Social Designing Edible Community Networks:
Longtan, Taoyuan, Taiwan

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Abstract
Based on action research methods in between peri-urban and rural communities of Longtan region in Taoyuan Taiwan, the object of our paper is to investigate how to reconnect lives and landscapes to revitalize small towns and shrinking rural villages by cultivating edible community networks. We define edible community networks as social designing local food to connect three major domains: autonomous processes, environmental friendly economies, and cross-cultural landscape identities. The findings of our research suggest that food imbody social relationships as well as economic connections. Rural revitalizations could be established via integrating food connections among urban consumers, farmers, and community groups.

Keywords: food research, social design, community development, Edible Community Network

1.0 Introduction
The process of modernization has caused the relationships that the land has with materials, life and society as a whole to gradually separate and disintegrate. This prompts several questions: How can we creatively empower villages' natural characteristics to stimulate greater autonomy for communities? What kinds of characteristics connect through what types of 'mediums'? Foremost, nourishment for all life and land comes from food, and groups habitually form social connections through food. Through civilizations and their evolution, the exchange of food has constantly shaped and redefined the relationship between the self and the community. This paper uses food as a medium to discuss the interaction between food and society, through food connections. This layer of interactive relationships constructs a heterogeneous network that reconnects the village's ecology, landscape and community economy. Interactions within this network involve more than just monetary exchange, but also exchanges of labor and knowledge. More importantly, this layer constructs a method of theoretical thinking and practical application that encompasses modern food systems and local societies.

This research project therefore used the participatory action research (PAR) method, with the village and people of Longtan, located in Taoyuan, Taiwan, as its subject. Through action plans guided by ideals and mobilizational modes, the researchers tried to understand the subjects' experiences from a participatory point of view. We also explored changes experienced by the subjects, and how they formed reconnected social relationships in the face of a variety of incidents.

These themes are, then, a local program for vitalization of production (shopping district marketing and microeconomic policy); a cultural-creative program (planning for a literary zone and tour guide training); and a revitalization program for plateau agricultural communities. We were in charge of implementation for the official program, while simultaneously being participants in community building for the area. Our data collection was divided into two stages: 1) We first made field notes, though the direct participation program...
that lasted from 2011 to 2015, and from our observations conducted during actual participation; 2) from 2015 to 2017, after implementation of the program had concluded, we conducted semi-structured interviews and indirect observations, and then analyzed and interpreted the transformations experienced by the active parties. (Fig. 1).

This research project therefore employed the practical application of social design of food in Longtan as theorization. An 'edible community network' theoretical framework was constructed experientially. Constructing such a framework requires an examination of food connection theories, such as theoretical discourse regarding the exchange of food, crossing of cultures, and social design (Fig. 2).

First, the exchange and sharing of food manifests interactive relationships within social groups. Food, in its role as a mechanism for reciprocity and redistribution, conveys relatedness through personal actions (Carsten 1997; 2000). Mauss (1967) analyzed the exchange of food from the perspective of socio-political alliances to understand how members of a population perform the actions of granting, receiving and denying through such food exchanges. Mauss thus explored the way that these exchanges can give rise to a greater understanding of how community elements conduct transactions and form alliances. We can view the exchange of food as an important mechanism by which the community establishes social relationships and identities. That is, the community uses food-driven actions to extend the social network, and in doing so, establishes social relationships.

In addition, in terms of research on food and local development, part of our focus has been on studies regarding development of food autonomy and livelihoods brought on by changes in aboriginal domains. We have also focused on discussing the power of citizen agriculture and local rebuilding. Examples of this include the Agricultural Renaissance at the village level, and community support of agriculture. Conceptually, and through a democratic, ecological process, this draws the once-disconnected food production network into the mainstream of society. It simultaneously puts emphasis on the dialogue that takes place between community power and local ethics. At the urban level, there has also been research into urban agriculture. This research includes various topics, such as food networks established and mutually supported by urban agriculture; small agricultural markets building systems of trust between consumers and producers; and an additional focus on the example of community protection presented by the South Airport Community Happiness Food Bank. This last is due to the uniqueness of the food bank, which achieves the concepts of care for the underprivileged and of social interaction. It is clear that contemporary food issues no longer consist of just the issue of having sufficient food to eat; an even more important issue is rebuilding both community and local relationships through food chains.

