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# Almost 1 In 3 U.S. Warplanes Is a Robot

By [Spencer Ackerman and Noah Shachtman](#)  
[Email Author](#)

January 9, 2012 |  
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Remember when the military actually put human beings in the cockpits of its planes? They still do, but in far fewer numbers. According to a new congressional report acquired by Danger Room, drones now account for 31 percent of all military aircraft.

To be fair, lots of those drones are tiny flying spies, like the Army's Raven, that could never accommodate even the most diminutive pilot. (Specifically, the Army has 5,346 Ravens, making it the most numerous military drone by far.) But in 2005, only five percent of military aircraft were robots, a report by the Congressional Research Service notes. Barely seven years later, the military has 7,494 drones. Total number of old school, manned aircraft: 10,767 planes.

A small sliver of those nearly 7,500 drones gets all of the attention. The military owns 161 Predators — the iconic flying strike drone used over [Pakistan, Yemen and elsewhere](#) — and [Reapers](#), the Predator's bigger, better-armed brother.

But even as the military's bought a ton of drones in the past few years, the Pentagon spends much, much more money on planes with people in them. Manned aircraft still get 92 percent of the Pentagon's aircraft procurement money. Still, since 2001, the military has spent \$26 billion on drones, the report — our Document of the Day — finds.

The drones are also getting safer. (To operate, that is; not for [their targets below](#).) Drone crashes get a lot of attention; 38 Predators and Reapers have crashed in Iraq and Afghanistan thus far; most recently, Iran looks like it got ahold of [an advanced, stealthy RQ-170 Sentinel](#). But the congressional report finds that the Predator, for instance, has only 7.5 accidents per 100,000 hours of flight, down from 20 accidents over that time in 2005 — meaning it's now got an accident rate comparable to a (manned) F-16.

But the report doesn't mention some of the unique vulnerabilities of the drones. There's no mention of the [malware infection that reached into the drone cockpits](#) at Creech Air Force Base in Nevada, a story [Danger Room broke](#). Nor does it go into the workload problems for military imagery analysts caused by the proliferation of the drones full-motion video "Death TV," which is pushing the military toward [developing selective or "thinking" cameras](#). The ethical issues attendant to remote-control war also go unexplored.

Still, the report does explore the downsides of the Pentagon's drone obsession. There are way too many redundant drones, it finds, and the expensive sensors they increasingly carry drive the costs of a supposedly cheap machine up. They're also bandwidth hogs: a single Global Hawk drone requires 500 megabytes per second worth of bandwidth, the report finds, which is "500 percent of the total bandwidth of the entire U.S. military used during the 1991 Gulf War." And it also notes that a lot of future spy missions might go not to drones, but to the [increasing number of giant blimps and aerostats](#), some of which can carry [way more sensors and cameras](#).

And the current fleet of flying robots is just the start. The Navy's developing a next-gen drone that can [take off and land from an aircraft carrier](#). Future missions, the report finds, include "stand-off jamming" of enemy electronics; "psychological operations, such as dropping leaflets" over an adversary population; and even measuring the amount of radiation in the earth's atmosphere. The military's working on increasingly autonomous drones — including [tiny, suicidal killers](#) — and on increasing the number of drones a single ground station can operate.

The Air Force even holds out hope for a "super/hyper-sonic" drone by 2034. It's a good time to be a flying robot.

Congressional Research Service reports typically aren't public. But we're embedding it here, so you can read it in full for yourself. It compiles and updates a lot of useful information about military drones:

[1105\\_001](#)



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*Photo: U.S. Air Force*

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Spencer Ackerman is Danger Room's senior reporter. Noah Shachtman tries to tell him what to do.

