

Capital accumulation and work in China's internet content industry: Struggling in the bubble

The Economic and
Labour Relations Review
2018, Vol. 29(4) 501–520

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DOI: 10.1177/1035304618810987

journals.sagepub.com/home/elrr



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Abstract

Since 2015, Baidu, Alibaba, and Tencent (the so-called BAT) have constructed an empire in the Chinese Internet content industry via mergers and acquisitions. However, little is known about how professional Internet workers are experiencing this process of accumulation and consolidation. This article focuses on how social relations are reconfigured and subsumed in the capital accumulation process in the realm of the Internet content industry, using the Chinese case. It argues that fresh graduates are subsumed into the accumulation process as immaterial resources in the circulation of capital. It also offers a general critique of the capital accumulation process, as it shifts risks and costs of failure on to independent start-ups entering the industry.

JEL Codes: P34, O3, Z1

Keywords

BAT, capital accumulation, Chinese Internet, start-ups, workers' experiences

Introduction: An emerging Internet content empire

In 2016, the Bank for International Settlements, the world's top financial watchdog, warned China about coming face-to-face with a full-blown banking crisis, as its credit vulnerability was three times over the danger threshold (The Guardian, 2016). According to a Boston Consulting Group report, in 2016, China's Internet economy was valued at USD12.4 trillion, accounting for 6.9% of the country's gross domestic product (GDP) (Dean et al., 2012: 24). The number of Chinese Internet users reached more than 700

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million (Soon-do, 2017). In addition, several of the most valuable Internet content providers, the BAT, are based in China (Baidu – China’s largest online search engine; Alibaba – China’s largest e-commerce platform; and Tencent – the main dominator of instant messaging services in China). The Alibaba Group was valued at nearly USD200 billion in April 2016 (Mozur and De La Merced, 2016), and this example shows that China has become a powerful force in the global digital economy.

Meanwhile, the BAT dominates China’s Internet content landscape. For example, in 2015, Tencent took charge of the merger of Didi and Kuaidi, the main taxi hailing mobile applications, as well as the merger of 58.com and Ganji.com, the main classified ad websites (Hornby, 2015; Sobel, 2015). Then, Baidu took charge of the merger of Ctrip and Qunar, the main online travel service sites (Carsten, 2015). And Alibaba took charge of the merger of Meituan and Dianping, the main group-buying websites (Borak, 2018). In other words, the BAT accumulated a business empire that covers almost all online and offline services ranging from e-commerce to insurance, from banking to health care services.

However, little is known about how individuals, in particular professional workers, are experiencing this accumulating Internet content empire. Therefore, this article asks, ‘How do Chinese Internet workers experience the development of the Chinese Internet content empire?’ It answers the question by exploring workers’ experiences, including but not limited to their risks and costs. In doing so, it adopts as an analytical framework Harvey’s concept of accumulation by dispossession in order to help explain workers’ experiences of struggle and dispossession within the financialised bubble economy of startups and takeovers that characterises Internet content provision.

Accumulation by dispossession in high-tech industries: Entrepreneurship and the labour issue

Harvey (2006) argues that modern capitalism is facing an over-accumulation crisis, a situation in which ‘both surplus capital and labour exist but there are [sic] no way to bring them together’ (p. 96). In order to solve the over-accumulation crisis and maintain the process of capital accumulation, capitalists search for new geographical spaces and ways to invest surplus capital, such as appropriating both material (e.g. natural resources in other geographical spaces) and immaterial resources (e.g. knowledge) into the circulation of capital. This is described as accumulation by dispossession.

Harvey (2011) points out that China has, on the one hand, created more fixed, constant capital than needed, which is overvalued. On the other hand, a large working population is currently unemployed in China. Harvey (1990) sees this over-accumulation as

a condition in which idle capital and idle labour supply [...] exist side by side with no apparent way to bring these [...] resources together to accomplish [...] useful tasks [...] [as] indicated by idle productive capacity, a glut in commodities and an excess of inventories. (pp. 180–181)

Harvey explains that in turn capital tries to overcome its own crisis by spatial fixes, temporal fixes or spatio-temporal fixes. He thereby means that capital tries to create new spheres of accumulation (spatial fix), using time-oriented strategies (such as credit, debt,

financial markets, financial derivatives) or the combination of both (e.g. the lending of money from banks in other countries or to companies in other countries).

Generally, Harvey's concept of accumulation by dispossession explains the problems and risks the Chinese economy is facing, such as overbuilding, overinvesting and the capitalist exploitation of cheap labour. This concept explains some of the findings of research into high-tech industries, as it highlights that capital tries to overcome its crisis caused by the gap between capital and labour, via creating new spheres of accumulation, in which high-tech industries have become participants. Some aspects of this capitalist accumulation by dispossession in high-tech industries have been discussed by scholars (McChesney, 2013; Milberg and Winkler, 2013; Rifkin, 2014; Sundararajan, 2016). For example, McChesney (2013) points out that Internet monopolists have dominated US and world capitalism, and the Internet 'has been subjected to the capital-accumulation process, which has a clear logic of its own', due to issues such as the increased use of patents (p. 97). He reminds us that the monopolies created cause lots of problems, such as Facebook's ignorance of users' privacy. He takes Google as an example to remind us that these monopolists create 'winner-take-all markets' (McChesney, 2013: 173) and leave others with little space for new products. Rifkin (2014) points out the same problem of monopolisation in the Internet of Things (IoT). By taking an economic approach, he points out that monopolies will block further economic progress 'in order to protect the value of the capital already invested in outmoded technology' (Rifkin, 2014), and these monopolies will also 'restrict entry of new enterprises and innovations' (p. 6). As a result, the economy will 'go into a protracted stall' (Rifkin, 2016), as new and more productive technologies are slowed down or stopped.

