Economics and Spirituality in the Entrepreneurial Development Strategy of the Franciscan California Missions: The Historical Case of San Diego

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While there is a large literature debating Spanish mission and colonial activities in the region that currently makes up California, the vast majority of this work is either historical or anthropological in orientation. Few, if any, researchers have approached the issue as a clash between the region’s pre-colonial indigenous political economy and the mission based political economy. Not surprising, looking at history through different lenses may result in different views, colors, emphasis and even conclusions. Examining the history of indigenous populations, and the interactions with colonial forces using economic thought, has become increasingly important in recent years. As Nobel Laureate Douglass C. North writes, “The history of Native Americans... requires a far richer understanding of the complex nature of human cultures, and equally, of the fundamentals of economic and societal change that we have possessed.” With respect to the California mission period this is important for a number of reasons.

First, the business model followed by the Franciscan friars in California was just one of several possible strategies proposed at the time. The Governor of California, Pedro Fages, for example, urged a strategy of small free-hold farms with private ownership by indigenous families. This recommendation by Fages was mentioned in French naval officer

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and explorer Jean Francois de la Perouse’s journal during his 1786 visit to Monterey and Mission San Carlos Borromeo. Another strategy, large scale plantation-style production of agricultural products for export to the Orient, was urged by Spanish merchant Vicente Vasadre y Vega. Both of these strategies, and others, were rejected by the Franciscans.

Second, recent research suggests that a major factor determining post-colonial economic development is the nature of the institutional arrangements that the colonizing power brought to a particular region. When colonial powers established strong economic institutional and legal frameworks then the post-colonial indigenous population generally benefited when measured by various social and economic indices. However, when the colonial effort was focused on simply extracting natural or agricultural resources with little attempt to establish strong institutions the post-colonial economy generally stagnated.

The nature of the existing pre-colonial indigenous institutions also played an important role in the development equation. Certain pre-colonial indigenous economic frameworks, for example, better lent themselves to integration with colonial systems than others. Many developmental experts now believe that a region’s long term economic trajectory was ultimately determined by the manner in which colonial and indigenous institutions combined into post-colonial hybrid frameworks.

And third, by every modern definition of the word, the early Franciscan friars were entrepreneurs. The friars were innovative and motivated, and they ultimately assumed the personal risk associated with their ventures. As with modern entrepreneurs, they also attempted to optimize their actions to satisfy multiple personal, social and economic objectives.

This essay examines the early Franciscan mission strategy in San Diego within the context of modern economic thought regarding development. Our discussion is grounded in an examination of pre-colonial indigenous economic systems and the concept of “local public goods.”

Understanding Indigenous Pre-Colonial Economies

Centralization, Stratification and Public Goods in Indigenous Economies. An important responsibility of local government is to develop and distribute public goods to members of society. A public good, in economic terms, refers to products or services that have two characteristics, a) the use of the good or service by an individual does not diminish the ability of others to use the good or service, and b) all members of society have access to the good or service. Thus roads, police, and education are all considered local public goods. By “voting with their feet” individual households, each attempting to maximize what is important for them, will tend to congregate with similar households in geographical areas where local government offers public goods that satisfy their particular needs. This makes an argument for local authority and local institutions, since “decentralization” results in the accountability of the local governing elites.

In order for this to work, however, people need to actually have the opportunity to “vote with one’s feet.” Without intergroup mobility decentralization may not be very efficient. In pre-colonial societies, for example, without high levels of intergroup mobility decentralization into fragmented bands or small tribes often evolved into what is known as “decentralized tyranny.” For these static indigenous
societies, centralization of some institutions may, in fact, have been a better solution for the production and distribution of public goods. The rigidity of social stratification is also important in understanding pre-colonial indigenous economies. In more egalitarian groups, decentralization does occasionally result in the production of some local public goods that directly benefited that particular group. But there still remains the problem of public good “spillovers” that benefit a larger portion of the region, such as maintaining trade routes between population bands, agreements for water sharing between tribes, or well organized regional defense strategies against invaders. These broader public goods generally require some degree of centralization, even in egalitarian indigenous cultures. From a public goods perspective, the worst case scenario is a fragmented, decentralized society that is also rigidly stratified. In these situations few public goods of any type are provided since there is little incentive for the elites to support either the immediate tribal group or broader activities that benefit the region.