The idea of the food net (or networks of food connection) is a new trend at the heart of the contemporary community movement. In 2011, Peruvian chef Gastón Acurio and other international chiefs jointly issued a declaration, To Future Chefs. In this document, they
encouraged chefs to take up social responsibility outside of the kitchen. Chefs around the world have utilized globalized information media and mobile spaces to spread the knowledge and technology needed to start a food revolution — from the local to the global, linking together families, schools, villages, cities and countries, to form cross-cultural and cross-border connections. In Taiwan, a trend of regional revitalization projects, based on microeconomics and connected to producers, is gradually forming. For example, the Taitung Rift Line ‘from farm to table’ project platform (in southeastern Taiwan) was realized by reproduction and sharing of food and agriculture knowledge. The project platform also linked together the life memories of different groups, families and individuals. As compared to the global cross-cultural experiences of foreign chefs, the movement in Taiwan has sought to narrow the distance between agriculture (producers) and the consumer, gathering together a diverse group of actors and in so doing, forming interactive, mutually beneficial communities. Interactions and cooperation within these communities emphasize mutual local assistance. They exchange, but they also exchange values of identity, emotions, lifestyles and cultural meaning. This has been called “producing what one needs and being able to exchange it for other resources one needs”.

Based on the above theoretical investigation, this paper constructed an analytical framework, namely, the edible community network. Within such a network, there exist two basic layers of network relationships: the community network, and the food network. Through the exchange and transaction of food, and through the production and management of resources both within and without the local area, communities operate an autonomous food economy. This instills economic energy back into the community, and creates a production environment that crosses geographical boundaries, industries and cultures. The introduction of social design redefines the scope of professional action within regional rejuvenation projects, gradually guiding the community from self-transformation to public interest. Social design also restructures power relations and production space structures, and thus forms an innovative social transformation. This study thus has two main parts. The first part looks at development in Longtan's urban and rural areas, as they have been influenced by modernization, and surveys community power arising from each transformation. The second part discusses how actions guided by the 'social design of food' can lead to local revitalization in two ways: a) Community-supported citizen-agricultural movements; b) Community food exchange. These two types of activities link villages with markets, and connect the broader community with its component communities. These activities also create interdisciplinary, cooperative and productive relationships and learning networks. The third and final part of this study is an empirical analysis of the edible community network.

2. Urban and Rural Development in Longtan

2.1. Changes in the Tea Country Landscape

The basis of Longtan's economy is agriculture. Its water and topography determine what crops are grown, with many varieties of tea grown in the hilly regions, and rice primarily in the plains. As a local saying has it, "Grow rice where there's water, grow tea where there isn't" (Civil Affairs Office of Longtan District, 2014). Longtan has been famous for its tea since the Qing Dynasty (ending 1911). Longtan remained Taiwan's primary tea producing region under Japanese rule. At its height, Longtan's production capacity accounted for one-tenth of Taiwan's total tea exports. However, industrialization in the 1960s to 1970s meant Longtan's farming villages experienced important changes due to government policies.

The first effect of this rural industrialization (caused by post-war industrialization) was that the rural labor force either left the countryside, or changed away from agriculture. During this time many villages in Taiwan experienced similar circumstances, with factories taking over spaces once devoted to agricultural production and rural living. Agricultural productivism also strongly affected agricultural workers. Though policies attempted to improve life for farmers, such policies were insufficient to offset the lure of the urban economic boom. The young generation thus overwhelmingly chose to move to the cities to find work. Only a few stayed behind to take up their family's tea businesses; while many women worked odd jobs in small processing factories. Local society in rural farming areas fell silent. Saturation of urban land use soon followed, as well as governmental conversion of non-urban land into industrial zones. Large swaths of tea plantations disappeared. It also caused significant changes in the landscape, water, irrigation, and the agricultural establishment's overall locality. In other words, the disappearance of the tea plantations was not only a problem of declines in productivity; it also had effects that rippled throughout society, culture and the ecology.

