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## COMMENTARY

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# The forgotten other of digital TV – from *maquila* to landfill<sup>1</sup>

### ABSTRACT

1. *When we think of digital television we think of newness, both in terms of the rela-*  
2. *tively recent mass conversions from analogue sets that have taken place across much*  
3. *of the globe and an uncertain but potentially exciting future – Apple TV, Google*  
4. *glasses or nano clothing? And will the Internet swallow television, vice versa or none*  
5. *of the above? The next turn remains unclear. But fantasizing it allows us to revel in*  
6. *the cheeky, cheery technological determinism of cybertarians.*  
7.  
8.  
9.

10. When we think of digital television we think of newness, both in terms of the  
11. relatively recent mass conversions from analogue sets that have taken place  
12. across much of the globe and an uncertain but potentially exciting future –  
13. Apple TV, Google glasses or nano clothing? And will the Internet swallow  
14. television, vice versa or none of the above? The next turn remains unclear.  
15. But fantasizing it allows us to revel in the cheeky, cheery technological  
16. determinism of cybertarians.

17. The recent past is often forgotten in this headlong rush to newness –  
18. namely, both how TVs are made and the pre-digital, analogic world of  
19. television: *fat* screens as opposed to *flat* ones. It is no wonder we neglect  
20. such topics when the marketing of flat-screen televisions stresses customer

### KEYWORDS

*maquiladoras*  
labour exploitation  
electronic waste  
cybertarianism  
technological  
determinism  
environment

1. Much of the data for this article comes from Maxwell and Miller (2012), apart from the photography.

2. Though some scholars have caught up with activist/non-governmental organization work, notably Reygadas (2002) and Mayer (2011).

pleasure that is predicated on happily accepting the obsolescence of existing machinery! Consumers and analysts are so caught up in the qualities of resolution that they show minimal concern about, for example, the increased electricity use incurred by today's flat-screen high-definition darlings (up to 250 watts per hour. They also emanate more heat than their fatter analogic forebears, thereby encouraging additional air conditioning in hot climates). But that is only part of the story that needs to be told if we are to engage digital television adequately.

I am particularly concerned in this article by what is left behind in conventional accounts – if you like, the abject form of digital TV, that which we had rather not think about as we dwell in the manifold and manifest pleasures of realism, plenty, special effects, three dimensions, Dolby, and the like, restricting our wonkish gaze to auctioning spectrum space, allocating frequencies, establishing parental policing controls, cord-cutting, cable bundling and the like. In the process, an entire world is forgotten, one where TVs are made and eventually go to die. The fraction of their lives spent with audiences is valorized beyond all measure in public debate, policy discourse and academic reflection. As a consequence, the exploitation, pain and suffering that are their very conditions of possibility and decline are essentially left off those agendas.<sup>2</sup>

Here is the scoop. Like electronic production more generally, TV relies on exorbitant water use and multiple carcinogens. Most colour televisions have been made with cathode-ray tubes (CRTs), which send electrons from caesium cathodes into high-voltage electrodes that project onto phosphorescent screens and emit radiation to illuminate phosphors.

It is no wonder that this leads to horrors. The ones I am principally concerned with here occur in the US-Mexico border city of Tijuana. Dubbed the world's television capital, Tijuana was recently restored to its number one place ahead of rivals in Vietnam and China, because workers' wages and transportation costs are competitive. *Maquiladora* factories there manufacture all manner of electronic goods for Asian, European and US multinationals, which then go over the border without incurring tariffs. In 2001, 20,000 people made over ten million televisions, 'soldering, inserting screws, connecting wires, testing, inspecting, painting, and packaging' (García and Simpson 2006: 150).

*Maquila* wages have declined consistently since 1993, even though productivity has increased. Two full-time workers in a Mexican plant receive just two-thirds of the pay needed to support a family of four, prior to medical and educational expenses, and are denied collective-bargaining rights and legal guarantees of privacy, health and safety. What is more, the very people who make these gadgets cannot afford to purchase them – a flat-screen TV costs less across the border in wealthy San Diego than where it is made, in Tijuana, because the tariff-free manufactures there are strictly for export (Anon. 2009).

Women have long been at the forefront of the *maquiladoras'* electronic-labour process and its environmental impact. For instance, when RCA moved its radio and TV plants from the United States to Mexico in search of cheaper labour, company elders sought a workforce of young, unmarried women. This strategy of gendered domination has an inevitable consequence: consistently unravelled lives. Human Rights Watch uncovered everyday sexual assault and discrimination in *maquiladoras* in 1996, and matters have worsened. The Centre for Reflection and Action on Labour Issues interviewed thousands of workers in 2008 and 2009 across the electronics sector. Its subsequent report disclosed chillingly systematic sexual harassment, and female workers who

1. are routinely classed as ‘temporary’ so that their employers can elude regula-  
 2. tions and evade contracts that apply to full-timers (Human Rights Watch 1996;  
 3. Centre for Reflection and Action on Labour Issues 2009; Paterson 2010).

4. Then there is the environment. The 1983 La Paz agreement between Mexico  
 5. and the United States stipulates that *maquiladora* waste be returned to where  
 6. the relevant multinational corporation is domiciled, but enforcement has been  
 7. lax, and data about the environmental side effects of production and the flow of  
 8. contaminated goods are minimal. In addition, despite the 1994 North American  
 9. Free Trade Agreement/Tratado de libre comercio’s environmental and worker  
 10. protections, it ushered in low wages, labour-law violations and occupational  
 11. exposure to unhealthy chemicals and gases (Simpson 2007: 166–67).

