Peter Pomerantsev

Fake news stories. Doctored photographs. Staged TV clips. Armies of paid trolls. Has Putin's Russia developed a new kind of information warfare – fought in the 'psychosphere' rather than on the battlefield? Or is it all just a giant bluff.

The thing that Margo Gontar found easiest to deal with were the dead children. They were all over her computer screens – on news sites and social media – next to headlines that blamed the deaths on Ukrainian fascist gangs trained by Nato. It was early 2014, Crimea had just been taken over by soldiers who seemed Russian and sounded Russian but who were wearing no national insignia, and who Vladimir Putin, with a little grin, had just told the whole world were not Russian at all. Now eastern Ukraine was being taken over by separatists. Gontar was trying to fight back.

She could usually locate the original images of the dead with a simple Google search. Some of the photographs were actually from other, older wars; some were from crime scenes that had nothing to with Ukraine; some even came from movies. Gontar posted her research on a myth-busting website called StopFake, which had been started in March by volunteers like her at the journalism school of Mohyla University in Kiev. It felt good being able to sort truth from lies, to feel some kind of certainty amid so much confusion.

But sometimes things could get more complicated. Russian state-television news began to fill up with plump, weeping women and elderly men who told tales of Ukrainian nationalists beating up Russian-speakers. These witnesses seemed genuine enough. But soon Gontar would see the same plump women and the same injured men appearing in different newscasts, identified as different people. In one report, a woman would be an "Odessa resident", then next she would be a "soldier's mother", then a "Kharkiv resident" and then an "anti-Maidan activist".

In July, after the downing of Malaysia Airlines flight MH17 over eastern Ukraine, Gontar surveyed the internet, picking up shards of pro-Russian conspiracy theories. She came across the Twitter feed of an air-traffic controller who had spotted Ukrainian army jets following the plane, although she could find no evidence that the air-traffic controller actually existed. She found dozens of sites in Russian and English which, almost as one, suddenly argued that the US had shot down MH17 in a botched attempt to target Putin's personal jet. There were even claims, circulated by Russian separatist leaders in Ukraine, that the plane had been filled with corpses before it had taken off – a plotline lifted from the BBC TV series Sherlock. The stories were glaringly sloppy, as if their creators did not care about being caught and just wanted to distract from the evidence that Russian-backed militias had shot down the plane. Gontar began to wonder whether she was falling into the Kremlin's trap by spending so much time trying to debunk its obviously fake stories.

Before long, she found herself, and StopFake, becoming part of the story. Russian media had begun to cite StopFake in their own reports – but would make it look like Gontar was presenting the falsified story as truth, rather than debunking it. It was like seeing herself reflected in a mirror upside down. She felt dizzy.

At times like this, she had always reached out to western media for a sense of something solid, but this was starting to slip too. Whenever somewhere like the BBC or Tagesspiegel published a story, they felt obliged to present the Kremlin's version of events – fascists, western conspiracy, etc – as the other side, for balance. Gontar began to wonder whether her search for certainty was futile: if the truth was constantly shifting before her eyes, and there was always another side to every story, was there anything solid left to hold on to?

After months working at StopFake, she began to doubt everything. Who was to say that "original" photo of a dead child she found was genuine? Maybe that, too, had been placed there? Reality felt malleable, spongy. Whatever the Russians were doing, it was not simply propaganda, which is intended to persuade and susceptible to debunking. This was something else entirely: not only could it not be disproven, it seemed to vaporise the very idea of proof.

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Late last year, I came across a Russian manual called Information-Psychological War

Operations: A Short Encyclopedia and Reference Guide (The 2011 edition, credited to Veprintsev et al, and published in Moscow by Hotline-Telecom, can be purchased online at the sale price of 348 roubles). The book is designed for "students, political technologists, state security services and civil servants" – a kind of user's manual for junior information warriors. The deployment of information weapons, it suggests, "acts like an invisible radiation" upon its targets: "The population doesn't even feel it is being acted upon. So the state doesn't switch on its self-defence mechanisms." If regular war is about actual guns and missiles, the encyclopedia continues, "information war is supple, you can never predict the angle or instruments of an attack".