Rifkin (2014) optimistically believes, however, that 'the emergence of the IoT infrastructure of the Third Industrial Revolution, with its open architecture and distributed features' will break the monopoly and billions of people will be individually empowered as far as they become social entrepreneurs (p. 23). Yet neither Rifkin nor McChesney appreciate the degrees of inequality and insecurity placed on workers in this process of capitalist accumulation. Also, it is valuable to explore the linked question of the ways monopolies stop or restrict new enterprises and innovations, as well as the experiences of start-ups in the process of being restricted in entry the market.

Rifkin (2014) argues that market leaders attempt to dominate the market in order to 'impose prices higher than the marginal cost of the products they're selling', with actions of 'preventing start-up companies from introducing even newer technologies to reduce marginal cost and the price of goods and services' (pp. 7, 23). It is therefore worth exploring the dynamics between these monopolies and start-up companies.

Schiller (2005) emphasises Chinese policymakers' significant role in determining the linkages between China's domestic political economy and transnational capitalism. For example, Chinese policymakers encourage bank lending and easy access to credit to meet transnational capital's demands for accumulation. Schiller (2005) also argues that China's rapid development as a new site of accumulation has created overproduction tendencies that exacerbate regional and social inequalities. Schiller (2014) points out that China plays a significant role in global digital capitalism due to its 'large and still rapidly growing domestic market, and overseen by a strong and capable state' (p. 235). He reminds us that despite heavy foreign investment, China's party-state with state intervention aids Chinese

capital in gaining important roles in the domestic information and communications technology (ICT) market.

Hong (2017) has extended Schiller's arguments by analysing the state-led model of digital capitalism, the model of a networked China that employs global business power under neoliberal policies. Hong (2017, Ch. 3) points out that China's policymakers deploy ICTs as the main strategy of economic restructuring in order to advance economic growth. For this task, the Chinese state encourages cultural consumption, digital media use and supports the roll-out of broadband networks.

Milberg and Winkler (2013) have highlighted the role of outsourcing in global value chains in capitalist development and they pay attention to workers' conditions in the outsourcing model that also applies to China. Likewise, there is some research on the labour costs of accumulation by dispossession in high-tech industries, with some, on the one hand, exploring the way audiences are being subsumed into the accumulation process as 'free labour' (Barbrook, 2005 [1998]; Hills, 2002; Jenkins, 2008; Nixon, 2016; Wittel, 2014). For example, Terranova (2004) defines active users in the 'digital economy' as 'free labour', who build a community without great financial rewards and in return obtain 'the pleasures of communication and exchange' (p. 91). She regards these free labourers as a new productive force of capitalist production, as well as believing that capitalism is increasingly relying on free labour with its emergence.

On the other hand, some scholars argue that professional labour in high-tech industries is an important issue to discuss in relation to the capitalist accumulation process (Chan, 2013; Gill, 2002; Kennedy, 2012; Pun et al., 2016; Qiu, 2014; Xia, 2014). For example, Gill (2002) investigates poor working conditions in new media industries, by highlighting the pervasiveness of employment insecurity, low pay and long working hours. She particularly links these poor working conditions to gender inequalities in new media work, by arguing that female workers in new media industries experience inequalities in terms of education, access to work, autonomy, flexibility and pay. Xia (2014) has also explored poor working conditions in Chinese Internet industries, to reveal long working hours, unequal pay, frequent job-hopping, lay-offs, and unsecured life after retirement.

There is, however, relatively little current research on worker's experiences in the current Chinese high-tech context, in particular in the context of capitalist accumulation by dispossession in Chinese Internet industries. It is therefore worth asking, to what extent China's Internet content industry, which occupies a large number of young workers, relates to phenomenon of accumulation by dispossession, and how young Internet workers are experiencing the accumulation by dispossession process.

Research methods

In order to identify workers' experiences working in a rapidly expanding media content empire, 12 in-depth interviews were conducted in Beijing and Hangzhou. Because experiences in the industry are individualised and fragmented, it is reasonable for this research to adopt a non-standardised interview method. This research builds on an earlier project on labour issues in Chinese Internet industries in 2014, in which I conducted large numbers of interviews and observations in China's

Internet content industry. Thus, I picked up my interviewees for this research from my existing networks in the industry. In order to explore different experiences of workers in the industry, all interviewees were chosen from different companies with different occupations. For example, one interviewee works at the Internet department of a state-owned telecommunication company; three interviewees work at BAT; three interviewees work at outsourcing companies; and five interviewees are start-up entrepreneurs. In an effort to avoid research bias, an effort was made to interview both female and male workers, although in the end there were only two females owing to gender discrimination in the industry.

