

EGOS 2014**General Theme: Reimagining, Rethinking, Reshaping: Organizational Scholarship in Unsettled Times****Sub-Theme 24****Marxism and Organizational Scholarship****The Governance of Global Value Chains: The Internationalisation and Intensification of Accumulation and Exploitation****Thomas Clarke, UTS Sydney**t.clarke@uts.edu.au**Introduction**

This paper analyses how the further development of global value chains internationally has compounded and intensified the accumulation process and extended exploitation. The paper will develop a Marxist critique of global value chain theory and policy, focusing on an incisive case analysis of Apple Inc, currently the world's most iconic corporation.

By September 2012 Apple Inc attained a market capitalization of \$625 billion, the largest by over \$200 billion of any company in the world, leaving Microsoft languishing with a market capitalization of \$249, 48, IBM with \$237, 068, and Google with \$197,657 billion.¹ With \$137 billion hoarded in cash in by the end of 2012, much of it in the Nevada based asset management corporation Braeburn capital established by Apple executives, Apple Inc is well on the way to becoming one of the world's best capitalized asset managers.² Yet while Apple was enjoying a meteoric rise as the world's richest business, increasing evidence was emerging of the tragic consequences of unresolved human rights, environmental and ethical dilemmas in the Apple supply chain in China. In a stark illustration of how extreme inequality continues to disfigure the operation of global value chains, it appears that all of the beauty of Apple's brilliant design and highly polished infinitely desirable products, ultimately rests upon the pain of young Chinese

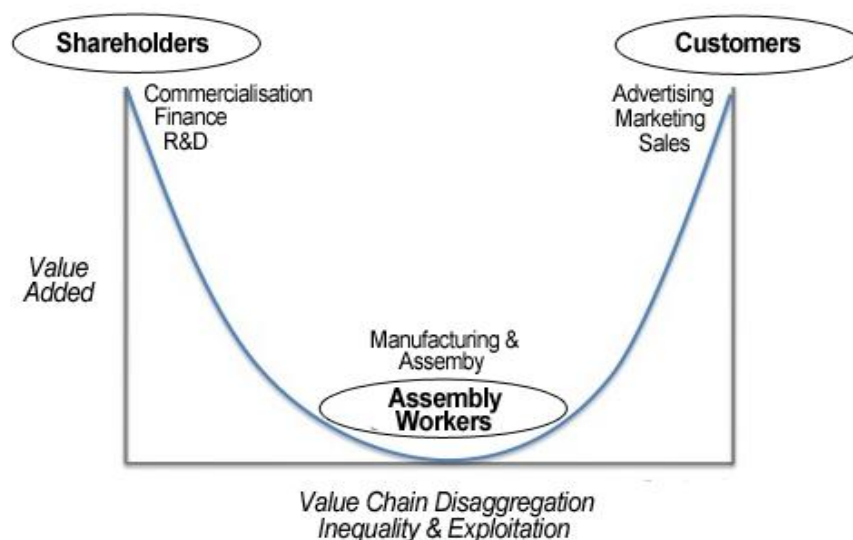
¹ <http://www.ft.com/intl/cms/c2a82f60-138b-11e2-9cc7-00144feabdc0.pdf>

² <http://www.cultofmac.com/193692/the-mysterious-company-that-manages-apples-cash-hoard-is-the-worlds-largest-hedge-fund/>

workers in electronic sweatshops where human rights, labour standards, environmental safety, and business integrity are routinely ignored.

It is the case that since these abuses in its supply chain were first brought to Apple Inc's attention in 2006, the company has made substantial and continuous efforts to eradicate problems and enforce higher standards in all of its suppliers. However there is much recent evidence to suggest that the successive interventions of Apple to improve audit and management systems to improve standards in suppliers' factories, are too often overwhelmed by the intensity of the production regimes that are enforced there because of Apple's own production demands and product launch strategies. There is evidence of bleak working conditions throughout much of the electronics supply chain in Asia including at factories manufacturing products for Dell, Hewlett –Packard, IBM, Lenovo, Motorola, Nokia, Sony, Toshiba and others (Barboza and Duhigg 2012a). However as the present market leader, and currently the richest and most successful consumer electronics corporation in the world, Apple has a particular responsibility to ensure the integrity and responsibility of its value chain. This paper critically examines the unresolved dilemmas that Apple faces in China as part of a larger issue of the intensified exploitation central to the operations of global value chains. This analysis is placed in the context of the increasingly rich literature and theorization of the global value chain.

Figure 1 Disaggregation of the global value chain



Source Adapted from Mudambi (2007)

The increasing disaggregation of the global value chain isolates the high value added controlling functions of finance, R & D and commercialization in the advanced industrial countries, where companies can accumulate vast fortunes by outsourcing the manufacturing of components and assembly of products to developing countries where workers are employed in miserable conditions. The fashionable products are then expensively marketed to the affluent customers of the richer countries. This international labour process for accumulation and exploitation has been perfected by Apple more than any other electronics corporation.

