

SAGGI – ESSAYS

WITHIN THE FOLDS AND AMONG THE WOUNDS OF CONFLICTS AT THE ROOTS OF ECO-TECHNOLOGI- CAL ENTANGLEMENTS OF ADVANCED SOCIETIES: PEDAGOGICAL PERSPECTIVES STARTING FROM THE HUMANITARIAN CATASTROPHE OF CONGOLESE SO- CIETY DEVASTATED BY THE COLTAN WAR

TRA LE PIEGHE E LE PIAGHE DEI CONFLITTI ALLE
RADICI DEI GROVIGLI ECO-TECNOLOGICI DELLE SO-
Cietà AVANZATE: PROSPETTIVE PEDAGOGICHE A PAR-
TIRE DALLA CATASTROFE UMANITARIA DELLA SOCIETÀ
CONGOLESE FUNESTATA DALLA GUERRA DEL COLTAN

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The eco-technological entanglements of advanced societies generate, mainly along the routes of e-waste consumed in the West, India, and elsewhere, communities living at the threshold of subsistence by collecting discarded technological waste. There are, however, also vast communities, such as the Congolese one, suffering from extremely violent and seemingly endless wars caused by struggles among major world powers and multinational corporations acting “by proxy” for the procurement of precious Coltan resources, a highly valuable mineral used in the manufacture of technological artefacts essential to the “civilized world”: from mobile phones to missiles. How can educational processes of critical conscientization be promoted in the West regarding the dramatic “material foundations” of “virtual worlds,” within a perspective of co-responsibility toward a planetary collectivity conceived as a “community of destiny” (Ceruti, 2019; Morin, 1996)? How can one act, from an emergency-pedagogical perspective (Annacontini, Vaccarelli & Zizioli, 2022), to rebuild the

social fabric of the Congolese community, exhausted and drained by an endless war fueled by the need to sustain the technological development of “advanced societies”? This contribution aims to address these questions.

I grovigli eco-tecnologici delle società avanzate generano, perlopiù lungo le rotte degli *e-waste* consumati in Occidente, in India e altrove, collettività che vivono ai limiti della sussistenza raccogliendo rifiuti tecnologici “di scarto”. Vi sono, però, anche vaste comunità, come quella congolese, che soffrono guerre sanguinosissime e interminabili causate dalle lotte, tra le Grandi Potenze Mondiali e le Grandi Multinazionali che agiscono “per procura”, per l’approvvigionamento delle preziose risorse di Coltan, minerale preziosissimo che è utilizzato per la fabbricazione di artefatti tecnologici di essenziale importanza per il “mondo civilizzato”: dai telefonini ai missili. Come promuovere in Occidente processi formativi di coscientizzazione nei confronti dei drammatici “fondamenti materiali” dei “mondi virtuali”, in un’ottica di co-responsabilità verso una collettività planetaria intesa come “comunità di destino” (Ceruti, 2019; Morin, 1996)? Come agire per ricostruire, in prospettiva pedagogico-emergenziale (Annacontini, Vaccarelli & Zizioli, 2022), il tessuto sociale della collettività congolese, sfibrato e dissanguato da una guerra interminabile perché alimentata dalla necessità di “sostenere” lo sviluppo tecnologico delle “società avanzate”? Il presente contributo si propone di affrontare tali interrogativi.

1. *Introduction*

Contemporary society appears marked by a radical contradiction: while technologically advanced societies celebrate digital progress as a horizon of emancipation, connectivity, and development, vast regions of the planet are devastated by processes of environmental, economic, and human exploitation functional to sustaining

such progress. The civilization of technology, far from representing exclusively a process of human liberation, reveals a dark side composed of structural inequalities, geopolitical conflicts, ecological devastation, and new forms of economic colonialism. Within this scenario, the tragedy of the Democratic Republic of Congo constitutes one of the most dramatic paradigms of the interconnections between global technological development, the exploitation of natural resources, and humanitarian crises.

Coltan – a mineral indispensable for the production of smartphones, computers, electronic devices, satellite systems, and military technologies – represents the emblematic symbol of such “eco-technological entanglements.” Behind the apparently immaterial surface of virtual worlds lies a violent materiality made of mines, child exploitation, civil wars, forced migrations, environmental devastation, and death. Contemporary technology, therefore, cannot be interpreted merely as a neutral or instrumental phenomenon, since it incorporates power relations, economic models, geopolitical structures, and anthropological visions profoundly affecting the collective destinies of humanity.

