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The Paths of Ethics in Research in Laos and the Mekong Countries

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Electronic Waste Dumped in the Global South: Ethical Issues in Practices and Research

Florence RODHAIN*

Although some humans still consider planet Earth worthy of respect in their day-to-day actions—whether as a shared asset or a sacred treasure—Michel Serres asserts that the majority of humanity has waged an ongoing war against the planet. Moreover, the philosopher points out that for the first time in human history, humans could possibly win this war.

This chapter restricts itself to just one of the many battles Humankind is waging in this great war against the planet, and thus against itself, since combatting the planet is tantamount to unconsciously sawing off the branch on which you sit. Few are aware of this battle; actually, it is fought in silence.

Nature does not produce waste. The concept of “waste” was invented by humans. In nature, outputs become inputs, and everything is recycled naturally. Yet, clearly humankind is not (or is no longer) mature enough to imitate nature’s wisdom. Industrial processes have yet to make imitating nature part of their agendas, and the capitalist system, founded on a policy promoting a development economy geared toward a consumer society, relies on producing waste. This situation has become the norm.

Hazardous waste

One such type of industrial waste, WEEE (waste electrical and electronic equipment) is constantly increasing. Commonly called “e-waste,” WEEE comprises electric and electronic products that are considered to be at the end of their “useful life” (which does not mean they no longer function, but that they might simply be seen as obsolete and are, therefore, unloaded by their owners). This waste is hazardous. For example, computers contain toxic substances that harm the environment and human health, such as antimony, barium oxide, beryllium, cadmium, chlorine, bromine, lead lithium, mercury, phosphorus, arsenic, brominated flame retardants, etc. It takes just one gram of mercury to pollute a square meter of land or 1000

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cubic meters of water for 50 years. In China, a water sample from the Lianjiang River, near a village that recycles e-waste, found lead levels 2400 times higher than WHO-recommended standards.

The United States is the champion in generating electronic waste. It is estimated that the average American produces 30 kg of electronic waste per year. Electronic waste is constantly increasing in the world. Lack of recycling, shorter and shorter product life (e.g., cell phones), planned obsolescence, and population growth are among the many factors contributing to generating more and more waste.

The e-waste recovery rate oscillates between 10% and 20% in the global North. This means between 80% and 90% of this waste is either incinerated or buried with no pre-treatment, or exported to countries in the global South.

A contamination free-for-all

This e-waste has had a violent effect on the environment, resulting in air pollution, soil pollution (acidification), and water pollution (groundwater and rivers). Some 40% of the lead that contaminates soil is directly linked to e-waste. Moreover, once they cross into the South, numerous containers from countries in the North transporting e-waste are dumped... straight into the sea: thrown overboard right into open waters, far from any witnesses. After the 2004 tsunami, dozens of containers carrying e-waste were found near Somalian shores, leaving no clues about when they were dumped or by whom, providing further evidence of this practice in open waters.

Humans, particularly illegal workers in the South, are also violently affected. The bodies of "recyclers" are exposed: these workers inhale toxic gases and fumes, and abrasive products come into contact with their unprotected skin. Exposed bodies suffer greatly. Reported symptoms include persistent migraines; insomnia; asthmatic bronchitis; lung cancer; skin problems; reproductive problems (miscarriages among women living near landfills); abnormal brain development in children; heart problems; and damage to the nervous system, liver, kidneys, and spleen.

From desktops to kitchen tables

People working illegally in the South (often women and children) are especially affected, because they are "inhaling" computers from the North (workers often use their bare hands to burn the waste material in rudimentary conditions to recover precious components). Men, women, and children breathe in these toxic fumes. But inhabitants in the North are also affected. While children in the South are "inhaling" personal computers (80% of children from Guiyu—one of China's largest recycling centers—suffer from respiratory diseases), children in the North are "eating" them. Imagine a cyber stomach. Rainwater leaches heavy metals from non-

recycled waste that has been simply dumped into landfills and enters the water table. Nearby garden produce is directly contaminated by rainwater pouring into the fields.

Illegal exportation: regulation and control

Transport of e-waste from countries in the global North to those in the South is completely illegal—yet 80% of the e-waste from the United States is shipped to these very countries.

