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Urban orchard in a megacity: formality and informality in China

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ABSTRACT

This anonymized Research Note reports qualitative observations and interview evidence to explore the operation of a U-pick lychee orchard located in China's Pearl River Delta. Observation reveals the ironic juxtaposition of an owner-built cottage on a forested hillside surrounded by an intensively planned, densely populated urban environment featuring high-rise apartment towers. Field data show that informality, social networks, and petty entrepreneurialism are all manifest in urban agriculture, lychee production, labor, and land tenure. This Research Note illustrates the interstitial porosity that exists within the incorporated bounds of an urban area with informal economic activity adjacent to formal occupations and hillside orchards in the shadows of high-rise apartment towers.

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Introduction

Based on field observation of "Lychee Vista," a pseudonym for a hillside lychee orchard in urban Guangdong, and social engagement with its operators, a couple originating in Sichuan (we call them Frank and Maggie), this Research Note is motivated to record our observations and explore the informal character of urban orchards as an atypical form of urban agriculture (UA).

UA has clear health, environmental, social equity, food security, and income generation benefits (Orsini et al. 2013; Smit and Nasr 1992). It is an accepted part of the urban landscape in most Asian countries and especially in China (Smit, Nasr, and Ratta 2001; see also Yeung 1987). Indeed, megacities such as Shanghai have incorporated UA into their economic development strategies (Wen 2003), yet the status of food producing spaces in urban areas is often ambiguous. Most empirical studies on UA in Chinese cities focus on horticulture on comparatively open and level sites (Glaros et al. 2022; Wei and Jones 2022). UA practices may occur on otherwise vacant spaces, or land parcels awaiting (re)development

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which is especially common during rapid urbanization. The informality and insecurity of land tenure on these "guerilla gardens" has been recognized in developed cities (Hardman and Larkham 2014). Observing agricultural activity on the urban periphery of Chongqing, Asa Roast (2022, 391) uses "*kongdi*" (vacant land with connotations similar to wasteland) as a concept to indicate a temporary phase "awaiting an imagined future of urban development." Reusing and reclaiming "empty" space facilitates informal urban agriculture for food production and physical activities detached "from the unhealthy foodways of the city" (Roast 2022, 401).

Our case study concerns a hillside lychee orchard on terrain too steep for traditional urban land uses. A blend of U-pick orchard and custom harvesting for shipment to a nationwide clientele has become the foundation for a profitable business, albeit neither registered nor incorporated. How can such informal activity thrive on urban land subject to formal regulation by local authorities? The land is used with the knowledge and consent of an urban village (*chengzhongcun*; for example see Hao et al. 2013, 2177) which owns the land. The orchard is classified as "country parkland," but its unsuitability for orthodox construction land and concealment provided by the trees makes it seem "empty," providing opportunities for villagers and rural migrants who are entrepreneurially disposed. This highlights the nuances of informality as manifest in labor, markets, land tenure, and housing of urban farmers.

Informality of urban agriculture

UA in China is characterized by four types of informality:

(1) Informal, often part-time, labor is embodied in self-employed or recreational horticultural activities, but those same workers may also hold formal sector employment.
(2) The second aspect of informality refers to the agricultural production process. On the one hand, cultivation, production, and harvesting may be formally organized in an integrated value chain subject to codified institutional regulation. On the other hand, the various stages may be articulated informally by a looser self-employed value chain of producers, pickers, and vendors, linked by tacit knowledge, social capital formation, and trust (*guanxi*).
(3) The spontaneous and unauthorized use of apparently vacant land is the most visible aspect of informality in the urban landscape. Much of the land used for urban agriculture is cultivated by people with no legitimate authority to use the land for that purpose in guerilla gardens. In the case of Lychee Vista, there is some expression of tenure, of informal authority to use the land, but such an undocumented usufruct is unlikely to survive a challenge from the local state.

(4) Fourth, the reproduction of informal labor and oversight of urban agriculture requires housing nearby which may also be informal and unauthorized in areas that the state has not managed to regulate (Polese 2021, 324).

