OF CURES AND NOSTRUMS: MEDICINE AND PUBLIC HEALTH IN MARKET STREET CHINATOWN

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Of Cures and Nostrums:
Medicine and Public Health in Market Street Chinatown

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I. INTRODUCTION

> Whereas, The condition of Chinatown is a constant menace to the health and morals of the inhabitants of this city as shown by the amount of filth, unsanitary precautions; the presence of prostitutes, gamblers and opium smokers; therefore be it
> Resolved, That the Santa Clara County Medical Society utter its condemnation of such a mental and physical menace to the health and morals of the people of San Jose, and
> Resolved, That this Society petition the Common Council of this city to condemn Chinatown as a public nuisance, and cause the demolition of the buildings and removal of the Chinese outside of the city limits. ("The Medical Men")

The above article was published two months before the destruction of San Jose's Market Street Chinatown, the second largest Chinese community in the United States, by arson. Though the crime remains unsolved, and indeed largely forgotten in the annals of Santa Clara Valley history, it is clear that it was an act of racially-motivated violence. Located at the corner of Market Street and San Fernando Street (also known as Block 1), the Market Street Chinatown was at the heart of downtown San Jose, putting San Jose's Euro-American population in close contact with the Chinese residents. This thesis seeks to unpack medical assumptions of Otherness and examine why racial tensions came to a head so disastrously at Market Street Chinatown. Xenophobia and intolerance are a continual challenge to reconcile, but the internal logic of difference and discrimination that drove anti-Chinese sentiments can drive a more nuanced understanding of 19th century San Jose life.

In introducing the above newspaper excerpt, I want to call attention to the medicalization of Chinese immigrants, the tangled and problematic role which public health and hygiene played in shaping the discourse of the anti-Chinese movement. The narrative of disease and health, of deviance and normalcy, was mobilized by Euro-Americans to express Otherness: the overcrowded, predominantly male-occupied tenements in Chinatown were imagined as breeding grounds for disease. By remaking Chinese bodies, spaces, and behaviors as sites of illness, public

health proponents related disease to biological qualities of race rather than simply cultural or social practices that could be exhibited by anyone; in other words, the Chinese were seen as inherently embodying disease, supporting beliefs of racial inferiority and moral degeneracy.

Sanitary conditions in Market Street Chinatown were no doubt challenging, and a number of diseases likely did arise from the crowded environment, poor sewage systems, and lack of hygienic practices. However, the pervasive medicalization of Chinese extended beyond the physical reality of these conditions and transformed almost every feature of Market Street Chinatown and its residents into pathology. This study of 191 medicinal bottles and other health products from the Market Street Chinatown site forms a counterargument to the narrative of a disease-ravaged, contagious Chinese existence. At present, there is no evidence available to indicate whether there were epidemics of contagious illnesses in the Market Street Chinatown. However, the archaeological record does demonstrate that residents were highly vulnerable to injuries and maladies that resulted from a rough, working-class livelihood common to most San Jose laborers. In addition, this thesis presents the Market Street Chinese as knowledgeable agents, active in preserving their own health and bodies through a variety of strategies, including Western medicine, traditional Chinese medicine, and home remedies. It is important to acknowledge the structural constraints of poverty, language deficiency, and lack of access to formal medical resources that limited the Chinatown residents' ability to adequately treat themselves, but equally important is the idea that they were capable of exercising consumer choice by purchasing certain brands of patent medicines, pairing Western treatments with traditional Chinese medicine, or even eschewing Western medicine altogether.

History of Market Street Chinatown

The Chinese, predominantly southerners from Guangdong Province, began migrating to California during the 1848 Gold Rush, but stayed long after the gold ran out. Political and economic conditions in China forced thousands of peasants to leave their natal villages and seek opportunities abroad (Yu 1991: 3). Chinese immigrants were instrumental in building the western portions of the Transcontinental Railroad, and many likely settled in the San Jose area after its completion (Yu 1991: 7). Agriculture, mining, manufacturing, and domestic service industries also hired Chinese labor, which was generally cheaper than white labor. By 1852, the Chinese were the largest minority group in California, numbering approximately 25,000 (Yu 1991: 5). A community of Chinese immigrants blossomed in Santa Clara Valley, and in 1866 the Market Street Chinatown was established by three businessmen who leased the land at Block 1 (Laffey 1993: 15). This first Market Street Chinatown was located primarily in Lots 1 and 2, with some buildings in Lots 3 and 4 (Figures 1 and 2). The remaining land in Block 1 was occupied by families with non-Chinese surnames during this period. In 1870, an accidental fire destroyed the first incarnation of the Market Street Chinatown, forcing residents to relocate to temporary settlements in the city, including what would become known as the Vine Street Chinatown (Laffey 1993: 18).

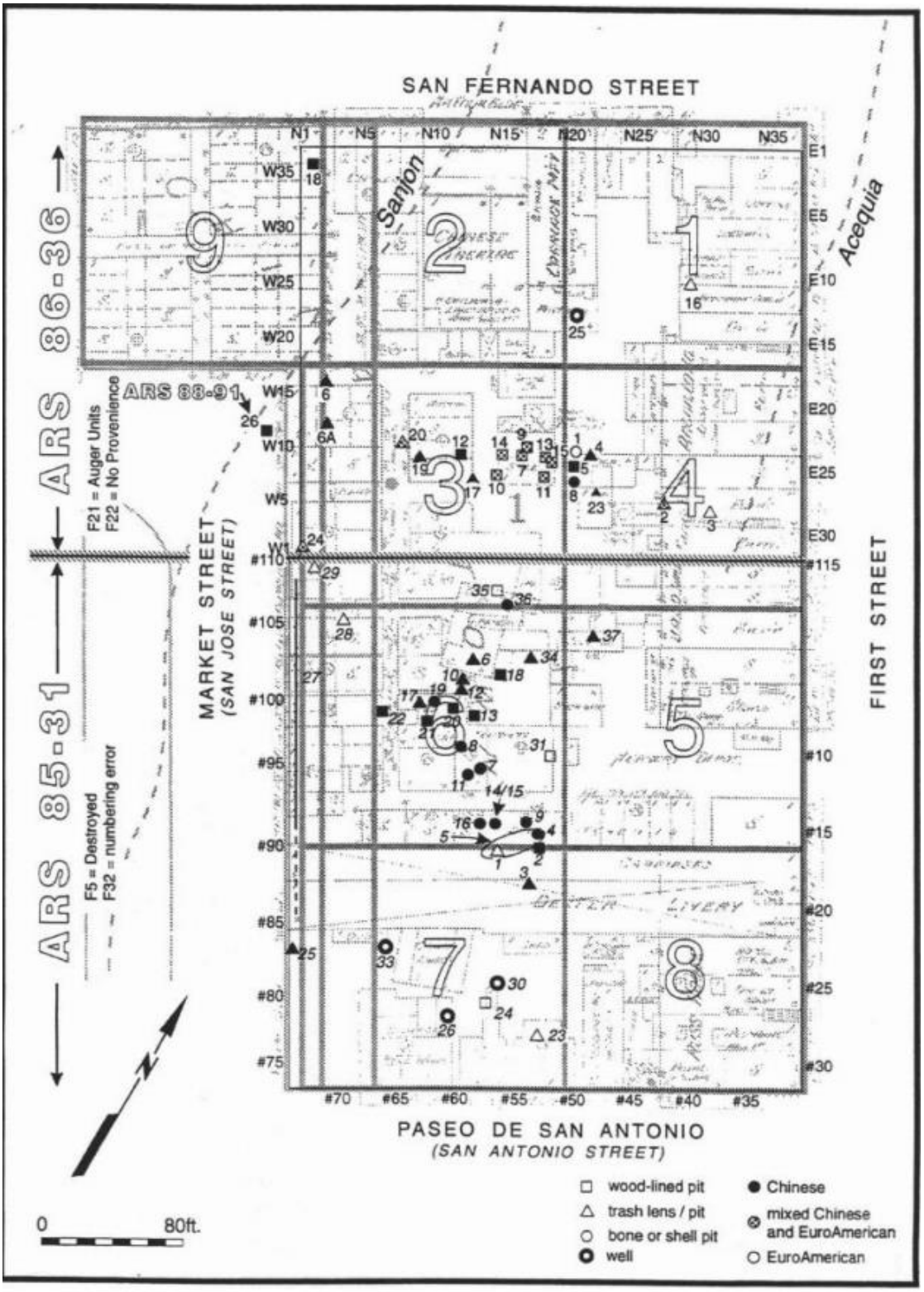

Figure 1. Feature Locations in Block 1, 1884 (Map A.10, as reproduced in Kane 2011)

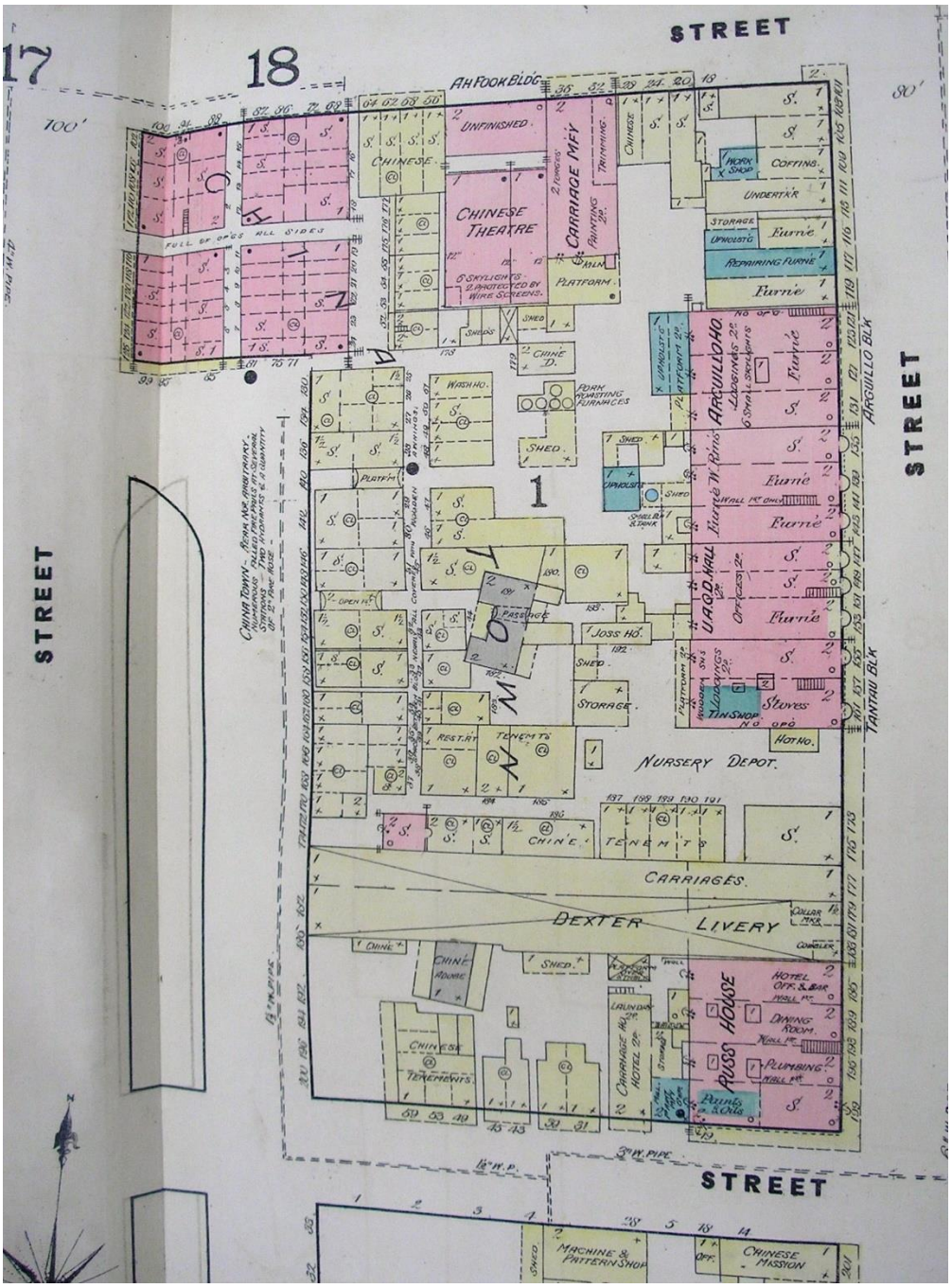

Figure 2. Sanborn Fire Insurance Map of Market Street Chinatown, 1884 (Map #143F)

Soon after the 1870 fire, Chinese tenants began rebuilding on Block 1, creating the second and larger Market Street Chinatown (Laffey 1993: 20). It expanded to include Lots 3, 5, 6, 7, and what would eventually be named Lot 9. The site was internally subdivided into the Brick Chinatown, comprising Lots 1, 2, and parts of 9, and Wood Chinatown, located on Lots 3,

5, 6, and 7 (Laffey 1993: 22). At the height of its occupation, the Market Street Chinatown housed over a thousand Chinese, as well as serving another two thousand throughout Santa Clara County who considered the Chinatown their economic and social headquarters (Voss 2005: 430). A thriving, self-sustaining neighborhood, the Market Street Chinatown boasted grocers, fish markets, restaurants, barber stands, general merchandise stores, a temple, and an opera theater (Laffey 1993: 24).