Carrying Capacity of Indigenous Environments. Another important factor in understanding indigenous economies is the notion of “carrying capacity,” or the ability of the environment to produce enough resources to support the population. A high population density to the point of reaching environmental carrying capacity makes spatial mobility extremely difficult, if not impossible. There is simply no more productive land available. In these cases, stratification generally increases, as wealthier families lock up the better farmland, fishing grounds, or water sources. In addition, efforts to control population growth, particularly among the lower, often landless classes, become necessary or starvation occurs. The problem becomes even more acute during droughts or other environmental changes. Since in many pre-colonial indigenous societies, females were generally associated with child bearing and family maintenance, as carrying capacity is reached, the protected status of females often vanishes. In extreme cases, ritualistic killings of
young girls, enforced abortion, or infanticide of female babies can occur. Under these harsh conditions, for static indigenous bands such as horticulturists, the primary mechanism to increase the carrying capacity of the environment is the adoption of new ways to expand the land’s productivity. However, when the indigenous population is less reliant on permanent settlement, once carrying capacity is reached in one area, then it might be easier to simply migrate to another area, peacefully if there are not other groups within the targeted region, or forcibly if weaker populations stand in the way.

Contracts and Institutions in Pre-colonial Indigenous Economies. The basis for efficient economic institutions must be found in the notion of contracts. But it is not easy to develop a structured legal system that is sophisticated enough to allow efficient economic organization among non-related members such as employees, owners, customers, suppliers, transporters, and financiers. Without strong contract systems, the boundaries of economic organizations will always remain limited, ill defined, and inefficient.

This is important when understanding most indigenous, pre-colonial economies. For example the family-based economic traditions of Native American tribes must be placed within the context of pre-colonial technology. The relatively primitive technology, such as stone axes, flint tools, and wood spears used by pre-colonial North American populations demanded cooperative strategies to achieve some level of economic efficiency. Groups had to work together rather than as individuals. Due to the difficulties in contractually organizing unrelated people, the Native American peoples had to use related parties in the form of clans and families as economic entities. By its very nature, this results in relatively small, fragile economic organizations.

This understanding of economic institutions in societal evolution is a key area where anthropologists and economists often diverge. Anthropological research recognizes that kinship ties, extended families, and tribal networks function as economic transaction points but typically does not recognize the implications of this for economic output. In actuality, kinship ties, extended families, and tribal networks are relatively inefficient institutional frameworks for complex economic transactions. They exist primarily as a result of institutional failures due to limiting factors that make contracting between different people difficult, such as a proliferation of languages within a region, a lack of sophisticated written languages among trading groups, or endemic warfare between neighboring factions. The priority of economic institutions over kinship economies is clearly seen in world history. Once innovative technologies are introduced, oftentimes by contact with other, more advanced expanding societies, the kinship related market frameworks of pre-colonial societies are often revealed to be fragile and quickly abandoned as new institutional frameworks are adopted.

Similarly, anthropological research recognizes the existence of communal property when discussing pre-colonial indigenous economics, without giving adequate attention to the well recognized economic fact that communal property inevitably results in free-riders and overuse. Research has shown that private ownership of valuable economic assets was in fact the norm among pre-colonial indigenous populations. But in instances where there was collective ownership of an asset, such as a tribal lake, there would be a local elder to closely monitor problems such as overfishing. This was necessary since pre-colonial indigenous institutional
frameworks were generally not sufficiently sophisticated to allow multiple, unrelated parties to contractually manage these issues.

Pre-colonial indigenous warfare was also a collective effort, often with economic overtones, but without efficient institutions and contracts, centralized control over indigenous armed groups was relatively weak. This is evidenced by the competition between multiple spiritual shamans and war chiefs, the generally disorganized line of battle, and the fact that many tribal members would act as free-riders by electing not to participate in battle but instead benefit from a victory by robbing the vanquished or dead--common characteristics of pre-colonial North American indigenous warfare. In addition, since indigenous static populations were generally governed by class stratification that drew wealth upward into the hands of the upper class, warfare was seen as low status. It was generally avoided by the upper class unless there was certainty of victory and, for commoners, was not a guaranteed route to success. In contrast, the nomadic tribes typically had a leadership system that rewarded individual initiative. For these groups, exploits during conflicts often provided substantial status, financial rewards, and increased class mobility for those in the lower economic strata.

Based upon the recent literature in developmental economics and entrepreneurship, we therefore consider centralization, stratification, carrying capacity, spatial and intergroup mobility, and institutional sophistication to be the concepts needed to be understood for a more accurate understanding of the contact between the early mission system and the indigenous populations with the San Diego region.