This Research Note is inspired and motivated to observe these four informalities in a party state where labor, economic activity, land, and housing are monitored and closely regulated. In unraveling this apparent paradox, we are reminded that the opposition between formality and informality is a false binary; they are poles along a continuum and they are often interdependent (McFarlane 2012, 2019; Roy 2005). Our field observations remind us that boundaries between formal and informal categories may be blurred, calling for a more nuanced understanding of processes embedded in an urban "way of life" (AlSayyad 2004, 7; Wirth 1938, 1).

Data collection and ethical considerations

This project began unintentionally during a Sunday afternoon walk when the senior author stumbled across a pathway leading from a paved parking lot to a wooded hillside. The path led to a cottage in a lychee orchard and a warm welcome from Frank and Maggie, a married couple, in their mid-40s (Figure 1). Situated amidst a metropolis, the mountain site is a fifteen-minute walk from public transit. Formerly surrounded by fertile farmland and traditional agricultural villages, the mountain area is now classified as "country parkland" – a landscape amenity contrasting with nearby industrial buildings, urban villages, and commercial centers.

What began as "inquisitive observation" (Zhong, Crang, and Zeng 2019, 177) and impromptu socializing evolved into friendship and eventually as an exercise in qualitative data collection. The obstacle of mutual English-Mandarin unintelligibility was overcome with the help of bilingual colleagues and student assistants. Qualitative data was gathered from 12 March to 13 June 2023 over a span of weekly and biweekly meetings with two additional meetings in

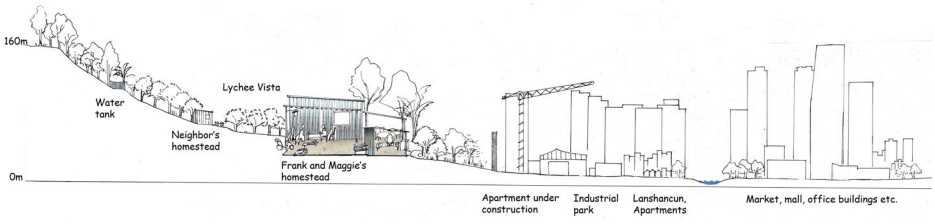

Figure 1. Landscape profile showing the upland orchard, lychee vista homestead, high rise apartment buildings under construction, and the urban village in a process of reconstruction and gentrification. Source: Diwen Tan

November. Some engagements were semi-structured interviews, while others were conversations over tea and meals both indoors and out.

As sociable cross-cultural conversations morphed into purposive interviews, we recognized our ethical obligation to explain our intentions. The first time we recorded a conversation, we asked permission to do so, and while this was willingly given, we were concerned that our respondents did not fully grasp the significance of a digital voice recording, and that acquiescence was not truly "informed consent." Ensuing visits were not recorded, in part because of their social nature. Later, we wanted to record verbatim responses in Mandarin for subsequent transcription, translation and quotation. Thus, we sought to reiterate our ethical obligations to obtain informed consent prior to recording further interview data. We explained that we were planning to write a story about the lychee orchard for an English-language academic journal.

This caused concern and bewilderment. Maggie asked, "What is the use of recording this conversation? We are just ordinary people; we are just chatting normally." Maggie could not imagine how her folk wisdom gained through years of living on the land in urban China might be of any value. She displays a remarkable mixture of peasant modesty, allegiance to the Party, and is quick to confess her lack of formal education. She went on to express apprehension about our research and its dissemination. After reassuring her that we would be prudent in what we wrote, I concluded the preliminaries for this recording by reiterating that Maggie was under no obligation to answer any questions and she was at liberty to change the subject at any time. Her answers would be translated carefully to avoid any trouble with authorities. Photographs would not be used and pseudonyms would replace personal names and toponyms.