The 495-page encyclopedia contained an introduction to information-psychological war, a glossary of key terms and detailed flowcharts describing the methods and strategies of defensive and offensive operations, including "operational deception" (maskirovka), "programmatical-mathematical influence", "disinformation", "imitation", and "TV and radio broadcasting". In "normal war" the encyclopedia explains, "victory is a case of yes or no; in information war it can be partial. Several rivals can fight over certain themes within a person's consciousness."

I had always imagined the phrase "information war" to refer to some sort of geopolitical debate, with Russian propagandists on one side and western propagandists on the other, both trying to convince everyone in the middle that their side was right. But the encyclopedia suggested something more expansive: information war was less about methods of persuasion and more about "influencing social relations" and "control over the sources of strategic reserves". Invisible weapons acting like radiation to override biological responses and seize strategic reserves? The text seemed more like garbled science fiction than a guide for students and civil servants.

But when I began to pore over recent Russian military theory – in history books and journals – the strange language of the encyclopedia began to make more sense. Since the end of the cold war, Russia had been preoccupied with the need to match the capabilities of the US and its allies. In 1999, Marshal Igor Sergeev, then minister of defence, admitted that Russia could not compete militarily with the west. Instead, he suggested, it needed to search for "revolutionary paths" and "asymmetrical directions". Over the course of the previous decade, Russian military and intelligence theorists began to elaborate more substantial ideas for non-physical warfare – claiming that Russia was already under attack, along similar lines, by western NGOs and media.

In 2013 the head of the General Staff of the Armed Forces of the Russian Federation, Valery Gerasimov, claimed that it was now possible to defeat enemies through a "combination of

political, economic, information, technological, and ecological campaigns". This was part of a vision of war which lay not in the realm of physical contact but in what Russian theorists described as the "psychosphere". These wars of the future would be fought not on the battlefield but in the minds of men.

Disinformation and psychological operations are as old as the Trojan horse. But what distinguished the Kremlin's approach from that of its western rivals was this new stress on the "psychosphere" as the theatre of conflict. The information operation was no longer auxiliary to some physical struggle or military invasion: now it had become an end in itself. Indeed, as the Russian encyclopedia for its practitioners concluded: "Information war ... is in many places replacing standard war."

The idea was clear enough. But what could "invisible radiation" really achieve? Was it simply an attempt to put a hard edge on what the Americans call "soft power", conducted through cultural outreach and public diplomacy? Or was it really some new form of war – one that could outfox Russia's enemies without firing a shot?

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Towards the end of last year, I flew to Estonia, the tiny Baltic country – population 1.3 million – that sits 150km west of St Petersburg. After the Russian annexation of Crimea in March 2014, there had been much talk that Estonia could be next in line. ("Today Crimea: Tomorrow Estonia?", as a headline in the Spectator put it.) A few months before my visit, President Barack Obama had jetted to the capital Tallinn to make a public pledge of America's commitment to the country's security. "The defence of Tallinn and Riga and Vilnius is just as important as the defence of Berlin and Paris and London," Obama said. "So if, in such a moment, you ever ask again, who'll come to help, you'll know the answer: the Nato alliance, including the armed forces of the United States of America, right here, present, now."

As Toomas Ilves, the president of Estonia, walked me down a long corridor in his Tallinn residence, he pointed out portraits of the men who led the country during the country's first period of independence – between the fall of the Russian empire in 1917 and its occupation by the Soviets during the second world war. They had not met happy fates: "This one was shot, this one was disappeared – apparently killed – this one was deported," Ilves said as we passed

each picture.

Ilves was dressed in his trademark tweeds and bow tie, a counterpoint to his mission to make Estonia the most digitally progressive country in Europe. The government has declared internet access a human right; citizens can vote, get medical prescriptions, deal with taxes and bank electronically and pay for parking with a mobile phone. A new school programme requires all pupils to learn to code from the age of seven. Ilves, who probably tweets more than any other head of state, peppers his conversations and speeches with references to the latest technology.

This "e-Stonia" project is practical – a search for an economic niche – but also symbolic. It is a way to tear away the country from its Soviet stereotype as Moscow's backward province. That break with the past seemed final when Estonia joined Nato in 2004 – a moment that was meant to mark the emergence of a new digital Estonia on the international stage, free forever from Russian coercion.

