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Covid-19 on Route of the Fourth Industrial Revolution

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Comments

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Translation:

COVID-19 on route of the fourth industrial revolution[1]
Luis Bonilla-Molina[2]

Since 2015 I have been talking about an imminent **Global Pedagogical Blackout (GPB)** as part of a transitional frame between the third and fourth industrial revolution. That which before February 2020 seemed incredible and is now more clearly evidenced, turns out to be a logical consequence of the transformation of the capitalist mode of production, producing the acceleration of scientific-technological innovation. The preventive quarantine has been used to enhance the construction of hegemony upon a new model of education: virtual education at home.

The **GPB** was progressively realized with (a) the **de-pedagogization** of the reality of education, (b) the construction of an **evaluative culture** (PISA[3], PIAAC[4], LLECE[5]-UNESCO tests, TIMMS[6], assessments of the national institutes for the assessment of educational quality, among others) justified by notions of **quality** and **relevance**, c) the construction of a **paradigm based in the "crisis of the education system"** further justified a process of incessant reforms that concluded in nothing, d) **educational divestment**, especially in terms of technological updating (internet, hardware, software), which was turning public schools and universities into museums of the past, e) the discursive hegemony of the educational quality of **SDG4[7]** in public policies linked to education, in contrast to f) **an outdated curriculum** paired to an updated model of content unable to keep up with the accelerating innovation and, g) the impetus for **a conversion of the teaching profession** into curricular administration. All of this was building the conditions of possibility to make way for the archetype of **virtual education at home**, something already in proposal by the IDB[8], BM[9], OECD[10] and the US Trump administration.

Although many may think that the contingent shift toward a virtual educational model at home is only a subject of COVID-19, the truth is that the pandemic is being used to accelerate the construction of hegemony for what will come in the short term; in just two months, educational neoliberalism has inserted within the world public opinion, **tension** between **face-to-face education** in schools versus **virtual education at home**. This is a false dichotomy because virtuality can be used as a complement to the educational process

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in schools. An understanding of pedagogical knowledge knows it to be false, that one can only learn alone, on the contrary, as Paulo Freire emphasized, we all learn together.

Certainly, schools will gradually reopen their doors in a few weeks or months, but already educational neoliberalism will have created the illusion with false social evidence, that schools are outdated in their models of teaching and pedagogical practices, something required by capital to start **a new phase of the destruction of public schools.**

The GPA cannot be understood, unless it is seen as the beginning framework of a planetary-scale process of **social reengineering** to reorder the world of work, consumption, sociability and governance. The model of consumption, trade, merchandise production (now not only material but also immaterial), sociability and education in cognitive capitalism and the rise of transnational capitalism is changing. **Our view is that the "family home" will play a central role in this reordering.** Let's take a look at the silent and continuous restructuring process.

Each house a school

The **"home school"** or "home education" model has been making its way for decades, as a capital bet to lower the costs of sustaining national and local school equipment. In correspondence, in the eighties of the twentieth century the paradigm of the **"education society"** was promoted, which sought to transfer the responsibilities of the State to communities and families; the central idea was for families to pay for their children's education and for the state to address those lagging behind. All this presented through the discourse of citizen co-responsibility. This initiative gained a special push with the appointment of the Trump administration's director of education Betsy DeVos, a militant devotee of the home education model. Currently, given the Coronavirus and a social distancing context, parents and families are abruptly given the responsibility to endow their students with equipped computers, the internet, access to platforms and a "virtual pedagogy". This is not a temporary situation as we are led to believe, but an integral part of the new political and ideological architecture of education and schooling. In addition, as initiatives to make the home education model possible, the world of work too began to change.

The home, the new laboral center

Work in the first and second industrial revolutions had industrial factories for services, and offices for the bureaucracy, these were the central places of employment. Informal and a good amount of artisanal work, were organized around these axes. The third industrial revolution began to reorient this trend. In the last decade **telework from home has become a new work phenomenon.**

The ILO[11] report entitled "Working anytime, anywhere: consequences in the workplace" (2019) noted that, depending on the country, telework ranged from 2% to 40% and in its full range of expression would mostly fall into the range of informal or flex-based work. This same report shows that this implies a drastic change in the organization of work time, which in many cases can exceed the maximum legally contemplated workload. The most relevant fact of this report is that this type of work shows a clear trend towards

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[11] International Labor Organization

expansion over the next five years. The experience of social isolation given the Coronavirus has led to many governments, which did not have a regulatory framework in this regard, are now considering legislating in the short term to adequately adapt to the growth of the world of telework; equally reallocating tasks that were previously done in the office, to the once "private" space of the home.