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**Pablo**

incorrect information yet again about RPAs... they are not "robots". they are manned like any other aircraft, the cockpit has simply been removed from the aircraft and placed on the ground. so the human pilot still flies it, just from a cockpit not in the airplane. and the reason having the cockpit on the ground isn't a bad idea, is it removes the systems required to have a man in the aircraft, ei ejection seat, oxygen system, pressurization system, instrumentation etc. weight savings and/or room for other systems required for the link.

it also means if an aircraft is shot down, we don't have to spend money or risk more lives on a search and rescue mission. and the aircraft can stay airborne for longer since it's not limited by human needs for food, sleep, and using the bathroom more than 3 or 4 piddle packs worth. the pilots flying from the cockpit on the ground can be swapped out to get food, sleep, etc without having to land the plane. makes a difference. aircraft can also be designed that aren't limited by human G load tolerance. quite an advantage when going up against an adversary aircraft which does have limited G load because the pilot is in the cockpit on the plane. these aircraft particularly the MQ-1 and -9 that everyone is referring to as "robots" or "drones" won't fly, navigate, turn on a camera, or

launch a weapon unless a human makes a control input from the cockpit on the ground just as they would from the cockpit of an aircraft with the cockpit in the plane. it's all the same, the only difference is the physical location of the pilot in the cockpit making the control inputs to the aircraft. the RPAs, the cockpit is on the ground. only difference... that's it. just like an A10 or F16 is controlled, but the cockpit, with a pilot in it, is on the ground, and a datalink is maintained with the aircraft. an encrypted datalink. too many people are eating up this robot mumbo jumbo. the media and hollywood is doing a horrible job portraying the truth about how these airplanes are operated. the many advantages in cost cuts from not needing search and rescue for a downed pilot, the time aloft, the deterrence factor for the enemy to suddenly not have as much leverage if he shoots down a RPA plane and doesn't kill a pilot, the cost savings in our pilots not having recover from injuries sustained during ejection, all put together is the reason why the pentagon loves these things. stay informed and think logically. movies and mass media is a very uninformed source of facts about these aircraft.

5 months ago 17 Likes

Like

**stoffer**



All you said is right, but there are also problems with situational awareness.

Check this article in the Flying magazine:

[www.flyingmag.com/pilot-reports/turboprops/remote-control-flying-predator](http://www.flyingmag.com/pilot-reports/turboprops/remote-control-flying-predator)

(put dots in their respective places)

You remove the feel from the pilot, and you remove the sound. You also reduce the vision. You cut out two senses and hamper one. You also add a delay for the satcom link.

That has detrimental effects on situational awareness. Remotely piloted aircraft would be probably useless in fight against manned aircraft. The increased possible G-loading is a myth. An airframe that could handle say 20 G would be immensely heavy. The engines are probably the most sensitive part. You need to design an engine, which will not cut out at lateral 20G. That is hard.

All in all, drones have their merits, but they need to be improved. First of all, the situational awareness of the remote pilots. That must be improved first and soon. That includes reducing the delay, so the pilots probably shouldn't be further than say 200 km away from the from aircraft for reduced lag. Here you

are limited by the speed of light and the only thing that can be done is moving drone pilots closer to the drone.

AI would be a blessing, but so far, we don't have true AI. We have algorithms, which can perform some tasks quite well, but go out of what they were trained and they fail miserably. I don't expect true AI until we have neural networks implemented in silicon and with number of neurons comparable to say a dog. That won't happen anytime soon, so we are stuck with remote control for the next say 10-15 years at least.

5 months ago in reply to Pablo 7 Likes

Like

**SanemD**

several companies are working on situational awareness. the F-35's computers can detect, identify, track and target any aircraft within optical range



the problem is that the USAF for a great part froze their investment in UAV's a few years back. they killed the J-UCAS program, because it was a danger to the F-35. they didn't automate their UAVs, because than their experienced pilots would quickly lose value (as the army has proven with its NCO's)

sharper G turns make a huge difference. in the 70's there was a program that pitched manned against RP F-4's. after a while the RPV's defeated the manned ones systematically, because they could simply turn that much sharper

not that that matters much, modern air combat is about missiles and stealth, that's what makes the F-22 so good, it's ability to hit and run (it doesn't even have a helmet mounted aiming system, how the hell is it supposed to stand a chance in a dogfight against something like a Su-30, never minder a Su-37 or a T-50).

as for being stuck with remote control, the Global Hawk can take off, fly its mission and land all by itself, and has done so very succesfully for the last decade. remote input yes, something every (manned) aircraft benefits from, like AWACS support. but they're already more autonomous than most people know



5 months ago in reply to stoffer 3 Likes

Like

**Joe Loiacono**

Yes like we haven't been using autopilot for 50 years already.

