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Foodways and the floating population: diet and rural-to- urban migration in nanjing, china — Source link

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FOODWAYS AND THE FLOATING POPULATION: DIET AND RURAL-TO-URBAN MIGRATION IN NANJING, CHINA

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DEDICATION

This thesis is dedicated to Sam Mitchell and Yuan Lu, for introducing me to China and so much more.

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NOTE CONCERNING TRANSLATION OF CHINESE TERMS:

All research was conducted in dialects of Mandarin Chinese, with written forms of communication using Simplified Chinese. Throughout this thesis, best efforts have been made to maintain consistency in the way in which Chinese terms or concepts are used. Italicized terms are the *pinyin* commonly used to alphabetize written and spoken Chinese for an English readership.

Chapter four provides transcript excerpts, which are verbatim presentations of portions of conversations. These passages include both Simplified Chinese and English translations, leaving no cause for the inclusion of *pinyin*.

INTRODUCTION:

Since its founding in 1949, the history of the People's Republic of China (PRC) has been one punctuated by eras of exceptional diversity with regards to their political, economic, and social features. In just over sixty years, the PRC has changed from one of the more austere and violent iterations of communism in the twentieth century, largely rural and closed to much of the outside world, to a global spectacle of perennial double-digit economic growth, teeming with skyscrapers and prolific consumption of domestic and international goods in what even the ruling Chinese Communist Party (CCP) has come to designate a "socialist market economy" (Gamer, 2008; Tong & Wong, 2008).

Consumption is certainly the central theme in China's most current epoch, and it calls forth the unparalleled significance of food–both material and symbolic–that serves as the connective thread through these highly divergent eras (Anderson, 1988; Farquhar, 2002; Kipnis, 1997; Yan, 2000; Yue, 1999). While the rapid growth in automobile, real estate, or consumer goods markets are often the most visible effect of China's economic stabilization and growth over the last three decades, a more gradual but perhaps less benign development has taken place in China: the rise of non-communicable nutrition-related disease (NC-NRD; Popkin, 2004) such as type 2 diabetes, hypertension, cardiovascular disease, and other forms of metabolic syndrome (Du, Lu, Zhai, & Popkin, 2002; Mendez & Popkin, 2004; Popkin & Doak, 1998; Popkin, 2010; Popkin, 2002; Popkin, 2004; Yan et al., 2012). These "diseases of affluence" are by no means limited to China's well-to-do, though their effects differ among socioeconomic contexts in China

(Du, Mroz, Zhai, & Popkin, 2004; Jones-Smith, Gordon-Larsen, Siddiqi, & Popkin, 2011; Jones-Smith & Popkin, 2010; Zhai, 2009; Zhang, 2008); still, the way in which the uptick in such disease incidence rates maps onto China's economic growth since the reforms begun in the late 1970s can be startling. If nothing else, *consumption* is the best thematic heading under which we can group the myriad phenomena that have taken place since that time, be it obesity, graft, or the increasingly ubiquitous (and often counterfeit) Louis Vuitton bag.

Yet another type of rapid increase seen in China, and one necessary for (or a least a byproduct of) the expansive quality of so many areas of Chinese life, is found in rates of rural-to-urban migration. China's major metropolitan areas–Beijing, Shanghai, Guangzhou, Chengdu, to name just a few–have seen their populations soar to upwards of 25 million, on infrastructure built largely by migrant labor (Fan, 2007; Solinger, 1999; Yu, 2002). This labor class first emerged in China during the 1980s, and in the last decade has become a problem too large (nearing 200 million; Fan, 2007) for most citizens or levels of government to ignore (Chan & Buckingham, 2008).

Coupled with the intransigence of China's household registration system, or *hukou*, China's formally rural floating population endures various types of risk that, again, fall under the general heading of *consumption*, with peasants being metaphorically eaten up by the city. In essence, migration entails a temporary exposure of oneself to a potentially exploitative urban labor market coupled with decreased quality of life for the sake of financial gain for one's rural household (Rozelle, Guo, Shen, Hughart, & Giles,

1999; Taylor, 2003; Zhang, de Brauw, & Rozelle, 2004). While remittances for improved household consumption (of say, durable goods like a television, or better education for the family's youngest generation) are the primary objective towards which the floating population (*liudong renkou*) works, the question of this thesis lies more in the physical, and the interim: during migration, what happens to migrants' diets–and with what impact on personal or public health, social well-being, and cultural values in China?

The purpose of this research was to investigate the following questions: First, is there an observable discrepancy in the consumption of high-fat, energy-dense foods and alcoholic beverages for rural-to-urban migrants between their hometown and migratory destination? What kind of variation can be observed in terms of health-related outcomes? Second, among rural-to-urban migrants, is there an observable transference of *foodways* based on individual place of origin *(lao jia*)? How do alimentary habits derived from the local ecologies, traditions, ethnic identities, and economic modalities of migrants' rural environment transition to an urban setting? Last, how does eating behavior vary among people living in a shared environment, with low-income a common denominator amongst them? Does different eating behavior in the same environment result in different body mass index (BMI) or health outcomes?

To meet these research objectives, a mixed-methodology study was conducted, consisting of focus groups, a survey of demographic and food access information, and measurement of height and weight for calculation of BMI. Focus group discussions lasted approximately 90 minutes and were audio recorded, transcribed verbatim, and translated.

Transcripts were analyzed using the open-coding method (Krueger & Casey, 2008), evaluated line by line to identify concepts or ideas as they emerged in the discussion, with further analysis of themes occurring across groups. This qualitative data was analyzed on its own, as well as in conjunction with the quantitative data collected concerning socioeconomic status, age, gender, food access/security, and anthropometric measurements.

After a brief historical overview, the following literature review examines key elements from two bodies of literature: first, an array of multidisciplinary studies concerning China's Nutrition Transition, a project initiated by Barry Popkin of the University of North Carolina and subsequently expanded by numerous researchers from around the world as part of the China Health and Nutrition Survey (CHNS). CHNS and associated studies contribute information regarding the incidence rates of NR-NCDs, their demographic associations, and existing problems in measurements and instruments used to track dietary and socio-economic change in contemporary China. Second, literature is reviewed concerning the social and economic significance of China's growing floating population. This corpus focuses on the structural and economic precedents for migration, the social status of migrants, and the health risks they incur during migration. Together, these two areas equip readers for considering the floating population's unique risk for nutrition-related non-communicable disease as a low-income population that is underserved by existing institutions and marginalized in its urban destinations. The literature review is followed by the presentation of two papers

submitted for publication after investigation, and concluded by a summary of results, conclusions and potential areas of future inquiry concerning the relationship between diet and health in China's rural-to-urban migrants.

CHAPTER ONE

LITERATURE REVIEW

LITERATURE REVIEW, PART I:

China's Last One Hundred Years

A popular joke among Sinologists is that while Chinese may assert their country's five thousand year history as a measure of authority, that claim can be met with the quick retort that the People's Republic of China (PRC) is merely sixty-some years old. As clever as that contradiction may (or may not) be, those holding either viewpoint are not likely to disagree with the assertion that the decades following the end of China's dynastic rule have seen triumph and tragedy like few others in recorded history. The last one hundred years in China have been filled with some of the most dramatic events Chinese culture has experienced.

Several decades into China's modern era, the Qing dynasty gave way to the Republic of China in 1912, founded by Sun Yat-sen (*Sun Zhong Shan*), who would serve briefly as the country's president and later go on to found the Kuomintang (KMT; *Guomindang*; Gamer, 2008). The late Qing witnessed not only the political, military and economic erosion of thousands of years of dynastic rule at the hands of multiple colonizing Western powers, its intellectual circles and culture were increasingly punctuated by outside thought, literature, entertainment, and goods (Bastid & Zhang, 1988; Lee, 1985; Wu, 2013; Yue, 1999). Thus, even the most conservative historical appraisal of this period holds that late Qing and early Republican China was an adoption of a less self-centered relationship between "the middle kingdom" and the outside world–Europe, most emphatically (Gamer, 2008; Pye, 1993), and make space for the political

ideology that many living today are likely to associate most closely with China, communism. The last one hundred years is thus comparatively epic in that contains a spectrum of political modalities virtually unseen elsewhere in world history: within one hundred years, China experienced feudalism, followed by a constitutional republic that was toppled by communist revolution. Chinese communism was among the most comprehensive and penetrating iterations of its time (Minxin & Pei, 2009)–certainly the largest by population–and yet it gave way to the market-oriented socialism of China today in under twenty years (Chun, 2007).

One of the more recent and certainly well-known political modalities to which I also refer is the Maoist era, which arose out of communist rivalry to Republican China, driving the Kuomintang to Taiwan and ultimately establishing the People's Republic of China on the mainland in 1949 (Gamer, 2008). The Maoist era in China, though not led solely by Mao Zedong himself, lasted from 1949 into the mid-late 1970s, just past his death in 1976. It was this era that, perhaps because there are so many still living to testify to it, hosted intense nationalistic sentiment among China's people, as well as deadly betrayal of its population at the hands of its government (Chiu, 1991; MacFarquhar, 1997; Pozzana & Russo, 2006). The campaigns of Mao's rule as the "last emperor"–for grain or iron, for the blooming of a Hundred Flowers of political thought or Proletariat Cultural Revolution–could at once be successful in garnering public sentiment yet fail in effecting the objectives Mao held to industrialize China from within during the heart of the Cold War, and render a successful model of the Marxist-Leninist ideology on which it

was fashioned (Gamer, 2008; Harrell, 2001). Most significant to the study of food in China is Mao's Great Leap Forward, an attempt to catalyze grain production (as well as industry and proletariat alike) in China in 1959. By late 1961, conservative estimates indicate that roughly 30 million people had died of starvation. This was the result of an initial season of natural disaster compounded by policy errors more grievous than any the world had seen at that time, or since (Ho, 2003; Kung & Lin, 2003). The collective era helmed by Mao and a host of other notable figures in the Chinese Communist Party found closure of sorts in the conviction of the Gang of Four, giving way to the leadership of Deng Xiaoping from 1978 to 1992 (MacFarquhar & Schoenhals, 2009). While Richard Nixon had long since come and gone from China, the fact that Deng visited the United States in the 1980s seemed to signify an entirely new level of global engagement for the PRC.

There are innumerable relevant moments in China's history, both leading up to that visit and since, which this brief political-historical summary unfortunately must omit: The nationalist backlash of the May Fourth Movement, the occupation of China by Japan during the late 1930s and early 1940s, the clashes between the Kuomintang and the People's Liberation Army–to name just a few of the historical features of China's early twentieth century history. The more recent half of the twentieth century remains an area that has yet to be fully excavated; as nascent historical material, the decades-long campaigns such as the Sent Down Youth, or the calls for democracy that culminated in the incident at Tiananmen Square in June of 1989 offer experiences that many living in

China today still carry with them (Pozzana & Russo, 2006; Yang, 2003). I offer this limited overview of just some of the transitions China has made in the last hundred years in an attempt to impress upon readers less familiar with modern Chinese history the range and intensity of ways of being part of that history that recent generations in China have experienced, and convey the persistent undercurrent of change that has swept up China during that time. However, one could argue that exception from the task of thoroughly undoing China's knotty past is operatively appropriate. For if there is anything that could be said about China's current relationship with its millennia–or sixty-four years–of complex and at times difficult history, it would be that it is, by necessity, selective.

LITERATURE REVIEW, PART TWO:

Socioeconomic Development and Diseases of Affluence in Contemporary China

As with many other developing nations, China's social and economic development over the last three decades has been accompanied by previously unseen rates of obesity, hypertension, type 2 diabetes, and other forms of nutrition-related non-communicable disease (NR-NCD; Jones-Smith, Gordon-Larsen, Siddiqi, & Popkin, 2011; Popkin, 2002; Popkin, 2004) In addition to the shift toward more sedentary lifestyles because of reduced physical activity in both labor and leisure, an array of environmental changes including declines in food prices, increased access to supermarkets, and spatial reorganization through urbanization further contribute to the rapid increases in rates of NR-NCD in China (Astrup, Dyerberg, Selleck, & Stender, 2008; Popkin, 2004; Popkin, Du, Zhai, & Zhang, 2010; Satia, 2010; Yan et al., 2012). In China, diet is a key centerpiece between environment and these forms of disease, characterized by a parallel "nutrition transition" in which caloric density of foods consumed increases, often with a net reduction in nutrient intake (Basta, 1977; Guo, 2000; Leppman, 1999; Liu, 2009; Zhang, 2008).

The most concerted effort to track and delineate these transforming relationships is the China Health and Nutrition Survey (CHNS), a collaboration between the National Institute of Nutrition and Food Safety (INFS), the University of North Carolina Chapel Hill, and the Chinese Center for Disease Control and Prevention (CCDC), coordinated by Barry Popkin and Fengying Zhai. Begun in 1985, the CHNS is the most comprehensive longitudinal study linking structural changes to a diverse array of effects on nutritional

status of the Chinese population, with a range of topics such as macronutrient intakes, the effects of agricultural price policy on consumption levels, and both national and provincial programs addressing dietary quality, activity patterns, and nutrition-related disease (Guo, 1999; Guo, 2000; Popkin et al., 2010). In addition to the depth of information captured by the CHNS over the last several decades, the body of information is made more valuable by its interdisciplinary, multi-institutional nature, with contributions not only from public health and epidemiology, but agronomy, applied economics, sociology, pediatrics, and more.

Obesity in China

Rates of obesity-related disease have increased significantly in recent decades, and are now the leading cause of mortality, morbidity, and disability in China (Gordon-Larsen et al., 2012; He et al., 2005; Popkin, 2008). For example, the CHNS has shown that from 1989-1997 the proportion of overweight (BMI $\geq$ 25) or obese (BMI $\geq$ 30) men more than doubled from 6.4.0% to 14.5%, and the proportion of overweight or obese women increased 50% from 11.5% to 16.2% (Popkin, 2004). By 2004, as much as 25% of rural and urban men and women were overweight (Zhai, 2009), with urban residents having higher probability of being overweight than their rural counterparts (OR = 1.18, $P < .01$; Hou, 2008). The most recent 2009 CHNS data found overweight increased with age with the highest rates among middle-aged adults: thirty percent of adults were overweight and 4% were obese (Yan et al., 2012).

In addition to the rapid increase of overweight/obesity, the steeper relationship between BMI and its associated risk factors make the scenario in China more daunting (Bell, Adair, & Popkin, 2002; Chan et al., 2009; Gordon-Larsen et al., 2012). With higher rates of disease incidence such as type 2 diabetes at lower BMI than found in Western populations (Deurenberg, Deurenberg-Yap, & Guricci, 2002; Yan et al., 2012), calls for alternative BMI thresholds used for indicating risk have abounded not only for studies concerning East and Southeast Asian populations, but for those concerning China specifically (Nguyen, Adair, Suchindran, He, & Popkin, 2009; Shankar, 2010). Despite the World Health Organization cutoff of 25 kg/m^2, this threshold between healthy and overweight BMI ranges among Chinese has been contested, often lowered to 24 or even 23 kg/m^2 (Nguyen et al., 2009; Wu, 2006). Using the Working Group on Obesity in China's alternative BMI thresholds of 24 and 28 kg/m^2 for overweight and obese, Shankar (2010) found that among 2006 CHNS participants (n= 11, 742), 33.4% were overweight and 8% were obese. However, as the highest rate of increase in mean BMI in China over the last two decades occurred between 2006 and 2009 (Yan et al., 2012), forthcoming CHNS studies are not likely to reveal a curtailed ascent in rates of overweight/obesity.

Type 2 Diabetes in China

While rates of type 1 diabetes mellitus are comparatively low in China (Li et al., 2013; Yan et al., 2012; Yang et al., 2010; Zhou et al., 2013), rates of dyslipidemia, hypertension, and inflammation are high across rural and urban populations and income

levels, contributing to high rates of pre-diabetes and type 2 diabetes (Yan et al., 2012; Yang et al., 2010). Recent estimates of type 2 diabetes rates in China range from 82.1 million (Yang et al., 2010) to 92.4 million with a prevalence rate of 9.7% (10.6% among men and 8.8% among women) as of 2008 (Yan et al., 2012). While an overall annual growth rate of 4.6% (Pan, Shang, Kirch, & Thoenes, 2010) has been suggested, as much as 30% of adults have been estimated to be pre-diabetic, with having impaired fasting glucose (IFG) and impaired HbA1c and increasing risk with age and urbanicity (Yan et al., 2012).

Income, Urbanicity, and BMI in China

In spite of tenfold growth in GDP since the late 1970s, income discrepancies between urban and rural residents are persistently large. At a historical peak disparity in 2005, rural per capita income was only 39% of urban per capita income, still more vast than those found in most other developing nations (Eastwood & Lipton, 2004; Knight, Shi, & Song, 2006; Park, 2007). Although decreased levels of physical activity impact BMI among both urban and rural populations alike (Ng, Norton, & Popkin, 2009; Popkin, 2010), mean BMI and overweight prevalence are highest among high-income urban groups in China (Guo, 2000; Wang, Mi, Shan, Wang, & Ge, 2006; Zhai, 2009).

Increased income among both rural and urban Chinese populations has allowed for the diversification of diets and the inclusion of many novel or prestigious foods (Veeck & Veeck, 2000; Zhang, 2008), but the obesogenic effect of income on BMI is most acute

among low-income ruralites (Du, Mroz, Zhai, & Popkin, 2004; Zhang, 2008). The central problem of this relationship is that reducing the amount of money per household spent on food can create wealth effects, but can also have negative consequences in lowering the nutritional content per unit of currency vis-à-vis the increased consumption of calorically-dense, nutrient-poor foods (Jensen, Jensen, & Miller, 2011). Taken together, these findings imply that those who are low-income but able to make shifts in occupation or lifestyle in pursuit of better wages in an urban environment subject themselves to a unique risk of overweight/obesity. This becomes especially relevant to migrants, who take on additional risk by becoming not only urban, but lowering their income status in the process.

The rural and urban divide not only represents a partition for income levels in China, but also for categorizing the geographic distribution of diseases as an effect of changing population characteristics, behaviors, and environmental features. China's population became more urban than rural in 2011 for the first time in its history, having been only 17.9 percent urban in 1978 (NSB; Park, 2007). In addition to conversion via urban sprawl, market forces drive rural residents to the city, where they play a critical role in the conversion of cities from their collective-era roles as industrial centers to contemporary hubs of a liberalized economy creates new problems related to poverty in urban spaces as labor markets become increasingly competitive (Cheng, 2010; Wu, 2007; Hershkovitz, 1985; Solinger, 1999). With urban areas in China both expanding and changing in composition, calls have been made for a refined urbanicity scale, one which

is more sensitive to changes over time and represent gradations on a continuum from rural to urban rather than population size and density alone (Brockerhoff & Brennan, 1998; Champion & Hugo, 2004; Jones-Smith & Popkin, 2010; McDade & Adair, 2001; Mendez & Popkin, 2004). As much as 50% of the previously identified inequality of obesity distribution between rural and urban is attributable to the urbanicity index itself, nearly twice that of the second largest contribution, occupation (Van de Poel, O'Donnell, & Van Doorslaer, 2009). Such crude classification largely misses the heterogeneity that exists in rural and urban areas of China alike (Allender, Foster, Hutchinson, & Arambepola, 2008; Jones-Smith & Popkin, 2010; Mendez & Popkin, 2004; Van de Poel et al., 2009), to which domestic migration contributes.

Changes in Food Consumption Patterns

Since the 1980s, both rural and urban areas in China have reflected substantial changes in dietary patterns, with faster and larger changes among urban populations, and a rural population that is catching up (Zhang, 2008). Overall, caloric increase in China has nearly doubled since the early 1960s (Mendez & Popkin, 2004), and the stabilization of food prices coupled with increased household incomes have mitigated the effect of price elasticities on nutritional status (Guo, 2000; Jensen & Miller, 2008)–a significant accomplishment for China, which experienced near-annual bouts of famine from the late first century BCE to the end of dynastic rule in 1911 (Swislocki, 2011), as well as the worst famine in recorded history following the Great Leap Forward between 1959 and

1961 (Ho, 2003; Li & Yang, 2005). Total daily kilocalories consumed actually decreased between 1989 and 2004 across income categories, with the greatest declines in low- and middle-income groups, a result of the replacement of more traditional, staple foods by dietary fat and animal-based proteins (Du, 2004; Mendez & Popkin, 2004; Zhai, 2009).

Today, the ability to purchase staple foods like rice and wheat has effectively been decoupled from income (Du, 2004; Ye, 1995). Increases in dietary fat consumption is positively related to improved household income (Guo, 2000), but the most rapid upward shifts in consumption of energy-dense foods and higher fat diets, are, like obesity, found among lower-income and rural Chinese in large part because of the price inelasticity of cooking oils (Du et al., 2004; Ng, 2008; Popkin, 2008; Wang et al., 2006).

Though increased intake has occurred across all subsets of the population, meat is the foodstuff that remains the most vulnerable to price elasticity (Du, 2004; Guo, 1999; Guo, 2000; Liu, 2009; Ye, 1995). Consumption of certain types of animal products (especially seafood or more prestigious meats like mutton or beef) can be strongly correlated to income, but pork and eggs show statistically insignificant differences in elasticity between low and high-income groups (Du, 2004). Urbanites consume as much as 70% more meat than their rural counterparts (Fu et al., 2012), and both type and quantity consumed vary considerably by region (Anderson, 1988; H. Ma, Rae, Huang, & Rozelle, 2004; Swislocki, 2009).

Changes in Consumer Demographics

The transformation of food systems across urban and rural contexts and their differential effects by income is another uniquely challenging problem in China. In China's urban areas, growing separation between food producers and consumers, as well as smaller family sizes, enable families to eat outside the home on a more regular basis and use more convenience or processed foods (Pingali, 2007; Veeck & Veeck, 2000; Watson, 2000; Yan, 2005). While this separation between producer and consumer may be a unifying feature of modern food systems throughout the globe (Brown, 1973; Runge, Senauer, Pardey, & Rosegrant, 2003), changes in the way food was rationed, distributed, and purchased prompted by market liberalization in many ways creates the bedrock of China's postsocialist development. The material reality of *da guo fan*, the "great pot" from which China ate together during the collective era, may now be remote, but the effects of vestigial institutions such as the *danwei* ("work-unit") provides an ongoing basis for comparison in the way purchasing, consumption, and commensality has changed both within family life and in society as a whole (Brownell, 2005; Farquhar, 2002; Yuhua, 2000). Particularly in post-socialist contexts such as China, Watson (2000) has identified such market-oriented developments as avenues for analysis of cultural change and preservation. Amidst a larger consumer revolution taking place in China, selective utilization of food-related technologies as well as extensions in the food system have been widely shown to have implications in multiple realms of culture and society such as developmental age and generation (Chee, 2000; Guldan, 2000; Lozada Jr,

Watson, & Caldwell, 2005; Yuhua, 2000), class and social hierarchy (Brownell, 2005; Cheung, 2005; Farquhar, 2012; Watson, 2000), social space and belonging (Cheung, 2005; Yan, 2005) and the consumptive link of food and sex as tropes of desire in post-socialist Chinese morality (Farquhar, 2002; Lu, 1987; Yan, 2000; Yue, 1999).

Food purchasing, at least in urban China, is part of a daily routine, an identity-forming practice that extends beyond economic activity (Farb & Armelagos, 1980; Heisley & Levy, 1991; Veeck, 2000). Still, this "traditional" mode of acquiring and consuming food has undergone numerous modifications in recent decades in China, ranging from the increased prevalence of refrigeration (Tao & Yu, 2011; Veeck & Veeck, 2000), to increased utilization of ready-to-eat foods, including outdoors food stalls serving local street foods as well as dine-in restaurants serving both Western and Chinese cuisine (Curtis, McCluskey, & Wahl, 2007; Veeck & Veeck, 2000; Zhang, 2003). Moreover, the affinity for traditional markets waned throughout urban areas during the 1990s, as lack of loyalty to or even distrust of vendors in the open-air markets grew amidst a changing retail infrastructure (Veeck, 2000). With these features of the contemporary food landscape set against their historical antecedent, Veeck and Veeck (2000) point out two significant traits specific to this development in China: first, a resulting marketplace that hosts a greater variety of food outlets, rather than being consolidated by a preference for one-stop shopping in larger format stores such as Walmart. Second, for foods to be considered "fresh" in Chinese culture, they must have come directly from the farm in as timely a manner as possible, an extension of dietary

practice in accord with principles of Traditional Chinese Medicine (TCM; Anderson, 1988; Beinfield, 1992; Farquhar, 2012; Scheid, 2002). A "traditional shopper" for food in urban China is thus one who shops daily for food, shops at only a few types of retail food stores, very rarely dines out, and purchases few convenience foods (Veeck & Veeck, 2000).

Not surprisingly, this type of traditional consumer is more likely to be found in rural areas in China, and is still prevalent today. As Zhang et al (2008) point out, the idea of China being a nearly untapped market of 1.3 billion for Westernized foods is largely a fallacy–"the consumption pyramid has a small top and a broad base of poor people with hardly any real purchasing power," they write. Furthermore, those with the lowest income (800-1999 *yuan* annually) in rural areas have higher rates of overweight/obesity (27%) than their rural companions with more moderate incomes (18%; 2000-4999 *yuan* per year)

In addition to the lowest rates of overweight/obesity among a nationally-representative sample, these geographically dispersed ruralites consumed the most traditional, largely vegetarian diet like that advocated by Campbell (2006). This "Green Water" category of moderate-income, rural consumers have by far the highest consumption of rice, vegetables, seafood, pork, and poultry but very low consumption of dairy products. They also lack many features of their urban counterparts: having not only lower BMI and rates of overweight/obesity (18 versus 30-39 percent), the "Green Water" cluster had lower levels of education and income, and lower levels of consumption

overall. They also consume less of the types of foods that have become more prevalent in the Chinese food system in recent decades: a wider variety of meats (such as beef and poultry), desserts and bottled beverages, and nuts.

LITERATURE REVIEW, PART 3: INTERNAL MIGRATION IN CHINA: *HUKOU* AND THE FLOATING POPULATION

"China's prosperity has hinged on three balancing acts: between city and country, between population and food, and between regions of hardship and regions of prosperity," writes Rong (2008). Rong's summary captures the fundamental elements at play in the migration of China's floating population, geography and economics. But also of significance is the mention of a population's relationship to food, which has long served as the fulcrum of this balancing act by the state, from the management of outer-lying regions in dynastic times, to the campaigns of the Mao era, and more recently as a site of postsocialist market integration. During the 1980s, as the population pressure on land, urban jobs, housing, and social spending became more serious, Rong writes, the "four modernizations" (of agriculture, industry, the military, and science and technology) implemented in 1978 increasingly looked unattainable. An attempt to right that course through population management well known to much of the outside world, China's One-Child Policy, was established.

An older policy also geared towards population management, almost as controversial within China but less known to an English readership, is its household registration, or *hukou*, policy. Like the Soviet *propiska* ("internal passport") system after which it was modeled, the basic purpose of *hukou* policy is to prevent the overwhelming migration of ruralites into urban areas (Chan & Buckingham, 2008). With its roots in imperial China, the contemporary *hukou* system was implemented in the mid-late 1950s

as a key instrument to push crash-industrialization by Mao (Chan, 1994; Chan & Buckingham, 2008; Dutton, 1992; Lin, Cai, & Li, 2003; Matthews, 1993). Still an active state regulation today, people wanting to permanently change residence are required to get approval from at least one set of authorities (Chan & Zhang, 1999). There are two basic types of *hukou* permits in Mainland China: a rural ‘‘agricultural’’ (*nongye*) permit and an effectively urban ‘‘non-agricultural’’ (*fei nongye*) one. Prior to reforms in the last decade, it was this distinction in *hukou* type that fundamentally defined an individual's relationship with the state, and therefore one's eligibility for an array of state-provided socio-economic benefits. But where policy-related structural inequalities may have been lessened, socioeconomic and cultural inequalities have emerged, persisted, and grown (Chan & Buckingham, 2008; Fan, 2007; Fan, 2002; Jacka, 2005; Solinger, 1999; Sun, 2012; Yu, 2009).

Access to space and entitlements was long the principal denotation of one's *hukou* category (*leibie*); as late as the 1980s, a *hukou* came its own suite of housing, employment, education, and food. The *hukou leibie* originated from occupational divisions after the implementation of *hukou* policy in 1958, but as the system evolved through the collective era, the agricultural and non-agricultural categories did not necessarily indicate the occupation of the holders. Similarly, entitlements became less direct or exclusive, as rationing policies ceased or efforts to improve educational disparities between urban and rural residents were taken up (Chan & Buckingham, 2008; Fan, 2007).

With the gradual lessening of structural inequalities brought on by *hukou* policy, the *hukou leibie* has taken on an increasingly meaningful symbolic value over the last two decades, effecting a marginalized labor class within the liberalized Chinese economy viewed as the unfortunate but necessary byproduct of its development (Anagnost, 2004; Gaetano & Jacka, 2004; Kipnis, 2007; Murphy, 2004; Sun, 2012). Migrants are commonly blamed for increasing crime rates, further burdening public transit systems, disorderly (*luan*) street scenes and delinquent family planning (Huang, 2009; Ma, 1998). Initially a partition between rural and urban residents, *hukou* classification was a key protectorate of housing, labor, and rations for holders of urban *hukou* throughout the collective era, Solinger (1999) writes that "by the middle of the [1980s] the state had acquiesced in the right of ruralites to make at least a temporary home in the cities. But it took no responsibility for the material or physical well-being of peasants in the city… the unspoken message was that the peasants were embraced just so long as they remained 'peasants' and did the work in the cities that only peasants would do, and so long as they refrained from expecting the treatment in the cities that 'belonged' only to full-fledged urbanites."

Since the 1980s, migration flows have increased dramatically, providing the labor needed to revitalize China's urban centers and transition the countryside from its longstanding agrarian modality to industrial zones fit for the township and village enterprises (TVEs) and foreign direct investment that have reoriented the rural sector under China's "socialist market" economy (He & Gober, 2003; Solinger, 1999; Tong &

Wong, 2008). When China officially began that economic transition in 1993, it had a total rural labor force of 411.6 million, with an out-migration rate of 12.5%, producing 51.2 million migrant workers (Chan, 2008; Li, 1994). By 2004, the rural labor force had grown to 496.8 million with an out-migration rate that had nearly doubled to 23.8%, producing a net number of 118.2 million migrants (Chan, 2008). In 2000, the state estimated that the floating population would increase by about 5 million people a year, with a total population projected to reach 200 million in 2015 and 250 million in 2025 (Fan, 2007). Even as early as 1984, grain rations were allocated to income peasants in some cities, but it was not until 1997 when the State Council approved a pilot scheme to grant urban hukou to rural migrants who held stable jobs and had resided in selected towns and small cities for more than two years (Fan, 2007; Yu, 2002). A second directive affirming the rights of rural migrants to work in cities was issued in 2003, but cities are still allowed to choose the extent to which they adhere to these guidelines. This allows *hukou* status to remain a key gatekeeper in large cities, where resistance to *hukou* reform has been highest; while grain rationing has ended in China, urbanites still view the entrance of migrants into cities as a run on the resources provided exclusively for urban residents (Cai, 2002; Fan, 2007).

Demographic Characteristics of China's Floating Population

In addition to its growing size, China's floating population is increasingly dynamic, with numerous concepts used to describe migration patterns and distinguish the

floating population (Hao, 2002; He & Gober, 2003; Hu, 2011). Time spent in migration, distance traveled, and *hukou* designation (agricultural versus non-agricultural) are most relevant descriptors for this study. While there are those who migrate permanently (*qianyi renkou*) and from city to city, temporary rural-to-urban migration is the dominant type occurring in China today (Fan, 2002). As the draw to select eastern cities and Special Economic Zones (SEZs; e.g. Beijing or Shenzhen, respectively) developed throughout the 1990s and into the 2000s, interregional migration took greater precedence over intraregional migration, accounting for 71.8% of all migratory flows by 2002 (Chan, 2008; Fan, 2007). Irrespective of the time spent in migration, a person can be counted as part of the floating population as long as his or her usual place of residence is different from the *hukou* location (Fan, 2007). While as little as ten days away from home can qualify one as being part of the floating population, throughout the last three decades China' major metropolitan areas such as Beijing and Shanghai have seen common terms of migration extend from six months to periods of over five years, leading to suggestions that China's floating population is not actually floating anymore (Connelly, Roberts, & Zheng, 2011; Du, Park, & Wang, 2005; Li, 2006; Ma, 1998).

Migrants in China were at first predominantly young, single, and male (Cai, 2002; Cao, 1995; Chan, Liu, & Yang, 1999; Fan, 2007; Zhao, 1999), though rates of female migration increased more rapidly than for males over the last three decades (Fan, 2007). Depending on region, the ratio of men to women varies among rural-to-urban migrants (Wang, Gao, Xu, & Chen, 2002), but on the whole the floating population is now equally

male and female (de Brauw, 2003; Du et al., 2005; Zhang, de Brauw, & Rozelle, 2004). Female migrants tend to be younger than male migrants, and they are more likely to be single (Fan, 2004; Jacka, 2005; Wang et al., 2002; Zhao, 2002). On the other hand, marriage, like children, is more likely to reduce the chances of migration for women over men, as men have greater chances of success in migration because of differences in types of available labor and household and social characteristics relating to women's role in families (He & Gober, 2003; Zhao, 1999). Consequently, gender equality in the labor market–especially in institutional settings–has actually been lessened as a result of migration in the context of market transition (He & Gober, 2003; Liu, Meng, & Zhang, 2000; X. Yang & Guo, 1999), as women are perceived to be less productive and more costly (He & Gober, 2003; Park, 1992).