The home epicenter of consumption

After the Second World War, the trade model in which **the goods went to the consumer** was imposed. The crisis of overproduction and oil prices of the 1970s began to reorient consumption towards shopping malls. **Prompting the consumer to go where the goods were.** The generalization of the scheduled obsolescence of goods partially solved the problem of failed capitalist gain projections, by the issues of slow incorporation into consumption of the inhabitants who inhabited (and inhabit) places without electricity, education or little drinking water.

The advent of the internet was making way for online commerce or ECommerce, which **concentrated consumption in a new place: the home.** Social media and increased connectivity were strengthening the tendency to relocate consumption. The quarantine by COVID-19 has enhanced this mode of consumption, bringing medicines, food, non-perishable products, books, technology, among other things, **from the commercial premises to the door of the house.**

The "Global Consumption Report on ECommerce: Key Figures Globally" (2017) showed that by that time the **annual average online purchases** varied by zones, with Asia being the highest average region among consumers in this modality, reaching 22.1 purchases per year, while in North America it was 19, Western Europe of 18.4, Austria and New Zealand 16.1, the lowest average areas such as Latin America with 9.2, Africa and the Middle East with 11, while in Eastern Europe and Russia it was 11.9. This report considered and proposed that the trend was to exponentially raise these figures by 2020, something that was indeed the case before the pandemic and has now skyrocketed.

Trade and finance from a computer at home

The 2008 financial bubble crisis showed how capital mobilizes from place to place, using online commerce. This trend has been accentuated in recent years and today many of the commercial and financial transactions are done from home, through a computer or mobile device with internet connection.

This dynamic gave way to the **B2B eCommerce[12]** phenomenon that reported as early as January 2020 a 150% growth compared to the 2017 figures[13]; this is more than evident in the Asia Pacific which today is one of the most important dynamizers of the capitalist economy, and who carry out 80% of their operations under this format. **The economy and consumption are moved to an online model, which centrally includes within the home, a new epicenter never seen before.**

Reordering sociability

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[12] It refers to e-commerce, between businesses, conducted through online or online transactions.
[13] Digital Marketing Report 2019

Bars, cinemas, restaurants and other places of leisure and fun, located equidistantly to the workplaces played a decisive role in human encounter, and the construction of sociability. Social networks have been reconfiguring this phenomenon and today much of the dialogue and the construction of affinities, from the personal to the political, the sporting and the cultural is done digitally. Even a good part of couple relationships are developed and dissolved around social networks as evidenced in TikTok's content, among others.

The Hootsuite Report (April, 2020) demonstrating "140 social media statistics that are important to marketers in 2020" notes that 59% of the world's population, some 4.540 million people have access to the internet, 84% of whom use social media, while 97% of digital consumers have used these networks. While The Hootsuite report (2020) indicates that 50% of the population uses some social network such as Facebook, Instagram, telegram, TikTok and platforms such as Zoom, GotMeeting, many of which are being used for the model of virtual education, **the other 50% have no experience in this regard, among which are students, parents, but also teachers**, something that will be significant when assessing the home education initiative, within the framework of the COVID-19 pandemic.

Citizen security, ecological crisis and the home
Violence is immanent to capitalism as an ideology that promotes competition and possession of objects as synonymous with success. The long transition between the second and fourth industrial revolutions and during the third industrial revolution, has been accompanied on a global scale, the problem of drug trafficking. Such drug problems, have exacerbated the levels of violence, crime and social breakdown, but also serve as a distractor of the center responsible for chaos: the capitalist system.

State-of-the-art technological development, especially associated with artificial intelligence, nanotechnology, facial biometric recognition and metadata analysis, is being experimented on for social control, with China as a leader in this field. The idea of big brother becomes indispensable for the model of production and consumption of the fourth industrial revolution. Such development threatens to leave 50% of the population on the edge of the economic periphery, which makes the increase in social unrest, revolts and discontent foreseeable.

To avoid revolutions, a control pattern based on quadrants, cells and sectors, supported on technology, has been assembled. **Within this model the home is the primary control unit.** An important part of this global governance model has been implemented with social distancing and quarantine via the Coronavirus. Such practices of control have temporarily curbed popular discontent in more than 17 nations, which in the months leading up to the outbreak of the pandemic had seen agitation reach the streets. "Stay at Home" is also a form of control and they are rehearsing how long the population will endure under the aegis of induced fear.

Something similar is happening with the global ecological crisis. A dominant discourse is now being constructed that the confinement at home showed that citizens confined in their homes allowed pollution indicators to fall. That is, the blame is placed on the people and not in the capitalist system, the solution is not to overcome the profit-focused model, but to reduce people's mobility. **The Confinement at home is intended to be presented as a determining factor in a solution to the ecological crisis.**

The 21st century cognitive and transnational capital/capitalism seems to be revaluing the role of a "family home" in the economy, consumption, work and education. The home appears as one of the potential new epicenters for social reengineering. This process of assembly is what we denounce within the GPB; we are not saying that there shouldn't be any "virtual pedagogies", more so that the essence of pedagogy, the human encounter, is being threatened, something that is being highlighted by the educational approach of COVID-19.