5 months ago in reply to SanemD 1 Like

Like

**Pablo**

that's a solid article. very detailed in the control aspects. makes a fool out of the people who liken operating RPAs to video games. there is no comparison. a video game is not real. operating RPAs is real. something goes wrong or if there is pilot error, a plane gets damaged or crashes. when a button is pressed to release a weapon, a target or a life gets destroyed in real life. when things go right, lives are really saved. no pause button, no restart option. no comparison to video games. people who compare them to video games are simply ignorant and too lazy to learn the facts. i bet any one of them would back down at the offer to fly one in combat in the fray with all other airplanes and helicopters stacked in the same airspace all trying to protect the lives of the guys on the ground who are begging for help. that's real... the 'video game commenters'... they'd be too scared to take the controls.

as far as senses go, think of it this way... have you heard that when a person is blind, their hearing is sharper, or if they are deaf, their more keen in touch, smell, or sight? or just when you're trying real hard to hear a faint sound, maybe you close your eyes? the whole premise of humans adapting to removing one sense heightens the other ones. so all this means is take away the sound, take away the seat of the pants feel, and limit the vision by taking away windows and all, and the pilot is left with increasing their sense of cross checking the instruments. airspeed, altitude, pitch, rpms, bank angle etc. doesn't take much else to keep the plane in the air. autopilot settings can take that task off the hands as well. a little more difficult than normal planes, yes. a bit awkward? yes, impossible? no. as far as battlespace situational awareness, i've read a lot in the works to make it better. seems like it comes down to spending though. no matter how much improvement it is, if it's too expensive, no go. and these airplanes have gps and moving maps and all the fancy stuff



other airplanes have. no different than flying any other plane with an autopilot and gps nav system in the clouds at night where your vision doesn't do you any good any way.

as far as the delay goes... i did a little number crunching. speed of light = 186,000 miles per second. assuming the satellites are in geostationary orbit, roughly 25,000 miles out from the Earth's surface, that's 50,000 miles of travel for a radio signal. that math makes for a .27 sec roundtrip for a signal to go from Earth to satellite back to airplane. a quarter of a second is negligible. perhaps the delay is not from the distance, but in data processing abilities?? not sure why since modern day fighters are all fly by wire. an F16 control stick is connected to a computer that tells the plane what to do. the pilot just moves the stick that's talking to the computer. exact same as RPAs but instead of the stick being connected directly to the computer, it's connected via a wireless signal. funny how everyone thinks wireless technology is awesome for home networks and cell phones and all that jazz, they wants them some wifi everywhere, but they'll be damned if airplanes can be controlled via wireless technology to take the aircrews out of the threat ring of a surface to air missile. controlling your tv from anywhere in the house wirelessly is cool as hell, controlling an airplane in a war from the other side of the planet is apocalyptic and freaky. i don't get the logic. i'm not saying you, you seem to dig the technology, i'm talking about others who are so scared of this technology. i bet they would think it would be cool to control their microwave from the couch. and is the microwave ever going to become "self aware?" nope. never. neither are these planes. it's simply wireless technology to fly airplanes.

good pilots adapt anyway. regardless of what they are given to fly. reminds me of that quote from Apollo 13. Jim Lovell's mom says "If they could get a washing machine to fly, my Jimmy could land it." So regardless of limitations... throw a good pilot in the seat, they'll fly the damn thing to the limit and do it well.

-2 cents

5 months ago in reply to stoffer 1 Like

Like

**NiMA Asghari**

Thanks for your kind of logical discussion about my country,the Truth is inside iran there is a great conflict between the People(spec. educated) and the Government. On the other side believe me,we people living in 1st. world countries are flying too high that don't even have time or concern to look what's Really goin' on here! In my Opinion USA and IRI are the same thing in two different suits! each wants their New World Order.