In this framework emerges the urgent necessity for a pedagogical reflection capable of questioning the ethical, political, and educational foundations of contemporary technological civilization. Pedagogy, in fact, cannot limit itself to describing formative processes within advanced societies; rather, it must adopt a planetary perspective oriented toward critical conscientization, global responsibility, and the construction of an earthly citizenship aware of the invisible bonds linking Western everyday consumption to the suffering of distant populations.

Education is thus called to confront what Edgar Morin defines as a “community of destiny”: a historical condition in which humanity as a whole shares global risks, common vulnerabilities, and systemic interdependencies that make it impossible to conceive individual salvation separately from the collective destiny of the planet. From this perspective, the Coltan war concerns not only Congo but radically questions the global development model and the anthropological paradigm of technocratic societies.

This contribution therefore aims to develop a pedagogical reflection on the educational, ethical, and intercultural implications of the Congolese humanitarian catastrophe by addressing two fundamental questions: on the one hand, how to promote processes of critical conscientization in Western contexts concerning the “material foundations” of digital technology; on the other hand, how to elaborate emergency-pedagogical perspectives oriented toward the reconstruction of the social, cultural, and relational fabric of communities devastated by permanent war.

2. The Civilization of Technology and the “Material Foundations” of Virtual Worlds

Contemporary society is characterized by a progressive symbolic dematerialization of everyday experience. Digital technologies appear, in the eyes of Western users, as immaterial, clean, rapid, almost “magical” tools capable of annihilating distances and simplifying life. Nevertheless, such apparent immateriality conceals a complex material infrastructure composed of mining extraction, energy exploitation, global industrial supply chains, and geopolitical processes often marked by violence.

In this sense, pedagogical reflection must recover the concrete and material dimension of technology. Günther Anders (2003) had already denounced the risk of “Promethean blindness,” namely humanity’s inability to understand the systemic consequences of its own technological productions. Contemporary human beings use highly sophisticated devices without perceiving the chains of suffering, exploitation, and devastation that make their existence possible.

Coltan thus becomes the symbol of a collective removal: the digital West tends to conceal the human and ecological cost of its technological well-being. Such removal produces an ethical dissociation between consumption and responsibility. Electronic devices are perceived as neutral goods, detached from the global dynamics of violence traversing them.

Critical pedagogy is therefore called to unmask the ideological mechanisms nourishing such unawareness. Paulo Freire spoke of “conscientization” as the process through which subjects acquire critical awareness of the oppressive structures of reality. Applied to the contemporary eco-technological context, conscientization implies the ability to recognize the connections between Western lifestyles, the global economy, and the suffering of marginalized populations.

Educational pathways capable of developing a new ethical-technological literacy must therefore be promoted. It is not enough to teach the use of technologies; it is necessary to educate individuals toward a critical understanding of their anthropological, economic, and geopolitical implications. Schools, universities, and educational agencies must become spaces in which the relationship between technology, power, and social justice can be critically interrogated.

3. Congo as a Paradigm of Global Eco-Technological Violence

The Democratic Republic of Congo represents one of the richest areas in mineral resources on the planet and, paradoxically, one of the most devastated by wars, poverty, and political instability. Such contradiction reveals the extractivist logic characterizing contemporary global capitalism: the natural resources of peripheral territories are exploited to sustain the well-being of central economies, while local populations suffer the destructive consequences of such exploitation.

The Congolese wars of recent decades cannot be understood exclusively as ethnic or regional conflicts. Rather, they constitute economic and geopolitical wars fought over the control of strategic resources indispensable to contemporary technological civilization. Within this scenario operate governments, multinational corporations, armed groups, military interests, and international economic networks feeding a permanent spiral of violence.

The principal victims of this system are civilian populations: child soldiers, women subjected to systematic violence, displaced

communities, and miners exploited under inhuman conditions. The territory itself is devastated through uncontrolled extractive practices destroying ecosystems, contaminating water sources, and compromising future possibilities for sustainable development.

The Congolese crisis thus reveals the necropolitical face of technological globalization. Achille Mbembe has shown how contemporary power increasingly operates through the differential management of life and death. Certain populations are implicitly sacrificed so that others may maintain particular levels of consumption and well-being.

From a pedagogical perspective, all this imposes a radical redefinition of education for global citizenship. It is impossible to educate for democracy, human rights, or sustainability without critically confronting the economic and geopolitical structures producing exclusion, exploitation, and systemic violence.

