

Socheolas

Limerick Student Journal of Sociology

Volume 2, Issue 2

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Along the Globalisation Trail***

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April 2010

**University of Limerick
Department of Sociology**

Available at <http://www.ul.ie/sociology/socheolas/vol2/2>

ISSN 2009-3144

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The Human and Exploitative Side of Digital Capitalism: The iPod's Journey Along the Globalisation Trail

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This article examines the iPod as a product of globalisation and as a consumer commodity that exemplifies digital capitalism. In tracing the journey of the iPod through its globalised production process, this article attempts to evaluate the iPods relationship to global market economics. Employing world-systems and dependency theory, the article investigates its assembly and explores the impact that it has upon the lives of those directly involved in the manufacturing process; people involved in an international division of labour within the globalised digital economy.

Introduction:

'First, the biggest winner is Apple, an American company, with predominantly American employees and stockholders who reap the benefits. If the iPod had been made by Sony or Samsung, the value to the U.S. would be considerably less...As long as the U.S. market remains dynamic, with innovative firms and risk-taking entrepreneurs, global innovation should continue to create value for American investors and well-paid jobs for knowledge workers' (Linden *et al* 2007, p.10).

Socially, economically and culturally, the world in which the iPod is purchased and its content consumed could not be further from the world in which the product is manufactured. Described as the first real cultural icon of the twenty-first century (Levy 2007, p.1; Bull 2009, p.1), the iPod has changed the relationship between audiences and content and, more fundamentally, has changed the culture of digital consumption. Since its introduction, the iPod has

embodied what Jenkins (2006, pp.14-16) refers to as the “black box’ concept; a single media device that allows content of all formats to be accessed and consumed. Since the countercultural movement of the 1960s, the future of digital technology has been envisaged as being built on such principles. The populist computer revolution occurring during that time inspired a notion of accessibility based upon the ‘artistic, presentational and conceptual [that was] ... convivial, self-evident, affordable, powerful and user-malleable’ (Brand cited in Nelson 1987, pp. i-ii). It is in comparison to such criteria that the iPod has come to epitomize this ideal of media convergence.

The popularity and adoption of personal digital equipment has grown exponentially over the past decade, providing society with a ubiquitous means to entertain, educate and inform. This explosion of self-determining digital access has manifested itself nowhere more so than in the rise of personal media players, which true to the doctrine of Moore’s Law¹, have become ever more accessible and present in the minds and ears of today’s ‘Net Generation’ (Tapscott 1998). Indeed, it could be argued that the iPod has come to symbolise this generation. Securing its position as first within the hierarchy of digital media devices, it is a product that represents liberalism and individual freedom within a post-modernist communicative sphere. Yet this cultural icon is also the embodiment of the globalised economic commodity and the archetype for digital capitalism. On the one hand, the iPod appears to be the heir-apparent of the technological revolutionaries of the counterculture movement of the 1960s, yet it is difficult to equate their idealism with the social inequalities associated with the means by which life is breathed into this techno-economic commodity. Commercially, it represents a truly globalised product; produced from

¹ Moore’s Law states that technological performance doubles, while the price halves every year (Segaller 1999, p. 140).

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components and processes gathered the world over and highly sought after commercially. However, although culturally and technologically it may assert to enhance the freedom of those who possess it, such notions are abstract concepts to those whose lives are directly affected in making a paltry livelihood from its assembly.

This article attempts to position the iPod as globalised commodity, demonstrating the effects of economic globalisation upon the lives of those most closely connected to its manufacture. Through this case study, the article will endeavor to show how social justice is compromised by both nation states and corporations in the service of neoliberal market economics (Harvey 2007, p.64). In furthering this hypothesis, the article will examine the iPod from two perspectives. The first, will consist of an empirical investigation of the phenomenal economic contribution that the iPod has made to the growth of digital capitalism and personal digital media devices, but more specifically, to its parent organisation, the Apple Corporation. Secondly, the human impact of the manufacturing process by which the iPod is created will be theorised employing Wallerstein's (2005) world-systems theory. This theory helps to illuminate the "asymmetrical economic exchange" with a more highly developed core which takes place when digital technology is manufactured in the lesser-developed, low-cost periphery (Higgot 1983, p.59; Jeske 1999, p. 206). Equally, dependency theory will be employed to highlight the exploitation of less developed economies by countries with higher incomes (Kendall 2007, p. 269). As the article delves deeper into this unequal relationship, the sociological relevance of the iPod and the organisation of its production will become more apparent. In conclusion, the article will comment on the neo-liberal underpinnings of technological culture and digital capitalism.

