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New Technologies, Extraterrestrial Exploitation & The Future Of Capitalism

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[ed. – Translated from Catalan; a continuation of the work started by Distri Josep Gardenyes in an earlier text 'A Wager on the Future', a very incisive analysis of (among other things) changes in the property regime enforced by contemporary capitalism's cutting edge, as well as the further-reaching colonisation of our imaginaries achieved by the above; expect excerpts in future volumes of Return Fire. Currently, the U.S. Government is preparing to revive the directive for a permanent American base on the moon to build to eventual missions to Mars; also, as 2017 draws towards its close, talk of weaponising space has also been back on their agenda, contrary to the treaty cited below.]

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 21st century capitalism as Ford was to 20th 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 challenge¹.

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 14th 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 obstacles 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 14th made an

¹ ed. – As of yet there is still no winner of the Lunar X Prize (despite TeamIndus from India having been tipped to win before dropping out), which since it's announcement in 2007 has seen the deadline moved back multiple times; though as mentioned in the footnotes below, China landed its own spacecraft on the moon in 2013.

eral is as unforgivable as massacring an entire people.⁷ **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 fruits⁸ [ed. – see *A Green Anarchist Critique of Science*]. **But we have been 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.

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 [ed. – see *Return Fire vol.3 pg33*] and commercial uses) is already in place

and profitable. Similarly, Columbus didn't have to invent the long-distance ships or the navigation equipment [to begin the European colonisation of the so-called 'New World'] (which had already been developed by the Portuguese in the luxurious commercial circuits of the Indian Ocean), he just had to take them further.

² ed. – Author of 'Capital' and co-writer of 'The Communist Manifesto' with Friedrich Engels, Karl Marx, in his most influential years, basically "stated that indigenous Peoples must submit to proletarianization or disappear from the world. Anyone who did not slave for a master for monetary gain was a lumpen, and Marx saw them – always the majority of the population in industrialized nations – as reactionary, enemies of the working class. He used much the same rationale we hear today from far-right racists: Lumpen want to take our jobs (scabs). They are criminals. They are no-good layabout alcoholics and drug addicts. They are whores. They are ignorant. As someone who has spent much of his adult life either homeless or in prison, but always struggling against the coercive forces of elite rule, I gotta say a big, ol' "Fuck you!" to orthodox Marxists" (Rob los Ricos). His legacy could hardly be clearer than his words: "England has a double mission to fulfill in India: one destructive, the other regenerative; the annihilation of the old Asian society and laying the material foundations of Western society in Asia." However, as an interesting and little-known side-note, Marx himself had something of a change of perspective in his later years prompted by his reading of Lewis Henry Morgan's 'Ancient Society' (and especially it's depiction, rightly or wrongly, of the Iroquois of America's north-eastern seaboard) and exposed by the posthumous publication of his unfinished 'Ethnological Notebooks'; thus he tossed aside his insistence on progressive human development necessitating a chain from "primitive" indigenous, to peasant, to capitalist labourer, to socialist 'new man'. "In a note written just after his conspectus of Morgan we find Marx arguing that "primitive [sic] communities had incomparably greater vitality than the Semitic, Greek, Roman and a fortiori the modern capitalist societies?" Thus Marx had come to realize that, measured according to the "wealth of subjective human sensuality," [Iroquois society] stood much higher than any of the societies "poisoned by the pestilential breath of civilization". Even more important, Morgan's lively account of the Iroquois gave him a vivid awareness of the actuality of indigenous peoples, and perhaps even a glimpse of the then-undreamed of [by him] possibility that such peoples could make their own contributions to the global struggle for human emancipation. [...] When Marx was reading Ancient Society the "Indian wars" were still very much a current topic in these United States, and if by that time the military phase of this genocidal campaign was confined to the west, far from Iroquois territory; still the Iroquois, and every surviving tribal society, were engaged (as they are engaged today to one

Earth or the Moon with holes in search of the latest valuable min-

⁷ ed. – One could certainly say that mining the moon impacts other very profound relationships it has with varied plant, human (menstrual cycles being an obvious example) and other animal life, ocean tides, etc.; but we wholly agree with the need for an approach embracing what Western culture exorcises to the separated realm of the 'spiritual'.