4. Community of Destiny and the Pedagogy of Planetary Co-Responsibility

Edgar Morin (1993; 2001) and Mauro Ceruti (2019) have emphasized how contemporary humanity lives within a “community of destiny,” characterized by global interdependencies rendering it impossible to separate the destinies of peoples. Ecological crises, pandemics, wars, migrations, and technological transformations clearly demonstrate the profound connections linking different regions of the planet.

The Coltan war dramatically highlights such interdependence: Western technological well-being is intertwined with the suffering of distant communities. This implies a radically new educational responsibility. It is no longer sufficient to educate competitive individuals adaptable to the global market; rather, it is necessary to form subjects capable of conceiving themselves as members of a planetary collectivity.

Within this perspective, intercultural pedagogy assumes a decisive role. It cannot limit itself to managing cultural differences within multicultural school contexts but must instead promote a

planetary consciousness oriented toward solidarity, global justice, and reciprocal understanding.

The category of co-responsibility thus becomes central. Every daily act of consumption possesses global implications. Educating for co-responsibility means developing in subjects an awareness of the ethical consequences of their economic, technological, and environmental choices.

Such an educational process requires a profound transformation of school and university curricula. Themes such as integral ecology, climate justice, extractive economies, techno-colonialism, and human rights must enter educational pathways in a stable manner. Education must help to symbolically “reweave” the fracture between the Global North and South, between the virtual and the material, between consumption and responsibility.

5. Emergency Pedagogy and the Reconstruction of the Social Fabric

Alongside the necessity of promoting processes of conscientization within Western contexts emerges the problem of a true educational reconstruction of communities devastated by permanent war. In this regard, the perspectives of emergency pedagogy elaborated by Alessandro Vaccarelli, Giuseppe Annacontini and other scholars (2022) offer fundamental theoretical instruments.

War produces not only material destruction but also symbolic, relational, and identity disintegration. Communities affected by prolonged conflicts develop profound collective traumas compromising reciprocal trust, educational continuity, and cultural transmission.

Emergency pedagogy proposes intervening precisely within such liminal contexts by promoting processes of community resilience, symbolic reconstruction, and educational regeneration. It recognizes that education may represent a fundamental space of human resistance even under the most dramatic conditions.

In the Congolese context, this implies the necessity of supporting educational programs oriented toward rebuilding the social fabric, protecting childhood, promoting peace, and valorizing local

cultures. Schools may become places of collective care, shared memory, and reconstruction of hope.

Particularly important is also the involvement of local communities within educational processes. Every pedagogical intervention must avoid paternalistic or neo-colonial logics, promoting instead participatory practices founded upon recognition of the cultural dignity of the populations involved.

Within this framework, the theme of narration also assumes relevance. Narrating the suffering and resistance of Congolese populations means rescuing them from media invisibility and restoring voice and recognition to them. Narrative pedagogy may contribute to constructing empathic bridges between distant worlds, counteracting global indifference.

6. Toward an Educational Ethics of Planetary Solidarity

The Congolese tragedy ultimately imposes a broader reflection on the anthropological model of contemporary societies. The civilization of technology risks producing a progressive moral anesthetization in which the suffering of others is perceived as distant, abstract or inevitable.

Hans Jonas had already emphasized the necessity of elaborating a new ethics of responsibility adequate to the transformative power of modern technology. Today such necessity appears even more urgent. Pedagogy must contribute to the formation of subjects capable of critically inhabiting the complexity of the global world without surrendering either to cynicism or indifference.

It is therefore necessary to promote an educational culture founded upon planetary solidarity, social justice, and care for the common earthly home. Within this perspective, peace education cannot be reduced to a mere education for tolerance; rather, it must become an education for the transformation of the economic, cultural, and political structures generating violence.

Peace, in fact, does not coincide with the mere absence of war. It implies the construction of conditions of justice, dignity, and reciprocal recognition. Educating for peace therefore means educating for responsibility toward the other, for awareness of global interdependencies, and for the capacity to imagine alternative models of development.

The drama of Congo forces us to look into the contradictions of technological modernity. Behind every luminous screen may lie bloodstained mines, denied childhoods, and devastated territories. Pedagogy has the task of rendering such invisible connections visible so that humanity may finally recognize itself as a community of destiny and responsibly assume the task of safeguarding the dignity of planetary life.

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