Apple as a Monopsony

Figure 2 Apple market capitalisation 2006-2012



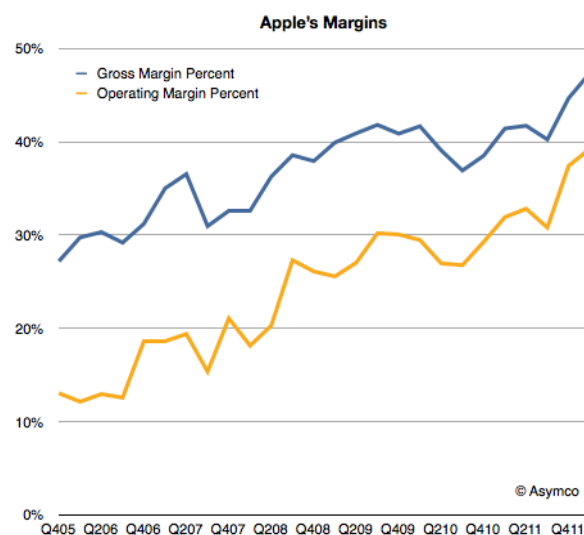
By 2012 Apple achieved a remarkable market capitalization of over \$600 billion, peaking later in the year at an astonishing \$700 billion, not only the highest market capitalization in the history of the NASDAQ, but equal to the combined market capitalization of its major rivals. Apple achieved a higher market capitalization than any corporation in US history (Microsoft secured \$604 billion in December 1999; Cisco \$538 billion in March 2000; General Electric \$581 billion in August 2000; Intel \$503 billion in August 2000; and Exxon Mobile \$514 billion in July 2009. Of these corporations Microsoft, Cisco and Intel quickly diminished to a fraction of their peak market capitalisation following the dot-com bust in 2000).³ Apple achieved this market

³ Apple market-Cap Poised to Crack \$500 billion, *Wall Street Journal*, 28 February 2012

leadership with a strategic vision and ruthless execution that is unparalleled in US innovation and manufacturing, that was recognized and massively rewarded by a hyper-ventilating stock market.

Apple's sustained competitive advantage over its competitors is not simply due to superior design and marketing, it is due to Apple's domination of the advanced consumer electronics supply chain. Apple has effectively created a closed ecosystem, controlling every part of the supply chain from design to retail. "Because of its volume—and its occasional ruthlessness—Apple gets big discounts on parts, manufacturing capacity, and air freight. 'Operations expertise is as big an asset for Apple as product innovation or marketing,' says Mike Fawkes, the former supply-chain chief at Hewlett-Packard and now a venture capitalist with VantagePoint Capital Partners. 'They've taken operational excellence to a level never seen before.'"⁴ This strategic use of the supply chain is one of the explanations for Apple's astonishing gross profit margins of 40% or more when other electronic hardware companies manage only 10% to 20%.

Figure 3 Apple Gross Margins and Operating Profit

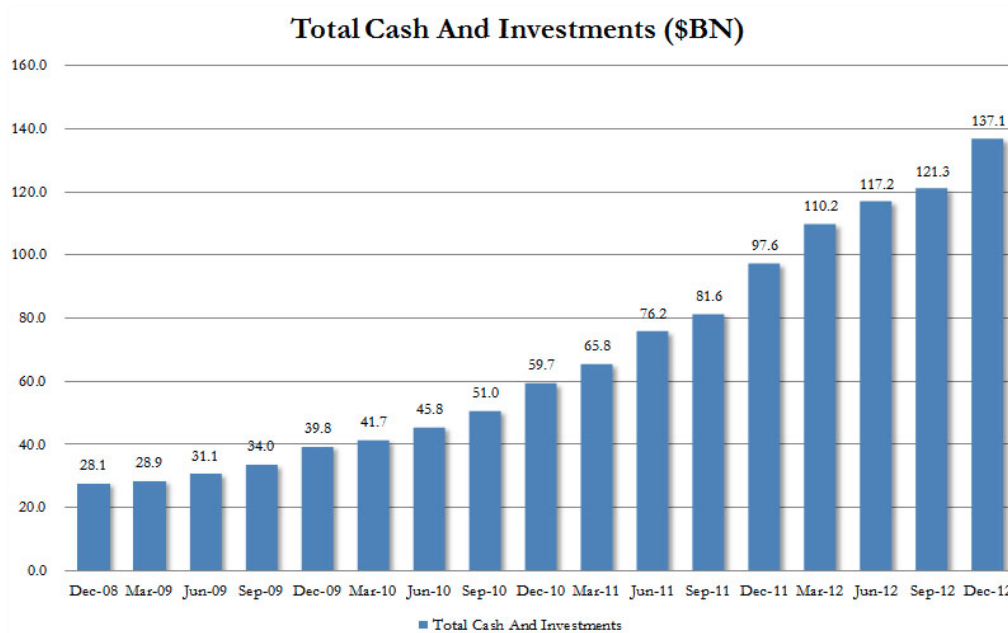


Leading this supply chain revolution was COO Tim Cook, the new Apple CEO, who gave colleagues copies of Stalk and Hout's book *Competing Against Time: How Time-Based Competition is Reshaping Global Markets* (1990), who argued, "The traditional pattern has been to provide the most value for the least cost. The expanded pattern is to provide

⁴ Apple's Supply-Chain Secret ? *Blumberg Business Week*, 3 November 2011
<http://www.webcitation.org/62xFMYu>

the most value for the least cost in the least elapsed amount of time. These new-generation competitors use flexible factories and operations to respond to their customers' needs rapidly by expanding variety and by increasing the rate of innovation" (1990:59).

Figure 4 Apple Cash and Investments 2008-2012



The heady combination of rapidly rising gross revenues, and sustaining remarkably high gross profit margins with each product launch allowed Apple to accumulate a vast mountain of cash and liquid investments amounting to \$137 billion in December 2012 (Figure 4). (This was more cash than the US government had at its disposal when facing the constraints of the fiscal cliff at this time). Apple has employed its hoard of tens of billions of dollars in cash to further dominate and control the electronics component supply chain in Asia and beyond. As Phillip Elmer-Dewitt argues the new component technologies (touchscreens, chips, LED displays) are expensive to make when first invented, and building factories to make these in mass quantities is more expensive still as the upfront investment is huge, while margins are small and shrink as new products become commoditized. It is hard for component companies to raise investment capital to cover their costs, but Apple will pay towards the cost of construction in exchange for exclusive rights to output for a period of time, with a discounted rate afterwards.⁵ This

