

## FAKING IT: FOOD QUALITY IN CHINA

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### ABSTRACT

*This article begins by examining the power of milk as a symbol of modernity par excellence. Scholars have noted how milk came to occupy this position in the West.<sup>2</sup> In China, the dairy industry has experienced a dramatic expansion due to government support and investment as well as an influx of foreign companies since the late 1980s. During this process, milk has taken its place as a symbolic marker of a modern, scientific and urbanised Chinese life. The melamine milk scandal of 2008, however, disturbs and unsettles these images of modernity in a number of key ways. The scandal revealed deep structural and regulatory problems with what had been declared one of China's safest model industries only months before the adulteration problem was revealed.<sup>3</sup> Most troublingly, similar issues can be found in food and medicine production across China. Indeed, fake food and fake medicine, along with poisonous air and water, rank as major concerns for Chinese citizens. This article shows how this concern extends beyond China's borders through the global supply chain. Mass deaths in other countries have resulted from poor quality Chinese food products. Meanwhile, Chinese government attempts at increasing regulation and quality standards appear to be inadequate for dealing with this ubiquitous problem. This article proposes that an exploration of how "quality" (suzhi) is understood in China is necessary for understanding the underpinning of Chinese regulatory efforts as well for making sense of the discussion in China on why these efforts are failing.*

**Keywords:** China, food safety, *suzhi*, quality in China, milk

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<sup>2</sup> Nimmo, R., *Milk, Modernity and the Making of the Human: Purifying the Social* (London: Routledge, 2010); Atkins, P., *Liquid Materialities: A History of Milk, Science and the Law* (Surrey: Ashgate, 2010).

<sup>3</sup> Yardley, J. and Barboza, Z., "Despite Warnings, China's Regulators Failed to Stop Tainted Milk," *New York Times*, 26 September 2008. <http://www.nytimes.com/2008/09/27/world/asia/27milk.html>

## INTRODUCTION: ONE WORLD, ONE DREAM<sup>4</sup>

The year 2008 proved to be extraordinary for China. The tragedy of the 12 May Sichuan earthquake with its estimated 80,000 deaths evolved into a tale of heroism, sacrifice and determination in overcoming adversity as many thousands of Chinese volunteered their time, money and even blood in the rescue effort. The unity of the nation which emerged after the earthquake response was further heightened further with the overwhelming triumph of the Beijing Summer Olympics, the most watched Olympics in history.<sup>5</sup> Fears of debilitating air pollution and inadequate infrastructure were swept away by dazzling displays of fireworks, sporting and organisational talent, and architectural expertise. Over \$41 billion American dollars were spent on four new subway lines, a high-speed rail link and an extensive renovation of the national airport with a further \$2 billion spent on building and renovating facilities and venues.<sup>6</sup> With the success of the Olympics, China demonstrated its extraordinary organisational capacity and the government's determination to succeed at any cost.<sup>7</sup> For the Beijing Olympics Organising Committee, China had successfully taken on the world's need for "mutual understanding, inclusiveness, cooperation and harmonious development" and had produced an event which was a "grand celebration of sport...peace... and friendship."<sup>8</sup> As the Beijing Olympic slogan expressed it, the 2008 Beijing Olympics demonstrated that China was part of "one world" with "one dream."

Less than a month after the closing ceremony, however, the harmonious dream was shattered. Evidence of food adulteration in the Chinese products of Fonterra, the New Zealand company, was presented to officials in Beijing at request of the N.Z. prime minister.<sup>9</sup> A few days later, Chinese media pressure lead the Ministry of Health to make a dramatic

<sup>4</sup> XXIX Summer Olympiad official slogan, Beijing, 8–24 August 2008.

<sup>5</sup> Fixmer, A., "Beijing Olympics Attracted Most Viewers," *Bloomberg*, 5 September 2008. <http://www.bloomberg.com/apps/news?pid=conewsstory&refer=conews&tkr=62553Q:US&sid=aT3QhOOTmtmQ>.

<sup>6</sup> Gerstein, J., "China Launches Olympic-Size Headache: Big Expenditures Mean Future Hoists Will Have Tough Act to Follow," *The New York Sun*, 20 August 2008. <http://www.nysun.com/foreign/china-launches-olympic-size-headache/84259/>

<sup>7</sup> Ryan, B., "Sparkling Display: Success Comes at a Price," *Boston Globe*, 9 August 2008. [http://www.boston.com/sports/articles/2008/08/09/sparkling\\_display/?page=2](http://www.boston.com/sports/articles/2008/08/09/sparkling_display/?page=2)

<sup>8</sup> Speech by Liu Qi (BOCOG president) at the Closing Ceremony. <http://en.beijing2008.cn/ceremonies/headlines/n214584104.shtml>

<sup>9</sup> "Fonterra Says Somebody Sabotaged Milk," *New Zealand Herald*, 15 September 2008. [http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=10532214](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10532214)

public announcement: thousands of babies had been hospitalised and at least one had died from kidney related problems after ingesting milk powder adulterated with the protein melamine. There is no safe melamine level and melamine causes kidney stones especially in children. The Chinese company at the centre of the scandal, Sanlu, issued a recall of products. The investigation was then extended to the products of other dairy companies. Investigations showed that the amount of melamine in milk powder in 22 brands ranged from 0.09 mg per kilogram to 2.563 mg per kilogram.<sup>10</sup> Within a week, over 40,000 Chinese children had been brought in for medical treatment and nearly 12,900 children had been hospitalised.<sup>11</sup>

The final count of fatalities is unknown. More than 20 million children had free medical examinations including ultrasounds for kidney stones. Free hospitalisation and medical treatment was provided.<sup>12</sup> At least 300,000 Chinese children were affected and at least six died.<sup>13</sup> The number of children who died without medical treatment as well as the number of children undiagnosed remains unknown. As a coalition of parents of affected children have argued, the official statistics must be considered unreliable because hospitals in populous provinces seem to have been directed by the Department of Public Health to only record kidney stones over four millimetres in an attempt to lower the numbers of casualties.<sup>14</sup>

Despite initial reports to the contrary, tainted milk powder was produced not only by small or local companies. Problems were found with both national and international brands including some companies previously certified exempt from national reporting standards due to their supposedly superior quality processes. Due to the extensive nature of the melamine adulteration of dairy products, the recall of products extended beyond China borders. Melamine tainted products were found as far afield as Indonesia, Tanzania and Slovakia. Products with Chinese ingredients were taken off

<sup>10</sup> "China Seizes 22 Companies with Contaminated Baby Milk Powder," *Xinhua News Agency*, 17 September 2008. [http://news.xinhuanet.com/english/2008-09/17/content\\_10046949.htm](http://news.xinhuanet.com/english/2008-09/17/content_10046949.htm)

<sup>11</sup> World Health Organization, "Melamine-contaminated powdered infant formula in China – update." [http://www.who.int/csr/don/2008\\_09\\_22/en/index.html](http://www.who.int/csr/don/2008_09_22/en/index.html)

<sup>12</sup> Chen, J., "A Worldwide Food Safety Concern in 2008 – Melamine-contaminated Infant Formula in China Caused Urinary Tract Stone in 290,000 Children in China," *Chinese Medical Journal* 122, no. 3 (2009): 243–244.