The government's "Sansheng" policy (improving farmers' agricultural production and quality of life, while also taking into account ecology) was a turning point in bringing the village into the post-production and multi-functional production stage of development. The goal was to guide villages toward more sophisticated development. In the Tongluoquan section of southern Longtan, tourist tea gardens sprung up. New buildings gave the local landscape a 'face lift' as well. Long-term, middle-aged farmers were receptive to the fact that these changes were leading the community in a new direction, along with an influx of resources. These bottom-up forces made diversified rural community building, and rural regeneration, possible.

The industrialization process' second effect was modernization of the irrigation system. Shimen Reservoir was built due to industrial demand for water. The Reservoir's construction resulted in certain areas being off-limits to urban development in the Shimen city planning project. The construction of the dam and subsequent formation of the Reservoir also affected water levels. Changes in water level, in turn, caused the decline of Sankeng Old Street, which originally relied on waterway transport. The dam and reservoir project benefited outside worker settlements and vendors who sold fish snacks from Shimen. However, businesses and industries were unable to then move in, because with the dam and military development, some non-urban land was off limits to construction. This caused an exodus of people and economic stagnation, but helped the area retain its historical, cultural and industrial feel. These factors resulted in the rise of Shimen Reservoir tourism, and caused a boom in restaurants in the surrounding villages to meet the tourist town's demands.
2.2 The Hakka Cultural Movement and Community Building

The third effect was the rise of the Hakka cultural movement and Hakka community building. These were a convergence of the government’s then policy of “culturalizing industries and industrializing culture”. Longtan is a region in Taoyuan with a Hakka majority; Longtan thus has a relatively high degree of unique local flavor. Local governments created Hakka tourist towns through specialty local marketing and festival events. However, village development became increasingly oriented toward consumerism, recreation and mere symbolism. Simultaneously, a Hakka group consciousness began to develop, better cohering and linking the strengths of rural communities. This consciousness came from the government’s urban and rural construction, and village regeneration and Hakka Life Creation projects. These projects happened alongside countrysidewise industrialization and the development of the modern village. Regrettably, for a long period, local governments saw community building and local economic development as two different things. ‘One Town, One Product’ development goals encouraged each town to become famous among tourists for one local specialty; and commercial district guidance projects were commissioned long-term to private consulting companies tourist and commoditization-based theme activities. However, such strategies could only attract tourists for short periods. Local industries at the time tended to be limited to the geopolitically related community itself, and didn’t include the surrounding variety of businesses within the community’s economic system. In other words, the local economic system was not truly enmeshed in community life.

Long-term government resources domesticated second- and third-tier cities and towns. Particularly in some of Longtan’s more closed off local societies, local factions who had held control of resources continually tended toward conciliating in dealing with local reforms. Their surface-deep construction efforts made Longtan into a "place neither backward nor modern, with a merely acceptable quality of life". The food industry managed to make management more localized, while at the same time it found ways to survive within the niche between urban planning and land development. However, this position was always precarious, wavering between small towns opening to tourism, and opening so widely that they fell into commodification. Both communities and industries continued to hope that the national government’s power could create needed change. This situation served as a reminder that Longtan doesn’t need big tourism construction projects; what it lacks, rather, is a local revitalization movement supported by professionals and the community itself. Therefore, the progressive and idealistic Graduate Institute of Building and Planning (part of National Taiwan University) became involved in Longtan through a Local Industry Development Project commission, and conducted the following food-related social design projects.

3.0 Social Design of Food

3.1 How can food drive local economies?

The project’s promotion mechanism involved three main propositions:

1. A platform that views each actor as a subject, understands differences, and helps to build trust: By forming strategic alliances between communities and businesses, and by matching stores with products, both sides can progress from sharing to trusting, and then build partnerships of mutual cooperation and improvement. This is the first step toward developing local production and the sales distribution system.