⁵ Phillip Elmer-Dewitt, CNN Money, 5 July 2011
<http://tech.fortune.cnn.com/2011/07/05/how-apple-became-a-monopsonist/>

allows Apple access to new advanced components before competitors. When competitors eventually secure access to these components, Apple continues to have access to the same parts at lower cost due to the discounted rates they have negotiated, which may be subsidized by other electronics companies buying the parts from the same provider. “Apple only makes premium products..but that is because they are literally more advanced than anything else (i.e. the price premium is not just for design), and once the product line is no longer premium, they are produced *more cheaply* than competitor equivalents, yielding higher margins, and more cash, which results in more ability to continue the cycle. In this way according to Dediu, Apple has become not a monopoly (a single seller), but a *monopsony* – the one buyer who can control the market.”⁶

In 2011 Apple announced it was intending to invest \$7.1 billion on its supply chain in the next year, together with \$2.4 billion in pre-payments to key suppliers. This tsunami of Apple cash ensures availability and low prices for Apple, while often limiting the options to competitors. For example before the release of the iPhone 4 in June 2010, rival companies could not buy as many screens as they required, because suppliers were fully engaged on Apple orders. In order to make the iPad 2, Apple ordered so many high-end drills to make the internal casing, that other electronics companies waiting time for drills stretched for months. Meanwhile Apple drives down suppliers quotes, including their estimates for materials and labour costs, and demands suppliers keep two weeks of inventory within a mile of Apple’s assembly plants in Asia. This sense of Apple controlling the supply chain reaches a pinnacle with the unveiling of a new Apple product, intensified over years of launching new models of the Mac, iPod, iPhone and iPad, as assembly factories work overtime to build hundreds of thousands of products in advance of the launch announcement.⁷

The Intensification of Labour and Exploitation in Global Supply Chains: Apple and Foxconn Operations

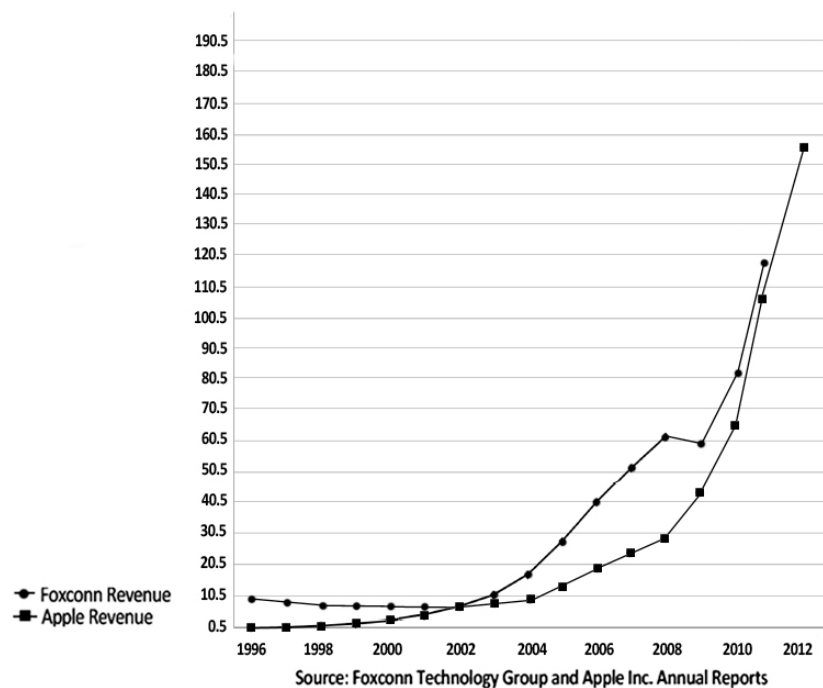
Traditionally the industries that have profited most from outsourcing manufacturing to low wage countries have produced goods such as clothing, sports apparel or toys. Since the 2000s, the electronics-manufacturing sector started to appear on the radar of labor rights activists, NGOs and investigative journalists. They found that *Original Equipment*

⁶ *ibid*;

⁷ Apple’s Supply-Chain Secret ? *Blumberg Business Week*, 3 November 2011
<http://www.webcitation.org/62xFMYu>

Manufacturers (OEMs) such as Dell, Hewlett-Packard, IBM, Fujitsu Siemens and Toshiba, were outsourcing production of components to companies in low wage countries that provided *Electronic Manufacturing Services* (EMS) at a low cost CAFOD (2004a). The conditions in which workers produced these goods gave rise to the term ‘electronics sweatshop’. The scale of these EMS enterprises is vast. Foxconn is one of the largest companies involved with plants employing approximately 1.2 million people in China, including Shenzhen plants with 390,000 workers, Zhengzhou with 192,000, and Chengdu with 110,000. Foxconn is a contractor for many international OEM companies, and is Apple’s principal supplier in China.⁸

Figure 5 Apple and Foxconn Revenues 1996-2012



During the period when of 2005-2012 when Apple and Foxconn were held to account for the poor working conditions and neglect of health and safety and environmental standards in their China factories, both companies were experiencing an unprecedented and sustained rapid escalation in their gross revenues (Figure 5). Though Apple has extremely high profit margins, and Foxconn’s are wafer thin, they are both immensely well resourced businesses: while they might claim some of their problems were due to

⁸ Beyond the Conveyor Belt, *Financial Times*, 15 October 2012

the pressures of unimaginably rapid growth, they could make no claim to a shortage of funds with which to remedy the problems if they had resolved to do this.