Most rural-to-urban migrants have a middle-school (junior secondary) education, more than rural non-migrants but less than urban residents (Cai, 2003; de Brauw, 2008; Du et al., 2005; Fan, 2007). However, the relationship between education and migration is nonlinear, with those with moderate levels of education most likely to migrate, having both the desire and means to improve their economic situation (Du et al., 2005; Fan, 2007). Given the lower educational achievement than their urban counterparts, coupled with their outsider status, formal education generally has little effect on migration outcomes (Du et al., 2005; Zhao, 1999).

Objectives, Goals, and Risks of Migration

Perhaps the most significant aspect of migration is the prevailing intent to return-migrate, joining the floating population as a provisional means of increasing household income (de Brauw, 2008; Fan, 2002; Rozelle, Guo, Shen, Hughart, & Giles, 1999; Solinger, 1999; Taylor, 2003). Like those with moderate levels of education, ruralites with moderate levels of income are most likely to migrate, having the means to bear the financial risk assumed by migrating, but not having so much investment in their hometown economic activity as to be retained by their household (Du et al., 2005; Solinger, 1999; Zhao, 1999). The transition from agriculture to wage labor in the countryside being a major source of the income inequality that developed during the 1990s (Fang & Rizzo, 2011), migration replaced other activities as the fastest growing share of the off-farm labor market during that time (de Brauw, Huang, Rozelle, Zhang, & Zhang, 2002).

Urban income can be five to six times that of rural incomes in China (Fan, 2007), and shifting from farm labor to migratory work can increase household income as much as 50%, with relatively low associated costs (Fan, 2002; Taylor, 2003; Zhao, 1999). While the households migrants leave behind retain their comparatively low cost of living, Park (2007) has noted that the longer hours worked, fewer number of dependents, and decreased likelihood of tolerating unemployment in their migratory destination bring migrants' per capita income close to that of urban residents. A 2006 survey by the

National Bureau of Statistics found that migrants earned a monthly average of 966 *yuan*, with two thirds of it being spent on room and board (Liang, 2006).

While such push-pull economic factors influence migrants' decision-making process, the intent to return-migrate emphasizes migrants' native place and the networks that connect them to their migratory destination (Hu, 2011; Solinger, 1999; Zhao, 2002). "A central theme is that a migrant's geographic origin and his conscious or unconscious attachment to his native place are the most important factors that influence the entire spectrum of migration: they determine where a migrant goes, where he lives and what he does there," writes Ma (1998). Peasants originating from the same hometown or county tend to end up working together in the city in any number of occupations, collecting trash, selling vegetables, doing construction, nannying, or interior decorating (Gaetano & Jacka, 2004; Loyalka, 2012; Ma, 1998).

Land and family increase the likelihood of return migration (Hu, 2011), but as agricultural markets thin out across China, the income earned during migration is not necessarily used to increase household productivity (de Brauw, 2008; Taylor, 2003). Outside of the poorest, most agriculturally intensive rural areas, remittances can often be used to increase housing assets like constructing a new home, purchasing non-farm durable goods, or supporting the financial needs of family members (de Brauw, 2008; Du et al., 2005; Taylor, 2003; Zhao, 1999; Zhao, 2002).

Another noteworthy purpose for the income earned during migration is to finance children's education, improving or extending educational opportunities in the hometown

in the event they are "left-behind" (*liushou*) with family. Though accessibility or acceptance can be problematic for agricultural *hukou* holders, in the event that children accompany their parents during migration the income can be used to pay tuition in the higher-quality education system in urban areas (Chan & Buckingham, 2008; Connelly et al., 2011; Li, 2006; Taylor, 2007; Xiang, 2007). More episodic goals such as improving the quality of education for children further reinforce return migration patterns, the outcome of which the state optimistically sees as being their future contribution to their native communities, atop their parents' return home with newfound scientific, technological, and market-based skills (Solinger, 1999; Zhao, 2002).

Detriment to personal health is another risk brought on by migration. Although migration is often self-selective for those with good health to begin with, limited access to health care during migration can erode that status over time, or even precipitate an often-permanent return to one's hometown (Chen, 2011; Hu, Cook, & Salazar, 2008). Rural-to-urban migrants have a number of distinct health-related risks that they incur, including increased risk of infectious and communicable diseases (Deng, Shu, Shen, & Zhang, 2004; Guo & Liu, 2001), including sexually transmitted diseases (Hong et al., 2006; Smith & Hugo, 2008; X. Yang, 2004) and they are more likely to experience poor maternal and infant health (Feng, Ren, Shaokang, & Anan, 2005). This risk to personal health for the floating population has long been noted as being overlooked or even exacerbated by their marginalized status in urban areas: seen as poor and uneducated, migrant men and women alike are subject to the notorious "3-D" jobs–dirty, difficult, and

dangerous–including intense physical labor in construction and sex trafficking (Hu et al., 2008; Jacka, 2005; Jahn, Ling, Han, Xia, & Krämer, 2011; Ma, 1998). And while the state is extremely concerned about the reproductive behavior of migrants in urban areas, women often lack maternal health and family planning education services (Feng et al., 2005; Jacka, 2005; Zhao, Kulane, Gao, & Xu, 2009). To meet the needs of this underserved floating population, Jahn (2011) has pointed out that various informal service providers such as small, more or less illegal clinics and pharmacies exist in many cities.

The mental toll of migration can be equally as serious during migration (Chen, 2011; Jahn et al., 2011; Wong, He, Leung, Lau, & Chang, 2008; Zheng & Lian, 2005). Although mental health risk declines with longer-term migration (Chen, 2011), the psychological cost associated with migration can be the earliest toll of migration. Even prior to the stress of adapting to the new living and working environment, Zhao (1999) told of numerous stories of robberies on the train from the countryside, with thieves and conductors working in collusion with one another. In their destination, parallel stressors such as separation from family and anxiety about the future compound migrants' overarching problem of a restricted or inaccessible urban health care system (Jahn et al., 2011).

Health Care and Insurance for the Floating Population

This gap between an increased-risk population and scant health care resources is the type of structural void symptomatic of the problem that Chan and Buckingham (2008) suggests results from *hukou* reform: the state dumps the responsibility of *hukou*-related policies on local governments with the unintended but not unforeseeable effect of making formal migration (and subsequent access to urban housing, healthcare, etc.) more difficult. Put differently, a nationwide problem is left to be solved (or not) by cities themselves. In 2003, 96% of rural households in China lacked medical insurance, 38% of the sick did not seek medical attention, and medical debt was so severe as to reduce food consumption in many households (You & Kobayashi, 2009). Results from the 2006 CHNS revealed that less than 25% of China's population were effectively covered by health insurance (Popkin, 2008). More recently, the private insurance market in China has been primed to take hold, with the intent of supplementing the coverage of state-provided health insurance (Bishop, 2013; Dong, 2009; Liu & Darimont, 2013).

While migrants may often be forced to return to their hometown to seek medical care under their *hukou*-provided insurance (Chen, 2011; Hu et al., 2008; Xiang, 2007) they likely return to a health care system inferior to that found in the city: Due to the reforms of the 1980s, the collective health care system that was previously installed in rural China lost its financial base. In the countryside, as much as 80% of rural residents began to pay their own health care expenses as the former "barefoot doctors" took up private practice starting in the 1980s (Dong, 2009; Liu & Rao, 2006). As a result of these market

liberalizations in health care, poorer regions suffer from a serious shortage of doctors and health care services (Rong, 2008), and even after the institution of the New Rural Cooperative Medical Insurance for Rural Residents program in 2003, average household out-of-pocket health spending and catastrophic expenditure risk remains unchanged in spite of major improvements in health care access for rural participants (You & Kobayashi, 2009).

Summary of Literature Review

In summary, consideration of migrants' situation produces a picture of a population demographic at increased risk for NR-NCD in an increasingly obesogenic environment. First, with higher rates of disease incidence occur at lower BMI in China, the incidence rates for overweight and prediabetes exceed 30% of China's population (Yan et al., 2012). Although the highest rates of obesity are found in urban populations (Guo, 2000; Hou, 2008; Wang et al., 2006; Zhai, 2009) the most rapid upward shifts in both obesity and higher fat diets are found among lower-income and rural Chinese (Du et al., 2004; Ng, 2008; Popkin, 2008; Wang et al., 2006). Ruralites with moderate incomes are less likely to be overweight/obese than those with low rural incomes; however, they are also the most likely to migrate to urban areas and potentially increase their risk. In migration, the floating population experiences both increased income and urban environments, which increases their risk for overweight/obesity (Du et al., 2004; Zhang, 2008).

At least in part, this increased risk for migrants has to do with divergent dietary practices and food access patterns between rural and urban areas. Across rural and urban populations, caloric consumption has decreased overall in recent decades, brought on increased proportions of dietary fat and animal-based proteins and decreased consumption of traditional foods (Du, 2004; Mendez & Popkin, 2004; Zhai, 2009) In addition to this trend, changes in China's food system, such as the food retail infrastructure in China's cities, elicit different purchasing patterns. (Veeck, 2000; Veeck & Veeck, 2000; Watson, 2000; Yan, 2005) and subsequently change dietary composition in urban environments (Guo, 2000; Liu, 2009; Mendez & Popkin, 2004; Pingali, 2007; Zhai, 2009; Zhang, 2008), adding to the effect of an unfamiliar environment as cause for dietary change during migration.

China first became more urban than rural only as of 2011, a dramatic shift in its population demographics, having been only 17.9 percent urban in 1978 (NSB; Park, 2007). This demographic shift is complicated by the nearly 200 million temporary rural-to-urban migrants living unsanctioned in China's cities. (Fan, 2002), a phenomena that has influenced changes in state and local policy regarding the provisions allotted to citizens in accord with their household registration, or *hukou*, status. While the increasingly long periods of time spent in migration, as well as the prevalence of interregional migratory flows have led some cities to accommodate migrants in more formal ways (Chan, 2008; Fan, 2007), the dominant intent of migration is to generate remittances for the sake of improving the quality of life in the rural households to which

migrants ultimately intend to return (de Brauw, 2008; Du et al., 2005; Taylor, 2003; Zhao, 1999; Zhao, 2002).

A somewhat crass question then arises: besides money, with what, exactly, do they return? Migration is often self-selective for those with good health to begin with, but migrants are more at risk for certain types of disease or injury (Chen, 2011; Hu et al., 2008). Meanwhile, violating the boundaries of their rural *hukou* designation can block migrants' access to health care in cities, while migration itself can create financial and geographic barriers to returning home to receive care (You & Kobayashi, 2009). The scenario thus appears to be one in which migrants' physical health goes unmanaged–at best–in an environment that threatens their mental and physical health, diet being significant part of the latter. The concern is that, like the new skills and knowledge they may collect in more technologically or entrepreneurially sophisticated forms of employment during migration (Solinger, 1999; Zhao, 2002), changes in dietary practice during migration may supplant an extant, traditional foodways upon return to one's hometown.

REFERENCES:

Allender, S., Foster, C., Hutchinson, L., & Arambepola, C. (2008). Quantification of urbanization in relation to chronic diseases in developing countries: a systematic review. *Journal of urban health,* 85(6), 938-951.

Anagnost, A. (2004). The corporeal politics of quality (suzhi). *Public culture,* 16(2), 189.

Anderson, E. N. (1988). *The food of China.* Yale University Press.

Astrup, A., Dyerberg, J., Selleck, M., & Stender, S. (2008). Nutrition transition and its relationship to the development of obesity and related chronic diseases. *obesity reviews,* 9(s1), 48-52.

Basta, S. S. (1977). Nutrition and health in low income urban areas of the third world†. *Ecology of Food and Nutrition,* 6(2), 113-124.

Bastid, M. & Zhang, J. (1988). *Educational reform in early twentieth-century China.* Center for Chinese Studies, University of Michigan Ann Arbor, MI.

Beinfield, H. (1992). *Between heaven and earth : a guide to Chinese medicine.* New York: New York : Ballantine Wellspring.

Bell, A. C., Adair, L. S., & Popkin, B. M. (2002). Ethnic differences in the association between body mass index and hypertension. *American Journal of Epidemiology,* 155(4), 346-353.

Bishop, M. (2013). How Asia Can Get Health Care Right. *The Wall Street Journal,* .

Bourdieu, P. (1984). *Distinction: a social critique of the judgement of taste* . Harvard University Press.

Brockerhoff, M. & Brennan, E. (1998). The poverty of cities in developing regions. *Population and development Review,* , 75-114.

Brown, L. R. (1973). *World without borders.* Random House.

Brownell, S. (2005). Food, Hunger, and the State. In J. Watson & C. Caldwell (Eds.), *The Cultural Politics of Food and Eating* (pp. 251). Blackwell.

Cai, F. (2002). Zhongguo Renkou Yu Laodong Wenti Baogao: Chengxiang Jiuye Wenti Yu Duice (Report on China's Population and Labor: Employment Issues and Strategies in Urban and Rural Areas).

Cai, F. (2003). Zhongguo Renkou Yu Laodong Wenti Baogao: Zhuangui Zhong Di Chengshi Pinkun Wenti (Report on China's Population and Labor: Urban Poverty in Transitional China). *Beijing: Shehui kexue wenxian chubanshe (Social Sciences Documentation),* .

Campbell, T. C. (2006). *The China study the most comprehensive study of nutrition ever conducted and the startling implications for diet, weight loss and long-term health.* Dallas, Tex.: Dallas, Tex. : BenBella Books.

Cao, X. (1995). Zhongguo nongcun laodongli liudong yu renkou qianyi yanjiu zongshu (Summary of research on rural labor flows and population migration in China). *Nongcun Jingji Yanjiu Cankao (Rural Agricultural Research),* 2, 23-33.

Champion, A. G. & Hugo, G. (2004). *New forms of urbanization: beyond the urban-rural dichotomy.* Ashgate Pub Limited.

Chan, J. C., et al. (2009). Diabetes in Asia. *JAMA: the journal of the American Medical Association,* 301(20), 2129-2140.

Chan, K. W. (1994). *Cities with invisible walls: reinterpreting urbanization in post-1949 China.* Oxford University Press Hong Kong.

Chan, K. W. (2008). Internal Labour Migration in China: Trends, Geographical Distribution and Policies. *United Nations Expert Group Meeting on Population Distribution, Urbanization, Internal Migration and Development,* UN/POP/EGM-URB/2008/05.

Chan, K. W. & Buckingham, W. (2008). Is China abolishing the hukou system? *The China Quarterly,* 195(1), 582-605.

Chan, K. W., Liu, T., & Yang, Y. (1999). Hukou and non-hukou migrations in China: comparisons and contrasts. *International Journal of Population Geography,* 5(6), 425.

Chan, K. W. & Zhang, L. (1999). The hukou system and rural-urban migration in China: Processes and changes. *China Quarterly. London*, 818-855.

Chee, B. W. (2000). Eating snacks and biting pressure: only children in Beijing. *Feeding China's Little Emperors,* , 48-70.

Chen, J. (2011). Internal migration and health: Re-examining the healthy migrant phenomenon in China. *Social science medicine,* .

Cheng, Z. (2010). Poverty in China's Urban Communities Profile and Correlates. *China Report,* 46(2), 143-173.
Cheung, S. C. (2005). Consuming "Low" cuisine after Hong Kong's handover: Village banquets and private kitchens. *Asian Studies Review,* 29(3), 259-273.

Chiu, F. Y. (1991). The specificity of the political on Tiananmen square, or a poetics of the popular resistance in Beijing. *Dialectical Anthropology,* 16(3-4), 333-347.

Chun, L. (2007). The Transformation of Chinese Socialism. *The China Quarterly,* 189, 187-228.

CIA World Factbook. https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html

Connelly, R., Roberts, K., & Zheng, Z. (2011). The settlement of rural migrants in urban China–some of China's migrants are not 'floating'anymore. *Journal of Chinese Economic and Business Studies,* 9(3), 283-300.

Curtis, K. R., McCluskey, J. J., & Wahl, T. I. (2007). Consumer preferences for western-style convenience foods in China. *China Economic Review,* 18(1), 1-14.

De Brauw, A. (2008). Migration and household investment in rural China. *China economic review,* 19(2), 320.

De Brauw, A. (2003). Are women taking over the farm in China. *Paper provided by Department of Economics, Williams College in its series Department of Economics Working Papers with,* (199).

De Brauw, A., Huang, J., Rozelle, S., Zhang, L., & Zhang, Y. (2002). The evolution of China's rural labor markets during the reforms. *Journal of Comparative Economics,* 30(2), 329-353.

Deng, H., Shu, M., Shen, Y., & Zhang, Y. (2004). Analysis on incidence of notifiable infectious diseases in floating population in Putuo district [J]. *Shanghai Journal of Preventive Medicine,* 8, 006.

Deurenberg, P., Deurenberg‐Yap, M., & Guricci, S. (2002). Asians are different from Caucasians and from each other in their body mass index/body fat per cent relationship. *Obesity reviews,* 3(3), 141-146.

Dong, K. (2009). Medical insurance system evolution in China. *China Economic Review,* 20(4), 591-597.

Du, S., Mroz, T. A., Zhai, F., & Popkin, B. M. (2004). Rapid income growth adversely affects diet quality in China--particularly for the poor! *Social science medicine,* 59(7), 1505.

Du, Y., Park, A., & Wang, S. (2005). Migration and rural poverty in China. *Journal of comparative economics,* 33(4), 688-709.

Du, S. (2004). Rapid income growth adversely affects diet quality in China--particularly for the poor! *Social science medicine,* 59(7), 1505.

Dutton, M. R. (1992). *Policing and punishment in China: From patriarchy to the people.* Cambridge University Press Cambridge.

Eastwood, R. & Lipton, M. (2004). Rural and urban income inequality and poverty: does convergence between sectors offset divergence within them? *GA Cornia, Inequality, Growth and Poverty in an Era of Liberalization and Globalization.Oxford University Press for UNU-WIDER: Oxford, .*

Fan, C. C. (2004). The state, the migrant labor regime, and maiden workers in China. *Political Geography,* 23(3), 283-305.

Fan, C. C. (2007). Migration,*Hukou*, and the City. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 65-89). Washington, D.C.: Washington, D.C. : World Bank.

Fan, C. C. (2002). The elite, the natives, and the outsiders: Migration and labor market segmentation in urban China. *Annals of the Association of American Geographers,* 92(1), 103.

Fang, H. & Rizzo, J. A. (2011). Income inequality dynamics in rural China from 1991 to 2006: the role of alternative income sources. *Applied Economics Letters,* 18(14), 1307-1310.

Farb, P. & Armelagos, G. (1980). *Consuming passions, the anthropology of eating.* Houghton Mifflin.

Farquhar, J. (2002). *Appetites: Food and Sex in Postsocialist China.* Duke University Press.

Farquhar, J. (2012). *Ten thousand things nurturing life in contemporary Beijing.* New York: New York : Zone Books.

Feng, W., Ren, P., Shaokang, Z., & Anan, S. (2005). Reproductive health status, knowledge, and access to health care among female migrants in Shanghai, China. *Journal of Biosocial Science,* 37(5), 603.

Fu, W., Fu, V., Gandhi, L., Cao, H., Liu, Z., & Zhou (2012). Rising Consumption of Animal Products in China and India: National and Global Implications. *China world economy,* 20(3), 88-106.

Fulong Wu, (2007). The Poverty of Transition: From Industrial District to Poor Neighbourhood in the City of Nanjing, China. *Urban Studies,* 44(13), 2673-2694.

Gaetano, A. M. & Jacka, T. (2004). Migrant Women's Stories. In A. M. Gaetano & I. ebrary (Eds.), *On the move women and rural-to-urban migration in contemporary China* (pp. 279). New York: New York : Columbia University Press.

Gamer, R. (2008). Chinese Politics. In R. E. Gamer (Ed.), *Understanding contemporary China* (pp. 67). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Guldan, Georgia S. (2000). Paradoxes of plenty: China's infant and childfeeding Transition. Feeding China's Little Emperors.

Gordon-Larsen, P., et al. (2012). Discordant Risk: Overweight and Cardiometabolic Risk in Chinese Adults. *Obesity,* .

Guo, Z. & Liu, S. (2001). Analysis on the disease spectrum of migrant population in Wuhua community of Kunming. *China Comm Med,* 7, 23-24.

Guo, X. (1999). Food price policy can favorably alter macronutrient intake in China. *The Journal of nutrition,* 129(5), 994.

Guo, X. (2000). Structural change in the impact of income on food consumption in China, 1989-1993. *Economic development and cultural change,* , 737.

Hao, Z. (2002). A Review, Summary and Discussion of Population Migration Study in China [J]. *Population & Economics,* 1, 011.

Harrell, S. (2001). The anthropology of reform and the reform of anthropology: anthropological narratives of recovery and progress in China. *Annual Review of Anthropology,* , 139-161.

Harris, M. (1987). The sacred cow and the abominable pig: riddles of food and culture. *A Touchstone book,* .

He, J., et al. (2005). Major causes of death among men and women in China. *New England Journal of Medicine,* 353(11), 1124-1134.

He, C. & Gober, P. (2003). Gendering Interprovincial Migration in China. *International Migration Review,* 37(4, The Future of the Second Generation: The Integration of Migrant Youth in Six European Countries), 1220-1251.

Heisley, D. D. & Levy, S. J. (1991). Autodriving: a photoelicitation technique. *Journal of Consumer Research,* , 257-272.

Hershkovitz, L. (1985). The fruits of ambivalence: China's urban individual economy. *Pacific Affairs,* 58(3), 427-450.

Ho, P. (2003). Mao's war against nature? The environmental impact of the grain-first campaign in China. *The China Journal,* (50), 37-59.

Hong, Y., et al. (2006). Rural-to-urban migrants and the HIV epidemic in China. *AIDS and Behavior,* 10(4), 421-430.

Hou, X. (2008). Urban—Rural Disparity of Overweight, Hypertension, Undiagnosed Hypertension, and Untreated Hypertension in China. *Asia-Pacific Journal of Public Health,* 20(2), 159-169.

Hu, X., Cook, S., & Salazar, M. A. (2008). Internal migration and health in China. *The Lancet,* 372(9651), 1717-1719.

Hu, F. (2011). Circular migration, or permanent stay? Evidence from China's rural–urban migration. *China economic review,* 22(1), 64.

Huang, W. (2009). Disorder (*Xianshi Shi Guoqu de Weilai)*.

Jacka, T. (2005). *Rural women in urban China gender, migration, and social change.* Armonk, N.Y.: Armonk, N.Y. : M.E. Sharpe, Inc.

Jahn, H. J., Ling, L., Han, L., Xia, Y., & Krämer, A. (2011). Migration and Health in Megacities: A Chinese Example from Guangzhou, China. In A. Krämer, M. M. H. Khan (Eds.), *Health in megacities and urban areas* (pp. 189). Heidelberg: Heidelberg : Physica-Verlag.

Jensen, R. T. & Miller, N. H. (2008). The impact of food price increases on caloric intake in China. *Agricultural Economics,* 39(s1), 465-476.

Jensen, R., Jensen, N., & Miller (2011). Do Consumer Price Subsidies Really Improve Nutrition? *The review of economics and statistics,* 93(4), 1205-1223.

Jing, J. (2000a). Food, Children, and Social Change in Contemporary China. In J. Jing (Ed.), (pp. 1). Stanford University Press.

Jing, J. (2000b). Food, Nutrition, and Cultural Authority in a Gansu Village. In J. Jing (Ed.), *Feeding China's Little Emperors: Food, Children, and Social Change* (pp. 135). Stanford University Press.

Jones-Smith, J. C., Gordon-Larsen, P., Siddiqi, A., & Popkin, B. M. (2011). Emerging disparities in overweight by educational attainment in Chinese adults (1989–2006). *International journal of obesity,* 36(6), 866-875.

Jones-Smith, J. C. & Popkin, B. (2010). Understanding community context and adult health changes in China: Development of an urbanicity scale. *Social science medicine,* 71(8), 1436.

Kipnis, A. (2007). Neoliberalism reified: suzhi discourse and tropes of neoliberalism in the People's Republic of China. *Journal of the Royal Anthropological Institute,* 13(2), 383.

Knight, J., Shi, L., & Song, L. (2006). The rural–urban divide and the evolution of political economy in China. *Human Development in the Era of Globalization: Essays in Honor of Keith B.Griffin,* .

Kung, J. K. & Lin, J. Y. (2003). The Causes of China's Great Leap Famine, 1959–1961*. *Economic Development and Cultural Change,* 52(1), 51-73.

Lee, L. O. (1985). *Lu Xun and his legacy.* University of California Pr.

Leppman, E. J. (1999). Urban-Rural Contrasts in Diet: The Case of China. *Urban Geography,* 20(6), 567-579.

Li, B. (2006). Floating population or urban citizens? Status, social provision and circumstances of rural–urban migrants in China. *Social policy & administration,* 40(2), 174-195.

Li, F. (1994). Waichu dagong renyuande guimo, liudong fanwei ji qita (The size, geographical distribution and other characteristics of outgoing workers). *Zhongguo nongcun jingji,* (9), 31-35.

Li, W. & Yang, D. T. (2005). The Great Leap Forward: Anatomy of a central planning disaster. *Journal of Political Economy,* 113(4), 840-877.

Li, W., Chen, I., Chang, Y., Loke, S., Wang, S., & Hsiao, K. (2013). Waist-to-height ratio, waist circumference, and body mass index as indices of cardiometabolic risk among 36,642 Taiwanese adults. *European journal of nutrition,* 52(1), 57-65.

Liang, Y. (2006). Migrant workers earn monthly 120 USD. *China View,* .
Lin, J. Y., Cai, F., & Li, Z. (2003). *The China miracle: Development strategy and economic reform.* Chinese University Press.

Liu, D. & Darimont, B. (2013). The health care system of the People's Republic of China: Between privatization and public health care. *International social security review,* 66(1), 97-116.

Liu, P., Meng, X., & Zhang, J. (2000). Sectoral gender wage differentials and discrimination in the transitional Chinese economy. *Journal of Population Economics,* 13(2), 331-352.

Liu, Y. & Rao, K. (2006). Providing health insurance in rural China: from research to policy. *Journal of health politics, policy and law,* 31(1), 71-92.

Liu, H. (2009). At‐home meat consumption in China: an empirical study*. *Australian Journal of Agricultural and Resource Economics,* 53(4), 485.

Loyalka, M. (2012). *Eating Bitterness: Stories from the Front Lines of China's Great Urban Migration* . Berkeley: University of California Press.

Lozada Jr, E. P., Watson, J., & Caldwell, M. (2005). Globalized childhood? Kentucky Fried Chicken in Beijing. *The cultural politics of food and eating: a reader,* , 163-179.

Lu, W. (1987). *The gourmet and other stories of modern China.* London: London : Readers International.

Ma, H., Rae, A., Huang, J., & Rozelle, S. (2004). Chinese animal product consumption in the 1990s. *Australian Journal of Agricultural and Resource Economics,* 48(4), 569-590.

Ma, L. J. C. (1998). Native Place, Migration and the Emergence of Peasant Enclaves in Beijing. *China quarterly,* (155), 546-581.

MacFarquhar, R. (1997). *The origins of the cultural revolution.* Cambridge Univ Press.

MacFarquhar, R. & Schoenhals, M. (2009). *Mao's last revolution.* Harvard University Press.

Matthews, M. (1993). *The passport society: controlling movement in Russia and the USSR.* Westview Press Boulder, CO.

McDade, T. W. & Adair, L. S. (2001). Defining the "urban" in urbanization and health: a factor analysis approach. *Social science & medicine,* 53(1), 55-70.

Mendez, M. & Popkin, B. (2004). Globalization, urbanization and nutritional change in the developing world. In Anonymous *Globalization of food systems in developing countries: impact on food security and nutrition* (pp. 55). Rome: Food and Agriculture Organization of the United Nations.

Mintz, S. W. (1985). *Sweetness and power.* Penguin Books.

Mintz, S. W. & Du Bois, C. M. (2002). The anthropology of food and eating. *Annual Review of Anthropology,* , 99-119.

Minxin, P. & Pei, M. (2009). *From reform to revolution: The demise of communism in China and the Soviet Union.* Harvard University Press.

Murphy, R. (2004). Turning peasants into modern Chinese citizens:"Population quality" discourse, demographic transition and primary education. *China quarterly,* 177(1), 1.

Ng, S. W., Norton, E. C., & Popkin, B. M. (2009). Why have physical activity levels declined among Chinese adults? Findings from the 1991–2006 China health and nutrition surveys. *Social science & medicine,* 68(7), 1305-1314.

Ng, S. W. (2008). Impacts of China's edible oil pricing policy on nutrition. *Social science medicine,* 66(2), 414.

Nguyen, T., Adair, L., Suchindran, C., He, K., & Popkin, B. (2009). The association between body mass index and hypertension is different between East and Southeast Asians. *The American Journal of Clinical Nutrition,* 89(6), 1905-1912.

Pan, C., Shang, S., Kirch, W., & Thoenes, M. (2010). Burden of diabetes in the adult Chinese population: A systematic literature review and future projections. *International journal of general medicine,* 3, 173.

Park, A. (2007). Rural-Urban Inequality in China. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 41-64). Washington, D.C.: Washington, D.C. : World Bank.

Park, K. A. (1992). *Women and revolution in China: the sources of constraints on women's emancipation.* Women in International Development, Michigan State University.

Pingali, P. (2007). Westernization of Asian diets and the transformation of food systems: implications for research and policy. *Food Policy,* 32(3), 281.

Popkin, B. (2002). An overview on the nutrition transition and its health implications: the Bellagio meeting. *Public health nutrition,* 5(1A), 93-103.

Popkin, B. M. (2008). Will China's nutrition transition overwhelm its health care system and slow economic growth? *Health affairs,* 27(4), 1064-1076.

Popkin, B. M. (2010). Recent dynamics suggest selected countries catching up to US obesity. *The American Journal of Clinical Nutrition,* 91(1), 284S-288S.

Popkin, B. (2004). The nutrition transition: an overview of world patterns of change. *Nutrition reviews,* 62(7), S140-S143.

Popkin, B., Du, S., Zhai, F., & Zhang, B. (2010). Cohort Profile: The China Health and Nutrition Survey--monitoring and understanding socio-economic and health change in China, 1989-2011. *International journal of epidemiology,* 39(6), 1435-1440.

Pozzana, C. & Russo, A. (2006). China's new order and past disorders: A Dialogue Starting from Wang Hui's analysis. *Critical Asian Studies,* 38(3), 329-351.

Pye, L. W. (1993). How China's nationalism was Shanghaied. *The Australian Journal of Chinese Affairs,* (29), 107-133.

Rong, M. (2008). Population Growth and Urbanization. In R. E. Gamer (Ed.), (pp. 241). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Roy, P. (2010). *Alimentary tracts : appetites, aversions, and the postcolonial /.*

Rozelle, S., Guo, L., Shen, M., Hughart, A., & Giles, J. (1999). Leaving China's farms: survey results of new paths and remaining hurdles to rural migration. *China Quarterly*. London, 367-393.

Runge, C. F., Senauer, B., Pardey, P. G., & Rosegrant, M. W. (2003). *Ending hunger in our lifetime: food security and globalization.* Johns Hopkins University Press.

Sahlins, M. (1978). *Culture and practical reason.* University of Chicago Press.

Satia, J. A. (2010). Dietary acculturation and the nutrition transition: an overview This is one of a selection of papers published in the CSCN-CSNS 2009 Conference, entitled Can we identify culture-specific healthful dietary patterns among diverse populations undergoing nutrition transition? This paper is being published without benefit of author's corrections. *Applied physiology, nutrition, and metabolism,* 35(2), 219-223.

Scheid, V., 1958- (2002). *Chinese medicine in contemporary China : plurality and synthesis.* Durham N.C.]: Durham N.C.] : Duke University Press.

Shankar, B. (2010). Obesity in China: the differential impacts of covariates along the BMI distribution. *Obesity,* 18(8), 1660-1666.

Smith, C. J. & Hugo, G. (2008). Migration, urbanization, and the spread of sexually transmitted diseases: empirical and theoretical observations in China and Indonesia. *Urban China in transition,* , 294-341.

Solinger, D. J. (1999). *Contesting citizenship in urban China peasant migrants, the state, and the logic of the market.* Berkeley: Berkeley : University of California Press.

Sun, W. (2012). Unequal China the political economy and cultural politics of inequality. In I. ebrary (Ed.), *Unequal China: The Political Economy and Cultural Politics of Inequality* (pp. 44). Abingdon, Oxon ; New York: Abingdon, Oxon ; New York : Routledge.

Sutton, D. E. (2001). Remembrance of repasts: An anthropology of food and memory.

Swislocki, M. (2011). Nutritional Governmentality Food and the Politics of Health in Late Imperial and Republican China. *Radical History Review,* 2011(110), 9-35.

Swislocki, M. (2009). *Culinary nostalgia : regional food culture and the urban experience in Shanghai /.* Stanford University Press.

Tao, J. & Yu, S. (2011). Implementation of energy efficiency standards of household refrigerator/freezer in China: Potential environmental and economic impacts. *Applied Energy,* 88(5), 1890-1905.

Taylor, J. (2007). Poverty and Vulnerability. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 91-104). Washington, D.C.: Washington, D.C. : World Bank.

Taylor, J. E. (2003). Migration and incomes in source communities: A new economics of migration perspective from China*. *Economic development and cultural change,* 52(1), 75.