COVID-19 and educational reengineering

Given the framework of a preventative quarantine by COVID-19, a strategy and educational approach is developed whose focus is on the model of home education, opening way to the "Home School" paradigm. Nevertheless, this "transition" is made unaware of the terrible economic, social, and technological inequalities in existence within the world. Many families don't even have a home, employment, computer, internet access, let alone a food to take to the table.

UNESCO's data (2020) is frightening, of the **1.730 million children out of school, 800 million have no computer and approximately 700 million no internet connection**; Add to this that by February 2020 (before quarantine by the pandemic) 258 million school-aged children and adolescents were out of school, we would have to say that more than a billion children and young people remain out of school coverage do to the virtual education model at home.

Today we are just over 7,783,977,080[14] inhabitants worldwide, of which 1 billion do not have access to electricity[15]. According to ILO figures, the world's employment population, before COVID-19, was 3.3 billion, of which 2 billion were informal employment within which 1.2 billion were highly unstable (day-to-day) employment. Teachers accounted for 5% of the world's employment by February 2020. While the percentage of employment relative to the total figures was small, this involved a budget section that capital sees as spending and money to recover, not as social investment.

In fact, In Incheon, Korea (2015) the world's governments agreed, that **6% of the national GDP should be earmarked for education**. If we review the behavior of the public budget, we find that between 75% and 85% of public funds for education go to the teaching payroll. For this reason, the model of home education becomes for neoliberalism a Trojan horse to initiate a neo-privatization of education, based on the dispute of money destined for wages and benefits to teachers.

But the home education model has highlighted a number of problems. The first, of a **pedagogical** nature: the model of frontal education in the classroom, focused on the blackboard and limiting or playing a non-existent roll in all the scientific and technological developments of the last three decades. The interactivity, image and brevity of ideas and strengths do not fit in a school focused on orality and classical written forms. Not only are schools not equipped with technological infrastructure (computers, cameras, USB sticks, internet connectivity) but the platforms of the educational ministries are often unable to support more than a thousand users connected simultaneously. The "virtual" content developed are much closer to the educational television model of the 1970's than to the

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[14] Real-time worldometer figures
[15] Energy Progress Report prepared by the International Energy Agency (IEA) and the World Bank (WB)

characteristics of agility, color, real-time current content, interactivity, typical of the digital age. "Virtual banking education" seems to be the pedagogical theme of the home education model.

Second, **teachers**, mostly born before the new cycle of innovation acceleration (1994-2020) have little training to tackle a virtual education model at home, they have much more willingness than the ability to deal with the challenge. This is the responsibility of the educational ministries and teacher training centers who prepare future educators and create a continuing education as if looking back through a rearview mirror. Younger teachers are confronted with the institutional culture that sees technology as the enemy of classroom work; although the so-called "UNESCO Guidelines for Mobile Learning Policies" were adopted internationally in many countries, cities and schools, before Coronavirus was declared a pandemic in February 2020, the use of cell phones in educational institutions was prohibited. In Latin America and the Caribbean at least four out of ten teachers do not have a computer and at best only two out of ten had previously been trained to work with digital education in the classroom.

Third, **the false tension between virtual education and face-to-face education** in schools has generated a neo-conservative wave of an uncritical defense of face-to-face schooling, as if it had no structural deficiencies in developing a model of liberating, transformative education that as Freire said changed men so that they can change society.

Fourth, the lack of understanding of the process that led to the model of virtual education at home has generated in large sectors of the magisterium the fatuous hope that once quarantine ceases and we return to schools everything will be back to the way it was. Nothing will ever be the same for education as it was in December 2019, **neoliberalism has managed to sow the seed in society, from the obsolescence of the face-to-face school**. Only the idea/role of school containment, mainly in terms of workers' children and the most vulnerable population, hold the notion that nothing will change. But the world of employment is also changing and so is the idea of mutual exclusivity.

To defend the free, popular, scientific and face-to-face public school, it is necessary to rethink the school at present. **The old Newtonian educational machine built for capital's requirements within the framework of the first and second industrial revolution is no longer relevant/needed.** We used to say it from our anti-capitalist resistance stance, today the owners of capital say it, we have an opportunity to change it, without awakening the conservative spirits.

The alternatives

Over time we have learned that the only way to build alternatives is for those that resist to come together and to think of another education. On this occasion we require philosophical definitions, principles and values for a new school, but also ideas to instrumentalize the new, to realize the emerging.

For this reason, today there is a need for the unity of teachers, of the guilds and trade unions who fight and are not dedicated to the designs of capital, of the collectives and companions of popular education and critical pedagogies, of the academics who reflect on another education, for another world is possible. That is why we are supporting the initiative of our first American summit of anti-neoliberal educators that has emerged from the International Contact Group (GCI) that brings together teachers that resist and fight within the American region.