As the second largest Chinese community in the US, San Jose became a battleground of anti-Chinese agitation and action. A nationwide depression besieged California in the 1870s, leading to increasingly toxic relations between Chinese immigrants and white laborers (Yu 1991: 12). The city was home to an Anti-Coolie League, which supported numerous boycotts, laundry ordinances, and nuisance laws to remove the "terrible incubus from our midst" ("A Mass Meeting"). Labor organizations, such as the Workingmen's Party of California and the Knights of Labor, were also crucially involved in the struggle, decrying the use of cheap Chinese labor in factories and fields as detracting from white labor opportunities (Yu 1991: 15). In February 1866, San Jose hosted the first statewide Anti-Chinese Convention, bringing together 75 delegates to establish a coordinated front against the Chinese ("They Must Go"). The 1882 Chinese Exclusion Act would eventually codify the nativist mindset by legitimizing the symbolic, structural, and physical violence done unto the Chinese.

It was within this milieu of economic uncertainty and racial hostility that the Market Street Chinatown was targeted on May 4, 1887. The Chinese Fire Protection Association's water towers were suspiciously drained before the fire, most likely by the arsonists, and the municipal firefighters failed to salvage the Market Street Chinatown. In the aftermath, the city district attorney pressured landowners to terminate their leases with Chinese tenants and citizens voted

to erect a new city hall at the site (Kane 2011: 8). However, the arson by no means spelled the end of San Jose's Chinese community; within ten days of the fire, a group of Chinese merchants leased land at Fifth Street and Taylor Street from local businessman John Heinlen, forming the new Heinlenville Chinatown, and shortly after, the Woolen Mills Chinatown was established near the outskirts of city (Yu 1991: 30).

Though the Chinese population recovered and flourished after the fire, the material remains and memory of the Market Street Chinatown remain. The site was excavated in the 1980s as part of an urban redevelopment project of downtown San Jose. The discovery of artifact deposits prompted local Chinese Americans, many descended from the Market Street Chinatown residents, to advocate for further excavation. The city contracted with Archaeological Resource Services to excavate and catalog all artifacts, but the collection was then consigned to municipal warehouses and left untouched for fifteen years (Voss 2005: 431). In 2002, the orphaned collection was rediscovered and the Market Street Chinatown Archaeology Project (MSCAP) was developed to document, research, and curate this remarkable assemblage of overseas Chinese artifacts. The project is a community-based collaboration between Stanford University, History San José, Chinese Historical and Cultural Project, and Environmental Science Associates. Today the Fairmont Hotel stands atop the ruins of the Market Street Chinatown, and the only physical trace of the community at the site itself is a small plaque commemorating the fire. However, the work of MSCAP and its community partners ensures that the stories and voices of the Market Street Chinese are far from forgotten.

II. HISTORICAL CONTEXT

The Patent Medicine Era

The desire to stay healthy and to seek relief from illness is a profoundly human one, and in this regard the Market Street Chinese did not differ from their Euro-American neighbors. It was also an arena in which "snake-oil salesmen" could capitalize upon by manufacturing cures, tonics, and remedies to treat the body. The 19th century was the golden age of patent medicine: the incredible productivity, or inventiveness, of patent medicine producers filled thousands of consumer catalogues with bold, new treatments for everything from diarrhea to cancer. The Civil War and its aftermath emphasized the need for patent medicines: soldiers returned from the battlefields with wounds and aches, as well as malaria, ruined appetites, and other ailments that would require long-term care (Young 1961: 11). The industry's expansion was also linked with an increasing sophistication of advertising media. Due to rising literacy and cheaper printing costs, the advertising industry was itself becoming a behemoth in the American landscape. Newspaper advertisements, trade cards, almanacs, and posters, many in color due to the invention of lithography, enabled medicinal proprietors to reach an unprecedented audience (Young 1961: 22). By 1870, Dr. James Ayer, of Ayer's Cherry Pectoral and Ayer's Sarsaparilla, had contracts with 1,900 newspapers and periodicals across the country (Baker n.d.:4). The Transcontinental Railroad further allowed proprietors to ship medicines in bulk, leading to national and local contexts for consumers. Notably, figures from the 1859 census valued the patent medicine industry at about $3,500,000, but by 1904 it had skyrocketed to more than twenty times that (Young 1961: 121).

More darkly though, the 19th century was also an era of nearly nonexistent regulation, of nostrums and panaceas that misled consumers and made extravagant claims to cure grave

illnesses. Most patent medicines contained large amounts of alcohol, opium, or cocaine that had the potential to cause addiction. At their worst, patent medicines not only failed to cure but irrevocably ruined lives. Greater awareness of patent medicine's egregious side-effects would not come until the passage of the 1906 Pure Food and Drugs Act, which required truthful labeling of medicinal products. The discovery of 'jake leg' syndrome in the 1930s is perhaps the most infamous case of the devastation caused by nostrums. In order to bypass Prohibition laws, Jamaica Ginger manufacturers replaced their product's alcohol content with a chemical adulterant, later found to be a neurotoxin that caused paralysis. Victims lost control over muscles in the leg, leading to a peculiar gait known as the 'jake walk' (Baum 2003: 51). In 1921, the American Medical Association officially listed Mrs. Winslow's Soothing Syrup, a common teething remedy for infants, as a "baby-killer" after several cases of morphine overdose (American Medical Association 1921: 432).

Nevertheless, patent medicines were sought after as low-cost, widely available alternatives to visiting a doctor, much as people today rely on over-the-counter medicines. According to an article that appeared in the *Evening News*, a Chinese laundryman earned $1 per week for an entire family's washing, compared to white women who charged $3 per week or $1 per dozen articles of clothing ("A Hard Blow"). Newspapers were apt to exaggerate Chinese wages, framing them as unsustainably low and in defiance to a basic standard of living, so it is difficult to ascertain exact numbers ("Pixley's Story"). William A.Z. Edwards, a farmer in the Alviso area, documented paying his head Chinese farmhand a $1 per day, including room and board, although wages were not standardized and laborers could be paid more or less depending on the farmer (in Tsu 2013: 45). Estimates such as these paint a picture of limited disposable income and a hard struggle to stave off poverty. Given the average doctor's consultation fee of

$5, patent medicines, generally priced at less than a dollar, were the far more economical choice for treating non-critical illnesses (Derks 2009: 29). Heffner (2012) argues that discrimination from hospitals or fear of mistreatment by white doctors may also have influenced Chinese immigrants to rely on patent medicines. This was not an unfounded fear: under the public health apparatus, the Chinese were transformed into medical scapegoats that were vulnerable to quarantine and prejudiced medical care. As a result, patent medicines may have provided a means for Chinese immigrants to anonymously access Euro-American healthcare. Some patent medicines could even be purchased through mail order, further minimizing interactions with Euro-American doctors or pharmacists (Heffner 2012: 93).

The Medicalized Other

Returning to the newspaper excerpt featured in the Introduction, it is clear that there was troubling overlap between the Euro-American medical establishment and the anti-Chinese movement, creating a boundary for what counted as a worthy, grievable life (Butler 2010: 41). Chinese immigrants were scapegoats for leprosy, smallpox, malaria, syphilis, and bubonic plague, popularly imagined as carriers that endangered innocent citizens by their very presence. This "medicalized nativism" produced a significant discourse around who deserved care, who posed a threat to the collective health, and who was not subject to medical policing (Kraut 1994: 3). Chinese immigrants were often barred from public hospitals, in addition to invasive inspections of living spaces and calls for the razing of "pestilent" dens. An editorial that appeared in the *Evening Herald*, weeks before the Market Street Chinatown arson, took a more aggressive stance: "With smallpox hovering around and the cholera ready to enter the country at any moment from South America, it seems little less than suicide to permit such a breeder of pestilence to remain in the heart of the city for a day longer than is absolutely necessary…In

fighting the devil there should be no hesitation about using fire, and in removing this coolie nuisance all who are in any way responsible for it should be handled without gloves" ("The Coolie Nuisance").

By remaking Chinese bodies, spaces, and behaviors as sites of illness, Euro-American society expressed crises and anxiety around racial mixing, labor competition, and social belongingness. Market Street Chinatown, with its mostly male community and conditions of urban poverty, challenged societal expectations of productivity, self-improvement, and family values (Shah 2001: 177). Contagion functioned as a powerful metaphor for both the physical communication of illness, but also the potential for moral pollution. Disease was politicized to produce incommensurability between Euro-Americans and Chinese immigrants, positioning health as normalcy and infectious disease as a hallmark of aberrant behaviors and lifestyles. As Priscilla Wald (2008) observes, regarding the emergence of an outbreak narrative, "the use of disease to imagine as well as regulate communities powerfully enacts the most anxious dimensions of national relatedness" (67).

Public health played a tangled, problematic role in shaping this racially encoded language of hygiene, health, and normalcy. It acted upon the population rather than individuals, using statistics to codify sanitary norms and hierarchies. In other words, the well-being of the population became dependent on the ability of individuals to regulate their conduct and obey unspoken rules of hygiene (Shah 2001: 47). The state's power to organize bodies and manage life for its subjects was dependent on normalization, that is, a separation of behaviors that enabled the population to thrive and those that threatened public welfare. Biopower was therefore a corrective force, one that was "concerned with distributing the living in the domain of

value and utility," while also identifying and expelling groups which threatened that continuity (Foucault 1978: 144).

The turn toward standardization and aggregate health implicitly demarcated which populations were to be protected and which were to be excluded from healthcare. Chinese immigrants were perceived to violate normative measures of health due to their lower standard of living and foreign customs, and thus they found themselves vulnerable to surveillance, documentation, and quarantine. A municipal suit to declare the Market Street Chinatown a public nuisance, and thereby dismantle it, illustrates many of these tensions:

> [The] alleys that defendants cause and permit the occupants to use the soil there as a place for the deposit of human excrement, deposit of garbage, offal, waste, filthy liquids, slops from privy vaults, wash-houses, slaughter pens; that this has been permitted so long that the soil has become filled with slime and exudations from decaying vegetable and animal matter, that the buildings are so built that there can be no adequate exposure of the soil to the sun or to currents of pure air; that it is impossible to distinguish the infected from the uninfected part; that the wooden foundations are rotting; that noxious, unwholesome and noisome stenches emanate from the soil and buildings and foundations; that this condition is maintained by defendants to the great danger to health, and to the damage and common nuisance of the people. ("Noisome Chinatown")

The potential for this marked community to blight the perceived pristineness of the Euro-American population was a source of incredible anxiety to San Joseans, and lawmakers encouraged its removal.

THEORETICAL ORIENTATIONS

Transnationalism

In reconstructing the health practices of the Market Street Chinese, I hope to avoid the pitfalls of an acculturation paradigm, a tendency to frame cultural changes among Chinese immigrants as assimilation or resistance to Western society (Voss 2005: 427). Such a model assumes a clear dividing line between Euro-American and Chinese practices, ignoring the mutual exchanges and interactions that inevitably transform both communities. The vast majority of Chinese in the Santa Clara Valley lived shoulder-to-shoulder with Euro-Americans, as servants in white households and laborers on white-owned farms. Though Market Street Chinatown was imagined as a bounded, self-enclosed space, it was situated in the heart of downtown San Jose. Block 1, for example, was the site of three Spanish-colonial/Mexican adobes and multiple Euro-American businesses, some of which continued to operate within the Market Street Chinatown (Chan 2013: 8). The Market Street Chinese were intimately involved in the economic activities of white households through laundry shops and local businesses, just as non-Chinese San Joseans relied on their patronage and labor. The important questions, then, are not of cultural continuity, but of how cultural change is constituted across and through these communities.

Instead of relying on the binary of cultural retention or incorporation, it is more productive to understand the Market Street Chinese through the lens of diaspora: as people whose lives spanned borders and were marked by multiplicity, heterogeneity, and hybridity (Ross 2013: 60). Chinese immigrants did not adhere to a monolithic identity, but as transnational subjects were engaged in creating new subjectivities and lifestyles that differed sharply from their compatriots in China. For example, archaeological evidence from the Market Street Chinatown site shows that their dietary patterns (Henry 2012) and use of ceramics (Chan 2013)

were a mix of Chinese and Euro-American behaviors, indicating that the residents viewed them as complementary, not oppositional, practices. Similarly, several Euro-American style medicine bottles from the study collection were found to contain traces of a Chinese stone drug, suggesting that artifacts need to be examined in their unique, local context rather than in their manufacturing origins (Voss et al. n.d.). In this sense, ethnic identity is not a uniform or stable category, but a dynamic flux that negotiates local choices, structural constraints, and relationships with home, what Hall (1990) describes as ongoing processes of being and becoming. Even within the Market Street Chinatown, individuals were marked by regional, socioeconomic, gender, occupational, and generational differences that spoke to complex and multivocal experiences. There is the potential for "artifacts as well as people to possess multiple simultaneous and fluid identities" (Ross 2011: 38). As a result, I would like to consider their health practices as strategies of adaptation and accommodation, behavioral decisions that were affected as much by specific contexts as cultural attitudes. Acculturation theories fail to acknowledge the idea that overseas communities, like the Market Street Chinatown, are worlds unto themselves, profoundly similar and different to monolithic Chinese and Euro-American experiences.