Since Soviet times, every year on 9 May, which is known as Victory in World War Two Day, Russian nationalists and war veterans living in Estonia had long gathered to celebrate in the centre of Tallinn, at a statue known as the Bronze Soldier – a large Aryan-looking hunk who commemorated Soviet victory over the Nazis. Around a third of Estonians are Russian, or at least primarily Russophone; the vast majority of these are descendents of Russians who were relocated from the Soviet Union after the second world war, while thousands of Estonians were being deported to the gulag and scattered across the USSR. Between 1945 and 1991, the number of Russians in Estonia rose from 23,000 to 475,000. But after the collapse of the Soviet Union, new citizenship laws required Russians who had arrived after 1945, and their descendents born in Soviet Estonia, to pass Estonian language tests to gain citizenship. Tensions began to grow. Many of the Russians do not see themselves, or their parents, as colonisers: according to the official Kremlin line, Estonia "voluntarily" renounced its independence in 1941. Some felt like second class citizens in the new Estonia: why weren't prescriptions available in Russian? Why couldn't Russophone towns have street signs in Russian?

When Russian nationalists would gather at the Bronze Soldier to sing Soviet songs and drape the statue with flags, Estonian nationalists began to organise counter-marches at the same spot. In 2006, one Estonian nationalist writer threatened to blow the statue up. In March 2007, the Estonian parliament voted to move the statue to a military cemetery – officially, for reasons of keeping the peace. But Russian politicians and media responded furiously. "Estonian leaders collaborate with fascism!" said the mayor of Moscow; "The situation is despicable," said the foreign minister. The Russian media nicknamed the country "eSStonia". A vigilante group

calling itself the Night Watch camped around the Bronze Soldier to protect it from removal.

On the night of 26 April, as the statue was about to be removed, Russian crowds started throwing bricks and bottles at Estonian police. Riots broke out. There was mass looting. One man died. Russian media, which are popular in Estonia, reported that he was killed by police (he was not), that Russians had been beaten to death at the ferry port (they had not), that Russians were tortured and fed psychotropic substances during interrogation (they were not).

The next day, employees of the Estonian government, newspapers and banks arrived at work to find their computer systems down, crippled by one of the largest cyber attacks to date. E-stonia had been taken offline.

Today, many in Estonia are convinced the whole affair was coordinated from Moscow. Yet nothing can be proven. After the cyber-attack, a nationalist Russian MP and spin doctor, Sergey Markov, told the media his assistant had coordinated the attack with the help of "patriotic hackers" – but said that he was working independently of the Kremlin. The Estonian security services claimed to have observed meetings between the Night Watch vigilantes and the staff at the Russian embassy. But proving the unrest had been coordinated by the Kremlin was a different matter. All that could be said for sure was that someone wanted the Estonian government to know it was not as safe as it thought. But safe against what? "Sometimes we wonder whether the point of the attacks is only to make us sound paranoid and unreliable to our Nato allies," Ilves suggested. "And thus undermine trust in the alliance."

A guiding tactical concept in the Russian information war is the idea of "reflexive control". According to Timothy L Thomas, an analyst at the US army's Foreign Military Studies Office, and an expert in recent Russian military history and theory, reflexive control involves "conveying to an opponent specially prepared information to incline him voluntarily to make the predetermined decision desired by the initiator of the action". In other words, to know your adversary's behaviour patterns so well you can provoke him into doing what you want.

One well-known example during the cold war would take place at the annual Red Square army parades, when the USSR would show off its nuclear weapons and ballistic rockets to the world. The Soviets knew this was one of the very few moments western analysts would be able to see their arsenal, and they would plant fake nuclear weapons with exceptionally big warheads meant to send the west into a panic about the power and innovation of Soviet weaponry. "The aim," writes Thomas, "was to prompt foreign scientists, who desired to copy the advanced

technology, down a dead-end street, thereby wasting precious time and money."

In Soviet times, "reflexive control" had been the subject of extensive academic study, pioneered by VA Lefebvre, a mathematical psychologist who, according to Thomas, "described reflexive control within the context and logic of a reflexive game". In the early 2000s, a biannual magazine dedicated to the subject was published by the Russian Institute of Psychology, with articles about the "algebra of conscience" and "reflexive games between people and robots".