2. A Commons of Food creation process: Guiding the community to think about the design of food through conceptual lectures; then breaking down boundaries separating the public and personal spheres, to inspire a wide range of economic and public welfare activities. (Fig. 3-4)

3. Small-scale experimental sites: Implement courses for businesses with urgent operational and/or product quality problems, to assist stores in examining more fully their own characteristics, and to extend the conversation from the individual realm into public-sphere issues, so that businesses’ specializations become involved in the community.

   - Operate a Localized Area to Learn about Selling and Consumption

   The operational mode is to first use a given store’s story as a marketing starting point to highlight the store. Through workshop guidance, and through identifying resources, stores with geographical and industrial relationships will naturally become part of the wider network (Fig. 5). The first phase of developing a linear tourist itinerary is established by tying stores’ products with local...
scenery/characteristics. For example, for the 9th Conference of the Pacific Rim Community Design Network: North Taiwan Longtan Itinerary, local businesses from Gaoyuan (in far southern Longtan), Sankeng (in eastern Longtan) and more urban communities lead scholars from Japan and South Korea on an experiential tour of the towns’ productive cultures and local customs (Fig. 6). This exchange helped these communities to develop their capacities to host international visitors. In the second year, stores learned how to create more and more deeply-focused tourism, utilizing cross-industry alliances and circular tourism. This included planning a one-night two-day itinerary connecting not only attractions, but also linking the community’s social network production and marketing with its wide variety of business units.

- Exchange of Knowledge and Study of Technology

Cross-cultural dialog takes place whenever people from different cultures come together and listen to each other. In the food system, cross-cultural dialogs are triggered through a variety of forms, including the agricultural technology reform, agro-food transaction integration, fair trade negotiations, and in food and cultural exchanges. This is a dynamic process that crosses borders and boundaries. In addition to relationship networks across modes of production and consumption, this creates forces that encourage mutual sharing. The edible community network is, thus, a platform for cross-cultural exchanges. Businesses form community organizations based on geography, on history, or simply because of operators’ generational identities. Businesses in these networks share services or assist one another, in order to reduce expenditures and to reduce their impact on the environment. New areal relationships form through these interactions. For example, businesses with young customers study and learn from one another; they form alliances; they share knowledge on management, local ingredients and food safety; and partially as a result, they become places where youth gather. This forms a new social network that serves as a platform for cross-generational and cross-industrial cooperation, with the exchange of knowledge as its basis.

3.2 Community-supported Civic Agriculture

The Gaoyuan community will serve as a specific example. Gaoyuan is located in the southernmost suburbs of Tongluoquan in Longtan. Geographically, it occupies the Taoyuan Plateau’s southernmost area, and is the area with the highest elevation. Early in its history the community planted drought-resistant tea for a living. Yet Gaoyuan faced the same problems as other farming villages: population migration, aging of the remaining population, and a need for a production transformation in agriculture. With the rural regeneration project and the accompanying decade-long injection of resources, the community was able to find a viable road to transition through the introduction of organic farming technology. The project and its resources and results laid down crucial foundations for integrating agriculture, food and the circulation of materials with the community care system.

First, in order to revitalize land left unfarmed, a portion of idle tea plantation land was given to the community to grow or plant as pumpkin pies and mugwort. The edible community network is, thus, a platform for cross-cultural dialogues. Businesses form community organizations based on geography, on history, or simply because of operators’ generational identities. Businesses in these networks share services or assist one another, in order to reduce expenditures and to reduce their impact on the environment. New areal relationships form through these interactions. For example, businesses with young customers study and learn from one another; they form alliances; they share knowledge on management, local ingredients and food safety; and partially as a result, they become places where youth gather. This forms a new social network that serves as a platform for cross-generational and cross-industrial cooperation, with the exchange of knowledge as its basis.
3.3 Cross-cultural Food Design

Longtan and many other Hakka villages have suffered from the same predicament: The economic situation in the villages makes it impossible for young people to stay behind, and as a result they migrate to the cities to find employment. After the turn of the millennium, the unstable economy led a group of Hakka people working in the cities to return and attempt to seek livelihoods in their hometowns. Another group, many of them not necessarily Hakka, faced the same dilemma, and chose to relocate to second-tier towns and invest in small-scale self-employment business models.