Tong, S. Y. & Wong, J. (2008). China's Economy. In R. E. Gamer (Ed.), *Understanding contemporary China* (pp. 117). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Van de Poel, E., O'Donnell, O., & Van Doorslaer, E. (2009). Urbanization and the spread of diseases of affluence in China. *Economics & Human Biology,* 7(2), 200-216.

Veeck, A. (2000). The revitalization of the marketplace: food markets of Nanjing. *The consumer revolution in urban China,* , 107-123.
Veeck, A & Veeck, G. (2000). Consumer segmentation and changing food purchase patterns in Nanjing, PRC. *World Development,* 28(3), 457.

Wang, G., Gao, H., Xu, W., & Chen, G. (2002). *Xiao chengzhen wailai laodongli jiben zhuangkuang ji dui xiao chengzhen fazhan yingxiang fenxi.* [Analyses on the situation of the labor force and its influences on the development of the little towns]*, Renkou Xuekan (Population Journal),* 3, 3-7.

Wang, Y., Mi, J., Shan, X., Wang, Q. J., & Ge, K. (2006). Is China facing an obesity epidemic and the consequences? The trends in obesity and chronic disease in China. *International journal of obesity,* 31(1), 177-188.

Watson, J. (2000). Food as a Lens: The Past, Present, and Future of Family Life in China. In J. Jing (Ed.), (pp. 199). Stanford University Press.

Watson, J. L. (2000). China's big Mac attack. *Foreign Affairs,* , 120-134.

Wong, D. F. K., He, X., Leung, G., Lau, Y., & Chang, Y. (2008). Mental health of migrant workers in China: prevalence and correlates. *Social psychiatry and psychiatric epidemiology,* 43(6), 483-489.

Wu, G. (2013). Should Nandan Be Abolished?: The Debate over Female Impersonation in Early Republican China and Its Underlying Cultural Logic. *Asian Theatre Journal,* 30(1), 189-206.

Wu, Y. (2006). Overweight and obesity in China. *BMJ.British medical journal,* 333(7564), 362-363.

Xiang, B. (2007). How far are the left-behind left behind? A preliminary study in Rural China. *Population, Space and Place,* 13(3), 179-191.

Yan, M. (2000). The Republic of Wine, trans. *Howard Goldblatt (New York: Arcade),* .

Yan, S., et al. (2012). The expanding burden of cardiometabolic risk in China: the China Health and Nutrition Survey. *Obesity Reviews,* 13(9), 810-821.

Yan, Y. X. (2005). Of Hamburger and Social Space: Consuming McDonald's in Beijing. In J. L. Watson & M. L. Caldwell (Eds.), *The Cultural Politics of Food and Eating: A Reader* (pp. 80).

Yang, G. (2003). China's Zhiqing Generation Nostalgia, Identity, and Cultural Resistance in the 1990s. *Modern China,* 29(3), 267-296.

Yang, W., et al. (2010). Prevalence of diabetes among men and women in China. *New England Journal of Medicine,* 362(12), 1090-1101.

Yang, X. (2004). Temporary Migration and The Spread of STDs/HIV in China: Is There A Link? 1. *International Migration Review,* 38(1), 212-235.

Yang, X. & Guo, F. (1999). Gender differences in determinants of temporary labor migration in China: A multilevel analysis. *International Migration Review,* , 929-953.

Ye, X. (1995). The impact of income growth on farm household nutrient intake: a case study of a prosperous rural area in Northern China. *Economic development and cultural change,* 43(4), 805.

You, X. & Kobayashi, Y. (2009). The new cooperative medical scheme in China. *Health policy,* 91(1), 1-9.

Yu, D. P. (2009). *Cheng Xiang Ju Min Shen Fen Ping Deng Hua Yan Jiu (Rural-Urban Migrants Status and Equality Research).* Beijing : Zhongguo she hui ke xue chu ban she.

Yu, D. (2002). Chengxiang Shehui: Cong Geli Zouxiang Kaifang–Zhongguo Huji Zhidu Yu Hujifa Yanjiu (City and Countryside Societies: From Segregation to Opening–Research on China's Household Registration System and Laws). *Jinan, China: Shandong renmin chubanshe (Shandong People's Press)(in Chinese),* .

Yue, G. (1999). *The mouth that begs : hunger, cannibalism, and the politics of eating in modern China /.* Duke University Press.

Yuhua, G. (2000). Family relations: the generation gap at the table. *Feeding China's little emperors: Food, children, and social change,* , 94-113.

Zhai, F. (2009). Prospective study on nutrition transition in China. *Nutrition reviews,* 67, S56.

Zhang, L., de Brauw, A., & Rozelle, S. (2004). China's rural labor market development and its gender implications. *China Economic Review,* 15(2), 230-247.

Zhang, X. (2003). The dynamics of Chinese consumers: a case of Shanghai food consumption. *Journal of International Food & Agribusiness Marketing,* 14(1), 47-66.

Zhang, X. (2008). Consumption and corpulence in China:: A consumer segmentation study based on the food perspective. *Food Policy,* 33(1), 37.

Zhao, Q., Kulane, A., Gao, Y., & Xu, B. (2009). Knowledge and attitude on maternal health care among rural-to-urban migrant women in Shanghai, China. *BMC women's health,* 9(1), 5.

Zhao, Y. (1999). Labor migration and earnings differences: the case of rural China. *Economic development and cultural change,* 47(4), 767.

Zhao, Y. (2002). Causes and consequences of return migration: recent evidence from China. *Journal of comparative economics,* 30(2), 376.

Zheng, Z. & Lian, P. (2005). Health Vulnerability among Temporary Migrants in Urban China.

Zhou, Z., et al. (2013). Frequency, Immunogenetics, and Clinical Characteristics of Latent Autoimmune Diabetes in China (LADA China Study) A Nationwide, Multicenter, Clinic-Based Cross-Sectional Study. *Diabetes,* 62(2), 543-550.

CHAPTER TWO

OVERVIEW OF RESEARCH STUDY

Rationale for Study Based on Literature Review

Pingali (2007) notes that diet transformation in Asia tends to occur in two stages: with income-induced diversification of diet followed by globalization and Westernization of dietary practice. The first stage, Pingali explains, is a function of wage increase: for example, as income goes up, so too does the willingness to pay for convenience–in turn freeing up more time for income earning activities. Especially in an urban context, the ramifications of this feedback loop point towards a host of both global and domestic consumer packaged goods, fast food, and more. A critical implication of Pingali's second stage is the severing of the link between diets and the availability of resources and local habits. This joint transition of upward economic mobility coupled with geographic and environmental displacement outlines the scenario in which dietary transformation might occur for China's floating population, a largely rural-to-urban temporary migrant demographic segment in mainland China (Du et al., 2005; Fan, 2007; Fan, 2002; Zhao, 1999).

The findings by Zhang et al (2008) are important to this project in their construction of novel categories and identification of relationships between overweight/obesity and dietary practice, geography and household registration, and income and SES contained therein. Specifically for the Green Water category, these features find correspondence with those of China's floating population, as those who migrate traverse both the geographic and socioeconomic boundaries used to create these categories by Zhang et al (2008). In doing so, the trajectory is often, but not always,

upward. How do diet and nutrition-related health fare in response? Believing that literature (both in English and Chinese) exploring the diets of the floating population during migration was limited to prenatal and pediatric nutrition (Feng et al., 2005; Zhao et al., 2009) the reach of such a question seemed greatly underexplored.

Like data more scarce within the CHNS corpus, such as that pertaining to social networks and culture, inquiry into these possible explanations align with previous authors' observations of how food and eating practices provide insight into social change and cultural identity (Brownell, 2005; Harris, 1987; Mintz & Du Bois, 2002; Sutton, 2001; J. Watson, 2000; Yan, 2005), power relations and class structure (Bourdieu, 1984; Brownell, 2005; Jing, 2000a; Jing, 2000b; Mintz, 1985; Roy, 2010; Sahlins, 1978), and more. These potential outgrowths in defining urbanicity reflect broad societal processes and can in turn refer back to how bio-cultural change is measured more quantitatively.

Project Hypothesis

The overall goal for this project was to determine what changes in dietary practice occurred during rural-to-urban migration among our participants in Nanjing and the causes of change or consistency throughout that process. The central hypothesis for this research project was that recent rural-to-urban migrants adapt quickly to their new urban food environment, dropping traditional village foodways in favor of urban foodways.

Research Questions

The principle questions of this research study were as follows:

1. How does eating behavior vary among people living in a shared environment, with low-income a common denominator amongst them? Does different eating behavior in the same environment result in different body mass index (BMI) or health outcomes?
2. Do traditional markets still flourish or if they have been replaced with supermarkets. How prevalent are traditional produce/meat markets, grocery stores, food stalls and fast food restaurants? How do poor urban dwellers access the food system? Do recent rural-to-urban migrants access it the same as longtime urban residents?
3. Is there an observable discrepancy in the consumption of high-fat, high-energy dense foods and alcoholic beverages between longtime urban residents and their

recent rural-to-urban migrant counterparts? What kind of variation can be observed in terms of health-related outcomes?

4. Among rural-to-urban migrants, is there an observable transference of *foodways* based on individual place of origin *(lao jia*)? How do alimentary habits derived from the local ecologies, traditions, ethnic identities, and economic modalities of migrants' rural environment transition to an urban setting?

Overview of Research Study Design and Methodology:

This mixed-methodology study was conducted during June and July of 2012 in Nanjing, Jiangsu, People's Republic of China, in collaboration with the Nanjing Medical University School of Public Health. Data was collected using three methods/instruments: focus groups of five to six participants, an individual survey, and anthropometric measurement to calculate BMI. Prior to fieldwork, focus group questions and a survey instrument concerning household demographic, migration, and food access/security information were created, based on literature review and existing survey instruments, including the USDA Economic Research Services' *U.S. Household Food Security Survey Module: Six-Item Short Form* (July 2008). All documents–including the survey, participants' statement of informed consent, and a receipt for the participation incentive–were translated into simplified Chinese by the graduate student (a non-native reader and speaker of Mandarin Chinese), and our collaborators in Nanjing.

Data collection occurred in or near our participants' homes and workplaces, with the Chinese research assistant serving as principle moderator and translator, accompanied by the PI and her graduate student at all times. Although this study used a convenience sample, focus groups were segmented based on household registration status (non-local/agricultural versus Nanjing/non-agricultural). All focus groups were audio recorded and transcribed by a native speaker of Mandarin Chinese; transcripts were translated from simplified Chinese into English by the graduate student. Following fieldwork, focus group data was analyzed and coded individually by both the PI and her graduate student,

with subsequent identification of key themes and content within and across transcripts. Survey data and anthropometric measurements were analyzed using Statistical Packages for Social Scientists (SPSS) software, version 21. Qualitative data from focus groups was cross-referenced with the quantitative analysis conducted in SPSS to provide further analysis.

Detailed information about the research methodology is found in the individual papers that constitute chapters three and four of this thesis. The University of Minnesota's Institutional Review Board for Human Subjects approved the focus group and survey questions prior to study initiation.

CHAPTER 3

FOODWAYS AND THE FLOATING POPULATION: DIET AND RURAL-TO-URBAN MIGRATION IN NANJING, CHINA

ROBERT SKORO, CHERY SMITH, YIXU JIN, AND QING FENG

MANUSCRIPT UNDER REVIEW AT APPETITE

Introduction

China's food system has undergone several periods of change since the founding of the People's Republic of China in 1949, the most recent of which have arisen since the end of the planned economy in the late 1970s (Tong & Wong, 2008). In this post-socialist era, numerous forms of social change have take place in response, dietary change being no exception. Surveys such as the China Health and Nutrition Survey (CHNS), an international collaboration between the University of North Carolina's Carolina Population Center and the Chinese Center for Disease Control and Prevention have documented China's "Nutrition Transition" (Popkin, 2004). As a longitudinal study that began in 1986, the CHNS has captured enormous heterogeneity and change connecting China's socioeconomic development to emergent trends in nutrition-related, non-communicable disease such as hypertension, coronary heart disease, and type 2 diabetes (Popkin, Du, Zhai, & Zhang, 2010).

Alongside its Nutrition Transition, China has experienced significant structural change involving urban and rural labor markets, contributing significantly to the revitalization of urban areas (Fan, 2007; Fan, 2002; Solinger, 1999). In converting what had become industrial centers in the mid-late 20th century into urban areas more consistent with transnational features of globalization–commercial centers, primarily–parallel shifts in rural labor markets have caused a dramatic swell in rural-to-urban migration in China over the last 30 years (Fan, 2007; Fan, 2002; Rong, 2008; Solinger, 1999). In addition to being the type of social change associated with China's Nutrition Transition, it has increasingly drawn attention to China's household registration and

population control policy, the *hukou* system. Under these regulations, every Chinese citizen is assigned a *hukou* location (*hukou suozaidi*) and an "agricultural" (rural) or "nonagricultural" (urban) *hukou* classification (*hukou leibie*; (Fan, 2007).

Since 1958, *hukou* policy has been the measure by which a geographic and sociological divide between urban and rural denizens is upheld (Chan, 2008; Chan & Buckingham, 2008; Fan, 2007; Solinger, 1999). However, this system has relaxed somewhat in recent decades as a means to draw human capital into these revitalized urban centers, resulting in two distinct types of migrants. First, there are those who relocate successfully (called the *qianyi renkou*), having their *hukou* reassigned to a new urban area, and thereby maintaining the entitlements to housing, health care, education, and employment that the *hukou* provides for them as new urban residents. Second, and more contentiously, there are growing numbers of China's "floating population" (*liudong renkou*), a class of migrant workers who relocate to urban areas in search of increased incomes, but for various reasons do not obtain a change in *hukou* status–often because of inaccessibility to urban *hukou* through formal channels in concert with the underlying aspiration to return home (Du, 2005; Yue, 1999; Zhao, 2002). This subset of the population has risen from 30 million in the mid 1980s (Solinger, 1999) to 150 million as of 2005 (Fan, 2007). In one profile of migrant workers, the size of China's floating population is projected to reach 300 million by 2030, then constituting approximately 20 percent of China's total population (Loyalka, 2012).

Along with the enhanced ability to earn income, being part of this floating population has well-documented negative impacts: rural access to entitlements are not transposed into a given urban environment; labor regulations and social stigma (including criminalization) limit the types of work in which a member of the floating population can engage, often to the most dangerous, exhausting, and/or low-wage forms available (Fan, 2002; Jahn, Ling, Han, Xia, & Krämer, 2011; Ma, 1998); separation from family and social resources (He & Gober, 2003; Zhao, 2002); and varying–even contradictory–impacts on mental and physical health have been shown (Chen, 2011; Yu, 2009). These inequalities are generally denoted by the conflict of agricultural *hukou* designation during urban residency, constituting a clearly identifiable social class of low-income, urban residents. Interestingly, this is a demographic that CHNS studies have also identified as being most at-risk for non-communicable, nutrition-related diseases such as obesity, cardiovascular disease, and hypertension–particularly because of their propensity to originate from rural households with moderate income and agrarian backgrounds (Du, Mroz, Zhai, & Popkin, 2004; Fan, 2007; Guo, 2000; Zhai, 2009; Zhang, 2008). As temporary but not necessarily short-term low-income urban residents, China's floating population thereby serves as an area for applying previous research methodologies for exploring relationships between food security, environment, and dietary practice (Franzen & Smith, 2009; Jones-Smith & Popkin, 2010; Richards & Smith, 2007; Wiig & Smith, 2009).

The hypothesis of this qualitative study was that rural-to-urban migrants adapt quickly to their new urban food environment, dropping traditional village foodways in favor of more convenient, less nutritionally diverse urban foodways. Our objectives were to a) determine how urban environments specific to the floating population, such as city-villages (*cheng zhong cun*, peripheral neighborhoods often slated for demolition and/or renovation), or institutionally-provided room and board could impact eating behaviors, food security, and BMI status; b) detect changes in consumption of energy-dense foods and beverages, including alcohol; and c) understand the degree to which foodways of one's native place (*lao jia*) were maintained through the migratory process.

Methods

Design & Sample

Taking place in Nanjing, Jiangsu, People's Republic of China, our study consisted of a convenience sample (n= 71) of male and female participants ranging from ages 16 to 82, with no exclusions based on level of education, time spent in Nanjing, or disease state. While we did not have an income amount as an inclusion/exclusion criterion, our focus on neighborhoods identified as low-income affected our sample to a similar end. Only one participant per household was included. One participant was under 18 and was granted permission to participate by her father at the time of recruitment and data collection.

During June and July 2012, we conducted focus groups (*n*= 12) consisting entirely of a) formal Nanjing residents–non-agricultural Nanjing *hukou* holders (*bendi ren,* meaning "local person", hereby referred to as "local") living in low-income neighborhoods of Nanjing–or, b) non-resident members of the floating population, with a *hukou* assignment from somewhere other than Nanjing (*waidi ren*, meaning "outside person", hereby referred to as "migrant") while living and working in Nanjing. With one exception, these *hukou* were designated as agricultural, as opposed to from another urban area. Holders of re-assigned *hukou* (*qianyi ren*) from somewhere other than Nanjing, holders of temporary worker *hukou*, or those who had acquired an educational *hukou* for attending post-secondary institutions were excluded from participating in our study.

We initially planned to conduct focus groups with equal numbers of migrants and low-income Nanjing residents as a basis for comparison of groups with comparable incomes but differing *hukou* status. However, after two focus groups with low-income Nanjing residents, we shifted our recruitment efforts solely toward recruiting members of the floating population. We found the data among our formal Nanjing resident groups to be consistent enough with existing literature (e.g. Liu & Wu, 2006; Veeck, 2000; Veeck & Veeck, 2000; Wu & He, 2004) that we felt it was not sufficiently beneficial for us to devote time and resources to generating our own primary data on low-income Nanjing *hukou*-holders.

Recruitment was done in person, often with the help of a primary contact living or working in the neighborhood of interest. Participants were compensated with 50 RMB

(roughly 8 USD) as well as a small gift (e.g. an umbrella). Signed statements of informed consent were obtained for all participants; in the event that a participant was illiterate, a native Chinese speaker explained the content of the statement to him or her. The University of Minnesota's and Nanjing Medical University's Institutional Review Boards (IRB) approved this study.

Measures and Analysis

Focus group questions were developed by the PI and her American graduate student based on existing literature and the methodological framework created by Krueger & Casey (2008). The questions, which were open-ended and included prompts, were then translated by the graduate student (a non-native speaker of standard Mandarin), and revised with our Chinese collaborators at Nanjing Medical University's School of Public Health to ensure demographic relevance and maintain a natural conversational flow. The focus groups were co-moderated by a Chinese student (a native speaker of a dialect local to Jiangsu province) and the graduate student, with the PI present for all groups. Our focus groups achieved saturation, meaning no new information was collected by the time the final group was conducted and therefore that our sample size was adequate (Krueger & Casey, 2008).

Demographic information regarding age, gender, ethnicity, education, income and employment, housing, place of origin, *hukou* status, and household and family composition was collected. Height and weight were measured with individuals wearing

as single layer of clothing and no shoes or hats to calculate BMI (kg/m^2). Participants filled out a short survey in simplified Chinese, which contained questions concerning dietary change, perceived health and diet quality, and food purchasing behaviors, as well as the six-item U.S. Household Food Security Survey Module (revised 2008) created by the United States Department of Agriculture's Economic Research Service.

Focus groups were recorded, transcribed by a native speaker of Chinese, and translated by the PI's graduate student. Transcripts were subsequently coded and reconciled by the PI and her graduate student. This qualitative data was evaluated in response to our initial questions and objectives, and new themes identified in our corpus induced further literature review and post hoc analysis. Themes were discussed with our Chinese collaborator when she visited the United States. Demographic and anthropometric data was analyzed using Statistical Packages for Social Scientists (SPSS) software, version 21.

Results

Participant Categories

Of our initial 71-person sample, four individuals were excluded from our final statistical analysis because of inconsistencies in the way they had reported their *hukou* status and/or place of origin during the initial screening process and later in a post-interview survey question on the same topic. Our final sample (n=67) consisted of two

categories: Nanjing *hukou* holders ("local" participants, *n*=12) and non-Nanjing *hukou* holders ("migrant", *n*=55; Table 1).

Gender, Age, and Ethnicity

Our "local" category consisted of six women and six men; our "migrant" category had 39 women and 16 men (Table 1). The mean age among all participants was 43.7 years old; the mean age among local participants was 55.6 years old; and the mean age of our migrant participants was 41.1 years old. Our local participants were all ethnic Han Chinese. In our migrant category, 50 out of 55 participants (91%) identified as Han Chinese; two participants were Hui (ethnic Muslims); one participant was Hani, an ethnic group of Tibeto-Burman linguistic lineage, who in China are most commonly associated with the mountainous areas of southern Yunnan province.

Education and Income

The majority of both migrant and local participants had achieved a level of education higher than elementary school, but less than completion of high school (Table 1). In our local category, 41.7% had an elementary education or lower, followed by 25% who had completed middle school. In the migrant category of our sample, 47.3% of our participants had completed middle school, while 34.5% had an elementary school education or less (Table 1).

Among our local category, 66.6% of our participants had individual incomes between 500 and 2000 Chinese Yuan, or *renminbi* (RMB), per month. Within our migrant category, 63.6% reported individual monthly incomes between 1,001 and 2,000 RMB, while 16.4% reported individual incomes of 2,001-3,000 RMB per month (Table 1). In 2011, the average individual income for employed persons in urban private units in Jiangsu province was ¥27,500 annually, with an unemployment rate of 3.2% (NBS, 2012). In our migrant category, a very weak correlation (r=0.092) was shown between level of education and income.

Place of origin, Time Spent In Nanjing and Travel to Hometown

Among our migrant participants, 95% originated from outer Jiangsu and Anhui provinces (Table 1). Migrant participants had been in Nanjing for an average of 7.9 ± 6.4 years and most often returned home annually, biannually, or monthly.

BMI, Self-Assessment of Diet and Health, and Food Security

Body mass index (BMI) ranged from 16.8 kg/m^2 to 35.3 kg/m^2 in our sample, with a mean BMI of 24.0 ± 3.53 kg/m^2. Men and women had similar mean BMI by *hukou* status, with Nanjing *hukou* holders having a higher mean BMI in the overweight range (Fig. 1). In total, 30% of our participants were overweight (BMI 25.0 to 29.9), and 4% were obese (BMI ≥ 30). Half of our local participants and 31% of our migrant participants were overweight or obese. BMI showed a positive relationship with years

lived in Nanjing for our non-Nanjing *hukou* holders (r=0.207), even after controlling for age (r= .156) and monthly income (r=0.211). The correlation between monthly individual income and BMI showed a slightly stronger degree of linear relationship (r=0.364; Figure 1).

Participants were also asked to rate the quality of their diet, weight, and overall health (Table 1). Most ranked their health as *fair* (40%), *good* (25%), or *very good* (30%). Only four ranked their own weight status as being *obese* (6%), while the rest ranked their weight as being either *overweight* (25%), *perfect* (28%), *somewhat thin* (25%), or *too thin* (16%). Calculation of Pearson correlation values showed significant correlations between monthly individual income and self-assessment of diet and overall health (0.367 and .520, respectively; $P<0.01$).

A majority of respondents indicated having high food security, with 15% of our participants indicating low or very low food security (Table 1). A moderately strong negative correlation ($r= -0.602$, $P<0.05$) between BMI and food security was found in among our local participants, but the relationship was negligible ($r= -0.019$) in our migrant category.

Qualitative Themes

While participants often suggested that their diet had not changed, through discussion we often found that both dietary composition and associated behaviors had shifted from those reported in their hometown. Qualitative themes arising from our focus group

discussions with migrant participants were as follows: a) dynamics of rural hometown food system; b) nutritional knowledge derived from Traditional Chinese Medicine (TCM) and rural experience, but influenced by contemporary media and notions of "low" culture; c) influence of occupation on mealtime and dietary patterns during migration; d) change in purchasing behaviors and food sourcing in the urban environment; and e) rural-to-urban dietary change based primarily on increased consumption of meat.

Dynamics of Rural Hometown Food System

All of our migrant participants came from a less-populous place of origin than Nanjing; all but one held agricultural *hukou* and came from a rural village (*nong cun*). As such, in their hometown all participated in the cultivation of fruits and vegetables, cash crops, or animal husbandry to some extent.

Small-scale horticulture was practiced among almost all of our participants, either in allocated land or the courtyard of their rural household. These gardens were kept primarily as a household food source to partially or in some cases completely offset household expenses. As one participant noted, their family "didn't go to the market to shop" for produce (*cai*). Nobody in a farm town had to go shopping at the market." In several instances surplus produce could be sold for income, but foods were not grown solely to be brought to market. As one woman described, "[We planted] different kinds of vegetables… could eat them all and then go sell them on the street." In their hometowns, the most commonly grown comestibles noted by our participants had been: eggplant,

tomato, peppers, cucumbers, watermelon, winter melon, green and soy beans, cowpea, garlic, chives, leeks, radishes, and persimmon; a variety of greens (*qing cai*) such as *kong xin cai*, *xiao bai cai* (commonly referred to as *bok choy* in the U.S.), amaranth (*xian cai*) and cabbage. One person reported having cultivated mushrooms, a rare example of small-scale growing geared principally toward marketing. Except for melons, fruit cultivation was also rarely mentioned; only one participant indicated that they had pear and apples growing in their hometown household. However, this individual's household had a larger-scale polycultural operation geared towards selling items at market.

Animal husbandry was also common, though not without great variation in practice. In our participants' rural households, chickens, ducks, and pigs were raised, and with distinct purposes and timelines for slaughter. Pigs, for instance, most often were raised to be slaughtered around the New Year; once processed the animal could serve as part of the multiple banquets that take place over the holiday, and be sold at market as needed. "Vegetables, meat dishes bought very little of that. Basically cultivated it all. Little chickens, little ducks–raised both," said one woman. "It was difficult for our family to not raise them, all my family raised animals." On the other hand, chickens and ducks offer a consistent source of protein by way of their eggs but could be slaughtered for consumption on a more at-will basis, with much lesser risk of waste or spoilage than a pig. Indeed, more so than their porcine counterparts, chickens and ducks were often explicitly *not* for sale. However, while this basis for slaughter was more loosely defined for some of our participants ("Want to eat chicken? Then kill one."), the obligation to

slaughter fowl for a meal to serve guests as part of a larger set of guidelines involved in commensality and relationships, or *guanxi*, could compel one to slaughter (or wait to do so) under different circumstances.

There were some novel instances of aquaculture and pastoralism as well. Whether because of geographic differences or entrepreneurialism, these practices had notable impacts on the discrepancy between the participants' hometown- and Nanjing-oriented dietary practices. One participant from northern Jiangsu had a fish tank in her rural home, which allowed her to sell fish. As a result, she was able to eat fish on a regular basis, adding that this decreased amount of oil she consumed and improved her diet since coming to Nanjing. Our two Hui participants, pastoralists from Gansu, had grown up with limited access to fresh agricultural products while grazing their animals in remote areas.

Agricultural practice as a primary source of income was common, but not nearly as much as horticultural practice or animal husbandry. Commodities such as rice, wheat, barley, corn, potato were grown in some of our participants' rural households. Equally as common among those who had produced cash crops before migration were rapeseed, sesame, and soy to be processed for oil. Like the smaller-scale horticultural practices, all comestible cash crops were an integrated part of the household food supply.

All of the above practices could interface with the purchasing of foods from traditional markets and small food outlets in or near migrant participants' hometowns. The cultivation of foods was often supplementary, as one participant whose family was not always dedicated to a more self-sufficient practice described. "Sometimes we'd buy a

little bit of vegetables, our own family didn't also raise [animals, at certain times]. Because my own family didn't raise [animals] then we'd go out to buy a little [meat]," she said. Furthermore, the time needed to travel to a food source, shop, and return could range dramatically, cultivation of foods at home not only offset costs, but also provided a useful convenience in household food supply. "You needed to walk quite a while [to the market]," recalled an older participant. "If it was eight o'clock, you'd need until noon to come back… Buy produce [*cai*] and then not be back until twelve o'clock." However, the convenience and savings of these in-home practices could also be cause for limiting household purchases. "Ai, yes! You think of something and then you cook [*shao*] it, it is not like in the city–in the countryside, don't need to buy it." But the notion of convenience cut both ways depending on the resources in either environment. "[In Nanjing,] it doesn't matter what you want to eat, it's all convenient. In my hometown, when you think about needing to eat, still need to go into town to shop. Here, if you have money than you can shop–no need to cook for yourself," explained one of our cafeteria worker participants.

The majority of migrants indicated an intention to return home to or with family. In many instances, property was being maintained by parents, siblings, or cousins, and even developed or remodeled for our participants' eventual return. Given this aspiration, the main reason for migration was to increase income. Across groups, the dominant reason for migration was simply "to earn money." Most participants, if married, had their spouses with them or even elsewhere outside of their hometown; in some cases children

had been brought to Nanjing either for childcare purposes or to attend higher quality schools than available in their hometown; in this latter scenario, education could influence those participants' term of migration.

Nutritional Knowledge

Our migrant participants' operating knowledge about nutrition was a discussion topic that introduced two key subthemes: their self-perceived "low" culture, and a casual framework for balancing dietary intake. While their knowledge of nutrition could be tied to their lack of culture and education, the framework they used informed deliberate choices in diet, manifested in overall dietary style, daily meal patterns, meal composition, and techniques used in preparing individual dishes.

In constructing a concept of healthy diet through our conversations, cleanliness and safety was treated as an obvious prerequisite, though by no means taken for granted. As one participant noted, "thinking about these [things, the features of a healthy diet], of course it's pollution-free [*wu gong hai*]." Once beyond that, the issue of what comprises a "healthy" diet, when probed, would often result in responses such as, "I really don't have the know-how at all. I haven't done the research on this stuff at all. Just that if you include some vegetables then that's okay." A more severe and common sentiment was voiced as, "I don't even have culture, I also don't know what things are nutritious," or "rural people don't devote any special attention to this." Moreover, migration was cited

as a barrier to overcoming that lack of knowledge; as one participant summarized, in the context of being in Nanjing to earn money, "who has time for cookbooks?"

However, knowledge of nutrition-related disease was something which participants across groups felt they could grasp. "Nowadays we are informed by books, newspapers, broadcast media about diseases, like obesity, coronary heart disease, hyperlipidemia and high blood pressure, so we know we need to eat [a balanced diet]." This exposure to media had didactic qualities specific to the prevention and management of nutrition-related disease, but led to singular behavioral changes such as using less oil for an overweight husband. "In the past, I saw people getting high blood pressure or diabetes after eating meat for a long time," recounted one of our older male participants. "So I just think *vegetables or fish only, vegetables are nutritious*. Vegetables contain Vitamin B, which is good for you." There are many programs that address or are devoted to food and nutrition noted by our participants, such as *Wan Jia Deng Huo* ("The Light of Ten Thousand Families") and *Jian Kang Zhi Lu* ("The Road to Health"), and even whole channels such as CCTV 7. But "after watching, then [you] forget it all.... I want to reach that level [of having a stronger idea of what constitutes a healthy diet], but based on our condition, we can't do it. We *do* want to do it, but in our life because of economic aspects, working aspects, don't have time to do it." As with other areas related to dietary practice such as meal preparation, time constraints further impeded a more robust concept of a healthy diet based on either Traditional Chinese Medicine or biomedical concepts.

Despite the constraints on nutrition-related knowledge, the concept of a healthy diet could be a) actively constructed on a meal-to-meal basis, b) manifested or defended through daily habit, and c) undergirded by the ideas of cleanliness and freshness. On a per-meal basis, the shorthand "one meat, two vegetable" (*yi hun liang su*) was ubiquitous across and within groups. Oil was by far the single ingredient that most participants elaborately regulated on a per-meal basis; it was not solely looked upon as something to be limited. While some participants–particularly female–would note that too much oil was bad for the stomach, or seasonally inappropriate, and too tiring or fattening, discussion of some dishes would address the need for substantial volumes of oil, such as eggplant or green beans.

As mentioned above, seasonality guides the consumption of certain foods and avoidance of others during certain times of year. Under those guidelines, dietary intake was often considered through the framework of overall daily consumption, as with one woman who described her daily routine, saying "I believe healthy diet is in the morning drink a little milk or soymilk and so on, lunch equal parts meat and vegetable *cai* is a little better, cook some fish soup or something, at dinner eat a little lighter." And in the cases of more casual eaters, such as (predominantly male) meat-forward dieters, that assurance was enough: "…According to science it's a mix of meat and vegetable, but I prefer to eat as I like. I don't say that it's vegetables for lunch, [or] dinner must eat meat." In the heat of summer in Nanjing, where temperatures routinely approach 100˚ Fahrenheit (38.7˚ Celsius), this could result in not only increased consumption of water

on a daily basis, but potentially reduce the number of meals from three to two per day. While the skipping of meals was not common among our participants, the hot weather was a deterrent of cooking in many cases, and two preparations were commonly turned into three meals.

Influence of Occupation on Mealtime and Dietary Patterns During Migration

Our migrant participants fell into four different subcategories based on occupation and/or residential location: *market vendors*, both from indoor and outdoor traditional markets; *city-villagers*, who had different forms of employment but lived in the same neighborhood on the outskirts of Nanjing; *campus workers*, who worked on the Nanjing Medical University campus and lived on our nearby it; and *hotel cleaners*, who worked together in a hotel and either lived in employer-provided housing or rented apartments with other family members nearby. This last subcategory of participants was unique in that they had one to two meals per day provided for them by their employer.

