

# From “Shanzhai” to “Maker” - A Critical Analysis about Shenzhen’s Creative Industry and the Maker Movement

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## INTRODUCTION

In less than 30 years, Shenzhen has achieved a huge leap in socio-economic and urban construction and has become a model of rapid expansion of the urbanization. Since 2008, Shenzhen joined creative city member of UNESCO as a creative city of design. Nowadays, accompanied with the rapid economic growth in Shenzhen, it’s capacity for manufacture is well known by the word “Shanzhai”, which used to refer to counterfeit consumer goods. This article focuses on the broad spread of “Shanzhai” culture and how this unusual phenomenon became a representative icon of Shenzhen’s creative industry, even how “Shanzhai” reshaped by the development of the creative city and turned into the culture of “Maker”. Moreover, a critical analysis of the entanglement relationship between “Shanzhai” culture and the consequences of creative industry’s rapidly rise such as gentrification. By deeply research and discuss those issues, this article is targeting to summarize and absorb experience from Shenzhen’s development pattern under the creative city term and understanding how maker culture has impacted it.

### “New Economy” in Shenzhen

Since a 1983 cover article of *Time* defined the transition from traditional heavy industry to a new technology-based economy as "The New Economy", this term is tightly connected with creative industry and the city development. In recent years, creative culture identity is becoming critically important for the city-based economy entity. This trending phenomenon created the term we called ‘creative cities’ which stresses ‘creativity, innovation, small business growth, and access to global market’ (Kong & O’Connor 2009, p. 1). This kind of economic evolution is driven by the increasing impact of intellectual-based industry, which we called creative industry, and it means profound changes to human’s daily life. Seltzer and Bentley (2001) described the creative economy as a trend that society shift from industrial economy to a knowledge-based economy (Seltzer & Bentley 2001, p.1). They also classified four trends which are driven by the demand for the creative industry. First, resources such as information, intellectual property and human capital becoming one of the most needed sources of human society, which they called “The ‘weightless’ economy” (Seltzer & Bentley 2001, p.1).

Second, labor population increasingly prefer to have part-time, temporary, fixed contract and self-employed job under the circumstance of an ever-changing new economy, Seltzer and Bentley called it “Weightless work” (Seltzer & Bentley 2001, p.1).

Third, digitalization and broad spread of social media fostered “the networked economy” (Seltzer & Bentley 2001, p.2), which generated a shift from vertical to horizontal relationships within and between organizations and regimes.

Fourth, Seltzer and Bentley described this trend as

“Knowledge and skill exclusion” (Seltzer & Bentley 2001, p.2), which is new skills and knowledge are rapidly becoming the most premium properties of productivity and competitiveness among economy entity. The ability to developing new skills or technologies are the critical capacity to no matter organizations or individual person.

According to the four trends bring forward by Seltzer and Bentley (2001), it can be clearly seen that for individuals and organizations, the need for greater creative ability is crucial. Under the broad environment of the creative economy, more and more job will demand a high knowledge and high-level skills labor, even lower-end industries will require better ability to apply the latest knowledge and manage information. Similarly, more and more fierce competition in the market and new technology area has driven economy entity must put more efforts on innovation to survive. This kind of pressure reflect in applies new technology and development pattern, especially for creative industry’s practice. From the development of creative industry all over the world in recent years, more and more creative industries are the combination of different disciplines and knowledge such as the coalition of art design capacity and technical ability, or interpersonal skills and online streaming technique. This kind of trend “will be increasingly important to maximizing the value of ‘Intellectual capital’” (Seltzer & Bentley 2001, p.2). Obviously, creative industry has become the most crucial element and trend in the intensified urbanism process.