Applied to the landscape of information warfare, "reflexive control" means that the Estonians are kept guessing about the Kremlin's intentions, and paralysed by inability to formulate a response to provocations whose origins and aims are impossible to determine – whose aims, in fact, may simply be to induce an overreaction. "When Russian politicians make threats about being able to conquer Estonia, does that mean they would actually invade?" asked Iivi Masso, Ilve's security adviser when she joined us at the president's residence. "Are they just trying to demoralise us? Or do they want western journalists to quote them, which will send a signal to the markets that we're unsafe, and thus send our investment climate plummeting?"

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A few months after my visit to Estonia, I attended a Nato policy seminar in Kiev that was intended to address these new challenges. The seminar was held in what looked like the ballroom of a grand hotel, with stucco columns and mirrored ceilings. At the head of the room was a small Cornishman, rocking backwards and forwards in front of a PowerPoint presentation. This was Mark Laity, a former BBC defence correspondent who is now the head of strategic communications for Nato.

Projected on a large screen behind Laity was a flowchart that explained the building blocks of a narrative: how conflict leads to the desire for resolution, which is played out through "actions, participants and events". It was the kind of thing students are taught in the first year of film school, or in undergraduate courses on literary theory. The presentation stressed that the world should be seen as a "system of stories" inside a "narrative landscape". For the attendants, mainly military men and civil servants, this was a new way of looking at the world. They took notes studiously.

Nato remains undefeated on the battlefield, but Laity wanted to make clear that the "narrative landscape" represented a new and unfamiliar battleground – one in which Nato no longer appeared to hold a clear advantage. This realisation has dawned more clearly over the past year, as the Kremlin appears to be trying to test the limits of the cold war alliance, in sometimes subtle, sometimes overt ways. The semantic lock that seals the North Atlantic treaty is Article 5, which states that a military attack on one Nato nation is an attack on all. Obama cited Article 5 in his Tallinn speech, describing it as "crystal clear". But what if you could undermine this principle without firing a single bullet? Would a cyber-attack on Bulgaria by unknown actors sympathetic to Russia invoke Article 5? What about a tiny insurrection in a Baltic border town, organised by locals with suspicious ties to Russian security services? Would all the countries in Nato go to war to keep Estonian electronic banking online?

Since the beginning of the conflict in Ukraine, the Kremlin seems to have sought to tease and provoke its western neighbours by more conventional means as well. (Russia, of course, insists the reverse is true.) In 2010, one Russian warship was spotted in Latvian waters; in 2014, the total was 40. Latvian aeroplanes were scrambled five times in 2010; in 2014 that figure was over a hundred, as Russian planes swooped into Baltic airspace. Meanwhile, in February, Russian bombers were spotted off the coast of Cornwall.

All these manoeuvres put Nato in a double bind. Not reacting would show the organisation to be pointless. Thus the necessity of Obama's trip to Tallinn, or of British defence secretary Philip Hammond's tough words, in March, that "Russia has the potential to pose the single greatest threat to our security". But, on the other hand, the Kremlin knew perfectly well that Nato had to respond. What if it does not take more than that to make Nato look impotent?

If the battle shifts to the "psychosphere", Nato's military supremacy is irrelevant – indeed it becomes an achilles heel as the alliance's very might makes it more unwieldy and more dramatic to subvert. Last winter, I met with Rick Stengel, the US undersecretary of state for public diplomacy, and one of those responsible for formulating the American response to Russia's ambiguous information operations. Stengel, a former editor of Time magazine, works out of the Washington office from which George Marshall once designed the reconstruction of Europe after the second world war. On weekends he commutes home to New York City, where I met him at his local coffee shop on the Upper West Side.

"At Time, my motto was, 'We explain the world to America, and America to the world,'" Stengel told me. He sees his new job as the application of this philosophy to a larger stage, one where

patient storytelling, based on identifiable facts, can still win the day. Since the annexation of Crimea, Stengel's team have compiled lists of facts, which it circulates on social media, in an attempt to contradict Kremlin disinformation – like an official US government version of the Ukrainian StopFake website. Stengel calls it "a reality check to the Kremlin line".

