In 1991, there were two kinds of images from the war of the Coalition Forces against Iraq that were new, that belonged to a visual category of their own.

The first shot shows a section of land, taken from a camera in a helicopter, an airplane, or in a drone—the name for unmanned light aircraft used for aerial reconnaissance. Crossing the center of the image are the lines marking the target. The projectile hits, the detonation overloads the contrast range, the automatic fade counteracts it; the image breaks off. The second shot comes from a camera installed in the head of a projectile. This camera crashes into its target—and here as well, of course, the image breaks off.

Since 1920 in the USA, shots filmed from a position not normally taken by a person have been called phantom shots; for instance, from a camera positioned under a train track. Images from the perspective of a person are called subjectives. We can therefore regard the shot from the perspective of a bomb as a phantom subjective.

The shots taken from a camera that crashes into its target—that is, from a suicide camera—cling to the memory. They were new and added something to the type of image that we may have heard about since the cruise missiles in the eighties, but didn’t know anything specific about. They appeared together with the term intelligent weapons,—that is, weapons that could recognize and hit a target on their own—connecting a rather glib idea of intelligence with an equally glib idea of subjectivity.

Animations as well, drawn or produced on a computer, frequently used perspectives that were difficult or even impossible for a camera to take; for instance, that of a bullet flying toward its target. Illustrated animation films therefore established a predominance over the filmed, photographic shot. Animated films became the means to make technological functions dynamically representable: thermal processes, biological functions, cross-sections of apparatuses.

In 1991, it was often said that images of approaching targets and detonations taken from surveillance cameras made war look like a computer game. What was meant was that war looked like a children’s game. The difference
between the serious and the playful, child and adult, has in the meantime become meaningless in this respect. Soldiers practice for war in visual worlds that the military has co-opted from the game industry and adapted for their own purposes. The US military had previously encouraged the games industry to generate images of a theater of war, of Afghanistan or Iraq.

Computer animations have by now become the standard. If 20 or 30 years ago they looked as if they were trying to replicate photographic representation, today they abound with self-assurance. The computer has been so thoroughly established as the primary medium that digital media is now considered superior to an original image from a photo or film camera. If a computer image leaves out a detail that film-photography reproduces, this is no longer considered a deficiency, but instead an ideal representation. A computer animation is like a reproach to a filmed recording for reproducing superfluous details, just as an industrial product is a critique of the irregularity of a hand-made object. The ability to reconfigure the framing and camera position of a computer image, that a figure in the image can react to something happening outside the image—that they can fall to the ground or shoot back when they’re shot at—more than compensates for the loss of a verifiable relation to the factual.

In the images from Iraq in 1991—those with the cross-hairs in the center—there are rarely any people to be seen. The battlefield is shown as deserted. If we look at a series of such images, we could imagine that war might continue after people have disappeared from the Earth: the agenda of war is executed by autonomous war machines.

The operational images of approaching targets and detonation usually show military targets such as barracks, bunkers, airfields: bridges also pass for strategic targets, even if they are in use by civilians. I remember, during the first Gulf War, a US military spokesman showing a clip at a press conference in which a car was quickly driving away from a bridge that had just been struck, and making a joke about it. The military archives today do not show images where vehicles can be seen, which would necessarily imply that people are present in the target area. It therefore becomes clear that making war and reporting war become a single project. The images that we get to see are created and controlled, militarily and politically. In film’s civilian life, it is common for production companies to make a documentary about a production alongside the primary film, tending to reserve the entire coverage of the product to themselves. In the case of television shows, there is hardly any difference at all between the primary and secondary images. Celebrities sell the exclusive rights to their weddings and the births of their children. In these cases a kind of image police is needed to prohibit monopoly-breaking reporting.

In the Iraq wars, there has similarly been an image police. In the first war, they worked according to a good-cop/bad-cop schema. On the side of Iraq, there was the bad cop who kept the reporter away from the battlefield through conventional, repressive means. This was done so that it did not become visible that the Saddam regime was able terrorize its own population and also that of defenseless Kuwait—although it could not organize an army that could at least provide the retreating soldiers with a minimum of protection, not to mention protecting the civilian population. The good cop of the USA, on the other hand, structurally excluded press photographers from the events by means of the “filming bombs,” as Theweleit called them—bombs that contained cameras, but no room for an independent reporter.