Informal and formal labor: on the job and in the orchard

Frank and Maggie operate an orchard producing lychee for sale and vegetables for household consumption. In these activities, they are self-employed and not subject to labor regulations, social security benefits, or income tax – their work is not recorded, protected or regulated by public authorities hence they are informal workers according to the ILO (2002). But they are also formally employed full time: Frank is a police officer and Maggie works in an institutional kitchen.

While the revenues from a U-pick lychee operation can be lucrative, full-time employment is a risk management strategy. Permanent off-farm work, formal and sanctioned by local government, provides employment security and social benefits in the city. In a good-harvest year, the income from lychee production could comprise 80% of total household income, however yield depends on weather conditions, and lychee is prone to "biennial bearing" with rich and poor crops in alternate years. Thus, urban farm income is unstable as "it depends on heaven for sustenance (*kaotianchifan*)," as Maggie told us. This stands in sharp

contrast to migrant families adopting a "hoe and wage" survival strategy, regarding self-employment in agriculture as vital to household security even though formal employment typically provides a larger share of household income (Ye 2018, 7). The intense connection between agricultural self-employment, ancestral land tenure and rustic memories leads many rural migrants to consider farmland as a form of indemnity to sustain their livelihoods. Whether informal agricultural work is considered to be the main or most reliable source of long-term sustenance varies considerably. In contrast, Maggie regards formal employment income and associated access to the city's medical resources and future retirement benefits, as a kind of insurance policy while the orchard is the major income source, insecure though it may be.

Frank works a forty-hour week, alternating between day and night shifts, patrolling city streets as a community-based police officer (*minjing*). Maggie works about a kilometer from home, providing institutional food service. She starts work every weekday at 5:00 a.m. It takes about 15 minutes to pick her way down the mountainside in the pre-dawn dark, escorted by her dogs. Her formal work ends at 3:00 p.m. so she has time for household chores and to monitor the lychee orchard.

These full-time formal sector occupations allow Frank and Maggie the flexibility to be part-time farmers, tending their orchard through the year: pruning the trees, repairing storm damage, monitoring blight and insects, and spraying to control pests. Frank and Maggie use their summer vacations to operate the orchard and their son helps out, so lychee harvest season is a family affair. This year they asked the son of a fruit wholesaler to assist with the harvest, providing a WeChat red envelope (*hongbao*) as an expression of thanks and informal compensation. This also reinforces an informal relationship with potential benefits in marketing the fruit.

Informal lychee production, harvesting, and marketing in relatively small urban orchards competes with the commercial lychee industry. Lychee has been the iconic summer fruit in South China for thousands of years and is Guangdong's largest fruit crop (Huang 2002). Lychee production accelerated rapidly in the late 1980s when city markets grew, and the Household Responsibility System provided an incentive for U-pick orchards. Thus, the area under lychee cultivation in Guangdong tripled in just 10 years reaching 300,000 hectares in 2000 (National Bureau of Statistics of China 2022, Chapter 11). In recent years the focus of investment and attention has shifted to technological innovation and culture-themed tourism in large commercial orchards (Xinhua 2023).

In contrast, Lychee Vista is a small-scale tourist orchard covering an area of about 20 mu (1.3 hectares) with 200 lychee trees, some longan, and a patch of dragon fruit. In June and July, city people come, often as families, to pick their own lychee. In June 2023, U-pick visitors were charged a flat rate of 60 RMB (about US$10) for all the lychee they could pick and eat on-site. Customers

wanting to take fruit away are charged at the market price: 30-35RMB per half-kilogram (*jin*) for *Nuomici*, the premium lychee variety.

Marketing relies on Frank and Maggie's social network, including friends, relatives, and off-farm coworkers. WeChat, China's most popular social medium, is the most effective channel to invite old customers to return. U-pick customers appreciate the sylvan atmosphere, fresh air, open space, and spectacular vista, quite different from city life in the traffic-choked streets below. Picking lychee is a nostalgic experience shared by all in the family for whom the rural atmosphere prompts reminiscing about village origins. Frank promotes lychee products through his social network of U-pick customers and uses WeChat to attract potential buyers nationwide. He is planning to expand the business and diversify his resource base by renting another lychee orchard nearby.

