

## ***New Technologies, Extraterrestrial Exploitation, and the Future of Capitalism*** *a revisiting of one theme mentioned in “A Wager on the Future”*

One of the themes mentioned in “A Wager on the Future” that was received with skepticism or even laughter was the affirmation that the colonization of outer space might be the only exit capitalism has from the crises it has generated.

We wanted to begin 2017 by dedicating a little more attention to this affirmation.



**2017** is the year of Google’s Lunar X Prize, through which the North American corporation (as important to 21<sup>st</sup> century capitalism as Ford was to 20<sup>th</sup> century capitalism) is offering \$20 million to the first company that manages to send a landing craft to the moon, drive 500 meters, and transmit high-resolution images back to Earth. But they have to do it this year. And there are already various teams that are getting ready to meet the challenge.

One of which is Moon Express, which has already become the first company in history to receive legal permission, from the US government in this case, to carry out commercial exploitations on the moon’s surface. If this team makes it to the moon—and they already have the necessary financing and a schedule of test launches—they won’t only win the Prize, they will also drop off a commercial payload that represents the first step in setting up an equipment delivery service to the moon, which will make the lunar mining of Helium-3 (a valuable fuel for nuclear reactors) feasible.

Another company, Planetary Resources, claims that the mining of metals and water on asteroids could be a trillion dollar business. For them, water (and the hydrogen it contains, which could be used as spaceship fuel) is “the oil of space.” These are not empty words. Planetary Resources is another company that has a business plan and the technology needed to begin carrying out the mining it envisions.

On the 14<sup>th</sup> of January, Space X returned to space. It’s one of the companies of Elon Musk (who is also preparing self-driving cars for commercial sale; the technology already works and the only obstacle are the legal regulations), the billionaire whose personal crusade is the colonization of Mars in the next two decades. Space X fixed a design flaw in its rockets and on the 14<sup>th</sup> made an effective launch, deploying 10 commercial satellites from the same rocket, which, subsequently, returned automatically to Earth, landing on a Space X drone ship waiting—with its entirely robotic crew—in the Pacific Ocean. The autonomous and reusable rockets (one could say, environmentally friendly) are one of the foundations of Musk’s plan for reaching Mars in a commercially feasible way. He has already developed a business plan for developing the technology and acquiring the resources needed to complete the mission.

These are not isolated or insignificant companies. And the State is also paying attention to extraterrestrial colonization. The UN Treaty on Outer Space, from 1966, holds that space and space objects cannot be armed or claimed as territory, and that any economic activity had to be peaceful and for the good of all humanity. In 2015, in the Commercial Space Launch Competitiveness Act, the US government clarified the legal question, establishing the legal right of private companies to exploit the moon, asteroids, and other space objects. It gives private entities the right to own and sell resources extracted from space objects, but not to possess the object outright. In effect, they can mine the moon until it's empty, but the private companies working there with their robotic factories couldn't be considered the owners.

The dotcom boom, which burst in 2000, shows that immense amounts of capital can be invested in companies that do not generate any profits for quite a few years before provoking a crash (in this case, it was six years). In fact, the crash didn't come until the moment when a few new corporations showed the capacity to become profitable and productive, corporations that today are among the most powerful in the world, like Google, Amazon, and Facebook. We are at the beginning of a phase of massive investment and growth in the new sector of extraterrestrial transport and mining. The venture capitalists of this sector enjoy the advantage that the logistical foundation of their dream (everything connected with the launching of satellites, with their crucial military and commercial uses) is already in place and profitable. Similarly, Columbus didn't have to invent the long-distance ships or the navigation equipment (which had already been developed by the Portuguese in the luxurious commercial circuits of the Indian Ocean), he just had to take them further.

They still have a few years to yield profits with extraterrestrial extraction before the bubble bursts. If they achieve it, capitalism will once again undergo an intense growth and the moment of maximum vulnerability and maximum popular rage that the institutions now face will have passed.

Extraterrestrial colonization is no longer a trope of science fiction. But speaking of science fiction, we must also point out the great imaginary production carried out by Hollywood and other centers of cultural work, which have redirected our gaze to the colonization of space. Since the 19<sup>th</sup> century, there have been occasional works that posed journeys beyond Planet Earth, but the current frenetic production is qualitatively and quantitatively incomparable. Its effect is not only the normalization of extraterrestrial activity, it also accustoms us to imagine the first steps of taking our civilization and the capitalist economy beyond the Earth's gravity well.