Market Vendors, Market vendors expressed the strongest degree of consensus when it came to successful continuation of their hometown dietary practice. With the exception of changing the principle staple (say from wheat in northern Anhui to rice in Nanjing), or switching species within a staple (e.g. rice) because of relocation, the positive byproduct of working in a market set the market vendors apart. Being involved in the food system on a daily basis led to greater awareness of factors influencing one's own dietary practice; most unique to this subcategory of participants was how the

managing of their business costs influenced what they eat. “We had some [*qing cai*, varieties of green, leafy vegetables] we grew ourselves, before in my hometown… now, now eat very little of it… too expensive, several bucks for a half-kilo,” said one participant, followed by another who further explained “this way, like [you eat] this type of produce you sell yourself,” with the rest of the group offering their agreement.

Timing of their meals had shifted most consistently as well, in response to the daily cycle at the market. They would have to wait until the busy part of their day is over to cook, eating lunch later than in their hometown, and pushing more of their food preparation activities into the evening than had occurred in their hometown. Still, in spite of their food choice being partially subject to the day’s business, most felt that the consistency in their dietary composition persisted–despite any irregularity in timing, the proximity to foods and control over cooking allowed for a diet much like in their hometown.

City-Villagers. Our city-villagers had a variety of ways in which they experienced forms of dietary change. The strongest sentiment involved a reorientation of meals around the work day, which involved skipping dinner to sleep early and waking up to eat breakfast. Most felt there had been no change in the flavors of the food they ate after coming to Nanjing. “I eat more meat dishes [*cai*], but my taste preferences haven't changed, it's made how I like it.” This sentiment, as with other groups, was the predominant indicator of dietary change. Like their market vendor counterparts, the control over their own cooking was an asset, and the convenience of acquiring a greater

variety of foods in Nanjing marked a significant improvement. In addition to an open-air market selling both fresh and ready-to-eat foods, there were multiple supermarkets, convenience stores, and Western fast food restaurants within a ten-minute walk of these focus group locations, despite being on the periphery of Nanjing.

Hotel Cleaners. Among our hotel cleaners a better diet was one that included more meat (but not excessively), and convenience had contributed to a perceived improvement in dietary quality–the range of available items were no longer constricted by the incentive to eat primarily what one produces. However, several of our hotel cleaner participants expressed a very unique change in diet since coming to Nanjing: they were eating less. “Here we're busy working, feel [I] just eat less a little. Anyways, I can eat anything.” While this change as an effect of time constraints was not entirely surprising, it was a curious change in that these hotel workers had housing, meals and insurance provided by their employer. The meals they were fed consisted of reheated or re-appropriated foods from the breakfast buffet served to hotel guests. At a minimum, all were served three dishes and a soup for lunch each day; several of those who lived onsite also had the option to be fed dinner. "We basically eat all in shops, don't shop [for food]," as one woman described. As a result of having their meals subsidized by their employer, less money was being spent on produce–freeing up money to purchase ready-to-eat foods.

University Employees. University campus employees consisted of one group of cafeteria workers and two groups of campus cleaners and handymen. As such, they were

predominantly male (four out of eighteen of these participants were female), but had distinct relationships with food by virtue of their occupation. As with other groups, their self-perceived improvement in diet was predicated on increased consumption of meat. For the cleaners and handymen, the option to eat in the campus cafeteria was available to them, but it was not free and the cleaners felt that the food was inferior. "No the cafeteria's not clean! [Group laughter]… The flavor is off, it's not delicious, not as good as what we cook ourselves." Indeed, better options were available off-campus, including meals prepared in their homes by or for their wives, which could invoke memories of being back in their hometown, as one participant explained. "I eat the food my wife makes, and ask *how am I in Nanjing [tasting these flavors]?*"

Those who worked in the cafeteria did not have criteria to serve certain quantities, proportions, or types of meat and vegetable dishes and therefore maintained control over what they ate. Particularly for the two Hui (Muslim) cafeteria workers, this relationship between food and employment was highly valuable, allowing them control over the *halal* sourcing and preparation of the foods they both served and ate. Even without the compounding religious dietary restrictions, the most significant dietary change for our participants was for those who were not from Jiangsu or neighboring Anhui province. There, they could not eat many fresh vegetables because of the higher cost of bringing produce into the remote countryside from Chengdu. Moving every two to three months, *tsampa* (barley porridge) and dairy products had been their staple foods, meat and vegetables were often cured or preserved, and fruit was scarce. Now in Nanjing, this

more recent migrant was exposed to an abundance of fresh vegetables and unfamiliar fruits, such as dragonfruit. Coupled with the adoption of new consumption patterns based on this availability, he used his occupation as a *halal* cook to ensure his adherence to those principles in the new, unfamiliar food environment.

Change in Purchasing Behaviors and Food Sourcing in the Urban Environment

While the influence of employer-provided meals could make it unnecessary or impractical to purchase unprepared foods, most of our participants indicated a) that they shopped for produce (*cai*) every day, buying basic ingredients such as rice and oil on an as-needed basis (e.g. monthly), and b) that there were conveniently located and affordable places to buy ingredients for cooking as well as ready-to-eat foods for in-home meal preparation. Even among those who did not have employer-provided meals, certain ready-to-eat foods such as steamed buns (*mantou* and *baozi*), or deli items (*lu cai*) such as salted duck could be used to augment meals prepared at home, saving preparation time or overcoming technological limitations under certain circumstances.

The sources of food consisted of four distinguishable categories: traditional food markets (*cai shi chang*), supermarkets, foodstuffs produced in one's hometown, and ready-to-eat food sources such as street vendors, food stalls, or different echelons of fast food and eat-in dining establishments. Utilization of these food access points are subject to a decision-making process involving hierarchy of values that drive purchasing habits; different types of foods (fresh produce versus oil, for example) entail their own rationale

when it comes to purchasing, and as food-oriented values move further away from a shared core among participants, that rationale falls more into the realm of personal preference. These values include food safety, freshness, price, convenience, flavor, and ritual behaviors.

The most important feature of all foods for our participants, in any purchasing context, involved cleanliness and safety. In several discussions of food feature priorities, this was understandably of such paramount importance that it could at first go unmentioned. This prerequisite of cleanliness informed virtually every type of food-oriented behavior discussed with our participants, from "if I cook on my own, then I'll know it's clean when the water for washing vegetables is clear," to "the small restaurants really aren't clean, so it's better not to eat outside at all," or "I found a good brand [of duck], it's clean." A related feature, the perception of freshness, could compound this issue, and thus tended to follow as a close second; a food item could be *not* fresh enough for consumption but not so much that it presented an actual health risk–its perceived nutritive value simply did not meet the standards for purchase. "We specifically buy today's [produce], said one participant," adding to another's statement that "The color of that *qing cai* [leafy green vegetables], yesterday's is not the same as today's." These standards were especially important in the context of traditional food markets, where produce and meats are kept unrefrigerated, and the highest standard for freshness came from those who sell foods in that context. But in the case of fresh, unprepared foods, the

risk of contamination could be offset by the fact that foods were purchased, handled, cleaned, and cooked by participants themselves, and usually on the same day of purchase.

Leftover cooked foods were subject to a unique evaluation of freshness, one that could be predicated on whether or a participant's house or workplace had refrigeration, the avoidance of waste, or the need for a convenient meal. "If there's a little left over, we'll just dump it out. If there's a lot leftover, then put it in a storage container and put it in the refrigerator," as one woman explained. Leftovers were often not viewed as edible past the second day, even when refrigerated, as in the summer heat of Nanjing fresh foods could sometimes barely survive to meet their first serving. As with our market vendors, "just pick what's a little soft" was the strategy employed to avoid wasting fruits and vegetables kept on tables under their daytime market canopies.

The use of fertilizers and pesticides versus the use of nightsoil was a subtopic that encompassed both the safety and freshness evaluations involved in defining a healthy diet as well as driving purchasing decisions. Thoughts on contamination, healthfulness, and overall appeal cut both ways within our group members: for some, conventional crop inputs and pesticides gave a more nutritious and appealing food, free from insect bites and with less risk of exposure to human or animal waste. "If it didn't pass [inspection at wholesale], they couldn't take it to sell," one of our market vendors told us. On the other hand, the insect bites, in moderation, became symbols of nutritive value and safety. As another market vendor indicated, "[If the] leaves have insect bites this is a good thing [particularly during the summer when the bug population is highest]. If you need to not

have insects, [then you're] looking for the really pretty stuff–but it's got an exceptional amount of fertilizer and pesticides." And there was also ambiguity: some felt that while they could judge freshness with ease at the market, they could not as easily determine how something had been cultivated. One participant raised the good question that even if one can tell whether or not a pesticide or fertilizer has been used, can he or she determine *when*? There were also some misconceptions about cleaning vegetables with fertilizers and pesticides applied–was soaking them in salt water a sufficient technique for cleaning them or not?

Price, convenience, and flavor influenced mealtime and purchasing behaviors, but with greater flexibility than safety and cleanliness. While there was a desire for goods to be convenient and inexpensive, the two scales could be leveraged against one another, as with oil and rice. Thus, supermarket shopping could more likely occur when items were on sale. As one woman explained, "if you're at the supermarket, maybe they'll have [rice and oil] going on [sale], at least it will be cheaper than here." Flavor tended to get a lower prioritization on the basis of foods being cooked by our participants themselves. Not only were they modest about the culinary merit of the food they cooked, but the control they wielded over their ingredients left many to feel like how they happened to make something was sufficient for their tastes as well. "Flavor?" remarked one of our market vendors, "the *cai* [accompanying dishes] I cook myself–wanna eat *weijing* [monosodium glutamate] then put it in these things… yeah, add some seasoning and what not–ginger, onion, *weijing*–just add these things, seasoning, soy sauce, these things. Meat dishes then

add a little soy sauce and these things. Just cook like this." However, flavor was a more important feature when it came to purchasing ready-to-eat foods. In the context of discussing those meals or purchases, safety and cleanliness were so absolutely necessary that places in which necessary standards were not met did not warrant conversation. Thus, convenience of stalls serving breakfast foods, or the flavor of a certain brand-name food product could become more important variables of evaluation.

Traditional Markets. Traditional markets were the most common type of environment in which our participants purchased foods. In comparison to other sources, price point was one driving feature for this; not only was it lower than the supermarket, but the price of many goods declines over the course of the day. More importantly, the food from traditional markets were fresher, according to our participants, and pursuit of freshness was a daily reality–part of an ongoing process that shoppers negotiate each time they purchase. "I definitely will buy which ever is fresh–one or two *mao* [one tenth of a Chinese *yuan*] more is irrelevant," was a typifying sentiment expressed by one participant. But not all strategies were the same: some participants would not buy meat in the afternoon for fear of spoilage; however, others would wait until after the morning rush to save a little bit of money on their produce.

Transparency was a noted quality of traditional markets that was closely related to that type of calculus. Many participants noted that, unlike supermarkets, the lack of packaging (or even refrigeration) in traditional markets allowed them to accurately gauge the freshness of foods for sale. As one participant explained "Sometimes the meat's not

fresh at the supermarket, it feels like. Sometimes it's expired, hasn't been exposed on television yet; so today's unsold meat–put in the freezer, tomorrow turn it into a fresh-wrapped one–take it out to sell again. The meat sold by people I know, they'll explain to me: this is fresh, this isn't fresh." Furthermore, the ability to discuss the cultivation and sourcing of products with vendors gave traditional markets an advantage over supermarkets.

In some instances, even small markets may have a brick-and-mortar shop or semi-permanent stall dedicated to the sale of grain and oil (*liang you dian*). But at one of the smallest markets identified as a primary food access point for two of our focus groups' participants, oil was sold (and resold) in similar fashion to more perishable foodstuffs–on a table or off a trailer. It was this context that oil was understandably suspect. "Shopping at the supermarket can make you feel somewhat more at ease," said one woman. "[It's] a bit more authentic [as in the products are genuine]. I wouldn't dare shop [for rice and oil] outside."

In that sense, traditional markets represent a venue for a more open dialogue about food supply for our participants, but specifically for fresh foods. As one young woman noted, if she felt uncertain about something at the market, there was likely someone nearby who's opinion could be trusted. "[In the event of uncertainty], we normally have other people inside [the market] come over–'He [used to] plant a little bit; they don't eat that in his house, then I won't pick that kind.'" And for those of our

participants who worked in the markets assuring quality for their customers was explicitly in their mutual interest as part of a business community.

Supermarkets. With different operating hours than traditional markets in our participants' neighborhoods, the omnipresence of local chains like Suguo, or international grocers like Walmart or Auchan make them strong competitors for incidental or convenience shopping and also provide an alternative discourse to the temporal cycle of traditional markets, sometimes twenty-four hours a day. In supermarkets, the freshness of produce was generally regarded as being inferior to the traditional markets' offerings: "none of the vegetables in the supermarket are fresh, not as fresh as the [traditional] market," declared one woman. But for shelf-stable products like rice and oil, supermarkets often had an advantage over other venues. "Shopping at the supermarket can make you feel somewhat more at ease," said another woman. Unlike the attitudes about meat and produce expressed above, the climate-controlled environment of the supermarket could be an assurance of quality that eluded open-air settings or even grain and oil stalls in traditional markets, where concerns less avoidable than recycled oil such as post-purchase mold came up.

Furthermore, products with brand identity–namely rice, oil, bottled water, and packaged foods were associated most strongly with the supermarket environment. "The supermarket is normally a bit more trustworthy, I wouldn't dare shop [for rice and oil] outside. But as participants in some groups suggested, branding also allowed traditional markets to garner a sense of authenticity and safety like that of the supermarket. "[The

oil is] the same, the same thing. Some people they think it's a supermarket product, actually it's the same thing. When you go in to buy, the supermarket, it sells the same name brand. It's all the same," asserted one market vendor, expressing a belief reiterated by some of our participants who did not have a vested interest in upholding the integrity of the traditional market. Supermarkets also have periodic sales as opposed to the daily price decline of traditional markets, again with a distinct implication about the relationship between time and food purchasing. However, promotional tools such as "buy one, get one free" were met with suspicion. As one participant asked, what does that 50% discount say about overall quality?

Hometown Foods. Hometown food access was a novel occurrence among our participants, but one that uniquely suggested a strong desire to maintain the foodways of their hometown. Whether foods were delivered or retrieved from one's hometown, they not only represent a means by which the relationship with family and friends that place is maintained, but a method of maintaining one's dietary practice and rural identity.

This practice was motivated by efforts to save money, to nostalgia for the flavors and textures of home. "We can't buy our countryside [free-range] chicken [in the markets in Nanjing]. So if we want to eat chicken, basically we will bring it from our hometown," as one woman described. Similarly, rice, wheat, and oil were delivered from the hometowns of several participants to meet the preferences of their hometown palate, save money, or maintain family connections. "Now it's essentially still this way [like in our

hometown]: oil is bought, eat rice grown in my family's own paddy," as one participant told.

Ready-to-Eat Foods. Our participants also operated with multiple distinct concepts of "eating out", in which buying ready-to-eat foods for breakfast such as steamed buns (*mantou* and *baozi*) or sesame pancakes falls under a different category than eating in a lower-scale noodle or dumpling canteen. These types of purchases were regarded as commonplace. "We ate *mantou* in our hometown, here to eat *mantou* you go buy them at the supermarket," as one woman described. "Roast duck, I'll buy that in the [traditional] agricultural market [*nong mao shichang*] … normally I'll pick some up on my way over here," described another. Beyond those two more common practices was a third, more elusive dining experience such as an organized banquet (*yan hui* or *ke fan*) reserved for special events. A concise way of describing the organizing principle for these activities would be to say that it involves a negotiation between daily time constraints, a specific concept of affordability, and ritual elements of normal Chinese life such as meals with coworkers to build relationships (*guanxi*), with the objective being to attain the highest degree of tangible benefit (*shi hui*).

Institutional workers such as the hotel cleaners and university cafeteria and campus maintenance workers were most intimately engaged in the purchase and consumption of ready-to-eat foods. As roughly half of those we interviewed lived in housing provided by their employer, the opportunity to have meals provided reduced the incentive to cook for oneself. "[Outside of the communal meal at work] we basically eat

entirely in shops, don't shop [for produce]," said one woman. This type of behavior could be encouraged or decreased by the influence of family, depending on the living arrangement. For example, a woman who lived in the hotel-provided dorm noted that if she felt like she needed a break from the communal food and nearby restaurants, she could always "buy a little brined duck, bring a little something from the deli [*lu cai*]" over to her cousin's home. Consumption of bottled water had often increased as a result of coming to Nanjing, while soda, sweetened tea, and beverages sold from street-side stalls in the summer heat were less of interest. "I don't drink bottled beverages, just like to drink spring water. Need to drink a little of that–what is it?–[laughing] a little milk tea [bubble tea]; those iced red teas, not used to eating those," said one of our market vendors. "I won't buy bottled beverages… I wouldn't buy them in my hometown, either, because right now in beverage products the sugar [and] coloring levels are too high." But in many cases the convenience of bottled water had eclipsed the practice of boiling (and sometimes cooling) water for drinking in home or at work. Consumption of the omnipresent bottled beverages sold throughout the convenience stores and less formal stalls that often numbered four or more to a block in some neighborhoods in which we conducted focus groups carried with it a generational implication as well–one of our youngest participants, teenage male who had struck out on his own to work in Nanjing, told us he drank two to three bottles of Sprite or Coca-Cola per day and that, like another young participant, he would go to McDonalds or KFC to get soda, but not the food.

Many of our participants told of infrequent, decreased, or abstained consumption of alcohol since arriving in Nanjing, but not without a number key of exceptions. The descriptions of more moderate behaviors surrounding alcohol ranged from "I drank a bit back in my hometown, rarely drink since coming here," to "normally every day at lunch [share] one bottle, dinner [share] one bottle–all beer." For those who indicated alcohol was most regularly consumed, the increase at hand was not so much in quantity but in quality. "When it's hot, then I'll drink a bottle of beer. I drink *bai jiu* [a distilled grain alcohol] every day anyways… I was like this in my hometown… now at least I have money." As another man added, "my financial state is irrelevant to drinking alcohol. In bad times drink low quality alcohol; in good times drink good alcohol. But the amount won't decrease."

Unlike Chinese ready-to-eat foods, Western fast food was an option not utilized by most of our participants, at least not for their own needs. Rather, the strongest sentiment we encountered concerning places like McDonald's or KFC was that they were novel sources of alimentary entertainment for the youngest generation of their family. As a ready-to-eat food source, Western fast food was viewed mostly as a frivolous expenditure–hence the treat for kids. In addition to being clean, most believed meals had to be *shi hui*–having tangible, economic benefit and being affordable–and McDonalds and KFC neither met the criteria for safety or price point. Many of our participants would indicated they'd tried it out of shared experience with their children, saying things like "I've eaten it; I brought it for my kid to try." But outside of that effort to expose their

children and grandchildren to novel foods in an urban environment, it did not suit the palate of older generations–as that same woman who brought fast food for her child to try clarified, "adults don't eat it, little kids eat it." Paradoxically, a second topic that frequently arose in the parts of our conversations dealing with Western fast food was that it was unsafe–riddled with preservatives, hormones, or unknown substances. As one young woman explained, "it's not that the flavor isn't good, I think it's not suitable to the way I feel, not something I really like. Also, also I saw something on the internet [that] said those chickens, they're all injected with something." But the opportunity for the novel experience with family was more compelling than the fear of an adulterated (but not necessarily unclean or unsafe) food. "It's okay, me and my son both like to eat those New Orleans flavored barbequed wings," as one woman said.

Rural-to-Urban Dietary Change Based Primarily on Increased Consumption of Meat

The majority of our participants often initially felt there was little or no change in the types of foods they consumed post-migration, frequently describing their rural and urban diets as *cha bu duo*, "more or less the same". Given the predisposition to ultimately return to one's hometown, this assertion of continuity makes sense on a certain level. As one participant explained, "because of this bitterness [as in "eating bitterness", *chi ku, a* metaphor for enduring hardship], you need to eat well for your health; if you drag your health down, won't you have [eaten] bitterness in vain?" This has much to do with the geographic proximity maintained by our participants as well, resulting in a

familiarity with the culture and foods of Nanjing prior to migration. “I felt Nanjing is the [former] capital and has a sense of identity,” said Uncle Yu. “Like Shanghai we don't understand their language, right? Same with Guangzhou. The living conditions and the vegetables they eat are different, but here it’s almost the same. Shanghai dishes are too sweet and I can’t get used to Guangzhou foods either."

Furthermore, the migration with family enhanced our participants’ ability to eat in the home, with foods being prepared in much the same way as in their hometown. “[My] tastes haven't changed. My own family members cook, and no outsiders. My own family's tastes haven't changed, anyways.” Among our hotel cleaners mentioned above, the aesthetics may not have changed, but as one woman noted “[the communal meal at work is] just not as flavorful [*xiang*] as my hometown.” Thus, the other half of the institutional workers who did not live and eat primarily on campus told of the influence their family on dietary style, with spouses doing much of the shopping or cooking at home, and adding to the critical mass to uphold the aesthetic and preserve the integrity of their hometown flavors. “My husband, as soon as he comes home,” told one woman, “he always says, ‘as soon as I come home I want to eat the chicken you cook–Nanjing doesn’t have it,’” with hometown memories being recalled through food, a sentiment noted by several other participants.

However, further discussion often revealed inconsistencies in dietary composition, food access between rural and urban environments, and taste preferences. The most frequent change indicated across all groups, regardless of age or occupation,

was increased consumption of meat. A common type of description was “in my hometown, we’d just eat meat every other day or two days, but now we eat it every day.” Particularly among older participants, meat consumption had increased from one to two times per week to as much as three times per day. And in cases in which participants did not feel that such a change had taken place in their diet, they readily acknowledged that this was a conscious effort of maintaining an earlier dietary style.

The convenience of acquiring a wider variety of foods was a noted change between rural and urban environments, as previously indicated. While many had journeys of thirty minutes or less, for others the change between rural and urban settings could be a dramatic improvement. Like our participant who noted a half-day voyage to market and back in her hometown, one participant from Yunnan who ate two meals a day in her hometown, sourcing her food in part through foraging the mountains surrounding her home, gave an even more extreme example. As she reflected, "it was a serious thing to go to the market. You'd go to the market to buy *cai* [produce], you needed to shop for a week, you wouldn't have the market for another six days." Furthermore, the frequency or timing of foods had often changed for our participants, as well as the means by which those foods were acquired or prepared. In the hometown context, the mid-day meal was the primary cooking episode, whereas in Nanjing it was liable to be shifted to the evening per individual or household work schedules. This shift occurred for obvious reasons among our cafeteria workers, who ate on the job, but for those who were self-employed, meals were reoriented around peak business hours. “I'm really busy, I don't eat very

regularly [lit. "on time"]… I ah, I like, in my heart I want to eat well–just at home, cooking for myself. But I don't have that time to cook, so every day in the morning I buy [something] to eat… I don't like to eat purchased [foods] at all, it's just I don't have time to cook." These types of time constraints influenced participants' dietary practice in other ways as well, making the reheating of leftover foods and consumption of bottled instead of boiled water a more regular occurrence in Nanjing.

Discussion

The major findings of this study were a) lower mean BMI among migrants in comparison to their local counterparts, and a high degree of food security given their social and structural position; b) migrants' formative rural experience and notions of "low" culture interfaced with more supplemental biomedical concepts to constitute an operating knowledge of nutrition, which held divergent values about the increased consumption of meat; and c) the daily purchase of fresh foods in traditional markets was the most prevalent means of food access, allowing for the maintenance of hometown foodways.

Migrants Have Lower BMI Than Their Local Counterparts and a Comparatively High Degree of Food Security

Migrants' BMI. The income increases and environmental changes brought about by migration do not appear to be mutually exclusive of a healthy BMI for our migrant

participants. While we lack baseline measurements for comparison, transnational migration has been shown to increase BMI in a range of cultural and diasporic contexts to unhealthy levels (Cairney, 1999; Himmelgreen, 2004; Madrigal, 2011). Migrant participants had lower mean BMI than their local counterparts (23.6 versus 24.7 in women; 23.8 versus 26.1 in men). Studies based on 2002 and 2006 rounds of CHNS data identified mean BMI across China ranging from 22.6 to 23.1 ± 3.7 respectively, with BMI slowly moving upwards among both men and women in China since the 1980s (Shankar, 2010; Zhai, 2009; Zhang, 2008). We found strong correlations between BMI and income and BMI and time spent in Nanjing, our data suggests both factors–more so than the transition to an urban environment per se–contribute to increased BMI among migrants. Notably, a weak positive relationship between age and BMI was shown in migrant women, but none was found in men within our migrant sample. .

While previous studies have segmented for rural and urban residency, to our knowledge this is the first study of its kind to focus specifically on dietary practice among migrant workers in China in a contemporary setting. A source of inspiration was a study by Zhang (2008), which analyzed increased corpulence in CHNS data through segmenting into a range of traditional to globalized food consumption patterns, income levels, and urban versus rural residency. In comparison to urban categories defined as being more globalized in their consumption habits, their middle-income, rural "Green Water" category showed the lowest rates of obesity while consuming the most diversified traditional Chinese diet. Not only did this category consume a diet most similar to that of

our migrant participants' hometown diet, but their moderate rural incomes and good health are most predictive of rural-to-urban migration in China (Chen, 2011; Zhao, 1999). Interestingly, 64% of our migrant participants had annual individual incomes between 12,000 and 24,000 RMB in Nanjing, an income range that Zhang (2008) found corresponded most frequently with urban consumers of more Westernized foods as well as the highest rates of obesity in their study. However, this income range was below the mean individual income of 27,000 RMB for privately employed Nanjing residents in 2011(NBS, 2012). Therefore, in light of our migrant participants' healthy BMI status and enhanced but still moderate ability to earn income, we suggest that features of their dietary style, in conjunction with the financial motivations to send remittances and/or accrue family savings during migration (Hu, 2011; Taylor, 2003; Zhao, 2002), contribute to the maintenance of a healthier diet than that found in their urban counterparts.

Food Security. Eighty-six percent of our sample indicated high (70%) or marginal (15%) food security, with approximately 15% of our total sample indicating low/very low food security. Policy changes involving land tenure and the liberalization of the agricultural economy alleviated food poverty in China dramatically during the early 1990s (Bohle, 1994), but China was also home to the second largest number of developing-country malnourished children at the turn of the century (Smith, 2000), suggesting that issues of food insecurity might still pertain to a marginalized population segment such as the floating population. Though the rates of food insecurity we found show room for improvement, they are also impressive when one considers the not-too-

distant historical context of severe famine resulting from the Great Leap Forward in the late 1950s and early 1960s (Kung & Lin, 2003).

While availability, access, and utilization are the basic tenets of food security (Barrett, 2010), elements of behavioral economics and social psychology are increasingly being used as areas in which to improve upon existing notions of food security/insecurity, including loss aversion, time inconsistency, and the framing of decisions (Timmer, 2012)–to name just the few that applied to our participants. The orientation of purchasing time around peak freshness (though cost does decline over the course of the day as well) was a salient example of value-oriented shopping for less expensive comestibles, and most felt that the difference in cost between peak freshness in the morning and a less desirable state in the afternoon was negligible. The tacit consequence is that the nutritive value has also decreased, even if the food is not spoiled or expired; in the Chinese estimation, this does not matter whether it is refrigerated or laying on an open-air market table (Veeck, 2000)–it loses its *qi*, its essence, upon harvest (Anderson, 1988; Beinfield, 1992). Therefore, when there is such a strong emphasis on the fresh preparation of certain categories of food, such as *cai*, the meat and vegetable-based dishes that accompany staple foods, that contextual shift reframes practices such as stretching or reheating of foods–practices which otherwise might invoke little or no connotation of food insecurity.

"Low" Culture and Biomedical Concepts Impact Notions of Healthy Diet

On one hand, the epistemology employed by our migrant participants was derived from their rural experience; on the other it was informed by a larger system of cultural values about it. Our migrant participants' operating knowledge about nutrition was bounded by two key elements: the "one meat, two vegetable" shorthand, which served as a casual framework for balancing dietary intake; and their self-perceived "low" culture, which limited their ability to understand, articulate, or enhance their conception of a healthy diet. Together, these features of dietary practice interfaced with biomedical concepts relating to disease etiology, delivered through media such as television and the Internet. With key descriptors of "balance" (*ping heng*) and "harmony" (*shufu*) alluding to basic principles of TCM amidst our participants' discussion of what makes a diet healthy, there is a more general form of intrinsic cultural knowledge about diet that they continue to employ during migration. At the same time, there was a perspective regarded as being more modernized which they felt they could not grasp as capably.

Constraints of Low Culture. Levels of culture, education, and subsequently knowledge were disclosed as impediments to our participants' ability to describe ideas of healthy diet. While this is related to the comparatively low level of education among our participants, it is not solely a product of it. Social, cultural, and economic marginalization is widely acknowledged to be a fundamental feature of migrants' experiences (Du, 2005; Fan, 2007; Fan, 2002; Gaetano & Jacka, 2004; Jacka, 2005; Solinger, 1999; Yu, 2009; Zhao, 1999). While examples of that marginalization resulting from state policies and

urban development have been explored since the late 1980s by many authors, Jacka (2005), Kipnis (2006) and Sun (2012) have more recently brought attention to what Sun calls the "culture of inequality" that marginalizes China's floating population. At issue with China's "blindly floating" (*mang liu*) migrant population in this regard is the questioning of their *suzhi*, the "essential quality" of their individual and collective subjectivities (Jacka, 2009; Kipnis, 2007; Murphy, 2004).The social issue of *suzhi* is closely linked to education and knowledge, such that a lack of education is tantamount to a lack of individual quality (Jacka, 2009; Kipnis, 2006)–the implication being that having low "essential quality" inhibits one's ability to integrate knowledge of a certain complexity or with expertise. Tied to our data more directly, Tamara Jacka has demonstrated in her ethnography of Beijing migrant women how referring to one's lack of culture or education can be a euphemistic talking point used to address the basis of pejorative social discourse about migrants' *suzhi* without engaging the more intrinsic, personal connotation that the term carries. In this way, migrants' state of being uncultured was a de facto constriction on the ability to advance their knowledge of nutrition as a medical paradigm or even improve their technique as cooks.

However, the influence of media on nutritional knowledge, public health, and food safety was noted several times. The incorporation of biomedical concepts often related specifically to disease etiology, and therefore conferred singular effects on diet as opposed to a reframing or abandonment of their endemic rural diet for a more Westernized practice overall. These channels of information also provided awareness of

food additives and their negative health effects for a variety of topics such as preservatives and hormones, added sugars, or artificial coloring. In this way, the development of nutritional knowledge and a dietary practice involving medical pluralism belies those caveats of "low" culture. Though it may not be explicit, there is evidence of a firm grasp on healthy dietary practice among our participants, both in terms of behaviors and outcome; while we do not agree with the assertion that our participants were "floating blindly", our data contradicts the notion that they might somehow be "eating blindly" on account of low levels of education or, more subjectively, a lack of culture.

"One Meat, Two Vegetable". Across groups we saw the tendency for gendered preferences for vegetables, fish, and "lighter" (*qing dan*) foods among women; a preference fatty meat among men–particularly older men–as well as an aversion to fruit. Men emphasized meat content in their diets more often than our female participants, and women were more likely to indicate abstinence from meat either as a seasonal practice or a long term-dietary approach. As in many cultures, foods are gendered in Chinese culture, most notably through the *yin*/*yang* binary of Traditional Chinese Medicine (Granet, 2007; Scheid, 2002), traditional values (Yan, 2005), and subsequent ideas about social roles, sexual health and reproduction (Anderson, 1988; Farquhar, 2002). However, it's important to note that foods regarded as "light" (*qing dan*) are not necessarily low-fat but rather light in flavor or spice. For example, preference for light foods was seasonally appropriate for mid-summer, as well as being an effective measure for tending to a sensitive digestive system.

Noted repeatedly as an outcome of increased meat consumption, fatness was also discussed in paradoxical terms, as a symbol of healthiness but an indicator of disease risk as well. Consumption of meat contributed most significantly to this area of discussion, carrying associations of healthfulness, sustenance and growth on one hand, but adiposity and obesity on the other. While protein could be a strongly-emphasized macronutrient, most participants did not conceive of meat as being the centerpiece of their diet. Save for the small number of vegetarians in our discussions, a "one meat, two vegetable" (*yi hun liang su*) shorthand explicitly defined proper meal composition across groups. Since the dismantling of the state-controlled rationing system in the late 1980s, net energy and protein intakes in China have decreased over time for both urban and rural residents, but the quantity of animal-based protein has increased as a percentage of total calories (Zhai, 2009), as has edible oil consumption (Du, 2004). However, our participants did not raise the issue of increased oil consumption in comparing their urban and rural dietary practices. This is likely related to the fact that the greatest increases in oil consumption in relation to household income occurred prior to 1997, and oil has been an inelastic commodity since the 1980s (Du, 2004; Ng, 2008). Furthermore, meat, not oil, is the comestible most significantly constrained by price in both rural and urban China, and into the 1990s, the poorest urbanites still consumed more meat than rural residents (Leppman, 1999; Liu, 2009).

Traditional Markets Allow for Dietary Continuity During Migration

While the stigma of food additives mentioned above was most often brought forth in discussing Western fast food or shelf-stable products in supermarkets, traditional markets (*cai shi chang*) were never implicated in discussion of this type of adulteration. Obviously this distinction does not benefit migrants alone–but in the context of originating from a rural place less likely to host as many of these more modern or globalized food sources (if at all), traditional markets represent a valuable source of familiarity and transparency in food purchasing and subsequently consumption to our migrant participants. We find that dietary knowledge, values, and practices can be sustained during migration, maintaining an emphasis on the daily purchase and consumption of fresh foods over shelf-stable, calorically dense and nutrient-poor foods that become increasingly available in urban environments (Jones-Smith & Popkin, 2010; Kusuma, Gupta, & Pandav, 2009; Madrigal, 2011; Pingali, 2007; Veeck, 2000).