12. The situation is starkly evoked by Luis Alberto Urrea, a ficto-critical writer  
 13. who blends sociological observation, *roman-à-clef*, and ethnography:

14.  
 15. *Maquis*, of course, are binational or multinational factories. They sit on  
 16. their bulldozed hills like raw-concrete forts, and the huts of the peas-  
 17. ants ring their walls. Some of them have Japanese names on them,  
 18. some of them have American names. All along Tijuana’s new high-tech  
 19. highway, *el Periférico*, you can see them up there, receding into the hazy  
 20. distance. Headstones for the graveyard of American union labor.

21. (1996: 25)

22.  
 23. Urrea wryly notes that Mexican progressives have dubbed the border region  
 24. *Palestijuas* (Tijuana-Palestine).

25. The *maquilas* have produced untold suffering at the other end of the elec-  
 26. tronic life cycle as well:

27.  
 28. The community ... occupied a tract of land at the foot of the mesa.  
 29. Above it hunkered the remains of *Reciclaje Integral*, a deserted smelt-  
 30. ing and battery recycling plant. For years the residents of Vista Nueva  
 31. had reported skin ulcers, respiratory ailments, birth defects. A number  
 32. of children had died. ... When it became apparent that charges would  
 33. be brought against him in a Mexican court, however, the owner, an  
 34. American, simply filed for bankruptcy in Mexico, left the factory as  
 35. it stood, and withdrew across the border, where he continued to  
 36. prosper. ... He lived in a million-dollar house somewhere in San Diego  
 37. County while his deserted plant continued to poison the residents of  
 38. Vista Nueva.

39. (Nunn 2005: 25)

40.  
 41. This quotation comes from Kem Nunn’s surfing mystery, *Tijuana Straits*  
 42. (2005). A complex story of violence, misunderstanding, difference, sacrifice  
 43. and redemption at the Mexican-US border, it is dominated by the *maquilas*’  
 44. deadly impact on occupational and residential health and safety. The seeming  
 45. villain of the novel is equally a victim of systematic corporate exploitation: he  
 46. is one of many workers who move between ragpicking, employment and drug  
 47. use in a desperate cycle that concatenates in violence.

48. The CRTs that these folks construct and deconstruct at the beginning  
 49. and end of a television set’s life are made of zinc, copper, cesium, cadmium,  
 50. silver and lead. Major environmental problems occur when they are made and  
 51. thrown away because components seep into underground water, leaving a  
 52. residue of heavy metals and toxic chemicals. This worsened with the 2009

transition to digital broadcasting in the United States, when hundreds of thousands of outdated analogue sets, perhaps the hardest of all manufactures to recycle, were discarded.

Electronic waste (e-waste) of this kind is the fastest-growing form of municipal refuse. Salvage yards have generated serious threats to worker health and safety wherever plastics and wires are burnt, monitors smashed and dismantled, and circuit boards grilled or leached with acid, while the toxic chemicals and heavy metals that flow from such practices have perilous implications for local and downstream residents, soil and water.

'Recyclers' eschew landfills and labour in the Global North in order to avoid costs and regulations in countries that effectively prohibit such destruction to the environment and workers. So businesses that forbid dumping in local landfills as part of their corporate policies merrily mail it elsewhere. Most e-waste recycling is done in the Global South by pre-teen girls, who pick away manually at discarded television sets in search of precious metals, dumping the remains in landfills – again, a picture of graphic gendered exploitation at the moment of destruction, mirroring with awful irony the moment of creation. A picture that does not show up even on Sony's new US\$6999.99 4K Ultra High-Definition television with eight million individual pixels versus the two million on your current set (Miller 2013).

To aid in some visualization of such things, here are some relevant, but far from revelatory or shocking, pictures that I have taken over the last two years in the three sites where I have been living: Los Angeles, Mexico City and London. The four photos from the Global North are of abandoned television sets left on sidewalks, perhaps for collection by recycling agencies before they are illegal exported to China, West Africa or India; perhaps destined for local incineration or landfill; perhaps just left there to rot. The TVs look almost stately when they first appear by the side of the road, as if they had been carefully placed there for a moment while people moved in or out. As we have seen, the reality is far darker, and it is shadowed by the way that the sets fall rapidly into decline, as if casually smashed by passers-by exacting some revenge on inanimate objects of an ambivalent passion.

The photo from the Global South advertises a local *reciclador*. He trades plants for electrical and electronic waste from his truck in Mexico City's La Condesa region, a hipster hangout that still features *pepenadores*, organ grinders and others from the traditional alternative economy alongside government-funded Spartacist poets and fast-food advertising directors. The leaves at the bottom of the image are examples of what he offers. He has been trawling the region for decades making these kinds of trades.

The lessons I draw from the information presented above, whether photographic, statistical, ethnographic, scientific, literary, activist or political-economic (and in less than 2000 words) is this: we need a properly materialist account of digital TV that tracks the entire life cycle of commodities and draws on all those discourses. Otherwise, we shall be left with the ultimately empty world of policy as usual – condemned to failure in its ignorance and neglect of the lives and environments that are affected by a beguiling new world.

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