We are on the cusp of an event as important for the advance of capitalism and the war against life as the colonization of the Americas. As Bob Richards, chief executive officer of Moon Express, said, "We are now free to set sail as explorers to Earth's eighth continent, the Moon, seeking new knowledge and resources to expand Earth's economic sphere for the benefit of all humanity."

Faced with this new reality in construction, what are we to do?

The fetishization of new technologies, common among certain circles of social antagonists, is the cruelest possible self-betrayal, comparable to the racist and myopic celebration of colonialism offered up by Marx and his sycophantic followers.

Luddism need not be a rejection of "all technology" (understood as any tool that human beings have come up with in the last hundred thousand years), and in fact, the first luddites, slandered by Marx and other progressives, did not reject the artisanal techniques that permitted them to maintain control over their productive activity; they rejected the technological impositions that benefited the owners and violently changed their way of life, and they rejected the police power that made such impositions

possible. Piracy, hacking, and the readaptation of technologies is a vital current that could exist in a fertile conflict with more naturalist currents. But the populist adoration of all new technology is an acritical gesture in support of the State and capitalism.

A first step is the elaboration of a subversive critique, and above all a subversive practice, of the latest technological impositions on our lives.

We are also faced with the theoretical task of conceiving how these changes will affect capitalism. As we affirmed in “23 Theses concerning Revolt”, the property regime that defined class society is already expiring. Outer space—for example a moon without owners, but with many exploiters—could be the ideal terrain for deploying the new regime of exploitation, based in use and access more than in property (a relation that is too stable in the eyes of financiers and the State).

Another question is that of work. Various 19<sup>th</sup> century socialists confusedly predicted that technological advances would cause the inauguration of a society of leisure and abundance. We should not commit a similar theoretical error now. The State invents work. Profitability is a secondary concern. Productive work in space will be overwhelmingly robotic. This is a part of the same trend towards roboticization that we see in industry on Earth. And this roboticization has not represented, at any moment, a reduction in the human labor force on a global level. It means, on the contrary, a growth of wage work in the service, care, sex work, engineering, and design sectors. The final two are the domain of privileged workers, the intellectual capital states will increasingly compete for, the producers of the ethereal merchandise of the new economy (and here we are thinking of the employees of Google and Apple, of the old corporations that have adapted to the new economy, and of the small startups, that produce programs, aesthetics, and systems).

The other sectors—service, care, and sex work—are feminized labor that now will become more generalized. What effect will the monetization and generalization of the previously non-remunerated labors, that yesteryear defined womanhood and patriarchal segregation, have for the patriarchy? We will leave the answering to more perspicacious comrades [translator: companyes, comrades in feminine], but in passing we can point out on the one hand the new laws in various democratic countries ceding certain rights to trans people, and on the other hand the counterattack by the patriarchal institutions within the extensive growth of the Right.

(The first occurrence recognizes, in a strictly limited way, the mutability of gender, thus contradicting one of the bases of patriarchy. Currently, the progressive wing of the State presents gender identity as just another consumer choice, deactivating the more conflictive elements of the transgression of gender, but it is a contradiction that cannot be permanently maintained. As such, it is different from the reformist feminist victory in which labor and political rights for “woman” were won at the cost of losing autonomous feminine spaces, a *quid pro quo* that preserved the power of the institutions. In that vein, we can note that against the snail’s progress of the institutionally mandated equalization of wages, the new high-paid labor that is cropping up like fall mushrooms is squarely within the staunchly masculine information technology sector.)

Capitalism has always depended on slavery, but the position of slavery within productive and reproductive processes changes, often as a response to our resistance (abolition of visible slavery in the democratic countries, feminist movements, autonomous workers’ struggles in automotive factories...). What yesterday was a sphere of unwaged labor, tomorrow will be waged, and vice versa. Feminine labor is pushed into the labor market and productive labor becomes unwaged once again. But this time, the slaves are robots and their activity is one hundred percent legible, rationalized, and surveilled: under State control. The transition will not be immediate nor homogeneous. Surely several

decades will pass before timber, chocolate, and other sectors in the poorest countries find it profitable to replace their human slaves with robots.