Socio-Economic Conditions of Pre-Colonial San Diego

Economic life in pre-colonial San Diego was primarily a static, agriculturally oriented system combined with localized hunting and fishing activities. This resulted in a land tenure system often seen among other pre-colonial North American permanent societies. In particular, the San Diego indigenous economic system was based upon: a) private land, home, tool, and water ownership; b) private ownership of certain intangible assets, such as songs and medicinal formulas, c) inheritance and assignment rights of the assets, d) agricultural methods including primitive ditch based irrigation, fire clearing of brush, and some broadcasting grain-grass seed in fields, and e) a stratified, decentralized, and static political system of bands and chieftains/religious leaders that managed disputes and declared war. In modern terms, the native people of San Diego might be best described as static forager-horticulturists, with protein food sources obtained from hunting and fishing.

The land tenure and political system in pre-colonial San Diego, while similar to other static horticultural Native American populations, was probably made even more rigid by the high population density of the area. Best estimates are that approximately 17,000 individuals lived in the San Diego region in 1769 when the San Diego Mission was established. Since arable land was scarce in the region's dry climate and the most productive land was located near water sources, the indigenous population had most likely reached its maximum environmental carrying capacity well before 1769.

Under these high-density situations, combined with the low intergroup mobility between the numerous bands in the San Diego region, static homesteads
became dominant. As previously discussed, economic theory suggests that horticulturists under these static conditions are often governed by a class stratification that draws wealth upward into the hands of the upper class or elites. This stratification is noted, in fact, by Florence Shipek in describing the San Diego Kumeyaay indigenous social structure where the upper class held the best land and hired the labor of the unlanded, poor classes. In these situations, the poor classes typically live on the fringe of the economy, often by begging, or as the early Spaniards constantly noted, by an “addiction to stealing.”\textsuperscript{15} Even Pedro Fages, later governor of California, noted very early that the local natives often killed the Spanish pack animals more for the purpose of “satisfying their hunger than by way of insult or of taking revenge.”\textsuperscript{16} These types of statements, and incessant well-documented thievery of food items from the Spaniards, clearly indicate a subsistence economic lifestyle at best, at least for a significant portion of the San Diego population prior to colonial contact.

Pre-colonial indigenous life expectancy was low. Infant mortality was probably very high due to malnutrition. Since there were no written records in pre-colonial periods, the best estimates come from similar forager-horticulturist or hunter-gatherer tribes with similar technology studied in more modern times, such as the Tsimane tribes in north-central Bolivia, that have remained isolated from colonial contact.\textsuperscript{17} These studies point to a very low life expectancy, somewhere between 15 years and 25 years, despite the fact that these tribes had probably not reached carrying capacity. Given the difficult chaparral terrain, the low levels of technology development, the arid region’s drought cycles, and the higher density of pre-colonial people in San Diego, it is likely that the average life expectancy for the immediate pre-colonial contact period would be more in the 15 to 20 year range for the population in general, compared to a life expectancy of over 40 years for Europeans during the same time period.

Organized warfare had low status in these stratified, local horticultural hierarchies. Local chiefs would not act warlike unless they were certain they would win; for the elites, there is simply too much to personally lose and too little to personally gain. This is well documented by a number of early Spanish land explorers, such as in the first Anza expedition in 1774.\textsuperscript{18}

In San Diego, the localized economic and social structure, combined with the high population density approaching environmental carrying capacity, had several implications. First, when the San Diego Mission was established in 1769, it was
clear that a large portion of the population in San Diego was barely maintaining itself at subsistence levels. There is no indication that the early San Diego missionaries or settlers, despite their small numbers, were able to trade with the local people to obtain food, because the local populations had no excess food to trade (with the exception of perhaps recently caught surplus game or fish). Because of the lack of food trade with the local population, the occasional supply ships from the nearest Spanish settlement at San Blas were critical to the survival of the mission and presidio population during the first ten years.19

Second, typical when carrying capacity of land is reached, population control becomes necessary. Young unmarried women, in particular, lose their protected status – a point made by several early Spanish observers.20

Third, technology in pre-colonial San Diego was essentially stone age. Trade and craft knowledge was low, even when compared with other North American tribes. In fact, there is little evidence of significant technological advancement among the San Diego population from the time Juan Rodriguez Cabrillo visited in 1542 to the establishment of the San Diego Mission in 1769.21

Fourth, although organized warfare was rare, indigenous violence was probably high. While there is little information regarding violence specifically among pre-contact San Diego population tribes, there is ample forensic and early observational evidence that points to a high level of pre-contact small group raiding and revenge killings among California tribes in general. The bio-archaeological record also suggests a relationship between violence and environmental carrying capacity throughout pre-contact California.22

Finally, ethno-linguistic diversity was high within the region. In the relatively small San Diego region, four different language groups have been identified.23 This high ethno-linguistic diversity is further emphasized in the Juan Bautista de Anza diary describing the first land expedition in 1774 from Sonora to San Diego, where a variety of languages was encountered along the way. The languages were oral, making it difficult to develop non-family related contracts and economic institutions across the region.

