Definitely Not "Better": The Hidden Costs of iPhone 6

Nicki Lisa Cole, Ph.D.

Research Fellow, Institute for Advanced Studies on Science, Technology and Society

21 January, 2015

In early 2015, the story of Apple would seem to be one of a company mostly in its glory, if one relied only on corporate, mainstream, and tech media sources. Searching for news on Apple, one can read about record-breaking sales of its latest iPhone models, and praise for the "genius" of Jony Ive, who designed both the new Apple Watch and the company's latest mobile operating system, iOS 8. The only bad news for Apple seems to be "Bendgate"—an abundance of stories about how some consumers had been able to bend iPhone 6 Plus.

The media landscape suggests by omission that Apple has effectively dealt with the ethical and legal labor issues that were previously reported by the *New York Times* and many other media outlets in 2012. Apple now claims that it has taken a lead on improving labor conditions throughout its supply chain. The well-polished pages devoted to supplier responsibility on its website (www.apple.com/supplier-responsibility/), and its annual Supplier Responsibility Progress Report—featuring the faces of smiling young workers—indicate that all is well.

Online and in print, Apple asserts, "Each of [the] workers [in our supply chain] has the right to safe and ethical working conditions. So we audit deep into our supply chain and hold our suppliers accountable to some of the industry's strictest standards. In fact, we care as much about how our products are made as we do about how they're designed" (Apple, Inc., 2014b, p. 4). In response to 2013 reports by China Labor Watch (CLW) that detailed labor law violations at several suppliers, Apple continues in the report, "We enforced our Code through 451 audits at multiple levels of our supply chain, and our suppliers trained 1.5 million

workers on their rights. We drove our suppliers to achieve an average of 95 percent compliance with our maximum 60-hour work week" (2014b, p. 4).

Yet, recent reports from Students and Scholars Against Corporate Misbehavior (SACOM) and CLW suggest otherwise. From October 2013 through August 2014, members of SACOM conducted undercover research at three Apple suppliers involved in producing iPhone 5C and iPhone 6, and interviewed 103 workers (SACOM, 2014). The suppliers—Maintek Computer, Cotek Electronics, and Casetek Computer—are all in Suzhou, China, and are subsidiaries of Pegatron Corporation, a Taiwanese electronics manufacturing firm that was awarded half of Apple's 2014 iPhone 6 orders (25 million units) (AppleInsider, 2014). Pegatron is also Apple's primary supplier for iPhone 5C (Worstall, 2013). Workers at these factories play a variety of roles in producing components for iPhones, and in assembling the devices.

SACOM's report, titled "The Lives of iSlaves," details how workers often labored as much as twelve to fifteen hours per day, sometimes more, and at times worked for *up to ten weeks* without a single day of rest. This unhealthily rigorous work schedule results in as much as 170 to 200 overtime hours per month, which is more than five times China's legal monthly limit (SACOM, 2014). Both the pace and volume of work documented at these suppliers are in violation of Chinese labor laws, as well as Apple's own Supplier Responsibility code, which states, "a workweek shall be restricted to 60 hours, including overtime, and workers shall take at least one day off every seven days" (Apple, Inc., 2014c, p. 1).

SACOM also found that the factories did not provide workers with necessary safety equipment, that workers suffered medical ailments and injuries including skin allergies, blisters, and fainting due to long hours of standing, and that many reported long-term physical exhaustion. Women who were pregnant while working had no choice but to quit to protect their health

and that of their unborn child, because managers were unwilling to reduce their hours to the legal limit. Workers hired through outside agencies, known as "dispatch workers" in China, were not paid benefits required by law (SACOM, 2014).

What makes these violations reported by SACOM particularly egregious is that many of the same violations were documented at other Pegatron factories during the manufacture of iPhone 5C in 2013, as reported by CLW in July of that year (China Labor Watch, 2013a). Despite this scathing 2013 report, Apple continues to work with Pegatron and grant it lucrative new orders.