Iraq permitted a few chosen reporters to remain in Baghdad, including Peter Arnett of CNN. The green panoramas, amplified by residual light, came from him. Like Ernst Jünger had done in Paris during the Second World War, Arnett experienced the bombing of Baghdad from the roof of a hotel. Unlike Jünger, he was under a kind of house arrest during this. In both cases, however, this point of view imposed an aestheticized observation, that of a lone figure on the commander’s hill, but who is no commander. The few correspondents in Baghdad belonged to the tactical reserves of a somewhat contradictory strategy of the Saddam regime. On the one hand, the inferiority of the Iraqi side was supposed to remain concealed; on the other side, the inhumanity of the allied warfare was supposed to be denounced. There was a need for images of dead bodies, filmed close up, as many as
The first shots taken by a camera in a projectile are possible in one image. From 1942 and show the practice-landing of an HS 293 D on a shipwreck near Peenemünde, Germany. The images were broadcast by means of a transmitter to an accompanying aircraft, which had launched the bomb and then turned around. From the aircraft, the bomb was directed toward its target by means of a control stick that resembled what would later be the joystick. Since it was not possible until the 1950s to record electronic images, this sequence is probably the only remaining documentation of such an attempt. A technician used a Bolex to film it off the monitor. Although the HS 293 D was not used in the Second World War anymore, the miniaturization of the television camera is still a significant development. Unlike the rocket builders, the German television technicians did not continue their work in the USA, but in the West German television industry.

“We consider it immoral for weapons to be planned whose construction presumes the death of the combatant and in doing so, at least for our conceptions, draws the victim into automation. In Japan on the other hand, the task of the kamikaze pilot, crashing his airplane into an enemy battleship, is regarded as commendable. There are also torpedoes there directed by an accompanying pilot, which has nullified the Russian saying ‘The bullet is a blind fool’” (Ernst Jünger, Der Gordische Knoten, 1953).

“The bullet is a blind fool,” or as it goes in the German soldiers’ song: “Nun Ade lieb Luise, wisch ab Dein Gesicht/ Eine jede Kugel die trifft ja nicht” (“Now farewell dear Luise, wipe off your tears/ Not every bullet hits the target”). The images from the head of a projectile in 1991, together with the word from the “intelligent weapons” were so terrifying and so fascinating because bullets were no longer blind. Even in war, death is always the death of others. The pattern recognition and object tracking of the “seeing” bombs threatens to be infallible. Paul Virilio thought that these images were directed at us. What once sounded like a prophecy, has now been fulfilled.

During our research over several years, in only one case have we found something that comes close to the idea of intelligent weapons, that is, those that seek their target by processing images. Hardware in the Loop (HIL) is a device that can test the flight of rockets, and can automatically check the course and approach to the target. The apparatus, approximately as big as a car, has a wide degree of freedom and can pivot very quickly and precisely. In the center of the simulator is the rocket’s seeker head with a pivoting prism. Images are played to this seeker head in simulation of the landscape to be flown over. These are analogue images, taken during a real overhead flight: forests, groups of houses, and transportation structures. The seeker head goes through these overhead images and processes them. This processing is made visible with green and red guiding lines. The green lines represent something like a preliminary suspicion. The seeker program has discovered a constellation in the image that could be part of a pattern that it has already saved. The program draws a line in the image and continues looking for clusters of pixels that might make it possible to continue the line. If this is verified, when the outlines of a street intersection, bridge, or power line—which are registered as path markers—become visible, the figure is confirmed in red. The eye-automat has saved a handful of seeking-masks through which it scans the images. These image-processing apparatuses work with a clumsiness reminiscent of robot arms undertaking a new task. Every movement is divided into sections, pausing after each partial gesture. This may be precise, but without any elegance. Just as mechanical robots initially took workers in the factory as their model, surpassing and displacing them shortly afterwards, so the sensory automatists are meant to replace the work of the human eye.