Crisis Ordinariness

The Market Street Chinatown collection came into existence because of a trauma that disrupted the fabric of everyday life: the arson that occurred on May 4, 1887. However, the arson is neither the beginning nor end of the narrative, and though it is through that critical event that we have come to understand that community, it tells very little of ordinary, uneventful existence in Market Street Chinatown. In this regard, I turn to Lauren Berlant's "crisis ordinariness" as a key analytic for understanding the temporality and precarity of the Market Street Chinese. Crisis

ordinariness describes a mode of "ongoingness, getting by, and living on, where the structural inequalities are dispersed, the pacing of their experience intermittent, often in phenomena not prone to capture by a consciousness organized by archives of memorable impact" (2007: 759). It attends to the unexceptional, the uneventful, and the gradual unfolding of precarity that permeates life. A language of trauma often implies an event appeared suddenly on the scene, rather than as a culmination of various processes of unraveling. More to the point, crisis ordinariness can provide a framework for thinking through "the forms heightened threat can take as it is managed in the context of living" (Berlant 2011: 101).

Medical practices at Market Street Chinatown embody such occasions: they represent a struggle to maintain and reproduce life, while being undermined by political, economic, and environmental precarity that threatened life in ways outside one's control. As outsiders to mainstream society, Chinese immigrants inhabited poorer living conditions and were excluded from access to official forms of healthcare, making them differentially exposed to disease and death. The use of patent, druggist, and traditional Chinese medicines in Market Street Chinatown provided an abeyance of structurally induced conditions, but not an escape from them. Nativists claimed that the Chinese were carriers for the most lurid epidemics, life-or-death diseases, but little attention was paid to the diseases that attenuated ordinary life, such as stomach ailments, respiratory disorders, headaches, and skin inflammation. These speak to a form of slow death, the "condition of being worn out by the activity of reproducing life" (Berlant 2007: 759).

A curious article appeared in the *Evening News* detailing the suicide of a Chinese man: "About two months before his body was discovered Jim [Lee] says his cousin came to his house and said he was tired of life. He couldn't work much and he didn't have enough to eat. Jim remonstrated him, but he was firm, and said he would be dead pretty soon" (13 April 1887).

Though this was only one story in the history of Market Street Chinatown, it speaks to the crisis ordinariness that was embedded in marginal lives. My intent here is not to portray the Market Street Chinese as solely suffering subjects, but rather to acknowledge that orienting towards a good life was likely a challenging, exhausting, and attritional endeavor. I want to avoid a narrative of heroic resistance or of passive victimhood, instead tracking the historical present as an undramatic way of living on in the world and in recognition that "subjects are [not] always involved, universally and in full throttle, in projects of self-extension according to the will-have-been of future anteriority" (Berlant 2007: 758). Approaching the collection through the lens of crisis ordinariness can provide an opportunity to trace the contours of life lived on the margins.

III. METHODOLOGY

The Market Street Chinatown Collection

At the time of its excavation, the Market Street Chinatown site was described as one of the most significant Overseas Chinese assemblages ever recovered in North America (Voss 2005: 431). As of 2014, approximately 77%, by volume, of the Market Street Chinatown collection has been catalogued. The current catalogue database represents an MNI of approximately 10,093 objects, including Chinese brown-glazed stoneware, Euro-American whiteware ceramics, bottle glass, and faunal remains, all of which point to a rich texture of lived experience (Voss and Kane 2014: 41). During San Jose's urban renewal project, the Archaeological Resource Service (ARS), a private-sector cultural resource management company, was contracted to excavate and rehouse the remains of Market Street Chinatown in three separate phases. Project 85-31 was the 31st project undertaken by ARS in 1985. It was located in the southern half of Block 1, where the Fairmont Hotel currently stands. Project 86-36 comprised the northern half of Block 1, later the site of the Silicon Valley Financial Center. Project 88-91, a single archaeological feature, was the last to be excavated, having been discovered during further additions to the plaza. It is the only project to consist of one feature, bringing the total number of features in the collection to 63 (Kane 2011: 29).

Working with an Orphaned Collection

The aftermath of excavation often poses a significant dilemma to archaeologists: how do we care for and manage collections in a timely and productive manner after artifacts have been unearthed? Orphaned collections are those that have lost curatorial support and remain underutilized or under-analyzed following excavation. Many factors may contribute to a collection's abandonment, including museum cutbacks, lack of researchers, or, as in the Market

Street Chinatown case, the ad hoc nature of salvage excavation (Voss 2012: 147). Due to a lack of resources and sustained engagement, the Market Street Chinatown collection lay in storage until it was 'rediscovered' in 1998 by History San José (Voss 2012: 155). Since then, MSCAP's mission has been to accession, catalogue, and rehouse the artifacts, an arduous and ongoing process to restore the collection's research potential.

Working with an orphaned collection as comprehensive as Market Street Chinatown presents both an opportunity for rich interpretations as well as a challenge to curation. Much of the collection is still being catalogued, so the initial stages of this thesis required me to locate and identify medicinal bottles, analyze them, and enter their information into the database. Almost twenty years have passed since the original excavation, so some of the artifacts and associated data have unfortunately been lost in the interlude. For example, ARS recorded almost 500 catalogue numbers referencing glass artifacts, but many of the boxes, especially from Project 88-91, are missing from storage (Kane 2011: 48). In response, I used ARS' original artifact catalogues and glass lab analysis forms, which contain descriptions and occasionally sketches of artifacts, to infer the presence of medicinal products. While not ideal, this presents a temporary solution and recreates some context for Feature 26 of Project 88-91.

Identifying the Study Collection

To understand the health challenges and strategies utilized in Market Street Chinatown, I first needed to isolate medicinal artifacts from the collection as a whole. Some had already been catalogued in the initial excavation reports, but a large portion of the study collection was pulled from boxes of uncatalogued glass in storage. During the initial stages of the thesis, I re-analyzed glass artifacts that had already been catalogued, reviewed their analysis forms, and made minor changes whenever necessary. In addition, I sorted through all boxes in storage, identified glass

artifacts that were potentially medicinal in nature, and transported them back to the lab for analysis. Examining the finish, base, and embossing of each artifact, I then designated them as either "Medicinal," "Not Medicinal," or "Further Research" in my notes. Those that were clearly not medicinal in purpose, such as condiment bottles or ink wells, would be returned to storage after being entered into the database. Throughout the year, I moved artifacts from the "Further Research" category to "Medicinal" or "Not Medicinal," resulting in a study collection of 191 health-related artifacts. As part of the cataloguing process, I recorded information about the manufacture process, bottle shape, finish style, and base profile. When necessary, I created new catalogue numbers for artifacts, split discernibly different artifacts into separate catalogue numbers, or combined cross-mended artifacts into the same number, so that catalogue records for this thesis could reflect a faithful MNI. Once I had finalized the study collection, I exported the records from the lab database into a spreadsheet, which allowed me to add additional notes and observations to the catalogue records. The attached copy of electronic data thus comprises respective spreadsheets for Projects 85-31, 86-36, and 88-91, as well as a combined spreadsheet that summarizes the study collection (see Appendix).

What Counts as Medicine?

The line between medicine, food, and drink can be ambiguous. Alcohol is not without its therapeutic qualities, and in the Chinese context, 'hot' and 'cold' foods often serve as folk remedies as well (Wu 2005: 23). One of the biggest challenges was identifying a bottle as medicinal as opposed to other uses. There are many vagaries in the definition of treatment, especially in an era without federal regulations, but for the purposes of this thesis I have constrained the collection to those products which have been explicitly marketed for medicinal use through product labels or newspaper advertisements. For example, most liquors did not fall

under the purview of the thesis, but I have included Schiedam Schnapps here because it was specifically advertised as a cure for dyspepsia. In addition, I have chosen to include various dental and hair treatment products because they treat bodily hygiene, and because deficits of the teeth or hair may be indicative of nutritional or dietary restrictions. As a point of comparison, I did not include an ammonia bottle from the San Francisco Gaslight Co. that was also found in the collection. An advertisement describes it as being sold by grocers and druggists alike for "Scrubbing Floors, Washing Paint, Removing Grease Spots, Shampooing or Bathing." ("Ammonia!"). Given this product's versatile purpose, it is difficult to distinguish between household use and a hygienic or pharmaceutical one, leading to its exclusion from the study collection. As with most archaeological endeavors, choices have been made that may close some lines of inquiry, but I have attempted to make the net as wide as possible in order to capture the health practices of the Market Street Chinese.

Patent Medicines

I defined my data set so as to include medicine bottles, both patent and druggist, and secondary health products, which are related to personal health but not specifically medicines. I use the term patent medicine to refer to nationally-branded products with demonstrated consistency in advertising, contents, and bottle design. Although these products are commonly referred to as 'patent' medicines, it would be more accurate to call them 'proprietary' medicines given that legal patents were rarely filed; the patent required that something new be discovered and then expired after only 17 years (Davoli 1998: 3). However, products could be trademarked and manufacturers went to great lengths to differentiate their bottle design and label verbiage from imposters. To translate this into a modern context, patent medicines would be similar to

brand-name, over-the-counter medications today, which likewise do not require a doctor's prescription.

Bitters and Other Alcohol-Based Medicines

Bitters, as with Schiedam Schnapps, were a particular class of patent medicines that contained high concentrations of alcohol. Various herbs and spices were added to the alcohol, giving it a bitter flavor (Society for Historical Archaeology 2014). Unlike other patent medicines, bitters and schnapps were packaged in the same style of liquor bottles: thick, heavy amber glass with a square cross-section. Hostetter's Stomach Bitters, a popular remedy for indigestion, consisted of 25% to 37% of alcohol, high enough to be served in saloons in Alaska by the glass (Graham 2005: 50). Generally, bitters were used to treat digestive ailments, although the alcohol content may have made it a popular choice for many other discomforts.

Druggist Medicines

In contrast, I categorize druggist bottles (also known as pharmacy or prescription bottles) as those sold by local drugstores and having limited distribution. These are sometimes embossed with the druggist's name or address, making them highly specific to the regional context. San Jose boasted between 25 and 35 drugstores, concentrated on the Santa Clara, Market, and First Streets, and with a population of about 20,000, residents likely had tight relationships with their neighborhood druggists (Gilman 2014). Three drug stores (Man Ning Tong, Quen Tai, and Soo Mow) and two doctors (Cog Fye and Lum Po Tai) are known to have operated specifically in the Market Street Chinatown (Wells, Fargo & Company 1882). Given their small size, druggist bottles could be filled with the pharmacist's own compounded medicines or with doses from a utility bottle, a generic container for liquids; unfortunately, these bottles were usually prepared for individual customers and identified by paper labels, which are far less likely to survive in the

archaeological record. While their specific function cannot be determined at this time, their presence in the data set still reveals information about the frequency and distribution of health management in the population.

Secondary Health Products

As for secondary health products, I define these as items that may have multiple uses or are not traditionally described as medicine, but are strongly associated with the desire to maintain personal hygiene or health and were marketed as such. Soda water, for example, comprises a fairly large part of this category: though it is a refreshing beverage, it also mimics the therapeutic properties of mineral springs, drawing on the European 'water cure' (Funderburg 2001: 8). It acted as a purgative to treat dyspepsia and had a soothing effect on liver and kidney diseases. San Jose was the first to manufacture bottled mineral water in California, which suggests that soda water was an important and easily accessible commodity in an arsenal of medical cures (Gilman 2014). Other products in this category include hair tonics, sozodont, Vaseline, Florida water, and castor oil.

Traditional Chinese Medicine

TCM differs from Western medicine in its holistic view of the body; whereas Euro-American treatments focus on particular organs or specific pathologies, TCM interprets illness as a function of disharmony with the internal system or the external environment. In this conception, the five internal organs interact with and balance one another in complex, dynamic ways that call for an integrated medical approach. The body is further understood through its relationship to the outside world, such that changes in climate, geographical location, and social environment can have profound influences on health (Wu 2005: 17).

TCM in this study collection appears in both Chinese-style medicine vials and Euro-American manufactured bottles. The Chinese medicine vials in this study collection are small and rectangular in cross-section, with sheared or cracked off finishes (Figure 3; see Greenwood 1996 for a complete shape typology). Chemical residue analysis of ten medicine bottles in the assemblage point to the use of stone drugs and calamine lotion in treating a variety of ailments (Voss et al. n.d.). One vial was found to contain cinnabar, a mercury sulfide used to treat palpitations, restlessness, and insomnia, as well as sore throats, cold sores, and certain skin infections (Acupuncture Today 2014a). Yet another contained traces of ophicalcite, which aimed to "stop bleeding and to release stagnation," such as vomiting, nausea, and excessive bleeding caused by external injuries (Acupuncture Today 2014b). While Chinese-style vials do appear in the collection, they comprise a minority and are scattered among the more common patent and prescription medicine bottles.