Table 1 provides a summary of the important and most likely structural economic and related characteristics of the San Diego indigenous people prior to initial contact with the mission system in 1769.24
Table 1: Characteristics of the Pre-Colonial Indigenous Population in San Diego

<table>
<thead>
<tr>
<th>Category</th>
<th>Probably Conditions in San Diego Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratification</td>
<td>Relatively rigid class structure</td>
</tr>
<tr>
<td></td>
<td>High Stratification</td>
</tr>
<tr>
<td>Centralization</td>
<td>Political power centralized versus local-ized with village elites and chiefs.</td>
</tr>
<tr>
<td></td>
<td>High Localization</td>
</tr>
<tr>
<td>Technology Level</td>
<td>Degree of technology adoption and usage</td>
</tr>
<tr>
<td></td>
<td>Low Technology, Stone Tools and Weapons</td>
</tr>
<tr>
<td>Ethnolinguistic Diversity</td>
<td>Number of different languages or variants spoken within a relatively small area, or</td>
</tr>
<tr>
<td></td>
<td>among different strata of society.</td>
</tr>
<tr>
<td></td>
<td>High Linguistic Diversity</td>
</tr>
<tr>
<td>Carrying Capacity</td>
<td>Near or at Environmental Carrying Capacity</td>
</tr>
<tr>
<td>Intergroup Mobility</td>
<td>Low Intergroup Mobility</td>
</tr>
<tr>
<td>Slave Ownership</td>
<td>Slave owners and/or un-landed segments working for Elite segments</td>
</tr>
<tr>
<td></td>
<td>Un-landed Segments Employed by Elites. No Clear Evidence of Slavery, however.</td>
</tr>
<tr>
<td>Violence Level</td>
<td>Unknown, possibly high levels of raiding and revenge killings as documented in other California regions. Low levels of organized large-scale warfare.</td>
</tr>
<tr>
<td>Poverty Level of Lower Classes</td>
<td>General Subsistence Level Economy</td>
</tr>
<tr>
<td>Institutional Sophistication</td>
<td>Contract law, land tenure, ability to organize unrelated parties, recourse mechanisms</td>
</tr>
<tr>
<td></td>
<td>Low Institutional Frameworks</td>
</tr>
</tbody>
</table>

Consistent with received economic theory, there is little evidence that pre-colonial San Diego society developed any significant public goods, either at the local level, such as an educational system, community based irrigation, or a crude health system, or at a broader level, such as maintaining trade roads, supporting a broader welfare system, or sharing water rights between tribes. In essence, given
the structural characteristics described above, under decentralization tyranny, in stratified societies with low intergroup mobility, few public goods of any type are provided. In addition, reaching carrying capacity without the means to either relocate or increase productivity through technology will inevitably result in both a poor laboring population segment bordering on starvation and a female population that suffers low status. This appears to be exactly the case in San Diego at the dawn of mission contact.

California Mission Activity

The eighteenth century Spanish Catholic missionary efforts within the vast regions of the southwestern United States and Northern Mexico were somewhat unique in world history. Unlike the majority of colonial intrusions, where missionary and Church activity took a secondary role to the more secular pursuits of economic speculation, political conquest, or mass immigrant settlement, the Catholic orders of Franciscans, Dominicans, and Jesuits took the lead role of settlement, administration, and cultural interaction with the local indigenous populations in these weakly controlled Spanish-claimed areas. In fact, the other two agencies that Spain used to colonize, presidios (forts) and government supported pueblos (towns), were simply not important in the earliest settlement period of California. The poorly manned presidios were established primarily to protect the missions, act as a local police force if necessary, and provide some security against piracy. Independent secular pueblos were generally non-existent in the colonial periods of our investigation.