However, a global agreement was signed in 1992 (International Basel Convention) that seeks to limit the exportation of dangerous waste from “developed” countries to “developing” countries. In addition, a 2002 European directive (2002/96/CE) required the recovery of WEEE, making the producer responsible for waste handling and treatment. This was followed in 2012 by another directive (2012/19/EU) prohibiting the illegal export of waste: all exports must be declared.

A special group was created in 2009 in Interpol to control illegal movements: the “Global E-Waste Crime Group,” whose mission was to combat crime related to e-waste.

Why circumvent the laws?

Whether in the North or South, certain parties benefit from operating outside the laws.

In the North, the rationale is purely economic: the cost of responsible e-waste treatment is considered too expensive compared to the cost of transporting it to countries in the South. Transferring to the South is 10 times less expensive. For example, it costs US\$ 18 to properly remove aluminum from a computer screen. Recycling is too expensive in an economy where the environmental costs related to consumption are not passed on to corporate taxation.

Responsible recycling is no match for organized crime: according to the rationale of the capitalist system, good recycling behavior does not pay and offers no competitive advantage.

We directed a doctoral student in France who investigated what motivated companies to manage their e-waste responsibly. She showed that the primary motivation had no ethical basis and reflected no sense of responsibility. Instead, the companies were merely interested in either following the letter of the law or practicing institutional mimicry (behaving like other companies in their sector). It turned out the only people that the PhD student interviewed who maintained an ethical stance were employees who had no decision-making power in the company.

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In the South, choices are also economically motivated: a recycler in China earns three to four times more than a worker in a rice paddy. Smugglers also benefit from this windfall, earning substantial additional income.

Both in the North and the South, illegal recycling is a bonanza for actors in organized crime: the return on one ton of e-waste transported illegally is 450 euros. Even the United Nations Environment Programme (UNEP) found that the e-waste sector is the best sector for mafia organizations to invest in, given the lack of statistics and studies on the subject, the virtual total lack of control, and the absence of any monitoring reports.

In a sector that is both informal and illegal, transferring e-waste recycling generates an estimated income between 12.5 and 18.8 billion dollars annually, according to Interpol, or the equivalent of two years of Laos' GDP, or the combined GDP of the world's 49 poorest countries. In short, it is a lucrative business sector with little regulation, and the benefits far outweigh the risks for unethical organizations.

How to circumvent laws: cynicism and "newspeak"

Although the United States signed the Basel Convention of 1992, it did not ratify it. Furthermore, many components identified as toxic in the convention are not labeled as such in the United States. But without a doubt, the trophy for cynicism goes to US politicians and lobbyists who claim that sending waste to the South allows IT equipment to be re-used, and thus closes the digital divide!

In the same way that a minister of peace can oversee war (a principle of newspeak) in George Orwell's dystopian society described in *1984*, the transfer of e-waste from the North to the South—illegal, yet illogically increasing despite regulations—is more and more often disguised as "humanitarian donations." While the Basel Convention and European directives prohibit the transfer of "waste," transferring so-called "second-hand products" is fully authorized. Interpol estimates that 75% of the containers of used goods shipped to Nigeria are in fact full of waste. False declarations are made when describing the container's contents. This practice only applies to OECD countries, since the United States has not ratified the Basel treaty and holds its head high as it exports its waste without even trying to cover it up.

Vietnam (like China) applies stricter regulations than those outlined in the Basel Convention. However, since the country needs resources and raw materials, it accepts second-hand products while confronting the enormous challenge to differentiate between disguised waste and actual second-hand goods.

Ethical issues raised by the problem of e-waste management

Dumping e-waste from the North to the South is an ecological timebomb constructed in a climate of widespread indifference. However, it raises several ethical issues involving numerous actors, virtually affecting the entire world at all levels.

• Ethical issues for all actors

Hans Jonas, in *The Imperative of Responsibility* (1979, *Das Prinzip Verantwortung* in German), proposes this guideline: "Act so that the effects of your actions are compatible with the permanence of genuine human life." According to Jonas, in response to this new power invested in humans through technology, a new form of collective and individual responsibility (that every individual must uphold) must emerge that prohibits taking any action that can threaten either the existence of future generations or the future quality of existence on earth.