The city of Shenzhen, which used to be an ordinary fishing town in neighboring Hong Kong, was chosen as China’s first special economic zone on August 26<sup>th</sup>, 1980. Over the past three decades, Shenzhen now has become the most urbanized city and the most economically developed metropolis. Until recently, Shenzhen was best known for “World Factory” in which cheap labor manufacturing counterfeit goods. In 2011, the Shenzhen Municipal People’s government put forward a plan to support research and innovation of cultural and creative industry. From this policy document’s description, local government highlight the creation and innovation abilities and introduce numerous policies to sustain the transition process from manufacturing center to the creative city. According to the document, there are five billion CNY increased municipal financial investment to fund the development of creative industry especially for original cultural and creative projects, in order to accelerate the development of core technologies in the field, there are extra special funds not exceeding five million CNY to support to establish key engineering laboratories and technical research centers, and also have tax incentives for independent innovation in cultural and creative industries. With the policy’s preference and supportive, Shenzhen’s creative industries have a good developing time, especially for technology innovation. O’ Connor and Gu (2012) states that China’s aspiring plan is a deliberate attempt to replace or transform manufacturing by advanced service

industries. Because of the rising creative industries, Shenzhen soon becomes a member of creative cities of UNESCO and developed its unique creative identity.

Why is creativity so important for a city like Shenzhen? According to Charles Landry's description, creativity has always been the lifeblood of the city. Cities always needed creativity to work as markets, trading and production centers (Landry 1995, p.11). However, the problems of cities like Shenzhen is facing the decline of traditional manufacturing industry, production and consumption are more and more attach importance to the added-value created by new technology within the products and the serviceability behind it. Landry (1995, p.11) interpreted this phenomenon as "The factors that once shaped city development – transport, rivers, a proximity of raw materials – have become less relevant".

### “Shanzhai” culture in Shenzhen

Historically, the word “Shanzhai” in ancient times means mountain villages. The Internet users in China give this word another definition in 2006 in reference to the imitation of the products with higher quality and price. It soon becomes a broad spread industry which is developed by non-governmental or grass-roots IT forces. By imitate famous brands in mobile phones, game consoles and other fields, although the material and quality are vastly inferiors with the original products, but its price is one-fifth even lower than the regular one, and it has numerous functions and appearances, thus it is favored by middle and lower-end consumers until today, and the scale of the industry was expanding into an unbelievable condition, even formed its own cultural.

As a part of the creative industry, “Shanzhai” cultural in Shenzhen lead to the form of industrial clusters such as HuaQiangBei, a major electronics manufacturing hub, and marketplace. Chubb (2014) asserts that “Shanzhai” cultural embedded in Chinese Internet cultural and give grass-roots population an access to technology practice, furthermore, this kind of human-centered cultural production give ordinary people a channel to bypass Chinese government’s censorship and connected with the world. Thus, a community around “Shanzhai” cultural was established and “has remained an extraordinary vibrant space for public expression and creativity” (Chubb 2014, p. 271). Because of that, even it still is questioned whether the “Shanzhai” cultural was one of innovation or not, but the creativity and innovation spirit embedded in it seems to be the cultural identity among people, it also laid a solid foundation for future reform of “Shanzhai” culture.

With the globalization and the development of creative city strategy, especially after China became the second large economic entity in the world, Chinese government tends to implement the process of “transform from ‘material civilization’ to ‘spiritual civilization’” (O'Connor J. & Liu L 2014, p.133). Generally speaking, it’s a transformation of the economic entity from manufacturing to creativity. Thus, the “Shanzhai” industry clusters as Shenzhen are beginning to reform its industry. Wang, Oakes and Yang (2016) mentioned in their book that the imitation as a temporary phenomenon that “would come to an end” upon a city’s mature integration with the global standard (Wang, Oakes and Yang 2016, p.139). Benefit from government policy, Shenzhen’s creative industry is trying to shift its lifeblood from imitation to innovation. According to ASKCI Consulting’s “2017-2022 Shenzhen Cultural and Creative Industry Development Prospect and Investment Opportunities Analysis Report”, since Shenzhen

municipal government formulated the strategy of “building a city through culture” policy in 2004, the city’s cultural and creative industries have maintained an average growth rate of 20% for 13 consecutive years, and have become an important base and main port for cultural exports in China (ASKCI 2017). The report also demonstrates that in 2016, Shenzhen’s Cultural and Creative Industries, with its creative design industry as one of its leaders, maintained a healthy and rapid development, achieving an added value of 194.97 billion CNY, an increase of 11% year-on-year, accounting for 10% of GDP. It is estimated that the added value of Shenzhen's cultural and creative industries will reach 214.973 billion CNY in 2017. Such a tremendous increase in the creative industry, on the one hand, it cultivates and attracts a large number of talents in the creative industry. On the other hand, it also enhances the status of Shenzhen as an international creative and design capital.