Notably, evidence of TCM was also found in five utility bottles of Euro-American manufacture, suggesting that there was bottle reuse by Chinese pharmacists or herbalists. These utility bottles come in a range of size and shape, including one bottle that compares favorably to a homeopathy vial (Voss et al. n.d.). They contained calamine lotion, which can remedy acute conjunctivitis, as well as several unidentified stone drugs (Voss et al. n.d.).

Since cataloguing and analysis of the Market Street Chinatown collection is still underway, material evidence of other traditional practices, such as acupuncture, cupping, or moxibustion, is not available at this time. However, it is clear that TCM and Euro-American medicines were by no means mutually exclusive, but rather were deployed as a complementary, coextensive system that served Chinese residents' needs.

Shape Typology

Glass bottle manufacturing became standardized between about 1830 and 1850, allowing consumers to associate bottle shapes with distinct products (Sutton and Arkush 2002: 178). Some, like the cathedral style bottles that typically contained sauces or condiments, were elaborate, while for others, like wine and champagne bottles, their shapes have changed little in the past century (Society for Historical Archaeology 2015b). The majority of bottles from this time period were formed in molds rather than free-blown, which increased the production and regularity of bottles. For a molded bottle, the glassmaker would insert the pipe into a gob of molten glass, blowing into it to allow the glass to expand and fit the mold (Sutton and Arkush 2002: 181). The pipe was then broken off and the opening covered with a hand-applied finish or reheated to create a tooled finish, which had a cleaner and more standardized look (Society for Historical Archaeology 2015c). Two-piece and three-piece molds were common, leaving recognizable seams running up the body and ending below the finish (Sutton and Arkush 2002: 182).

Medicine bottles are among the most heterogeneous in bottle shape and size, but there are commonalities that distinguish them from other nineteenth century glass. The finish, body shape, base, glass color, and mold seams are rich depositories of information, especially when working with fragments of the whole bottle. Embossing, when it is present, is also a key diagnostic since the verbiage and positioning of product names are essential to brand recognition. Most medicine bottles are made with aqua or colorless glass, although they are found in a variety of other colors as well. Florida Water and castor oil bottles, distinguished by their bright cobalt blue, are a notable exception. Aqua glass was generally associated with patent medicines, while colorless implied a prescription product (Society for Historical Archaeology 2014). Many medicine bottles are square or rectangular in cross-section, often with recessed panels that show off proprietary

embossing. They range in size from large Bitters bottles to medium bottles like Pratt's Abolition Oil. Smaller square bottles may be in the "French square" style (chamfered corners, cup-bottom mold, and no recessed panels), which is strongly associated with druggist bottles (Society for Historical Archaeology 2014). Cylindrical and oval medicine bottles occur in the study collection as well. Medicine bottles have relatively thin glass, especially compared to soda water bottles that demand heavy glass and a rounded shape to contain carbonation. Patent and prescription finishes are fairly characteristic of medicine bottles, the latter of which are found on the vast majority of druggist bottles. The narrow neck and bore facilitate the pouring of liquids (Society for Historical Archaeology 2014). However, other finishes, including down-tooled, collared ring, and flanged, are also common. Bitters bottles, due to their large volumes and association with liquor, are not typically shaped like medicine bottles: they have heavy, olive or amber-colored glass, usually lack recessed panels, and sport bulky down-tooled finishes. Using a rough shape typology, I created an assemblage of medicinal bottles for this thesis (Table 1).

Table 1. Shape typology of patent medicine and druggist bottles.

Size	Name	Cross-Section	Description	Representative Example
Large (approx. 9" x 3" x 3")	Type 1: "Bitters"	Square	Heavy down-tooled finish, squat/short neck, rounded shoulders, chamfered base. Amber or olive color, occasionally aqua. Paneled, but not usually recessed.	Hostetter's Bitters (Figure 4)
	Type 2: "Sarsaparilla"	Rectangular	Perry Davis or down-tooled finish, rounded shoulders, long neck. May have recessed panels.	Ayer's Sarsaparilla (Figure 5)
	Type 3: "Heavy Cylindrical"	Cylindrical	Down-tooled, patent, or rolled collar finish. Aqua color. Similar proportions to Type 1: "Bitters."	J. Walker's Vinegar Bitters (Figure 6)
Medium	Type 4: "Jamaica Ginger"	Oval	Down-tooled finish, relatively narrow body. Not	E. Frese SF Jamaica Ginger

(approx. 5” x 2” x 1”)			paneled. Generally aqua color.	
	Type 5: “Pain Reliever”	Rectangular	Patent finish, long neck, recessed panels. Aqua or colorless.	Pratt’s Abolition Oil (Figure 7)
	Type 6: “Utility Bottle”	Cylindrical	Prescription or patent finish. Aqua or colorless. Occasionally has fluted shoulders.	85-31/27-11 (Figure 8)
Small (approx. 4” x 1.5” 1.5”)	Type 7: “French square”	Square	Prescription or patent finish, cup-bottom mold, chamfered corners. Generally colorless, relatively thinner glass, and lacks recessed panels.	86-36/17 -86 (Figure 9)

However, not all bottles fall neatly into this shape typology. Soda water bottles have far less variety due to the constraints of their carbonated contents. The glass, almost always aqua color, is thick to withstand the internal pressure of carbonation as well as the bottling process itself. Most have a round cross-section because a cylindrical shape tends to be structurally stronger than other shapes (Figure 10). A subset of these have rounded or torpedo bottoms instead of flattened bases, meaning that they were not intended to stand upright. (Society for Historical Archaeology 2015a). Unlike those of medicine bottles, the closures of soda water bottles can be diagnostic for dating: blob tops that were originally cork-sealed are the most common finishes, but the study collection does contain a few bottles with gravitating stoppers, which were patented in 1864.

TCM bottles in this study collection also follows a limited shape typology, consisting almost entirely of small rectangular vials. The rectangular vials in the study collection likely contained single doses of medicinal powders or oil (Greenwood 1996: 110). Aqua colored and suffused with air bubbles, these were first made as tubes, dipped into molten glass, and the gather plied into a rectangular shape. The vial was then snapped off the tube, forming the sheared

lip (Lister and Lister 1989: 70). However, TCM was not solely contained in Chinese-style vials, but also Euro-American utility bottles and homeopathic vials, broadening the potential for TCM in this collection (Voss et al. n.d.).

Function Typology

After separating an assemblage of medicinal bottles from the larger Market Street Chinatown collection, the next step of the process was identifying the product name, contents, and intended purpose. I cross-referenced embossed labels with Fike (1987), Hunt (1995), and various bottle collector websites. I also turned to advertisements that appeared in California newspapers and trade card advertisements for detailed descriptions of how these medicines were being marketed and what diseases they purported to treat. In order to understand the particular intersections of medicine, health, and politics in Market Street Chinatown, I have categorized artifacts in the study collection by medicinal function (Table 2).

Table 2. Function typology of medicinal bottles.

Function	***Intended to Cure (compiled from advertisements and testimonials)***	***Products in Study Collection***
Blood Purifier	Scrofula, struma, eruptions, ulcers, sores, boils, syphilis, dropsy, gout, neuralgia	Ayer's Sarsaparilla, Dr. Kennedy's Medical Discovery, Scovill's Blood & Liver Syrup, Hall's Sarsaparilla, J. Walkers Vinegar Bitters
Child Healthcare	Medicines advertised specifically to children	Mrs. Winslow's Soothing Syrup
Cure-All/Pain Reliever	Rheumatic pains, stiff joints, contracted muscles, sprains, strains, colds, sore throats, lameness, fever, ague,	Mexican Mustang Liniment, Dr. McBride's World Relief, Pratt's Abolition Oil, Dr. Perry's Last Chance Liniment

	neuralgia, lame back, paralysis, toothache	
Florida Water	A perfumed spirit that refreshes and was thought to prevent infection	Murray & Lanman Florida Water
Hair	Balding, graying, dandruff	Lyon's Kathairon Hair Tonic, Nelson's Extract of Rose and Rosemary, Dr. Jayne's Hair Tonic
Lungs/Respiratory	Coughs, asthma, croup, bronchitis, whooping cough, consumption	Ayer's Cherry Pectoral, Shiloh's Consumption Cure
Oral Hygiene	Preserve teeth, harden gums, refresh breath	Van Buskirk's Sozodont
Skin/Topical	Chafing sores, chapped hands, salt rheum, skin disorders, burns, bruises, sore throat, inflammation	A. Trask's Magnetic Ointment, Registered Cosmoline, calamine lotion
Stomach/Intestinal	Dyspesia (indigestion), constipation, fever, ague, dropsy, gravel, rheumatism, dysentery, malaria, torpidity of liver and bowels, general debility	Dr. J. Hostetter's Stomach Bitters, Rosenbaum's Bitters, Dr. Wonser's Bitters, Voldner's Aromatic Schiedam Schnapps, E. Frese Jamaica Ginger, F. Brown's Ess of Jamaica Ginger, New Almaden Mineral Water, San Jose Soda Works, Wood's Napa Soda, Williams Brothers, Meyer & Rottman, Cantrell & Cochrane Belfast & Dublin Medicated Aerated Waters
Traditional Chinese Medicine	Stone drugs contained in Euro-American bottles that were identified through residue analysis, as well as traditional rectangular vials that would have contained TCM	
Unknown	Fragments that could not be identified, but compared favorably to medicine bottles in the assemblage. Additionally includes unlabeled medicinal and druggist bottles.	

Figure 3. Chinese-style medicine vial (86-36/5-1385)

Figure 4. Hostetter's Bitters (86-36/9-38)

Figure 5. Ayer's Sarsaparilla (88-91/26-261)

Figure 6. Walker's Vinegar Bitters (88-91/26-257)

Figure 7. Pratt's Abolition Oil (88-91/26-262)

Figure 8. Utility bottle with twelve flukes (85-31/27-11)

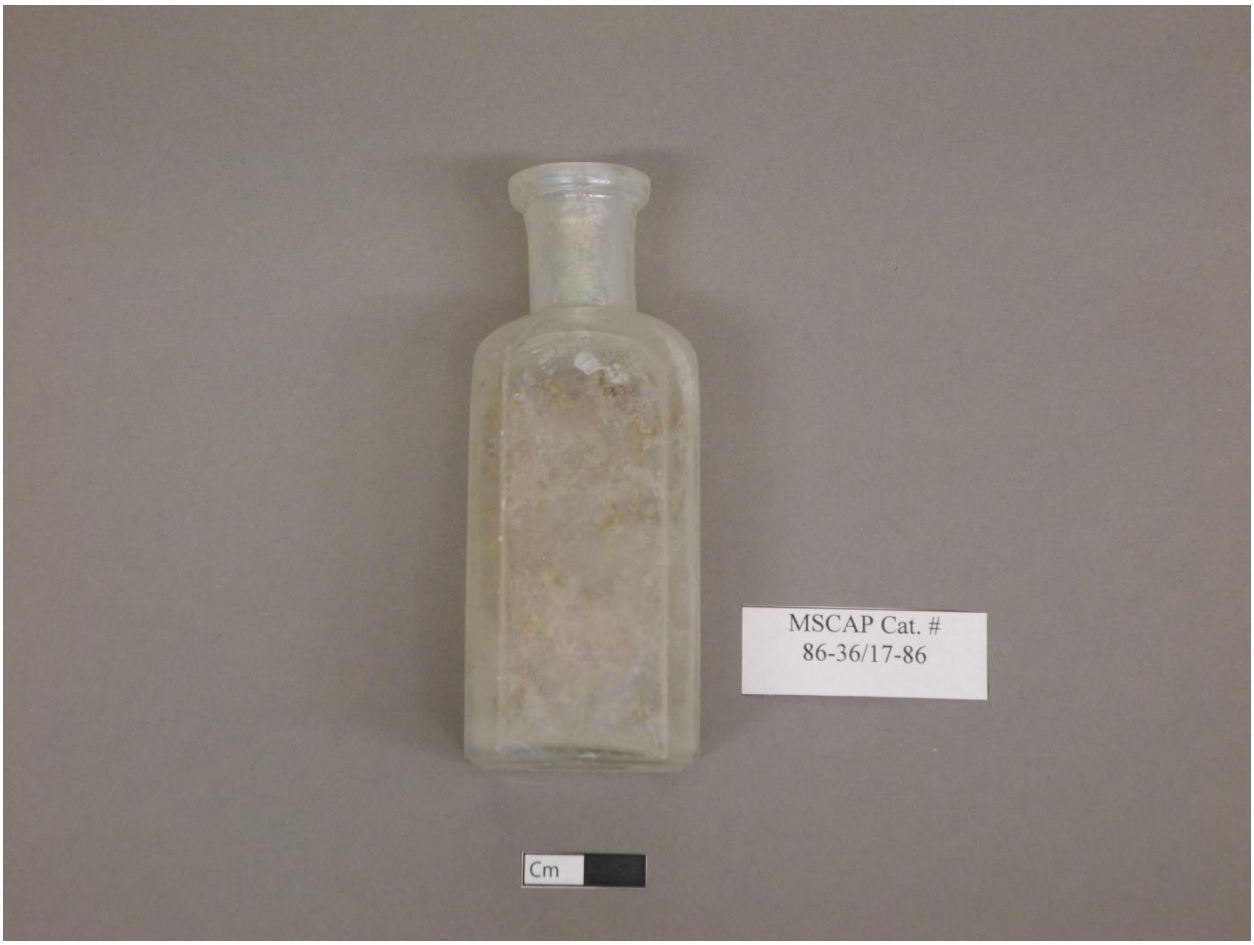

Figure 9. “French square” style druggist bottle (86-36/17-86)

Figure 10. Williams Brothers soda water bottle (85-31/24-15)

V. DATA ANALYSIS

A total of 191 patent medicines, druggist, soda water, hair tonics, and Chinese-style medicine vials were selected for this study collection. Drawing on Chan (2013)'s thesis, I use a density index and frequency index to analyze the therapeutic impact and deployment of medicinal bottles found across the Market Street Chinatown site. The frequency index accounts for the occurrence and prevalence of medicinal bottles in each feature, relative to the total contained in the study collection. The density index attempts to account for the size of each feature in order to better assess the relative significance of medicinal bottles at each feature. ARS' initial catalogue records are used as a proxy for the total population of artifacts in each feature because new cataloguing by the Market Street Chinatown Archaeology Project is still ongoing. Considered together, these measures form a picture of what self-diagnosis and self-treatment looked like in Market Street Chinatown, as well as a jumping off point to discuss the diverse nature of medicinal products found at each feature.