⁸ ed. – As well as the many things utilised by the victorious Allies after their dismantling of the Nazi state and recruitment of many of its elements, the anarchists Silvia, Billy and Costa reminded us during their court statement when on trial for a planned attack on the laboratories of IBM in Switzerland (see **Return Fire vol.4 pg73**) of a famous example: "The German branch of IBM, Dehomag, whose publicity proclaimed in Gothic characters: "Hollerith's perforated cards allow you to see everything", traded with the Nazis as well as with the American government throughout the war. It took half a century for us to discover, thanks to the American journalist Edwin Black, the responsibilities of IBM and proto-computers in the Holocaust: "When the Nazis tried to identify the Jews by name, IBM showed them how to do it. When the Nazis wanted to exploit this information to launch the expulsion and expropriation campaigns, IBM provided the necessary means. When the trains had to run by a timetable, between cities or concentration camps, even in that case IBM showed them the way[...] The application of the Nuremberg laws was based entirely on Hollerith technology, the only one capable of establishing the genealogical trees that the Reich needed [in a short time] to identify all the half-Jews, the quarters, the eighths and even the sixteenths, with the speed and exhaustiveness hoped for. [...] IBM did not limit its business to the Germans alone, even though they were among its best customers in the 1930s. Undoubtedly convinced of the neutrality of technology, Watson, its boss, sold machines to [U.S. President] Roosevelt at the same time as Hitler. [Three days after the attack on Pearl Harbor] the US Census Bureau could provide various reports on the Japanese population of different cities in the United States, by place of birth, citizenship, sex, etc..." Thanks to the applications IBM and the responses provided during the 1940 census, the Census Bureau had been able to determine the ethnicity of all Japanese-Americans. The American administration used the Hollerith systems to draw maps of population density by locating people by block of houses – even if the census was anonymous and without address – and "allowing to organize the movements of populations [of Japanese origin] towards concentration camps" starting from '42." Similarly, it was Nazi concentration camps where the gene and biotechnology industries of today were first spawned in earnest, the now re-branded 'life science' companies. Just as transhumanism (see **Return Fire vol.4 pg43**) is nothing but another name for the stinking eugenics philosophy that the Nazis embraced, like Americans, Swedes and British (and more) before them.

of the Tribe'/Q]. 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 ludite, 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 [ed. – see 'Rejoin the Circle'], 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 [ed. – see *Return Fire vol.4 pg40*]: 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 [ed. – see *Veganism: Why Not*] 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 [sic] and that we should adapt ourselves to the natural world rather than molding it according to our arrogant caprices; that filling the

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 19th 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?*

degree or another) in a continuous struggle against the system of private property and the State [ed. – see *Return Fire vol.3 pg59* and companion piece on **Colonisation**]. In a multitude of variants, the same basic conditions prevailed in Asia, Africa, parts of Eastern Europe, Russia, Canada, Australia, South America, the West Indies, Polynesia... [T]his study led him not only to dramatically and extensively alter his earlier views, but also to champion a movement in Russia [ed. – versus his previous bets on 'developed' Germany or England] that his "disciples" there and elsewhere scorned as "ahistorical," "utopian," "unrealistic" and "petty-bourgeois." Even today such epithets are not unfamiliar to anyone who has ever dared to struggle against the existing order in a manner unprescribed by the "Marxist" Code of Law" (Karl Marx and the Iroquois).

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 followers².

Luddism [*ed. – see Return Fire vol.4 pg53*] need not be a rejection of “all technology” (understood as any tool that human beings have come up with in the last hundred thousand years³), 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 [*ed. – see Return Fire vol.4 pg85*]. 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 19th century socialists confusedly predicted that technological advances would cause the

³ ed. – This is not, in fact, the only way to understand or differentiate technology (for example, see *Return Fire vol.4 pg 53*); while clearly this is a vast and complex topic needing further exploration.

of accumulation, which might involve more human labor, the terraforming and settlement of Mars (following the pattern identified by [Giovanni] Arrighi⁵, of one cycle of geographic and institutional expansion, followed by another cycle that intensifies the exploitation and control within the previously colonized terrain⁶).

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 21st 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 [*ed. – see Return Fire vol.2 pg15*]. 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 [*ed. – see Fraud, Fantasy & Fiction in Environmental Writing/The Invention*