Expansion of capital accumulation: Mass entrepreneurship and innovation (*quanmin chuangye*) and financialisation

Since 2010, there has been a start-up boom in China, for which the Internet content industry is key. In 2014, the Chinese government issued the programme ‘mass entrepreneurship and innovation’ (*quanmin chuangye*) to encourage the entire population to start their own businesses and unleash their innovation potential (State Council of the People’s of China, 2016). The number of newly registered enterprises increased to 2.62 million until the first half of 2016 (Xinhua, 2016a). It is common to find cities in China that are ambitious about being start-up incubators. For example, Suzhou, a third tier city west of Shanghai, has announced the establishment of three hundred incubators holding 30,000 start-ups by 2020 (Schuman, 2016). In order to increase the speed of this start-up boom, both the central government and local governments showed their support through developing policies and providing funds. For example, the Hangzhou government initiated a Dream Town (an Internet village) with lavish resources for start-ups, such as giving start-up companies easy access to loans and subsidies (Schuman, 2016).

Owing to the evidence of substantial support from agencies, policy and funds and from media reports we can deduce that millions of entrepreneurs have entered the start-up market, usually with some years of work experience; a devoted approach to work; a passion for technology and a dream of becoming millionaires. Forbes has revealed that numerous young Chinese-born people from the 1980s and 1990s, from first and second tier cities, or even smaller cities, have entered into the start-up market. Most of these young people are not afraid of failure, as they take the outcome, whether positive or not, as part of their experience and believe that it will open up more opportunities in the future (Tse, 2016). In summary, the Chinese start-up boom in the Internet content industry is facilitated through governmental support and has been supported by large numbers of young and willing entrepreneurs.

My two interviewees in Hangzhou mentioned that some of their colleagues quit their jobs at Alibaba and started their own businesses in the Dream Town, as the Hangzhou government supports the Internet village with subsidised rent, cash hand-outs and special training. According to the New York Times, USD49 billion of venture capital was invested in China in 2015 and in August 2016, the Vice Chairman of the National Development and Reform Commission (NDRC) announced that a national venture capital fund for emerging industries of about a further USD6 billion would be issued (Xinhua, 2016b).

Table 1. Baidu's acquisitions.

Date	Acquired	Market
5 Jul 2017	KITT.AI	Developer tools
13 Apr 2017	XPerception	Hardware, software, virtual reality
16 Feb 2017	Raven Tech	Artificial intelligence, big data, mobile application
16 Apr 2015	Anquanbao	Software
9 Oct 2014	Peixe Urbano	Travel and tourism
27 Dec 2013	Beijing Huanxiang Zongheng	Literature
	Chinese literature	
15 Jul 2013	91 Boyuan Wireless	Mobile application
7 May 2013	PPS	Entertainment
13 Feb 2013	TrustGo	Mobile application
16 Sep 2004	Hao 123.com	Web dictionary

Data source: https://www.crunchbase.com/organization/baidu/acquisitions/acquisitions_list#section-acquisitions (accessed 10 October 2018).

That being the case, is the market ready for this start-up boom? To what extent does the market have space for start-ups? As mentioned earlier, the Chinese Internet economy is increasingly dominated by the BAT. Table 1 lists Baidu's acquisitions in recent years showing it has entered various areas in the content industry, such as website security software, literature, and entertainment. Previously, in 2010, Baidu invested USD50 million of private equity in iQiyi, an online video company and obtained the controlling interest in iQiyi in November 2012. In May 2013, it further acquired PPS, another online video business, and merged it with iQiyi (see Baidu, 2016). Baidu states the aim of these acquisitions was to become the leader of the online video business in China. Baidu (2016) has also declared its aim of acquiring 91 Wireless, a leading mobile application and mobile games operator stating,

The synergies are mainly attributable to the enhancement of the company's leading position on the rapidly emerging mobile area ... and further foster an ecosystem with better users experience for mobile products, stronger user loyalty, and greater value for both customers and developers that enhance the company's monetisation ability on the emerging mobile market. (pp. 33–34)

As the above quote mentions, Baidu's ambition is to 'further foster an ecosystem that enhance[s] the company's monetization ability on the emerging mobile markets', and thus dominate the mobile market via such acquisitions and investments. This domination via acquisitions and investments indeed is a common strategy shared also by Alibaba and Tencent. For example, Table 2 shows Alibaba's acquisitions, which covers areas like newspaper, video sharing, mobile applications, advertising, and so on. Table 3 shows Tencent's acquisitions, which includes services like music, digital gaming, literature, and so on. Both companies state a similar aim of enhancing the company's leading position on certain area. In other words, the three giants are dominating emerging areas via acquisition and investments.

Table 2. Alibaba's acquisitions.

Date	Acquired	Market
8 May 2018	Darak.pk	E-commerce, fashion
28 Sep 2017	Ejoy Technology	Computer games
5 Jul 2016	Wandoujia	Software
6 Mar 2016	AGTech Holdings	Sports leisure
11 Dec 2015	South China Morning Post	Newspaper
16 Oct 2015	Youku	Video sharing
22 Apr 2015	Yueke Software	Entertainment
6 Jan 2015	AdChina	Advertising
11 Jun 2014	UCWeb	Software
13 Apr 2014	AutoNavi	Digital map
25 Sep 2013	Kanbox	Hardware
26 Apr 2013	Umeng	Mobile application
24 Jun 2010	Vendio	E-Commerce

Data source: https://www.crunchbase.com/search/acquisitions/field/organisations/num_acquisitions/alibaba (accessed: 9 October 2018).

Table 3. Tencent's acquisitions.