Table 3. Density and frequency indices of medicinal bottles in each feature. Features with the highest density or frequency index are marked in red.

Feature	Total Medicinal Bottle Catalogue Records	Total ARS Catalog Records	Density Index	Frequency Index
85-31/1	1	178	0.006	0.005
85-31/2	4	235	0.017	0.021
85-31/3	0	288	0	0
85-31/4	0	0	0	0
85-31/5	0	0	0	0
85-31/6	0	160	0	0
85-31/7	1	135	0.007	0.005
85-31/8	0	0	0	0
85-31/9	2	65	0.031	0.010
85-31/10	1	49	0.020	0.005
85-31/11	0	2	0	0
85-31/12	0	17	0	0
85-31/13	8	367	0.022	0.042
85-31/14	1	44	0.023	0.005
85-31/15	0	0	0	0

85-31/16	0	0	0	0
85-31/17	0	15	0	0
85-31/18	2	738	0.001	0.005
85-31/18B	1	360	0.003	0.005
85-31/19	1	108	0.009	0.005
85-31/20	4	357	0.011	0.021
85-31/21	0	5	0	0
85-31/22	0	88	0	0
85-31/23	0	83	0	0
85-31/24	5	222	0.023	0.026
85-31/25	0	41	0	0
85-31/26	0	24	0	0
85-31/27	4	186	0.022	0.021
85-31/28	1	87	0.011	0.005
85-31/29	1	28	0.036	0.005
85-31/30	0	3	0	0
85-31/31	0	10	0	0
85-31/32	0	n/a	0	0
85-31/33	1	123	0.008	0.005
85-31/34	1	24	0.042	0.005
85-31/35	**6**	**42**	**0.143**	**0.031**
85-31/36	0	0	0	0
85-31/37	0	0	0	0
86-36/1	2	278	0.007	0.010
86-36/2	0	95	0	0
86-36/3	0	93	0	0
86-36/4	1	211	0.005	0.005
86-36/5	**41**	**1712**	**0.025**	**0.215**
86-36/6	1	224	0.005	0.005
86-36/6A	0	35	0	0
86-36/7	8	921	0.009	0.042
86-36/8	0	67	0	0
86-36/9	7	213	0.033	0.037
86-36/10	0	65	0	0
86-36/11	**12**	**38**	**0.316**	**0.063**
86-36/12	0	22	0	0
86-36/13	0	254	0	0
86-36/14	0	139	0	0
86-36/15	0	16	0	0
86-36/16	0	67	0	0
86-36/17	**30**	**170**	**0.176**	**0.157**
86-36/18	14	455	0.031	0.073
86-36/19	4	228	0.018	0.021
86-36/20	6	303	0.020	0.031

86-36/21	0	27	0	0
86-36/22	0	49	0	0
86-36/23	0	40	0	0
86-36/24	0	21	0	0
86-36/25	0	0	0	0
88-91/26	**21**	**1005**	**0.021**	**0.110**
TOTAL	191	10,877	0.018	n/a

A little over half the features (29 of 54 features) contain medicinal bottles. The vast majority of medicinal bottles (127 of 191) were recovered from Project 86-36. Features 85-31/35, 86-36/11, and 86-36/17 had by far the highest densities of medicinal bottles. Features 86-36/5, 86-36/17, and 88-91/26 had exceptionally high frequencies of medicinal bottles. Only Feature 86-36/17 corresponds with one of the highest density and frequency indices, which speaks to its unusual concentration of medical products. I will discuss the characteristics of these five features below, drawing on trade advertisements to discuss the specific patent medicines found in each of the features.

The absence of medicinal bottles in some features is puzzling and indicates the need for further research. It suggests that there were pockets of the population that were not using many or any medicines, or at the very least, not discarding them in those features. However, it is also highly improbable that these residents were not susceptible to illness at all. The asymmetrical distribution of medicinal bottles may indicate an uneven access to healthcare, reliance on ephemeral medicines, like herbal remedies contained in paper packets, or even visits to off-site doctors and druggists.

Discussion of Function

Table 4. Medicinal bottles found in the study collection, organized by medicinal function.

Functional Category	Number of Bottles (MNI)
Blood Purifier	6
Child Healthcare	1
Cure-All/Pain Reliever	9

Florida Water	1
Hair	4
Lungs/Respiratory	3
Oral Hygiene	1
Skin	4
Stomach/Intestinal	27
TCM	32
Unknown	103

Stomach and intestinal distress is by far the most pervasive illness for which the Market Street Chinese sought treatment. Dyspepsia, constipation, dysentery, dropsy, and gravel often resulted from poor diet, unclean drinking water, and inadequate sanitation. A variety of products were used to mollify bowel discomfort, including Bitters, Schiedam Schnapps, Jamaica Ginger, and soda water.

Cure-alls and pain relievers were also popular, treating rheumatic pains, stiff joints, contracted muscles, sprains, and other general injuries likely incurred in daily life. For example, Mexican Mustang Liniment claimed to cure the ailments of man and beast and everything from toothaches to cancer.

Blood purifiers were used to treat many skin inflammations and swelling, believed to be caused by vitiated blood. These mixtures, typically composed of sarsaparilla and iron compounds, purported to cure boils, ulcers, scrofula, dropsy, and syphilis, among other illnesses.

Hair tonics preserved color and glossiness, but also worked to prevent dandruff and balding. For example, Lyon's Kathairon Hair Tonic drew its trademark name from the Greek word 'kathro,' which means to cleanse, rejuvenate, and restore.

Lung and respiratory medicines treated bronchitis, whooping cough, asthma, croup, and consumption, typically relying on large concentrations of opiates to suppress coughing. Samuel Hopkins Adams, in his landmark expose on patent medicine fraud, wrote of Shiloh's

Consumption Cure, whose primary ingredients are chloroform and prussic acid, "if I were a consumptive, after I had taken 'Shiloh' for awhile I should be less interested in recovering my money than in getting back my wasted chance of life" (1906: 46)

Topically applied skin treatments soothed chapped hands, chafing sores, salt rheum, burns, and inflammation. One medicinal bottle found, Registered Cosmoline, may be an early imitator of Vaseline.

Oral hygiene consists of only one product, Van Buskirk's Fragrant Sozodont for the Teeth and Breath. It was a liquid and powder mixture, the former made from castile soap, glycerin, alcohol, water, and a few drops of peppermint, cloves, cinnamon, and star anise, and the latter from orris root, carbonate of calcium, and magnesia (American Druggist 1889: 138). The sozodont was dispensed from the glass bottle and applied to a toothbrush, somewhat similar to toothpaste today.

Florida Water, the only artifact in this category being Murray and Lanman Florida Water, was a perfumed spirit thought to possess miraculous healing properties and prevent infection, deriving its name from Ponce de Leon's search for Florida's Fountain of Youth (Sullivan 1994: 78).

Under the functional category of Child Healthcare is the infamous Mrs. Winslow's Soothing Syrup, given to infants for teething pains and diarrhea. Many patent medicines were advertised for use by adults and children, but given this product's specific purpose and advertising that targeted mothers, Mrs. Winslow's Soothing Syrup is a strong indicator of the presence of young children.

Discussion of High Density & Frequency Features

Feature 85-31/35

Only one bag of material was recovered from this feature, which was a wood-lined pit. None of the artifacts were associated with stratigraphic data (Kane 2011: Appendix D). Located ten feet from the Bernal adobe on Lot 3, this feature can be associated with the Bernal family or other Euro-Americans who inhabited the building from 1848 to 1870; Chinese businesses, including a restaurant, merchant, and grocer, that leased the land after 1870; or Euro-American occupation after the 1887 arson. Based on the artifacts found, the trash deposit can most likely be associated with Euro-American use after the arson, creating a point of comparison between Euro-American and Chinese immigrants' medical practices. Feature 85-31/35 contained six medicinal products, including soda water and castor oil bottles.

Table 5. Medicinal bottles found in 85-31/35.

Catalog #	Contents	Function
85-31/35-1	San Jose Soda Works	Stomach/Intestinal
85-31/35-3	Unidentified druggist bottle	Unknown
85-31/35-9	Unidentified druggist bottle	Unknown
85-31/35-10	Unidentified druggist bottle	Unknown
85-31/35-13	Unidentified druggist bottle	Unknown
85-31/35-23	Castor Oil	Stomach/Intestinal

The soda water bottle, manufactured by San Jose Soda Works, is a complete vessel, circular in cross-section with a flat base. It has a blob finish and the lines of its three-piece Ricketts mold are apparent. Like other soda water bottles, it has thick aqua glass to sustain the pressure of carbonation. An embossing along its body reads "SAN JOSE SODA WORKS/JOHN BALZHAUSER/PROP./SAN JOSE, CAL." San Jose Soda Works was founded in 1891 by

German immigrant John Balzhauser, and as a result, postdates the occupation of Market Street Chinatown ("Soft Drinks").[1]

85-31/35-3 is a finish, neck, shoulder, and body fragment, with a wide prescription finish, constricted bore, and two-piece mold. A partial embossed label "[…]AGE/[…] & MIL[…]" could be the name of a local pharmacist, although no record could be found of one with those letters. However, the colorless glass, finish, sloped shoulders, paneled body, and square or rectangular body suggest it may be a druggist bottle. 85-31/35-9 is a finish and neck fragment of indefinite manufacture, but with a typical prescription finish. 85-31/35-10 is a finish, neck, and shoulder fragment made from a two-piece mold and also with a prescription finish. The prescription finish, as its name suggests, is the most common finish on druggist bottles through the mid-1870s (Society for Historical Archaeology 2015b). 85-31/35-13 is a fragment from the lower part of a medicinal bottle, with a beveled or chamfered base and partial body. These three artifacts have colorless glass and compare favorably to other druggist bottles found in the study collection, especially in their size and body proportions. They likely contained proprietary medicines prepared by druggists on an individual basis, but without a label it is difficult to identify the artifacts' original contents.

85-31/35-23 is the only castor oil bottle found in the study collection. It is a distinct cobalt blue, featuring a long neck, down-tooled finish, and two-piece mold that compares favorably to products like Dr. Zimmerman's Castor Oil. A spoonful of castor oil was commonly

[1] Other artifacts from Feature 85-31/35 also corroborate the association with post-arson Euro-Americans. 85-31/35-8, an unidentified bottle, is embossed with a manufacturer's mark on its base (A.B.G.M.CO.). Based on this particular mark, the bottle can most likely be associated with Adolphus Busch Glass Manufacturing Company, which began manufacturing in 1893 (Lockhart et al. 2010: 47). Additionally, metal parts, leather belts, and liquor bottles were found, but there is no evidence of definitively Chinese-related artifacts.

taken as a laxative, although it could also be used as a cold remedy or hair supplement ("Hair Grower"). Some physicians may even have prescribed it as a cure for cholera. Writing in a British medical journal, one doctor described it as "desirable to encourage rather than to suppress the diarrhoea, the agent best adapted to accomplish this result appears to be castor-oil – the mildest, least irritating, and yet withal the quickest purgative which we possess" (Ranking et al. 1854: 206).

Discussion

Feature 85-31/35 suggests that there was little material difference between Euro-American and Chinese immigrants' medical practices. Soda water and druggist preparations were deployed throughout the Market Street Chinatown site, indicating widespread use among Euro-Americans and Chinese populations alike. Feature 85-31/35 contains the only castor oil bottle of the study collection, which implies that particular remedy may have been more frequently used among Euro-Americans. However, castor oil may not have been unfamiliar to the Chinese residents either. Known as *bi ma you*, castor oil had some applications in traditional Chinese medicine, serving a similar purpose by moistening the intestines, relaxing the bowels, and nourishing the skin (Zhou et al. 2011: 421). There is ample evidence of Chinese relying on other stomach remedies, including soda water, Jamaica Ginger, and bitters, but there is relatively little in regards to castor oil. The Market Street Chinese may have been using castor oil in a different form, such as in traditional Chinese medicines, or perhaps did not utilize it all.