Increased purchasing power is enhanced by the convenience of accessing foods in Nanjing; our participants all had frequented food access points within ten minutes of their place of residence, depending on the means of travel available to them. However, the increased convenience of purchasing foods pertained more to traditional market access than the utilization of newer or novel aspects of the urban food environment such as convenience stores and supermarkets. Attempts to improve upon but not abandon migrants' hometown foodways occur during urban residency. In turn, these efforts drive behaviors that may help protect against unhealthy BMI for rural-to-urban migrants in China (Zhang, 2008). While increased consumption of meat may be a potentially

problematic exception, the principles of a healthy diet described by our participants provide sufficient capability to avoid risk of non-communicable nutrition-related disease. (NR-NCD; Popkin, 2004).

In discussion of the Westernization of diets across Asia, Pingali (2007) has noted that the process often occurs in two stages: first, with income-induced diversification of diets, followed by a second stage in which diet becomes more globalized and Westernized, "severing the link between diets and the local availability of resources and local habits." We found elements of diversification among our participants' experiences more so than those of the later-stage abandonment Pingali suggests. Given the deep regional identity of cuisine in China (Anderson, 1988; Swislocki, 2009), it is understandable that our participants often initially indicated that the aesthetics of their diet had not changed significantly, since the majority of migrants came from within a 300 km radius of Nanjing. What it seems we observed is not so much a desire to adopt Nanjing customs and "act the part" to become a local, but rather to maintain connection to the foodways of their hometown both for financial purposes and reasons of identity.

As the name suggests, traditional markets operate on a culturally-acceptable cycle, familiar to our migrant participants. Veeck (2000) has noted changes in the food marketplace in Nanjing since the 1990s, both in the infrastructure and the services it provides, and in turn the implications of class structure with which certain types of food access points are imbued. Also like the segmentation used by Zhang (2008), Veeck & Veeck (2000) have also written about how the increased purchasing of convenience

foods, dining outside of the home, and patronage of retail food outlets are features that have developed specifically to meet the needs of (*formally*) urban residents. Contrary to the offerings of traditional markets, the rise of supermarkets offered services which played only peripheral or incidental roles in the purchasing behaviors of our migrant participants, such as self-service bakery items and packaged, shelf-stable snack foods. These types of foods are noted as markers of a more globalized diet of urbanites in China (Zhang, 2008) and especially younger generations who may not have been exposed to China's pre-socialist-market economy (Watson, 2000). Highly trafficked during the peak hours we observed, the traditional markets proximate to and in which we conducted focus groups were clearly resources to those living nearby, and all the "low-income" neighborhoods in which we conducted focus groups were referred to us by Nanjing natives and/or long-time resident colleagues.

Conclusion

Our findings suggest four key points: First, healthy BMI and increased income are not necessarily mutually exclusive for migrants. Second, dietary knowledge and practice can be sustained during migration, despite environmental changes involving food access. Third, factors used assess food security can be improved for a population segment such as China's floating population, both as migrants in the broader sense and as a unique demographic within China. Last, traditional markets can play an instrumental role in all of the above scenarios.

Our study depicts a sample of migrant workers in one of China's larger urban areas, capable of maintaining a lifestyle that may put them at lesser risk for NR-NCDs than their urban counterparts. However, as Chen (2011) has illustrated, there are features of China's floating population that may confound such findings or erode the chances of this "healthy migrant" phenomena continuing: first, migrants self-select–their movement is most often voluntary and as such contingent upon pre-existing healthiness. Second, their lack of access to healthcare during migration may cause them to underreport or disregard changes or problems in their health. Third, in the case of serious illness, the retention of their rural health insurance (*nong bao*) may cause them to return home, which may adversely affect their income and result in newfound health risks upon return migration (Qi & Niu, 2012; Zhao, 1999).

In addition to its historical significance as the former capital, being one of China's mid-sized cities made Nanjing an apt destination for our study. Unlike cities such as Beijing, Shanghai, and Guangzhou, which boast some of China's largest urban populations and draws for internal migration (Chan, 2008; He & Gober, 2003), Nanjing is situated in the midst of these migratory flows but not a major destination itself. Nanjing also relaxed its *hukou* policy in 2004 to allow for more permissive inflows of migration (Fan, 2007). Away from these more competitive labor markets for migrants, our study participants may have better access to resources supporting their health outcomes than those in *du cheng*, exceptionally large urban areas (Jahn, Ling, Han, Xia, & Krämer, 2011; Zhou & Cai, 2008). However, as there are dozens of cities with populations over

one million in China, and migration is not exclusively to those *du cheng*, the situation of our study in Nanjing may be more representative of migrant experiences across China in some ways as well.

We hope that careful consideration of the knowledge-, income-, and structurally-oriented resources at play in our study highlight elements of extant dietary practice in contemporary China. As these behaviors are in part attributable to traditional forms of cultural knowledge, we feel that selective promotion and utilization can be used to mitigate the trend of overconsumption and NR-NCD within at-risk demographics in China's population.

REFERENCES:

Anderson, E. N. (1988). *The food of China.* Yale University Press.

Barrett, C. B. (2010). Measuring food insecurity. *Science, 327*(5967), 825. doi:10.1126/science.1182768

Beinfield, H. (1992). In Korngold E. (Ed.), *Between heaven and earth : A guide to chinese medicine*. New York: New York : Ballantine Wellspring.

Bohle, H. G. (1994). Climate change and social vulnerability: Toward a sociology and geography of food insecurity. *Global Environmental Change, 4*(1), 37. doi:10.1016/0959-3780(94)90020-5

Cairney, J. (1999). Time since immigration and excess body weight. *Canadian Journal of Public Health, 90*(2), 120.

Chan, K. W. (2008). *Internal labour migration in China: Trends, geographical distribution and policies* No. UN/POP/EGM-URB/2008/05)

Chan, K. W., & Buckingham, W. (2008). Is China abolishing the hukou system? *The China Quarterly, 195*(1), 582-605.

Chen, J. (2011). Internal migration and health: Re-examining the healthy migrant phenomenon in China. *Social Science Medicine,*

Du, S., Mroz, T. A., Zhai, F., & Popkin, B. M. (2004). Rapid income growth adversely affects diet quality in China--particularly for the poor! *Social Science Medicine, 59*(7), 1505. doi:10.1016/j.socscimed.2004.01.021

Du, S. (2004). Rapid income growth adversely affects diet quality in China--particularly for the poor! *Social Science Medicine, 59*(7), 1505.

Du, Y. (2005). Migration and rural poverty in China. *Journal of Comparative Economics, 33*(4), 688. doi:10.1016/j.jce.2005.09.001

Fan, C. C. (2007). Migration,*Hukou*, and the city. In S. Yusuf, & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 65-89). Washington, D.C.: Washington, D.C. : World Bank.

Fan, C. C. (2002). The elite, the natives, and the outsiders: Migration and labor market segmentation in urban China. *Annals of the Association of American Geographers, 92*(1), 103. doi:10.1111/1467-8306.00282

Farquhar, J. (2002). *Appetites: Food and sex in postsocialist China* Duke University Press.

Franzen, L., & Smith, C. (2009). Acculturation and environmental change impacts dietary habits among adult hmong. *Appetite, 52*(1), 173. doi:10.1016/j.appet.2008.09.012

Gaetano, A. M., & Jacka, T. (2004). Migrant women's stories. In A. M. Gaetano, & I. ebrary (Eds.), *On the move women and rural-to-urban migration in contemporary China* (pp. 279). New York: New York : Columbia University Press.

Granet, M. (2007). Right and left in China. In M. Lock, & J. Farquhar (Eds.), *Beyond the body proper* (pp. 41). Chapel Hill: Duke University Press.

Guo, X. (2000). Structural change in the impact of income on food consumption in China, 1989-1993. *Economic Development and Cultural Change,* , 737. doi:10.1086/452475

He, C., & Gober, P. (2003). Gendering interprovincial migration in China. *International Migration Review, 37*(4, The Future of the Second Generation: The Integration of Migrant Youth in Six European Countries), 1220-1251. Retrieved from http://www.jstor.org/stable/30037792

Himmelgreen, D. A. (2004). The longer you stay, the bigger you get: Length of time and language use in the US are associated with obesity in puerto rican women. *American Journal of Physical Anthropology, 125*(1), 90. doi:10.1002/ajpa.10367

Hu, F. (2011). Circular migration, or permanent stay? evidence from China's rural–urban migration. *China Economic Review, 22*(1), 64. doi:10.1016/j.chieco.2010.09.007

Jacka, T. (2009). Cultivating citizens: Suzhi (quality) discourse in the PRC. *Positions, 17*(3), 523. doi:10.1215/10679847-2009-013

Jacka, T. (2005). In ebrary I. (Ed.), *Rural women in urban China gender, migration, and social change*. Armonk, N.Y.: Armonk, N.Y. : M.E. Sharpe, Inc.

Jahn, H. J., Ling, L., Han, L., Xia, Y., & Krämer, A. (2011). Migration and health in megacities: A chinese example from guangzhou, China. In A. Krämer, M. M. H. Khan, F. Kraas & SpringerLink (Online service) (Eds.), *Health in megacities and urban areas* (pp. 189). Heidelberg: Heidelberg : Physica-Verlag.

Jones-Smith, J. C., & Popkin, B. (2010). Understanding community context and adult health changes in China: Development of an urbanicity scale. *Social Science Medicine, 71*(8), 1436. doi:10.1016/j.socscimed.2010.07.027

Kipnis, A. (2006). Suzhi: A keyword approach. *China Quarterly, 186*, 295. doi:10.1017/S0305741006000166

Kipnis, A. (2007). Neoliberalism reified: Suzhi discourse and tropes of neoliberalism in the people's republic of China. *Journal of the Royal Anthropological Institute, 13*(2), 383. doi:10.1111/j.1467-9655.2007.00432.x

Krueger, R. A., & Casey, M. A. (2008). *Focus groups: A practical guide for applied research* SAGE Publications, Incorporated.

Kung, J. K., & Lin, J. Y. (2003). The causes of China's great leap famine, 1959–1961*. *Economic Development and Cultural Change, 52*(1), 51-73.

Kusuma, Y., Gupta, S., & Pandav, C. (2009). Migration and hypertension: A cross-sectional study among neo-migrants and settled-migrants in delhi, india. *Asia-Pacific Journal of Public Health, 21*(4), 497-507.

Leppman, E. J. (1999). Urban-rural contrasts in diet: The case of China. *Urban Geography, 20*(6), 567-579.

Liu, H. (2009). At home meat consumption in China: An empirical study*. *Australian Journal of Agricultural and Resource Economics, 53*(4), 485. doi:10.1111/j.1467-8489.2009.00463.x

Loyalka, M. D., 1972-. (2012). *Eating bitterness : Stories from the front lines of China's great urban migration*. Berkeley: Berkeley : University of California Press.

Ma, L. J. C. (1998). Native place, migration and the emergence of peasant enclaves in beijing. *China Quarterly,* (155), 546-581.

Madrigal, L. (2011). Obesity, hypertension, and migration: A meta-analysis of populations of the south asian diaspora. *Human Biology, 83*(1), 71. doi:10.3378/027.083.0105

Murphy, R. (2004). Turning peasants into modern chinese citizens:"Population quality" discourse, demographic transition and primary education. *China Quarterly, 177*(1), 1. doi:10.1017/S0305741004000025

NBS. (2012). *Employment and wages*.http://www.stats.gov.cn/tjsj/ndsj/2012/indexeh.htm

Ng, S. W. (2008). Impacts of China's edible oil pricing policy on nutrition. *Social Science Medicine, 66*(2), 414. doi:10.1016/j.socscimed.2007.09.015

Pingali, P. (2007). Westernization of asian diets and the transformation of food systems: Implications for research and policy. *Food Policy, 32*(3), 281. doi:10.1016/j.foodpol.2006.08.001

Popkin, B. (2004). The nutrition transition: An overview of world patterns of change. *Nutrition Reviews, 62*(7), S140-S143. doi:10.1301/nr.2004.jul.S140-S143

Popkin, B., Du, S., Zhai, F., & Zhang, B. (2010). Cohort profile: The China health and nutrition survey--monitoring and understanding socio-economic and health change in

China, 1989-2011. *International Journal of Epidemiology, 39*(6), 1435-1440. doi:10.1093/ije/dyp322

Qi, Y., & Niu, J. (2012). Health selection effects in China's internal migration. *Asian Population Studies,* (iFirst), 1.

Richards, R., & Smith, C. (2007). Environmental, parental, and personal influences on food choice, access, and overweight status among homeless children. *Social Science Medicine, 65*(8), 1572. doi:10.1016/j.socscimed.2007.06.013

Rong, M. (2008). Population growth and urbanization. In R. E. Gamer (Ed.), (pp. 241). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Scheid, V., 1958-. (2002). *Chinese medicine in contemporary China : Plurality and synthesiDu*rham N.C.]: Durham N.C.] : Duke University Press.

Shankar, B. (2010). Obesity in China: The differential impacts of covariates along the BMI distribution. *Obesity, 18*(8), 1660-1666. doi:10.1038/oby.2009.417

Smith, L. C. (2000). The geography and causes of food insecurity in developing countries. *Agricultural Economics, 22*(2), 199. doi:10.1111/j.1574-0862.2000.tb00018.x

Solinger, D. J. (1999). *Contesting citizenship in urban China peasant migrants, the state, and the logic of the market*. Berkeley: Berkeley : University of California Press.

Sun, W. (2012). Unequal China the political economy and cultural politics of inequality. In I. ebrary (Ed.), *Unequal China: The political economy and cultural politics of*

inequality (pp. 44). Abingdon, Oxon ; New York: Abingdon, Oxon ; New York : Routledge.

Swislocki, M. (2009). *Culinary nostalgia : Regional food culture and the urban experience in shanghai* / Stanford University Press.

Taylor, J. E. (2003). Migration and incomes in source communities: A new economics of migration perspective from China*. *Economic Development and Cultural Change, 52*(1), 75. doi:10.1086/380135

Timmer, C. P. (2012). Behavioral dimensions of food security. *Proceedings of the National Academy of Sciences of the United States of America, 109*(31), 12315. doi:10.1073/pnas.0913213107

Tong, S. Y., & Wong, J. (2008). China's economy. In R. E. Gamer (Ed.), *Understanding contemporary China* (pp. 117). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Veeck, A. (2000). The revitalization of the marketplace: Food markets of nanjing. *Feeding China's little emperors : Food, children, and social change* (). Stanford, Calif.: Stanford, Calif. : Stanford University Press.

Veeck, A., & Veeck, G. (2000). Consumer segmentation and changing food purchase patterns in nanjing, PRC. *World Development, 28*(3), 457. doi:10.1016/S0305-750X(99)00135-7

Watson, J. (2000). Food as a lens: The past, present, and future of family life in China. In J. Jing (Ed.), (pp. 199) Stanford University Press.

Wiig, K., & Smith, C. (2009). The art of grocery shopping on a food stamp budget: Factors influencing the food choices of low-income women as they try to make ends meet. *Public Health Nutrition, 12*(10), 1726. doi:10.1017/S1368980008004102

Yan, Y. X. (2005). Of hamburger and social space: Consuming McDonald's in beijing. In Watson, & M. L. Caldwell (Eds.), *The cultural politics of food and eating: A reader* (pp. 80)

Yu, D. P. (2009). *Cheng Xiang Ju Min Shen Fen Ping Deng Hua Yan Jiu (Rural-Urban Migrants Status and Equality Research).* Beijing : Zhongguo she hui ke xue chu ban she.

Yue, G. (1999). *The mouth that begs : Hunger, cannibalism, and the politics of eating in modern China* / Duke University Press.

Zhai, F. (2009). Prospective study on nutrition transition in China. *Nutrition Reviews, 67*, S56. doi:10.1111/j.1753-4887.2009.00160.x

Zhang, X. (2008). Consumption and corpulence in China:: A consumer segmentation study based on the food perspective. *Food Policy, 33*(1), 37. doi:10.1016/j.foodpol.2007.06.002

Zhao, Y. (1999). Labor migration and earnings differences: The case of rural China. *Economic Development and Cultural Change, 47*(4), 767. doi:10.1086/452431

Zhao, Y. (2002). Causes and consequences of return migration: Recent evidence from China. *Journal of Comparative Economics, 30*(2), 376. doi:10.1006/jcec.2002.1781

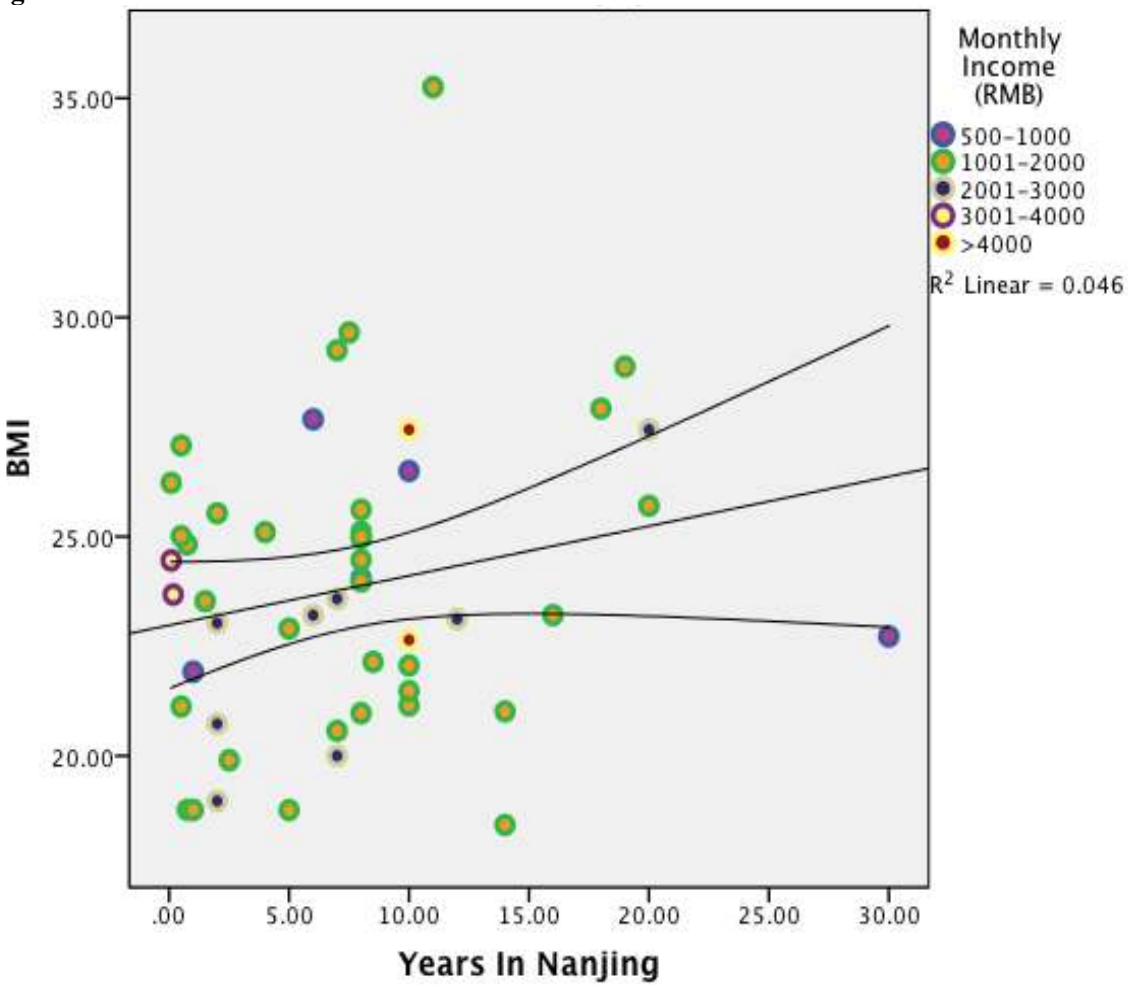
Zhou, M., & Cai, G. (2008). Trapped in neglected corners of a booming metropolis: Residential patterns and marginalization of migrant workers in guangzhou. In J. R. Logan (Ed.), *Urban China in transition : Studies in urban social change* (pp. 226). Oxford: Blackwell.

Table 1: Sample Characteristics of Study Participants in Nanjing.

Characteristic	All Participants *n= 67*	Local Participants *n*= 12	Migrant Participants *n= 55*
Gender			
Male	22	6	16
Female	44	6	38
Age	43.7 ±11.8	55.6 ±14.8	41.1 ±9.3[a]
Height (cm) *mean ±SD*	160.5 ± 7.2	163.6 ± 8.8	159.9 ± 6.6
Weight (kg)	61.9 ± 10.9	68.0 ± 12.2	60.6 ± 10.3
BMI[b]	24.0 ± 3.5	25.4 ± 4.0	23. 7 ± 3.4
Ethnicity *n (%)*			
Han	62 (92.5)	12 (100)	50 (90)
Hui	2 (3.0)	–	2 (3.6)
Hani	1 (1.5)	–	1 (1.8)
Declined	2 (3.0)	–	2 (3.6)
Education Level *n (%)*			
Completed Elementary School or Less	24 (35.8)	5 (41.6)	19 (34.5)
Completed Middle School	29 (43.3)	3 (25.0)	26 (47.2)
Some High School	6 (9.0)	2 (16.6)	4 (7.3)
Completed High School	2 (3.0)	–	2 (3.6)
Completed Vocational School	1 (1.5)	1 (8.3)	–
Monthly Individual Income (RMB) *n (%)*			
<500	2 (3.0)	1 (8.3)	1 (1.8)
500-1000	9 (13.4)	4 (33.3)	5 (9.1)
1001-2000	39 (58.2)	4 (33.3)	35 (63.6)
2001-3000	10 (14.9)	1 (8.3)	9 (16.4)
3001-4000	2 (3.0)		2 (3.6)
>4000	4 (6.0)	2 (16.7)	2 (3.6)
Household Size (mean ± SD)	3.2 ± 1.3	3.3 ± 0.86	3.2 ± 1.3
Hometown Province of Migrant Participants *n* (%)[c]			
Anhui	–	–	21 (42)
Jiangsu	–	–	25 (50)
Gansu	–	–	2 (4)
Henan	–	–	1 (2)
Yunnan	–	–	1 (2)
Time Spent in Nanjing (Years)	–	–	7.9 ± 6.4
Food Security			
High Food Security	48 (71.6)	8 (66.7)	40 (72.7)
Marginal Food Security	9 (13.4)	2 (16.7)	7 (12.7)
Low Food Security	9 (13.4)	2 (16.7)	7 (12.7)
Very Low Food Security	1 (1.5)	–	1 (1.8)
Self Perception of Weight *n* (%)	*n*= 65	*n*= 10	*n*= 55
Too Thin	10 (15.4)	3 (30)	7 (12.7)
Somewhat thin	16 (24.6)	2 (20)	14 (25.5)
Perfect	18 (27.7)	1 (10)	17 (30.9)
Overweight	16 (24.6)	4 (40)	12 (21.8)
Obese	5 (7.7)	0	5 (9.1)
Self Perception of Diet *n (%)*	*n*= 65	*n*= 10	*n*= 55
Very Good	9 (13.8)	2 (20)	7 (12.7)
Good	11 (16.9)	1 (10)	10 (18.1)
Fair	42 (64.6)	7 (70)	35 (63.6)
Poor	3 (4.6)	0	3 (5.4)
Self-perception of Health *n (%)*	*n*= 64	*n*= 10	*n*= 54
Excellent	1 (1.6)	0	1 (1.9)
Very Good	19 (29.6)	2 (20)	17 (31.5)
Good	16 (25.0))	1 (10)	15 (27.8)
Fair	25 (39.1)	5 (50)	20 (37.0)
Poor	3 (4.7)	2 (20)	1 (1.9)

[a] *n= 54*
[b] *Statistical significance of difference in means: P= .121*
[c] *n*= 50

Figure 1: Correlation of BMI and Years Lived in Nanjing (With Income Quintiles) Among Migrant Workers.



Age- and income-controlled correlation of income and years spent in Nanjing (r= 0.211, P<0.05). Income quintiles are based on reported monthly individual incomes.

CHAPTER 4

DISCOURSE IN THE DIET: FOODWAYS, THE FLOATING POPULATION, AND *SUZHI* IN NANJING

ROBERT SKORO AND CHERY SMITH

MANUSCRIPT UNDER REVIEW AT AMERICAN ANTHROPOLOGIST

Introduction: The Floating Population in China's Nutrition Transition

Amidst the highly visible social and economic development that has arisen since the end of its collective era, China's food system has likewise proliferated in both the agricultural and commercial senses. In the present day, caloric consumption has almost doubled since the end of the famine brought on by the Great Leap Forward, while China has also been the site of the most substantial increases in the consumption of vegetable oils and animal-based proteins in the world since the 1980s (Mendez and Popkin 2004:55), when both economic reforms that opened China's economy to the rest of the world and the end of state-controlled rationing dramatically changed China's food system (Solinger 1999:100). The resulting increases in rates of obesity and iterations of metabolic syndrome that have followed are in many ways analogous indicators of globalization found elsewhere in developing nations and Asia (Popkin 2004:S140-S143; Pingali 2007:281). Since the mid-1980s, collaborative efforts between Chinese and Western institutions have fostered longitudinal study of change connecting China's socioeconomic development to emergent trends in nutrition-related, non-communicable disease such as hypertension, coronary heart disease, and type 2 diabetes (Popkin et al. 2010:1435-1440). While the rural poor are often most at risk for these types of disease as effects of income (Du 2004:1505; Guo 2000:737; Ye and Taylor 1995:805), ruralites with moderate incomes and levels of education are most likely to self-select for migration and do so with the ultimate intention of one day returning home with both their physical and improved financial health, becoming part of China's floating population (Chan

2008:17; Chen 2011:1295; De Brauw 2008:320; Du et al. 2005:688; Jahn et al. 2011:189; Ma and Xiang 1998:546-581; Qi and Niu 2012:1; Taylor 2003:75; Zhao 2002:376).

China's floating population is in essence a marginalized product of its household registration, or *hukou,* system. Since 1958, *hukou* policy has been the measure by which a geographical and sociological divide between urban and rural denizens is upheld (Fan 2007:65-89; Solinger 1999:242). However, this system has relaxed somewhat in recent decades as a means to draw human capital into these revitalized urban centers, resulting in migration patterns to cities such as Guangzhou, Shanghai, and Beijing previously unseen in China. For example, in 2006 a study of the Guangzhou Economic Technological Developent District (GETDD), Zhou and Cai (2008:226) found that 85% of the more than 100,000 workers employed by foreign or joint-venture companies in the special economic zone (SEZ) were migrant workers without Guangzhou *hukou*. On the whole, the floating population has grown from twelve million in the mid 1980s (Solinger 1999:17) to an estimated 200 million by 2015 (Fan 2007:71).

Hazards of migration including labor abuses, inadequate housing, inaccessible education and healthcare, and criminalization (Fan 2007:65-89; Gaetano and Jacka 2004:279; Murphy 2004:1; Sigley 2009:537) have thus far offered highly compelling examples of social and economic inequality, against which efforts have been taken up in recent years. However, as Wanning Sun (2012:44) has suggested, the explicit articulation of culture as a category for analysis is greatly underdeveloped in discussion of the inequalities faced by rural people in China, especially when they transgress the

urban/rural boundary. Compounding the structural inequalities past and present are the lingering cultural values that encumber their upward mobility, and render them as out of place, second-class citizens.

Amidst these opposing trajectories, how do the diets of such a marginalized population segment fare during the migratory process? Migration poses potential threats to those arriving in cities from the countryside in numerous ways: through changes in the dynamics of food access, including the loss of self-sufficiency or improved convenience; through the loss of traditional foods and exposure to new, unfamiliar foods; through changes in daily patterns and occupation; or through the link between geography and micro-regional cuisine. While existing research has involved capturing the disparities in the Chinese diet based on income, gender and age, and urban versus rural residency (Du et al. 2004:1505; Guo 2000:737; Jones-Smith and Popkin 2010:1436; Mendez and Popkin 2004:55; Zhai 2009:S56; Zhang 2008:37), study of foodways among domestic migrants in China, to our knowledge, has not been undertaken alongside these efforts[1]. Changes in both migration and associated policies since the 1980s (Fan 2002:103; Solinger 1999:37), and changes in urban and rural food systems such as the emergence of supermarkets (Veeck 2000:457), the entry of multinational food companies, and the proliferation of restaurant chains (Watson 2000:120-134; Yan 2005:80) have led to a

[1] However, it has been undertaken with regards to prenatal nutrition of migrant women. See Zhao (2009:5), for instance. As this is also closely related to China's birth planning policies, and is thereby loaded with a host of its own political implications when applied to migrants, we treat our essay as distinct from that literature.

unique intersection between rural ways of being and a modernized, globalized food system.

Nanjing Sample

With the available space in existing research on the foodways of a liminal population demographic in mind, we conducted a mixed-methodology study of migrant workers—holders of agricultural household registration permits, *hukou*—in Nanjing during the summer of 2012. In addition to measuring height and weight to calculate BMI (m/kg^2), we collected household demographic, food security, and food purchasing information by written survey, visited migrant communities and their food access points, and conducted focus groups with fifty-five participants in their communities. Focus groups were conducted in the neighborhoods or workplaces of migrants, whose occupations included hotel maids, truck drivers, construction workers, cafeteria cooks, market vendors, university campus maintenance workers, and other forms of wage labor. Qualitatively, our objectives were to a) determine how urban environments specific to the floating population, such as city-villages (*cheng zhong cun*, peripheral urban neighborhoods often slated for demolition and/or renovation), or institutionally-provided room and board could impact eating behaviors, food security, and BMI status; b) detect changes in consumption of energy-dense foods and beverages, including alcohol; and c) understand the degree to which foodways of one's native place (*lao jia*) were maintained through the migratory process.

While being part of the floating population in Nanjing, migrants had healthy BMI averaging 23.96 ± 3.53 kg/m^2 with no self-reported instances of nutrition-related disease such as hypertension or Type II Diabetes, and eighty-five percent of our migrant sample identified as being completely or marginally food secure. Rather than replacing their hometown foodways with a more urbanized diet consisting of increased amounts of calorically-dense convenience foods, our participants often asserted that their dietary style had not changed but for increased consumption of meat, which has been noted to occur in rural and urban areas alike in recent decades (Guo 2000:737). Urban occupation could influence temporal and material features of dietary patterns among our participants; still, utilization of traditional markets—a carryover from their rural environments—as a principle food source was noted most frequently.

During our focus groups, we found that overlapping ideas about culture, education, and knowledge directed our participants' low appraisal of their ability to understand and articulate healthy dietary practice. At the crux of this adaptation is a culture-education-knowledge trifecta, all of which were lacking according to our participants; in lieu of explicit understanding of what constitutes healthy dietary practice, shorthand measures such as "one meat, two vegetable" (*yi hun liang su*) and basic principles of Traditional Chinese Medicine (TCM) such as balance (*ping heng*) and harmony (*shufu*) guided our subjects' seasonal, daily, and individual mealtime behaviors through the urban food environment in Nanjing.

Considering our migrant participants' good health and diet, the value of this unattainable "level" of culture-education-knowledge that our participants described seemed exaggerated. With the manifold impacts that such low cultural regard has on migrants in China, our attention was drawn closer by this incongruity. As Americans, we also could not help but notice analogies to our own situation, considering this relationship between poverty, marginalization, diet, and health in our own social context. The most immediate point of comparison lies in the strong relationship between poverty and increased BMI found in the U.S. (Baker et al. 2006:A76; Baltrus et al. 2005:1595-1601; Dammann and Smith 2009:242-253; Dammann and Smith, 2010; Dammann and Smith 2011; Drewnowski 2012:e74; Franzen and Smith 2006; Franzen and Smith 2009; McLaren 2007:29-48; Richards and Smith 2010:339-359; Smith and Franzen-Castle 2012; Wang et al. 2007:491-498). Having come from agrarian origins of varying degrees, our participants were largely able to cope with the increased risk for metabolic syndrome they experienced while exposing themselves to a potentially unfamiliar, unreliable, or simply unhealthy food landscape. But moreover, the shape and function of our participants' situated knowledge of nutrition could perhaps be viewed as speaking truth to power in their context, were it not for the fact that the paradox arrives, at least in part, through speech itself. *Embodying* truth to power seems a more precise riff on the accomplishment the expression indicates.

Migrants and Discourse

Eating Well and "Eating Well": Indexicality and Dietary Practice

While eating well in the physical sense, the physical-material is often not an end in itself—certainly not in China, where "the mode of [alimentary] consumption defines the ways in which the physical body partakes in, and is shaped by, the political economy and cultural practice of the social body," as Gang Yue (1999) writes in his *The Mouth That Begs: Hunger, Cannibalism, and the Politics of Eating in Modern China*. In considering the floating population, domestic migrants who serve as temporary urban denizens in pursuit of increased income, this use of cannibalism as a trope often applied to post-colonial mechanisms of modernization becomes a relevant metaphorical exercise in which to engage. As Parama Roy (2010:14) writes in her historiography of the symbolic-material role of food in colonial India, "the question is not whether one should ingest the other but how this should be done, since all feeding involves humans in economies of hospitality of a sort, of giving to and receiving from the other, of the interiorization of the other as well as a submission to the incorporation by the other; that is what 'eating well' is. It follows that the refusal to partake with or of the other is an important breakdown in or rejection of ethical reciprocity with the other. This invocation of Derrida's inquiry into the ethics of subject position and relational structures within and transcendent of society addresses a symptom of the cultural inequality migrants experience as a type of second-class Chinese citizen, dislocated from their home both in terms of space and identity. While often not considered a post-colonial context *sensu*

stricto, the sites at which China's post-socialist development and globalization intersect with features dating back to the collective era and beyond echo these relationships of inequitable "feeding" and therefore invite similar analysis.