Date	Acquired	Market
21 May 2018	Grinding Gear Games	Digital game
22 Dec 2016	Sanook	News
14 Jul 2016	China Music Corp	Music
21 Jun 2016	Supercell	Digital game
18 Feb 2015	Miniclip SA	Digital game
27 Jan 2015	Clouday	Literature
26 Jan 2014	Linktech Navi	Digital map
1 Mar 2012	Zam	Digital game
Feb 2011	Riot Games	Digital game
23 Aug 2010	Comsenz	Community service
20 Apr 2010	Shenzhen Domain Networks	Digital game

Data source: https://www.crunchbase.com/search/acquisitions/field/organisations/num_acquisitions/tencent (accessed 9 October 2018).

It is valuable to see how Baidu defines its main competitors for its three segments. In terms of Internet search, its main service, it defines Google and Tencent's search engine 'SoSo', merging with Sohu's search engine 'Sogou' as part of its investment in Sogou in 2013 (Crunchbase, 2018),¹ as its main competitors. For transaction services, Baidu identifies its primary competitors as being Meituan-Dianping, which was funded USD3.3 billion by Tencent in January 2016, and Koubei, in which Alibaba's investment arm Alibaba Capital Partners invested USD1 billion in October 2016 (Crunchbase, 2018).² For iQiyi, Baidu recognises Youku-Tudou, acquired by Alibaba in November 2015, and Tencent Video as its main competitors. In other words, Baidu, Alibaba and Tencent share

Table 4. Baidu's research and investment expenses 2015.

2015	Costs (RMB)	Total revenue (RMB)
Research and development expenditures	10.2 billion	66.382 billion
Cash investment expenses	31.3 billion	
Non-cash acquisitions of investments	24.43 billion	

Data source: Baidu (2015), accessed 29 January 2017.

most of the Internet content markets, as all Baidu's competitors are part of Tencent or Alibaba's services.

Moreover, the BAT's subsidiaries and investees are continuously acquiring and investing in new start-up companies. For example, Tencent's investee Meituan-Dianping, China's largest group deals site, acquired a third-party payment start-up, Qiandai, in 2016, in order to reduce its reliance on the existing mobile payment solutions owned by Alibaba and Tencent, and also to eliminate a possible competitor for Tencent (Yap, 2016). Therefore, it is not surprising to see that BAT is developing a monopoly capitalist accumulation via investing and acquiring companies in various areas, including by subsuming start-ups.

Also in its annual report, Baidu (2016) highlights the importance of innovation by stating 'this (the high competition) may force us to expand significant resources in research and development and strategic investments and acquisitions in order to remain competitive' (p. 7). Baidu seems to rely heavily on 'strategic investments and acquisitions' (Baidu, 2016), and does not give details of how to 'expand significant resources in research and development' (Baidu, 2016). Table 4 shows Baidu's research expenses and investing expenses. In 2015, in terms of research expenses, Baidu spent nearly 10.2 billion RMB, 15.3% of its annual revenue; in terms of investing expenses, Baidu spent nearly 55.73 billion RMB, including 31.3 billion RMB cash investments and 24.43 billion RMB non-cash acquisitions of investments, amounting to around 83.96% of its annual revenue (66.38 billion RMB). Apparently, Baidu spent much of its revenue on acquisition and investments, rather than research and innovation, as it claimed to do.

Therefore, as Foster (2007) argues, if the BAT group continues expanding their empire via acquiring start-ups that provide new projects and services, rather than inventing new ones, they will occupy the entire market and leave limited space for new productive capacity. An example is that of, as already referred to in the introduction, Didi dache, a car hailing company that was funded by Tencent and subsequently merged with Kuaidi dache, which was subsequently funded by Alibaba in 2015 and in the process became dominant in China's car hailing market. In a short period of time, it bought Uber's China unit in 2016 and became an oligopolist in the industry. The new giant Didi Chuxing nowadays occupies almost 90% of the ride-hailing market (Beijing Review, 2016). This certainly leaves hardly any space for new start-ups to enter the market via initiating new services or projects. As Foster argues above, the result is a limited space for new productive capacity.

However, this article's main concern is to explore how individuals such as start-up entrepreneurs experience this process of financialisation. To them, the first issue they face is piracy – sometimes, piracy becoming a chance, rather than a problem:

Piracy is not a problem. I only realised it after setting up my own company. Take the game 2048 as an example, the open source code was shared online by the creator, and later was modified to various versions. It then became popular among billions of users, and even created the so called '2048 culture' ... Different from Western entrepreneurship, which is from 0 to 1, Chinese entrepreneurship is from 1 to infinity: if one online game becomes popular, then thousands of companies will profit from pirating, as we have so many users ... This is a sort of diversity (laugh) ... (Interview 3, Tom, Beijing, December 2015)

In 2014, almost 2.5 billion pirated digital games were downloaded, representing a loss in revenue of USD74 billion revenue lost (Graham, 2016). It seems that the piracy culture damages the digital game industry. However, it is a different story in the Chinese context: in some entrepreneurs' understanding, piracy has become such a common phenomenon in the industry that it has even become an aspect of business rules:

I experienced this (piracy): my company released an online game on the Android market, but it was soon adapted by another company by adding their ads. Users complained to us, whilst their pay actually was earned by that company ... It costs money and time to sue these companies, whilst the result may be out of your expectation. For example, CY, a famous online game company, sued WX, a small company that pirated CY's popular game. WX profited more than 30 million RMB from piracy, whilst it was just penalised 1 million RMB. Later, CY became a stockholder of WX via investing ... In my case, the pirate of my game had 70,000–80,000 downloads, with which they earned 0.3 RMB per download. So the net profit is around 10,000 RMB. If I protected my game via applying for trademark and copyright, it costs me a similar price, whilst takes a longer time. So I usually authorise my game to these companies and share profits with them. (Interview 3, Tom, December 2015)