Formal land use rights and informal land tenure

UA may occupy temporarily vacant land awaiting (re)development; steeply sloping parcels not suited to construction; margins of road, rail, or drainage allowances; or public land that is formally zoned as a community garden (Zhang et al. 2022). In the case of Lychee Vista, the tenure arrangement for the level homestead area of less than 200 square meters and the adjacent orchard on the hillside, is informal though it also seems quite secure.

The orchard can be traced back to the 1980s when reclamation of uncultivated land (*kaihuang*) was encouraged by the central government. Traditional village farmland expanded to reach the limit of field crop cultivation along the mountain's perimeter. Uncle Xie, a local villager, occupied this rugged hillside by planting lychee and longan trees in an environment unsuitable for any other crop.

In ensuing years, many traditional agricultural villages were engulfed by urban growth and became urban villages, while their agrarian land was expropriated for industrial, commercial, and residential land uses. The steeply sloping hillside, reclaimed wasteland through lychee planting, was of no interest to the government because of its limited urban development potential, thus rights to this land remained with the village collective while it was designated as "country parkland" under municipal land use regulations.

In the early 2000s, villagers started to rent out their forest land to rural migrants, both to obtain rental income and to manage and protect their lychee trees. Orchard tenants could harvest and sell the fruit however they chose and had an incentive to maximize their yield. In the case of Lychee Vista, Uncle Xie granted informal tenure to Frank rent-free, based on their close personal relationship and mutual trust developed over a period of years. However, Uncle Xie's authority to grant use of the land to Frank, whether approval by the village collective was necessary, and whether such approval was actually given, is unclear. There is no document, contract, or deed transferring

stewardship and usufructuary rights to the land to Frank and Maggie. However, Frank seems quite confident in the long-term security of his tenure. "The villager [Uncle Xie] lets us use the land and manage the trees. I can stay here as long as the government does not take over the land," a prospect that Frank views as extremely unlikely.

Frank's social networks and personal relationships are diverse and not limited to people with common village origins (*laoxiang*). Uncle Xie is from Guangdong and speaks Cantonese while Frank is Sichuanese. Yet Frank has managed to overcome the cultural divide which has been fundamental to his informal land tenure and informal lychee production and marketing. Sharing fruit with relatives, friends, or coworkers and inviting their children to help have become the means for creating and maintaining a rich social network comprising a wide range of personal relationships (*guanxi*).

Informal housing

Frank and Maggie's farmhouse is a single-storey cottage on a concrete pad. The walls are green metal-clad foam-core panels 3–4 centimeters thick topped off with a corrugated shed roof. It has an air-conditioned living room, three bedrooms, a detached open kitchen (considering fire safety), and a separate toilet structure that drains into a septic tank. The structure is mainly self-built, but workers were brought in to assist in erecting the walls. The standard of construction is much better than the precarious shanties near other UA fields in Guangdong (Talamini, Zhang, and Viganò 2022, 109). In some respects this is a form of "small property rights" housing (Lai and Lin 2022). However, Frank and Maggie's property rights depend on the benevolent munificence of Uncle Xie; there is no document to legitimate their occupancy.

Rainwater to irrigate the trees is collected in concrete water tanks built (and later abandoned) by villagers for the irrigation of village farmland in the 1960s and 1970s. Potable domestic water from city supplies is tapped in from the construction site down the hill on an informal basis. Lychee Vista has an electricity meter in the industrial park down the hill, so the monthly electrical bill requires a formal transaction. However, the electrical conduit is DIY and runs through the woods up to the house.

Frank and Maggie own their home but not the land on which it stands. In the unlikely event that the government expropriated Lychee Vista, Frank is not sure that they would receive any compensation. He recognizes that their house was illegally built. "You definitely cannot sell the house … Uncle Xie (informal landlord and villager) told us to build a good quality house. If the government were to take over the land, it might provide some compensation for the homestead." Maggie and Frank express a deep attachment to place: Lychee Vista is their home and an important part of their livelihood. "For as long as we have lived here and worked here, this land has belonged to us. I want to protect it and

manage it well as a productive lychee forest. Since the uncle gave it to us, we have the responsibility to protect these lychee trees and to make good use of them."