Because migrants do not "eat well" in the sense described above, the accomplishment of the physical and material pursuit becomes more likely to be overlooked. In the episodes in our transcripts in which these caveats of "I don't have culture [to understand what a healthy diet is]" or "rural people don't bother with this [type of thinking]" occurred, *language socialization* came to mind, a "processual account of how individuals come to be particular kinds of culturally intelligible subjects." (Kulick and Schieffelin 2004:351) Judith Irvine (1989:250) has noted that understanding the range of roles language plays in a political economy relies heavily on larger cultural systems of ideas. What she calls the "indexicality arrived at through signs that index social groups, categories, and situations entering into the relations of production" certainly includes formal linguistic elements such as dialects in China—with innumerable regional and city-specific forms that indicate membership within a specific demonym, belonging to one place while not to another. Moreover, the array of pejorative terminology used to support that indexicality, such as *tu baozi*, "dirt bun"—for individual migrants, or collectively as *mang liu*, a "blindly floating" subset of the population addresses a higher level of discursive organization than tacit acknowledgement of one's speaking accent.

Suzhi and The Floating Population: Questioning of Domestic Migrants' "Essential Quality"

In considering language used against migrants, the term *suzhi* is an encompassing concept and keyword. While *suzhi* does not find precise translation in English, the term can be broken down into its constituent elements to what can be read as "essentialized quality" (Murphy 2004:2). Importantly, the context in which the *suzhi* is invoked regulates the extent to which the term carries an overtly negative connotation: indicators and symptoms of *suzhi* range from the innate to the superficial, and are couched in measurement and talk of "raising" (*tigao*, Jacka 2009:524) individual and collective qualities—even the most minute features such as poor fashion, nearsightedness, shortness, or being a litterbug as all having the power to indicate one's inadequate *suzhi* (Kipnis 2006:296). Conversely, in the rural context, Jinting Wu (2012:652) found that the different systems of valuations of human qualities connoted by *suzhi* discourse were met with ambiguity. But on the whole, *suzhi* discourse indexes migrants in the margins of China's development narrative *politically*, through nationalized efforts to improve the *suzhi* of China's population; *symbolically*, through the modalities and social class that *suzhi* evaluations create in Chinese culture; and *physically*, through the fixation of *suzhi*-related evaluations to both geographical location and bodies in labor (Anagnost 2004:193; Dello Iacovo 2009:241;Jacka 2009:523; Kipnis 2006:295; Kipnis 2007:383; Sigley 2009:537; Wu 2012:652).

A telling manifestation of *suzhi* discourse is found in the case of two migrant workers who performed a cover of the mainstream Chinese rock signer Wang Feng's "In Springtime" (*Chuntian Li*). Wang Xu and Liu Gang videotaped their rendition of "In Springtime"; through the video's subsequent proliferation through online video-sharing media popular in China, they not only boosted the ratings of its original performer, Wang Feng, but also allowed the song to become an anthem of the migrant labor class in urban China. In the video, the duo perform an impassioned but austere rendition of the song on acoustic guitar, trading roles as singer between them. Viewers begin with a profile of Wang singing the early sections of the piece, as Liu smokes and stands behind a second microphone plugged into an unseen amplifier. The camera pans to Liu, and viewers are given not only a view of a meager dwelling with a cloth hung in the doorway as makeshift partition, but now of both migrants' shirtless upper bodies. In its lyrics, evocations of pastoral settings, the intermittent amenities of rural life, and, perhaps most importantly, the fear of not having anything to fall back on in old age (*wo lao wu suo yi*), makes it seem that the success of *Chun Tian Li* resided exclusively its appropriation by migrants.

Critical to this phenomena was the coupling of these sentiments with the vérité imagery of two *nongmin gong* (migrant laborers), identified through both the title(s) given to the video on multiple hosting sites and the cramped, makeshift apartment-cum-performance space. Not only does the viewer see immediately how the two physically and symbolically inhabit a space from which to the song's longing for rural idyll can

most aptly be expressed, but the exposure of their bodies piqued viewers' interest as well. Chatter arose through online media such as Weibo, China's prominent microblogging website, about their physical attractiveness—notably Liu Gang's muscularity—and the casual facial scruff worn by migrants in general. The response that followed made Wang and Liu celebrities in their own right, prompted others to follow their example, and generally raised the profile of the song and perhaps Wang Feng himself as well. CCTV coverage presented a range of reaffirming features on the two migrants, ranging from televised performances with augmenting synthesizers and drums enhancing the production value of their cover of the song, to features on Liu attending Wang Feng's concert and receiving dedication of the song mid-set. Such treatment occurs under the auspices of escalating their status as migrants through promoting awareness of and sympathy for the plight of *nongmin gong* as the most downtrodden of the floating population. The overlapping political, symbolic, and physical charges within the video enhance the song's meaning, while also alluding to the subject of *suzhi*. Ann Anagnost writes that the desire for acquiring *suzhi* is what lures the migrant laborer to the city as an escape from rurality. "The coding of the migrant body as having low quality justifies the extraction of surplus value while it also serves to legitimate new regimes of social differentiation and governmentality… subjects recognize their positions within the larger social order and thereby [set] up the conditions for socio-economic striving." (2004:193) *Subject position* is precisely the issue at hand: the catalyzing effect of Wang and Liu's performance alludes to the boundaries of migrants' situated knowledge. While the

"success" of that situated knowledge is shown through the expertise and authority signified by two *nongmin gong* re-appropriating the words of a conservatory-trained musician, the opposite embodiment occurred among our participants. In our case, the deficient culture-education-knowledge with which they were endowed represented a constraint on their ability to improve their understanding of principles of nutrition and/or to understand their own existing dietary practice as cohesive and legitimate.

We agree with previous authors who have written on *suzhi* discourse in China—Ann Anagnost, Rachel Murphy, Andrew Kipnis, Tamara Jacka, and others—that attention to the significance of *suzhi* within China's globalizing process has been slow to come about. We find it to be of critical importance that practitioners seeking to alleviate, improve, or gain insight into issues that are both biological and cultural understand this contextual feature, particularly among those conducting qualitative research. However, much of the evidence used in constructing analysis of *suzhi* discourse has drawn from contrasts between rural and urban (Anagnost 2004:189; Jacka 2009:523); the meeting of state/institutional power and individual subjectivity (Dello Iacovo 2009:241; Murphy 2004:1; Sigley 2009:537); or semantic meta-analysis of such contexts (Kipnis 2006:295; Kipnis 2007:383). Considering these ways in which *suzhi* discourse functions *against* the individual, we found the language used in our fieldwork to exemplify how *suzhi* discourse functions *within* the individual. Our work thus fortifies existing literature by giving multiple direct examples of how the system of values in which *suzhi* discourse

operates confers an effect on metalinguistic practices, impacting not only individual speech and self-reflective thought but physical status as well.

***Suzhi* and Nutrition Knowledge**

Suzhi and Culture

Our focus group discussions centered around the continuation and adaptation of hometown dietary practice during migration. As most of our participants originated from a rural hometown within 300 km of Nanjing; coming primarily from outer Jiangsu or neighboring Anhui provinces, the geographic proximity between their two places of residence allowed for the use of similar ingredients and seasonal variation, a high degree of sustained aesthetics of both everyday and ritual/commensal meals, as well as individual taste preferences. Given this type of continuity, we often were told initially that there had been no change in diet (*cha bu duo*). However, that evaluation was frequently qualified through probing questions involving meal composition, timing, and purchasing behaviors. For instance, asking about meat consumption almost uniformly brought forth a point of dietary change, with amounts increasing from just one or two times per week to daily or even at each meal. In both urban and rural contexts, the dietary practice was decidedly casual and oriented around work. One woman stated succinctly, "as long as we ate until we were full, then go into the field to make a living—simply don't tend to health or, in our farm village say basically don't bother with it."

Most notably, the basis for food access shifted from subsistence farming augmented by traditional markets, to traditional markets augmented by supermarkets and restaurants.

The role of food in our participants' lives in Nanjing both connected them with the foodways of their hometowns, but also represented features specific to their outsider status in a less familiar urban environment. One of the often-noted benefits of having one's spouse with them during migration was the ability to taste the idiosyncratic flavors of their past life in the countryside. One woman relayed her husband's compliments on her cooking, the rhetorical question of *how am I tasting these flavors in* Nanjing*?* Another type of question designed to explore this topic of continuity and change involved individual articulations of a healthy diet. A question such as *what makes a healthy diet, in your opinion* was an effective strategy to promote conversation between participants, and prompted reflection on dietary maintenance during migration. Responses ranged from diffidence and uncertainty to using examples of mealtime or daily routines to define individual concepts of a healthy diet. Most commonly, insistence upon freshness and cleanliness predicated a shorthand concept of balanced proportions for in-home meals, *one meat, two vegetable* (*yi hun, liang su*). *One meat, two vegetable* could act as a placeholder for a more explicit conceptualization of dietary intake. But when probing beyond that maxim, caveats of low levels of culture, education, and knowledge began to be invoked:

Moderator: 你觉得什么是营养?
What do you think is nutritious?

王阿姨 [Aunt Wang]: 我也不知道，我又没有文化，我也不知道什么东西营养
I also don't know, I don't even have culture, I also don't know what things are nutritious.

We encountered repeated instances in our focus group discussions in which participants cited lack of culture (*wo mei you wenhua*) as an impediment to understanding and articulating what constitutes a healthy diet. Across transcripts, the trend we found was that this type of evaluation functioned metonymically, with an explicit statement about the ranking of one's culture carrying the implications for level of education, sophistication of intellect, spatial belonging, and class identity. In turn, we observed transpositions of class and culture onto alimentary domains:

王姐姐 [Sister Wang]: 没有什么，像我们都是出来打工的啊是啊，
没有什么文化水平看食谱啥子。那个什么……是做不到的。
对不对啊，就是感觉就是大荤， 肉少吃一点。
Don't have anything, like we all came over to work, right? Don't have the level of culture to look at cookbooks and whatnot. That stuff… I can't make it. Am I right? I feel like it's just big meat dishes—[I]eat a little less meat.

In separate conversations, that "level" or "degree" of culture was shown to be an impediment to integrating new ideas about diet and health. In the example that follows, the source of such information comes by way of the numerous food and health-related programs with didactic content:

潘师傅 [Mr. Fan]: 我跟你讲，你要讲到健康这方面来讲，我们这种年龄的
层次和文化程度来讲，谈不上怎么样的健康，基本上我认
为的话呢，就是干净一点，新鲜一点的。要从这个荤素搭配
来讲我们也要求不到那个样子，我们达不到那个要求。
I tell you, you want to talk about health, our age and level and degree of culture, can't say much about health, basically if I were to say what I believe, just more clean, fresh, From portioning vegetables and meat, we don't have those kinds of standards, we can't meet those demands.

Moderator: 实惠为主，但是潘师傅刚刚说，按照荤素搭配我们也达不到那个要。那么你觉得按照标准的荤素搭配是什么样子的
Must be useful, but Master Fan just said, based on vegetables and meat portioning, we can't meet those criteria, what do you think what kind standard should be used for diet?

潘师傅 [Mr. Fan]: 我也不懂那个，我讲实话，电视里放个什么万家灯火呀，健康之声；记了过后又忘记了…也想达到那个要求，但是根据我们那个条件确实也做不到。我们也想做到，但是在生活当中由于经济方面呀，工作方面呀，又没得时间来搞。
I don't know about that, to be honest, There are TV shows called Wan Jia Deng Huo and Jian Kang Zhi Sheng [sic]*; after watching, then forget it all....also want to reach that level, but based on our circumstances, we can't do it, we also want to do it, but in our life because of economic aspects, working aspects, don't have time to do it.*

Our participants' specific usage of *wo mei you wenhua*—"I don't have culture"—as opposed to *wo suzhi di*—"my *suzhi* is low"—is an example of how language is used to construct specific social identities (Ochs 1993:287-306). Discussing *suzhi* as a discursively more benign lack of culture, education, or knowledge addresses the variation in neutral and critical uses of language that typify linguistic ideology (Woolard and Schieffelin 1994:55). Most pertinent to our results, Tamara Jacka (2005:233) found that in her ethnography of Beijing migrants, indirectly referring to one's own *suzhi* in substitute terms of lacking culture or education is a euphemistic strategy to avoid recapitulating the disparaging remarks made about oneself.

Simply put, "lack of culture" is tantamount to having low *suzhi*, providing indexicality to the recipients of its assignment. In concert with the lack of culture, education, and knowledge, rural origin indexes migrants' low *suzhi* (Anagnost 2004:189; Jacka 2009:523; Murphy 2004:1; Sigley 2009:537). In this way, the dietary habits of

migrant workers, like clothing, speech, and bodily appearance, act as floating signifiers of *suzhi* with a metonymic effect—the modality of their dietary practice thus threatens to perpetuate the internalization of that external, discursive evaluation of their low *suzhi*, as reflected in their caveats of low culture found in our transcripts.

Suzhi, Education, and Knowledge

The inequitable distribution of resources experienced by migrants applies also to scientific-technical knowledge (Sun 2012:44), which we find to result not so much in a lack of comprehension but a *lack of authority* condemning self-styled ideas of diet. This discursive undermining, recalls Jun Jing's ethnography of pediatric nutrition in rural Gansu. There, the utilization of "advanced, scientific" information contributed to a form of cultural authority wielded by state institutions, foisting unfamiliar or even contradictory practices on villagers (2000:135). Migrants in our sample, as in other studies (Chan 2008:21; Fan 2002:103; Rong 2008:241) had uniformly low levels of education. While largely attained prior to the advent of *suzhi* discourse in its contemporary sense, the subsequent use of education as the engine of population demographic revitalizations (Murphy 2004:4) does not provide exemption from that metric.

The effect of this authoritative knowledge was on display in one conversation with a group of vegetable vendors, who clearly put consideration into the way they chose their daily foods, but with the principle motivation for doing so being to minimize waste

by eating surplus produce. But they were less inclined to credit themselves with any such practical knowledge in the realm of nutrition:

Moderator: 你是觉得现在吃的还健康啊?
You think the way you eat right now is healthy?

秦女士 [Aunt Qin]: 不怎么太懂。
I don't have a way to understand it too much.

Moderator: 不怎么太懂啊?
Don't have a way to understand it too much?

秦女士 [Aunt Qin]: 不是，是因为我们并不知道这个知识。这个方面没什么研究。只是蔬菜搭配一下就行了…没有经过哪个什么营养啊什么东西，也就没考虑这个。
I don't. It's because I really don't have the know-how at all. I haven't done the research on this stuff at all. Just that if you couple with some vegetables then that's okay… I just haven't been through any nutrition, any things, just haven't considered this.

In our case, dietary practice was by no means something that did not undergo thoughtful consideration by our participants. Specific practices such as limiting oil or hot pepper to defend a temperamental stomach was noted by some of our female participants; conversely several of our male participants unabashedly expressed a preference for meat—our youngest male participant, a teenager who had recently struck out on his own in Nanjing, described an aversion to cooking for himself that was rectified by near-daily consumption of Coca-Cola and roast duck. A less exaggerated iteration of casual dietary practice was expressed more in ways such as Ms. Guo:

郭小姐 [Ms. Guo]: 反正多注意点饮食，反正吃饭...荤素搭配.. 不要特饱那种，实在饱实在饱 那种。
Anyways a more attentive diet, anyways eating food… the meat and vegetable proportions, no need to overeat—eat until you're actually full, actually full—like that.

Moderator: 哦，不要吃得太饱。
Ah, no need to eat until you're too full.

郭小姐 [Ms. Guo]: 反正我每次吃都不...
Anyways every time I eat I don't…

Moderator: 荤素搭配，就..就是这样就好了，那你觉得你平常吃得还健康吗?
Proportionate meat and vegetables, just, just this way is good, you think you normally eat is still healthy?

郭小姐 [Ms. Guo]: 我感觉，我平时..身体也…
I feel, during normal times, my body does too…

More recently, Judith Farquhar (2002; 2012) has shown how among urban practitioners of *yangsheng* ("life-nurturing") activities in Beijing, the efficacy of the practice lies not in a centerpiece of explicit knowledge but in a holistic approach. "[The] most powerfully formative conditions for life— the structures and categories of languages, the deep-seated metaphysical assumptions dimly visible in idioms and proverbs, the biological processes of daily existence, long-inculcated habits, and built environments— usually fail to draw the attention of actors themselves," she concludes (Farquhar 2012:174). Beyond any stigma of being rural, our migrants lacked that holism and formal practice as a means of solidifying their own experiential knowledge concerning nutrition.

白女士[Aunt Bai]: 啊，我没有控制，就是正常生活么。
Ah, I don't manage it, it's just normal life.

Moderator: 那你觉得健康的饮食应该是怎么样子的?
What do you think a healthy diet should be like?

白女士[Aunt Bai]: 我不知道。
I don't know.

Moderator: 怎么吃健康……没有，不要标准答案，我就是想听听你们是怎么觉得的。
How to eat healthy… haven't, don't need a standard answer, I just would like to hear your thoughts.

白女士[Aunt Bai]: 我们觉得不就是这些菜这些东西啊，就是自己家吃啊，烧的吃啊，干净一点啊，身体不就健康了么?
We think about not just these dishes, these things, it's what our own family eats, cooking to eat—a bit cleaner, isn't your body healthier for it, then?

Moderator: 荤素搭配没关系?
The proportions of meat and vegetable don't matter?

白女士[Aunt Bai]: 没有关系。自己想怎么吃怎么吃。
Doesn't matter. Eat whatever you feel like eating.

This absence of explicit principles in urbanites noted by Farquhar further suggests class or cultural connotations in relation to the authority derived through practice or embodiment alone. In Jing's profile, employing the positivism of science reinforced the dialectic position of the state over the villagers by seeking to undermine the ability of Jing's subjects to take confidence their own extant practices as a measure of cultural authority. Such "technoscientific reasoning" is a necessary tool of governmentality, improving the Chinese population to "create certain human subjects" (Sigley 2009:537).

Conclusion

The multifaceted disclaimers of low culture we observed connects *suzhi* discourse to the conceptualization of nutrition within overall dietary practice. We find that the ability of *suzhi* discourse to function *simultaneously* across the spectrum of its political, social, and corporal contexts was manifest through our discussion of personal ideas of healthy diet. The shaping of our participants' knowledge of nutrition and confidence in their own dietary practice was undermined both by the more formalistic mechanisms of education, but also by the implications of class—both as former peasants and as displaced ruralites in an adopted urban context. Both have the capability of producing the type of "I don't have culture" and "I don't have education" type of disclaimers when asked to provide a personalized idea of what constitutes a healthy diet.

Suzhi discourse exemplifies a "cultural system of ideas about social and linguistic relationships, together with their loading of moral and political interests." (Irvine 1989:255) Here, the multiple nodes of *suzhi* discourse and semiotics appear to simultaneously reinforce the stigma of low education while also interdicting the erosion of that stigma through future learning. Migrants' bodies are the site at which nutrition and *suzhi* discourse intersect. Being that corporal effects such as BMI are the common means of evaluating both diet and physical exercise, the relationship of this axis to both the socio-demographic significance of migrants and the *suzhi* discourse used to further interpellate them in that lexicon becomes relevant. This occurs not only through the objectification/sexualization as seen in the case of Liu Gang's video performance of *In*

Springtime, but also through the function of migrants' bodies as objects of value in labor. Labor, in the political-economic sense, undergirds the relationship between *suzhi* discourse and the politics of the body in China, as many authors have shown. As Anagnost (2004:200) asks, in what sense is *suzhi* a corporeal politics, one that symbolically orients the body around its transposition from material into valued object of labor?

This notion of a precipice—a threshold of risk like that expressed in *Chuntian Li*—can be ready two ways with regards to migrants' bodies. First, there is the physical hazard involved with labor: for example, Anagnost cites an Associated Press piece from 2002 regarding a migrant worker who had her hand amputated in Shenzhen in 2002 that year quoted one adviser for the State Administration of Safety Production, who said, "local authorities, factory owners, even workers themselves—no one really cares about safety. They all think the risks are a small price to pay for economic advancement." (Fackler 2002) Given trends in public health across China, change in diet represents a less overt but significant hazard for the floating population. As one of our participants put it, "if we're here eating all this bitterness [experiencing hardship], but return home without our health, what's the point?"

References

Anagnost, Ann
2004 The Corporeal Politics of Quality (Suzhi). Public Culture 16(2):189.

Baker, Elizabeth, Mario Schootman, Ellen Barnidge, and Cheryl Kelly
2006 The Role of Race and Poverty in Access to Foods that Enable Individuals to Adhere to Dietary Guidelines. Preventing Chronic Disease 3(3):A76-A76.

Baltrus, Peter, John Lynch, Susan Everson Rose, Trivellore Raghunathan, and George Kaplan
2005 Race/Ethnicity, Life-Course Socioeconomic Position, and Body Weight Trajectories Over 34 Years: The Alameda County Study. American Journal of Public Health 95(9):1595-1601.

Chan, Kam Wing
2008 Internal Labour Migration in China: Trends, Geographical Distribution and Policies. United Nations Expert Group Meeting on Population Distribution, Urbanization, Internal Migration and Development UN/POP/EGM-URB/2008/05.

Chan, Kam Wing, and Will Buckingham
2008 Is China Abolishing the Hukou System? The China Quarterly 195(1):582-605.

Chen, Juan
2011 Internal Migration and Health: Re-Examining the Healthy Migrant Phenomenon in China. Social Science Medicine.

Dammann, Kristen Wiig, and Chery Smith
2011 Food-Related Environmental, Behavioral, and Personal Factors Associated with Body Mass Index among Urban, Low-Income African-American, American Indian, and Caucasian Women. American Journal of Health Promotion 25(6):e1-e10.

Dammann, Kristen Wiig, and Chery Smith
2010 Race, Homelessness, and Other Environmental Factors Associated with the Food-Purchasing Behavior of Low-Income Women. Journal of the American Dietetic Association 110(9):1351-1356.

Dammann, Kristen Wiig, and Chery Smith
2009 Factors Affecting Low-Income Women's Food Choices and the Perceived Impact of Dietary Intake and Socioeconomic Status on their Health and Weight. Journal of Nutrition Education and Behavior 41(4):242-253.

De Brauw, Alan
2008 Migration and Household Investment in Rural China. China Economic Review 19(2):320.

Dello Iacovo, Belinda
2009 Curriculum Reform and Â€˜quality Educationâ€™in China: An Overview. International Journal of Educational Development 29(3):241.

Drewnowski, Adam
2012 Obesity and Supermarket Access: Proximity Or Price? American Journal of Public Health 102(8):e74.

Du, Shufa, Tom A. Mroz, Fengying Zhai, and Barry M. Popkin
2004 Rapid Income Growth Adversely Affects Diet Quality in China--Particularly for the Poor! Social Science Medicine 59(7):1505.
Du, Shufa
2004 Rapid Income Growth Adversely Affects Diet Quality in China--Particularly for the Poor! Social Science Medicine 59(7):1505.
Du, Yang, Albert Park, Sangui Wang
2005 Migration and Rural Poverty in China. Journal of Comparative Economics 33(4):688.
Fackler, Martin
2002 China's Workers Pay Price in Death and Injury for Country's Export Success. The Dispatch. Associated Press. September 9.
Fan, C. Cindy.
2007 Migration,*Hukou*, and the City. *In* China Urbanizes Consequences, Strategies, and Policies. Shahid Yusuf and Tony Saich, eds. Pp. 65-89. Washington, D.C.: Washington, D.C. : World Bank.
Fan, C. Cindy
2002 The Elite, the Natives, and the Outsiders: Migration and Labor Market Segmentation in Urban China. Annals of the Association of American Geographers 92(1):103.
Farquhar, Judith
2002 Appetites : Food and Sex in Postsocialist China.Duke University Press.
Farquhar, Judith
2012 Ten Thousand Things Nurturing Life in Contemporary Beijing. Qicheng Zhang, Inc ebrary, eds. New York: New York : Zone Books.
Franzen, Lisa, and Chery Smith
2006 Differences in Stature, BMI, and Dietary Practices between US Born and Newly Immigrated Hmong Children. Social Science & Medicine 69(3):442-450.
Franzen, Lisa, and Chery Smith
2009 Acculturation and Environmental Change Impacts Dietary Habits among Adult Hmong. Appetite 52(1):173.
Gaetano, Arriane M., and Tamara Jacka
2004 Migrant Women's Stories. *In* On the Move Women and Rural-to-Urban Migration in Contemporary China. Arianne M. Gaetano and Inc ebrary, eds. Pp. 279. New York: New York : Columbia University Press.
Guo, Xu.
2000 Structural Change in the Impact of Income on Food Consumption in China, 1989-1993. Economic Development and Cultural Change:737.
Irvine, Judith T.
1989 When Talk Isn'T Cheap: Language and Political Economy. American Ethnologist 16(2):248.

Jacka, Tamara
2009 Cultivating Citizens: Suzhi (Quality) Discourse in the PRC. Positions 17(3):523.
Jacka, Tamara
2005 Rural Women in Urban China Gender, Migration, and Social Change. Inc ebrary, ed. Armonk, N.Y.: Armonk, N.Y. : M.E. Sharpe, Inc.
Jahn, Heiko J., Li Ling, Lu Han, Yinghua Xia, and Alexander Krämer
2011 Migration and Health in Megacities: A Chinese Example from Guangzhou, China. *In* Health in Megacities and Urban Areas. Alexander Krämer, Md Mobarak Hussain Khan, Frauke Kraas and SpringerLink (Online service), eds. Pp. 189. Heidelberg: Heidelberg : Physica-Verlag.
Jing, Jun
2000 Food, Nutrition, and Cultural Authority in a Gansu Village. *In* Feeding China's Little Emperors: Food, Children, and Social Change. Jun Jing, ed. Pp. 135. Stanford University Press.
Jones-Smith, Jessica C., and Barry Popkin
2010 Understanding Community Context and Adult Health Changes in China: Development of an Urbanicity Scale. Social Science Medicine 71(8):1436.
Kipnis, Andrew.
2007 Neoliberalism Reified: Suzhi Discourse and Tropes of Neoliberalism in the People's Republic of China. Journal of the Royal Anthropological Institute 13(2):383.
Kipnis, Andrew
2006 Suzhi: A Keyword Approach. China Quarterly 186:295.
Kulick, Don, and Bambi B. Schieffelin
2004 Language Socialization. *In* A Companion to Linguistic Anthropology : Blackwell Companions to Anthropology. Alessandro Duranti, ed. Pp. 349. Oxford: Blackwell Publishing Ltd.
Ma, Laurence J. C and Biao Xiang
1998 Native Place, Migration and the Emergence of Peasant Enclaves in Beijing. China Quarterly(155):546-581.
McLaren, Lindsay
2007 Socioeconomic Status and Obesity. Epidemiologic Reviews 29:29-48.
Mendez, Michelle, and Barry Popkin
2004 Globalization, Urbanization and nutritional Change in the Developing World. *In* Globalization of Food Systems in Developing Countries: Impact on Food Security and Nutrition. Pp. 55. Rome: Food and Agriculture Organization of the United Nations.
Murphy, Rhodes
2004 Turning Peasants into Modern Chinese Citizens:“Population Quality” Discourse, Demographic Transition and Primary Education. China Quarterly 177(1):1.

Ochs, Elinor
1993 Constructing Social Identity: A Language Socialization Perspective. Research on Language and Social Interaction 26(3):287-306.
Pingali, Prabhu
2007 Westernization of Asian Diets and the Transformation of Food Systems: Implications for Research and Policy. Food Policy 32(3):281.
Popkin, Barry
2004 The Nutrition Transition: An Overview of World Patterns of Change. Nutrition Reviews 62(7):S140-S143.
Popkin, Barry, Shufa Du, Fengying Zhai, and Bing Zhang
2010 Cohort Profile: The China Health and Nutrition Survey--Monitoring and Understanding Socio-Economic and Health Change in China, 1989-2011. International Journal of Epidemiology 39(6):1435-1440.
Qi, Yaqiang, and Jianlin Niu
2012 Health Selection Effects in China's Internal Migration. Asian Population Studies(iFirst):1.
Richards, Rickelle, and Chery Smith
2010 Investigation of the Hunger—Obesity Paradigm among Shelter-Based Homeless Women Living in Minnesota. Journal of Hunger & Environmental Nutrition 5(3):339-359.
Rong, Ma
2008 Population Growth and Urbanization. *In* Robert E. Gamer, ed. Pp. 241. Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.
Roy, Parama
2010 Alimentary Tracts : Appetites, Aversions, and the Postcolonial /.
Sigley, Gary
2009 Suzhi, the Body, and the Fortunes of Technoscientific Reasoning in Contemporary China. Positions 17(3):537.
Smith, Chery, and Lisa Franzen-Castle
2012 Dietary Acculturation and Body Composition Predict American Mmong Children's Blood Pressure. American Journal of Human Biology 24(5):666-674.
Solinger, Dorothy J.
1999 Contesting Citizenship in Urban China Peasant Migrants, the State, and the Logic of the Market. Berkeley: Berkeley : University of California Press.
Sun, Wanning
2012 Unequal China the Political Economy and Cultural Politics of Inequality. *In* Unequal China: The Political Economy and Cultural Politics of Inequality. Inc ebrary, ed. Pp. 44. Abingdon, Oxon ; New York: Abingdon, Oxon ; New York : Routledge.
Taylor, J. Edward
2003 Migration and Incomes in Source Communities: A New Economics of

Migration Perspective from China*. Economic Development and Cultural Change 52(1):75.

Veeck, Ann and Gregory Veeck
2000 Consumer Segmentation and Changing Food Purchase Patterns in Nanjing, PRC. World Development 28(3):457.

Wang, Xu, and Liu Gang
旭日阳刚《春天里》 *(Wang Xu and Liu Gang "In Springtime")*. Electronic document, http://www.tudou.com/programs/view/5nPgTS_pNq4/.

Wang, May, Soowon Kim, Alma Gonzalez, Kara MacLeod, and Marilyn Winkleby
2007 Socioeconomic and Food-Related Physical Characteristics of the Neighbourhood Environment are Associated with Body Mass Index. Journal of Epidemiology and Community Health 61(6):491-498.

Watson, James L.
2000 China's Big Mac Attack. Foreign Affairs:120-134.

Wiig, Kristen, and Chery Smith
2009 The Art of Grocery Shopping on a Food Stamp Budget: Factors Influencing the Food Choices of Low-Income Women as they Try to make Ends Meet. Public Health Nutrition 12(10):1726.

Woolard, Kathryn A., and Bambi B. Schieffelin
1994 Language Ideology. Annual Review of Anthropology 23(1):55.

Wu, Jinting
2012 Governing Suzhi and Curriculum Reform in Rural Ethnic China: Viewpoints from the Miao and Dong Communities in Qiandongnan. Curriculum Inquiry 42(5):652.

Yan, Yun Xiang
2005 Of Hamburger and Social Space: Consuming McDonald's in Beijing. *In* The Cultural Politics of Food and Eating: A Reader. James L. Watson and Melissa L. Caldwell, eds. Pp. 80.

Ye, Xiao and J. Edward Taylor
1995 The Impact of Income Growth on Farm Household Nutrient Intake: A Case Study of a Prosperous Rural Area in Northern China. Economic Development and Cultural Change 43(4):805.

Yue, Gang
1999 The Mouth that Begs : Hunger, Cannibalism, and the Politics of Eating in Modern China /.Duke University Press.

Zhai, Fengying
2009 Prospective Study on Nutrition Transition in China. Nutrition Reviews 67:S56.

Zhang, Xiaoyong, Hans Dagevos, Yuna He, Ivo van der Lans, and Fengying Zhai
2008 Consumption and Corpulence in China:: A Consumer Segmentation Study Based on the Food Perspective. Food Policy 33(1):37.

Zhao, Yaohui
2002 Causes and Consequences of Return Migration: Recent Evidence from China. Journal of Comparative Economics 30(2):376.
Zhou, Min, and Guoxuan Cai
2008 Trapped in Neglected Corners of a Booming Metropolis: Residential Patterns and Marginalization of Migrant Workers in Guangzhou. *In* Urban China in Transition : Studies in Urban Social Change. John R. Logan, ed. Pp. 226. Oxford: Blackwell.

CHAPTER 5

SUMMARY OF RESULTS, CONCLUSIONS, AND IMPLICATIONS

RESULTS SUMMARY TO ADDRESS RESEARCH HYPOTHESIS AND OBJECTIVES:

This project provides results addressing research questions about the effect of migration on hometown dietary practice by rural-to-urban migrants in Nanjing, Jiangsu, PRC. The following is a summary of the major research findings.

Chapter 3: Focus groups with rural-to-urban migrants in Nanjing.