As Tom suggested above, the phenomenon of absorption emerges via piracy: as the CY case shows, start-ups invest in small companies that pirate their products, first, to avoid the negative impact caused by piracy, and second to avoid the complicated process of applying for a trademark and copyright. Meanwhile, as pointed out above, the BAT tends to dominate the industry via absorbing these start-ups. McChesney (2013: 173–174) argues that technical standards, such as patents, encourage monopolies, as the firm that holds the patent usually sets up barriers for new competitors to enter. Here, the Chinese case suggests further ways in which to understand means of setting up entry barriers: monopolies extract low purchase prices for patents and copyright via absorbing start-ups, while leaving the risks and costs of setting up these technical standards to start-ups. It is easy to imagine that a large number of small start-ups may disappear, owing to the negative impacts caused by piracy and the benefits taken by piratic companies. Only a small number of start-ups survive in this cruel game and are successfully absorbed by the monopolies, and they do so after paying a high price in the process. Therefore, thousands of start-up companies are innovating with only few of them succeeding in creating new projects attracting large numbers of users and many of them are shortly after this taken over by the BAT, via investment or acquisition.

The process of accumulation by dispossession is enabled by the close relationships between the BAT and the government. The interviewees in this study gave more detailed information on the game between Internet companies and the government. For example,

most Internet companies, start-ups as well as the BAT, are aiding the government in deepening current economic reform via improving traditional industries:

Our project is in response to the government's policy concerning doctors ... Internet indeed is a tool in the hand of government to marketise certain fields where conservatism dominates ... We are standing close to the government and the Party. (Interview 10, Galeno, Beijing, December 2015)

In return, the government protects companies standing close to it, such as the BAT, by cordoning off the market:

The market is closed. No matter how brilliant your product is, it may not reach users, because there is an interest group filtering all products. It is possible that your product benefits users, whilst it hurts this group's interests. Then, it must be filtered out ... Why is O2O so popular these days? We can only do localised business, as we cannot compete with Google and Amazon. So we just close the market and focus on offline business ... our government doesn't have experience in antitrust, it's afraid that Amazon may dominate the local online commerce market if it applied antitrust law on Alibaba. So it chooses to close the market to enable BAT dominate the local market ... (Interview 11. John, Beijing, December 2015)

This suggests close relationships between the government and Internet industries: the BAT helps the government deepen current economic reform with certain products improving traditional industries, rather than creating an online space for alternative voices to speak out (Xia and Kennedy, 2014: 177). In return, the government closes the market to enable BAT to benefit from offline business.

Foster (2007) warns that the monopoly capitalist production process will result in limited space for productive capacity and investment in new capacity, stating:

As capitalists they naturally seek to invest this surplus in a drive to ever greater accumulation. But the same conditions that give rise to these surpluses also introduce barriers that limit their profitable investment. Corporations can just barely sell the current level of goods to consumers at prices calibrated to yield the going rate of oligopolistic profit. The weakness in the growth of consumption results in cutbacks in the utilization of productive capacity as corporations attempt to avoid overproduction and price reductions that threaten their profit margins. The consequent build-up of excess productive capacity is a warning sign for business, indicating that there is little room for investment in new capacity. (p. 3)

Foster (2007) has also argued that oligopolistic firms under monopoly capitalism will generate a strong tendency towards economic stagnation, as they rely heavily on 'cutbacks in output, capacity utilization and new investment' (p. 7). Therefore, this financialisation certainly will lead to a decrease in innovation and production. Furthermore, it is 'an ongoing process transcending particular financial bubbles' (Foster and Magdoff, 2009: 84). As a result, some start-up entrepreneurs become capitalists-in-waiting via financing and cashing out:

If I can earn more money with my knowledge/skills in other industries, I definitely will leave this industry ... If my company now repurchases my stocks, I will also leave ... At the moment, I'm more interested in realising financial freedom ... (Interview 10, Galeno, Beijing, December 2015)

Chinese internet industries indeed are a transaction of data flow ... Government encourages multilevel capital market for financing, however, many entrepreneurs nowadays enter the market with the aim of cashing out. They calculated price-performance ratio, and realised that cashing out is easier than improving products with this money. And it becomes a business culture: entrepreneurs create stories and ideas for financing, and workers focus on sharing stocks and selling stocks after Initial Public Offering (IPO). (Interview 6, Jack, Beijing, December 2015)

To be honest, working in the internet industry is more attractive than in others because of stocks we can have after accessing a company. (Interview 8, Henry, Hangzhou, January 2016)

Here, as these start-up entrepreneurs suggest above, the aim of their Initial Public Offering (IPO) is merely to extract wealth from the rest of population, such as investors, by cashing out. Therefore, this research suggests that capital concentration and centralisation in the industry, resulting in BAT's monopolisation based on their alliance with the government, indeed stimulate a process of financialisation. Therefore, BAT subsumes start-ups, a process which rationalises the illegal phenomenon of piracy by investing in or acquiring piratic companies. The BAT then builds up an alliance with the government via benefit exchanging. This alliance enables the BAT members to monopolise the industry, as part of the financialisation process. Consequently, some start-up entrepreneurs become capitalists-in-waiting: they pay attention to an IPO for financing and cashing out, rather than for improving products. Likewise, ordinary workers focus on sharing stocks and cashing out after an IPO.