Beginning with my first works on this topic (“Eye/Machine” 2001), I have called such images, which are not made to entertain or to inform, “operative images.” Images that are not simply meant to reproduce something but are...
instead part of the operation. This term can be traced back to Roland Barthes. In *Mythologies*, he writes in a theoretical afterword: “Here we must go back to the distinction between language-object and meta-language. If I am a woodcutter and I am led to name the tree which I am felling, whatever the form of my sentence, I ‘speak the tree,’ I do not speak about it…. But if I am not a woodcutter, I can no longer ‘speak the tree,’ I can only speak about it, on it.” For Barthes, this text is an affirmation of his own practice. He wanted to belong to the revolutionary left without having to take up the Stalinist line, as the CPF (Communist Party of France) was then demanding of intellectuals. Moscow persecuted the kind of semiotics represented by Barthes with particular hatred, since it did not refer back to anything foreign, but to formalism, the ostracized Russian avant-garde theory; the only thing theoretically new, according to Foucault, to come out of Communism.

Nothing compels us anymore to be radical materialists and to account for materialist rules of effect in language and thought construction. If we are interested in images that are part of an operation, this more likely comes from the flood of non-operative images, from the tedium of meta-language. Tedium of the everyday practice of re-mythologizing everyday life, and the multiple and many-channeled program of images that confirm the most banal thing: that the world is as it is.

Images from surveillance cameras are, as a rule, never viewed by human eyes. They are recorded to survey a process. They are therefore considered so insignificant that they are not stored, and the recording medium is erased and reused. Only in exceptional cases are the images observed and archived. Such images are a provocation to artists, in that they are not authorial and intentional, but do have a certain beauty that is not calculated. Showing something in art that comes close to the unconsciously visible was outperformed in 1991 by the US military leadership when they made surveillance images the main representation of war reporting.

The materialists today are authors like Heidi and Alvin Toffler. They do not belong to an intellectual circle in Paris but to a think tank in Washington, centered on the Pentagon. In their widely read mass-market books *The Third Wave* (New York, 1980) and *War and Anti-War* (New York, 1993), they assume that there is a necessary correspondence between technologies of production and of destruction, the manufacture of goods and war. They compare war and industry in the same way that one would compare, for instance, agriculture and industry. In this axiomatic view of evolution, war is a field of activity like any other.

We received a short, computer generated promotional tape, sent to us by the Swiss weapons manufacturer Oelikon-Bührle: two fighter jets in front of a blue sky, over the sand colored desert. One of them shoots out an orange colored cruise missile, which, located by a dark green radar, is in turn shot at from an anti-aircraft cannon, and finally destroyed. There are no people to be seen. The synthetic desert landscape is the right place to imagine a pure war in which every weapon is reacted to by a counter-weapon, which is then reacted to by a counter-counter-weapon. This succession of products, where the new annihilates the previous, is a cultural model. The Cold War made it possible, over a forty-year period, to write off rockets, tanks, aircraft, and ships that were materially unused, but were morally already worn out–sometimes even before they were completed.

The products of the IT industry actually last longer than war devices, so in order not to clog the market, moral campaigns are led to represent them as obsolete, making it possible to replace them with new ones. The increasing importance of the production of informational goods, tending to be immaterial, is supposed to have been the reason for the sudden demise of the Soviet Union. The rival went under, but not only because it was weaker. It was dissolved because it was no longer needed. Even competition as the motor of obsolescence and renewal is no longer used in the IT industry.
The arms industry, on the other hand, has difficulty justifying new products these days. It’s lacking the enemy to produce the counter-weapons that make the counter-counter-weapons necessary. The process of delivering surplus weapons to an ally, which then later secedes and becomes the enemy—such as was the case with Afghanistan and Iraq—can hardly be systematized. I’m speaking here from the phantom perspective of war, from an imagined war-subjective. In Bertolt Brecht’s *Mother Courage and Her Children*, it goes as follows: “War always finds a way.” Barbara Ehrenreich understood this sentence to mean that war is unimaginably inventive when it comes to its own survival[2]. Even if no human being wanted it anymore, it would still attempt to mutate into an automatic war on a deserted battlefield. In the rich countries, most people do not want war. War is as unnecessary as the gold standard behind currency.

The idea of a deserted battlefield on which war battles on—a bit like the toys that wake up while the children are sleeping—reminds us of the emptiness of production facilities. In the automobile industry, for instance, we only see people working where there’s no room for another robot. In connection with production and destruction, the following analogy seems to apply: while in the rich countries the factories are deserted of people, in the poor countries more and more people are performing mechanical, manual labor. And war is increasingly taking place in the poor countries.