Of course, Pegatron is not the only iPhone supplier with which Apple continues to work, despite known ethical and legal violations on-site. In September 2013, CLW released another report that detailed oppressive and unsafe working conditions at Jabil Circuit factory in Wuxi, China—a U.S.-owned corporation—which at the time was making covers for iPhone 5 and iPhone 5C (China Labor Watch, 2013b). A year later, the organization released a second report on the factory that shows that ethical and legal violations continue unabated as workers produce covers for iPhone 6 (China Labor Watch, 2014).

Readers are likely to have heard of labor issues at Foxconn sites throughout China, which made headlines across corporate, mainstream, and independent media outlets in 2012 after a spate of worker suicides drew attention to iPad and iPhone assembly lines. Apple became a member of the Fair Labor Association and promised to conduct audits in response to allegations of labor violations at Foxconn sites following the *New York Times*' in-depth "iEconomy" series. Since then, mainstream media have touted Apple's progress with headlines like, "Apple's pres-

sure on Foxconn forces improved working conditions in China," "Improving Working Conditions at Foxconn," and "Foxconn's Apple factories start to show signs of improved working conditions."

Yet, no media coverage has mentioned the contrary research findings of sociologists

Jenny Chan, Ngai Pun, and Mark Selden, who have done extensive undercover research at Foxconn facilities and interviewed hundreds of workers. They reported in 2013 that the raising of wages that went through after activist and media scrutiny has been counterbalanced by heightened productivity quotas (Chan, Ngai, and Selden, 2013). So, while workers got a bit more money per hour, they were expected to produce more work for it, effectively nullifying the raise. They also found that while Foxconn management promised to allow workers to unionize, in fact the union leaders were selected by upper management to serve as spies on workers (Chan, Ngai, & Selden, 2013). Instead of moving toward fair labor practices, Foxconn effectively took several steps back. Despite this reality, Foxconn remains the primary producer of iPhones and iPads, and is poised to grow its relationship with Apple with its new contract to produce sapphire glass for screen displays (Chaffin, 2014).

Meanwhile, further down the supply chain, equally disturbing problems are found, but you would hardly know it given the praising news coverage that dominated the media conversation about Apple in early February 2014. On the heels of the release of the company's annual Supplier Responsibility Progress Report, typical headlines included, "Greenpeace praises Apple for reducing use of conflict minerals," (Neil Hughes, AppleInsider); "Apple weeds out conflict

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¹ Katie Marsal, AppleInsider (http://appleinsider.com/articles/12/12/27/apples-pressure-on-foxconn-forces-improved-working-conditions-in-china)

² New York Times (http://www.nytimes.com/interactive/2012/12/27/business/Improving-Working-Conditions-at-Foxconn.html?ref=business& r=0)

³ Juli Clover, MacRumors (http://www.macrumors.com/2013/12/12/foxconn-and-apple-make-strides-to-wards-improving-work-hours-but-still-violate-chinese-limits/)

metals from iPhone and iPad," (Shona Ghosh, PCPro); and "Apple cuts conflict minerals and puts its supplier cards on the table," (Tom Dowdall, GreenpeaceBlogs).

The praise was in reaction to the fact that Apple had released a list of smelters in its supply chain. Smelters are factories that turn mined ore into usable metal for electronics components, like gold, tin, and tungsten—to name three out of thirty elements that go into a smartphone (CompoundChem.com, 2014). Apple and its suppliers source from as many as 220 smelters from all over the world at any given time.

Praise for Apple was largely due to its partnership with the Conflict-Free Sourcing Initiative (CFSI), and its participation in the organization's Conflict-Free Smelter Program (CFSP). Of its stance on conflict minerals—the mining and sale of which funds armed conflict in places like the Democratic Republic of Congo (DRC)—and its relationship with this organization, Apple wrote in the annual report:

The ethical sourcing of minerals is an important part of our mission to ensure safe and fair working conditions for everyone in our supply chain. We were one of the first companies to survey our suppliers to identify the smelters they use and understand the potential entry points for conflict minerals. We are driving smelters and refiners to be compliant with the Conflict-Free Smelter Program (CFSP) or an equivalent third party audit program. And rather than avoiding minerals from the DRC and neighboring countries entirely, we're supporting verified supply lines and economic development in the region (Apple, Inc., 2014b, 15).