In other words, individuals' experiences in this research enrich the process of financialisation going on in Chinese Internet content industry, by exploring piracy issue. Moreover, there is another factor relating this financialisation process to Chinese education system and contemporary Chinese social context: training institutes in the Internet content industry.

Changing social relations: Training institutes

This accumulation by dispossession process also subsumes thousands of labourers from traditional industries as one interviewee states,

I had a colleague who used to be a college teacher joined in our company by taking some courses for three to four months ... My high school classmate who worked in the chemical industry asked me how he could join in the UI [User Interface] design, as he realised this industry became so popular that the salary became so high. (Interview 2, Lucy, Beijing, December 2015)

People in many different occupations are joining this industry at the moment, such as security men and kindergarten teachers, because the salary (of internet work) is much higher. (Interview 5, Stuart, Beijing, December 2015)

In other words, this capital accumulation manifests 'the expansion of wage-earning class, a way for capital accumulation expansion via enlarging the scope of social relation' (Harvey, 2006: 95–96). There are two tendencies revealed in the existing research

exploring this expansion process. First, some scholars (Fuchs, 2016; Nixon, 2016; Wittel, 2014) argue that capital accumulation occurs from exploiting a number of non-waged labourers' surplus value, such as Internet users' time spending on Internet and contents they created online. Nixon (2016) in turn has argued that digital media companies, such as Google, are generating revenue via controlling over numerous activities of digital audience labourers. He conceptualises this capital accumulation process as 'the Googlization of everything'.

Other scholars (Chan, 2013; Pun et al., 2016; Qiu, 2014) pay attention to labourers in digital electronics manufacture industry, and explore how Chinese cheap labour is subsumed into global capitalism. For example, Pun et al. (2016) focus on the Foxconn issue by exploring how Foxconn is building up its empire based on exploiting Chinese labour. All these scholars also indicate the emergence of worker resistance – from an alliance of workers, students and scholars.

Both tendencies show that media giants in capitalist countries expand outwards via subsuming waged and non-waged labourers in Asian countries like China. They usefully reveal the forming of a media empire based on the expansion of a wage-earning class: both non-waged Internet users and waged workers are exploited in the digital electronics manufacture industry.

Likewise, the expansion of a wage-earning class in the Internet content industry enlarges the scope of social relations. For example, as shown above, this industry has subsumed a number of workers from traditional industries but also involves the use of new university graduates from the problematic Chinese education system. This is an unexplored factor in the capital accumulation process as training institutes in the Internet content industry become an incubator for laymen, both workers in traditional industries and fresh university graduates, to join the industry:

Training institutes are more like factories now: individuals without any professional knowledge can easily learn some necessary skills for internet work just within four to five months ... If some field, such as HTML5, became popular, hundreds of training institutes just come out to attract millions of people to join in ... And the majority are fresh university graduates. (Interview 4, David, Beijing, December 2015)

The following interviewees also suggest, an overload of university students also has undermined the quality of education, making it difficult to teach students skills necessary for joining the industry:

University didn't teach us these skills (often used in work), and training institutes taught very practical skills. (Interview 4, David, Beijing, December 2015)

[The] Chinese education system is so problematic that it teaches students few skills for living. Taking UI design as an example, skills taught in university are out of date, and students cannot work in this field after four years' study. Thus, the training institute becomes an effective supplement ... I graduated from animation major in a branded university, however, few of my classmates found jobs in animation as we actually didn't have the capacity to work in the industry ... We have such a large population that most people need to access university to keep social stability. And a university can accept 4,000 new students, only if it had 4,000 students graduating. Thus, universities focus on how to make everyone

graduate, rather than teaching useful knowledge and necessary skills. (Interview 5, Stuart, Beijing, December 2015)

As Wu (2017: 4–5) indicates, China started its market-oriented education reform in the 1990s and since then, many private colleges with high tuition fees have been established, and public universities and colleges have been restructured to generate profits. For example, the number of college students grew from 2.28 million in 1978 to 37.79 million in 2017, accounting for 45.7% of the age cohort (Ministry of Education of the People's Republic of China, 2018). This dramatic increase in the number of college students and graduates led to a devaluation of their bargaining power in the job market. According to Wang (2015), more than 7 million college graduates entered the job market in 2015, and many of them live as an 'ant tribe', a term coined by Lian (2009) to describe group of low-income graduates, suffering from rising health care and education costs, surging housing prices, rising crime rates, and environmental degradation, clustered together in cheaply rented subdivided rooms on the outskirts of large cities, undertaking low-paid temporary work while they search for jobs.

Ongoing education reform in China is characterised by an industrialisation of education – an increasingly market-oriented education system restricted for sustained profits, based on a problematic university education system, producing too many university graduates with low-quality vocational preparation, competing for limited positions in high-tech industries, such as the Internet content industry examined in this research. In the process, it is facilitating the growth of private training institutes to supplement the education system in training university graduates hoping to access the Internet content industry (Figure 1).