<sup>13</sup> Branigan, T., "Chinese Figures Show Fivefold Rise in Babies Sick from Contaminated Milk," *The Guardian*, 2 December 2008. <http://www.guardian.co.uk/world/2008/dec/02/china>

<sup>14</sup> Schiller, B., "Father of Poisoned Baby Rallies Parents in Tainted-milk Fight," *Boston Globe*, 17 January 2009. <http://www.thestar.com/World/Columnist/article/572723>

shelves around the world as cakes, biscuits, milk products, yoghurt and popular sweets such as the White Rabbit candy were found to be tainted with melamine. Sick children were recorded in Taiwan, Hong Kong and Macau.

The melamine milk tragedy became a public scandal once it became clear that reports of adulterated milk had been known within journalistic circles for some months. Concerned provincial health officials had even sent in reports to Beijing of increased cases of kidney stones amongst babies in the period immediately before the story became public.<sup>15</sup> These reports were suppressed. Later investigations showed that the practice of adulterating of milk with banned products to artificially boost protein content had long been an open secret in some provinces.<sup>16</sup> When combined with cyanuric acid, the boosted protein powder proved deadly.<sup>17</sup>

The melamine tragedy, therefore, was more than preventable. In fact, the deep structural and regulatory problems in China's dairy industry meant that it was inevitable. For China's critics, both the melamine milk poisoning and especially the attempted cover-up proved that the Chinese government was prepared to sacrifice everything, including the health of babies, in order to ensure a smooth and successful Olympic games, China's showcase of modernity.

## "LIQUID/POWDERED" MODERNITY: MILK IN CHINA

The story of milk's rise in China can be told through that of one of China's largest dairy producers, Mengniu. Started in 1999 by a former employee of Yili, China's biggest state owned dairy company, Mengniu's name capitalises on both its connection with Inner Mongolia (the name "mengniu" literally means Mongolian cow) and a play on words in Chinese in which the word "cow" is slang for a profanity meaning "awesome." Thus the name "Mengniu" could also be read as "awesome Mongolia." A clever advertising slogan used by the company emphasises this play on words: "China cow, World cow, Mongolian cow" is also "Awesome in China, awesome in the world, awesome in Mongolia." This word play speaks to a Chinese audience

<sup>15</sup> Yardley, J. and Barboza, D., "Despite Warnings, China's Regulators Failed to Stop Tainted Milk."

<sup>16</sup> Moore, M., "China Milk Scandal: Families of Sick Children Fight to Find out True Scale of the Problem," *The Telegraph*, 3 December 2008. <http://www.telegraph.co.uk/news/worldnews/asia/china/3545733/China-milk-scandal-Families-of-sick-children-fight-to-find-out-true-scale-of-the-problem.html>

<sup>17</sup> Chen, F. "Melamine Limits for All Foods Set" (in Chinese), *Xinhua*, reported in *Global Times* <http://china.huanqiu.com/roll/2011-04/1642937.html>

by associating cool slang with both Mongolia and the previously uncool and unpopular product, milk.

Mengniu's advertising strategies include not only the use of slogans but also effective imagery and innovative branding of events. Printed advertisements make much of the colour to emphasise a connection with a natural environment: the green grasslands of Mongolia and the clear blue skies. Often Mongolian yurts are included. For example, one printed advertisement displays a Mongolian yurt prominently on a vivid green grassland with the slogan: "Appreciate the natural journey, Mengniu takes you to the grassland." This imagery is significant, as Han Chinese have no tradition of consuming milk. Rather, milk production and consumption has always been closely associated with non-Han ethnic groups such as Tibetans and particularly Mongolians.<sup>18</sup> Mengniu's name and use of Mongolian imagery lends an air of authenticity. However, this grassland dreamscape is populated not by Mongolians, a potentially challenging sight for the target Han consumers, but by beautiful Friesian cows and a model Han urban couple with their one boy child. The woman is pale skinned and slim and the ruggedly handsome man holds the child aloft like he is flying. In his chubby hand, the boy holds a carton of Mengniu Ultra-High-Temperature (UHT) milk. These advertisements, therefore, manage to draw on the clean, green image of the Mongolian grasslands in the popular Chinese imagination without evoking troubling thoughts of ethnic conflict or barbarity. The urban couple, with their neat, clean casual travel clothes and perfect child, are the target consumers. Thus the pastoral and the urban meet in a consumer fantasy of milk production which is often far from reality.

At the same time, Mengniu has effectively drawn on China's space exploration success in the last ten years by becoming the official providers of dairy products for the first manned space flight in 2003. An advertising campaign showing ordinary Chinese as astronauts blitzed the country. China's first astronaut then landed on Mengniu's grasslands, giving extra emphasis to their campaign. These strategies paid off, with Mengniu claiming 22 percent of the market in 2004, and with profits soaring 94 percent. The success continued in 2005 after Mengniu sponsored the first

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<sup>18</sup> Wiley, A. S., "Milk for 'Growth': Global and Local Meanings of Milk Consumption in China, India and the United States," *Food and Foodways* 19, no. 1–2 (2011): 11–33.

Chinese version of *American Idol*, the *SuperGirl* singing competition.<sup>19</sup> An estimated 400 million viewers watched the 2005 *SuperGirl* final which gave the Mengniu's yoghurt drink, sponsoring product, a huge marketing boost. Profits continued to increase 50 percent in subsequent years.<sup>20</sup>

Mengniu seemed to be a model entrepreneurial company in China's rapidly evolving economy. The company had proven to be innovative and flexible in their approach to building a brand name without state subsidies. They had cleverly utilised new opportunities such as *SuperGirl's* innovative TV presence and the successful Chinese space program to capture new markets and promote milk as a modern, scientific, safe, clean, nutritious and popular product for urban Chinese.

Milk consumption rose from one million metric tons in 1980 to 35 million metric tons by 2007 as milk moved from being a product consumed primarily by young children and the elderly into general acceptance.<sup>21</sup> Consuming milk was one way of obtaining a globalised and modern lifestyle with milk commonly seen as one of the causes of both height and health amongst Americans.<sup>22</sup> This boom in milk consumption was accelerated by the Chinese government. In 2006, the Premier Wen Jiabao said, "My dream is for every Chinese person especially children to be able to drink 500 ml of milk a day."<sup>23</sup> Through an article by the BBC (British Broadcasting Corporation), this excerpted "dream" is often quoted in news reports and articles on China's dairy industry.<sup>24</sup> The full statement, however, is worth exploring in detail. The Premier continues on to stress the importance of "Drinking milk everyday to support the project of improving health and nutrition." This, along with the strengthening of the dairy industry, he declared, are our goals.

Wen Jiabao also spoke of the "quality" of the nation. He commented that his wish [to increase milk consumption] would strengthen the nation. Here the words used are "*minzu shenti suzhi*" literally meaning the "quality of the body of the race." This reference to *suzhi* (quality) is instructive.