Six and a half ounces of commodified gold

As a source of revenue for the Apple Corporation, the iPod is nothing short of extraordinary. When the iPod was launched in 2001, the six and half ounce device saw Apple's share price rise from \$9.43 to \$203.00 per share in the following eight years (www.nasdaq.com). This monumental increase in Apple's good fortune is in no small way due to the iPod and its contribution to the continued success of Apple within the consumer technology market. Apple's 2009 Second Quarter results experienced what they described as 'the best non-holiday quarter revenues and earnings in Apple history' (Apple 2009b). Despite the global recession that had taken hold since mid-2008, iPod revenues dropped by just 7%, equating to a total of 10.2 million units sold. By the same token, when sales of the iPhone, the iPod that incorporates telephony, are included, the position of the iPod takes a sharp turn upwards. In 2009, the iPhone had sales of 5.2 million units, an increase of 626% on the previous year and, combined with other iPod models, over 15 million units were sold. By late 2009, the unique position that the iPod held within the market was validated by the announcement that 225 million units had been sold worldwide (Apple 2009a). Of these sales, more than 50% were made to 'new' or first-time customers. The iPod currently holds a market share of 78% among digital media players.

The uneven nature of digital capitalism:

In order to achieve such results, the globalised manufacture of the iPod embodies market economics; from the Transnational Corporations (TNCs) who acquire added value in the movement of components around the world, to those who place at the disposal of TNCs cheap, available labour and affordable production facilities. The effects of this globalised model make up two unequal parts of the same equation; on one hand, the benefits of a globalised market-led economy, providing a wider range of cheaper goods for the consumer, while on

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the other hand, the means by which these same goods are produced by very low-cost labour markets. For American sociologist Immanuel Wallerstein (2005), such inequity epitomised modern capitalism. Firstly, he observed that capitalism was organised on a global rather than a national basis, and secondly, that regions that had advanced both economically as well as politically were in a position to dominate the direction of world economics. Abercrombie *et al* (2000, pp.397-80) take the view that Wallerstein's world systems theory has in some way been usurped by globalisation. However, it could equally be argued that Wallerstein's focus on core and peripheral nations has simply been out dated and replaced by multinational corporations and their relationship to service providers in developing nations. Dependency theory also contributes to our understanding of such imbalances within global economic affairs, advancing the premise that the growth of more and more products consisting of a multiple of components supplied from around the world is in fact due to low-income economies being exploited by those with the highest incomes (Kendall 2007, p.271).

The iPod's DNA resides firmly within this globalised construction process. While all components supplied for the iPod are shipped to China for assembly, most of the profits attached to these components go to the countries where these parts are originally manufactured. Most component parts used within the production process originate in the United States, or with companies owned by U.S. conglomerates. A 2007 study carried out by the Personal Computing Industry Centre (PCIC) in Berkeley, California used the Apple iPod as a case study to illustrate this aspect of globalisation. Even though, in a globalised production process profits appear to be dispersed around the globe, most of them find their way back to the country of innovation origin which, in a good many cases, is the United States of America (Linden *et al* 2007, p.10). The PCIC study based its research on a 5th generation iPod priced at \$299 and

launched in late 2005. Their findings illustrate the costs associated with the constituent parts, either physical components or assembly processes, along with the geographical locations where most of the value is captured. In relation to the costs associated with the product, the overall breakdown in approximate terms are:

- Manufacture: \$144.00;
 - Apple's profit: \$80.00;
 - Wholesale discounts: \$38.00;
 - Retail cost: \$22.00
 - Distribution: \$15.00
- (Fig. 1).