At first glance, this progressive mission statement sounds promising. Apple is moving toward transparency by listing its smelters (and many of its other suppliers too, in another document), which is a necessary aspect of being accountable for how it does business. And, it has partnered with an independent organization that will help it to audit and regulate its smelters. Yet, once again, when we dig beneath the surface of the narrative crafted by Apple and the media, we see a much more complicated and troubling picture.

For starters, CFSI, the organization that runs CSFP, is an initiative of the Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI) (Conflict-Free Sourcing Initiative, 2014a). The leadership of EICC—including its Board of Directors and its Senior Executive Advisory Council—is comprised of executives from major electronics firms like Dell, Qualcomm, Intel, BlackBerry, and Jabil, among others (Electronic Industry Citizenship Coalition, 2014). (You might remember Jabil as the U.S. corporation that owns the Jabil Circuit factory in Wuxi, China, where numerous ethical and legal violations have been recurring for years, as documented by CLW.) Meanwhile, GeSI is governed by senior executives from major telecommunications companies based in Europe and the US, including several which host contracts for—and sell!—Apple's iPhone (Global e-Sustainability Initiative, 2014).

When we critically examine these entities, what we see is industry regulating itself, which raises serious questions about the validity of the regulation process, like: Can an organization provide unbiased audits and regulation when it is created, hosted, and run by representatives of the very industry it aims to regulate? Should we trust senior executives of companies that profit from unsustainable and unethical production processes to verify that some aspects of their supply chains are sustainable and just? How thorough will audits be, and how strict enforcement of rules, when the enforcers have a vested interest in the profitability of the targets of enforcement?

The narrative on conflict minerals presented by Apple and corporate news media was further muddied by a report Apple filed with the US Securities and Exchange Commission on May 29, 2014. The Specialized Disclosure Report is required by the Dodd-Frank Wall Street Reform and Consumer Protection Act, passed in 2010 in the wake of the financial crisis. Title XV of the act, "Miscellaneous Provisions," includes a requirement that publicly listed companies disclose

the sources of minerals used in their products in order to identify whether the sale of these minerals benefits armed groups in the DRC (Frank, 2009).

In the report, Apple states that most of its supply chain is now conflict-free, per the guidelines of CFSI, and states that its own "conflict minerals policy requires that all of its suppliers map their supply chains through all levels down to the smelters and refiners and report the results to Apple" (Sewell, 2014). The report also states that, between 2010 and 2013, the company surveyed over 400 suppliers. While a cursory look at the report paints a rosy picture, digital media literacy education requires a more investigative and comprehensive analysis, because later in the report, Apple states:

Based on its due diligence efforts, *Apple does not have sufficient information to conclusively determine the country of origin of the Subject Minerals in its products* or whether the Subject Minerals are from recycled or scrap sources. However, based on the information provided by Apple's suppliers, smelters, and refiners, as well as from other sources, Apple believes that the countries of origin of the Subject Minerals contained in its products include the countries listed in Annex II below, as well as recycled and scrap sources [emphasis added] (Sewell, 2014, p. 3).

Translating this legalese to plain English, Apple states that it cannot confirm, due to insufficient information, the country of origin of the minerals in its supply chain—where the smelters get the minerals. Prior to this paragraph, Apple also admits that it "believes" that the smelters listed are those that its suppliers use. In other words, Apple cannot state with certainty that the smelters it lists are the ones providing the minerals for its products. So, while Apple claims to have a mostly conflict-free supply chain, in reality, the company's leaders really do not know if this is true.