The first mission settlement in Alta California was established in San Diego on July 16, 1769. There is a large literature, including articles in this journal, which detail the early mission period. We will note only the most relevant issues as they relate to our economic discussion.
The Entrepreneurial Spirit of the Franciscans

The economic and entrepreneurial strategy employed in the mission process was grounded in the overall spiritual orientation of the Franciscan Order established in 1209 by St. Francis of Assisi (1181-1226). The Franciscans were founded as a “mendicant” order whose members take strict vows of poverty, do not own property either as individuals or a group, tend to work as individuals or small groups in isolated areas, and depend directly upon charity. This orientation framed the Franciscan efforts in both Baja and Alta California in distinct ways.

First, the Franciscans were willing to go as very small groups to establish a mission and live under extremely impoverished circumstances. Second, from inception, the missions that the Franciscans established and operated were to be temporary. According to Franciscan economic and theological philosophy, they did not own the missions but simply managed them as legal agents for the local indigenous population who would then ultimately inherit the property and assets. This attitude was always made clear in the writings of the mission friars; for example, as late as 1827, Fathers José María Zalvidea and José Barona of Mission San Juan Capistrano wrote to Governor José María Echeandia of California, “all these lands did and do now belong to the Indians.”

The notion of a land trust for the native population was supported under the laws of Spain. Third, due to the historical Franciscan mendicant philosophy regarding charity, they felt that the missions should also be charitable to the local population. Therefore when locals came to the mission to be baptized, they would often be given food in exchange. In fact, there were many instances when whole communities would come to be baptized but be turned away due to the lack of supplies to give them in return. In many missions, particularly in Baja California, only those near...
death would be baptized due to the lack of exchange provisions.

Finally, with respect to the California Franciscans, most were highly educated, having studied abroad and at the Apostolic Missionary College of San Fernando in Mexico City where they received detailed instruction in local language, culture, and transferable technologies and crafts, such as tool making, horticultural sciences, and appropriate ranching techniques.29

The missionary fathers, particularly Father Serra who was quite familiar with the problems in Baja California, appear to have understood immediately the problem in Alta California only later described in more theoretical terms by modern development economic theorists. In order to achieve economic and spiritual development within the region, the mission strategy had to be designed to overcome the structural limitations existing in the local indigenous communities. Examination of the histories, letters and diaries of the early friars shows that they had four somewhat related objectives. First, to “save souls”, that is to convert the “Indios bárbaros” to Christianity; second, to reduce the extent of “immoral” behaviors, such as thievery, violence, and sexual promiscuity that was prevalent among some California native groups; and third, within the mission of Christian charity, to reduce poverty, increase the protection of females, decrease infant mortality, and increase health care. Given the carrying capacity problems and low mobility in the region, by necessity this involved enhancing the economic productivity of the region. Fourth was to hold in trust as protectors, and ultimately develop the economic base and value of the mission holdings for the native population.

Originally located near the presidio, the San Diego Mission experienced extreme difficulty in its early years. Most of the sailors that arrived in 1769 either died or were sick during the first year. The intimidating proximity of the presidio to the mission, and the mission’s diversion of its attention to tending the Spanish sick, made it difficult at first to baptize the local population. The crops failed in the early years due to lack of water and poor land, and there were few supply ships, as several were damaged in storms. In addition, important social problems arose among the Spanish soldiers that threatened to undermine the mission effort.

Fr. Serra also saw the inherent problems of the existing indigenous economy. By 1773, the alta California entrepreneurial strategy needed to be made more comprehensive and refined. It is this strategic vision that framed the mission entrepreneurial strategy for the following 50 years. In particular:

1) The missions needed to provide centralized government to the local population in order to generate “public goods with spillover effects,” and overcome the stratified decentralized tyranny of the multiple local elites controlling the region’s rancherías. In essence, the Franciscan friars discovered that they needed to follow an economic strategy known as a type of “local capture,” that given the structural failures within the indigenous economy, the authority and responsibility for public good generation and distribution needed to be centralized. Within this context, this type of centralization would be what many modern developmental economists have described as a government and institutional process that is strong enough to provide public goods, secure contracts, and maintain stability but still provide a social and economic trust.30
2) Education is one of the most important public goods. An important effort during the colonial period focused on formal education to facilitate “technology transfer,” in particular, training the indigenous population in various crafts and trades, such as tanning, higher quality pottery making, candle making, metal working, woodworking, horse riding and herding.

3) All of the missions, particularly the San Diego Mission that was initially built on less productive land, needed to obtain a regular schedule of supplies until the missions could become self-sufficient, not only for the survival of the mission and presidio personnel, but also as charity exchange goods to assist in the conversion of the local population.