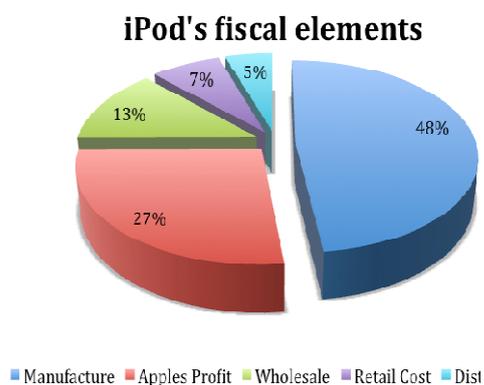


Table 1 illustrates the most expensive component parts used in the iPod's manufacture, while also identifying where possible, the country of origin, and the country where the physical act of manufacture takes place.

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Table 1. – The Most Expensive Inputs in the 5th Generation iPod.

Components used in the iPod	Location of HQ	Manufacture Location	Estimated Price
Hard Drive	Japan	China	\$73.00
Display Module	Japan	Japan	\$20.00
Multimedia Processor	US	Taiwan/Singapore	\$8.00
Portal Player CPU	US	US or Taiwan	\$5.00
Assembly/Test	Taiwan	China	\$4.00
Display Driver	Japan	Japan	\$3.00
Battery Pack	Unknown	Unknown	\$3.00
Memory	Korea	Korea	\$2.50
Back Enclosure	Unknown	Unknown	\$2.50
Mainboard PCB	Unknown	Unknown	\$2.00
All other inputs			\$21.00

Source: Who Captures Value in a Global innovation System? The case of Apple's iPod – Personal Computing Industry Center – (Linden *et al* 2007, p.6)

In observing the sliding scale of costs associated with each part, the cost associated with the actual physical labour intervention is most telling. This process, which involves the installing and assembly of parts and testing their worthiness, is charged at \$4.00. In true testimony to the application of dependency theory, while the high value added processes associated with the iPod's design, functionality and aesthetic occur in core countries, this process, carried out in China, accounts for as little as 1.3% to the overall value of the product.

This vast chasm between the higher-value added activities and labour intensive assembly is further illustrated in Linden’s report by disseminating data on how profit from the iPod is distributed across geographical borders. Table 2 illustrates their findings.

**Table 2. – The Capture of \$190 of the \$299 - 5th Generation iPod.
(Based upon a device being sold in the USA)**

Input	USA	Japan	Korea
Distribution/Retail	\$75.00		
Apple Profit	\$80.00		
Seven inputs from Table 1	\$7.00	\$26.00	\$1.00
Portal Player Suppliers	\$1.00		
Total	\$163.00	\$26.00	\$1.00

Source: Who Captures Value in a Global innovation System? The case of Apple’s iPod – Personal Computing Industry Center – (Linden *et al* 2007,p.8)

In concluding their report, the authors suggest that,

‘Today, no single country is the source of all innovation and therefore U.S. companies need to work with international partners to bring new products to market. These companies will capture profits commensurate with the extra value they bring to the table. This is simply a fact of business in the 21st century, and the good news is that many American companies are winning this game and continuing to bring significant benefits to the U.S. economy’ (Linden *et al* 2007, p.10)

Linden et al (2007) suggest that the innovation process is itself globalised - companies working together in international partnership can only result in creating the added value needed that will translate into profit. However, those involved in providing their labour power to the lower value-added assembly and testing processes may have a different understanding altogether.

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At a state level, China has instilled within its citizens the need to work hard, endure substandard working conditions and low wages, all in the name of modernisation (Harvey 2007, p.148). Not unlike other countries in East Asia, China took full advantage of globalisation in order to expand their own markets, resulting in faster and stronger economic growth (Stiglitz 2002, p.60). Yet, the relationship between China and the iPod is nothing short of paradoxical. While China benefits from high volume manufacture of the iPod, the profits resulting from its actual assembly go, not to Chinese corporations, but to a Taiwanese company, Foxconn, who is contracted by Apple to complete the actual manufacture. And although China is given prominent acknowledgment of its role within the manufacturing process, through the etching “Assembled in China” scored upon the shiny stainless steel back enclosure of the iPod, the paradox exists in the fact that, for all of Apple's recognition, the cost of the workers contribution is less than \$4.00 for each \$299 spent on an iPod.

