

THE PLASTIFYERS

*(loosely translated from the original title "LES PLASTIQUEURS",
a French neologism combining two ideas:
the manufacture of plastics and the destruction of the planet)*

An investigation into the businesses poisoning us



Global plastic production will double by 2040. Beach cleanups and other plastic straw bans will not be enough to extinguish the threat. The industry is promising \$1.5 billion in advertising to boost collection and recycling. What it says less is that it plans to invest \$200 billion in new production facilities in the U.S. alone. Europe, for its part, regulates single-use plastics while allowing British billionaire Jim Ratcliffe and his company Ineos to build a huge production site in the port of Antwerp, fuelled by American shale gas. Asia, the leading destination for Western waste, is now the world's largest garbage can.

Just like tobacco and asbestos in their time, or more recently Monsanto, the plastics industry is working to manufacture doubt, minimize the dangers of plastic and extol the benefits of recycling, to divert attention from the hidden face of the iceberg. For beyond the visible pollution it generates, plastic poisons us on a daily basis. An impalpable poison made of toxic additives and microparticles that permeate the air, water, soil and bodies. Pollution, climatic threat, increased mortality, falling fertility... Plastic is no longer fantastic. It puts nature and humanity in danger.

From China, the world's leading producer of plastic, to the industry's strategies in Africa - the new market to conquer - via Louisiana's "Death Alley" and its record rate of cancers, welcome to an industry that poisons us yet continues to thrive.

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INTRODUCTION

Three percent. This is the forecast growth in plastic production for the coming years. The day I found out, I grabbed my old calculator and realized the unthinkable: plus 3 percent per year would mean a doubling of world production in twenty years. But why hadn't I been told? How could this obvious fact have escaped the politicians and the media? Above all, how on earth could we hope to reconcile this industrial boom with the fight against plastic pollution, which we were being told about? The ban on straws and cotton buds was clearly not going to solve the problem.

Covid-19 and the explosion of plastic waste it generated only made more visible a sneaky reality: plastic is not dead. It is not even at the end of its life. It moves more than ever. It took only a handful of weeks for an epidemic to signal the return to grace of yesterday's pestilence: polypropylene masks, hydroalcoholic gel bottles, Plexiglas partitions, PVC visors, Internet deliveries wrapped in polystyrene... In hospitals, transport and supermarkets, but also in the streets, rivers and incinerators, we are witnessing a plastic bonanza.

Since the invention of Bakelite in 1907, this material has hardly changed. Its chemical structure is the same and it is still 99% derived from fossil fuels: oil, gas and coal. Well, perhaps a little has changed.... What has changed is its disposable nature. Whereas once we used to wash our coffee mugs, we have since learned to throw them away. Specifically, we were taught how to do it. It was tough at first. In the 1950s, when the first coffee machines appeared, some people even had the crazy idea of keeping their plastic cup, to clean and reuse it. But soon, the trash can conveniently placed at the foot of the dispenser got the better of us. Through innovation and advertising campaigns, the industry has instilled the delights of the disposable into our lives. From now on, the future would be nestled in the garbage can: any discarded product would be replaced, ensuring the eternal prosperity of the Plastifiers.

Seventy years on, that prosperity is well and truly assured. But the concern is that in the meantime, more than 7 billion tons of this plastic has ended up in the environment. This volume is so extreme that traditional comparisons with elephants or soccer pitches no longer have any place here. In recent years, studies have multiplied, to the point that the figures are simply frightening. The annual production of plastic is close to 450 million tons, the equivalent in weight of the human population. Since 1950, more than 9 billion

tons of plastic have been produced, half of it in just the last 15 years. Three-quarters of it is waste, and much will not decompose for several hundred, or even thousands, of years. It's estimated that between 10 and 20 million tons of plastic ends up in the ocean each year, or one ton every second. Every minute, we consume 1 million bottles of water and 10 million plastic bags worldwide. Not to mention that with time, erosion, sunlight and oxygen, plastic fragments can be found everywhere: at the top of Everest, in the depths of the oceans, but also in our bodies, salt, beer, seafood, water or even milk in baby bottles. The oceans are not to be outdone: there are an estimated 500 times more microplastics in the oceans than stars in the galaxy.