4) The presidio Spanish soldiers needed to be tightly controlled and prevented from abusing local females.

5) The San Diego Mission had to be moved away from the adjacent San Diego presidio in order to become less intimidating and closer to the local, indigenous rancherías.

6) Productivity of the land, low under indigenous technologies, needed to be increased. Productivity could be enhanced by a) developing public good oriented to agricultural, such as reservoirs, a local police to control thievery, and a transportation system; b) grazing livestock (sheep and cattle in particular) would provide better protein food sources than occasional hunting of game and could be grazed on agriculturally unproductive land; c) agricultural productivity could be increased with mules, horses, and plows; d) new crops, such as grapes, corn, wheat, barley, and fruit trees would flourish in the Alta
California microclimates; and e) various crafts, such as food preservation and centralized flour milling, would increase productivity due to economies of scale and food storage and transportation advantages.

7) Encouragement of settlement by established Mexican families could help demonstrate the importance of family traditions and moral behavior.

Fr. Serra knew that this all had to happen fast or the entrepreneurial mission project would fail. By 1773 he was in Mexico City to plead his case and got a commitment from Spanish authorities on all of the above (26 Articles of Memorandum, #1, February 1773). In response to Fr. Serra’s efforts, the first overland Anza expedition was organized in 1774 by Juan Bautista de Anza to bring not only supplies but also herds, technology, skilled craftsmen, crop specimens, and a few families to the missions. Fr. Serra also got a commitment for more reliable supply shipping from San Blas, as well as authorization that education and administration of the native population would be centralized and be the responsibility of the friars. Finally, Fr. Serra received a new, revised set of authorizations, including the right to demand that any soldier who exhibited licentious or cruel behaviors toward the natives would be immediately recalled. Clearly Fr. Serra’s effort in Mexico City addressed the structural economic problems that he saw within the pre-colonial indigenous economy.

In 1774, the San Diego Mission moved to a spot approximately six miles from the presidio to be closer to the local villages. Land was more arable so crops were better and a few small herds were established. Baptisms increased dramatically. About this time, the San Diego Mission developed a strategy somewhat different from the other Alta California missions. The core Alta California mission strategy was highly centralized to house, educate, and train the baptized people within or near the mission property. In San Diego, however, since land was less productive in the immediate mission location, newly baptized people would be given limited instruction then rotated back to their villages. Only the unmarried young women and the more established neophytes, primarily families, would stay on central mission property in San Diego.

In 1775, a not unexpected attack occurred. In many respects, the attack illustrates many of the structural limitations discussed above. The local leaders from a number of the more remote rancherías organized an attack on the mission and the presidio. The attack fits the response one would expect from a highly stratified, localized system of elites when confronted with an expanding centralized mission government that was starting to provide important public goods to the community. Some of the poorer individuals within the attacking force might also have seen
an opportunity to acquire food and supplies from the mission. It was well known by the Spaniards that economics provided the main motivation for uprisings in the Sonora and California districts, and they specifically tracked the number of thefts as a primary leading indicator of an uprising since it indicated increasing desperation by the poorest subset of the local population. Since organized warfare was unattractive to established, localized elites, it was only pursued when those individuals felt that there was no chance of losing. This was exactly the situation in 1775 when the attacking force outnumbered the mission defenders by approximately 40 to 1.

Although the San Diego presidio had only about ten soldiers and the San Diego Mission had eleven Europeans/Mexicans (friars plus skilled workers), the organizers of the attack waited until several of the soldiers were out of the region on other activities. Approximately four hundred people attacked the mission while an equal number were to attack the presidio some six miles away. The presidio attack never materialized. The mission attack burned most of the mission buildings and immediately killed two people, including the mutilation of Fr. Luis Jayme, and one of the wounded died later. The majority of the mission attacking force quickly got distracted by the spoils of the attack, carting off the few relics and supplies of the mission, and tried, mostly unsuccessfully due to stone weapons, to slaughter the herd animals.34

The attacking forces finally lost their cohesion and returned to their villages. The failure of the 1775 attack, in spite of the overwhelming numbers of the attacking force, essentially ended the elite’s power among San Diego’s more distant rancherías. The mode of attack verifies the structural limitations discussed above. First, due to decentralization among multiple elites within the San Diego region, there was no coordinated line of battle. Essentially, the attack was more of a mob action. Second, a major distraction during the battle was plunder, not only of mission material but also of food items. This indicates both an economic motive and a serious free-rider problem associated with the attack. Probably only a small number of attackers actually engaged the mission defenders in combat. Within a few months, a small squad of Spanish soldiers arrested the instigators.