Despite being built on rugged terrain deep in the bush, Frank and Maggie's home is not completely undocumented and unregistered. Technically, they are under the jurisdiction of the park office, Lychee Vista's land is registered with the village management committee, and the house is registered with the sub-district office. Yet their neighborhood of homesteaders is well off the beaten track and visits from any authority are a rare occurrence. The dogs discourage visitors outside of lychee season. The local government adopts a *laissez-faire* approach to management, not interfering with production activities but providing notification of emergencies such as fires, typhoons or disease outbreaks.

Conclusion

These empirical observations are important because they challenge Western imaginaries of urban land use regulation in China. Regulatory capacity is not comprehensive; some authorities are oblivious while others simply turn away when the opportunity to intervene presents itself. This points to an unrecognized porosity in the monitoring and regulation of land use and construction standards of the Chinese party state at the local government level.

In operating a lychee orchard in the midst of a megacity, Frank and Maggie live a hybrid formal-informal lifestyle. Hundreds of households are scattered through rugged forestland well within municipal boundaries. Most have full-time off-farm formal sector occupations and in no sense are their homes truly "off the grid," yet they enjoy a rural lifestyle. By delineating multiple informalities in the organization of on- and off-farm labor, orchard land tenure, and housing, we foreground "segments of the population that have been neglected by orthodox economic and economic policy approaches" (Polese 2021, 324). Without ever challenging the state's power and legitimacy, Frank and Maggie's Lychee Vista demonstrates how the construction of a lifestyle alternative stands in sharp contrast to the normative urban behaviors anticipated under an ideology of modernization. Their search for the "good life" leads down heterodox pathways amidst urban orthodoxy.

The *kongdi* concept has been used to highlight the temporary nature of informal agricultural practices on urban land that may be considered empty or vacant in the vernacular (Roast 2022). However, our case suggests another sense to "empty" that emerges from the *laissez-faire* management of local government, benign neglect by property inspectors, and the ambiguity of land use regulations especially when applied to land not (yet) built up with urban uses. As a land use designation, "country parkland" does not convey any precise indication of the types of vegetation that are appropriate or activities that are permitted, thus the care of lychee trees and fruit production for profit

(which is considered agricultural and outside of urban life) is ignored as a matter of tacit disregard by the party state.

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References

AlSayyad, N. 2004. "Urban Informality As a 'New' Way of Life." In *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*, edited by A. Roy and N. AlSayyad, 7–30. Lanham, MD: Lexington Books.

Glaros, A., G. Luehr, Z. Si, and S. Scott. 2022. "Ecological Civilization in Practice: An Exploratory Study of Urban Agriculture in Four Chinese Cities." *The Land* 11 (10): 1628. https://doi.org/10.3390/land11101628.

Hao, P., S. Geertman, P. Hooimeijer, and R. Sliuzas. 2013. "Spatial Analyses of the Urban Village Development Process in Shenzhen, China." *International Journal of Urban & Regional Research* 37 (6): 2177–2197. https://doi.org/10.1111/j.1468-2427.2012.01109.x.

Hardman, M., and P. J. Larkham. 2014. *Informal Urban Agriculture: The Secret Lives of Guerrilla Gardeners*. London: Springer Cham.

Huang, X. 2002. *Lychee Production in China. Lychee Production in the Asia-Pacific Region*. Bangkok: Food and Agricultural Organization of the United Nations.

ILO. 2002. "Decent Work and the Informal Economy: Sixth Item on the Agenda." 90th International Labour Conference: 2002, Geneva. Report VII (2A). International Labour Organization.

Lai, Y., and Y. Lin. 2022. "Buying a House without a Formal Title: A Property Rights Perspective for Understanding Informal Housing Ownership in Shenzhen, China." *Journal of Urban Affairs*: 1–19. https://doi.org/10.1080/07352166.2022.2137031.