### From Capital of “Shanzhai” to Capital of “Maker”

Shenzhen was once the capital of “Shanzhai” culture, from early years by produce fake oil painting and exported overseas, later became the largest imitator clusters of the electronic device in the world, Shenzhen accumulated fabulous wealth from “Shanzhai”. However, in November 2010, the Chinese government launched a special project to crack down on infringement of intellectual property rights, manufacture and sale of fake products. By raising the market entry condition and other measures, the legend of “Shanzhai” ended.

Although this “Shanzhai” process which has continued for several years shape the city as a copycat of western knowledge-based industry, but it still cultivates the creativity concept among Chinese. “Shanzhai” process has created a powerful production capacity, it also helps Shenzhen established a complete supply chain which allows the creativity can turn into products with high quality and low-cost. These elements have now become the advantages of Shenzhen. As Xu, Lu and Yao (2016, p.20) expounded in their article, “Imitation can be seen as the first step for Chinese culture and creative firmsto learn from the west and build up their knowledge and experience in order todevelop their own innovation capabilities”.

In March 2015, at the Time Square in the United States, a billboard shows “Make with Shenzhen” was advertised to publicize its goal of creating a “City of Makers”; at the same time, the work report of the municipal government proposed to build the first international maker center in the world.

The “Maker Movement” began in the 21st century. With the drive of the scientific and technological revolution, the demand for economic development, the promotion of national policies, and the birth of an innovative atmosphere, the maker movement has flourished. It is also expected to promote the development of global manufacturing and creative industries. The term refers to the design and manufactures consumer products via advanced technology which is accessible. According to Wolf-Powers et al. (2017, p.365), “Making encompasses a range of activities undertaken by learners, do-it-yourselfers, andbusinesspeople and takes place in community centers, classrooms, public librarybranches, incubators, and factories.” As such, maker movement is to emphasis on changing traditional manufacturing pattern into a new model, it “lies principle in the emergence of new small-scale manufacturing enterprises that integrate design with production” (Wolf-Powers et al. 2017, p.365).

The maker movement demonstrate the changes in technology and consumption, it emphasizes the benefits that open-source

design software and producing technologies. Tools such as the 3-D printer, miniaturized CNC machine tools, artificially intelligent and customized circuit boards dramatically enhanced the accessibility for people to engage in the designing and producing process. This phenomenon allowed ordinary people to have the resources to directly create unique products and reduced the price for maker-entrepreneurs to experiment their thoughts.

The reason for maker movement so welcomed across the world is, it gives confidence to governments to catch up this new manufacturing trend and bring the economic resurgence to local industry. The Institute for the Future (ITF) regards makers as a problem solver of the challenges that urban suffering, it deems that makers mindset is the key feature to solve the urban issues such as health, education, food, and even citizenship (ITF 2013). Thus, the planners and policymakers of the city show a positive attitude to embracing the future blueprint predicted by the advocators of the maker movement, even without questions. As Charles Landry (1995) mentioned, cities are facing new sets of problems, the old social functioning model based on the traditional industry is decaying. The maker movement provides a concept to fits the city rulers' urgent demand, that is, maker culture will highly correspond to city's need to promote "innovation, generate jobs, and breathe new life into urban manufacturing clusters" (Wolf-Powers et al. 2017, p.365). Obviously, by conduct maker culture modification, the city can achieve its goal in human-centered design, to make the city grow stronger in both hard industry and soft infrastructure. Moreover, the participant of makers could boost local economic activity, those kinds of production and consumption concentrate economy will assist the city to build its own culture and creative identity, and eventually form as a complete eco-system to support city itself.