<sup>19</sup> "China's Free Range Cash Cow," *Bloomberg Business Week*, 24 November 2005.

[http://www.businessweek.com/magazine/content/05\\_43/b3956083.htm](http://www.businessweek.com/magazine/content/05_43/b3956083.htm)

<sup>20</sup> Epstein, G. "Golden Cow," *Forbes Asia Magazine*, 17 September 2010.

<http://www.forbes.com/global/2010/0927/fab-50-10-china-mengniu-dairy-milk-golden-cow.html>

<sup>21</sup> Gale, F. and, Hu, D., "Supply Chain Issues in China's Adulteration Incident," Agricultural Economists' Conference, August 2009. Available at SSRN: <http://ssrn.com/abstract=1739143>

<sup>22</sup> Wiley, A. S., "Milk for 'Growth.'"

<sup>23</sup> Xinhua News report. <http://www.xinhuanet.com/xhft/20060527/wzsl.htm> (in Chinese).

<sup>24</sup> Rohrer, F., "China Drinks its Milk," *BBC News Magazine*, 7 August 2007. <http://news.bbc.co.uk/2/hi/6934709.stm>, cited in Wiley, A. S., "Milk for 'Growth.'"

*Suzhi* has become central to how the People's Republic of China is governed.<sup>25</sup> It is, however, an *extremely* difficult term to define in Chinese. Anagost notes that Chinese middleclass interviewees were unable to define it and therefore used it to have a variety of meanings.<sup>26</sup> She describes *suzhi* as operating as "a floating signifier [which] traverses the complex terrain of economic, social, and political relationships."<sup>27</sup> She argues that by the late 1990s *suzhi* had replaced class within public discourse. Kipnis cites Chinese research which shows 32 different definitions in English.<sup>28</sup> *Suzhi* has been a constant theme of Chinese modernity since the early 20th century, "whether of individual, class, population, or nation and has been a consistent feature and problem of Chinese modernity."<sup>29</sup> For both Yan Hairong and Anagost, *suzhi* is a key concept for occluding the reality of a brutal Chinese economic rationality which involves the "vampiric" extraction of surplus value from the body of the rural migrant.<sup>30</sup>

As a concept, it helps maintain state legitimacy and distracts attention from inequality by bringing together disparate policies and "linking them with a teleology of modernisation."<sup>31</sup> The logic is explained well by Murphey with regards to reproductive policies in China. Birth planning leads to small classes in schools which leads to a better quality population (higher educational standard) which contributes to modernity which then decreases fertility.<sup>32</sup> *Suzhi* works to divide all human behaviour into two categories: the civilised, cultured and rational or its opposite—the uncivilised, uncultured and superstitious.<sup>33</sup> *Suzhi* does more than imply quality of a material object or behaviour—it is a codeword for a system of thinking.

<sup>25</sup> Kipnis, A., "Suzhi": A Keyword Approach," *The China Quarterly* 186 (2006): 295–313.

<sup>26</sup> Anagost, A., "The Corporeal Politics of Quality (*Suzhi*)," *Public Culture* 16, no. 2 (2004): 189–208.

<sup>27</sup> Ibid. For an extensive summary of *suzhi*, see Jacka, T., "Cultivating Citizens: *Suzhi* (Quality) Discourse in the PRC," *Positions* 17, no. 4 (2009): 523–535.

<sup>28</sup> Kipnis, A., "Suzhi."

<sup>29</sup> Sigley, G., "Suzhi, the Body, and the Fortunes of Technoscientific Reasoning in Contemporary China," *Positions* 17, no. 3 (2009): 537–566.

<sup>30</sup> Anagost, A., "The Corporeal Politics of Quality (*Suzhi*)"; Yan, H., "Neoliberal Governmentality and Neohumanism: Organizing *Suzhi*/Value Flow Through Labor Recruitment Networks," *Cultural Anthropology* 18 (2003): 493–523.

<sup>31</sup> Murphey, R., "Turning Peasants into Modern Chinese Citizens: "Population Quality" Discourse, Demographic Transition and Primary Education," *The China Quarterly* 177 (March): 1–20.

<sup>32</sup> Ibid.

<sup>33</sup> Sigley, G., "Suzhi, the Body, and the Fortunes of Technoscientific Reasoning in Contemporary China."

The multiplicity of meanings for the term *suzhi* means that simply using a translation such as "quality" is inadequate. Until the last few years, however, the term was more likely to be rendered as "eugenics" in English. This is because *suzhi* also encapsulates the prevention of "low quality" births such as those born with diseases, malformations or disabilities. The area of reproductive health is considered to fall under the notion of *suzhi*. Preventing maternal and infant deaths is a *suzhi* issue as is following the rules and regulations regarding birth planning. Raising population quality, therefore, can mean the prevention of unhealthy births, the raising of education standards, the raising of reproductive health standards, or just improvements in wellbeing and health. It is also something which can and *should* be cultivated because of its importance in advancing "family happiness, national prosperity and social progress."<sup>34</sup> Anagost was the first to point out that, by the 1990s, *suzhi* was being held responsible for everything that held China back as well as determining socially acceptable patterns of consumption and the production of identity.<sup>35</sup>

Once *suzhi* is understood as something which can be cultivated, a system for regulating *suzhi* can be brought into effect. Those with the ability to cultivate themselves and indeed supervise themselves are regarded as having high *suzhi*. The others (usually farmers and rural people, ethnic minorities) need to be governed with their *suzhi* regulated for them.<sup>36</sup> Anagost's insightful exploration of *suzhi* reveals that the two figures which elicit the most response related to *suzhi* are the rural migrant worker (rural farmers who leave the land to work in China's urban centres) and the urban middle-class only child. This pair is so frequently linked in the interviews that Anagost conducted with urban middle-class couples that she calls the rural migrant the "ghostly double of the child" (191). In the examples of milk advertising discussed above, the modern urban child is often present whereas the poor rural farmer is conspicuously absent.

Wen Jiabao's use of the term *suzhi* has a deep resonance with notions of the civilised, the developed and the modern. Milk, as the symbol of a modern, globalised life, was being approved as a *suzhi*-increasing product. The boom in consumption, however, stretched the industry to breaking point. The quality of the milk itself was then compromised, leading to the melamine tragedy of 2008.

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<sup>34</sup> Population and Birth Planning Law, Article 1. Available at [http://www.unescap.org/esid/psis/population/database/poplaws/law\\_china/ch\\_record052.htm](http://www.unescap.org/esid/psis/population/database/poplaws/law_china/ch_record052.htm)

<sup>35</sup> Anagost, A., "The Corporeal Politics of Quality (*Suzhi*)."

<sup>36</sup> Sigley, G., "*Suzhi*, the Body, and the Fortunes of Technoscientific Reasoning in Contemporary China."