McFarlane, C. 2012. "Rethinking Informality: Politics, Crisis, and the City." *Planning Theory & Practice* 13 (1): 89–108. https://doi.org/10.1080/14649357.2012.649951.

McFarlane, C. 2019. "Thinking with and Beyond the Informal–Formal Relation in Urban Thought." *Urban Studies* 56 (3): 620–623. https://doi.org/10.1177/0042098018810603.

National Bureau of Statistics of China. 2022. *Guangdong Statistical Yearbook*. Beijing: China Statistics Press.

Orsini, F., R. Kahane, R. Nono-Womdim, and G. Gianquinto. 2013. "Urban Agriculture in the Developing World: A Review." *Agronomy for Sustainable Development* 33 (4): 695–720. https://doi.org/10.1007/s13593-013-0143-z.

Polese, A. 2021. "What Is Informality? (Mapping) "The Art of Bypassing the state" in Eurasian Spaces - and Beyond." *Eurasian Geography and Economics* 64 (3): 322–364. https://doi.org/10.1080/15387216.2021.1992791.

Roast, A. 2022. "Theory from Empty Land: Informal Commoning Outside/Within Economies and Ecologies of the Urban." *International Journal of Urban & Regional Research* 46 (3): 387–404. https://doi.org/10.1111/1468-2427.13097.

Roy, A. 2005. "Urban Informality: Toward an Epistemology of Planning." *Journal of the American Planning Association* 71 (2): 147–158.

Smit, J., and J. Nasr. 1992. "Urban Agriculture for Sustainable Cities: Using Wastes and Idle Land and Water Bodies As Resources." *Environment and Urbanization* 4 (2): 141–152.

Smit, J., J. Nasr, and A. Ratta. 2001. "Urban Agriculture Yesterday and Today." In *Urban Agriculture: Food, Jobs and Sustainable Cities*, edited by Jac Smit, 1–31. New York: United Nations Development Programme/The Urban Agriculture Network, Inc.

Talamini, G., Q. Zhang, and P. Viganò. 2022. "The Condition of Urban Agriculture in a Chinese Global City: Evidence from the Field." *Environment and Urbanization* 34 (1): 99–121. https://doi.org/10.1177/09562478211066422.

Wei, Y., and P. Jones. 2022. "Emergent Urban Agricultural Practices and Attitudes in the Residential Area in China." *Urban Forestry & Urban Greening* 69:127491. https://doi.org/10.1016/j.ufug.2022.127491.

Wen, Z. 2003. "Urban Agriculture and Rural Economic Development." *Rural Economy* (11): 41–43. (in Chinese).

Wirth, L. 1938. "Urbanism As a Way of Life." *The American Journal of Sociology* 44 (1): 1–24.

Xinhua. 2023. *Xi Story: Lychee Industry Brings Wealth to Villagers in Guangdong*. April 14. Accessed August 2, 2023 from https://english.news.cn/20230414/8454851d143c469ebc91892ee538dfa4/c.html.

Ye, J. 2018. "Stayers in China's "Hollowed-out" Villages: A Counter Narrative on Massive Rural-Urban Migration." *Population, Space and Place* 24 (4): e2128. https://doi.org/10.1002/psp.2128.

Yeung, Y.-M. 1987. "Examples of Urban Agriculture in Asia." *Food and Nutrition Bulletin* 9 (2): 1–10.

Zhang, X., D. Pan, K. Wong, and Y. Zhang. 2022. "A New Top-Down Governance Approach to Community Gardens: A Case Study of the "We Garden" Community Experiment in Shenzhen, China." *Urban Science* 6 (2): 41. https://doi.org/10.3390/urbansci6020041.

Zhong, S., M. Crang, and G. Zeng. 2019. "Constructing Freshness: The Vitality of Wet Markets in Urban China." *Agriculture and Human Values* 37 (1): 175–185. https://doi.org/10.1007/s10460-019-09987-2.