The municipal government of Shenzhen promulgated ambitious plans to enhance the creative industry in the city in order to break away from the image as a site of cheap and low-end manufacturing, the effect of those policies is also obviousness. This article analyzes the "Shaizhan" culture in Shenzhen, and dissect that those imitation industries also helped Shenzhen to build an integrated industrial system, which gives the city magnificent advantages in the competition to take the lead in developing a maker-based city growth mode.

According to the research of ITF, each maker city presents different characteristics, New York and Toronto is the frontier for advanced smart city technology, they focus on innovating existing city infrastructure and integrate technology such as AI into citizen's daily life. Kansas City introduced the gigabit fiber from Google to attract a large number of start-up maker companies in which ultra-fast broadband are urgently needed. Those maker cities have a lot of in common, including encouraging younger generation to put what they have learned into practice with modern tools of production; Training workers with the needs of market; Corporate with local universities and community colleges for creative talents; Creating an ecosystem that allows local industries to grow; Provide resources for the people who are willing and able to conduct prospective research. From those common points of maker cities, it can be figured out that for city officials and planners, maker-based creative city policy has responded the enthusiastic to develop an idea that "its growth coincides with a general resurgence of interest in and advocacy for manufacturing" (Wolf-Powers et al. 2017, p.366); For citizen, it provides opportunities for people to achieve their personal

ambitions, enhance the quality of life and create a sense of identity to the city.

For the city like Shenzhen, more than 95% of its population is migrants. Shenzhen's technology industry was laid the foundation by talented elites such as entrepreneurs, hackers, makers, geeks, and artists, who are attracted by the city's abundance of opportunities. With the rapid growth of creative industries, makerspaces, a workshop offering personal digital fabrication similar to the fab lab, are popularized in Shenzhen. "Makerspaces provide affordable and shared access to capital-intensive equipment and serve as learning communities in which people take classes, share technical knowledge, and connect with peers" (Wolf-Powers et al. 2017, p.366).

Chaihuo makerspace is the first makerspace in Shenzhen. Its name comes from the Chinese saying, "The fire burns high when everybody adds wood to it". "Chaihuo provides an open and collaborative environment for makers and encourages cross-field communication" (Chaihuo makerspace 2011, para. 1). As the organizer of global Maker Faire since 2012, which is an event created by *Make* magazine to "celebrate arts, crafts, engineering, science projects and the DIY mindset". As the worlds biggest maker event, the Maker Faire provides a window to demonstrate Shenzhen's vision of the creative role of China in the world of making and manufacturing. The slogan of Shenzhen Maker Faire "Innovate with China" draw the makers from all over the world to join this event, especially those well-known people in the maker community.

The founder of Chaihuo makerspace, Mr. Pan Hao said there are hundreds of maker teams moved from other countries to Shenzhen in the past few years. For those makers, the most valuable element of Shenzhen is its unparalleled hardware support capability. The kind of competitive advantage of Shenzhen attracts not only the small-scale maker business but also the giant in the creative industry. In the 2014 Intel Developer Forum (IDF), Intel announced to establish the first Intel smart device innovation center in Shenzhen. After 7 years waiting, in 2015, Microsoft held the Windows Hardware Engineering Conference (WinHec) in Shenzhen and announced to held maker event and establish a fab lab in Shenzhen.

### The Influences of "Maker Movement" to Shenzhen

The formation of makerspaces such as Chaihuo is actually related to more complicated regeneration issues in urban development. In fact, makerspace is only a small part of the entire "City of Maker" strategy, but it effectively impacts the whole creative industries is not only in Shenzhen but also the whole country.