In the second Iraq war in 2003, the images from the heads of projectiles were hardly shown at all. We also didn’t hear anything more about “intelligent weapons,” only about *precision guided weapons*. Because of non-disclosure, it is difficult to prove—although everything points to it—that there were no “intelligent weapons” in either the first or in the second Gulf War, that is, weapons that could recognize and hit a target on their own. That the idea of an “intelligent weapon” was at the very least not contradicted was more than the typical strategy of deceiving the enemy. It was about making the idea of seeing bombs so common that they only needed to be ordered, developed, and paid for without critical questions.

There are as few images that would not be directed at a human eye as there were “intelligent weapons.” A computer can indeed process images, but it needs no real images from which to determine the veracity or the falsity of what is shown. For the computer, the digital representation is enough. The axe of Roland Barthes’ woodcutter is also no purely reified instrumental reason; but a tool does not only speak to the substance, it also speaks to the human senses. We can, nonetheless, differ in degree
between the object-linguistic images and the meta-
linguistic ones, just as machine aesthetics can be
distinguished from the aesthetics of commodities.
If a program in a sequence of images only draws in
what it is looking for—whether it is colored lines as
markers in an aerial landscape or the baseboard in
the hall of a research institute used to orient an
autonomous robot—then we’re seeing a kind of
disavowal of what is being marked. The lines
proclaim that in this image, only what is marked
can be seen. Like any disavowal, this also creates a
strong counter-reaction.

My interest in aerial images from the first Gulf War
can be traced back to the work for my film Images
of the World and the Inscription of War (1988). At
core, it is about aerial shots of the concentration
camp at Auschwitz, made in 1944 from US
reconnaissance planes. These images were actually
meant to survey nearby targets, and factories that
produced synthetic fuel and rubber, but they also
catch sight of the camp connected to them. Only in
1977 was it discovered that a group of detainees
can be made out on its way to the gas chambers,
another standing in line for registration. The
commandant’s house can also be identified, the
shooting wall, and even the slots in the roof of the
gas chambers through which the Cyclon B was
introduced. At the time, these images struck me as
an appropriate means of representing the camp,
because they maintained a certain distance from
the victims. They seemed more appropriate than
the images shot close up: the skeletons on the
ramp, starving detainees in the barracks, piles of
corpses being shoved away by bulldozers. Such
images were symbolically doing violence to the
victims, yet again, and even the best intentions still
make use of them in this way. Over the aerial
images of the camps, in which individuals are
barely bigger than a dot, I wrote the commentary:
“The photograph’s graininess provides them with
some protection of their humanity.”

Today it is all too clear that these images, captured
from a distance, did not help to spare the dead a
further humiliation. There are rarely good reasons
for looking at images of mutilated victims. It is part
of the nature of the thing that the images of a
terrible event that are taken from a distance also
allude to the lack of distance, indeed even by
presenting themselves as their opposites. It cannot
be avoided that in the attempt to be philanthropic,
barbarism occurs.

Already in 1969, in my film on napalm and
Vietnam, Inextinguishable Fire, I didn’t want to be
the one to produce a terrible image that could not
then be contradicted. I wanted, at the very least, to
make a symbolic advance effort, and so I gave a
small introductory speech in which I cited the
report of a Vietnamese man who had been hit by a
napalm bomb. At the end, I put out a cigarette on
the back of my wrist: “A cigarette burns with 400
degrees, napalm with 3,000.” My act was about the
here and now. Vietnam was far away and the
pointed contact with the heat was meant to bring it
closer. The small act was meant to disturb the
image, was directed against the cinematographic
apparatus, and indeed confirmed, as an unedited
sequence, the testimonial power of the film image.

In a remote archive in Florida, we ran across a
promotional film from Texas Instruments: B-52
bombers in slow motion, bombs falling from their
chutes—the opposite of an operative image—an
image that was meant to instill fear and entertain,
preferably both; accompanied by the Valkyries’
music, which alludes to Coppola and only
unwittingly to Nazi war newsreels; a commercial
making the economic argument that it is cheaper
to drop computer-guided bombs, and cheaper still
to use laser guided precision missiles. A productive
misreading, saying that very few bombs have any
slump in sales that has to be compensated for. If
there is a relation between production and
destruction, it is also true that it is not so much
hardware that needs to be disposed of, as it is the
controlling and targeting. But selling more control
depends precisely on differentiating between
friend and foe. The economy, at least that of the
weapons manufacturer, demands war for
humanitarian aims.

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REFERENCES