No more violence occurred after the 1775 incident. By 1800, the San Diego Mission and other Alta California missions were firmly established, with irrigated farmlands, reservoir systems, deep wells, dedicated food processing, curing, and preservation as well as various trade and craft production activities, such as pottery, tanning, candle making, cloth weaving, and blacksmithing. Sheep and cattle ranching became dominant. In addition, a variety of new agricultural products, such as grapes, wheat, figs, barley, and corn were introduced to the region. The road system was improved between the native rancherías, and distant mission properties were now connected. According to statistics, the California missions started to produce substantial economic surpluses between 1800 and 1810. San Diego reported 1797 as its most successful year in terms of baptisms. Around this time, important trade markets also started to develop, initially with the local presidio and governmental agencies.

Problems started to develop around 1810 as the war for Mexican independence developed. Spain, already struggling financially, could no longer support its troops in California. Yet some of the missions, including San Diego, continued to grow and prosper. The primary reason for this continued expansion was the opening of
the export trade market. Although exporting was essentially illegal under Spanish rule, by the mid-1820s Spain could no longer enforce this ban, and many privateer trading vessels started to visit the missions to acquire export products. Due to its attractive and safe harbor, San Diego was one of the missions that benefited from the export market.35

The situation declined significantly after Mexican independence from Spain in 1821. The native population’s title to Mission lands was protected under Spanish law, but Mexican law did not provide the same protection, and the Mexican government did not support the mission strategy. In 1834-1835 the Alta California mission lands, including those of San Diego, were secularized by the Mexican government, the mission population drifted away since there were no more protection for them, and the best mission farm and ranch lands were confiscated by local Mexican officials, speculators, and ranchers, many of whom were retired presidio soldiers.36 Under secularization, the missions were to give one half of their movable property to the mission residents and to give to each head of a mission family four hundred square yards (simply a house and garden plot). Everything else, lands, movable properties, property of all classes, was transferred to the Mexican administrators. Native American families were given the opportunity to leave the mission or to work as laborers for the Mexican government. In San Diego, only about 10% of the remaining mission populations chose to work for the Mexican administration.37

California became a part of the United States as a result of the Mexican War in 1848; gold was discovered near San Francisco a few days before, forever changing California history. The population of California literally exploded overnight, and
the native population became an increasingly small minority of the total population. California entered the union as a free state in 1850. Ultimately those Native Americans who did not assimilate into the broader population were resettled on reservation lands similar to the rest of the United States.

Was the mission strategy successful? Success can be analyzed from different perspectives.

Economic Output. From an entrepreneurial point of view, the Alta California mission strategy, including the San Diego Mission, was a success, bringing large acreage under modern cultivation within a relatively short time span. According to official mission records, the San Diego Mission at its peak had over 50,000 acres. Crops included corn, barley, kidney beans, chick peas, and wheat. The San Diego Mission livestock herds included approximately 20,000 sheep, 10,000 cattle, and 1,250 horses. This is a remarkable level of productive activity considering that the vast majority of the San Diego region is an arid chaparral receiving less than 14 inches of annual rainfall. The mission produced economic surpluses for many years and resulted in an active trade market with the local Spanish and, later, Mexican governments. Being a well-sheltered port city, San Diego also benefitted from the export trade market. As with all the California missions, after 1821 with Mexican independence, conditions declined rapidly in San Diego. However, from its inception in 1769 until 1834, for more than 60 years the mission generally created the majority of economic output for the region.

Public Goods. During the near half century of initial growth and stability, a whole generation benefited from a variety of public goods supplied by the San Diego Mission. As predicted by modern economic thought, the mission process centralized and standardized the institutional processes of economic activities, resulting in greater production and distribution of broad regional public goods. The road system between the interior and coast communities and between various valleys and rancherías was developed. Welfare and public health systems were established at the mission. Education of the native population, particularly in the productive crafts and skilled trades, was undertaken. In San Diego alone, a large
irrigation system was built, including a stone dam and a six-mile brick and stone irrigation conduit. Most of these public goods subsequently ceased, or fell into disrepair, with the fall of the mission system.