His attentions are not confined to Russia: the State Department has also launched a Twitter campaign against the Islamic State, called "Think Again Turn Away", which aims to deliver "some truths about terrorism" in order to discourage recruits from joining Isis. (Given Isis's high recruitment rate, it is not entirely clear that this is meeting with much success.) It is an approach steeped in the premises of liberal journalism: if Stengel presents better arguments and stronger evidence, he believes he should win the debate.

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At the time that I met Stengel in November, posters for RT – Russia's state-run international news channel – were plastered all over Manhattan. It had just launched in the US, with an advertising campaign promising an alternative view to the American mainstream media. "Before I was sworn in, I had never watched RT," Stengel told me. The channel is funded by the Kremlin, with an estimated budget of $230m per year, and services in English, German, Serbian, Spanish and Arabic. RT claims to have a "global reach" of 700 million people, and says its video clips have received over 2bn views online, making it "YouTube's leading news provider".

The mantra of Margarita Simonyan, who heads RT, is: "There is no such thing as objective reporting." This may be true, but RT's mission is to push the truism to its breaking point. At a time when many in the west have lost faith in the integrity and authority of mainstream media organisations, RT seems dedicated to the proposition that after the notion of objectivity has evaporated, all stories are equally true. In America, where polls show that trust in the media has never recovered to levels seen before the 2003 invasion of Iraq, RT's posters showed George W Bush celebrating "Mission Accomplished" – with the tag line: "This is what happens when there is no second opinion." It was hard not to nod in agreement with the message.

The posters, however, do not offer any argument for trusting Putin's TV network; their main message is that you cannot trust the western media. It is all too easy to show that RT's

coverage is rife with conspiracy theories and risible fabrications: one programme showed fake documents intended to prove that the US was guiding the Ukrainian government to ethnically cleanse Russian speakers from western Ukraine. Another RT report investigated whether the CIA had invented Ebola to use as a weapon against developing nations. Presenters rarely challenge the views of "experts" during discussions of subjects such as the Syria conflict – where Moscow has backed President Bashar al-Assad. One regular guest has suggested that the Syrian civil war was "planned in 1997 by Paul Wolfowitz", while another has described the death toll as "a joint production of CIA, MI6, Mossad".

The foibles of RT have been well-documented, not least by StopFake, but journalistic credibility does not seem to be what the network is striving for. If a commitment to the impossibility of objective reporting means that any position, however bizarre, is no better or worse than any other, the ultimate effect, which may be the intended one, is to suggest that all media organisations are equally untrustworthy – and to elevate any journalistic errors by the BBC or New York Times into indisputable signs they are lackeys of their own governments.

The conspiratorial flights of fancy that fill up RT's airtime are reminiscent of "active measures", the old-school KGB psy□ops tactics that the Soviet defector Oleg Kalugin described as "the heart and soul of the intelligence services". Departments dedicated to active measures did not seek to collect intelligence. Their aim, said Kalugin, was "subversion: to drive wedges in the western community, particularly Nato, and weaken the United States". A favourite tactic was to place fake stories, "dezinformatsiya", in international news outlets. One story from the early 1980s presented painstakingly concocted medical proof that the CIA invented Aids to kill off the African-American population.

Where once the KGB would have spent months, or years, carefully planting well-made forgeries through covert agents in the west, the new dezinformatsiya is cheap, crass and quick: created in a few seconds and thrown online. The aim seems less to establish alternative truths than to spread confusion about the status of truth. In a similar vein, the aim of the professional pro-Putin online trolls who haunt website comment sections is to make any constructive conversation impossible. As Shaun Walker recently reported in this newspaper, at one "troll factory" in St Petersburg, employees are paid about £500 a month to pose as regular internet users defending Putin, posting insulting pictures of foreign leaders, and spreading conspiracy theories – for instance, that Ukrainian protestors on the Maidan were fed tea laced with drugs, which led them to overthrow the (pro-Moscow) government.

Taken together, all these efforts constitute a kind of linguistic sabotage of the infrastructure of reason: if the very possibility of rational argument is submerged in a fog of uncertainty, there are

no grounds for debate – and the public can be expected to decide that there is no point in trying to decide the winner, or even bothering to listen.