We each have our own perspective for what will come and how to resist it, but it is not the time of individual geniuses but of collective genius.

Bibliografía *(Bibliography)*

Bonilla-Molina, Luis y otros (2015). Carta a la UNESCO llamando la atención sobre giro economicista de la educación. Change.org. Disponible en Alainet.org

Bonilla-Molina, Luis (2016) Apagón Pedagógico Global (APG). Las reformas educativas en clave de resistencias. Viento Sur Nº 147 Disponible en: https://vientosur.info/IMG/pdf/vs147_1_bonilla_molina_apagon_padagogico_global_apg_l as_reformas_educativas_en_clave_de_resistencias.pdf

Bonilla-Molina, Luis (2017) El ODS-4 en la perspectiva de la pedagogía radical de las resistencias. Revista RUNA. Universidad Nacional de educación del ecuador, Número 2. Disponible en: http://repositorio.unae.edu.ec/handle/56000/232

Bonilla-Molina, Luis (2020). En casa y sin tocar a los otros: coronavirus o reingeniería social a escala planetaria. Disponible en https://luisbonillamolina.wordpress.com/2020/03/16/en-casa-y-sin-tocar-a-los-otros-coronavirus-o-reingenieria-social-a-escala-planetaria/ y otros medios digitales

Bonilla-Molina, Luis (2020) Avengers, Coronavirus y cambio climático. Disponible en https://luisbonillamolina.wordpress.com/2020/03/20/avengers-coronavirus-y-cambio-climatico/ y otros medios digitales.

Bonilla-Molina, Luis (2020). La escuela y la universidad en el capitalismo de la primera y segunda revolución industrial. Disponible en https://luisbonillamolina.wordpress.com/2020/03/26/la-escuela-y-la-universidad-en-el-capitalismo-de-la-primera-y-segunda-revolucion-industrial/
 Y otros medios digitales

Bonilla-Molina, Luis (2020). La cultura evaluativa y la virtualización educativa: dos tenazas del capitalismo cognitivo de la tercera revolución industrial. Disponible en https://luisbonillamolina.wordpress.com/2020/03/26/la-cultura-evaluativa-y-la-virtualizacion-educativa-dos-tenazas-del-capitalismo-cognitivo-de-la-tercera-revolucion-industrial/ y otros medios digitales

Bonilla-Molina, Luis (2020) Coronavirus: Google y la NASA en la reingeniería educativa. Disponible en https://luisbonillamolina.wordpress.com/2020/03/26/coronavirus-google-y-la-nasa-en-la-reingenieria-educativa/ y otros medios digitales

Bonilla-Molina, Luis (2020) Coronavirus, nuevas profesiones y máquina educativa newtoniana disponible en https://luisbonillamolina.wordpress.com/2020/04/06/coronavirus-nuevas-profesiones-y-maquina-educativa-newtoniana/ y otros medios digitales

Bonilla-Molina, Luis (2020). El presupuesto para la nómina docente en el centro de interés de la neo privatización educativa. Disponible en https://luisbonillamolina.wordpress.com/2020/04/08/el-presupuesto-de-la-nomina-docente-en-el-centro-de-interes-de-la-neo-privatizacion-educativa/ y otros medios digitales

Bonilla-Molina, Luis (2020). Pongámonos serios ¿Educación virtual en casa? Disponible en https://luisbonillamolina.wordpress.com/2020/04/10/pongamonos-serios-cada-familia-una-escuela/ y otros medios digitales

Bonilla-Molina, Luis (2020). Los desaparecidos y torturados por el modelo global de educación en casa Disponible en https://luisbonillamolina.wordpress.com/2020/04/27/los-desaparecidos-y-torturados-por-el-modelo-global-de-educacion-en-casa/ y otros medios digitales

ECN (2017) Informe global de consumo sobre ECommerce: cifras claves a nivel mundial. Disponible en https://www.ecommerce-nation.es/estudio-ecommerce-cifras-tendencias/

Hootsuite (2020) Tendencias de redes sociales de 2020. Disponible en https://hootsuite.com/es/research/social-trends

Hootsuite (2020) 140 estadísticas de redes sociales que son importantes para los mercadólogos en 2020. Disponible en https://blog.hootsuite.com/es/125-estadisticas-de-redes-sociales/

OIT (2019). Trabajar en cualquier momento y en cualquier lugar: consecuencias en el ámbito laboral. Disponible en https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_712531.pdf

UNESCO (2013) Directrices de la UNESCO para las políticas de aprendizaje móvil. Disponible   en http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/images/114_13_ED_UNESCO_Policy_Guidelines_for_Mobile_Learning_S.pdf