According to Charles Landry (1995), "creativity is like a new currency that is more sophisticated and powerful than finance capital" (Landry 1995, p.25). He also mentioned that "creativity can help to solve the problem and can grasp potential" (Landry 1995, p.25). The maker business in Shenzhen is now an important part of the community. In the sectors such as apparel, food, and household goods, maker culture entrepreneurs are tending to value crafts, artisanship and the cultural connotation of their product. In the maker creating electronic devices and hardware, "they appear to value the culture of open-access technology and digital fabrication" (Wolf-Powers et al. 2017, p.369). They emphasize the connection between their device and the customers and cultivate the curiosity in consumer for how to make it more personalized or more interesting. This changed the consumption custom of younger generation and opened a

brand new market, the progress in robotic, remote sense and artificial intelligence has dramatically reshaped the cultural concept, furthermore, by associated with the top-down planning of the government, it also regenerated the creative industries and help the city enhancing in unite communities, improve citizen's aesthetic taste, re-develop heritage sites, create meanings and images of the city and improve citizen's life quality. As such, the rise of maker culture and maker industries are replacing the traditional concept of creative industry in Shenzhen, and more on, it set an example for the world of a human-centered creative city which reshaped by maker industry.

The municipal government and city planners of Shenzhen formulate a detailed and ambitious project plan for building a "City of Maker". However, approaching policies for industrial transformation by the top-down designed method, for a land-based cultural industry in especial, it requires a cautious research and evaluation process followed by scientific methods. Jane Jacob (1969) defined 'creative cities' as a city which is planned more human-centered, folks centered and a mixture of arts and culture. Thus it can be seen, from the perspective of city planning, one of the nature of the creative city is to 'break the top-down development model' (Jacob 1969). During the progress of implement policies, it seems like the ruler of Shenzhen uncritically accept the overstate part of the concept from maker movement advocators. In order to "improve the aesthetic appeal to a 'creative class'" (O'Connor and Gu 2012, p. 1), and to enhance the economic growth as soon as possible, the culture and creative industry "over commercialised culture and lose the authenticity that distinguishes cultural products from other products" (Sonn et al. 2017, p.308). This tendency often leads to the phenomenon such as gentrification, which rapidly increasing real estate prices, as the result, small-scale creative and maker industries becoming not welcomed in the community, even cannot survive in gentrification process.

The rapid urbanization in Shenzhen attract the largest migrant waves in China, because of the free atmosphere contains freethinking, entrepreneurial spirit and less controlled by central government, Shenzhen soon be identified as a place of "tolerance, openness, fairness and competitiveness, full of uncertainties and opportunities" (O'Connor & Liu 2014, p.132). To some extent, these characteristics lead to the "gold rush" in the 1980s to 1990s and attracted millions of people (O'Connor & Liu, 2014), and formed as the "villages in the city" (VICs). Similar to other countries, the development of creative industry brings replacement and gentrification issues to China, especially in Shenzhen. Due to the informality of VICs such as Baishizhou, which contains one hundred and fifty thousand people's suburbs, which most of the population are migrants who work in electronics factory nearby, will be demolished and redeveloped into an upscale community to attract upper-class and high-quality intellectuals. By promoting policies in an imposed uniformity and non-democracy way, this displacement caused discontent sentiment on both sides of the people. For immigrants' populations consists of low-income workers and fresh graduates, it is an unwise policy which makes them feel to be abandoned after been exploit.

Generally, Shenzhen set a good example to the world that how to overtake around the corner by vigorously promote creative industry via maker culture, based on the complete

manufacturing and supply chain system, Shenzhen reshaped its emphasis on economic development and shift the city brand from "City of Shanzhai" to "City of Maker". Increasingly sophisticated creative industry and maker culture are constructing a more human-centered society which satisfied the material needs of the citizen, moreover, bring precious identity to its citizenship. A self-supplied ecosystem of maker industry also enhances the cultural production and consumption, which provide the opportunity for creative workers have a loosen atmosphere and powerful investment support to co-operate with each other to create value. Although all these achievements are partly the contribution to the municipal government's policy, however, these kinds of one-sided and non-discretionary policies implementation also caused many unsolved problems, especially in the displacement and gentrification of the VICs. By research and study the issue about the creative city like Shenzhen, a conclusion can be made which is the maker movement still remains in primary stage, the discussions above the article deems that maker industry is the generator of the next wave of urbanization, by enhance innovation, creativity and make everyone have the accessibility to technology, creative and maker industry can create an ecosystem with more humanity, but for Shenzhen municipal government, how to get the balance between the effectiveness of the policies implement and guarantee migrants population' basic right is the urgent issue need to be solved.

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