3.3.1 Food Linking Together the Hakka and Their Hometowns

Research participant A1 is a single father with three children. He returned to his hometown of Longtan after finding himself unemployed in middle age. He ended up making pizza; his pizzeria is a shipping container made into living quarters, located by an industrial road in a non-commercial zone. Discussing whether it was "a house or a store" helped him establish a family-like relationship of trust with his customers. After the business got on track, he started thinking about how to connect with the land. As a Hakka person returning home, he yearned for local attention. The project helped him combine quality food with local characteristics and then use the medium of pizza to easily merge together ingredients with different qualities. And so he chose Longtan's signature dish, the Hakka glutinous rice cake, as a pizza topping. Hakka glutinous rice cakes are made from rice farmed in Longtan and then processed in traditional local rice mills. The creative flavor became wildly popular, and his pizzas have received mention in a prominent Hakka magazine. This has paved the way for a new generation of Hakka cuisine. At the same time, the project also negotiated with A1 to provide his pizza-making skills to assist Xiaolin Village, which had been victim of an earthquake disaster, to rebuild their community industry. This established a cross-domain social design that transferred food-making techniques in service of the public welfare (Fig.8 & 9).

3.3.2 From Economic Alliance to Public Welfare Alliance

The average person thinks of businesses as just being there to make a profit. However, this prompts questions: Must alliances between producers necessarily be profit-oriented? Are there any ways to connect producers to consumers, other than the sale and purchase of goods and services? Al and his business partners started to consider how to allow more communities to participate in public welfare. In 2013, they set up the Longtan Who Shares platform with like-minded partners. This public service platform brings together government, non-profit organizations, businesses, and other communities to perform regular community services. Such services have included sending food to, or holding food charity markets to benefit, vulnerable families and children. Businesses have generated new social service through their public welfare activities, such as designing vouchers and stored value cards, and holding charity markets for public welfare platform. In the course of this research project, we found that "Business is a good way to bring about public welfare", making businesses a way to serve disadvantaged groups, and forming an immaterial relationship of sharing and reciprocity.
3.3.3 How Did Longtan’s Tea Find Itself Back on the Old Street?
Now we turn back to Longtan’s Old Street, a domestically-oriented business district. Emerging commercial activities are flourishing, and old industries are gradually being phased out, renting their storefronts to incoming commercial entities. Life-long relationships of the past have turned into relationships of landlord and tenant, and this has caused a rupture between living and production spaces. Changes in the industrial structure have meant that young people were loath to take up the running of family businesses. Many of them found employment in the north, leaving at sunrise and returning at sundown. This prompted local residents to joke that the place had become a day stay hotel. However, a young man (A2) was determined to stay in the city. He opened a tea shop, an unexpected sight in a street surrounded by tea franchises. A2 was troubled by the fact that young people were uninterested in their hometown’s tea brands. Instead, their lives were filled with bottles of supermarket teas, or teas made from inferior tea leaves. A2 could not help but ponder why young people were unable to accept good teas, and why it was so hard for good teas to make their way into the business district. Filled with enthusiasm, he thought of the idea of using tea leaves from Longtan, in combination with a handmade drink approach, to create drinks young people would like. So, with the support of an old tea factory, he opened a direct-sale tea shop in the city’s Old Street. A2 redefined the quality of tea young people were willing to accept, and also transformed the thinking of old tea factories. As he put it, “We want to introduce Taiwan’s tea to young people, in a way they will accept.” As it happens, in addition to producing good tea, A2 is a master of street dancing. He therefore created a dance classroom behind the tea shop, since he knew that local youth had no place to practice. The classroom was a place where people who love street dance could gather and learn. It was also a place where conservative local elders could see young people, and increase opportunities for interaction between the two groups. The tea shop was thus transformed into a social space. Through learning and practicing dance, young people have gained a new identification with the city’s streets. The arcade of the long terraced house and its backyard became stages for performances. The stage extended all the way to the temple. The program invited ユルドルskm, a Japanese university girls’ idol group, to perform with the young dance group A2 had formed at Longyuan Temple (Fig.10-11). After the show, local stores took the Japanese visitors on a tour of the city’s streets. From the streets to the temple, from street dance to food culture, A2 led young people to exhibit the power of street dance. In doing so, he shook up the power structure of the traditional Hakka streets, and helped to create a more open temple street space.