We should also know that the true High-Tech is for the Ones with whole lot of money in their hand,

sanctions are just annoying people not iranian mil.

I have friends inside Sepah(Special Revolutionary Guards) that have worked on EMPs,Drones and lately high investments on long Range missiles or Tiny Suicide Drones! recruiting any young thinker tank!

I vote for no weapon,such a small piece of Rock is this Earth! WTF Mochten sie machen am ende?!! :D

5 months ago 8 Likes

Like



**Joe Loiacono**

Well if the US invaded your country to liberate you from the Government in a Libya style conflict, ie NATO or joint Operation which side would you pick up a rifle and fight for? What would be the line where you stop supporting the US and would support the current government in Iran?

The US will not wade into a conflict unless it guarantee that they will be meet as liberators and not occupiers.

5 months ago in reply to NiMA Asghari

Like



**TCinSC**

I wasn't aware the US/NATO did more than stop Qaddafi from fighting back. I missed them invading.

5 months ago in reply to Joe Loiacono

Like

**Joe Loiacono**



if you don't think their were special forces / pmcs in Libya then your pretty naive.

There was American ISA/JSOC guys on the ground without a doubt in my mind, along with French and British SOF. You think one of these rebels in a tacoma knows the first thing about being a forward air controller? Their was a invisible wave of covert ops guys once we committed to going in.

5 months ago in reply to TCinSC 1 Like

Like



**TCinSC**

Hmmm I wasn't aware that R2P included any ground ops.

5 months ago in reply to Joe Loiacono

Like



**Joe Loiacono**

they aren't going to plaster it everywhere.

if you look at some of these guys there are too clean cut to be locals. Libyan-Americans or UK/ French nationals.

Use logic the majority of ground attack aircraft used require forward air controllers on the ground. Do you think these were locals?

5 months ago in reply to TCinSC

Like



**TCinSC**

I don't know, but they said they didn't send in troops, so I believe them. they said they were shooting planes & tanks and I believe that.

I do believe that Libyan rebels could call in strikes or at least "paint" I think the term is targets.



4 months ago in reply to Joe Loiacono

Like

**TCinSC**

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I do believe that Libyan rebels could call in strikes or at least "paint" I think the term is tagets.

4 months ago in reply to Joe Loiacono

Like



**SanemD**

they're still way too conservative with them

- let non-officers fly them, the Army and the CIA do, so certainly the USAF can too
- automate them, human error is a major cause of accidents (and the reason why the USAF has more accidents than the Army)
- make the Predator/Reaper/similar UAV carrier compatible, prop UAVs have shown that their low cost and high endurance makes them in many ways superior to jet aircraft
- start using UAVs for major combat operations, rather than fixating on gold-plated aircraft that are too expensive and valuable to be used
- air-to-air UAVs, for god's sake
- drop the F-35, its a huge waste of money, buy UAVs instead

5 months ago 5 Likes

Like




**stoffer**

I think that you are overestimating what can be possibly done with drones. They are nothing more that glorified over-sized RC planes. Most of drone accidents are at landing. You can't reliably (<- this is the keyword!) automate landings in a non-ILS environment, which I presume many forward air bases are.

5 months ago in reply to SanemD 3 Likes

Like

**SanemD**

true, most drone accidents happen at landing, because of human error years ago the  insisted on using "real" pilots for their UAVs, because they have more flight experience

the Army choice to use weapons specialists and give their UAVs automated landing systems  
result: the USAF UAVs have more accidents than the Army ones, mostly during landing

as for automated landing, commercial aircraft have been using automated systems for decades

as technology becomes better, UAV's will be able to land pretty much anywhere using passive systems like gps, radar and optical sensors. you tell a computer where the airstrip is, and you'd be surprised as to what they can do

as for non-ILS environment, I'd like to see an F-35 or even an F-16 operate from a forward base with limited support

5 months ago in reply to stoffer 2 Likes

Like



**stoffer**

And those human errors happen because of the dramatic reduced situational awareness of the remote pilot (see my other post). That is the most urgent thing that needs to be fixed.