## DAIRY: A QUALITY INDUSTRY?

Despite the image portrayed in Mengniu's eye catching advertising, Mengniu did not own dairy herds for the first few years of its operation. Mengniu operated as a collector of product from hundreds of small scale producers mostly with herds of less than a dozen cows.<sup>37</sup> This became the industry model with two-thirds of milk being produced on farms with fewer than 20 cows in 2006.<sup>38</sup> Mengniu drew on the small farm procurement strategy pioneered by the state-owned milk company Sanlu. This model included the provision of cows and technical advice to farmers in return for milk. Local governments supported the strategy by building milk collection centres and providing land.<sup>39</sup> The dairy industry, however, is extremely heterogeneous with a handful of very large companies and over 700 smaller companies.<sup>40</sup> In 2007, demand was rising higher than supply and at the same time, milk prices rose dramatically due to international milk and grain price rises. Taking advantage of the international market, China's dairy companies increased exports. The squeeze in the domestic market increased and milk companies were forced to compete for milk supply.<sup>41</sup>

As Ortega et al. argues, the growth in the industry has also been fuelled also by multinational companies. The result is a split industry in which millions of small producers are unsupervised but the products from their herds are aggregated in highly modern processing centres.<sup>42</sup> Therefore, there are many opportunities for adulteration of the milk product before aggregation. Cost pressures on small producers of agricultural products include not only local road taxes and levies but also animal feed. Many small farmers meet these demands by using unpaid family labour to gather weeds, leftovers and even rubbish for animal feed.<sup>43</sup> Investigations into the quality of milk in these circumstances have shown that poorly nourished cows produce low protein and lower fat milk with higher bacteria counts. In

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<sup>37</sup> Epstein, G., "Golden Cow."

<sup>38</sup> Gale, F. and Hu, D., "Supply Chain Issues in China's Adulteration Incident."

<sup>39</sup> Ibid.

<sup>40</sup> Ortega, D., Wang, H., Wu, L., Bai, J., and Olynk, N., "Got (Safe) Milk? Consumers' Valuation for Select Food Safety Attributes," paper presented at the Southern Agricultural Economics Association 2011 Annual Meeting, Feb 5–8, 2011. <http://purl.umn.edu/98723>

<sup>41</sup> Gale, F. and Hu, D., "Supply Chain Issues in China's Adulteration Incident."

<sup>42</sup> Ortega, D. et al., "Got (Safe) Milk?"

<sup>43</sup> Gale, F. and Hu, D., "Supply Chain Issues in China's Adulteration Incident."

addition, hygienic practices such as using disinfectant are less common on smaller farms.<sup>44</sup> With a minimum protein content of milk set at the national level, one way of increasing protein content is to add melamine.

The 2008 melamine milk tragedy followed directly on from a renewed emphasis on the introduction of minimum protein standards for infant formula after at least 13 babies died and over 200 were made ill from malnutrition after consuming diluted milk products in 2003. At the time, the government claimed that they responded to the milk malnutrition problem swiftly. The Premier vowed a thorough investigation and severe punishment.<sup>45</sup> Twenty-two people were arrested after investigations initiated by Premier Wen Jiabao showed in April 2004 that more than 33 percent of infant formula brands did not meet national standards. However, many people would claim that the government was, in fact, very slow to react to the malnutrition crisis. In Anhui, reports of problems with milk powder had been circulating for over a year, with parents demanding testing. Infant formula tested with levels as low as one or two percent. The national standard for infant formula was at least ten percent.<sup>46</sup> During this period, the government was also forced to admit that only 17,900 of China's estimated 106,000 food companies were fully licensed.<sup>47</sup> In 2010, the national standard for protein in milk was reduced from 2.96 percent to 2.8 percent in recognition of the demands on farmers. As the *China Daily* explained, farmers had difficulty meeting the higher protein demand due to low quality feed. Reducing the protein standard would allow them to meet the standard without being forced into unsafe practices.<sup>48</sup>

After the melamine milk scandal, the Chinese government responded with a new Food Safety Law. This law shifted the focus from food sanitation to the newer concept of food safety. A National Food Safety Commission was established. This was established under the State Council in February 2010. With three vice-premiers and a dozen ministerial level officials, the commission was a high profile attempt to improve food

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<sup>44</sup> Zhu, J., *Research on Scale Economy of Decentralized Milk Cow Breeding: A Case Study in Huhehaote* (Masters thesis, Beijing: Chinese Academy of Agricultural Sciences, 2008 [in Chinese]); Zhang, L., *China Dairy Industry Development Report*, Beijing: Renmin University, April 2008 (in Chinese).

<sup>45</sup> Ying, W., "Severe Punishment Vowed for Fake Milk Powder Producers," *China Daily*, 21 April 2004. [http://www.chinadaily.com.cn/english/doc/2004-04/21/content\\_325223.htm](http://www.chinadaily.com.cn/english/doc/2004-04/21/content_325223.htm)

<sup>46</sup> "Fake Milk Powders 'Kill' Babies," *China Daily*, 20 April 2004. [http://www.chinadaily.com.cn/english/doc/2004-04/20/content\\_324610.htm](http://www.chinadaily.com.cn/english/doc/2004-04/20/content_324610.htm)

<sup>47</sup> Yardley, J., "Infants in Chinese City Starve on Protein-short Formula," *New York Times*, 5 May 2004. <http://www.nytimes.com/2004/05/05/world/infants-in-chinese-city-starve-on-protein-shortformula.html?src=pm>

<sup>48</sup> "China Lowers Dairy Protein Levels to Curb Melamine," *China Daily*, 15 July 2010.

regulation. A year later, this commission was being held as much to blame as the dirty food producers themselves.<sup>49</sup>

However, despite the lower than international standard protein level, adulterated milk was again discovered in China in 2010 and 2011. Nearly 200 government officials were punished for allowing 2,000 tonnes of recycled melamine tainted milk to be re-used and re-sold in 2010.<sup>50</sup> The practice of producing "leather milk" by adding protein derived from animal hide which is toxic if processed with certain chemicals, was banned in 2009 despite continuing to be legal as an animal feed source. In February 2011, authorities were still vowing to "harshly crack down upon and punish companies that illegally process or produce milk using leather protein."<sup>51</sup> New toxic milk cases were kept secret for a year as government officials investigated. Shanghai Panda Dairy company was publicly found to have been producing tainted products in January, 2010 despite being under investigation since February 2009. Shanghai Panda had been found in breach during the 2008 investigation but allowed to resume production. The former head of the Dairy Association of China was quoted as saying that some local governments did not destroy the tainted product from 2008 but, instead, were illegally recycling tainted product and selling it.<sup>52</sup> This was despite the sacking of the mayor, party boss and city officials of the city at the centre of the Sanlu milk scandal (Shijiazhuang), the jailing of many and the execution of two men (a dairy farmer and a milk salesman) found guilty of selling melamine in November 2009.<sup>53</sup> Chen Xiaohong, vice minister of the Ministry of Health, said that by February 2011, China had discovered 2,334 tonnes of "problematic" milk powder and two people involved in milk scandal were sent to prison with life sentences.<sup>54</sup> Meanwhile, China's Vice Minister of Agriculture categorically declared mainland Chinese milk products trustworthy during the 11th National People's Congress in March 2011 yet serious problems with the monitoring of food safety have continued despite extensive media attention, multiple official investigations,

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<sup>49</sup> "Food Watchdogs as Much to Blame as Dirty Producers," *Shanghai Daily*, 21 April 2011.