In recent years, citizens seem to have become aware of this catastrophe. Laws have been passed here and there to try to control the crisis. The European Union has banned the single-use plastic products most frequently found on beaches. China, for its part, has closed its borders to waste from the West, while in Africa, countless states have banned the use of plastic bags, sometimes even under penalty of imprisonment. So many initiatives that the most optimistic believe that plastic pollution will soon be eradicated. Their hope is all the more understandable since the industry is sparing no effort to suggest it to them. It's sponsoring beach cleanups or, more ambitiously, creating a mega-coalition called the Alliance to End Plastic Waste. Under it, the fifty largest plastics companies in the world have promised to invest the sum of 1.5 billion dollars - that's a lot - within five years to "put an end to plastic waste together". The concern is that in a parallel world, the same companies plan to invest more than \$200 billion in new petrochemical plants in the United States alone. That's a lot more; a hundred and thirty times more.

To distract attention from this embarrassing contradiction - the so-called fight against plastic pollution *versus* gigantic investments to double production - a diversion is necessary. For forty years, the ultimate trick has been called "recycling". Some U.S. industry executives have themselves recognized that promoting recycling was just a strategy they put in place to make consumers feel less guilty and to encourage their shopping frenzies. In reality, the miracle is more of a mirage; only 9% of the plastic waste generated since 1950 has been recycled, while 12% has been incinerated. The rest has ended up in landfills or in nature. We have reached an unprecedented situation, where manufacturers defend recycling at all costs while the major NGOs try to explain to completely disoriented consumers that recycling is not a win-win situation. Anti-recycling NGOs? Plastic has definitely turned the world upside down.

At this point, I can already hear the fire of criticism. In the background, the Elmer Food Beat hit: "Le Plastique, c'est fantastique" ("Plastic is fantastic"), sang the French rock band in 1991 to encourage people to wear condoms. Yes, it's true. Even if it is polluting, often toxic and a large emitter of greenhouse gases, plastic is nonetheless a material with

formidable properties, like suggest its Greek etymology, *plastikos*, which describes an item that can be moulded, shaped, and take on all imaginable forms. In just over a century, it has revolutionized life on earth. Light, waterproof, versatile, transparent, heat-resistant, it has become indispensable in the preservation of certain foodstuffs, in the medical world, construction, transport, electronics, telecommunications and today appears to be an essential partner in the energy transition (car batteries, wind turbines...). We no longer notice, but it has become impossible to avoid any contact with this material, even for a few seconds. As I write these lines using my *acrylonitrile butadiene styrene* keyboard, my *polycarbonate* smartphone is connected via its *Teflon* cable to a *polypropylene* electrical outlet. My pupils are covered with *silicone* lenses, while my socks are made of *synthetic fibers* and the window that lets light on my desk is made of *PVC*. Plastic has so many attributes that it will be - come on, let's dare to say it once and for all - IM-POS-SI-BLE to eradicate. There will be no universal substitute. That said, there is room - plenty of room - to cut. The task, however, is gargantuan.

For a long time, the question has been poorly phrased: "where does plastic go and how do we get rid of it". The questions should have been: "where does it come from and how do we not produce it". Of course, the consumer is partly responsible for plastic pollution. But by taking the blame for it off the unscrupulous citizens, the industry has been a bit too quick to erase its own guilt. While for decades, it has invested billions to convince us that "plastic is fantastic", now it's time to restore a little balance. Three hundred pages won't do it. Because "plastic is dramatic," too. Far from the hygienic image conveyed by industry, countless studies show that this material is a threat to health at every stage of its life cycle: extraction, refining, transportation, manufacture by workers, use by people, incineration or dispersal in nature. These risks to human health and the environment come from exposure to the plastic particles themselves, but also and above all to the chemicals associated with them. Some of these additives are carcinogenic; others are endocrine disruptors capable, even in minute doses, of disrupting the functioning of the human body. There are tens of thousands of these substances. Yet few are regulated. Even fewer are controlled, even in Europe, one of the world's most consumer-protective regions. "Completely caught up in the system, people are unable to ask themselves the right questions: whoever opens this must question their whole life," a European expert explained to me, with the weary and pitied look of a woman who has long since opened this fearsome Pandora's box.

Just like the oil industry, to which it is intimately linked, the plastics industry is a pro at rewriting and fabricating doubt. The lobbies that defend it are among the most powerful. Will plastic be the new tobacco or the new asbestos? For half a century, tobacco companies have denied the dangers of tobacco, challenging its links to lung cancer fiercely despite the evidence; a strategy that allowed them to continue to prosper while tobacco claimed a hundred million lives in the 20th century alone. The asbestos industry,

whose use became widespread at the end of the 19th century, had paved the way for it. As early as 1930, a British study drew an "irrefutable link" between asbestos dust and lung disease. The industry became aware of it, but hid the risks from its employees. It wasn't until the 1970s and a lawsuit in the United States that the subterfuge came to light. When will the Plastifiers face their day in court?