5 months ago in reply to SanemD

Like



**Parazo**

I thought the X-47 was air-to-air. I have to agree with you on this. I think on "automate them", you mean have them be flown "point and click" style. I forgot that the predator is still piloted the same way some kid plays a combat simulator.

5 months ago in reply to SanemD

Like



**planeshaper**

Nitpick. The report says 500Mbps for the RQ-4, NOT 500MBps. It's on page 17 (22 of the PDF), about halfway down.

5 months ago 2 Likes

Like

**Anees Prince**

American army is a weakest army in whole world and its a bitter truth

5 months ago 2 Likes

Like



**Soylent Green Is People**

Get back under your bridge.

5 months ago in reply to Anees Prince 8 Likes

Like



**Fatty Bunter**, When I was 8, a Frisbee flew into my backyard and I blew it up with my mind.

How's that?

5 months ago in reply to Anees Prince

Like



**John Goekler**

And at least 9 out of 10 of the brass.

5 months ago 2 Likes

Like



**phalanx**

Zing!

5 months ago in reply to John Goekler 1 Like

Like

**Joe Loiacono**

Drones in the future will always operate alongside humans.

They best fit into acting like extension of humans and doing jobs mundane for us,

be it a unmanned wing man that fights alongside a human pilot, or a squad of robotic infantrymen which protect a human Lieutenant.

What remains to be since, is which will become our overload and triumph in the end.

Human-Machine Cyborg Hybrids or All Machine Robots.



My vote is with the Hybrids, at least will be able to hopefully reason with them and not with a Cylon.

5 months ago 2 Likes

Like



**tomwhite**

"Hybrids, at least will be able to hopefully reason with them"

It's hard enough reasoning with normal people :-)

5 months ago in reply to Joe Loiacono 3 Likes

Like



**Joe Loiacono**

well my point is a cyborg will have some human parts (hopefully the important ones) which to beg for mercy too, a machine will simply be programmed without it.

5 months ago in reply to tomwhite

Like



**Parazo**

For a robot to protect a human, the best way is to enclose the person. That exo-suit developed by SACROS.

5 months ago in reply to Joe Loiacono

Like



**Joe Loiacono**



Yes this is the natural progression of body armor land warriors etc etc everyone wants this its just a question of time and money.

But rest assure DARPA has brilliant minds working on this and its civilian applications as well. These suits will have limitations but will fit into the battlefield.

5 months ago in reply to Parazo

Like

**Soylent Green Is People**



“500 percent of the total bandwidth of the entire U.S. military used during the 1991 Gulf War.”

I know that sounds like an outrageously high number. But back in 1991 most people who are reading this didn't even know what bandwidth was, myself included.

(Edited by author 5 months ago)

5 months ago 2 Likes

Like

Invalid Application ID: The provided Application ID is invalid.



**PeteEllis**

That's because most people were still using the terms "baud rate" and "Kilo Bit" as a description of the rate data was transferred. I will bet that you understood those terms back then.

5 months ago in reply to Soylen Green Is People 1 Like

Like



**robertmeerdahl**

too bad a third world military is able to jam and capture these robots

5 months ago 2 Likes

Like



**SanemD**

sure, and Iran is developing a 5th gen fighter and has no intention of getting nuclear weapons

I mean, when I capture a crashed stealthy UAV, the first place I bring it to is a public school gym, certainly not say a military base or anything...

5 months ago in reply to robertmeerdahl 2 Likes

Like

**robertmeerdahl**

less likely for us to find & bomb it if it's in a school...

it is really so unbelievable for them to jam the military signal and then spoof the civilian gps signal, perhaps with help from our chinese and/or russian friends?