The tendency towards roboticization will only make undeniable our own incapacity to take over the means of production, as well as the impossibility of the proposal itself. The majority of productive workers will be robots and the others will make up the most privileged stratum of the exploited. This reality has already come into being in a large part of the field of automobile production, the industrial process that defined the previous era of capitalism. The most modern automobile companies and the IT companies already have mostly robotic factories, fabricating products ideated by well paid engineers and designers, those highly skilled workers with multiple degrees, who see work as self-actualization, people tied to the means of production and loyal to capitalism.

It will be even more definitive in outer space, where nearly 100% of the workforce will be robotic, mining the fuels (green energy like hydrogen cells and nuclear) that will propel the next cycle of accumulation. And that cycle will be defined as the expansion of productive circuits to a new territory: the moon, the asteroid belt, and Mars; thus preparing the terrain for the subsequent cycle of accumulation, which might involve more human labor, the terraforming and settlement of Mars (following the pattern identified by Arrighi, of one cycle of geographic and institutional expansion, followed by another cycle that intensifies the exploitation and control within the previously colonized terrain).

The means of production are and always have been a machine of devastation. We do not want them and now we cannot even seriously propose their expropriation. In the 21<sup>st</sup> century, there is no other remedy but to champion and practice the recovery of artisanal knowledge and skills that put life and survival, on a healthy and natural scale, in everyone's reach. But this path of struggle, like any other, is mined with traps. The principal trap is commercialization. With more privileged consumers—the designers, programmers, and systems architects—more artisanal producers can be supported, above all when the tastes of the former show a decided preference for things local and eco-friendly. Let's take the example of agriculture. In a near future, it is possible that energetic efficiency (how many calories of energy go into producing one calorie of food) becomes a metric for evaluating the effective use of capital. For agriculture to be more sustainable and more energy efficient, machines and petroleum would have to be substituted by more human labor. Faced with the danger of a population with no work, capitalists, and otherwise the State, have always invented new forms of work. And the ecological crisis is proving to be ever more serious. A possible solution would be for capitalism to encourage local agriculture, making use of its new capacity for decentralization. Thus, it would take giant steps towards solving the ecological crisis (created in large part by industrial agriculture), it would give employment to more people, it would offer privileged consumers a new fetish product, and it would colonize small-scale agriculture, transforming it into a legible commercial activity when historically it was always a source of resistance and autonomy. In the poorer countries, in the absence of many privileged consumers and a strong state, NGOs could take charge of this process; in fact, they already are. In the US, where the portion of the population involved in agricultural work had already dropped below one percent thanks to hyper-industrialization, this turn towards agricultural growth via small-scale production is already happening. Farmers' markets, above all in the zones of Information Technology production, have already returned from oblivion to be once again a common affair.

The new artisanry, in order to be subversive, must be luddite, based in practices of sabotage and in illegible networks (which is to say, opaque from above) of qualitative exchange (which is to say, gift economies, like those that were practiced in the most radical collectives during the Spanish Civil War). But today, the most relevant machines for sabotage are not mechanical looms but social machines, those that mediate communication, that produce and control the networks of socialization and

sociability, and that define a way of being in the world.

We cannot continue using arguments of convenience. Capitalism is also bad in moments of expansion and wealth; capitalist technology is also bad when it works well and doesn't provoke any specific disaster. The only path of discursive attack we have left is a direct confrontation with the Christian spirituality that science as well as socialism inherited: the world, the universe, do not exist for our exploitation. There is no rationalist argument (not even within the parameters of liberalism's most radical current, veganism) against the mining of the moon. It will not harm any human being or other animal, and according to rationalism, everything else is dead matter. The only solid arguments against capitalism's new atrocities are spiritual. They hold that the Earth is our mother and that we should adapt ourselves to the natural world rather than molding it according to our arrogant caprices; that filling the Earth or the Moon with holes in search of the latest valuable mineral is as unforgivable as massacring an entire people. Those who made use of scientific arguments to justify genocide, slavery, mining, and clear-cutting entire forests are the same—and their institutions are the same—as the ones who today are celebrating the imminent conquest of the moon and Mars. And the technologies that will take us there (speaking of rockets) were developed by the Nazis in the course of the very same Holocaust that liberalism so hypocritically rejects, without ever rejecting its fruits. But we have rendered homage to humanism for so long that we can no longer raise our voices in protest when faced with an atrocity that lacks human victims. But not even the contemptible people who think it is not wrong *per se* to mine the moon can deny that any introduction of new resources into the capitalist machinery will hasten the processes that are building us a prison society here on Earth.

The choice is between ecocentrism and totalitarianism.

– Josep Gardenyes  
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