Feature 86-36/5

Feature 5 is the largest feature of Project 86-36, in terms of catalog records, as well as the most stratigraphically complex. It was a wood-lined pit, possibly a privy, of Chinese ethnicity. Artifacts were excavated from this feature in ten levels, with the majority coming from Levels 6

and 8. Level 6 contained a heavy deposit of Chinese artifacts and porcine remains buried in a loose, brown silt. Similarly, Level 8 contained a great deal of Chinese artifacts in a loose, brown matrix. Overlaying the feature was an Upper Stratum of disturbed gravel, concrete, and artifacts (Kane 2011: Appendix D). According to Laffey (1994: 11), Feature 86-36/5 could represent either of the two Chinatowns that occupied Block 1, the 1860-1870 Chinatown or the 1871-1887 Chinatown. The trash pit was also located in a semi-open area, near sheds, pork roasting furnaces, and an upholstery.

Table 8. Medicinal bottles found in Feature 86-36/5.

Catalog #	**Contents**	**Function**	**ARS Association**
86-36/5-38	Unidentified druggist bottle	Unknown	Upper Strata
86-36/5-41	Unidentified TCM	TCM	Level 8
86-36/5-87	Unidentified druggist bottle	Unknown	General Surface
86-36/5-137	Joseph Burnett & Co.	Unknown	Dozer
86-36/5-212	Unidentified druggist bottle	Unknown	Disturbed
86-36/5-291	J.C. Ayer & Co.	Unknown	Upper Strata
86-36/5-340	Unidentified TCM	TCM	Level 1
86-36/5-416 and 86-36/5-732	Ayer's Cherry Pectoral	Lungs/Respiratory	Upper Strata and Level 6
86-36/5-421	Unidentified medicinal bottle	Unknown	Upper Strata
86-36/5-429	Carson-Riley Drug Company	Unknown	Upper Strata
86-36/5-456	Cantrell & Cochrane Belfast and Dublin Medicated Aerated Waters	Stomach/Intestinal	Level 6

86-36/5-457	Soda Water	Stomach/Intestinal	Disturbed
86-36/5-692	Calamine Lotion	Skin	Level 6
86-36/5-693	Calamine Lotion	Skin	Level 6
86-36/5-694	Stone Drug	TCM	Level 6
86-36/5-695	Unidentified TCM	TCM	Level 6
86-36/5-696	Unidentified druggist bottle	Unknown	Level 6
86-36/5-697	Unidentified TCM	TCM	Level 6
86-36/5-698	Unidentified TCM	TCM	Level 6
86-36/5-740	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-874	Williams Brothers Soda Works	Stomach/Intestinal	Level 6
86-36/5-875	Williams Brother Soda Works	Stomach/Intestinal	Level 6
86-36/5-876	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-881	Joseph Burnett & Co.	Unknown	Level 6
86-36/5-898	Unidentified druggist bottle	Unknown	Level 6
86-36/5-933	Unidentified druggist bottle	Unknown	Level 6
86-36/5-935	J.C. Ayer & Co.	Unknown	Level 6
86-36/5-936	Unidentified druggist bottle	Unknown	Level 6
86-36/5-938	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-939	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-962	Unidentified druggist	Unknown	Level 6

	bottle		
86-36/5-989	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-992	Unidentified druggist bottle	Unknown	Level 6
86-36/5-996	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-998	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-1385	Unidentified TCM	TCM	Level 8
86-36/5-1507	Unidentified druggist bottle	Unknown	Level 8
86-36/5-1508	Unidentified medicinal bottle	Unknown	Level 8
86-36/5-2069 and 86-36/5-2070	Williams Brothers Soda Works	Stomach/Intestinal	Level 6
86-36/5-3008	Unidentified medicinal bottle	Unknown	Level 6
86-36/5-3009	Unidentified druggist bottle	Unknown	Level 6

Stomach and Intestinal Medicines in Feature 86-36/5

The only identifiable stomach remedies identified from this feature were soda water bottles. Cantrell & Cochrane Belfast and Dublin Medicated Aerated Waters forms an interesting counterpoint to locally manufactured soda waters and is the only product found in this study collection that was explicitly imported from Europe. These bottles were imported by the millions into the US during the mid-19th century and differed from many American-made soda water bottles by their convex bases (Society for Historical Archaeology 2015a). The bottled product mimicked "the mildly alkaline and tonic saline properties" of the holy St. Patrick's Well in

Dublin (Wyman and Sons 1888: 127). 86-36/5-457 is also a rounded-bottom bottle of heavy aqua glass, which may indicate a foreign manufacture. In addition, three soda water bottles from the Williams Brothers Soda Works were found at this feature.

Lung and Respiratory Medicines in Feature 86-36/5

Ayer's Cherry Pectoral countered all diseases of the throat and lungs, including coughs, colds, whooping cough, bronchitis, asthma, and consumption, such that "multitudes are rescued from untimely graves, and saved to the love and affection centred on them" ("Ayer's Cherry Pectoral"). The small quantities of alcohol and morphine in the formula acted as a cough suppressant. The Cherry Pectoral achieved global acclaim, and Dr. James Cook Ayer retired as one of the wealthiest patent medicine manufacturers (Odyssey Museum 2015a). Part of the Cherry Pectoral's appeal was in treating childhood afflictions, especially whooping cough and influenza, which may also indicate presence of young children in the area. 86-36/5-291 and 86-36/935 are products of J.C. Ayer & Co. as well, sporting the distinctive Ayer's logo embossing. However, it cannot be determined whether they are Ayer's Cherry Pectoral or Ayer's Ague Cure (a malaria medicine) because the two products share Perry-Davis finishes, recessed panels, and similar body proportions.

Skin Ointments in Feature 86-36/5

Calamine lotion was discovered in two Chinese-style medicine vials. Calamine lotion can be applied topically to treat skin afflictions, such as burns, rashes, and insect bites. In TCM, it also clears nebula clouding to improve eyesight, removes dampness, and promotes tissue regeneration (Wu 2005: 677). While stone drugs were commonly shipped from China in Chinese-style medicine vials, there are no known examples of calamine lotion being imported

this way. Instead, the vials were perhaps being reused to distribute single doses from a larger bottle of calamine lotion (Voss et al. n.d.).

Traditional Chinese Medicine in Feature 86-36/5

86-36/5-694 contained a red powder, which chemical analysis revealed to be a stone drug made from lead tetroxide (*qian dan*) (Voss et al. n.d.). It was likely used to treat skin inflammation and clear toxic pathogens, such as sores, eczema, ringworm, and ulcerations (TCM Wiki). The residue from the bottle also contained nitrate, which rarely occurs naturally and suggests that the compound was manufactured (Voss et al. n.d.).

Feature 86-36/5 also contained six other Chinese-style medicine vials, all of similar manufacture and shape. They have a gather of glass around a hollow tube core and rectangular bases, falling under Type 1a (Greenwood 1996: 111). The hollow within the body is the same diameter as the neck, and the body is tapered, widening at the shoulder. The contents of these vials are unknown, but likely contained doses of pills or powder.

Medicinal Bottles of Unknown Function in Feature 86-36/5

Five bottle fragments (86-36/5-87, 86-36/5-249, 86-36/5-898, 86-36/5-936, and 86-36/5-992) are colorless prescription finishes, all highly typical of druggist bottles. 86-36/5-429 is the only one with proprietary embossing, and it most likely contained a medicine prepared by the Carson-Riley Drug Company, located at 47 E. Santa Clara Street. 86-36/5-962 is a complete vessel with colorless glass, patent finish, and ovoid base. It is similar to the "Favorite Oval" style listed in the Illinois Glass Company Catalog, a popular bottle used by pharmacists (1906: 25). Larger and thicker than the other druggist bottles, it would have contained a greater volume of medicine.

Four Euro-American style medicine vials (86-36/5-38, 86-36/5-212, 86-36/5-696, and 86-36/5-1507) were recovered from this feature. They are similar in size and manufacture, created through a dip mold and a finish that was cracked off. The latter three are aqua and have rectangular bases with chamfers, while the former is colorless and has a more distinctly octagonal base. These vials likely contained single doses of medicine, specially prepared by a pharmacist or dispensed from a larger bottle of medicine.

86-36/5-137 and 86-36/5-881 are fragments embossed with the Joseph Burnett Company logo, but it is unclear which of Burnett's popular patent medicines, such as Cocaine for the Hair, Oriental Tooth Wash, or Cod Liver Oil, they may have contained. Both 86-36/5-876 and 86-36/5-3008 are colorless fragments with recessed panels. The latter also has a rectangular base with chamfered corners. These characteristics compare favorably with Type 5 bottles, including Pratt's Abolition Oil. 86-36/5-939 can also be categorized as Type 5, with its patent finish, narrow bore, and relatively long neck bearing similarity to the "straight neck panel" style that is common to many medicinal products (Society for Historical Archaeology 2014). 86-36/5-421 is of heavier aqua glass, with a two-piece mold, patent finish, and sloping shoulders. It compares favorably in size and body proportions to Type 2 bottles, such as Ayer's Sarsaparilla. 86-36/5-938 likely falls under Type 6, its prescription finish and sloped shoulders almost identical to utility bottles found in the collection. 86-36/5-989 is an unidentified cylindrical bottle, manufactured from aqua glass and a cup-bottom mold. Its medium size suggests it could be classified as a Type 6 bottle, although its relatively thick glass may also mark it as a soda water bottle.

Discussion

Feature 86-36/5 demonstrates that the Market Street Chinese deployed an incredibly diverse arsenal of medicines to preserve their health. Medicinal practice ran the gamut of universally popular patent medicines, traditional Chinese medicine, domestic and imported soda water, and single dose medicines. In particular, the bottle from the Carson-Riley Drug Company suggests that the Market Street Chinese were not restricted to Chinese druggists, but had significant access to Euro-American pharmacies as well.

Located in the same semi-open, mixed-use area as Feature 86-36/17, Feature 86-36/5 may also be associated more with the working class. Though cure-alls are absent in this feature, the presence of calamine lotion may relate to the hot labor of washing clothes and roasting pigs (Voss et al. n.d.).

Feature 86-36/11

Feature 11 of Project 86-36 was an unlined trash pit in the northern half of Block 1. Apart from medicinal bottles, the ARS report shows faunal remains (fish and porcine) and Chinese ceramics, with ash and charcoal prominent in the matrix. The feature was excavated in two layers, but no artifacts were recorded as associated with Layer 2 (Kane 2011: Appendix D). Twelve medicinal bottles of Euro-American origin were present in this feature (Table 6). Half of the medicinal bottles found at the feature have stratigraphic data and are associated with Layer 1, a gray, loose clay-silt about 25 cm. thick (Kane 2011: Appendix D). According to the Sanborn map, Feature 86-36/11 was located steps away from wooden sheds, pork roasting furnaces, and an upholstery.

Table 6. Medicinal bottles found in Feature 86-36/11

Catalog #	Contents	Function	ARS Association
86-36/11-1	Unidentified druggist bottle	Unknown	No association
86-36/11-2	Stone Drug	TCM	No association

86-36/11-3	Unidentified druggist bottle	Unknown	No association
86-36/11-4	Unidentified druggist bottle	Unknown	No association
86-36/11-5	Unidentified druggist bottle	Unknown	No association
86-36/11-6	Unidentified druggist bottle	Unknown	No association
86-36/11-12	Unidentified druggist bottle	Unknown	Layer 1
86-36/11-13	Unidentified druggist bottle	Unknown	Layer 1
86-36/11-14	Unidentified druggist bottle	Unknown	Layer 1
86-36/11-15	Unidentified druggist bottle	Unknown	Layer 1
86-36/11-16	Unidentified druggist bottle	Unknown	Layer 1
86-36/11-17	Unidentified druggist bottle	Unknown	Layer 1

The twelve medicinal bottles are exceedingly similar in shape and manufacture: they are all small, Euro-American style medicinal bottles, with colorless glass, a two-part mold, patent finish, and twelve flukes around the body. Each would contain around 10 mL of powder, pills, or liquid, likely taken as a single dose medicine or otherwise sparingly used. The absence of embossed labels and the general uniformity of shape indicate that these were utility bottles that contained local compounds, such that a druggist prepared them for individual customers as opposed to an off-the-shelf patent medicine.

The contents of one artifact, 86-36/11-2, were determined through chemical analysis to be a stone drug, compounded from charcoal and iron, magnesium, and copper (Voss et al. n.d.). Stone drugs are made from minerals, and occasionally fossils or amber; they often contain toxic elements such as lead, mercury, and arsenic that may be harmful if taken in excess (Yu et al. 1995). The specific purposes of the charcoal compound are unclear, due to the sample's

prolonged exposure, but charcoal has a long history of therapeutic use, including as an antidote for poisons and ulcers. Iron continues to be used as a hematinic, copper is believed to help the flow of 'chi', or life energy, and magnesium may bolster relaxation and heart health (Voss et al. n.d.). These factors taken together indicate that the stone drug found in 86-36/11-2 served to assuage some ailment in Market Street Chinatown. Moreover, the discovery of a stone drug in a Euro-American medicinal bottle demonstrates that Chinese residents were reusing them to package and distribute traditional Chinese medicine.