Among the countries Apple does believe its minerals come from, eleven have extreme to high risk factors for human rights violations, per the U.K.-based Maplecroft's seventh annual Human Rights Risk Atlas. The Maplecroft report specifically implicates four countries from which Apple believes its suppliers source minerals, offering: "The economies of Myanmar, Nigeria,

Ethiopia, and Indonesia present a particularly high risk to business. In such economies, a high rate of deforestation, coupled with the unchecked conduct of security forces and a climate of impunity for human rights violations has led to a high risk of 'land grabs' at the expense of indigenous peoples rights, property rights and minority rights" (Maplecroft, 2013). Apple believes that the minerals from its products come from places like this, yet claims that its smelters are conflict-free.

This seeming contradictions raises pressing questions about the definition of "conflict-free" minerals. For example, what of the conflicts faced by communities like Bangka, Indonesia, where tin is mined in ways and at a rate that has devastated the local ecology and fishing economy, and injured and killed hundreds of workers (Friends of the Earth, 2012)? Tin from Bangka is hardly free of conflict, though it would meet Apple's and the CFSI's definition of the term. In fact, several Indonesian tin smelters that mine in environmentally destructive ways in and around Bangka, and that buy tin ore from miners often working in dangerous conditions (Matteo, 2014), are on the CFSI's current list of conflict-free smelters (Conflict-Free Sourcing Initiative, 2014b). With such glaring blind spots in the framework of conflict-free sourcing, and no verifiable information about which mines, regions, or countries Apple's minerals come from, it is hard to swallow Apple's claim that the majority of its supply chain is conflict-free.

While it may be appropriate to blame companies like Apple, Foxconn, and Pegatron for the abuses described in this chapter, we must also recognize our own relationship to these problems, as our collective insatiable demand for the latest devices is a significant driver of them. On average, the US mobile phone user replaces their device every 22 months—just shy of every two years (EcoATM, 2014). Companies like Apple fuel this trend with their rapid product cycle. Apple has released ten versions of iPhone since its introduction in 2007. That averages to a new

iPhone every 8.4 months! The combination of advertising, incessant news media coverage of the latest products at the expense of more critical reporting, and the centrality of consumer goods in our lives fuels a monstrously unsustainable consumption of natural resources, and ecologically disastrous mass disposal of them.

One way to combat this is through repair and reuse. Across the UK, Europe, and the US, citizens are coming together to share and teach the skills necessary to repair digital products in order to keep them out of the toxic waste stream. In the UK, The Restart Project, a non-profit organization, provides trainings and online tutorials in fixing broken electronics (The Restart Project, 2014). At the Restart Parties hosted by their volunteers, not only do many attendees walk away with working products, but they also leave with an important feeling of community after meeting and working together with neighbors who were otherwise strangers. They also leave with an empowering set of knowledge and skills that serve to re-democratize our relationship with digital technology (J. Gunter and U. Vallauri, in-person interview, December 1, 2014). iFixit, a U.S.-based organization, frames repair of digital technology as a right—a form of freedom. They also point out that a growing repair economy creates jobs, and promotes a sustainable future (iFixit.org, 2014).

On the production side, it's not only important to create ethical supply chains, but also, for companies to design products that are made to last, rather than those that are seemingly impossible to repair, and that are meant to be obsolete within two years' time. Friends of the Earth in the UK has lobbied for laws that would hold companies accountable to standards consistent with these ideals. Their "Make it Better Campaign" encourages companies and law makers to build sustainability and long-term durability into product design (Kirby, 2012).

To that end, Fairphone, a company based in the Netherlands, is producing a smartphone with a fully traceable and independently audited supply chain. Not only are they providing a living wage, and safe and stable work environments for those who make their products, but in keeping with the challenge posed by Friends of the Earth, their smartphone was designed with ease of repair and parts replacement as priorities (Fairphone, 2014). While many smartphone users are unable to even open their device to replace a battery or a damaged part, the Fairphone is easy to get into, and the parts inside are labeled to foster ease of replacement and repair.

In sum, addressing the hidden costs of iPhones and other mobile devices will require more than holding corporations accountable. It will require that we also hold ourselves accountable for the role consumerism plays in producing these costs, and it will require choosing to live differently.

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