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The mindset that the Kremlin's information warfare seems intended to encourage is well-suited to European citizens at this particular moment. In a recent paper called "The Conspiratorial Mindset in an Age of Transition", which looked at the proliferation of conspiracy theories in France, Hungary and Slovakia, a team of researchers from European thinktanks concluded that the "current period of transition in Europe has resulted in increased uncertainty about collective identities and a perceived loss of control. These are in turn the ideal conditions for the proliferation of conspiracy." Conspiratorial inclinations are especially rife among supporters of rightwing nationalist and populist parties, such as the Front National in France or Jobbik in Hungary – which support, and are supported by, Moscow. (Marine Le Pen admitted in November that the FN had taken a €9m loan from a Moscow bank owned by a pro-Kremlin businessman; she insists that the deal had nothing to do with her support of Putin's annexation of Crimea.) Some 20% of the members of the European parliament now belong to parties – largely on the far right – sympathetic to Moscow.

The significance of these parties has grown in tandem with the decline of trust in national governments. At moments of financial and geopolitical uncertainty, people turn to outlandish theories to explain crises. Was this the "invisible radiation" that the Russian information-psychological war encyclopedia had referred to? Once the idea of rational discourse has been undermined, spectacle is all that remains. The side that tells better stories, and does so more aggressively – unencumbered by scrupulousness about their verifiability – will edge out someone trying to methodically "prove" a fact.

Whatever else might be said of the Kremlin's information strategy, it is undoubtedly in tune with the zeitgeist: one that is also visible in America and Britain, where what Stephen Colbert memorably called "truthiness" can run roughshod over fact-based discourse.

"There are two possible approaches to information war," the encyclopedia states. The first approach "recognises the primacy of objects in the real world" and attempts to spin them in a favourable or unfavourable direction. The "more strategic" approach, it continues, "puts

information before objects". In other words, the encyclopedia seems to be saying that reality can be reinvented.

Russia is hardly alone in its exploration of these methods. In Asia, China has deployed a potent mix of psychological and legal warfare to strengthen its claims to hegemony over the South China Sea. A 2013 report called "China: The Three Warfares", prepared for the Pentagon by a group of scholars led by Cambridge University's Stefan Halper, describes the Chinese response to a standoff with the Philippines over a disputed shoal claimed by both countries, which involved economic sanctions, psychological intimidation (in the form of military ships sailing into Filipino waters) and a media campaign depicting Manila's behaviour as dangerously "radical". "Twenty-first-century warfare is guided by a new and vital dimension," writes Halper, "namely the belief that whose story wins may be more important than whose army wins."

"Journalists are taught to report both sides," Stengel told me with frustration. "When the Kremlin says there are no Russian soldiers in Crimea they have to repeat it. How do you combat someone who just makes stuff up?"

Maybe it was the jet lag, or the way darkness descends so suddenly over Manhattan in midwinter, but as I walked away from my meeting with Stengel, I couldn't help contemplating a vision of a future inundated by disinformation, where no argument could ever be won and no view had more authority than any other. But almost immediately, I caught myself: what if fears like mine were part of the game? In information-psychological war there are no clear victories, no flags to be planted and borders to be redrawn, only endless mind games in the "psychosphere", where victory might be the opposite of what you initially supposed. Is the purpose of RT, for example, to spread news, conspiracies and opinions? Or is its purpose to project an impression of Russian strength and confidence – which means that talking constantly about its brazen attitude only augments that perception?

I began to wonder whether the very idea of information-psychological war – with its suggestion that Russia had discovered a shadowy weapon for which the west has no answer – was itself a species of information warfare. Perhaps the encyclopedia, and talk of "invisible radiation" that could override "biological defences", was simply one more bluff – like the fake nuclear weapons that were paraded through Red Square in order to lead overeager western analysts down a hall of mirrors. And if this was simply a 21st-century update of that classic example of "reflexive control", inducing your enemy to do what you want him to – then, I wondered, was this essay, the one you are reading, part of the plan?

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• This article was amended on 9 April 2015 to fix a typo: the earlier version referred to 1915 where 1917 was meant.

Original article on The Guardian webpage .