Discussion

The twelve medicinal bottles excavated from Feature 86-36/11 are all Euro-American utility bottles that were commonly used by local pharmacists or herbalists to dispense medicines to individual clients. Given their small volumes, these were medicines that were either sparingly used or taken as single doses. In contrast, many patent medicines were large, contained multiple doses, and could be taken over a longer period of time. Moreover, druggist preparations may have been more suited for treating specific or episodic ailments that required immediate attention, as opposed to patent medicines that treated a wide array of symptoms. The absence of large medicinal bottles at Feature 86-36/11, especially in comparison to other features, suggests that Chinese medical practitioners may have been purchasing these Euro-American utility bottles wholesale for their own use.

Feature 86-36/17

Feature 17 of Project 86-36 contained a wood-lined trash lens, which was excavated as a single cultural layer without stratigraphic associations. In addition to medicinal bottles and other glass fragments, Chinese artifacts and faunal remains were discovered (Kane 2011: Appendix D). During the 1850s, hotel keepers Jean Vioget and Augustin Chatelle owned this area of Block

1, founding the Eagle Hotel by 1852. Residents of the first Market Street Chinatown likely occupied parts of Lot 3 during the 1860s, and by 1873 the entire lot formed part of the Chinatown's second incarnation (Laffey 1994: 8). Two patent medicines excavated from this feature situate the deposition with the second Chinatown: Dr. Wonser's Bitters was first sold in 1870 and Dr. McBride's World Relief in the 1870s (Fike 1987: 44, 172). According to the Sanborn map, Feature 86-36/17 was located in a mixed-use area with a washhouse, pork roasting furnaces, sheds, and tenement housing nearby.

Table 7. Medicinal bottles found in Feature 86-36/17

Catalog #	Contents	Function
86-36/17-1	Unidentified druggist bottle	Unknown
86-36/17-85	Mrs. Winslow's Soothing Syrup	Child Healthcare
86-36/17-86	Ferrous carbonate	TCM
86-36/17-87	Ointment	Unknown
86-36/17-88	Unidentified medicinal bottle	Unknown
86-36/17-89	Unidentified druggist bottle	Unknown
86-36/17-90	Unidentified medicinal bottle	Unknown
86-36/17-91	Unidentified druggist bottle	Unknown
86-36/17-92	Unidentified medicinal bottle	Unknown
86-36/17-95	A. Trask's Magnetic Ointment	Skin
86-36/17-101	Jamaica Ginger	Stomach/Intestinal
86-36/17-104	Unidentified druggist bottle	Unknown
86-36/17-106	Mexican Mustang Liniment	Cure-all/Pain Reliever
86-36/17-107	Dr. McBride's World Relief	Cure-all/Pain Reliever
86-36/17-108	Unidentified medicinal bottle	Cure-all/Pain Reliever

86-36/17-109 and 86-36/17-110*	Dr. Perry's Last Chance Liniment	Cure-all/Pain Reliever
86-36/17-115	Dr. Wonser's Bitters	Stomach/Intestinal
86-36/17-120	Unidentified medicinal bottle	Unknown
86-36/17-121	Wood's Napa Soda	Stomach/Intestinal
86-36/17-127	F. Brown's Ess of Jamaica Ginger	Stomach/Intestinal
86-36/17-129	Williams Brothers Soda Water	Stomach/Intestinal
86-36/17-132	Unidentified medicinal bottle	Unknown
86-36/17-133 and 86-36/17-138*	Dr. Kennedy's Medical Discovery	Blood Purifier
86-36/17-135	Dr. Perry's Last Chance Liniment	Cure-all/Pain Reliever
86-36/17-142	Dr. Perry's Last Chance Liniment	Cure-all/Pain Reliever
86-36/17-216	Unidentified medicinal bottle	Unknown
86-36/17-217	Unidentified medicinal bottle	Unknown
86-36/17-218	Soda Water	Stomach/Intestinal

* Artifacts that were found to cross-mend. The original catalog numbers were kept, but MNI was changed to reflect the consolidation.

Stomach and Intestinal Medicines in Feature 86-36/17

Dr. Wonser's Indian Root Bitters was a "pleasant and healthful tonic" which "improves the appetite, and is a sure cure for indigestion, constipation, pile and all diseases arising from a torpid and inactive liver" (Hawkins 1870). 86-36/17-115 is a square variant of the more commonly seen ornamented Wonser's Bitters. Made with heavy aqua glass, it has a long body and relatively short neck with a squat, down-tooled finish. Like other bitters at the time, such as Dr. J. Hostetter's Stomach Bitters, Wonser's Bitters was probably a combination of herbs and

spices steeped in large amounts of alcohol (Collectors Weekly 2015). The usual dose was one-half to one wineglassful two or three times daily (Hiss 1898: 49). Though advertisers ascribed healing properties of bitters to the herbs, the high alcohol content likely played a larger role in suppressing symptoms (Society for Historical Archaeology 2014).

Frederick Brown's Essence of Jamaica Ginger purported to "[give] tone to the digestive organs, and is a valuable remedy for Dyspepsia, Colic, Flatulence, Gout, Rheumatism, etc." (Reddington & Co. 1862). Though Jamaica Gingers contained alcohol as well, their small bottle sizes suggests they were consumed primarily as medicines rather than alcoholic beverages like bitters. Moreover, ginger was reported to cure all manners of stomach ailments, including cholera, cramps, diarrhea, dysentery, dyspepsia, and flatulence (Wilson 1981: 33). 86-36/17-101 compares favorably to other Jamaica Ginger bottles in the collection due to its aqua glass, ovoid base, and post-bottom mold, although the specific product name cannot be identified without an embossed label.

Soda water comprises another category of products aimed at assuaging stomach ailments, and unlike most patent medicines, were generally manufactured locally. The water contained minerals, salts, and sulfur compounds that was believed to cleanse the body of toxins and soothe indigestion. Williams Brothers Soda Works, located on St. John between First and Market Streets, produced around three hundred dozen bottles per day from the springs near the New Almaden quicksilver mine (Alley, Bowen, & Company 1881: 522). Wood's Napa Soda was likely bottled from the effervescent mineral waters of Soda Springs in Napa County, serving a similar therapeutic purpose. 86-36/17-218 is a body fragment from a cylindrical bottle, made of thick aqua glass and with an embossing that compares favorably to the Williams Brother soda water bottle.

Cure-Alls and Pain Relievers in Feature 86-36/17

As the name suggests, these patent medicines were nostrums that claimed to remedy virtually every discomfort, typically applied topically. For example, Mexican Mustang Liniment not only advertised itself as a reliever of "cuts, sprains, burns...rheumatism, neuralgia, stiff joints, stings and bites" among humans, but also of "poll-evil, ringbone and sweeny" in horses ("Mustang Liniment"). Unfortunately, cure-alls rarely lived up to their promises. According to Hiss (1898), Mexican Mustang Liniment was merely a concoction of soap, water, oil of turpentine, crude petroleum, oil of amber, oil of thyme, kerosene, and caustic potash (196). Similarly, Dr. McBride's World's Relief boasted of curing "neuralgia in three minutes, toothache in one minute, cholera in seven minutes, bloody flux in five minutes, and liver complaint in a day" (Ebert 1875: 231). Interestingly, "Dr." J.J. McBride claimed to have discovered his wonder drug during his travels through the Orient, although this was likely an advertising ploy as well (Lloyd 1860: 360). The three fragmented bottles of Dr. Perry's Last Chance Liniment found at this feature speak to a desperate need for relief from a laundry list of symptoms: rheumatism, lame back, toothache, sprains, cramp colic, earache, neuralgia, headache, sore throat, stiff lame neck, painful bruxions, burns, bruises, cuts, and cough ("Dr. Perry's Last Chance"). Given this context, 86-36/17-108 is a basal fragment that compares favorably to cure-alls. Its small size, rectangular base with flat chamfers, and paneled body is common to cure-all bottles found in the collection. Since cure-alls were generally priced at a dollar or less, they presented low-cost salves for daily aches and pains, in spite of their dubious efficacy.

Blood Purifiers in Feature 86-36/17

Kennedy's Medical Discovery claimed to cure "every kind of humor from the worst Scrofula down to a common Pimple" with a few bottles. Donald Kennedy, based near Boston,

claimed to have treated over a thousand cases of nursing-sore mouth, Eyrsipelas, ulcers, ringworm, rheumatism, and salt rheum (Library of Congress). This particular remedy was a mixture of various herbs, including fluid extracts of podophyllum (mayapple), dandelion, and leptandra (black root), along with alcohol and water (Hiss 1898: 174).

Skin Ointments in Feature 86-36/17

Trask's Magnetic Ointment was an intriguing patent medicine which supposedly harnessed the power of electromagnetism to heal the body, although it is unclear through what mechanism since the ointment was composed of tobacco, raisins, and lard (Hiss 1898: 262). For bruises, cuts, sores, burns, sore throat, lameness, and all inflammation, its advertisement noted that "laboring men should never be without a bottle of Trask's Magnetic Ointment" ("Laboring Men").

Child Healthcare in Feature 86-36/17

The bottle of Mrs. Winslow's Soothing Syrup indicates the presence of infants and mothers in the community. An 1880 census listed only seven children in the Chinatown, although though the distrust and miscommunication between Chinese residents and white bureaucrats made it difficult to record the population accurately (Yu 1991: 24). Said to relieve discomfort so that "the little cherub awakes bright as a button," Mrs. Winslow's Soothing Syrup was also laced with morphine and caused numerous infant deaths, revealing a hidden risk in child healthcare (Odyssey Museum 2015b).

Traditional Chinese Medicine in Feature 86-36/17

86-36/17-86 is colorless utility bottle with a prescription finish and chamfered base, of the "French square" style that is common to druggist bottles (Society for Historical Archaeology 2014). According to Voss et al. (n.d.), residue analysis of the bottle revealed its contents to be a

mixture of mostly ferrous carbonate. Ferrous carbonate is not listed as a stone drug by Yu et al. (1995), but it is presently advertised for sale as a blood tonic ingredient by Chinese chemical supply companies (in Voss et al. n.d.). It has also been used to treat iron-deficiency anemia in some contexts (Sirdah et al. 2014). However, residue analysis was not able to definitively conclude whether the substance was part of a stone drug or simply soil that had penetrated the bottle (Voss et al. n.d.).

Medicinal Bottles of Unknown Function in Feature 86-36/17

86-36/17-89 is an aqua fragment with a prescription finish, sloped shoulders, and twelve flutes around the body, which compares favorably to utility bottles found in the collection. 86-36/17-104 is in the "French square" style, its chamfered base and cup-bottom mold similar to the previously mentioned 86-36/17-86. The prescription finish of 86-36/17-91, also colorless, compares favorably in size and proportion to other druggist bottles. All three lack proprietary embossing.

Of the unidentified medicinal bottles, two fragments (86-36/17-90 and 86-36/17-92) are aqua color and have medium-sized down-tooled finishes, similar to Type 4 bottles. 86-36/17-88 and 86-36/17-216 may fall under Type 5, the former having a patent finish with a narrow bore, and the latter having a medium-sized paneled body with an incomplete embossing. 86-36/17-217 may belong to Type 2 given its heavy aqua glass, embossing, and large recessed panels. 86-36/17-87 is a likely an ointment, based on its thin patent lip, squat neck, wide mouth, and rounded shoulders. Finally, 86-36/17-1 is a Euro-American style medicine vial that likely contained a single dose medicine.

Discussion

Feature 86-36/17 is the only feature with both a high frequency and density index, which speaks to its richness and diversity of medicinal practice. Moreover, this feature has the largest concentration of cure-alls/pain relievers in the study collection (six of nine bottles). Given its proximity to the washhouse, pork roasting furnace, and tenement housing, the trash pit at Feature 86-36/17 may have been utilized primarily by working class Chinese. The preponderance of medicinal bottles could reflect self-treatment of occupational injuries. For example, laborers in the washhouse, which entailed carrying buckets of laundry, scrubbing clothes, and wringing them out, may have relied on cure-alls to alleviate any soreness. Similarly, the skin ointment found at this feature could have soothed chapped or burned hands that handled boiling water, hot irons, and spit-roasted pork.

Jamaica Ginger may have had some cross-cultural resonance, given that ginger is a central ingredient in traditional Chinese medicine. Due to its hot, spicy properties, fresh ginger "warms the spleen and stomach, promotes recovery from collapse, dispels pathogenic cold, warms the lung, and resolves phlegm" (Wu 2005: 664). I speculate that the presence of ginger could have been an impetus in utilizing Jamaica Ginger as a medicine, although many other factors would have played a role as well, including availability of other stomach remedies and reputation for efficacy.

Feature 88-91/26

Feature 26 of Project 88-91 was discovered after the initial ARS excavations, and based on the material excavated, was determined to be associated with the Market Street Chinatown occupation of Block 1. It was located on the western edge of the Chinatown, at the rear of several commercial buildings. Excavated as a single layer, Feature 88-91/21 was found to be an unlined trash pit containing Chinese domestic ceramics, glass fragments, and faunal remains. The large

quantities of ash, charcoal, and burned bone in the layer also led ARS excavators to describe it as a "burned layer," a result of the arson (Kane 2011: Appendix D). Given this information, Kane speculated that the feature may have been a demolition or trash pit following the 1887 arson, but a soda water bottle from the Williams Brothers and Winslow plant, which ceased operations in 1882, suggests otherwise. The deposits in Feature 88-91/21 likely pre-date the fire, which scorched the trash pit.