<sup>50</sup> "96 Arrested over Tainted Milk Powder Scandal," *Xinhua*, 13 January 2011. [http://www.china.org.cn/china/2011-01/13/content\\_21734204.htm](http://www.china.org.cn/china/2011-01/13/content_21734204.htm)

<sup>51</sup> "China Targets Leather Protein in New Food Concern," *AFP*, 18 February 2011.

<sup>52</sup> "Non Toxic Milk Cases in China, Kept Secret for a Year, Report Says," *The Guardian*, 6 January 2010.

<sup>53</sup> "China Executes 2 for Tainted Milk Scandal," *The Guardian*, 24 November 2009.

<sup>54</sup> "China Targets Dairy Products, Meat in Food Safety Campaign for 2011," *Xinhua*, 25 March 2011. [http://news.xinhuanet.com/english2010/china/2011-03/25/c\\_13798496.htm](http://news.xinhuanet.com/english2010/china/2011-03/25/c_13798496.htm)

a very active group of citizens on the internet who rapidly circulate reports of food problems, a new national law, new regulatory authorities and more food inspectors.<sup>55</sup> As the State Council's Food Safety Commission is still working on "loopholes which were identified during the last dairy campaign" there is little doubt that future health hazards will emerge.<sup>56</sup> A Xinhua investigation revealed one major contributing cause: the budget and salary of food supervisory agencies depends on fines and fees. Food manufacturers are major contributors to local government tax revenue.<sup>57</sup> This raises the crucial issue of food and safety regulation.

The problems faced by the dairy industry in China are not confined to that industry nor to within China's borders. A recent report on the pig industry in China revealed that small and backyard producers of pork products are under heavy pressure in a very competitive and changing market.<sup>58</sup> The industrialisation of agriculture, on the one hand, and the increasing migration of labour from rural to urban areas, on the other, when combined with changes in the animal feed industry mean that making a living from small scale farming is increasingly difficult.<sup>59</sup> Illegal and harmful techniques for increasing yield, appearance of freshness and desirable lean meat rather than traditional fatty meat have been reported as rife in the industry.<sup>60</sup> Illegal additives, antibiotics and chemical compounds have all been utilised to overcome challenges arising within the competitive food production industry. Adulterated food products and adulterated animal feed such as gluten permeate the Chinese food supply chain and, through China's integration in the global food supply chain, all other countries in the world.

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<sup>55</sup> "China Says Milk Products Safe, but Restoring Confidence Takes Time," *Xinhua*, 12 March 2011.

<sup>56</sup> "96 Arrested over Tainted Milk Powder Scandal," *Xinhua*, 13 January 2011. [http://www.china.org.cn/china/2011-01/13/content\\_21734204.htm](http://www.china.org.cn/china/2011-01/13/content_21734204.htm)

<sup>57</sup> *Global Times*, 21 April 2011.

<sup>58</sup> Schneider, M., "Feeding China's Pigs: Implications for the Environment, China's Smallholder Farmers and Food Security," Institute of Agriculture and Trade Policy, May 2011.

<sup>59</sup> *Ibid.*

<sup>60</sup> "China Convicts More than 100 in Tainted Pork Scandal," *The China Post*, 27 November 2011. <http://www.chinapost.com.tw/china/national-news/2011/11/27/324169/China-convicts.htm>

## DEAD PETS AND PATIENTS: SECURING THE GLOBAL FOOD CHAIN

In February 2007, cats and dogs with renal problems started appearing in veterinary clinics in the United States in unprecedented numbers. A massive product recall of over 5,000 pet food products quickly followed. Initially, rat poison was suspected as the agent but the U.S. Food and Drug Administration (USFDA) quickly tracked the problem down to melamine and cyanuric acid tainted wheat protein from China. Contaminated Chinese rice, wheat, corn and soy protein were also found. These products had entered the animal feed chain and the subsequent USFDA investigation revealed that around 3 million Americans had consumed chicken fed on tainted feed. For humans, the amount of contamination proved harmless.<sup>61</sup> For the pets, the contamination was more toxic. Final estimates of the number of dog and cat fatalities range from an official count of less than two hundred to up to 4,000.<sup>62</sup> The American pet food deaths of 2007 reveal two important facts: melamine use as a protein booster was known to be in widespread use in China at least a year before the powdered milk tragedy, and Chinese exports are inextricably interwoven into the global supply chain.

A safe food or drug chain relies on traceability, transparency, testability, time, trust and training.<sup>63</sup> All of these are frequently lacking in China's food and drug manufacturing sector, with deadly consequences. In the case of the pet poisoning, China's General Administration of Quality Supervision, Inspection and Quarantine even initially denied that gluten was shipped to the U.S.A. Within a few months, however, the ex-director of the State Food and Drug Administration, Zheng Xiaoyu, was executed for

<sup>61</sup> "Scientists Conclude Very Low Risk to Humans from Food Containing Melamine," FDA/USDA Joint News Release, 7 May 2007. <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2007/ucm108910.htm>; *USDA Releases Some Swine and Poultry for Processing* P07–82, 7 May 2007; "Feds: Millions Have Eaten Chickens Fed Tainted Pet Food," *CNN*, 2 May 2007. <http://www.cnn.com/2007/HEALTH/05/02/pet.food.poultry/index.html>

<sup>62</sup> Thornton, K., "A Year after Pet Food Recall, Still Buyer Beware," *NBC News*, 17 March 2008. [http://www.msnbc.msn.com/id/23505218/ns/health-pet\\_health/t/year-after-pet-food-recall-still-buyer-beware/](http://www.msnbc.msn.com/id/23505218/ns/health-pet_health/t/year-after-pet-food-recall-still-buyer-beware/)

<sup>63</sup> Roth, A. et al., "Unravelling the Food Supply Chain: Strategic Insights from China and the 2007 Recalls," *Journal of Supply Chain Management* 44, no. 1 (2008): 22–39.

accepting bribes from companies wanting to avoid the proper registration and regulation process.<sup>64</sup>

The U.S. pet food scandal is important because the inability of the Chinese authorities to respond appropriately and effectively to the charges of the USFDA proved to be a harbinger of the melamine milk scandal the following year. In 2006, cats in China had died from kidney failure after consuming Chinese made cat food. Concerned animal carers in Beijing had approached the Ministry of Agriculture to have the food tested. The test showed nothing conclusive. As the Ministry of Agriculture announced at the time, testing was difficult due to a lack of food safety criteria for pet food.<sup>65</sup> However, the addition of melamine scrap into many animal feed products was well known within food and feed producing circles. A year before the milk tragedy, the *New York Times* revealed that melamine scrap was regularly added to all manner of animal feed including to fish raised for human consumption. Knowledge of the regulations was scanty. As Ji Denghui, the general manager of a chemical company which sold melamine explained: "I don't know if there's a regulation on it. Probably not. No law or regulation says "don't do it," so everyone's doing it. The laws in China are like that, aren't they? If there's no accident, there won't be any regulation."<sup>66</sup> Due to China's integral role in the global food and drug supply chain, any failed system of monitoring and regulation in China has implications which reach beyond China's national borders.<sup>67</sup>