Since 2006 Apple has been under fire for sourcing components from producers that have a poor reputation with regard to employment conditions and practices. In that year the first criticisms were voiced in the media regarding the circumstances in which Apple's iPods were being produced. In 2010 after Apple unveiled its iPad, the world was shocked by a series of suicides that occurred at iPad manufacturing plants in China, operated by EMS provider Foxconn. In 2011 a total of 137 workers were seriously injured by the hazardous chemical n-hexane, which was used to clean the glass screens of Apple's iPhone. In the same year, two explosions in workshops of Apple's component manufacturers caused four deaths and left dozens injured. In June 2006 the UK newspaper *Mail on Sunday* published a story titled *iPod City*, in which it alleged that Apple's iPod music player was being produced in Chinese workshops where line workers were earning as little as US\$50 a month, while working 15 hours a day.⁹ The newspaper had sent its reporters to Longhua and Suzhou to visit two factories of EMS companies contracted by Apple to produce millions of iPods, iPod Nanos, and iPod Shuffles. The story featured images and first-hand accounts, for example one worker described the factory regime as:

"It's like being in the army. They make us stand still for hours. If we move, we are punished by being made to stand still for longer... We have to work overtime if we are told to and can only go back to the dormitories when our boss gives us permission... If they ask for overtime we must do it. After working 15 hours until 11:30pm, we feel so tired."

One of the two factories owned by the Taiwanese company Foxconn, was described as harboring as many as 200,000 workers (approximately one-fifth of Foxconn's total workforce), who inhabit onsite dormitories that house up to 100 people and are not open to outside visitors. Employees at this facility were paid approximately US\$50 a month for laboring 15 hour a day. In the other factory workers live in offsite dormitories and were paid approximately \$100 a month, of which half has to be paid to their employer for housing and food. The report by *Mail on Sunday* spread like a wildfire

⁹ The article is not available online but a transcript can be found on the website [arstechnica.com](http://arstechnica.com/uncategorized/2006/06/7039-2/): <http://arstechnica.com/uncategorized/2006/06/7039-2/> <retrieved 13 July 2012>

as international newspapers started to feature stories that carried the same allegations, while posts about Apple's 'sweatshops' started to appear on countless blogs, resulting in world-wide controversy in both online and offline media. Apple was experiencing a public relations nightmare: the maker of the world's most popular music player had been linked to appalling workplace conditions in unprecedented large-scale factory cities, where workers were drilled in military style, lived in crowded dormitories and were forced to work long shifts for low pay.

However the long-running Apple controversy took a dramatic turn for the worse in early 2010 when labor unrest shook up the south of China in the form of mass strikes and protests for wage increases and better working conditions. Three-dozen strikes took place at the factories of Foxconn, Honda, Hyundai and other multinationals.¹⁰ It was suggested that changing demographics with increasing numbers of younger male workers being employed, and an increased awareness of rights were likely to have been catalyzing forces behind the uprisings. Protests received global media attention after a string of suicides and attempted suicides occurred at the factories of Foxconn.¹¹ On January 23, the body of the 19-year-old Ma Xiangqian was found in front of his high-rise dormitory of the Foxconn plant in Guanlan. Police investigators concluded that he had jumped from a high floor, and ruled it a suicide. Ma had worked 11-hour overnight shifts, seven nights a week, forging plastic and metal amid fumes and dust, until he was demoted to cleaning toilets after a dispute with his supervisor. His wage slip showed that he worked 286 hours in the month before he died, including 112 hours of overtime, which is three times the legal limit in China. For all of this work, including extra pay for overtime, he earned the equivalent of \$1 an hour.¹²

Other Foxconn employees had tried to commit suicide and failed, such as the 17-year-old Tian Yu. On March 17 2010, she jumped from the fourth floor of her dormitory. She has been bedridden since and cannot feel anything below her waist and carries metal

¹⁰ Keith Richburh, "Labor unrest in China reflects changing demographics, more awareness of rights," *Washington Post*, June 7, 2010 <http://www.washingtonpost.com/wp-dyn/content/article/2010/06/06/AR2010060603295.html>

¹¹ J. Dean, "Apple, H-P to Examine Asian Supplier After String of Deaths at Factory," *The Wall Street Journal*, May 27 2010.

¹² After Suicides, Scrutiny of China's Grim Factories, by David Barboza. Rallying for democracy, *New York Times*, 2010

plates inside her body. After having worked for Foxconn for a month, she was unsure how to obtain her wage. She was told she needed to go to a different Foxconn facility, which was located over an hour away. After taking the bus, she was sent from office to office, being told to go ask somewhere else. Tian returned humiliated and angry. The next morning she jumped from her dormitory. In 2010 a total of thirteen Foxconn employees had taken their own lives, with another four attempting suicide, and surviving badly injured (SACOM 2010:2).¹³

In 2011 during a strike at EMS company Wintek, Chinese workers urged Apple to help resolve the incidence of chemical poisoning by hexyl hydride. Also called n-hexane, the chemical is regarded as a narcotic by the United States Department of Labor, which in high concentrations can damage the central nervous system, induce vertigo and cause muscular atrophy.¹⁴ Wintek who produced touchscreens for Apple products at the time, used n-hexane from May 2008 to August 2009 to speed up production. It claims it ceased using the chemical after discovering it was making workers ill.¹⁵ Local authorities in Suzhou reported that in 2011, 137 Wintek employees had been poisoned by n-hexane (Chan 2012). Workers complained about sore limbs, dizziness, headaches, extreme weakness and experiencing difficulties performing simple tasks such as climbing stairs and getting dressed. Among them was Jia Jingchuan, a 27-year-old who claims he was exposed to the chemical, and says that it has left him with nerve damage and hypersensitivity to cold.¹⁶

In May 2011 an explosion in the polishing department of Foxconn in Chengdu caused three deaths and multiple injuries. The Chinese media alleged that the blast was caused by dust that had accumulated in the ventilation system, being ignited by a faulty wire. In December 2011 an explosion occurred at RiTeng Computer Accessory, a subsidiary plant of Pegatron Corp, another of Apple's Chinese suppliers, injuring 57 workers.¹⁷ Two months before the first explosion occurred, non-profit organization Students and

¹³ M.Lau, (December 15, 2010). "Struggle for Foxconn girl who wanted to die". *South China Morning Post*: <http://topics.scmp.com/news/china-news-watch/article/Struggle-for-Foxconn-girl-who-wanted-to-die> <accessed 16 July 2012>

¹⁴ <http://www.osha.gov/SLTC/healthguidelines/n-hexane/recognition.html>

¹⁵ <http://www.guardian.co.uk/world/2011/feb/22/chinese-workers-apple-nhexane-poisoning>

¹⁶ D. Barboza, Workers Sickened at Apple Supplier in China, *New York Times*, February 22 2011.