(Edited by author 5 months ago)

5 months ago in reply to SanemD 3 Likes

Like



**Guest**

*Comment removed.*

5 months ago in reply to robertmeerdahl 1 Like

Like



**robertmeerdahl**

nice straw man you're building there...

i'm sure "the most advanced defense contractors in the world" put a lot of effort into GPS jamming and spoofing protection, and i am also sure that the russians and chinese are putting a lot of effort into getting around those defenses

if a device can be controlled remotely by a signal, there is a chance that device can be taken control of by a hostile party; this concern is why "the most advanced defense contractors in the world" try so hard to prevent this

my guess is that the drone likely malfunctioned and flew off on its own in the wrong direction (despite the design and construction efforts of "the most advanced defense contractors in the world"), but there is a good chance that with foreign help and examining other downed drones that the iranians found a flaw in the defenses

5 months ago in reply to Guest

Like



**SanemD**

like JeffreyCross pointed out, if they really did what they said and it was so easy, every guided weapon and communication system in the Western militaries risks becoming useless overnight

5 months ago in reply to Guest

Like

**robertmeerdahl**

it is probably not as dramatic as "becoming useless overnight", but i think there is a concern about us becoming overly reliant on GPS and remote control signals; it is a weakness which could be exploited under certain circumstances

the enemy is never as smart, or as dumb, as you assume

5 months ago in reply to SanemD

Like

**Nathan Schultz**

It's very unlikely there's any truth to the "hacked GPS" story.

Military signals are encrypted with rapidly changing codes. If this system has truly been hacked then UAVs are the least of our concern.

Besides, there's no reason a UAV couldn't ascertain with a reasonable degree of accuracy where it is - in almost unblockable fashion.

In WW2 a V2 missile just needed a couple of gyroscopes and a timer, and it could navigate with enough precision for devastating effect. A UAV could know where it is with a reasonable degree of accuracy just using a simple compass, airspeed indicator, and timer - just like aircraft navigators did in the good old days. Other techniques could be triangulation techniques - on any number of classified sources. And terrain mapping. You can't block everything - especially if your enemy doesn't know you are even there.

If contact is lost to the ground, it could be programmed either to return to base, or circle where it is (depending whether its present location is considered hostile, fuel available, etc).

5 months ago in reply to robertmeerdahl

Like

**robertmeerdahl**

not hacked, but Joe below had the best explanation of the theory:

"enough with the hacking bullshit, they didn't hack it, if you read what is speculated they jammed the control signal and the military GPS signal, then spoof the civilian GPS signal, which Lockheed thought for some reason would be a good idea to fall back on instead of ignoring it consider the civilian signal is broadcasted all over the world without encryption and using its INS to at least get it back over the border."

it should default to INS after losing control signal and military GPS, but was there a flaw / feature that caused it to check first for civilian GPS before INS and rely on that? who knows, but possible

it is also possible, although unlikely, that we intentionally sent in a flawed UAV for them to study & copy, to mess with their research program

5 months ago in reply to Nathan Schultz

Like

**Guest**

*Comment removed.*

5 months ago in reply to robertmeerdahl

Like

**tomwhite**

When it comes to propaganda, neither side seems entirely trustworthy. Is it inconceivable to you that the Iranians may have actually hacked that UAV?

5 months ago in reply to Guest 3 Likes

Like

**Joe Loiacono**

enough with the hacking bullshit, they didn't hack it, if you read what is speculated they jammed the control signal and the military GPS signal, then spoof the civilian GPS signal, which Lockheed though for some reason would be a good idea to fall back on instead of ignoring it consider the civilian signal is broadcasted all over the world without encryption and using its INS to at least get it back over the border.

I honestly think, if this is how it happened it was due to lack of creativity thinking at Lockheed, and not so much our equipment crap out or getting hacked.

I believe it just malfunctioned and crashed, and the Iranians were lucky enough to find it, either way if it was done, they loss all tactical advantage they just had and the US will quickly patch the security hole.

5 months ago in reply to tomwhite 2 Likes

Like



**Peter Simpson**, Real Computers have switches and lights.

Perhaps. For now.

And Iran is more like 2d world, maybe 1st world.

5 months ago in reply to robertmeerdahl

Like



**Joe Loiacono**

maybe 7% of Iran is 1st world and that's largely along the coast in the South and in the capital, the rest of Iran looks a lot like Pakistan.