This lack of understanding of regulation and a cavalier approach to chemicals and manufacturing lie at the heart of one of China's less well-known deadly food/drug scandals involving substitute glycerine. In the substitute glycerine case, a Chinese tailor without any education, training or qualifications in chemical manufacture, began to substitute industrial grade syrup for pharmaceutical quality glycerine and sell it to pharmaceutical manufacturers in a swindle intended to increase profits. Wang Guiping went on to forge paperwork and certificates to support sales of an even cheaper but more deadly substitute for glycerine, diethylene glycol which is a key component of anti-freeze. This substitute product was added to drugs which

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<sup>64</sup> Buckley, C., "China Calls Official's Execution a Warning Sign," *Reuters*, 11 July 2007. <http://www.reuters.com/article/2007/07/11/us-china-corruption-idUSSP32731420070711>

<sup>65</sup> "Cat Deaths Prompt Concern over Food's Safety," *Xinhua English*, 21 February 2006. <http://english.sina.com/china/1/2006/0221/66443.html>

<sup>66</sup> Barboza, D. and Barrioneuvo, A., "Filler in Animal Feed is Open Secret in China," *New York Times*, 30 April 2007.

<sup>67</sup> Gossner, C. M. et al., "The Melamine Incident: Implications for International Food and Feed Safety," *Environmental Health Perspectives* 117, no. 12 (2009): 1803–1808.

were used in Chinese hospitals and resulted in at least 14 deaths and 64 cases of renal failure.<sup>68</sup> The case led the Chinese premier Wen Jiabao to declare that the pharmaceutical industry was in disorder and announce a major re-organisation of the nation's regulations.<sup>69</sup> Five officials from Qiqihar No. 2 Pharmaceutical Company were given jail sentences, including the laboratory director who admitted not knowing the difference between the glycerine and diethylene glycol as she had no chemistry training and only a junior high school education.<sup>70</sup>

The substitute glycerine was not confined to China. The Taixing Glycerine factory bought the same substitute product as Wang Guiping from the same source and sold it on to a state owned distributor as pure glycerine. The name of the product, TD Glycerine, gave some indication of its substitute nature as TD stood for "tidai" or substitute but even a native Chinese speaker would have had trouble making this identification. The Beijing based distributor translated the product certificates into English and replaced the manufacturer of origin name with their own. The Spanish purchasers then shipped the product to Barcelona before it went to Panama, and sat for two years with altered use-by dates. Finally, it was added into government-made cough syrup. At least 300 Panamanians died, many of them children.<sup>71</sup>

It is possible that substitute glycerine produced in a small factory in Dalian, China, was responsible for 88 child deaths in Haiti in 1996 and another 40 child deaths in India.<sup>72</sup> The USFDA noted that "China is turning into one of the major bulk pharmaceutical producers in the world. Unless they have an open, transparent and predictable system for dealing with problems and other countries, it is going to be 'rough sledding' in the years ahead."<sup>73</sup> As the melamine milk powder tragedy showed, these words have proven to be prophetic.

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<sup>68</sup> Luo, M-y., Lin, B-l. and Gao, Z-l., "Clinical Features, Laboratory Findings and Imaging Appearances of Venous Diethylene Glycol Poisoning in Patients with Liver Disease," *Chinese Medical Journal* 122, no. 19 (2009): 2315–2320.

<sup>69</sup> "China Tackles Food Safety Problems," *China Daily*, 30 May 2007.

[http://www1.chinadaily.com.cn/china/2007-05/30/content\\_883295.htm](http://www1.chinadaily.com.cn/china/2007-05/30/content_883295.htm)

<sup>70</sup> "Qiqihar Pharma Officials to be Locked up for Deadly Mix-up," *Interfax-China*, 30 April 2008.

<sup>71</sup> Bogdanich, W., "From China to Panama, a Trail of Poisoned Medicine," *New York Times*, 6 May 2007.

<sup>72</sup> \_\_\_\_\_, "F.D.A. Tracked Poisoned Drugs, but Trail Went Cold in China," *New York Times*, 17 June 2007.

<sup>73</sup> *Ibid.*

## REGULATION: THE CHICKEN AND THE EGG

The regulation of food and drug manufacture is complex, involving multiple agencies at the national to the provincial and local levels. In addition, jurisdiction is not always clear. This was exemplified in the fake glycerine investigation of 2007 in which the Chinese Food and Drug Administration declared that they had no jurisdiction over the Taixing Glycerine factory because the factory was not authorised to produce pharmaceutical goods. In the fake egg example, the issue of regulation is one of the main obstacles to effective action in ensuring food quality.

Chinese consumers were shocked to discover the production of fake eggs as early as 1994. Although the fake egg story met with general incredulity, numerous television documentaries went on to reveal how the eggs were being made over the next decade. For a few cents, a passable imitation of an egg (either in the shell or "fried") could be produced with little equipment and training. Cheaper than real eggs, the fake eggs could then be intermingled with real eggs and sold to unsuspecting consumers. CCTV investigated fake eggs in late 2010 to find out how if fake eggs actually exist and, if so, how were they made. *Focus* (焦点访谈) host Jing Yidan commenced the 26 December report with a question: What came first, the chicken or the egg and if artificial eggs can be made which are identical to the real item, can chickens be "laid off"?<sup>74</sup> The subsequent report revealed a widespread scam in which people were promised the secret of fake egg manufacture for large sums of money (up to 1,200 yuan, approx US \$180). The fake eggs produced had no nutritional value but were unlikely to harmful to human health if consumed, according to chemists interviewed by CCTV.

Of greater interest, however, was the anomaly in the regulation system which the report uncovered. According to responses CCTV elicited from the relevant supervisory bureaus, fake eggs are in disputed territory for regulation. The Beijing branch of the Bureau of Industry and Commerce thought that the eggs would come under the responsibility of the General Administration of Quality Supervision, Inspection and Quarantine (GAQSIQ). The hotline for the GAQSIQ directed the reporter to the bureau responsible for agriculture as all egg products are agricultural. The Bureau

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<sup>74</sup> CCTV *Focus* 26/12/2010 中国中央电视台 焦点访谈 2010.12.26 — 假蛋真相.  
<http://www.youtube.com/watch?v=n30C4nTgrFg>



of Agricultural claimed that as the eggs did not come from the body of a chicken then responsibility was clearly and completely with the Bureau of Industry and Commerce.