Later on, the tea shop was forced to move because of rising rent. On advice from the project, A2 decided to convert an old house on the other side of the Old Street into a two-story tea house, in order to attract a different sub-group of young people to stay. Whether it is in a tea-making street dance space, or in a place where young cultural workers can gather, A2 is fighting against both globalized tea franchises and the Hakka patriarchal authority in order to unfold his alternative tea revival project. His movement is spreading. A group of young students, middle-aged businesspeople and cultural workers have begun using the tea house as their base as they discuss action plans to rebuild the city’s Old Street.

4. Analysis
4.1. Construction of a Commons of Food
The edible community network strengthens the community’s economic links, by helping the community design food together, and by shaping an innovative moment surrounding food exchange. By identifying, defining and co-creating food, relationships between the subject and other lives that it co-exists with in symbiosis become clear. The operation of the platform, in its attempt to link together small production networks that had been scattered, allows different types of outside consumers to enter an area of learning, and to make localized purchases and consumption. In doing so, they construct a practical Commons of Food.

Another type of non-governmental public interest movement also sheds light on the transformative process by which food becomes public. Longtan’s producers produce food with their own hands. By doing so, they uphold the moral quality of food, and they repair trust
between the producer and consumer that was so eroded during the food safety crisis. Through the process of turning the human-food relationship into a human-human relationship, the self is reoriented outwards, into the public sphere; actions are transformed to become oriented toward the public interest, forming a human-food-public relationship. This life-force innate to the producer leads to alliances between various businesses; it provides a wide range of resources to disadvantaged groups, and helps to wipe clean past stereotypes that businesses only exist to make a profit. These informal organizational relationships link together local governments, businesses and their informal organizations. It is worth mentioning here that the participation of local governments within this process allows them to gain a fuller and deeper understanding of the community's true situation; and such participation also makes them better able to assist and inject resources, and in the process form still new partnerships.

4.2. Weaving Cross-cultural Food Networks

Different generations have different thoughts regarding local development. This triggers social forces that can reshape the cross-cultural landscape. Edible community networks provide a mechanism that promotes locally-based exchanges for the community. Linking the exchange of food with social capital between actors in different fields can mean a matching of supply chains, technological support, or food and cultural exchanges; these are all examples of cross-generational sharing of culture. Each exchange is mixed with different elements of culture, and each practical step is enmeshed within a blend of different cultures. Together, such exchanges can lead to a cross-cultural network for mutual economic aid. Businesses have begun to use food quality to rebuild trust between the producer and consumer; the exchange has become one of trust and morality. The social space for young people where they can drink tea, and the space co-created by students, have served to lessen tensions with the conservative local society of the modernized business district, and have promoted exchanges of cultural values between different generations.

5. Conclusion

How do we design 'for' society? Social design is most commonly known as design "to solve social problems". Internally, this echoes the mainstream view that "design can solve problems"; externally, it reflects how society turns to design for solutions to public problems. The social design of the edible community network is aimed at breaking through the power imbalance so often implicit within the mentoring relationship process. In such a network, professionals act as cross-disciplinary intermediaries, mediating between different cultures and groups. Alliances are driven by co-design, and are equally driven by conscious and ideal-driven guidance in a variety of participatory modes. In these inter-cultural times, the process of planning cross-cultural initiatives that bring actors from different fields together has gradually changed local awareness in Longtan. The process has also led more actors to maintain contact and follow-up in their local relationships. The spatial and action strategies of younger generations reveal them to not be simplistically analyzable as those 'returning home', nor as passive inheritors of traditional culture. For the young generation, cooperative and innovative social action is self-transformation, and is further a restructuring of the relationship between self and society. I conclude that this is the transformative process through which the edible community network constructs progressive social innovation (Fig. 12).

References