¹⁷ http://www.huffingtonpost.co.uk/2011/12/19/apple-explosion-at-chinese-factory_n_1157670.html

Scholars Against Corporate Misbehavior (SACOM) interviewed Foxconn factory workers, who complained the polishing department was filled with aluminum dust and had poor ventilation (Chan 2012). In the aftermath of the second explosion, Pegatron Chief Financial Officer Charles Lin admitted that the factory had not started operations fully, and that parts of the facility were still under inspection and running trial production.¹⁸ Both explosions received global media attention regarding safety concerns in Chinese EMS factories.

Apple and Foxconn's Response: Supplier Responsibility Program

Apple started a supplier responsibility program in 2005, when it established its Supplier Code of Conduct. Since then the company has published a supplier responsibility report annually, in which it makes its audit findings public. An Apple representative, who is supported by third-party auditors such as Verité and the Fair Labor Association, leads the audits. When violations of the Code of Conduct are encountered, Apple insists that the perpetrating company addresses the violation within 90 days. Should a supplier not meet Apple's demands, the business relationship will be terminated (Apple 2011). Following the iPod woes in 2006 Apple released a statement saying that they were

"Committed to ensuring that working conditions in our supply chain are safe, workers are treated with respect and dignity, and manufacturing processes are environmentally responsible."

Foxconn denied all the allegations and called the newspaper report a 'vicious attack' on the company. In an attempt to ensure Foxconn and other EMS companies were meeting the guidelines set out in the Supplier Code of Conduct, Apple started to probe labor conditions by means of hiring the independent audit service provider Verité, who sent in a team to investigate the iPod manufacturing facilities.¹⁹ Apple spokesperson Steve Dowling was quoted as saying:

¹⁸ <http://in.reuters.com/article/2011/12/19/pegatron-idINDEE7BI00F20111219>

¹⁹ <http://www.917wy.com/old/content/2006/08/7539.ars>

*"This is a thorough audit, which includes employee working and living conditions, interviews of employees and managers, compliance with overtime and wage regulations, and other areas as necessary to ensure adherence to Apple's supplier code of conduct. Apple's supplier code of conduct sets the bar higher than accepted industry standards and we take allegations of noncompliance very seriously."*²⁰

At Foxconn in 2006 over 100 workers were interviewed, of which 83 were factory line workers. In total over 500 factory line workers in 11 factories were questioned. From these interviews, Apple concluded that with one supplier the off-campus dormitories, essentially converted factory spaces with triple-decker bunk beds, failed to meet the company's Supplier Code of Conduct. Similarly with one supplier the overtime pay structure, which was deemed overly complex failed to meet the Code. Although Apple's Supplier Code of Conduct allows labor for up to 60 hours a week, the investigation showed that Foxconn employees surpassed this limit 35% of the time. Two per cent of the workers interviewed reported that some workers were disciplined inappropriately, being required to stand in the corner or do push-ups (Apple 2007:2). Workers were generally happy with the dormitories on-campus and were earning at least the local minimum wage. Apple stated that it expected suppliers to adhere to the principles set out in its Supplier Code of Conduct: *"In cases where a supplier's efforts in this area do not meet our expectations, their contracts will be terminated"* (Apple 2007:4). Foxconn subsequently promised to make appropriate changes in order to adhere to Apple's Supplier Code of Conduct: new off-campus dormitories were built, weekly overtime limits were to be strictly enforced, payment procedures simplified, and a supervisor training program was launched to ensure no harsh treatments would occur. Apple announced follow-up audits and an expansion of the monitoring program, probing suppliers deeper in its supply chain.

In June 2010 Steve Jobs was interviewed for over 90 minutes at the D8 (all things digital) conference for technology leaders at Rancho Palos Verdes in California. While giving his thoughts on Google, Adobe Flash and the iPad, Jobs was also asked to give his thoughts on the Foxconn suicides, Jobs responded:

²⁰ Arik Hesseldahl, "Fixing Apple's "Sweatshop" Woes," *Business Week*, June 29 2006.

*"I actually think that Apple does one of the best jobs of any companies in our industry, and maybe in any industry, of understanding the working conditions in our supply chain, and we're extraordinarily diligent and extraordinarily transparent about it. We go into the suppliers, and into their secondary and tertiary suppliers, places where nobody has ever gone before and audited them. And we are pretty rigorous about it."*²¹

Jobs went on a little less convincingly to say, *"I mean, you go to this place, and, it's a factory, but, my gosh, I mean, they've got restaurants and movie theaters and hospitals and swimming pools, and I mean, for a factory, it's a pretty nice factory."*

On the most sensitive issue Jobs further noted that suicides at Foxconn, which numbered thirteen at the time of the interview, were *"still below the national average in the U.S"*, adding that *"this is very troubling to us ... so we send over our own people and some outside folks as well, to look into the issue."* Subsequently in an interview with *BusinessWeek*, Terry Gou, CEO of Foxconn even less reassuringly said: *"The first one, second one, and third one, I did not see this as a serious problem."* After the fifth suicide, Gou *"... decided to do something different."* After the ninth suicide had occurred, Foxconn ordered over three million square meters of mesh netting to be put up around its buildings, 24-hour stand-by counseling teams were introduced, and wages were increased.²²

In its 2011 *Supplier Responsibility Report* Apple stated that it had hired suicide prevention specialists to better understand the conditions. These experts met with Apple COO Tim Cook, Foxconn's Terry Gou and other executives on a visit to the Shenzhen factory to assess the measures Foxconn had taken to prevent further suicides. The experts conducted an investigation into the suicides, evaluated Foxconn's response, and recommended strategies. More than 1000 workers were surveyed about their quality of life, sources of stress, psychological health, and other work-related factors, while other workers were interviewed face to face. The facts and circumstances of each suicide were reviewed, and Foxconn's effectiveness in counseling services and response systems assessed. Three months after their visit to the Shenzhen factory, the suicide prevention experts praised Foxconn for its quick and adequate response on multiple

²¹ Peter Kafka, "Apple CEO Steve Jobs at D8: The Full, Uncut Interview," All Things Digital, June 7 2010. <<http://allthingsd.com/20100607/steve-jobs-at-d8-the-full-uncut-interview>> Accessed 9 July 2012.