Lei Xiaoling, a deputy to the 11th National People's Congress and a Professor of food safety at College of Food Science and Technology, Guangdong Ocean University believes that, in regard to regulation, "too many cooks spoil the broth, because every department is supposed to be involved but none of them are clear about their duties. This is a key problem. So, more supervisory departments don't mean more problems will be solved. The key is to clarify the duties of every department involved in the process of supervision, which will increase their sense of responsibility." She goes on to argue that "it is important to reinforce supervision. I also hope our Food Safety Commission will get together the relevant food safety departments as soon as possible to clarify the responsibilities of each managing department."<sup>75</sup>

Food scandals have become so widespread that the government linked newspaper, the *Global Times*, released an editorial (in both Chinese and English) claiming that food scandals have become a public enemy that demands public involvement to eradicate the problem. The editorial goes on to outline necessary measures: consumer groups need to be included in the supervisory system and more media coverage is needed for fake food disclosure.<sup>76</sup>

The list of food scandals grew dramatically during 2010 and the beginning of 2011: calligraphy ink in noodles, fake wine, fake tofu, poisoned mushrooms, recycled steam buns, illegal food colouring, banned steroids fed to pigs, pork marinated to masquerade as beef, tainted bean sprouts, fake sweet potato flour, fish injected with mercury, shrimp injected with sodium, nitrite poison added to milk, extensive use of sewer or gutter recycled cooking oil. The "green pea" problem is instructive. Despite press reports of fake peas in 2005, 2006, 2007 and 2010, the soaking of dried snow peas and soy beans in green coloured water and chemicals continued into 2011. One manufacturer engaged in the practice revealed the economics: the weight of the peas could be increased by 70 percent, soybeans 80

<sup>75</sup> "Unclear Supervision Wreaks Havoc with Food Safety," *Global Times*, 20 April 2011.  
<http://opinion.globaltimes.cn/commentary/2011-04/646908.html>

<sup>76</sup> "Fighting the Food Fight a Necessary Team Effort," *Global Times*, 21 April 2011.  
<http://opinion.globaltimes.cn/observer/2011-04/646986.html>

percent, thus improving on the price for each kilogram of unadulterated product by nearly \$2 Chinese dollars. Media reports into the green pea situation also revealed that a "food safety incident" was only to be recorded after a death, thus excluding long term diseases and disabilities.<sup>77</sup>

By the end of 2010, more than 18 months after the Food Safety law was enacted, 70 percent of surveyed consumers expressed doubts over food safety in China.<sup>78</sup> This was despite the National Food Safety Regulating Work Office reporting that a large number of food safety cases had been prosecuted (130,000).<sup>79</sup> About 250 arrests were made, with 191 officials punished and 26 sacked in 2010.<sup>80</sup> However, multiple problems across the food sector continued to be revealed. Chinese television showed report after report of how food was faked or unsanitary practices were putting the health of consumers at risk. Old scandals resurfaced such as human hair being used in the making of soy sauce, resurfaced.

Central Chinese Television, in 2004, revealed that human hair was being used as the basis for soy sauce as, according to the manufacturer, "human hair is rich in protein content, just like soybean, wheat and bran, the conventional and legally accepted raw ingredients for the production of soy sauce."<sup>81</sup> Hair from all over Hubei province was collected, soaked to produce amino acids which then formed the basis for "soy sauce." As the CCTV report graphically demonstrated, the hair was adulterated with items such as condoms, menstrual pads and cotton buds. It is worth noting that hairdressing salons are often the front cover for massage parlours offering sex services, thus explaining the incorporation of bodily waste products in refuse from hairdressing salons. Workers wearing masks sorted through the hair removing the impurities before the hair was used. The case scandalised the Chinese public and officials vowed to take serious action yet reports of human hair being used as the basis for food reappeared.<sup>82</sup>

In the absence of trusted mechanisms for supervision of quality, Chinese consumers have responded with their own strategies in dealing with poisoned food. The *South China Morning Post* reported the extensive efforts

<sup>77</sup> Wang, Y., "Fake Green Peas Latest Food Scandal," *China Daily*, 31 March 2011. [http://www.chinadaily.com.cn/china/2010-03/31/content\\_9664992.htm](http://www.chinadaily.com.cn/china/2010-03/31/content_9664992.htm)

<sup>78</sup> Survey Carried out by Tsinghua University Media Survey Lab with Results Released in *Inside China Magazine*. *South China Morning Post*, 18 February 2011.

<sup>79</sup> Zhuang, P., "Fears over Food Safety Linger," *South China Morning Post*, 18 February 2011.

<sup>80</sup> *Xinhua*, 31 January 2011.

<sup>81</sup> "People Scared of 'Hair Water' Soy Sauce" (in Chinese), *CCTV*, 1 April 2004. [http://www.cctv.com/news/financial/inland/20040104/100389\\_1.shtml](http://www.cctv.com/news/financial/inland/20040104/100389_1.shtml)

<sup>82</sup> Winterman, D., "From Food to Fashion – the Thriving Fashion in Human Hair," *BBC News*, 24 June 2010. [http://news.bbc.co.uk/2/hi/uk\\_news/magazine/8753698.stm](http://news.bbc.co.uk/2/hi/uk_news/magazine/8753698.stm)

which consumers were prepared to go to in order to avoid being poisoned by tainted food. These include buying from a variety of sources, never buying vegetables out of season, growing your own vegetables as much as possible.<sup>83</sup> This last measure had become so popular by mid 2010 that housing management companies were facing an unprecedented number of complaints from residents about strong smelling fertilisers, water damage from seepage and complaints about restful green areas around apartment buildings being converted into bustling vegetable gardens. Shanghai Daily offered a solution—grow small amounts of suitable food on the balcony.<sup>84</sup> Another option has been the formation of a type of food cooperative called Community Supported Agriculture in which people band together to contract farmers to produce safe food or pay a fee to work the land themselves.<sup>85</sup>

In response to customer concerns about food quality, large supermarket chains are conducting their own testing. Wumart, a huge supermarket retailer, says it tests about 20 different products daily and claims that it can ensure that the vast majority of its more than 20,000 different products are safe as any that fail will be intercepted before appearing on shelves.<sup>86</sup> However, Chinese consumers of milk products particularly baby milk powder are not so trusting. The import of milk powder into China reached a new record at the end of 2010.<sup>87</sup> Suppliers of infant formula in Hong Kong have been overwhelmed with demand, as mainland Chinese visitors stock up. Smuggling operations have also been revealed in which mainland Chinese people make multiple daily trips across the border in order to import foreign milk powder into China. The milk powder shortage which has developed in Hong Kong since December 2010 has led some to call for a departure tax and a limit of milk powder being taken out of Hong Kong.<sup>88</sup> This suggestion was rejected by the Hong Kong administrators yet some sellers imposed their own limits per customer and

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<sup>83</sup> *South China Morning Post*, 18 February 2011.

<sup>84</sup> Yao, M., "Balcony Farmers Sprout in City," *Shanghai Daily*, 22 April 2011.

<sup>85</sup> MacCleod, C., "China's Organic Farms Rooted in Food-safety Concerns," *USA Today*, 23 Jan 2011.

<sup>86</sup> "Strict Tests for Supermarket Food," *Xinhua*, 21 April 2011.