The exploitative dimension of technoculture:

In August 2006 a story broke in the media as to the working and living conditions of Chinese employees engaged in the assembly of the iPod. A report printed in the *Mail On Sunday* (2006) revealed that though not subject to forced labour or to the use of child labour, the workers were nonetheless exposed to conditions of employment and remuneration that were beyond harsh and bordered on the oppressive. The relevant Foxconn facility, is in the province of Guangdong, where the compound houses a factory that employs 200,000 people, most of whom live, 100 to a room, in dormitories that are free to employees. According to the media report, a stipulation exists that should an employee live within the compound, they are forbidden visitors. Employees were found to work up to 15 hours per day for a wage of £27.00 per month and overtime was not optional nor was it paid at a premium (Mail Online 2006). Within weeks of the story breaking, Apple sent an audit team to assess the

situation for themselves; their terms of reference were simply, ‘to carry out a thorough investigation of the conditions at the manufacturing site’ (Apple 2006). By way of vindicating what the audit team had witnessed and projecting an image of social as well as corporate responsibility, Apple explained that only 30,000 of the 200,000 employees were involved in duties relating to the iPod’s assembly. Interviews were conducted by the audit team with over 100 staff (0.05% of the workforce) of various rank within the organisation and items discussed included; employment standards – referring to whether there was evidence of forced labour; the working environment – the amenities and facilities available to employees; remuneration – indicating that employees earned at least minimum wage; overtime – the limiting of weekly work practices to a maximum of 60 hours; and the general treatment of staff – indicating that only a ‘few’ examples of disciplinary punishments were witnessed by staff. Punishments referred to consisted of employees being made stand to attention. Such practices were not condoned by Apple, and in order to correct such shortcomings Foxconn had ‘launched an aggressive manager and employee training program to ensure such behaviour does not occur in the future’ (Apple 2006). As for Apple’s subsequent relationship with Foxconn, they publicised their demand for corrective action plans to be provided with a ‘focus on prevention and systemic solutions’. Apple also specified that any deviation would lead to a termination of contracts and that Apple were ‘dedicated to ensuring that working conditions are safe and employees are treated with respect and dignity wherever Apple products are made’ (Apple 2006).

‘In the face of the facts that modern man lives more wretchedly than the cave-man, and that his producing power is a thousand times greater than that of the cave-man, no other conclusion is possible than that the capitalist class has mismanaged...criminally and selfishly mismanaged’ - Jack London (Zinn 2005, p.322)

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These words, written by Jack London in his 1906 novel *The Iron Heel*, warn of an America with growing fascist tendencies. His reasoning was influenced by how the employer class administered capitalism at the turn of the last century. For those currently residing within the developing world, it could appear as though nothing has changed. If current practices are to be held up as the face of capitalism in the 21st century, surely any benefits of neoliberal globalisation fall short from a social justice perspective. The division of labour that was to help spread prosperity and modernisation from developed economies into more impoverished nations would appear to have failed in this endeavour.

Conclusion

From the perspective of dependency theory digital capitalism is best summed up as the opportunity for high-income nations to benefit from lower-income economies by the exploitation of their citizens (Kendall 2007, p.271). The digital economic model, and the international division of labour it entails, has done little to dignify the worker's contribution. It is unfortunate that the working conditions and remuneration connected to the testing and assembly of the iPod does not deviate from any presubscribed norm within the market economy. According to John Markoff (2006), Apple is not unique in this regard, for along with Apple, Foxconn also provide contracted services for large corporations like Dell and Sony. As demand increases for new technology so too does the insistence that costs remain low, all in the name of economic globalisation. The increased pressure placed upon the global labour markets have forced wages within low-income economies to remain stagnant and justification for this is strict adherence to Moore's Law and global share prices. The Guangdong region of China where the factory producing iPods is based is a large industrialised area wherein 90% of the workforce are migrants from other parts of China. These migrants are willing to work for low wages and reduced conditions (Chan 2000, p.262). While the practice of working for less is having

a positive effect on market prices for goods and services, it has an opposite and adverse effect on the lives and working conditions of those servicing this ravenous global economy.

The segregation of those who provide the articles of economic success from those who aspire to own them is the true measure of economic globalisation (Zizek 2008, p.87). Although highlighting the pay and conditions of those in low-income economies as unacceptable, Apple has missed the opportunity to address itself to the uneven nature of digital capitalism. Compared to the many accolades and praise that have been heaped upon the iPod from a cultural perspective, its journey through the globalised manufacturing process falls short of excellence.

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