- Is there an observable discrepancy in the consumption of high-fat, energy-dense foods and alcoholic beverages for rural-to-urban migrants between their hometown and migratory destination?
- What kind of variation can be observed in terms of health-related outcomes?
- Among rural-to-urban migrants, is there an observable transference of *foodways* based on individual place of origin *(lao jia*)?
- How do alimentary habits derived from the local ecologies, traditions, ethnic identities, and economic modalities of migrants' rural environment transition to an urban setting?
- How does eating behavior vary among people living in a shared environment, with low-income a common denominator amongst them?
- Does different eating behavior in the same environment result in different body mass index (BMI) or health outcomes?

Summarized responses to focus group research addressing the effect of migration to Nanjing on dietary practice begun in participants' hometowns:

The major themes of focus groups conducted with migrants were as follows: a) dynamics of rural hometown food system; b) nutritional knowledge derived from Traditional Chinese Medicine (TCM) and rural experience, but influenced by contemporary media and notions of "low" culture; c) influence of occupation on mealtime and dietary patterns during migration; d) change in purchasing behaviors and food sourcing in the urban environment; and e) rural-to-urban dietary change based primarily on increased consumption of meat. Each theme contained its own subthemes.

Theme 1: In participants' rural hometown setting, the principle means of food access was small scale horticulture and animal husbandry of primarily chickens, ducks, and pigs. The effect was that traditional markets were used in supplementary fashion– rarely for some who were capable of greater self-sufficiency. For the many who were reliant on traditional markets to some degree, travel times could be long (up to four hours), representing a impediment to food access. Regardless of the degree to which participants' relied on outside food supplies to their hometown household, the self-sufficiency attained in their hometown created a preference for fresh foods that was carried over into their migratory experience.

Theme 2: Migrants' nutritional knowledge contained two important subthemes: first, their lack of culture and education as a hindrance to understanding, explaining, and improving upon their individual notion of healthy dietary practice. Second, an operating

principle of balance in their diet voiced repeatedly as "one meat, two vegetable" (*yi hun liang su*), used to guide the proportion of dishes served during meals. Together, these features of nutritional knowledge were met with concepts in Western biomedicine ranging from vitamins to nutrition-related disease etiology, delivered primarily through forms of media such as state-programmed television and internet.

Theme 3: Occupational influence on mealtime and dietary patterns varied between four subcategories derived from participants' occupation or residential location: market vendors, city-villagers, campus workers, and hotel cleaners. Market vendors were afforded the greatest degree of continuity in their dietary style during migration as an effect of their occupation; however, they also felt that the timing of their meals had changed significantly as well, a detrimental effect of migrating to Nanjing. City-villagers, who lived on the outskirts of Nanjing, felt more strongly about this temporal reorientation, contending that their taste preferences had changed despite increased consumption of meat.

Campus workers and hotel cleaners represented a subset of our participants engaged in more institutional forms of work that could have more sophisticated influence on their daily dietary practice. For example, hotel cleaners were provided with up to two meals per day; this could represent an opportunity to save money, or free up food expenses normally designated for groceries to be used for buying convenience foods. There was also divergence within our hotel cleaner participants concerning residency– some were living in an employer-provided dormitory with their coworkers, while others

lived in rented apartments with family; these living arrangements could likewise produce a number of different evaluations around dietary practice during migration.

Attitudes and behaviors around dietary practice diverged around the issue of worksite meals for our campus employees as well, as some worked in a cafeteria while others were groundskeepers. This scenario produced a different type of scenario in which occupation was a means to maintaining one's dietary practice, as two of our cafeteria workers were Hui (Muslim) and operated a *halal* food stall in the campus cafeteria. Among these "institutional" workers, better diet was equated with increased meat consumption, but that preference could be gendered towards men. However, among the hotel cleaners–all of whom were women–several felt they ate less since coming to Nanjing.

Theme 4: Among all groups, the convenience of acquiring a greater variety of foods was a significant improvement brought on by migration, with all participants having easy access to traditional markets, supermarkets, convenience stores, and restaurants. The dominant aspiration was to shop for food daily, and 85% of our participants indicated complete or marginal food security. Safety, cleanliness, and freshness were the key features of food purchasing decisions taking place in Nanjing, with equal consideration of cost often being ruled out by virtue of the fact that participants limited their purchases of ready-to-eat foods to low-cost street vendors and food stalls. The issue of pesticides and fertilizers versus nightsoil was one that could land on either side of the debate among our participants, invoking diverse views on safety and

cleanliness, evaluation, and regulation. Particularly in supermarkets, brand identity could bolster a product's perceived safety or quality, but only in the event that it was a shelf-stable product like oil or rice. Once prepared, leftover foods of any sort were not viewed as edible past the second day, even when refrigerated.

Theme 5: Increased meat consumption was the most widely noted difference in dietary proportions between participants' hometown and Nanjing. Consumption of bottled beverages had only increased in the form of bottled water; the sodas and sweetened teas sold in convenience stores and supermarkets were not of interest for the vast majority of our participants. However, this interest could be piqued if a generational divide was crossed: our youngest participants, who were teenagers, expressed interest in soda from fast food restaurants that older participants did not. Similarly, purchases of Western fast foods like KFC and McDonalds was something the older participants made only on behalf of their younger relatives. Alcohol consumption increased only for a handful of participants, most of whom contended that it was not an effect of income.

Chapter 4: Discourse and language ideology relating to nutritional knowledge and migratory experience

During our focus groups with migrants, we asked each participant to offer his or her own idea of what constitutes a healthy diet. In response, participants had a difficult time answering, citing a lack of culture or education. In subsequent analysis, this discursive technique was shown in existing literature to be related through the notion of

suzhi, "essential quality", a keyword used in an ideological discourse pertaining to China's social and economic development. The use of this term constitutes an example of what anthropologists and linguists define as *language ideology*; in China, *suzhi* discourse is used as part of a language ideology which indexes migrants into an inferior social position, an ineluctable standard against which rural peasants are seen as intrinsically backwards. Disclaimers such as "I don't have culture" (*wo mei you wenhua*) in regards to nutrition knowledge thus join a host of other metonymic iterations of migrants such as poor dress or non-native dialect in situating migrants at the bottom of urban social hierarchy.

We felt these occurrences were noteworthy because despite migrants self-identifying their culture or education (and subsequently implying one's *suzhi*) as being inferior, none of our participants disclosed any forms of nutrition-related disease, and our mean BMI among migrants was within the healthy range. For the sake of future practitioners of community and public health nutrition in China–the number of which is poised to increase as China's health insurance system braces for an overhaul–we find this paradox to be a potential hurdle to communicating effectively with a population demographic that historically is not just marginalized but also underserved.

CONCLUSIONS AND IMPLICATIONS:

The main findings of this research project were the documentation and identification of: 1) expressed continuity between the dietary style of one's hometown and Nanjing, coupled with 2) increased consumption of meat as the primary effect of migration on dietary composition; 3) the transition of traditional food markets from supplementary food source to primary food source as an effect of migration; 4) occupation was the primary source of a shift in meal purchasing and consumption patterns during migration; 5) *freshness*, which was extremely time-sensitive, was a principle factor in food security, eclipsing proximity or price; 6) our participants low levels of education and rural origin impose a self-perceived restriction on their ability to understand, articulate, and carry out a healthy dietary practice, but 7) informal concepts about dietary practice, coupled with dietary habits reportedly forged in our participants' hometowns produce healthy results.

Despite our sample consisting predominantly of intraregional migrants originating from within a 300-kilometer radius of Nanjing, the role of traditional markets for migrants regardless of occupation is the most significant implication from our findings. Given the largely healthy outcomes of our participants' dietary practices, access to traditional markets during migration holds paramount value as a food source that affords migrants the ability to maintain their health in an environment that holds many risks to their physical health, nutritional insufficiency being one of them.

However, the waning of traditional markets in Nanjing, coupled with migrants' low social status, poses a threat to this approach. If both migrants and traditional markets are viewed as anachronistic, out-of-place features of China's rapidly developing urban landscapes, the feasibility of promoting both as necessary counterparts as an epidemiological measure in China seems disappointingly unlikely. At the same time, increasing awareness of both the hardship endured during migration, and the exacerbation of such hardship by the inequity migrants experience as an essential part of China's workforce offers a point of sympathy that could be leveraged in the future.

A related implication of the values that surround traditional markets contributes to existing calls for a revision to the factors that define food security: particularly in the post-socialist context, where price controls on food may be robust, but incomes flexible, consideration of culturally-specific values surrounding food access may become more significant. Freshness is such an example found in our study. As an effect of migration, we heard migrants describe scenarios in which they had problems accessing food that was fresh (and therefore nutritive) enough–not because of cost, but because of time constraints. While we acknowledge that the concept of time in regards to freshness is particularly stringent in comparison with the standards of many contemporary food systems, it is this type of sensitivity to how the subjects of food security measurement evaluate their own scenarios that represents the room for improvement in the highly pluralistic problem of food access.

Limitations to this study include the use of a non-representative sample, particularly in the sense that most of our participants were not inter-regional migrants, as is the dominant trend in migratory flows in China (He & Gober, 2003). Furthermore, Nanjing is not a major migratory destination, and its *hukou* policy is more relaxed as a result (Fan, 2007); this may result in a less competitive and/or hostile environment for migrants than in cities such as Shanghai or Guangzhou, the effect being improved quality of life for migrants. We also were not able to access as diverse an array of migrant workers as needed to constitute a representative sample. For example, construction workers–particularly those who live in the sheet-metal dormitories constructed on their worksite–were not accessible to us during our fieldwork. Similarly, we were prevented from recruiting in some neighborhoods because of a lack of government cooperation/supervision.

Several of our statistical findings were insignificant, due in part to our small sample size. Additionally, our study would have benefitted from further non-invasive measurement of indicators such as blood pressure, which may have provided additional insight given the higher incidence rate of hypertension at lower BMIs found in China (Nguyen, Adair, Suchindran, He, & Popkin, 2009; Yan et al., 2012). We also did not include survey questions about physical activity levels or energy expenditure.

In closing, there is much room for inquiry into the dietary practice of China's floating population. As a growing subset of an increasingly overweight population, both the broad epidemiological risk and social, cultural, and economic marginalization unique

to the floating population highlights China's migrants as being acutely at risk and perilously underserved. Because migrants often self-select and therefore depart from their hometowns in good health (Chen, 2011), future studies that focus on the relationships between occupation, environment and migrant health must give more consideration to diet as a preventative measure. Likewise, the benefit of traditional foodways amidst China's increasingly globalized diet can be used to leverage migrants' social status positively.

REFERENCES:

Chen, J. (2011). Internal migration and health: Re-examining the healthy migrant phenomenon in China. *Social science medicine,* .

Fan, C. C. (2007). Migration,*Hukou*, and the City. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 65-89). Washington, D.C.: Washington, D.C. : World Bank.

He, C. & Gober, P. (2003). Gendering Interprovincial Migration in China. *International Migration Review,* 37(4, The Future of the Second Generation: The Integration of Migrant Youth in Six European Countries), 1220-1251.

Nguyen, T., Adair, L., Suchindran, C., He, K., & Popkin, B. (2009). The association between body mass index and hypertension is different between East and Southeast Asians. *The American Journal of Clinical Nutrition,* 89(6), 1905-1912.

Yan, S., et al. (2012). The expanding burden of cardiometabolic risk in China: the China Health and Nutrition Survey. *Obesity Reviews,* 13(9), 810-821.

COMPREHENSIVE BIBLIOGRAHPY:

Allender, S., Foster, C., Hutchinson, L., & Arambepola, C. (2008). Quantification of urbanization in relation to chronic diseases in developing countries: a systematic review. *Journal of Urban Health,* 85(6), 938-951.

Anagnost, A. (2004). The corporeal politics of quality (suzhi). *Public Culture,* 16(2), 189.

Anderson, E. N. (1988). *The food of China.* Yale University Press.

Astrup, A., Dyerberg, J., Selleck, M., & Stender, S. (2008). Nutrition transition and its relationship to the development of obesity and related chronic diseases. *Obesity Reviews,* 9(s1), 48-52.

Baker, E., Schootman, M., Barnidge, E., & Kelly, C. (2006) The role of race and poverty in access to foods that enable individuals to adhere to dietary guidelines. preventing chronic disease 3(3):A76-A76.

Baltrus, P., Lynch, J., Rose, S.E., Raghunathan, T., & Kaplan, G. (2005). Race/ethnicity, life-course socioeconomic position, and body weight trajectories over 34 years: the alameda county study. *American Journal of Public Health*. 95(9), 1595-1601.

Barrett, C. B. (2010). Measuring food insecurity. *Science, 327*(5967), 825. doi:10.1126/science.1182768

Basta, S. S. (1977). Nutrition and health in low income urban areas of the third world†. *Ecology of Food and Nutrition,* 6(2), 113-124.

Bastid, M. & Zhang, J. (1988). *Educational reform in early twentieth-century China.* Center for Chinese Studies, University of Michigan Ann Arbor, MI.

Beinfield, H. (1992). *Between heaven and earth : a guide to Chinese medicine.* New York: New York : Ballantine Wellspring.

Bell, A. C., Adair, L. S., & Popkin, B. M. (2002). Ethnic differences in the association between body mass index and hypertension. *American Journal of Epidemiology,* 155(4), 346-353.

Bishop, M. (2013). How Asia can get health care right. *The Wall Street Journal.*

Bohle, H. G. (1994). Climate change and social vulnerability: Toward a sociology and geography of food insecurity. *Global Environmental Change, 4*(1), 37.

Bourdieu, P. (1984). *Distinction: a social critique of the judgement of taste.* Harvard University Press.

Brockerhoff, M. & Brennan, E. (1998). The poverty of cities in developing regions. *Population and Development Review.* 75-114.

Brown, L. R. (1973). *World without borders.* Random House.

Brownell, S. (2005). Food, Hunger, and the State. In J. Watson & C. Caldwell (Eds.), *The Cultural Politics of Food and Eating.* Blackwell. 251.

Cai, F. (2002). Zhongguo Renkou Yu Laodong Wenti Baogao: Chengxiang Jiuye Wenti Yu Duice (Report on China's Population and Labor: Employment Issues and Strategies in Urban and Rural Areas).

Cai, F. (2003). Zhongguo Renkou Yu Laodong Wenti Baogao: Zhuangui Zhong Di Chengshi Pinkun Wenti (Report on China's Population and Labor: Urban Poverty in Transitional China). *Beijing: Shehui kexue wenxian chubanshe (Social Sciences Documentation), .*

Cairney, J. (1999). Time since immigration and excess body weight. *Canadian Journal of Public Health, 90*(2), 120.

Campbell, T. C. (2006). *The China study the most comprehensive study of nutrition ever conducted and the startling implications for diet, weight loss and long-term health.* Dallas, Tex.: Dallas, Tex. : BenBella Books.

Cao, X. (1995). Zhongguo nongcun laodongli liudong yu renkou qianyi yanjiu zongshu (Summary of research on rural labor flows and population migration in China). *Nongcun Jingji Yanjiu Cankao (Rural Agricultural Research),* 2, 23-33.

Champion, A. G. & Hugo, G. (2004). *New forms of urbanization: beyond the urban-rural dichotomy.* Ashgate Pub Limited.

Chan, J. C., et al. (2009). Diabetes in Asia. *JAMA: the journal of the American Medical Association,* 301(20), 2129-2140.

Chan, K. W. (1994). *Cities with invisible walls: reinterpreting urbanization in post-1949 China.* Oxford University Press Hong Kong.

Chan, K. W. (2008). Internal Labour Migration in China: Trends, Geographical Distribution and Policies. *United Nations Expert Group Meeting on Population Distribution, Urbanization, Internal Migration and Development,* UN/POP/EGM-URB/2008/05.

Chan, K. W. & Buckingham, W. (2008). Is China abolishing the hukou system? *The China Quarterly,* 195(1), 582-605.

Chan, K. W., Liu, T., & Yang, Y. (1999). Hukou and non-hukou migrations in China: comparisons and contrasts. *International Journal of Population Geography,* 5(6), 425.

Chan, K. W. & Zhang, L. (1999). The hukou system and rural-urban migration in China: Processes and changes. *China Quarterly. London*, 818-855.

Chee, B. W. (2000). Eating snacks and biting pressure: only children in Beijing. In J. Jing (Ed.), *Feeding China's Little Emperors, Food, Children and Social Change*. Stanford University Press. 48-70.

Chen, J. (2011). Internal migration and health: Re-examining the healthy migrant phenomenon in China. *Social science medicine*.

Cheng, Z. (2010). Poverty in China's Urban Communities Profile and Correlates. *China Report,* 46(2), 143-173.

Cheung, S. C. (2005). Consuming "Low" cuisine after Hong Kong's handover: Village banquets and private kitchens. *Asian Studies Review,* 29(3), 259-273.

Chiu, F. Y. (1991). The specificity of the political on Tiananmen square, or a poetics of the popular resistance in Beijing. *Dialectical Anthropology,* 16(3-4), 333-347.

Chun, L. (2007). The Transformation of Chinese Socialism. *The China Quarterly,* 189, 187-228.

CIA World Factbook. https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html

Connelly, R., Roberts, K., & Zheng, Z. (2011). The settlement of rural migrants in urban China–some of China's migrants are not 'floating'anymore. *Journal of Chinese Economic and Business Studies,* 9(3), 283-300.

Curtis, K. R., McCluskey, J. J., & Wahl, T. I. (2007). Consumer preferences for western-style convenience foods in China. *China Economic Review,* 18(1), 1-14.

De Brauw, A. (2008). Migration and household investment in rural China. *China Economic Review,* 19(2), 320.

De Brauw, A. (2003). Are women taking over the farm in China. *Paper provided by Department of Economics, Williams College in its series Department of Economics Working Papers with,* (199).

De Brauw, A., Huang, J., Rozelle, S., Zhang, L., & Zhang, Y. (2002). The evolution of China's rural labor markets during the reforms. *Journal of Comparative Economics,* 30(2), 329-353.

Dello Iacovo, B. (2009). Curriculum Reform and quality education in China: an overview. *International Journal of Educational Development* 29(3), 241.

Deng, H., Shu, M., Shen, Y., & Zhang, Y. (2004). Analysis on incidence of notifiable infectious diseases in floating population in Putuo district [J]. *Shanghai Journal of Preventive Medicine,* 8, 006.

Deurenberg, P., Deurenberg-Yap, M., & Guricci, S. (2002). Asians are different from Caucasians and from each other in their body mass index/body fat per cent relationship. *Obesity Reviews,* 3(3), 141-146.

Dong, K. (2009). Medical insurance system evolution in China. *China Economic Review,* 20(4), 591-597.

Du, S., Mroz, T. A., Zhai, F., & Popkin, B. M. (2004). Rapid income growth adversely affects diet quality in China--particularly for the poor! *Social Science Medicine,* 59(7), 1505.

Du, Y., Park, A., & Wang, S. (2005). Migration and rural poverty in China. *Journal of Comparative Economics,* 33(4), 688-709.

Du, S. (2004). Rapid income growth adversely affects diet quality in China--particularly for the poor! *Social Science Medicine,* 59(7), 1505.

Dutton, M. R. (1992). *Policing and punishment in China: From patriarchy to the people.* Cambridge University Press Cambridge.

Eastwood, R. & Lipton, M. (2004). Rural and urban income inequality and poverty: does convergence between sectors offset divergence within them? *GA Cornia, Inequality, Growth and Poverty in an Era of Liberalization and Globalization.Oxford University Press for UNU-WIDER: Oxford, .*

Fackler, M. (2002) China's Workers pay price in death and injury for country's export success. *The Dispatch*. Associated Press. September 9.

Fan, C. C. (2004). The state, the migrant labor regime, and maiden workers in China. *Political Geography,* 23(3), 283-305.

Fan, C. C. (2007). Migration,*Hukou*, and the City. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 65-89). Washington, D.C.: Washington, D.C. World Bank.

Fan, C. C. (2002). The elite, the natives, and the outsiders: Migration and labor market segmentation in urban China. *Annals of the Association of American Geographers,* 92(1), 103.

Fang, H. & Rizzo, J. A. (2011). Income inequality dynamics in rural China from 1991 to 2006: the role of alternative income sources. *Applied Economics Letters,* 18(14), 1307-1310.

Farb, P. & Armelagos, G. (1980). *Consuming passions, the anthropology of eating.* Houghton Mifflin.

Farquhar, J. (2002). *Appetites: Food and Sex in Postsocialist China.* Duke University Press.

Farquhar, J. (2012). *Ten thousand things nurturing life in contemporary Beijing.* New York: New York : Zone Books.

Feng, W., Ren, P., Shaokang, Z., & Anan, S. (2005). Reproductive health status, knowledge, and access to health care among female migrants in Shanghai, China. *Journal of Biosocial Science,* 37(5), 603.

Franzen, L., & Smith, C. (2009). Acculturation and environmental change impacts dietary habits among adult hmong. *Appetite, 52*(1), 173. doi:10.1016/j.appet.2008.09.012

Fu, W., Fu, V., Gandhi, L., Cao, H., Liu, Z., & Zhou (2012). Rising Consumption of Animal Products in China and India: National and Global Implications. *China world economy,* 20(3), 88-106.

Fulong Wu, (2007). The Poverty of Transition: From Industrial District to Poor Neighbourhood in the City of Nanjing, China. *Urban Studies,* 44(13), 2673-2694.

Gaetano, A. M. & Jacka, T. (2004). Migrant Women's Stories. In A. M. Gaetano & I. ebrary (Eds.), *On the move women and rural-to-urban migration in contemporary China* (pp. 279). New York: New York : Columbia University Press.

Gamer, R. (2008). Chinese Politics. In R. E. Gamer (Ed.), *Understanding contemporary China* (pp. 67). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Guldan, Georgia S. (2000). Paradoxes of plenty: China's infant and childfeeding Transition. In J. Jing (Ed.), *Feeding China's Little Emperors*. Stanford University Press.

Gordon-Larsen, P., et al. (2012). Discordant Risk: Overweight and Cardiometabolic Risk in Chinese Adults. *Obesity,* .

Granet, M. (2007). Right and left in China. In M. Lock, & J. Farquhar (Eds.), *Beyond the body proper* (pp. 41). Chapel Hill: Duke University Press.

Guo, Z. & Liu, S. (2001). Analysis on the disease spectrum of migrant population in Wuhua community of Kunming. *China Comm Med,* 7, 23-24.

Guo, X. (1999). Food price policy can favorably alter macronutrient intake in China. *The Journal of nutrition,* 129(5), 994.

Guo, X. (2000). Structural change in the impact of income on food consumption in China, 1989-1993. *Economic development and cultural change,* , 737.

Hao, Z. (2002). A Review, Summary and Discussion of Population Migration Study in China [J]. *Population & Economics,* 1, 011.

Harrell, S. (2001). The anthropology of reform and the reform of anthropology: anthropological narratives of recovery and progress in China. *Annual Review of Anthropology,* , 139-161.

Harris, M. (1987). The sacred cow and the abominable pig: riddles of food and culture. Touchstone.

He, J., et al. (2005). Major causes of death among men and women in China. *New England Journal of Medicine,* 353(11), 1124-1134.

He, C. & Gober, P. (2003). Gendering Interprovincial Migration in China. *International Migration Review,* 37(4, The Future of the Second Generation: The Integration of Migrant Youth in Six European Countries), 1220-1251.

Heisley, D. D. & Levy, S. J. (1991). Autodriving: a photoelicitation technique. *Journal of Consumer Research.* 257-272.

Hershkovitz, L. (1985). The fruits of ambivalence: China's urban individual economy. *Pacific Affairs,* 58(3), 427-450.

Himmelgreen, D. A. (2004). The longer you stay, the bigger you get: Length of time and language use in the US are associated with obesity in puerto rican women. *American Journal of Physical Anthropology, 125*(1), 90. doi:10.1002/ajpa.10367

Ho, P. (2003). Mao's war against nature? The environmental impact of the grain-first campaign in China. *The China Journal,* (50), 37-59.

Hong, Y., et al. (2006). Rural-to-urban migrants and the HIV epidemic in China. *AIDS and Behavior,* 10(4), 421-430.

Hou, X. (2008). Urban—Rural Disparity of Overweight, Hypertension, Undiagnosed Hypertension, and Untreated Hypertension in China. *Asia-Pacific Journal of Public Health,* 20(2), 159-169.

Hu, X., Cook, S., & Salazar, M. A. (2008). Internal migration and health in China. *The Lancet,* 372(9651), 1717-1719.

Hu, F. (2011). Circular migration, or permanent stay? Evidence from China's rural–urban migration. *China Economic Review,* 22(1), 64.

Huang, W. (2009). Disorder (*Xianshi Shi Guoqu de Weilai)*.

Irvine, J.T. (1989) When talk isn't cheap: language and political economy. *American Ethnologist*. 16(2), 248.

Jacka, T. (2005). *Rural women in urban China gender, migration, and social change.* Armonk, N.Y.: Armonk, N.Y. : M.E. Sharpe, Inc.

Jacka, T. (2009). Cultivating citizens: suzhi (quality) discourse in the PRC. *Positions* 17(3), 523.

Jahn, H. J., Ling, L., Han, L., Xia, Y., & Krämer, A. (2011). Migration and health in megacities: A Chinese example from Guangzhou, China. In A. Krämer, M. M. H. Khan, F. Kraas & SpringerLink (Online service) (Eds.), *Health in Megacities and Urban Areas* (pp. 189). Heidelberg: Heidelberg : Physica-Verlag.

Jensen, R. T. & Miller, N. H. (2008). The impact of food price increases on caloric intake in China. *Agricultural Economics,* 39(s1), 465-476.

Jensen, R., Jensen, N., & Miller (2011). do consumer price subsidies really improve nutrition? *The Review of Economics and Statistics,* 93(4), 1205-1223.

Jing, J. (2000a). Food, children, and social change in contemporary China. In J. Jing (Ed.), *Feeding China's Little Emperors: Food, Children, and Social Change*. Stanford University Press. 1.

Jing, J. (2000b). Food, nutrition, and cultural authority in a Gansu village. In J. Jing (Ed.), *Feeding China's Little Emperors: Food, Children, and Social Change.* Stanford University Press. 135.

Jones-Smith, J. C., Gordon-Larsen, P., Siddiqi, A., & Popkin, B. M. (2011). Emerging disparities in overweight by educational attainment in Chinese adults (1989–2006). *International Journal of Obesity,* 36(6), 866-875.

Jones-Smith, J. C. & Popkin, B. (2010). Understanding community context and adult health changes in China: Development of an urbanicity scale. *Social Science Medicine,* 71(8), 1436.

Kipnis, A. (2006). Suzhi: A keyword approach. *China Quarterly, 186*, 295. doi:10.1017/S0305741006000166

Kipnis, A. (2007). Neoliberalism reified: suzhi discourse and tropes of neoliberalism in the People's Republic of China. *Journal of the Royal Anthropological Institute,* 13(2), 383.

Knight, J., Shi, L., & Song, L. (2006). The rural–urban divide and the evolution of political economy in China. *Human Development in the Era of Globalization: Essays in Honor of Keith B.Griffin, .*

Krueger, R. A., & Casey, M. A. (2008). *Focus groups: A practical guide for applied research* SAGE Publications, Incorporated.

Kulick, D. & Schieffelin, B.B. (2004) Language socialization. In A. Duranti (Ed.), *A Companion to Linguistic Anthropology : Blackwell Companions to Anthropology*. 349. Oxford: Blackwell Publishing Ltd.

Kung, J. K. & Lin, J. Y. (2003). The Causes of China's Great Leap Famine, 1959–1961*. *Economic Development and Cultural Change,* 52(1), 51-73.

Kusuma, Y., Gupta, S., & Pandav, C. (2009). Migration and hypertension: A cross-sectional study among neo-migrants and settled-migrants in delhi, india. *Asia-Pacific Journal of Public Health, 21*(4), 497-507.

Lee, L. O. (1985). *Lu Xun and his legacy.* University of California Pr.

Leppman, E. J. (1999). Urban-Rural Contrasts in Diet: The Case of China. *Urban Geography,* 20(6), 567-579.

Li, B. (2006). Floating population or urban citizens? Status, social provision and circumstances of rural–urban migrants in China. *Social Policy & Administration,* 40(2), 174-195.

Li, F. (1994). Waichu dagong renyuande guimo, liudong fanwei ji qita (The size, geographical distribution and other characteristics of outgoing workers). *Zhongguo nongcun jingji,* (9), 31-35.

Li, W. & Yang, D. T. (2005). The Great Leap Forward: Anatomy of a central planning disaster. *Journal of Political Economy,* 113(4), 840-877.

Li, W., Chen, I., Chang, Y., Loke, S., Wang, S., & Hsiao, K. (2013). Waist-to-height ratio, waist circumference, and body mass index as indices of cardiometabolic risk among 36,642 Taiwanese adults. *European journal of nutrition,* 52(1), 57-65.

Liang, Y. (2006). Migrant workers earn monthly 120 USD. *China View.*
Lin, J. Y., Cai, F., & Li, Z. (2003). *The China miracle: Development strategy and economic reform.* Chinese University Press.

Liu, D. & Darimont, B. (2013). The health care system of the People's Republic of China: Between privatization and public health care. *International social security review,* 66(1), 97-116.

Liu, P., Meng, X., & Zhang, J. (2000). Sectoral gender wage differentials and discrimination in the transitional Chinese economy. *Journal of Population Economics,* 13(2), 331-352.

Liu, Y. & Rao, K. (2006). Providing health insurance in rural China: from research to policy. *Journal of Health Politics, Policy and Law,* 31(1), 71-92.

Liu, H. (2009). At‐home meat consumption in China: an empirical study. *Australian Journal of Agricultural and Resource Economics,* 53(4), 485.

Loyalka, M. (2012). *Eating Bitterness: Stories from the Front Lines of China's Great Urban Migration* . Berkeley: University of California Press.

Lozada Jr, E. P., Watson, J., & Caldwell, M. (2005). Globalized childhood? Kentucky Fried Chicken in Beijing. *The cultural politics of food and eating: a reader,* , 163-179.

Lu, W. (1987). *The gourmet and other stories of modern China.* London: London : Readers International.

Ma, H., Rae, A., Huang, J., & Rozelle, S. (2004). Chinese animal product consumption in the 1990s. *Australian Journal of Agricultural and Resource Economics,* 48(4), 569-590.

Ma, L. J. C. (1998). Native Place, Migration and the Emergence of Peasant Enclaves in Beijing. *China quarterly,* (155), 546-581.

MacFarquhar, R. (1997). *The origins of the cultural revolution.* Cambridge Univ Press.

MacFarquhar, R. & Schoenhals, M. (2009). *Mao's last revolution.* Harvard University Press.

Madrigal, L. (2011). Obesity, hypertension, and migration: A meta-analysis of populations of the south asian diaspora. *Human Biology, 83*(1), 71. doi:10.3378/027.083.0105

Matthews, M. (1993). *The passport society: controlling movement in Russia and the USSR.* Westview Press Boulder, CO.

McDade, T. W. & Adair, L. S. (2001). Defining the “urban” in urbanization and health: a factor analysis approach. *Social Science & Medicine,* 53(1), 55-70.

McLaren, L. (2007). Socioeconomic status and obesity. *Epidemiologic Reviews* 29, 29-48.

Mendez, M. & Popkin, B. (2004). Globalization, urbanization and nutritional change in the developing world. In Anonymous *Globalization of food systems in developing countries: impact on food security and nutrition* (pp. 55). Rome: Food and Agriculture Organization of the United Nations.

Mintz, S. W. (1985). *Sweetness and power.* Penguin Books.

Mintz, S. W. & Du Bois, C. M. (2002). The anthropology of food and eating. *Annual Review of Anthropology,* , 99-119.

Minxin, P. & Pei, M. (2009). *From reform to revolution: The demise of communism in China and the Soviet Union.* Harvard University Press.

Murphy, R. (2004). Turning peasants into modern Chinese citizens:"Population quality" discourse, demographic transition and primary education. *China Quarterly,* 177(1), 1.

Ng, S. W., Norton, E. C., & Popkin, B. M. (2009). Why have physical activity levels declined among Chinese adults? Findings from the 1991–2006 China health and nutrition surveys. *Social science & medicine,* 68(7), 1305-1314.

Ng, S. W. (2008). Impacts of China's edible oil pricing policy on nutrition. *Social Science Medicine,* 66(2), 414.

Nguyen, T., Adair, L., Suchindran, C., He, K., & Popkin, B. (2009). The association between body mass index and hypertension is different between East and Southeast Asians. *The American Journal of Clinical Nutrition,* 89(6), 1905-1912.

Ochs, E. (1993) Constructing social identity: a language socialization perspective. *Research on Language and Social Interaction* 26(3), 287-306.

Pan, C., Shang, S., Kirch, W., & Thoenes, M. (2010). Burden of diabetes in the adult Chinese population: A systematic literature review and future projections. *International journal of general medicine,* 3, 173.

Park, A. (2007). Rural-urban inequality in China. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 41-64). Washington, D.C.: Washington, D.C. : World Bank.

Park, K. A. (1992). *Women and revolution in China: the sources of constraints on women's emancipation.* Women in International Development. Michigan State University.

Pingali, P. (2007). Westernization of Asian diets and the transformation of food systems: implications for research and policy. *Food Policy,* 32(3), 281.

Popkin, B. (2002). An overview on the nutrition transition and its health implications: the Bellagio meeting. *Public Health Nutrition,* 5(1A), 93-103.

Popkin, B. M. (2008). Will China's nutrition transition overwhelm its health care system and slow economic growth? *Health Affairs,* 27(4), 1064-1076.

Popkin, B. M. (2010). Recent dynamics suggest selected countries catching up to US obesity. *The American Journal of Clinical Nutrition,* 91(1), 284S-288S.

