history.

1951: The New York Giants of the 1940s were baseball's lovable losers. In 1951, they became an organic Disney script, sort of. Twelve-and-a-half games behind the first place Brooklyn Dodgers on August 10, the Giants rallied with a 16-game winning streak and closed out the season by winning their last seven to tie the Dodgers and force a three-game playoff for the National League pennant.

Down three runs in the ninth inning of the third and deciding game, the Giants managed one last desperate rally that climaxed with Bobby Thomson's "Shot Heard 'Round The World"—a serieswinning, walk-off home run. It was the defining moment of both an improbably dramatic comeback and one of the most successful cheating schemes ever. After decades of allegations that the team engaged in sign stealing, several players on the '51 Giants came clean to the *Wall Street Journal* in 2001. It turns out coach Herman Franks was using a telescope to steal signals from opposing catchers and then relaying them to the dugout. The Giants went 37-7 over the season's last 44 games. The Disney movie has yet to be made.

1964-1983: Gaylord Perry posted 314 wins and 3,534 strikeouts over a 22-year career that serves as a glorious monument to skillful cheating. His infamy is owed to the spitball, a pitch involving copious lubrication and a healthy distaste for the rules. Reporters, players, and coaches all knew he was cheating, but it took nearly two decades for an umpire to catch him in the act.

He was elected to the Major League Baseball Hall of Fame in 1991, 17 years after writing *Me and the Spitter: An Autobiographical Confession*. In the book, Perry maintained that he *used to* throw the spitball but gave it up in 1974, along with his cheating ways. Eight years later, Perry was given a 10-game suspension for doctoring the ball.

1986: Mike Scott, a solid veteran pitcher for the Houston Astros, posts a shockingly dominant season en route to winning the National League Cy Young award. The credit belonged to a newfound mastery of the split-finger fastball. The pitch, an insult to physics, seemed to break in two directions at once. Opposing teams noticed and routinely accused Scott of doctoring the ball to manipulate its movement.

The rival New York Mets resorted to collecting the doctored balls Scott threw in their home stadium that season and <u>presenting them to NL President Chub Feeney</u>, who refused the evidence on specious grounds. Scott would never again approach the dominance of his '86 season and retired due to injuries after the 1991 season. He still denies the cheating accusations.

1994: Albert Belle was one of the best power hitters of any generation, and his 1994 season kicked off three straight MVP-caliber seasons. Unfortunately, those other two seasons failed to match the transcendent absurdism of Belle's '94 campaign.

In the first inning of a July 15 game against the Chicago White Sox, Belle, then of the Cleveland Indians, was accused of using a corked bat by White Sox manager Gene Lamont. The bat was confiscated and locked away in the umpires' dressing room for later inspection, which set off one of baseball's great capers.

Belle's use of corked bats was an open secret in the Indians clubhouse, and the team could illafford to lose their best hitter to a suspension. Desperate for a solution, Indians relief pitcher Jason Grimsley was enlisted to retrieve the bat. Grimsley accessed a false ceiling, crawled across it to reach the dressing room, and swapped out the bat with an uncorked one belonging to teammate Paul Sorrento. During the sixth inning of the game, the umpires' custodian noticed signs of a break-in, and the Chicago police were called in. Major League Baseball even flew in a former FBI agent to investigate the theft.

Still unaware of what exactly happened, Major League Baseball demanded the Indians produce the confiscated bat or risk the FBI getting involved. The team acquiesced, and an inspection of the bat revealed it was indeed corked. Belle was eventually suspended for seven games, but Grimsley's involvement remained secret until a 1999 interview with <u>The New York Times</u>. As for

why he replaced Belle's bat with one belonging to Sorrento, the correct answer is the simple one: all of Belle's bats were corked. No one knows how any part of this story could be any more perfect.

THE GREAT CORKED BAT Caper was perhaps the last gasp of baseball's cheating heyday. Consumed by the hysterics of the so-called Steroid Era, baseball has dedicated itself to a witch hunt seeking to preserve the integrity of a game that never had any to begin with. It's every bit the <u>pointless grasp at imagined moral superiority that it all appears to be</u>. If the ploy succeeds, we'll lose something special.

Think of the worst bit of cheating you ever got away with, and consider if you're more Jason Grimsley or <u>Jamie Dimon</u>. Baseball's greatest cheaters are impish children prone to mischief, society's greatest cheaters are something way more sinister. The brand of cheating that goes with that gig makes for stories that end up in SEC filings and righteously vicious obits. When Perry passes away we'll get dozens of priceless columns about the chubby rogue of the pitcher's mound. We'd all be better off if future generations could look back on us and do nothing but laugh at our crimes.

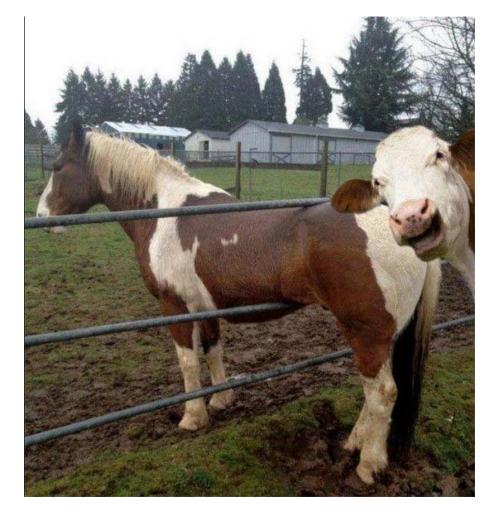
No one could ever calculate the degree to which cheating has and continues to ruin people's lives in the United States. The beauty of baseball is that it functions as an example of the fact that, sometimes, cheating is just a funny, harmless thing that pretty much everyone does at one point or another. If anything, it works best as a gentle reminder that we're all flawed, but are generally hesitant to rip each other's throats out given a chance to do so face-to-face. A mostly harmless thumb to the nose aimed at needlessly authoritative authority figures is where most of us top out—and that's about right.



EKEMIES

"POOR PEOPLE HAVE BEEN VOTING DEMOCRAT FOR 50 YEARS...AND THEY'RE STILL POOR" -CHARLES BARKLEY





"I CAN'T BELIEVE THE WAY KIDS NOWADAYS WEAR THEIR COLLARS!"