[http://news.xinhuanet.com/english2010/video/2011-04/21/c\\_13839459.htm](http://news.xinhuanet.com/english2010/video/2011-04/21/c_13839459.htm)

<sup>87</sup> Feng, Y. and Sommer, G., "'Leather Milk' Surfaces in China," *The Epoch Times*, 20 February 2011.

<http://www.theepochtimes.com/n2/content/view/51637/99999999/1/1/>

<sup>88</sup> *Ibid.*

the Chinese government imposed duty free tax limits in September 2010.<sup>89</sup> For urban consumers, however, quality is essential. This is not the case for China's large rural population. Price, rather than quality, is the over-riding concern.<sup>90</sup> This leaves China's vast population of rural inhabitants at risk of inferior but cheaper products.

## CONCLUSION: QUALITY IN 21ST CENTURY CHINA?

The bulk of China's food producers are very small scale enterprises thus making food production difficult to police. The land ownership system requires households to contract to produce for the state thus ensuring that producers are kept small with few options. Development and wealth is unevenly distributed in China leaving some provinces and regions in greater poverty. People in those regions are more likely to be looking for cheaper products out of necessity and this explains the pattern of infant deaths from malnutrition in 2003. The legal system has lagged behind developments in science and food manufacture leaving Chinese consumers vulnerable as regulations are insufficient. The inspection and regulation system is complex and inadequate for the huge task of ensuring that China's extensive use of chemicals and manufacturing methods is investigated and monitored. For example, an estimated one in ten meals in China is cooked in oil which has been recycled from the sewerage system.<sup>91</sup> Finally, the Chinese government battles inflation by imposing price ceilings on staple products, thus forcing farmers and producers to look for inventive ways of making a profit.<sup>92</sup>

Regulation of the industry has been, and continues to be, ineffective: from malnourished babies due to watered down dairy in 2003, renal failure babies from melamine tainted milk in 2008, to recycled banned melamine milk still being sold in 2010. The *New York Times* claimed that the ruling Chinese Communist Party's need to maintain control of both the economy

<sup>89</sup> "Hong Kong not Intend to Levy Milk Powder Export Tax," *Xinhua*, 16 February 2011. [http://news.xinhuanet.com/english2010/china/2011-02/16/c\\_13734910.htm](http://news.xinhuanet.com/english2010/china/2011-02/16/c_13734910.htm); Yu, V., "Hong Kong's Hot Commodities," *N.Y. Times*, 3 December 2010. <http://www.nytimes.com/2010/12/04/opinion/04iht-edyu.html?ref=hongkong>

<sup>90</sup> Ortega, D. et al., "Got (Safe) Milk?"

<sup>91</sup> Moore, M., "China Goes Organic after Scandal of Cooking Oil from Sewers," *The Telegraph*, 30 August 2010. <http://www.telegraph.co.uk/news/worldnews/asia/china/7971983/China-goes-organic-afterscandal-of-cooking-oil-from-sewers.html>

<sup>92</sup> "China's Wen Says Price Control Measures on the Way," *Reuters*, 16 November 2010. <http://www.reuters.com/article/2010/11/16/us-china-economy-inflation-idUSTRE6AF6DP20101116>

and of information would continue to undermine any attempt to introduce an effective and independent regulatory system.<sup>93</sup>

In 2011, the fake food situation is more than ever recognised as an issue of national security. The *Global Times* editorial argues that it is a concern which threatens the health of consumers in China and, importantly, tarnishes the image of the nation abroad. This reference to the image of the nation is important as it places the food and drug safety issue within a moral framework of ideology. Several key ideas inform this framework such as the government's commitment to building a harmonious society and to raising the quality (*suzhi*) of the population in terms of education, health, morals and culture. Food regulation therefore becomes a moral issue of low quality amongst the people. The Chinese Premier, Wen Jiabao, has emphasised that "without well-educated citizens or ethical strength" China cannot be a respectable economy or "a power in the real sense." More is needed than "requiring food producers to be self-disciplined and stick to moral standards during production."<sup>94</sup> For Wen and the Chinese government, "life and social order would be safeguarded" and the "stain of swindling, corruption and other illegal conduct" would be removed if the moral standard or quality of the people was advanced.<sup>95</sup> Thus *suzhi* rather than legal or regulatory, becomes the underpinning concept for understanding the discourse on food safety in China today. This demand for moral behaviour shifts the responsibility for food scandals from the government back onto the people.

The question of Chinese food quality is one not confined to China's borders. As this article has shown, the failure of the Chinese legal and regulatory system to adequately deal with the many health issues arising from the dramatic growth in fake, adulterated and inferior products has global implications. By emphasising the low *suzhi* (moral quality) of those people engaged in adulterating food and medicine, the government shifts attention away from the structural and economic problems which foster unhealthy and illegal practices. However, using the dairy industry as an example, this article has examined the food safety issues in China as multi-sourced. For the Mongolian cow to produce high quality, high protein milk,

<sup>93</sup> Yardley, J. and Barboza, D., "Despite Warnings, China's Regulators Failed to Stop Tainted Milk."

<sup>94</sup> *Global Times*, 21 April 2011.

<sup>95</sup> "Chinese Premier Calls for More Efforts to Heed Public Opinion," *Xinhua*, 17 April 2011. [http://big5.xinhuanet.com/gate/big5/news.xinhuanet.com/english2010/china/201104/17/c\\_13833215.htm](http://big5.xinhuanet.com/gate/big5/news.xinhuanet.com/english2010/china/201104/17/c_13833215.htm)

it needs to be fed high quality food. For the milk products to remain safe, the collection, transportation and distribution networks need to be secure from the possibility of both accidental and deliberate adulteration. As this article has demonstrated, the reality for the dairy industry is vastly different. Very small scale producers eke out a living, saving money on feed for stock by letting cows graze on rubbish. In larger facilities, mildewed feed can lead to a serious carcinogen, aflatoxin, being present in the milk. This occurred in batches of Mengniu milk in December 2011, leading to a massive consumer backlash in China and the extension of the Indian ban of all Chinese dairy products.<sup>96</sup> The small size of dairy landholdings, the heavy burden of taxes and fierce global competition all work as forces to encourage adulteration. Ignorance regarding animal husbandry and veterinarian practices as well as a lack of adequate infrastructure increase the chance of accidental adulteration. Despite recent changes in food law, the existing regulatory framework and resources have proven inadequate for the task of policing both accidental and deliberate adulteration. Punishments may be severe (e.g., the death penalty) but seem rarely enforced. Until all of these aspects of food production and regulation are addressed, food safety in China will remain a serious concern for the world's consumers.

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<sup>96</sup> "Mengniu Milk found to Contain Strong Carcinogens" (in Chinese), *Beijing News*, 25 December 2011. <http://news.163.com/11/1225/19/7M55601D00014JB6.html>; The ban on Chinese dairy products including chocolate commenced in September 2008 and was due to expire at the end of 2011. The ban was extended after the aflatoxin scandal of December 2011. "India Extends Ban on Chinese Milk Imports," *Food Business Review*, 27 December 2011. <http://dairyproducts.food-business-review.com/news/india-extends-ban-on-chinese-milk-imports-271211>