Popkin, B. (2004). The nutrition transition: an overview of world patterns of change. *Nutrition reviews,* 62(7), S140-S143.

Popkin, B., Du, S., Zhai, F., & Zhang, B. (2010). Cohort Profile: The China Health and Nutrition Survey--monitoring and understanding socio-economic and health change in China, 1989-2011. *International Journal of Epidemiology,* 39(6), 1435-1440.

Pozzana, C. & Russo, A. (2006). China's new order and past disorders: A Dialogue Starting from Wang Hui's analysis. *Critical Asian Studies,* 38(3), 329-351.

Pye, L. W. (1993). How China's nationalism was Shanghaied. *The Australian Journal of Chinese Affairs,* (29), 107-133.

Qi, Y., & Niu, J. (2012). Health selection effects in China's internal migration. *Asian Population Studies,* (iFirst), 1.

Richards, R., & Smith, C. (2007). Environmental, parental, and personal influences on food choice, access, and overweight status among homeless children. *Social Science Medicine, 65*(8), 1572. doi:10.1016/j.socscimed.2007.06.013

Rong, M. (2008). Population Growth and Urbanization. In R. E. Gamer (Ed.), (pp. 241). Boulder, Colo.: Boulder, Colo. : Lynne Rienner Publishers.

Roy, P. (2010). *Alimentary tracts : appetites, aversions, and the postcolonial.*

Rozelle, S., Guo, L., Shen, M., Hughart, A., & Giles, J. (1999). Leaving China's farms: survey results of new paths and remaining hurdles to rural migration. *China Quarterly*. London, 367-393.

Runge, C. F., Senauer, B., Pardey, P. G., & Rosegrant, M. W. (2003). *Ending hunger in our lifetime: food security and globalization.* Johns Hopkins University Press.

Sahlins, M. (1978). *Culture and practical reason.* University of Chicago Press.

Satia, J. A. (2010). Dietary acculturation and the nutrition transition: an overview This is one of a selection of papers published in the CSCN-CSNS 2009 Conference, entitled Can we identify culture-specific healthful dietary patterns among diverse populations undergoing nutrition transition? This paper is being published without benefit of author's corrections. *Applied physiology, nutrition, and metabolism,* 35(2), 219-223.

Scheid, V., 1958- (2002). *Chinese medicine in contemporary China : plurality and synthesis.* Durham N.C.]: Durham N.C.] : Duke University Press.

Shankar, B. (2010). Obesity in China: the differential impacts of covariates along the BMI distribution. *Obesity,* 18(8), 1660-1666.

Sigley, G. (2009) Suzhi, the body, and the fortunes of technoscientific reasoning in contemporary China. *Positions* 17(3), 537.

Smith, C. J. & Hugo, G. (2008). Migration, urbanization, and the spread of sexually transmitted diseases: empirical and theoretical observations in China and Indonesia. *Urban China in Transition*. 294-341.

Smith, L. C. (2000). The geography and causes of food insecurity in developing countries. *Agricultural Economics, 22*(2), 199. doi:10.1111/j.1574-0862.2000.tb00018.x

Solinger, D. J. (1999). *Contesting citizenship in urban China peasant migrants, the state, and the logic of the market.* Berkeley: Berkeley : University of California Press.

Sun, W. (2012). Unequal China the political economy and cultural politics of inequality. In I. ebrary (Ed.), *Unequal China: The Political Economy and Cultural Politics of Inequality* (pp. 44). Abingdon, Oxon ; New York: Abingdon, Oxon ; New York : Routledge.

Sutton, D. E. (2001). Remembrance of repasts: An anthropology of food and memory. Berg. New York.

Swislocki, M. (2011). Nutritional Governmentality Food and the Politics of Health in Late Imperial and Republican China. *Radical History Review,* 2011(110), 9-35.

Swislocki, M. (2009). *Culinary nostalgia : regional food culture and the urban experience in Shanghai /.* Stanford University Press.

Tao, J. & Yu, S. (2011). Implementation of energy efficiency standards of household refrigerator/freezer in China: Potential environmental and economic impacts. *Applied Energy,* 88(5), 1890-1905.

Taylor, J. (2007). Poverty and Vulnerability. In S. Yusuf & T. Saich (Eds.), *China urbanizes consequences, strategies, and policies* (pp. 91-104). Washington, D.C.: Washington, D.C. : World Bank.

Taylor, J. E. (2003). Migration and incomes in source communities: A new economics of migration perspective from China*. *Economic Development and Cultural Change,* 52(1), 75.

Timmer, C. P. (2012). Behavioral dimensions of food security. *Proceedings of the National Academy of Sciences of the United States of America, 109*(31), 12315. doi:10.1073/pnas.0913213107

Tong, S. Y. & Wong, J. (2008). China's Economy. In R. E. Gamer (Ed.), *Understanding contemporary China*. Boulder, Colo.: Boulder, Colo. Lynne Rienner. 117.

Van de Poel, E., O'Donnell, O., & Van Doorslaer, E. (2009). Urbanization and the spread of diseases of affluence in China. *Economics & Human Biology,* 7(2), 200-216.

Veeck, A. (2000). The revitalization of the marketplace: food markets of Nanjing. *The consumer revolution in urban China,* , 107-123.
Veeck, A & Veeck, G. (2000). Consumer segmentation and changing food purchase patterns in Nanjing, PRC. *World Development,* 28(3), 457.

Wang, G., Gao, H., Xu, W., & Chen, G. (2002). *Xiao chengzhen wailai laodongli jiben zhuangkuang ji dui xiao chengzhen fazhan yingxiang fenxi.* [Analyses on the situation of the labor force and its influences on the development of the little towns]*, Renkou Xuekan (Population Journal),* 3, 3-7.

Wang, Xu, and Liu Gang旭日阳刚《春天里》 *(Wang Xu and Liu Gang "In Springtime")*. Electronic document, http://www.tudou.com/programs/view/5nPgTS_pNq4/.

Wang, Y., Mi, J., Shan, X., Wang, Q. J., & Ge, K. (2006). Is China facing an obesity epidemic and the consequences? The trends in obesity and chronic disease in China. *International Journal of Obesity,* 31(1), 177-188.

Watson, J. (2000). Food as a lens: the past, present, and future of family life in China. In J. Jing (Ed.), *Feeding China's Little Emperors: Food, Children, and Social Change.* Stanford University Press. 199.

Watson, J. L. (2000). China's big mac attack. *Foreign Affairs,* , 120-134.

Wiig, K., & Smith, C. (2009). The art of grocery shopping on a food stamp budget: Factors influencing the food choices of low-income women as they try to make ends meet. *Public Health Nutrition, 12*(10), 1726. doi:10.1017/S1368980008004102

Woolard, K.A. & Schieffelin, B.B. (1994) Language ideology. *Annual Review of Anthropology* 23(1), 55.

Wong, D. F. K., He, X., Leung, G., Lau, Y., & Chang, Y. (2008). Mental health of migrant workers in China: prevalence and correlates. *Social psychiatry and psychiatric epidemiology,* 43(6), 483-489.

Wu, G. (2013). Should nandan be abolished?: The debate over female impersonation in early republican China and its underlying cultural logic. *Asian Theatre Journal,* 30(1), 189-206.

Wu, J. (2012) Governing suzhi and curriculum reform in rural ethnic china: viewpoints from the Miao and Dong communities in Qiandongnan. *Curriculum Inquiry* 42(5), 652.

Wu, Y. (2006). Overweight and obesity in China. *British medical journal,* 333(7564), 362-363.

Xiang, B. (2007). How far are the left-behind left behind? A preliminary study in rural China. *Population, Space and Place,* 13(3), 179-191.

Yan, M. (2000). The Republic of Wine, trans. *Howard Goldblatt (New York: Arcade),* .

Yan, S., et al. (2012). The expanding burden of cardiometabolic risk in China: the China Health and Nutrition Survey. *Obesity Reviews,* 13(9), 810-821.

Yan, Y. X. (2005). Of Hamburger and Social Space: Consuming McDonald's in Beijing. In J. L. Watson & M. L. Caldwell (Eds.), *The Cultural Politics of Food and Eating: A Reader* (pp. 80).

Yang, G. (2003). China's Zhiqing Generation Nostalgia, Identity, and Cultural Resistance in the 1990s. *Modern China,* 29(3), 267-296.

Yang, W., et al. (2010). Prevalence of diabetes among men and women in China. *New England Journal of Medicine,* 362(12), 1090-1101.

Yang, X. (2004). Temporary Migration and The Spread of STDs/HIV in China: Is There A Link? 1. *International Migration Review,* 38(1), 212-235.

Yang, X. & Guo, F. (1999). Gender differences in determinants of temporary labor migration in China: A multilevel analysis. *International Migration Review,* , 929-953.

Ye, X. (1995). The impact of income growth on farm household nutrient intake: a case study of a prosperous rural area in Northern China. *Economic development and cultural change,* 43(4), 805.

You, X. & Kobayashi, Y. (2009). The new cooperative medical scheme in China. *Health Policy,* 91(1), 1-9.

Yu, D. P. (2009). *Cheng Xiang Ju Min Shen Fen Ping Deng Hua Yan Jiu (Rural-Urban Migrants Status and Equality Research).* Beijing : Zhongguo she hui ke xue chu ban she.

Yu, D. (2002). Chengxiang Shehui: Cong Geli Zouxiang Kaifang–Zhongguo Huji Zhidu Yu Hujifa Yanjiu (City and Countryside Societies: From Segregation to Opening–Research on China's Household Registration System and Laws). *Jinan, China: Shandong renmin chubanshe (Shandong People's Press)(in Chinese),* .

Yue, G. (1999). *The mouth that begs : hunger, cannibalism, and the politics of eating in modern China /.* Duke University Press.

Yuhua, G. (2000). Family relations: the generation gap at the table. In J. Jing (Ed.), *Feeding China's little emperors: Food, Children, and Social Change.* Stanford University Press. 94-113.

Zhai, F. (2009). Prospective study on nutrition transition in China. *Nutrition Reviews,* 67, S56.

Zhang, L., de Brauw, A., & Rozelle, S. (2004). China's rural labor market development and its gender implications. *China Economic Review,* 15(2), 230-247.

Zhang, X. (2003). The dynamics of Chinese consumers: a case of Shanghai food consumption. *Journal of International Food & Agribusiness Marketing,* 14(1), 47-66.

Zhang, X. (2008). Consumption and corpulence in China:: A consumer segmentation study based on the food perspective. *Food Policy,* 33(1), 37.

Zhao, Q., Kulane, A., Gao, Y., & Xu, B. (2009). Knowledge and attitude on maternal health care among rural-to-urban migrant women in Shanghai, China. *BMC women's health,* 9(1), 5.

Zhao, Y. (1999). Labor migration and earnings differences: the case of rural China. *Economic Development and Cultural Change,* 47(4), 767.

Zhao, Y. (2002). Causes and consequences of return migration: recent evidence from China. *Journal of Comparative Economics,* 30(2), 376.

Zhou, M. & Cai, G. (2008) Trapped in neglected corners of a booming metropolis: residential patterns and marginalization of migrant workers in Guangzhou. In J. Logan (Ed.) *Urban China in Transition : Studies in Urban Social Change*. Oxford: Blackwell. 226.

Zhou, Z., et al. (2013). Frequency, Immunogenetics, and Clinical Characteristics of Latent Autoimmune Diabetes in China (LADA China Study) A Nationwide, Multicenter, Clinic-Based Cross-Sectional Study. *Diabetes,* 62(2), 543-550.

APPENDIX

STATEMENT OF INFORMED CONSENT:

知情同意书
STATEMENT OF INFORMED CONSENT
Participants – 参加者

This project is being conducted by Chery Smith, PhD, MPH, RD, and Robert Skoro, Masters Student at the University of Minnesota (Department of Food Science and Nutrition) and by Dr Qing Feng, PhD and Yixu Jin of Nanjing Medical University (Department of Nutrition and Food Hygiene in the School of Public Health).
这是一个中美合作的调查研究项目。美方由来自明尼苏达大学食品科学与营养学系的 Chery Smith 博士(PhD， MPH, RD)和 Robert Skoro（明尼苏达大学的研究生）主持；中方由来自南京医科大学公共卫生学院营养和食品卫生学系的冯晴博士（Ph.D）和金亦徐（南京医科大学预防医学学生）主持的。

You have been asked to take part in a focus group that will look at food access and consumption patterns of low-income, rural-to-urban migrants and/or urban residents. We are looking at proximity to sources of food, what types of foods are purchased, household food practices and preferences, and health-related outcomes. The focus group involves a discussion with 4 to 7 participants, and we will also measure your height and weight and have you fill out a demographic form. You were asked to be a participant because there is very little information about the impact of relocation and urban environments on low-income short- and long-term residents in Nanjing. The focus group will last approximately 90 minutes and will be audio-taped.

您将会参加一个焦点团体，这个团体主要讨论低收入流动人口（从农村到城镇）和城镇居民的食物获取途径和食物消费模式。我们将研究食物获取点的地理位置、人们购买的食物的类型、人们对食物的习惯和偏好还有食物与健康的相关性。每个焦点团体由 4~7 个参加者组成，参加者们将就我们提出的问题进行讨论。我们还将测量您的身高体重并请您填写一份人口学方面的表格。目前关于居住地变换和城镇环境对南京低收入短期/长期居民的影响的文献并不多，所以我们希望您能参加这次的焦点团体以帮助我们获得可贵的资料。每个焦点团体将有总共 90 分钟的交流时间，并且我们将记录下大家的意见。

Please read this form carefully and ask any questions you may have before agreeing to this project. Please do not bring any friends or family to the discussion without our prior approval. You also must allow us to measure your height and weight to participate.
请仔细阅读本知情同意书，并在同意参加该项目前向我们提出您有的任何疑问。请不要未经允许带您的朋友或家人参加本次讨论，他们可以在房间或附近等待或陪伴您，但是无法聆听或参与谈话，敬请谅解。请允许我们测量您的身高体重以完善我们的研究。

Risks and Benefits:风险与收益
There are no risks or benefits involved with being in this project.

本项目不存在任何风险与收益。

Compensation: 补贴：

You will receive a 50 RMB Suguo gift card in return for your participation. 你会收一个 50 元苏果礼物卡。

Confidentiality: 匿名：

The records for this project will be kept private, in a locked file in Dr. Smith's office. Only your family name will be attached to your transcript. Only project staff will have access to this file. If the information becomes published, your identity will not be given out - it will remain confidential.

该项目的任何记录将会被存放于 Smith 博士办公室的保险箱中严密保存。记录的文件中只会出现您的姓氏（比如吴先生、王小姐）。只有项目人员（您在焦点团体中见到的人）能够接触这些记录。如果该项目被发表，您的私人信息也不会被泄露-依然保持匿名。

Voluntary Nature of the Project:项目的志愿性

Your decision to participate (or not) will not affect any present or future relations with the University of Minnesota or any community program. If you decide to participate in the project, you are free to withdraw at any time.

您是否参加本项目对您和明尼苏达大学或其他社区项目的关系并没有任何影响。如果您决定参加本项目，您可以在任何时间退出该项目。

Contacts and Questions:联系方式和相关问题：

Those conducting this project are Dr. Chery Smith, Robert Skoro, Dr Qing Feng, and Yixu Jin. You may ask any questions you have now and if you have questions later you may contact Dr. Chery Smith at (612) 624-2217, Robert Skoro at 15996484158 or (612) 242-6823, Dr. Qing Feng at 13584059768 or Yixu Jin at 15195864298. If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Fairview Research Helpline at telephone number 612-672-7692 or toll-free at 866-508-6961. You may also contact this office in writing or in person at University of Minnesota Medical Center, Fairview Riverside Campus, 2200 Riverside Avenue, Minneapolis, MN 55454. You will be given a copy of this form to keep for your own records.

本项目的主持人是 Chery Smith 博士、Robert Skoro、冯晴博士和金亦徐。您现在可以提出就本项目的任何疑问，如果您之后有相关的问题，请联系 Chery Smith 博士（612-624-2217）或 Robert Skoro（15996484158/612-242-6823）或冯晴博士（13584059768）或金亦徐（15195864298）。如果您就本项目有任何的疑问或忧虑想向非项目主持人咨询，请致电 Fairview Research Helpline（612-672-7692 或免费电话 866-508-6961）。您也可以向以下地址写信咨询：University of Minnesota Medical Center, Fairview Riverside Campus, 2200 Riverside Avenue, Minneapolis, MN 55454。本知情同意书一式两份，请妥善保管。

I understand the terms and conditions of the focus group and I agree to participate.

我已经理解焦点团体的条件和情况并同意参加。

Signature:签名：_____Date:日期_____

Signature of Investigator: 调查员签名：_____ _____Date: 日期 _____

SURVEY INSTRUMENT:

☐ **农村到城镇流动人口** **Rural-to-Urban Migrants (RUMs)** ☐ **南京低收入长期居民** **Long-term, Low-income Nanjing Residents**

人口学情况 DEMOGRAPHIC INFORMATION-

1. 年龄 *Age:* _____

2. 民族 *Ethnicity:*
   - ☐ 汉族 *Han*
   - ☐ 回族 *Hui*
   - ☐ 满族 *Manchu*
   - ☐ 苗族 Miao/Hmong
   - ☐ 壮族 *Zhuang*
   - ☐ □□ *Other*:_____

3. 个人月收入 *Individual monthly income:*
   - ☐ 少于 500 元 *≤ 500 RMB*
   - ☐ ≤ 1000 元
   - ☐ ≤ 2000 元
   - ☐ ≤ 3000 元
   - ☐ ≤ 4000 元
   - ☐ 多于 4000 元 *Greater than 4000 RMB*

   How many hours per week do you work?你每个星期工作多少小时_____

4. **家庭收入来源？（多选）** *Which income sources does your current household receive? (CHECK ALL THAT APPLY)*
   - ☐ 固定工资 *Wages from a job*
   - ☐ 个体经营 *Self-employment*
     - 如果是这样，请列出经营内容? *If so, please list your occupation:* _____
   - ☐ 其余亲戚或家人支持 Money sent from other family
   - ☐ 公司或政府补贴 Employer or government support
     - 如果是这样，是哪种补贴?（比如住房补贴、交通补贴等）If so, what kind: _____

5. 教育水平 *Education level:*
   - *a)* 小学或更低 *Elementary School or less*
   - *b)* 初中毕业 *Middle School*
   - *c)* 高中或中专肄业 *Some high school*
   - *d)* 高中或中专毕业 *High school graduate*
   - *e)* 大专肄业 *Some Vocational School*
   - *f)* 本科肄业 *Some College*
   - *g)* 大专毕业 *Completed Vocational School*
   - **h)** 本科毕业 *Completed college*

6. 主要收入来源？ *What is your main source of income?*_____
   - ☐ 如果没有 *IF NO INCOME* ----------> 您多久未工作？ *How long have you been jobless?* _____
     最后的工作是什么？ *What was your last job?*_____

7. 住宿情况？ *Where do you currently live?*
   - ☐ 租房 *Rented apartment*
   - ☐ 借宿亲戚家 *With other relatives*
   - ☐ **单位供房** *Communal housing*
   - ☐ **棚屋** lean-to/slum
   - ☐ 其他 Other: _____

8. **您目前是否有地方居住？** *Do you not have a place to live?*
   - ☐ 有 ----------> 如果没有的话，有多久了？ *IF YES, how long have you been without a place to live?* _____
   - ☐ 没有

家庭情况 Household & Hometown Information

9. 户口类型？ *What type of residence permit do you have?*
   □非农业户口 *urban* □农业户口 *rural*
10. 您的籍贯（老家）在哪里？ *Where is your hometown?* _____
11. 您坐什么交通工具回老家？一般要多久？ *How do you normally get from your hometown to Nanjing? How long does it take?* _____
12. 您多久回一次老家？ *How often do you return to your hometown?* _____
13. *您回老家时通常给您家人带什么（特产、生活费等）？ What items do you often send back to your hometown?* _____
14. 您来南京多久了？ *How long have you lived in Nanjing?* _____
15. 南京的家里有多少人？ *Total number of people in current household:* _____
16. 南京的家里有多少孩子？ *Total number of children in current household:* _____

17. **您有孩子吗？** *Do you have children?*
    ☐ 有 ---------->
    ☐ 没有

如果有 *if yes*:
- 有几个？ *How many?* _____
- 请写下他们的性别和年纪 *Please list their gender and age* _____
  _____
  _____
- *他们住在那里？ Where do they live?* _____

18. **老家的家里有多少人？** *Total number of people in native household* _____

19. **老家的家里有多少孩子？** *Total number of children in native household (under 18):* _____

    他们的年纪？ *Please list their ages:* _____

营养和饮食方式 Nutrition & Foodways Information

20. 你来南京以后，饮食上有什么变化？ *What new food and beverages do you consume that weren't available before you came to Nanjing?*
    _____
    _____

21. **从居住的地方走到您平常买菜的地方多少要多久？** *How many minutes is your home from the grocery store where you most regularly shop?* _____
22. **您多久买一次菜？** *How often do you shop for groceries?* _____
23. **您通常怎么去那里？** *How do you usually get there?*

    ☐ 步行 *Walk*
    ☐ 自行车 *Bicycle*
    ☐ 公共汽车 *Bus*
    ☐ 朋友或家人送 Ride with friend/family ----
    ☐ 开车 *Van*
    ☐ 其他 *Other*: _____

如果这样，您付给他们钱么？
☐ 是
☐ 不
多少钱？ _____

24. 请按照您平时购买食物时的重视程度将下面的食物排序 *Please rank the following food groups in order of importance when grocery shopping* (1=最重要的；10= 最不重要的)（*1= most important*; *10= least important*)

_____ 大米，米线等米制品 Rice, rice noodles, etc.
_____ 面条，馒头等， Wheat noodles, bread
_____ 包子， 饺子等 Steamed buns, dumplings
_____肉，鸡，鸭，鱼，蛋等 Animal Proteins (meat, poultry, fish, eggs, etc.)
_____ 大豆，豆腐，坚果等 Plant Proteins (tofu, nuts, beans etc.)
_____ 荤油：猪油，肥肉等 Animal Fats (*fei rou*, butter, lard, etc.)
_____ 植物油：菜油，豆油等 Plant-based oils
_____含糖饮料 Sweetened drinks
_____ 奶制品（牛奶，奶酪，酸奶等） Dairy (milk, cheese, yogurt, etc.)
_____ 糖类（糖，蛋糕，饼干等） Sweets (cookies, cakes, candy, etc.)
_____水果 Fruit
_____ 蔬菜 Vegetables
_____咸口零食 Salty snacks
_____ 油炸食品（油条，炸鸡等） Deep-Fried foods (fry bread, etc.)
_____碳酸饮料 Pop
_____啤酒 beer
_____黄酒，白酒 yellow/white liquor

25. **如果您收入提高了，您会增加哪一种食品的摄入？** *If your income increased, the first foods you'd buy more of are: (CHECK ONE)*

_____ 大米，米线等米制品 Rice, rice noodles, etc.
_____ 面条，馒头等， Wheat noodles, bread
_____ 包子， 饺子等 Steamed buns, dumplings
_____肉，鸡，鸭，鱼，蛋等 Animal Proteins (meat, poultry, fish, eggs, etc.)
_____ 大豆，豆腐，坚果等 Plant Proteins (tofu, nuts, beans etc.)
_____ 荤油：猪油，肥肉等 Animal Fats (*fei rou*, butter, lard, etc.)
_____ 植物油：菜油，豆油等 Plant-based oils
_____含糖饮料 Sweetened drinks
_____ 奶制品（牛奶，奶酪，酸奶等） Dairy (milk, cheese, yogurt, etc.)
_____ 糖类（糖，蛋糕，饼干等） Sweets (cookies, cakes, candy, etc.)
_____水果 Fruit
_____ 蔬菜 Vegetables
_____咸口零食 Salty snacks
_____ 油炸食品（油条，炸鸡等） Deep-Fried foods (fry bread, etc.)
_____碳酸饮料 Pop
_____啤酒 beer
_____黄酒，白酒 yellow/white liquor
Fried foods (fry bread, etc.)

26. **您觉得您吃得怎么样：** *In general, you would say your DIET is:*
□不好 Poor □ 还行 Fair □ 好 Good □ 很好 Very Good □非常好 Excellent

27. **您觉得您的身体状况：** *In general, you would say your HEALTH is:*
□不好 Poor □ 还行 Fair □ 好 Good □ 很好 Very Good □非常好 Excellent

28. 您觉得您的体重： *In general, you would say your WEIGHT is:*
□太瘦 Too Thin □ 还行 Somewhat thin □ 正好 Perfect □ 超重 Overweight □肥胖 Obese

29. **您有下列疾病吗？** *Have you ever been diagnosed with any of the following conditions? (CHECK ALL THAT APPLY)*
☐ 糖尿病 Diabetes
☐ 心脏病 Heart disease
☐ 高血压 High blood pressure
☐ 癌症 Cancer
☐ 艾滋病 HIV/AIDS
☐ 其他 other
☐ 从没检查过 Don't know

30. 您吸烟吗？如果吸，一天多少根？ Do you smoke cigarettes? If so, how many per day?

饮食保障问题 *FOOD SECURITY QUESTIONS*

1. The first statement is, “The food that (I/we) bought just didn’t last, and (I/we) didn’t have money to get more.” Was that often, sometimes, or never true for (you/your household) in the last 12 months? 有一种情况：“我们买的食物不够吃，我们没有钱买更多的了。”在过去一年你家里，这种情况出现过吗？

[ ] 经常出现Often true
[ ] 有时出现Sometimes true
[ ] 从未出现Never true
[ ] 不知道 DK or Refused

2. “(I/we) couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for (you/your household) in the last 12 months? “我们吃不起营养均衡的一餐（我们无法每顿都有肉吃）。”在过去的一年你家里，这种情况出现过吗？

[ ] 经常出现Often true
[ ] 有时出现Sometimes true
[ ] 从未出现Never true
[ ] 不知道 DK or Refused

3. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food? 在过去一年中，你或你家人（不包括小孩）有没有因为买不起食物而减少饭量或者干脆有一顿不吃的情况出现？

[ ] 有Yes
[ ] 没有No
[ ] 不知道DK

4. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? 多久出现一次？

[ ] 几乎每个月都有Almost every month
[ ] 有几个月但不是每个月Some months but not every month
[ ] 只有一到两个月Only 1 or 2 months
[ ] 不知道DK

5. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? 过去一年中，你有没有因为没有钱而没有吃饱过？

[ ] 有Yes
[ ] 没有No
[ ] 不知道DK

6. In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food? 过去一年中，你有没有因为没有钱而饿过肚子？

[ ] 有Yes
[ ] 没有No
[ ] 不知道DK

THANK YOU!!! 谢谢！

FOCUS GROUP QUESTIONS:

Rural-to-Urban Migrants

Opening Question

- Please tell us your name and what your favorite thing to eat is.
    - 请告诉我们你的名字，和你最喜欢吃的东西。

Introductory Questions

- Next, please tell us where you're from, which family members you lived with there, and how long you've lived in Nanjing.
    - 接下来，请告诉我们你老家在哪里，在你老家有哪些家人，你来南京多久了？
- Thinking about life in your hometown, please describe the meals you would typically eat during a day, such as breakfast, lunch, and dinner.
    - 想一下你在家里常吃的菜，比如早饭、午饭、晚饭都吃些什么？
- In your hometown, what kinds of foods (*shu cai*) would you grow for yourself to eat? Did your house raise chickens, ducks, pigs, etc?
    - 在你老家，你们种蔬菜吗？哪些蔬菜？有没有养鸡，鸭，猪等？
        - Otherwise, where would you go to get meat and vegetables? Where could you get oil or rice?
            - 不然的话，你到哪里去买肉和蔬菜？哪里买油和米？
- In your hometown, when you celebrate holidays what kinds of foods are prepared?
    - 在老家，过节的时候你们准备哪些食物？
- Why did you choose to come to Nanjing over Shanghai, Guangzhou, etc?
    - 你为什么来南京？不去上海或广州等地方？

Key Questions

- Please describe the meals you eat on a typical day.
    - 你一天中每顿通常吃些什么？
        - How many times per day do you eat?
            - 你一天吃几顿？
        - Where do you cook food, and what equipment do you have?
            - 你在哪里煮饭？你用什么煮饭（有什么工具）？
        - Where do you often go to buy food that's ready to eat?
            - 你通常去哪里买现成的东西吃？
- When it's time to eat a meal, what factors are most important to you?
    - 对于你来说，一顿饭最重要的是什么？
        - price, taste, convenience, cleanliness, the recommendation of a friend?
            - 价格，味道，方便，干净或安全，朋友推荐等？
    - Do you prefer to get (Chinese) fast-food or cook your own food at home?
        - 你最喜欢在外面吃还是在家自己做饭？

- How often do you drink alcohol, soda or bottled water here in Nanjing? How does this compare with when you lived in your hometown?
    - 你在南京常喝酒，饮料，瓶装水吗？和你在老家比喝的更多吗？
- How do you feel different environmental elements influence your diet here in Nanjing?
    - 你有没有觉得在南京不同的环境因素影响了你的饮食？怎样影响的？
        - How often do you shop for food? Are the foods you buy fresh or canned?
            - 你多久买一次菜？ 买的东西是新鲜的还是保鲜的？
        - Do you lack facilities or equipment such as a kitchen or refrigerator? How do you cope with problems like this?
            - 你是不是缺少像厨房或冰箱这样的地方或设备？你怎么解决这些问题？
- What's the biggest change in your diet between your hometown and Nanjing?
    - 你觉得你在老家和在南京吃饭最大的区别是什么？
    - What is a balanced or healthy diet in your mind? Do you feel it is hard to eat a balanced/healthy diet? Why or why not?
        - 你觉得平衡的或健康的饮食是怎么样的？要做到很难吗？为什么？
- As a result of migrating, what has happened to different resources (health care, education, housing, etc.) for you and/or your family? Who provides this?
    - 来南京后，你和你家人的资源有没有发生改变？比如医保，教育， 住房？谁提供这些？

Closing Questions

- Here in Nanjing, how do you determine whether food is safe to eat?
    - 在南京，你如何判断食物是不是干净或安全？
- What type of short-term goals do you have beyond monetary gain? What are your long-term goals?
    - 除了赚钱以外，你来南京还有什么别的目地吗？ 有没有什么长远计划？
- Have you ever tried Western fast food like McDonalds or KFC? What did you think?
    - 你是否已经吃腻了西式快餐比如麦当劳，肯德基等？你怎么看待它们？

Registered Nanjing Residents

Opening Question

- Please tell us your name and what your favorite thing to eat is.
    - 请告诉我们你的名字，和你最喜欢吃的东西。

Introductory Questions

- Which family members do you live with here? Is there a person that's usually responsible for buying and making food?
    - 你现在和谁一起住？你家里是否有一个专门负责买菜的人？
- How many times per day do you eat a meal? Please describe the meals you would typically eat during a day, such as breakfast, lunch, and dinner.
    - 你一天吃几顿？你的早餐、午饭和晚饭通常都吃些什么？
- Are you or your neighbors able to grow any foods (*shu cai*) for yourself to eat? What about raising chickens, ducks, pigs, etc?
    - 你和你的邻居有没有自己种菜吃？有没有养鸡，鸭，或者猪之类的？
- When you celebrate holidays what kinds of foods are served?
    - 过节的时候， 有没有什么特殊的食物？

Key Questions

- When it's time to eat a meal, what factors are most important to you?
    - 对于你来说，一顿饭最重要的是什么？
        - price, taste, convenience, cleanliness, the recommendation of a friend?
            - 价格，味道，方便，干净或安全，朋友推荐等？
        - Where do you cook food, and what equipment do you have?
            - 你在哪里煮饭？你用什么工具煮饭？
        - Where do you often go to buy food that's ready to eat?
            - 你经常去哪里买现成的东西吃？
- How often do you shop for food? Do you shop different places for different items, or get everything from one place?
    - 你多久买一次菜？你从不同的地方买买不同的菜，还是所有的菜都在一个地方买？
        - For example, would you go to get meat and vegetables one place but get oil or rice from another?
            - 例如，你会不会在一个地方买肉和蔬菜，在另一个地方买油和米？
- How do you feel different environmental elements influence your diet here in Nanjing?
        - 你有没有觉得在南京不同的环境因素影响了你的饮食？怎样影响的？
            - How far from home do you have to go to get something you can eat immediately? What about food to take home and cook?

        - 你要走多远从你家到能买到现成的吃的的地方？买菜的地方呢？
    - Do you lack facilities or equipment such as a kitchen or refrigerator? How do you cope with problems like this?
        - 你是不是缺少像厨房或冰箱这样的地方或设备？你怎么解决这些问题？
- How often do you drink alcohol, soft drinks, or bottled water here in Nanjing?
    - 你在南京常喝酒，饮料，或瓶装水吗？
- What is a balanced or healthy diet in your mind? Do you feel it is hard to eat a balanced/healthy diet? Why or why not?
    - 你觉得平衡的或健康的饮食是怎么样的？要做到很难吗？为什么？
- What types of additional support, such as health care, education, housing, etc. are you able to access?
    - 你已经有哪些资源，比如医保，教育，住房等？

Closing Questions

- Here in Nanjing, how do you determine whether food is safe to eat?
    - 在南京，你如何判断食物是不是干净或安全？
- Have you ever tried Western fast food like McDonalds or KFC? What did you think?
    - 你是否已经吃腻了西式快餐比如麦当劳，肯德基等？你怎么看待它们？