The Weapons of Hyperconflict

In all ages, the outcome of wars has been decided by possession of new arms and by the price attached by each belligerent to the lives of its own soldiers. In their time, the archers at the battle of Crécy, the tanks of the First World War, and the atomic weapons of the Second World War decided the fate of battles.

In all ages, new weapons have appeared, at once the products and the midwives of civilian technologies: the propeller was born with the lever, firearms with mechanization, tanks with the automobile. Inversely, it was in the armed forces that the telegraph, the radio, energy, the nuclear weapon, and the Internet were born alongside many other technological innovations.

In the next fifty years, new technologies will be developed by armies before being used on the civilian market. For defense or police needs, governments will finance the research needed for perfection of the technologies of hypersurveillance and self-surveillance. Inversely, these technologies will then have civil applications.

In fact, these future weapons will essentially be founded on the concept of surveillance. Armies will at once develop digital infrastructures of nomadic ubiquity, surveillance systems for suspect movements, the means of protecting strategic installations, and a network of economic intelligence. Robots (concealed in enemy territory) and drones (flying robots) will relay data, detect chemical or biological agents, and serve as scouts ahead of infantry detachments faced with mined areas or blind spots. Software simulating battle will be permanently updated as close as possible to the battlefields.

Furthermore, new combat units will be integrated with the means of simulation, surveillance, and striking. New networks and instruments of nomadic ubiquity will allow combatants to stay connected and simulate every kind of situation. Intelligent clothing will serve to manufacture new uniforms; new materials will make it possible to design new shields. Three-dimensional simulation technologies will help prepare and carry out combat missions, while robots will work as substitutes for real fighters. Electronic systems (e-bombs) will be able to destroy communications grids and leave an opposing force blind and deaf.

Marines will play a new part in the fight against traffickers, in emigration surveillance, and in the protection of strategic straits. Fighter aircraft will no longer be as useful as today, and will lose their influence over staff thinking and military budgets.

New, so-called conventional weapons will be all the more necessary as unconventional weapons (nuclear and other) become more and more widely disseminated.

The five great powers authorized by treaty to possess nuclear arms will deploy for a long time to come more than five thousand nuclear warheads, most of them aboard submarines and launched by ultra-precise ballistic missiles. Among these five powers, some will reserve for themselves the possibility of using tactical nuclear weapons — in other words short-range weapons destined for operational use and no longer as instruments of deterrence. These could even be miniaturized to the point where they would be usable by a single combatant, as was already the case during the cold war. India, Israel, and Pakistan, nuclear powers for the past thirty years, will also equip themselves with nuclear submarines able to launch nuclear-capable ballistic missiles designed to reach any potentially hostile or rival capital. North Korea, too, which launched its first nuclear-weapon test in the mid-2000s, will acquire ballistic missiles with a range of about five thousand

miles, its declared motive being to forearm itself against any attempt to destabilize its regime. Faced with this threat, Japan will not hesitate much longer to equip itself with arms of the same type to counter the weapons Pyongyang's leaders might launch against it. Four months will suffice, from the moment the decision is taken, for it to acquire the weapon. Iran, obviously, will do the same or come very close to it — unless a clash (which we shall later discuss) takes place. Others will follow along the same path. First it will be Egypt and Turkey, then (probably) Indonesia, Australia, Brazil, and Saudi Arabia. By 2040 or 2050, a total of more than fif-teen countries will openly possess nuclear weapons and the means to deliver them.

Shortage of oil will also impel the most diverse countries toward the production of civil nuclear power stations. This will lead them to use recycled wastes, known as MOX, for fuel — further multiplying the risks of proliferation and also of "disappearance" of wastes (during the transfer of these radioactive materials). Such wastes could then be used to manufacture radiological weapons mingling nuclear wastes and conventional explosives.

Other weapons — chemical, biological, bacterio-logical, electronic, and nanotechnological — will then appear. As with the new civil technologies they will prefigure, scientists will strive to increase their power, their miniaturization, and their accuracy. Chemical arms will be capable of seeking out and killing leaders without being detected; pandemics could be ready for unleashing at will; complex genetic arms may one day be directed specifically against certain ethnic groups. Nanorobots as small as a mote of dust, known as gray jelly, could carry out stealth surveillance missions and attack the cells of enemy bodies. Then, once animal cloning techniques have progressed, cloned animals could well carry out missions — living animal bombs, monsters out of nightmare.

These weapons will not be developed solely in the military laboratories of powerful countries but also by big businesses,

“circus businesses,” which will find new markets for them. As always, armaments will remain at the heart of the industrial apparatus, and until super-empire is here, public markets will be essentially oriented toward the armaments sector. Big insurance firms and mercenary companies will then pick up the torch.

Most of these weapons will be accessible to small nations, to nonstates, to corsairs, to pirates, mercenaries, maquisards, mafias, terrorists, and every kind of trafficker. In the not distant future, for example, it will be possible to make an e-bomb for $400 from a condenser, a reel of copper wire, and an explosive. Chemical, radiological, and biological weapons will thus be affordable to everyone. Killing more and more people with rudimentary means will become a sad possibility. In cities and on mass transport, crowding will multiply the effectiveness of the most primitive weapons.

Finally (and perhaps especially), since no war can be won unless the peoples waging it believe it just and necessary, and unless the loyalty of citizens and their belief in its values are maintained, the chief weapons of the future will be the instruments of propaganda, communication, and intimidation.