5 months ago in reply to Peter Simpson 2 Likes

Like

**R P Bird**

The large urban areas are thoroughly modernized and, by many reports, pro-Western. But large areas of the country are





undeveloped and that's where most of the political strength behind the regime comes from.

5 months ago in reply to Joe Loiacono 1 Like

Like



**Joe Loiacono**

Most of Iran educated people realize the truth, its only the farm peasants that can't read or write that just buy spoon fed propaganda. Much like in this country.

I feel for the Iranians, they were so close they could taste it, it just came as such a shock to everyone in the international community and the IRG/protestors themselves, no one was prepared for the Green revolution and unfortunately the US missed it's chance to do what we was done in Libya.

I don't think we will get another chance, but there was a few days when we all though they would, tough up and ride it out like the Syrians are now, the truth is the Iranians are very similar to the US in that sense they didn't have the stomach for internal class war, which is what a civil war in Iran would look like, it would be class based and less of a religious based as it was in Iraq.

Some people say that the Iraqi elections were the spark that triggered the Arab Spring, but in truth I think it was these events the days leading up to and during the Green Revolution riots that let the rest of the Arab world think they could do it, so could we.

5 months ago in reply to R P Bird 1 Like

Like



**Daniel Warren DuPre**

Exactly how many illiterate farm peasants are there in this country?

5 months ago in reply to Joe Loiacono 1 Like

Like



**The Shambolic Skeptic**, McDonnell Douglas F-4 Phantom

Correct

5 months ago in reply to R P Bird

Like



**boobabloo**

You idiots don't even know what the phrase means. It was a first world country up to 1980, meaning it was allied with the United States. Second world was USSR. Third world were the unaligned countries.

5 months ago in reply to Peter Simpson 1 Like

Like



**Joe Loiacono**

Yes had the Iranians not decide to return to the 14th century in 1979, the US would have cemented a military alliances with Iran, and much of the drama in the Middle East would have been avoided.

In another generation we get back to that point, but sadly I think it will take a internal revolutionary or a military intervention to unseat the mullahs.

But it will be up to the Iranians to decide it for themselves. Despite the conspiracies the US really isn't interested in the oil, they are interest in the consumer markets, Iran's 75 million people are one of those markets which are untapped in the eyes of US business.

What i think pisses them off so much is their woman would rather wear western dresses and bluejeans then hejabs and chadors and watch TV instead of read the Koran, and they just can't wrap there heads around it.

5 months ago in reply to boobabloo 4 Likes

Like

**Soylent Green Is People**

Maybe 1st world? Sure, if you're comparing them to North Korea.



5 months ago in reply to Peter Simpson

Like

**Happeh**

So how much longer before they start slaughtering all of us like in "The Terminator"?  
10 years? 20?

5 months ago 1 Like

Like

**Ken**

Somewhere, there is a John Connor that will teach us how to fight back when the machines decide we are the enemy.

5 months ago 1 Like

Like

**marc sobel**

You know, a lot of the problem with these drones is in the ground stations personnel being forced to do a lot of mundane things, the old weeks of boredom and a few seconds of panic. Why not set up a distributed application with a lot of the processing on the drones, so the work load could be shifted from one drone to another and relatively little in the human element. You know, it could become  
Defense network computers. New... powerful... hooked into everything, trusted to run it all. [it could get] smart, a new order of intelligence

That would save a lot of money.

5 months ago in reply to Ken

Like

**Rob Sullivan**, Like all proud gay males, I'm always on my knees.

Sarah Connor? BLAM!!

5 months ago in reply to Ken

Like

**David Derus**

Bigger news 2/3 of the US warplanes are made out of organic material! Pterodactyls any one?

5 months ago 1 Like

Like



**Parazo**

Well, at least you didn't say "flying dragons like that in avatar"=)

5 months ago in reply to David Derus

Like



**R P Bird**

With the massive increase in drone use and the near-term advent of the UCAV, the F-35 program's making less and less sense. It might be a better use of our money to hold off on a trillion-dollar program for aircraft that might literally be obsolete before the procurement's even complete.