The training institutes also pose significant issues for their graduates and their future employment in the Internet content industry. First, the teaching quality is not guaranteed:

Mars (a popular UI [user interface] design training institute) usually has several classes taught by one teacher at the same time: the teacher teaches in the main classroom with cameras live broadcasting to other classrooms, where teaching assistants help students. (Interview 5, Stuart, Beijing, December 2015)

(In Mars), we usually have three teachers for a course lasting for three months, which means every teacher takes charge for one month ... There is competition among these three teachers, as Mars judges them by students' evaluation. So the second teacher criticises what the first taught, and the third criticises what the previous two taught. This confuses students about whom they need to follow ... We were trained to have tips of skipping some classes. For example, you can arrange a quiz if you are not in the mood to teach today, and you can criticise their answers in the next class. You can also ask students to design a proposal and judge their work in the coming two days ... I met with a student from Lai (a popular UI design training institute) some days ago, and he complained of the bad teaching quality, for example, Lai is still teaching Firework, a design device out of fashion, rather than Photoshop, a more useful design device. (Interview 5, Stuart, Beijing, December 2015)

Even with this unguaranteed teaching quality, the tuition fee is still too high for fresh graduates to afford:

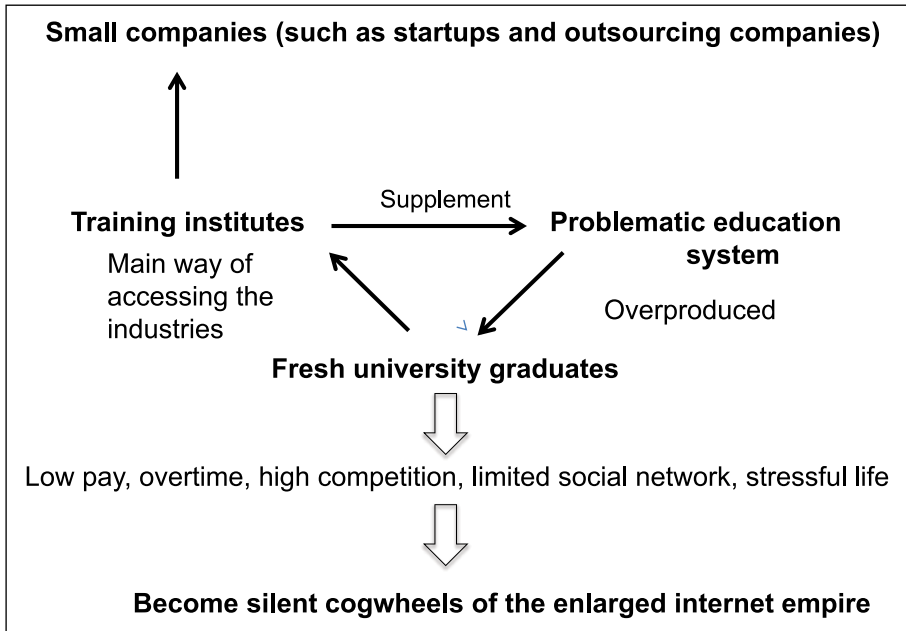


Figure 1. Individual subsumption in the Chinese Internet industry.

We (a UI design training institute) charge 16,000 RMB per student for a course lasting for three months. (Interview 5, Stuart, Beijing, December 2015)

Most courses are over 10,000 RMB for four months' training ... Fresh graduates or people who had worked in other industries for just two years are mostly poor. They cannot afford this high fee, and don't want to ask for money from families ... (Interview 4, David, Beijing, December 2015)

According to a Peking University study, the average monthly salary for fresh graduates in Shanghai, a city with one of world's top 10 most expensive property markets, is only 3241 RMB (Sweeney, 2015). It is obvious that a tuition fee of more than 10,000 RMB is too high for most fresh university graduates, even if they may be able to enter the institutes after 2 years of working.

In order to attract these students who are eager to join the Internet content industry while unable to afford the fees, some training institutes even advertise 'free courses without tuition', which means that students can pay back the fees after finding jobs in the industry:

It is usually advertised as 'free', because you don't need to pay before finishing your course and finding a job. (Interview 4, David, Beijing, December 2015)

However, 'free' obviously has its price. Indeed, training institutes offer loans to students by cooperating with loan companies, and students need to pay interests:

Usually our tuition is 16,000 RMB, however, students applying for loans from loan companies, such as *crediteasy.com*, will need to pay back around 20,000 RMB after finishing the course. (Interview 5)

The institute where I studied cooperates with *crediteasy.com*. The institute told me that the tuition fee was 16,000 RMB, and I could study first and pay back after finding a job. It was said that the tuition was an interest-free loan offered by *crediteasy.com*. However, 3000 RMB of the tuition actually was interest paid to *crediteasy.com*, because my classmate who paid tuition before training benefited from 20% off ... The institute asked me to offer a debit card, from which it would deduct money every month to pay back the tuition, after I found a job. (Interview 4, David, Beijing, December 2015)

Some institutes even advertised a ‘job guarantee’ to attract these laypeople, although this again cannot be realised in many students’ cases:

However, after finishing the course, I realised that only few of us are guaranteed a job, and most of us still need to find jobs by ourselves. (Interview 4, David, Beijing, December 2015)

I feel so sorry for my high school classmate, as he has not found a job in this industry (UI design) after taking classes in the institute I recommended to him. (Interview 2, Lucy, Beijing, December 2015)

In some ‘successful’ cases, such jobs are still not stable:

DN, another UI design training institute, set up a technology company called DN Tech. Usually applicants for DN Tech are asked to attend the DN training institute, because their skills are not qualified for positions at DN Tech. Of course, applicants need to pay for the training. After training, they are recommended for some positions in either DN Tech or other small companies cooperating with DN. These companies guarantee 8,000 RMB per month to applicants, whilst only half price for the probation period. And applicants usually are fired within one month. (Interview 5, Stuart, Beijing, December 2015)