Table 9. Medicinal bottles found in Feature 88-91/26

Catalog #	Contents	Function
88-91/26-257	J. Walker's Vinegar Bitters	Blood Purifier
88-91/26-260	Nelson's Extract of Roses & Rosemary	Hair
88-91/26-261	Ayer's Sarsaparilla	Blood Purifier
88-91/26-262	Pratt's Abolition Oil	Cure-all/Pain Reliever
88-91/26-264	Dr. Jayne's Hair Tonic	Hair
88-91/26-267	Unidentified druggist bottle	Unknown
88-91/26-268**	Unidentified medicinal bottle	Unknown
88-91/26-269	Unidentified medicinal bottle	Unknown
88-91/26-270**	Unidentified medicinal bottle	Unknown
88-91/26-271**	Unidentified medicinal bottle	Unknown
88-91/26-273	Unidentified medicinal bottle	Unknown
88-91/26-292**	New Almaden Mineral Water	Stomach/Intestinal
88-91/26-312	Unidentified TCM	TCM
88-91/26-313	Unidentified TCM	TCM
88-91/26-314	Unidentified TCM	TCM
88-91/26-316	Unidentified TCM	TCM
88-91/26-317	Stone Drug	TCM
88-91/26-318	Unidentified TCM	TCM
88-91/26-319	Unidentified TCM	TCM
88-91/26-476**	Unidentified medicinal bottle	Unknown

88-91/26-479**	Udolpho Wolfe's Schiedam Aromatic Schnapps	Stomach/Intestinal

** Original artifact missing from the collection, but catalogued and described in the ARS Glass Container Analysis Form.

Stomach and Intestinal Medicines in Feature 88-91/21

Brothers Thomas and David Williams and partner D.T. Winslow began bottling their New Almaden Mineral Water in 1854, using water that was enriched by the quicksilver mine, located about twelve miles south of San Jose. They would later move their bottling operations to San Jose in 1867, which continued until an explosion in the mine shaft destroyed the water's natural carbonation in the early 1880s (Basin Research Associates 2010: 20). I was unable to find newspaper advertisements listing this product's specific properties, but an advertisement from its competitor, New Almaden Vichy Water, bottled from the same spring, proclaimed to "[restore] lost strength, energy and good digestion to the stomach, ruined by excess of eating and drinking, immoderate smoking and chewing, excess of work or pleasure," as well as prevent rheumatism, gout, scrofula, and general debilities of the nervous system and poor circulation of the blood ("New Almaden Vichy Water").

Based on the ARS' sketch of the bottle's embossing, 88-91/26-479 is Udolpho Wolfe's Schiedam Aromatic Schnapps. Imported from Holland, it was a type of gin distilled with various spices and berries that not only lent it a pleasant flavor, but supposedly medicinal properties as well. An "absolute corrective of [the] injurious properties of bad water," it soothed dyspepsia, dropsy, gravel, gout, and other stomach ailments that tormented a resident of Market Street Chinatown ("Udolpho Wolfe's Schnapps"). Schiedam Aromatic Schnapps, similar to Bitters,

was contained in large bottles that could dispense multiple doses over a period of time, in contrast to soda water or druggist bottles that were smaller in size and sparingly used.

Blood Purifiers in Feature 88-91/21

Another intriguing specimen, Walker's Vinegar Bitters distinguished itself from other blood purifiers by advertising itself as an alcohol-free, non-addictive remedy, thereby aligning itself with the growing temperance movement. In truth, it contained about 5% alcohol, a modest amount compared to other patent medicines (Wendt). Made from native roots and herbs of California, it promised to "[carry] off all poisonous matter and [restore] the blood to a health condition, enriching it, refreshing and invigorating both mind and body" ("Walker's Vinegar Bitters"). Among the many disorders it allegedly cured were dyspepsia, female complaints, gout, bilious disease, skin disease, scrofula, and worms.

Ayer's Sarsaparilla, another exceedingly popular product in the arsenal of J.C. Ayer & Co., treated scrofula, sores, boils, ulcers, salt rheum, dropsy, neuralgia, syphilis, dyspepsia, St. Anthony's Fire, and the whole class of illnesses arising from vitiated blood ("Ayer's Sarsaparilla"). Sarsaparilla was compounded from sarsaparilla root, stillingia, yellow dock, mandrake, and other roots held in high esteem for their tonic properties, but it was little different from the drink we now call root beer (Hagley Museum and Library N.d.a). Priced at $1 a bottle, it was a quick, cheap cure for inflammatory diseases.

Cure-Alls and Pain Relievers in Feature 88-91/21

Sufferers bought Pratt's Abolition Oil to abolish pain, including rheumatism, gout, neuralgia, stiff and swollen joints, sciatica, pleurisy, sore throat, cholera morbus, lame back, and all aches and sprains. A small bottle, such as that found in Feature 88-91/21, cost around fifty cents, indeed making it the "poor man's friend and family physician" ("Pratt's Abolition Oil").

Hair Treatments in Feature 88-91/21

Nelson's Extract of Roses and Rosemary, distributed by San Francisco druggist H.P. Wakelee, was a hair restorer from England (Polak 2008: 150). It was likely similar to Gibbins' Extract of Roses and Rosemary, another English product, which rendered the hair soft and glossy when applied during washing (Westley 1846: 622).

Jayne's Hair Tonic was a popular remedy for the preservation, growth, and restoration of hair (Jayne & Son 1907: 31). Dr. D. Jayne and Son, based in Philadelphia, was one of the largest and most successful patent medicine firms in the country (Hagley Museum and Library N.d. b). Many of Jayne's products were of international repute as well: the bottle excavated from Feature 88-91/21 is embossed with both English and Spanish ("Tonico del Dr. D. Jayne/ Para el Pelo/ Philada.), which speaks to the hair tonic's widespread use.[2]

Traditional Chinese Medicine in Feature 88-91/21

A small Euro-American style vial, 88-91/26-317 was found to contain a mix of sulfides, silicates, and nitrates of iron, copper, and calcium (Voss et al. n.d.). Given the unusual composition of minerals and appearance of the vial, this artifact most likely stored a Chinese stone drug, although its particular purpose could not be determined. The six other Chinese-style medicine vials excavated from this feature (88-91/26-312, 88-91/26-313, 88-91/26-314, 88-91/26-316, 88-91/26-318, and 88-91/26-319) adhere to Greenwood (1996)'s Type 1a.

Medicinal Bottles of Unknown Function in Feature 88-91/21

88-91/26-267 is a colorless, cylindrical bottle with a flanged (or wide prescription) finish, identifiable to druggist bottles. 88-91/26-273 is a colorless body fragment with recessed panels

[2] Jayne's Hair Tonic was advertised in Venezuelan newspaper, *El Federalista* (December 17, 1864).

and a rectangular base with flat chamfers, placing it squarely within the realm of Type 5. 88-91/26-269 is a fragment of an aqua medicinal bottle with a collared ring finish, two piece mold, and recessed panels. It is exceedingly similar in shape and proportions to a Type 2 bottle, but it is much smaller in size, almost resembling a miniature Ayer's Sarsaparilla. 88-91/26-268, according to the ARS Glass Container Analysis Form, is an aqua fragment with a flared (or wide prescription) finish, constricted bore, sloped shoulders, and a body that is likely paneled, all of which suggests a medicinal bottle. 88-91/26-270 and 88-91/26-271 are likely candidates for medicinal bottles as well, the latter having a prescription finish. 88-91/26-476 has a partially embossed label of "DR [...]//STO[…]" that indicates it was either a patent medicine or local druggist product.

Discussion

Feature 88-91/21 contains gastrointestinal medicines, blood purifiers, cure-alls, hair tonics, druggist bottles, and traditional Chinese medicine, all of which illustrate the transnational nature of medical practice in Market Street Chinatown.

VI. DISCUSSION OF RESULTS

The Market Street Chinese were not only invested in personal health and hygiene, but also skillfully employed a variety of medical practices, including patent medicines, druggist preparations, soda water, and traditional stone drugs, to do so. The incredible richness of medicinal products being used by residents demonstrates the transnational nature of the Market Street Chinatown, part of an evolving habitus of material culture and health practices. Their consumption of and participation in both Euro-American and traditional Chinese medical practices suggests these were complementary, rather than mutually exclusive, systems. While they draw on patterns from home and host societies, healthcare practices in the Market Street Chinatown was not a straightforward reproduction of either (Ross 2013: 191). To describe the use of Western medicine as acculturation or assimilation would be a simplification of the complex processes occurring in Market Street Chinatown. Instead, I argue that this synthesis reflects a uniquely mobile and pragmatic medical system, one that reflects the adaptation and recontextualization essential to diasporic identity.

Contrary to nativist allegations that they were unassimilable and unwilling to curtail disease, the Market Street Chinese were actively engaged in maintaining their health and positioned as consumers in the market. Euro-American style medicines dominate the study collection, suggesting a pragmatic, adaptive approach to personal health that extended beyond racial categories. Soda water, a significant industry to the San Jose region, also points to an adoption of local home remedies, of new methods of self-care. In self-administering these medicines, the Market Street Chinese were "no different from thousands of other people living in the United States" (Orser 2007: 171).

The reliance on both patent and druggist medicines adds to the complexity of medical practice. Heffner (2012: 93) suggests that Chinese immigrants may have preferred patent medicines because it allowed them to avoid unfriendly interactions with Euro-American doctors or drugstore owners. While this could have played a significant role, several bottles from the Carson-Riley Drug Company and Rhodes & Lewis Apothecaries show that there may have been some interactions between the Market Street Chinese and white pharmacists. Given the variety of patent medicines found at the site and the propensity for druggist medicines, there also did not seem to be evidence that the Market Street Chinese favored brand-name medicines as a means of counteracting racism, in the manner Mullins (1999) demonstrates for African-Americans in Annapolis, Maryland. Furthermore, the use of large, generic bottles of patent medicines forms an intriguing counterpoint to that of smaller dosage, individualized medicines prepared by pharmacists or herbalists. The former may reflect treatment of specific, episodic ailments while the latter may have been intended for periodic, long-term use. Convenience and affordability would also have been important factors to consider, all of which points to a measure of consumer choice and an awareness of the different pharmaceutical strategies available.

Traditional Chinese medicine at Market Street Chinatown also paints a picture of cultural change and adaptation, rather than simple continuity. Residue analysis of several bottles suggests that Chinese herbalists and doctors were purchasing or reusing utility bottles to dispense compound medicines for individual patients (Voss et al. n.d.). Though the bottles are of Euro-American manufacture, they were being reappropriated to suit the needs of Chinese, and perhaps even white, clients. As Ross (2011: 46) notes, "it is in the context of everyday practice, rather than origins per se, that objects intersect with agency and take on meaning, including functional, social and symbolic significance." Moreover, there is historical evidence that the Market Street

Chinese were not alone in adjusting or modifying their medical practices: herbal medicine was relatively popular with white clientele as an alternative to Western medicine (Liu 2005: 49). In 1886, Lee Wah, a doctor in San Jose, was charged with practicing medicine without a license. During the trial, a Miss Kendall, an invalid for seven years, testified that she had been cured after four months of herbal treatments. Several other white patients testified to the same effect ("A Chinese Healer"). Medical practice thus represented a mutual exchange between Chinese and white San Joseans, blurring the lines between Western and Eastern medicine.

Market Street Chinatown residents were treating themselves for ordinary, unsensational illnesses, such as indigestion or muscle pains, that their Euro-American neighbors were suffering from as well. Attentiveness to this could have humanized the Market Street Chinese, removing stigma from their bodies and forming a point of connection based on shared vulnerability. It could have gestured towards a radical politics of recognition, one "based on the humanness of a shared precariousness and shared efforts to do something about it" (Allison 2013: 179). In this sense, the material evidence portrays a community struggling with illness, but no less imbricated in the desire for health and relief from suffering.

VII. CONCLUSION

The residents of Market Street Chinatown left behind few written documents or images, and after the 1887 arson, the site itself was replaced by a new city hall and commercial buildings, literally burying the community's history. However, material culture from this collection demonstrates that the Market Street Chinese were anything but invisible or absent from the San Jose landscape. They relied on Euro-American medicines and patronized white-owned drugstores, as well as adapting traditional Chinese medicines to suit new challenges. In doing so, they cultivated new ways of being in the world: neither Chinese nor Euro-American, but a distinctly Market Street Chinese experience. For this reason, archaeology plays a special role in uncovering these narratives that are not necessarily preserved in the historical record. Through medicinal bottles and other artifacts, the Market Street Chinese communicated a particular view of the world, "for in the seemingly little and insignificant things that accumulate to create a lifetime, the essence of our existence is captured" (Deetz 1977: 257). Material culture from the Market Street Chinatown collection speaks to a hidden chapter in the history of Chinese immigration, and more broadly, the American past: it provides significant insight into how medicine was practiced at this unique juncture of Chinese and Euro-American lives, the challenges of preserving health in precarious situations, and the aspirations for a good life.

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