5 months ago 1 Like

Like



**BillCornelius**

they sell well though

5 months ago in reply to R P Bird

Like

**Pablo**

incorrect information yet again about RPAs... they are not "robots". they are manned like any other aircraft, the cockpit has simply been removed from the aircraft and placed on the ground. so the human pilot still flies it, just from a cockpit not in the airplane. and the reason having the cockpit on the ground isn't a bad idea, is it removes the systems required to have a man in the aircraft, ei ejection seat, oxygen system, pressurization system, instrumentation etc. weight savings and/or room for other systems required for the link.

it also means if an aircraft is shot down, we don't have to spend money or risk more lives on a search and rescue mission. and the aircraft can stay airborne for longer since it's not limited by human needs for food, sleep, and using the bathroom more than 3 or 4 piddle packs worth. the pilots flying from the cockpit on the ground can be swapped



out to get food, sleep, etc without having to land the plane. makes a difference. aircraft can also be designed that aren't limited by human G load tolerance. quite an advantage when going up against an adversary aircraft which does have limited G load because the pilot is in the cockpit on the plane. these aircraft particularly the MQ-1 and -9 that everyone is referring to as "robots" or "drones" won't fly, navigate, turn on a camera, or launch a weapon unless a human makes a control input from the cockpit on the ground just as they would from the cockpit of an aircraft with the cockpit in the plane. it's all the same, the only difference is the physical location of the pilot in the cockpit making the control inputs to the aircraft. the RPAs, the cockpit is on the ground. only difference... that's it. just like an A10 or F16 is controlled, but the cockpit, with a pilot in it, is on the ground, and a datalink is maintained with the aircraft. an encrypted datalink. too many people are eating up this robot mumbo jumbo. the media and hollywood is doing a horrible job portraying the truth about how these airplanes are operated. the many advantages in cost cuts from not needing search and rescue for a downed pilot, the time aloft, the deterrence factor for the enemy to suddenly not have as much leverage if he shoots down a RPA plane and doesn't kill a pilot, the cost savings in our pilots not having recover from injuries sustained during ejection, all put together is the reason why the pentagon loves these things. stay informed and think logically. movies and mass media is a very uninformed source of facts about these aircraft.

5 months ago 1 Like

Like



**keyse2s**

I for one look forward to our robot fighters being shot out of the sky en mass by Spectra.

5 months ago 1 Like

Like



**Parazo**

In some part of my mind, I hope this statistic was compiled by sending the recipient pilots a questionnaire asking if they were robot or human=)

4 months ago

Like

**Appleitical**

Maths fail.

"Barely seven years later, the military has 7,494 drones. Total number of old school, manned aircraft: 10,767 planes."

Total Number of aircraft:  $7494 + 10767 = 18261$

Percentage of all aircraft that are drones:  $(7494/18261)*100 = 41\%$

31% would mean that there were more than 24174 aircraft.

You can see the percentage is wrong just by looking at the pie chart on page 9 of the report.

4 months ago

Like



**Occupy Command**

Whatever you pilots do from your land-cockpit... becareful and keep ur locations secret. Imagine you could do it from home! :x

4 months ago

Like



**Belden Erhart**

They are flying around areas of the country depending on the mission. "Somebody's watching you,"

by Sly & the Family Stone a succinct prophesy. Fear total spectrum dominance coming. Someplace, sometime, your phone,cpu, tv will be kaput for no good reason...

4 months ago

Like



**Sesli Sohbet**

very good... Thanks you very much !

5 months ago

Like



**kyoshi munara**

Now I see why the Air Force wanted to corner the market in drones several years back.

5 months ago

Like

**D G**

The Air Force wants to control everything they can their hands on weather it be turboprop airplanes, UAVs, or "cyber defense."

And the reason is clear. They are scared.They are scared of not being needed anymore. I say give all their stuff back to the Army.

5 months ago in reply to kyoshi munara

Like

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