However, responsible does not mean guilty, an expression made famous by the contaminated blood scandal in the 1980s.¹ Companies, governments, and users comprise the three levels of responsibility. This game of "responsible, but not guilty" brings into play the relationships between corporate social responsibility (CSR), government social responsibility (GSR), and individual social responsibility (ISR): it devolves into a card game of Old Maid, where players must discard the "guilty" card. Social responsibility is a game played in three dimensions: democracy (between governments and individuals), government regulation (between companies and governments), and justification (between companies and individuals).

– Government social responsibility

Where does responsibility begin and end for governments? Is it just complying with laws and conventions? With no supranational regulation, how can we limit the abuse of power by dominant countries that exploit others who are less well-off (either as a source of abundant resources or as a dumping ground)?

– Corporate social responsibility

Where does social responsibility begin and end for producers? (In the United States, there is no legislation to make producers aware of "end of useful life" product management that encourages them to take responsibility

1. A former French minister, accused of failing to take measures to stop the use of batches of blood products contaminated by an unknown virus (the future HIV) pleaded "responsible" but not guilty, establishing a distinction between the responsibility for administrative measures and an understanding of the epidemiological impacts of the delayed destruction of suspected samples.

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for it). Is the practice of planned obsolescence for products to drive up consumption ethical?

– *Individual social responsibility*

Where does social responsibility begin and end for wasteful consumers?

• ***Ethical issues for researchers***

Numerous ethical issues arise when researching this topic. Here we only address the one that seems the most “sensitive”: What should be done when a researcher discovers practices that are obviously unethical?

If we want to investigate this question in-depth in terms of e-waste, researchers must conduct their research in multiple locations, using various types of surveys in the North and the South. Ethical issues can be differentiated according to the geographical origin and location of the researcher’s field.

– *Researchers “in the South”*

If a researcher ever has access to dumping sites for electronic products, where individuals recycle this garbage, how should that researcher use the collected information? If he or she uncovers information that might pose major health hazards, who should it be reported to? What should one do with this information? Contact the country’s Minister of Health? Should the researcher go back to the population that was interviewed? This raises the issue of confidentiality. And if the researcher manages to contact the population that is sorting waste, won’t some of its members be put at risk if the researcher exposes confidential information that involves them?

– *Researchers “in the North”*

If a researcher is conducting interviews “in the North” and through interviews with a company discovers that it is sending waste overseas illegally, how should this discovery be handled? This raises issues of neutrality and maintaining distance between the study object and the researcher. If the researcher discovers real or potential dangers in the practices he or she has uncovered, should that researcher raise this issue? If yes, to whom? If the research clearly reveals real dangers, should researchers continue to distance themselves from their observations? These are the typical questions whistleblowers ask themselves before deciding to inform the public about the unethical practices of organizations that employ them. What are the boundaries of ethical activism?

BIBLIOGRAPHY

- Ait Daoud S. (2012). *Le management responsable des technologies de l'information (MRTI) : entre approches éthique et institutionnelle*. Doctoral Thesis, University of Montpellier.
- INTERPOL (2009). *Electronic waste and organized crime. Assessing the links, phase II report for the INTERPOL Pollution Crime Working Group (PCWG)*.
- Jonas H. (1979)(2013). *Le principe responsabilité. Une éthique pour la civilisation technologique*. Paris : Flammarion, collection Champs.
- Rodhain F., & Fallery, B. (2010). Après la prise de conscience écologique, les TIC en quête de responsabilité sociale. *Actes du 15^{ème} Congrès de l'AIM*, June, La Rochelle, 28 p.
- Rucevska, I., Nellemann, C., Isarin, N., Yang, W., Liu, N., Yu, K., ..., Nilsen R. (2015). *Waste crime – Waste risks: gaps in meeting the global waste challenge*. A UNEP Rapid Response Assessment. Nairobi and Arendal, United Nations Environment Programme and GRID-Arendal.
- UNEP (2014). *Basel Convention on the control of hazardous wastes and their disposal – Protocol on liability and compensation for damage resulting from transboundary movements of hazardous wastes and their disposal*, Texts and Annexes, United Nations Environment Programme, UNEP/BRS/2014/3.

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