²² F. Balfour and T. Culpan, "The Man Who Makes Your iPhone," *BusinessWeek*, September 9 2010.

fronts, such as hiring counselors, establishing a 24-hour care center, and attaching nets to the factory buildings. The experts further concluded that Foxconn's response had definitely saved lives. Foxconn pledged to incorporate further recommendations into their long-term plans for addressing employee wellbeing. Apple stated that it would continue to work with Foxconn on the implementation of these programs, and take key learning to other producers in its supply chain (Apple 2011).

The n-hexane incidents were also addressed in the 2011 *Supplier Responsibility Report*: "In 2010 we learned that 137 workers at the Suzhou facility of Wintek, one of Apple's suppliers, had suffered adverse health effects following exposure to n-hexane, a chemical in cleaning agents used in some manufacturing processes. We discovered that the factory had reconfigured operations without also changing their ventilation system. Apple considered this series of incidents to be a core violation for worker endangerment. ... For all chemicals in the workplace, Apple's Code requires adequate ventilation systems, proper handling and disposal, and robust processes for risk assessments, training, and emergency response." Apple's Supplier Code of Conduct underlines the necessity of adequate ventilation systems and the proper handling and disposal of chemicals. The company stated that it had asked Wintek to cease using n-hexane and to fix their ventilation system. In order to prevent further incidents at Wintek, Apple further requested them to improve their Environmental Health and Safety processes and announced an audit of the Wintek facility (Apple 2011). Apple stated that it verified that all affected workers were treated successfully. In line with Chinese law, Wintek had paid for all medical costs and foregone wages of sick employees. Apple further reported other incidents involving n-hexane. After they learned that a supplier and a subcontractor were still using the chemical, Apple investigated and found that the subcontractor had already been shutdown by local officials. It further ensured that the supplier was no longer using n-hexane and instructed its supplier to optimize Environmental Health and Safety systems and follow up on the health of workers who were exposed to n-hexane (Apple 2012).

In Apple's 2012 *Supplier Responsibility Progress Report*, the company announced that it was "... deeply saddened by events at two of our suppliers in 2011." Apple acknowledged that two explosions took the lives of four workers and injured dozens of others.

According to the report, Apple sent in expert teams to investigate the circumstances in which each of the explosions occurred and provide suggestions for better health and safety conditions. The teams of experts concluded that both explosions involved combustible dust, in which aluminum particles provided fuel for the explosion. In an effort to prevent similar incidents from occurring at other suppliers, Apple went on to audit all suppliers handling aluminum dust, while establishing new requirements for handling combustible dust such as specific ventilation, regular inspections of ductwork, banning usage of compressed air for cleaning, and having type-D fire extinguishers at hand to handle metal fires. According to Apple, all its suppliers except one have followed up on Apple's demands and implemented the proposed measures. "The one supplier that has not will remain shut down until modifications are in place" (Apple 2012).

Apart from responding to incidents that received global media coverage, Apple addressed a range of other issues that it encountered during factory audits. The reports include sections concerning discrimination, wages and working hours, dormitories and dining, freedom of association, employee treatment, and environmental impacts. Apple performs follow-up audits and sets key performance indicators for its suppliers, reports on progress and determines whether other core violations occurred. From 2005 to 2012, Apple has reported and taken corrective action on recruitment fee overcharges, underage labor, falsification of records and improper disposal of hazardous waste. Apple also provides training to workers and supervisors regarding health and safety, CSR, preventing harassment and conflict resolution, and implemented education and development programs such as the Supplier Employee Education and Development (SEED) program, which launched in 2008. This program offers English-language courses, associate degree programs linked to three universities and a range of computer and technical skills courses. Lastly, in March 2012 Apple announced a deal it made with Foxconn regarding the hiring of more laborers, stricter safety and overtime rules, and improving on employee facilities such as dormitories.²³

²³ http://articles.chicagotribune.com/2012-03-30/business/sns-rt-us-apple-foxconnbre82s197-20120329_1_chinese-workers-apple-devices-hon-hai-precision-industry

Apple's Continued Commitment to Exploitative Practices

It has become clear that Apple is now aware of the potential pitfalls of outsourcing electronics manufacturing to low wage countries. It has gone to great lengths to hire independent audit teams, while the company itself also inspects production facilities to ensure that manufacturers adhere to strict codes of conduct regarding worker safety and compliance with Chinese laws. However self-auditing in these circumstances is not the most reliable way of determining whether there are any workplace violations. And although Apple did request the assistance of third-party auditors such as Verité, and went on to join the Fair Labor Association (FLA) in January 2012, neither organization made their reports on labor conditions at Apple's component suppliers available to the public. This lack of transparency does not help Apple in obtaining either the image or reality of being a company committed to corporate social responsibility.