belt, and Mars; thus preparing the terrain for the subsequent cycle

ever come at the expense of externalizing impact, and what could be more external to the biosphere?), an expanding consumer society in an ever more capricious service sector and a highly paid design sector (with the private cities of Google and the NSA, perhaps, as the dichotomous model). [December 2013], China landed a rover on the moon. Anyone who mistakes this for an extremely tardy attempt to keep up with the Jones' is missing its significance. China has guaranteed itself access to processes of capital accumulation in space. With a space program far cheaper than the US government's, [they have become] the first country to match the US for new satellites in space, and they have also developed killer satellites and other anti-satellite weapons that could destroy all of the expensive little orbiters on which global communications, and the US capacity to deploy military force around the world, across the Pacific for example, depend. With no need to overcome US superiority head-on, just as the Dutch navy and American colonial army often used guerrilla tactics or evasion to confound a superior force, the Chinese have the potential to make US military might meaningless, and the liquid capital to give themselves the advantage in outer space investment. As higher levels (in this case perhaps literally) of competition require higher levels of collaboration, it is unlikely that terrestrial states, at least in their present form, will find themselves adequately equipped to the task of organizing capital accumulation beyond planet earth. Power structures like Google may prove vital in organizing the new material expansion and also linking the power of terrestrial states to achieve the cultural unification necessary for the regulation and organization of capitalism. After all, the totalitarianism that liberal freedom most requires is not the secret police nor the torture chambers of the Communist Party (although these will never go away, neither in China nor in the US), it is the panopticon society [ed. see **Return Fire vol.4 pg9**], the apparatuses of communication, the instantaneous imposition of legibility on oral culture, and immediate enclosure of any new commons, that the likes of Google and Apple have already achieved [ed. – see the supplement to **Return Fire vol.4; Caught in the Net**]. If these changes come to pass – and they will to the extent that we allow them to – there will no doubt appear another wave of leftists who claim that it was all an economic operation, that the State has now expired, that capitalism is self-regulating, that the decentralized forms of production that are coming to the fore are the new reality. They willfully forget how much state power continues to concentrate, how the new decentralized industries only function in relation to unprecedented phenomena of concentration, that without drones raining missiles from the sky, there are no iPhones, that without nuclear submarines, there are no satellites, and without the State, whatever its form, there is no capitalism" (Anarchy in World Systems).

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 which 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 [*transl. – 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

⁴ The first occurrence recognizes, in a strictly limited way, the mutability of gender, thus contradicting one of the bases of patriarchy [ed. – see **Return Fire vol.2 pg8**]. 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 [ed. – see **Rebels Behind Bars; 'Yet Another Fenced World'**], 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 autumn mushrooms is squarely within the staunchly masculine information technology sector.

hand the counterattack by the patriarchal institutions within the extensive growth of the Right⁴.

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 [*sic*] 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

⁵ ed. – “Arrighi revises both Marx and world systems theory to define four stages of capitalism, each marked by a systemic cycle of accumulation. [Paramount to this revision is Arrighi’s identification] of capitalism as a dichotomous fusion of state and capital. In this view, the State is far more important than a mere “organizing committee” for the bourgeoisie, as Marx and Engels, covetous of a state of their own, would have it. [...] Each cycle begins with the rise of a new leading state and form of institutionalized planning that organizes a global accumulation of capital, subtly interrupted by a signal crisis that heralds the switch from industrial to financial expansion, experienced as a golden age that marches inevitably to the terminal crisis when the bubble bursts and a new state (or group of states) must take up the lead in the reorganization of global capital. [...] The alliance between the merchants of Genoa and the military power of the Spanish state organized and impelled the first global cycle of capital accumulation. The next cycle was led by the new Dutch nation-state, the architect of the interstate system or the “Westphalia system” of territorial nation-states linked in a global economy that in essence remains valid today. The third, or British, cycle of accumulation saw the mechanization of industry and the extension of the world system to every last corner of the globe through aggressive colonization. And the fourth, American cycle of accumulation saw the intensification of accumulation throughout the map laid down by the British, and the creation of the global financial and political institutions that exercise power today. [...] In essence, merchants who had long been playing a particular game amongst themselves, with exponentially mounting stakes, began to invest their profits in state-making and war-making, not merely as another industry, but as a way to produce an expansion of the field in which their accumulation took place, and to produce the instruments to organize and regulate that field. Simultaneously, ruling elites began to extend their territorialist strategies for the control of the space-of-places in which state competition traditionally took place (the conquering of territory, cities, resources) into the space-of-flows in which the merchants operated (the capturing of markets, trade routes) as a way to fuel the engine of state growth. Capitalism as an interstate system rests on a dichotomous structure that balances, in ever changing measures, territorialist and capitalist strategies for global power and organization, operating simultaneously in a space-of-places and a space-of-flows.” (Anarchy in World Systems)

⁶ ed. – “The next cycle of accumulation, if it is to happen in any way similar to past cycles, will have to expand into outer space. A robotic workforce (resistance free) carrying out mining on asteroids and the moon, and the chemistrucl development (pre- or sub-infrastructure, the organic basis already existent on earth that makes infrastructure meaningful) of Mars. (A subsequent cycle of accumulation, feasibly, would be based on colonization). Meanwhile, on an earth with new possibilities for green management (statist environmentalism has only