It is suggested that such ‘guaranteed jobs’ are created by the training institutes to attract potential students. Students are forced to pay for training when finding jobs and are forced to leave with half pay for their hard work in the first 3 months in these companies. For students who cannot find ‘guaranteed’ jobs do institutes keep their promises by returning fees? The answer is clearly no as one interviewee reports:

The way for these institutes returning fees is unacceptable to most people. For example, Lang, a UI design training institute, asks student who wants get refund to clock on and off in the institute every day, in order to prove that s/he has not found a job after training. If s/he can clock on and off for four to five months, then s/he can get [a] refund. But the point is, no one can accept such humiliation. This is why institutes can still advertise ‘job guarantee’ without keeping the promise. (Interview 5, Stuart, Beijing, December 2015)

This process of fee recovery appears to involve deception and coercion. Students are deceived into thinking there is no other way to claim back their fees. And they are coerced

to forgo claiming back their money in such a humiliating way. It therefore undermines these students' legal rights.

To students who are neither deceived to get a 'guaranteed job' nor coerced to claim back tuition fees and then finally access the Internet content industry, they may need to eliminate their experiences in training institutes from their CVs in order to receive a fair pay:

Professionals in the industries usually look down on people trained in institutes, because they don't trust our students' ability of working independently after just three months' training ... Thus, students usually hide the truth that they have been trained in institutes and provide a fake CV with more than one year's working experience in small companies. (Interview 5, Stuart, Beijing, December 2015)

One of my students was recruited by YouKu-Tudou (China's biggest online video website), and the salary was 6,000 RMB, lower than the average 8,000 RMB, because he was known to be from my institute. To those companies, it is easy to copy such workers, as thousands of them are waiting in training institutes. (Interview 5, Stuart, Beijing, December 2015)

As the interviewee suggested, workers from these training institutes either can only find positions in small companies, such as start-ups and outsourcing companies, with heavy workloads and low pay, or find low-level positions in big companies, such as those in the BAT, with lower pay than their colleagues. As stated above, there is an emerging body of evidence about poor working conditions in high-tech industries (Chan, 2013; Pun et al., 2016; Qiu, 2014; Ross, 2007) revealing the problems associated with excessive overtime work, poor pay, limited social networks, insecurity, and high competition, and the presence of high levels of exploitation and slavery. Workers from training institutes in this research also suffer such poor working conditions, and their stressful working life drives them to become the silent cogwheels of the BAT's enlarged Internet content empire.

In summary, the graduates training for work in the Internet content industry often become victims of a problematic Chinese education system and training institutes. After graduating from poor-quality universities, they are forced to pay for training institutes to join an Internet content industry that is often tagged 'high salary' in some media reports but in practice the evidence above suggests this is not the case. Some graduates may not be able to afford the high tuition that they choose to attend so-called free courses, for which they indeed need to pay more to loan companies. Some graduates may choose so-called 'job-guarantee' institutes, while they finally realise this is only a business strategy, and claiming back tuition is humiliating. In many cases, owing to the poor quality of these courses, most graduates finally only find jobs in start-ups and outsourcing companies or low-level positions in members of the BAT with low pay.

In turn, in the Internet content production process, it is fresh graduates' labour power as well as immaterial assets, such as knowledge and social networks, that are being transformed into priced commodities, such as professionally produced Internet content and products. These graduates are therefore subsumed into the capitalist accumulation by dispossession based on the social programme 'mass entrepreneurship and innovation', as social relations of subjects.

Conclusion

In this research, the Internet content industry in China has been shown to have become a clear case of capital accumulation by dispossession, as anticipated by David Harvey. The Internet content industry is becoming an economic arena controlled by the BAT and focussed on the appreciation of capital in the realm of finance, rather than the accumulation of capital within production. The government's 'mass entrepreneurship and innovation' policy, in turn has led to millions of university graduates being subsumed via training institutes into small Internet companies, such as start-ups and outsourcing companies, as poorly paid labourers. This article argues that as a result graduates are subsumed into the accumulation by the dispossession process as the immaterial resources in the circulation of capital. They become the silent cogwheels of the enlarged Internet content empire.

Moreover, with this large number of cheap labourers, some start-ups are not innovating products. Rather, they are aiming to either be acquired by BAT or sell themselves to the capital market via the IPO (Initial Public Offering) route. In turn, start-ups as well as the BAT tolerate piracy and investing in piratic companies to save money and time, rather than suing them. This process stimulates the emergence of monopolies. This article also indicates the way the Internet monopolies in the BAT shift the risks of development onto independent start-ups by not funding failures and using market power to extract low purchase prices for copyrights and patents. The analysis suggests that further discussion and research into the dynamics between China's digital monopolies and independent start-ups is essential, in order to further investigate the effects the process of accumulation by dispossession on graduates from the Internet training system and on the industry's workers more broadly.

Acknowledgements

I thank all my interviewees who provided their experiences in the industry and Prof. Christian Fuchs for his comments on an earlier version of the manuscript. I also thank two anonymous reviewers and editors of ELRR for their helpful comments and suggestions for revision and editorial tidying.

Funding

The research for this article was financially supported and enabled by East China Normal University Fundamental Research Funds for the Central Universities (Ref. NO. 2018ECNU-HWFW005), and the Westminster Institute for Advanced Research's international research fellowship programme.

Notes

1. Data source <https://www.crunchbase.com/organization/tencent/investments>, accessed: 4 February 2017
2. See Crunchbase (2018).

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