Apple also works on its commitment to corporate social responsibility, or at least the image of a socially responsible company by being actively engaged in the Electronics Industry Citizenship Coalition (EICC), an alliance of electronics firms whose aim is to improve working conditions and reduce environmental impact throughout the supply chain of the electronics sector. Companies can join the EICC by adopting the Code of Conduct through signing a commitment letter and completing a self-assessment questionnaire, after which the board of directors of the EICC will determine whether the company is eligible for membership. The board of the EICC however is entirely made up of executives from the electronics sector,²⁴ and its funding is derived from the same sector through membership fees and company audits, causing a serious conflict of interest. It is helpful to see what independent organization's investigations have found after Apple and its suppliers had promised to attend to the many problems that had been revealed. NGOs such as the Centre for Research on Multinational Corporations (SOMO), China Labor Watch, and the Hong Kong-based Students & Scholars Against Corporate Misbehavior (SACOM) have focused on labor practices, whereas the Chinese Institute of Public and Environmental Affairs (IPE) has studied pollution through Apple's supply chain and its impacts on workers and the environment. In 2007, a year after Apple had first come under scrutiny because of its iPod production facilities, SOMO assembled a report on Apple's corporate social responsibility. It found that,

²⁴ http://www.eicc.info/about_us/board.shtml <Accessed 20 October 2012>

although Apple stressed the importance of its Supplier Code of Conduct, the means by which compliance is verified remained untransparent. Furthermore workers continued to express concerns regarding forced overtime, lack of safety while working with hazardous substances, low wages, disproportionate wage deductions and withheld wages.²⁵

In 2010 the year that witnessed the labor unrest in South China and the first of the Foxconn suicides, SACOM reported on working conditions at Foxconn by conducting interviews with factory workers and sending in undercover researcher to work in production facilities. The NGO alleged that workers were compelled to work overtime, as they were required to sign an overtime pledge clause as part of their contract, and that physical and mental abuse by superiors was far from uncommon (SACOM 2010). In 2011 SACOM found that although Apple commends actions taken by Foxconn, many promises remain unfulfilled. According to SACOM conditions have hardly improved, as can be seen in Table 1 below.

Table Apple and Foxconn Unfulfilled Promises

	Apple and Foxconn Promise 2010	Operational Reality 2011/2012
Recruitment and terms of employment	In strict compliance with the law	Misleading statements (e.g. regarding wages, benefits, and location of work)
Wages	Across the board increases	Miscalculation of wages; unpaid overtime work per month; continuous shifts denying meal breaks
Health and Safety	Adequate personal protective equipment; health examination	Lack of protection; workers not well informed about the chemicals in use
Student workers	Length of internship regulated; skills training provided; underage workers protected (16-18 years of age)	Interns are de facto workers; mandatory night shifts
Grievance mechanisms	Better worker-management communication by launching a hotline for workers	Workers cannot find effective ways to handle grievances at the workplace

Source SACOM (2011:3)

²⁵ http://somo.nl/publications-en/Publication_1963 <Accessed 31 August 2012>

It can be argued “Apple bears ultimate responsibility for the way the workers who make its products are treated.. Apple’s responsibility is underscored by the reality that the company has profited greatly from a production system at Foxconn that has long been defined by low wages and harsh and illegal treatment of workers—a system that has in many ways been necessitated by the price pressures and production demands Apple imposes, especially when it is rolling out new products” (EPI 2012:10). As SACOM’s most report (2012b) observes: “It is ironic that Apple declared to the world that it would ensure that working hours and other working conditions would be improved, but would then push its major supplier Foxconn, and consequently its workers, to meet product schedules inconsistent with such improvements.”

Apple has the power to bring an end to severe and chronic labor rights abuses in its supply chain. As a former Apple executive told the *New York Times* (Duhigg and Barboza 2012b) early this year:

“We’ve known about labour abuses in some factories for four years, and they’re still going on....Why? Because the system works for us. Suppliers would change everything tomorrow if Apple told them they didn’t have another choice....If half of iPhones were malfunctioning, do you think Apple would let it go on for four years?”

As Scott Nova and Isaac Shapiro conclude “The greatest responsibility for the lack of progress lies not with Foxconn or the FLA, but with Apple, the company with the largest market value and the most coveted consumer products in the world. The paramount issue remains whether Apple will ever choose to apply its legendary business prowess and spirit of innovation, and its enormous financial clout, to the goal of protecting the basic human rights of the people who make those products” (EPI 2012:10).

Development of the Paper

The paper will build on the empirical critique of Apple’s conduct in the global value chain, to develop a Marxist critique of global value chain theory and policy, highlighting how the increasing inter-connectedness of the global economy allows an intensification of the processes of accumulation and exploitation.

Bibliography

Apple (2007) *Apple Supplier Responsibility 2007 Progress Report*, Apple Inc
<http://images.apple.com/supplierresponsibility/pdf/Apple_SR_2007_Progress_Report.pdf>
Accessed 5 July 2012.

Apple (2011) *Apple Supplier Responsibility 2011 Progress Report*, Apple Inc
http://images.apple.com/supplierresponsibility/pdf/Apple_SR_2011_Progress_Report.pdf

Apple (2012) *Apple Supplier Responsibility 2012 Progress Report*, Apple Inc
http://www.apple.com/supplierresponsibility/pdf/Apple_SR_2012_Progress_Report.pdf

Barboza, David, and Charles Duhigg. (2012a) "China Contractor Again Faces Labor Issue on iPhones." *New York Times*, September 10
<http://www.nytimes.com/2012/09/11/technology/foxconn-said-to-use-forced-student-labor-to-makeiphones.html?pagewanted=all>

Barboza, David, and Charles Duhigg. (2012b) "In China, Human Costs are Built Into an iPad" *New York Times*, 25 January
<http://www.nytimes.com/2012/01/26/business/ieconomy-apples-ipad-and-the-human-costs-for-workers-in-china.html?pagewanted=all&r=0>

CAFOD (2004a) *Clean Up Your Computer: Working Conditions in the Electronics Industry*, at
<http://www.catholiclabor.org/gen-art/cafod-computers.pdf> <accessed 20 October 2012>

Chan, Debby (2012) "Activist Perspective: The Social Cost Hidden in the Apple Products," *Journal of Workplace Rights*, Vol. 15 (3-4) 363-365, 2010-2012

China Labor Watch (CLW) (2012a) *Beyond Foxconn: Deplorable Working Conditions Characterize Apple's Entire Supply Chain*. June 27. <http://www.chinalaborwatch.org/pro/proshow-176.html>

China Labor Watch (CLW). 2012b. "Response to FLA's Progress Report on Apple." Aug. 21.
<http://www.chinalaborwatch.org/news/new-419.html>

China Labor Watch (CLW). 2012c. "3000 to 4000 Workers Strike at Foxconn's China Factory." Oct. 5. <http://chinalaborwatch.org/news/new-433.html>

China Labor Watch (CLW). 2012d. "Foxconn Employs Interns Between 14 to 16." Oct. 15.
<http://www.chinalaborwatch.org/news/new-438.html>

Clarke, T. (2010) Recurring Crises in Anglo-American Corporate Governance, *Contributions to Political Economy*, 29, 1, 9-32

Clarke, T. (2000) Haemorrhaging Tigers: The Power of International Financial Markets and the Weaknesses of Asian Modes of Corporate Governance, *Corporate Governance: An International Review*, 8, 2, 101-116

Clarke, T. And Yuxing, D. (1998) Corporate Governance in China: Explosive Growth and New Patterns of Ownership, *Long Range Planning*, 31, 2, 239-251

Deepak Subedi, (2013) "Explaining supply chain as an "opportunistic coalition"", *Competitiveness Review: An International Business Journal incorporating Journal of Global Competitiveness*, Vol. 23 Iss: 1, pp.41 - 54

EPI (2012) *Polishing Apple: Fair Labour Association Gives Foxconn and Apple Undue Credit for Labour Rights Progress*, Briefing Paper 352, Economic Policy Institute, 8 November 2012

Fair Labor Association (FLA). 2012a. "Independent Investigation of Apple Supplier, Foxconn Report Highlights." March.
http://www.fairlabor.org/sites/default/files/documents/reports/foxconn_investigation_report.pdf

Fair Labor Association (FLA). 2012b. "Fair Labor Association Secures Commitment to Limit Workers' Hours, Protect Pay at Apple's Largest Supplier." March 29.
<http://www.fairlabor.org/blog/entry/fair-labor-association-secures-commitment-limitworkers-hours-protect-pay-apples-largest>

Fair Labor Association (FLA). 2012c. "Independent Investigation of Apple Supplier, Foxconn Report Highlights. Appendix 1, Part 2." March.
http://www.fairlabor.org/sites/default/files/documents/reports/appendix_1.2_sci_findings_longhua.pdf.pdf

Fair Labor Association (FLA). 2012d. *Foxconn Verification Status Report*.
http://www.fairlabor.org/sites/default/files/documents/reports/foxconn_verification_report_final.pdf

Fair Labor Association (FLA). 2012e. "Foxconn Verification Status Report. Appendix 2, Foxconn Verification Tracker –Guanlan." Aug. 21. <http://www.fairlabor.org/report/foxconnremediation-verification>

Fair Labor Association (FLA). 2012f. "Foxconn Verification Status Report. Appendix 3, Foxconn Verification Tracker –Longhua," Aug. 21.
<http://www.fairlabor.org/report/foxconnremediation-verification>

Guo, R., Lee, H., & Swinney, R. (2013). The Impact of Supply Chain Structure on Responsible Sourcing.
 (This article came from the Stanford University website without mention of a journal: <http://www.stanford.edu/~swinney/>. The note on the first page of the article seems to indicate that this initially was a conference paper: "The authors thank Sang Kim, Erica Plambeck, Angharad Porteous, and conference participants at the 2012 INFORMS Annual Meeting in Phoenix for helpful comments."

Litzinger, R. (2013). The Labor Question in China: Apple and Beyond. *South Atlantic Quarterly*, 112(1), 172-178.

Munck 2002:128-134

SACOM (2010) *Workers as Machines: Military Management in Foxconn*, 12 October 2010, Hong Kong: Student and Scholars Against Corporate Misbehaviour,

http://sacom.hk/wp-content/uploads/2010/11/report-on-foxconn-workers-as-machines_sacom.pdf
<Accessed 31 August 2012>

SACOM (2011) *Foxconn and Apple Fail to Fulfill Promises: Predicaments of Workers After the Suicides*, 6 May 2011, Hong Kong: Student and Scholars Against Corporate Misbehaviour, http://sacom.hk/wp-content/uploads/2011/05/2011-05-06_foxconn-and-apple-fail-to-fulfill-promises1.pdf <Accessed 31 August 2012>

SACOM. 2012a. *Sweatshops Are Good for Apple and Foxconn, But Not for Workers*.
<http://sacom.hk/archives/947>

SACOM (2012b) *New iPhone, Old Abuses: Have Working Conditions at Foxconn in China Improved?* <http://sacom.hk/archives/960>

Stalk, George and Hout, Thomas M. (1990) *Competing Against Time: How Time-Based Competition is Reshaping Global Markets*, New York, Simon and Schuster

Sushil Vachani, James E. Post (2012), Creating Socially Responsible Value Chains: Role of Companies, Governments and NGOs, in Amjad Hadjikhani, Ulf Elg, Pervez Ghauri (ed.) *Business, Society and Politics (International Business and Management, Volume 28)*, Emerald Group Publishing Limited, pp.17-44

Lin, C., Kuei, C. H., & Chai, K. W. (2013). Identifying critical enablers and pathways to high performance supply chain quality management. *International Journal of Operations & Production Management*, 33(3), 347-370.

Roh, J., Hong, P., & Min, H. (2013). Implementation of a Responsive Supply Chain Strategy in Global Complexity: The Case of Manufacturing Firms. *International Journal of Production Economics*.

Winter, M., & Knemeyer, A. M. (2013). Exploring the integration of sustainability and supply chain management: Current state and opportunities for future inquiry. *International Journal of Physical Distribution & Logistics Management*, 43(1), 18-38.