**Technology Transfer.** Land productivity, through enhancement of tilling and gravity fed irrigation, and crop diversity increased exponentially during the mission period, not only in the San Diego area but also throughout California. This was a key strategy to increasing environmental carrying capacity, decreasing poverty, and raising the status of females. Essentially, all the major groups of grain currently grown in California, plus the vast majority of grown fruits, such as apples, oranges, peaches, pears, plums, prunes, lemons, grapes, pomegranates, olives, and nuts were introduced by the Franciscans. Grapes and wine making were also introduced, particularly in the central area of California, laying the foundation for the modern wine industry. Most importantly, the Franciscans introduced livestock to the area, establishing ranching as the major industry utilizing previously unproductive land. Overall, the mission system was able to sustain both the local native population and the growing Spanish presidio and pueblo populations, while gradually developing a surplus for export.

**Economic Buffering.** The missions, including San Diego, expanded their land holdings by securing farm and ranching tracts as the area transitioned into modern economic production. This land was held in trust by the Franciscans under Spanish law, the *Recopilación de leyes de los Reynos de las Indias* of 1680, and was clearly understood as a trust by the friars’ own writings throughout the mission period. This was the Franciscan strategy and provides the basis for argument today in various legal cases. By holding land, technically in the name of the indigenous people who converted and now worked the land, the missions provided a protective economic buffer to the increasing pressure during the early 1800s from both retiring Spanish military personnel and new Spanish immigrant speculators that wanted to acquire the best land. The friars’ effort to discourage and dislodge Spanish and Mexican land squatters from mission land is often misinterpreted as protecting ownership, rather than protecting the “trust.”

After the mission system collapse in 1834, the lack of enforcement of earlier Spanish laws by the Mexican government, and then the ceding of California to the United States, combined with the population explosion starting in 1848, without the centralized Mission counterbalance, new immigrant land speculators, ranchers, and military routinely forced the natives off the best land.

**Assimilation and Labor Force Advantages.** Unlike the majority of indigenous people in the United States who were left to assimilate by their own means, or retreat to isolated lands and later reservations, during the peak mission period, over fifty percent of California’s indigenous population was
directly associated with the mission system. Many natives became quite skilled in important construction, agricultural production trades and crafts. This had important advantages. First, it potentially created a basis for successful assimilation for those natives that chose that direction, and second, for those that returned to their villages, it potentially provided a basis for local economic development. For example, in 1852 the Hon. Benjamin D. Wilson of Los Angeles noted,39 “these same Indians had built all the houses in the country, planted all the fields and vineyards. Under the Missions they were masons, carpenters, plasterers, soapmakers, tanners, shoemakers, blacksmiths, millers, bakers, cooks, brickmakers, carters and cartmakers, weavers and spinners, saddlers, shepherds, agriculturists, horticulturists, viñeros, vaqueros; in a word, they filled all the laborious occupations known to civilized society.” In particular, the natives became skilled, and highly prized “cowboys” in the post-mission period as the large secular ranches developed, often on old mission property. Wilson continues by noting that Indians constituted “the majority of the laborers, mechanics, and servants” of San Diego and Los Angeles, and “they all spoke the Spanish language, and a not inconsiderable number could read and write it . . . They had built all the houses in the country, had taught the new whites how to make brick, mud mortar, how to use asphalt on roofs; they understood irrigation, and were good herders.”

However, the two labor force advantages, speaking Spanish and trade skills, that the former mission population had in California during the 1820s to the 1840s literally evaporated overnight, particularly in the cities and more urban communities. With the gold discovery by 1850, the massive population growth also brought immigrants highly skilled in the trades while the primary language rapidly shifted from Spanish to English. In less than a decade the indigenous population no longer held the labor force advantages that had been acquired during the mission experience, with the exception of working as “cowboys” on the larger, more rural ranches.

Disease and Violence Management. One of the major criticisms leveled at the mission effort was the introduction of epidemic diseases into the indigenous population. There is no question that introduced disease severely impacted the Native American populations throughout North America, sometimes in devastating proportions, sometimes less so depending on the region and period being examined. In California, the native population was clearly affected by introduced diseases. One line of current thought is that these diseases entered California overland from Sonora prior to 1797. Another model is that the diseases were brought during the
initial mission expeditions to California, most probably by the soldiers and sailors. In examining the issue of disease, one must remember that the colonial process would have happened no matter what, with or without the mission system, and diseases most certainly would have been introduced regardless.

Many critics of the mission system argue that life expectancy was made worse by the policy of using dormitories for the neophyte population. Almost always this argument is grounded by examining mission records of births, deaths, and baptism to determine mortality and life expectancies. Based on these records, it is often remarked that the life expectancy of a “Mission Indian” was less than 15 years.\(^4\) However, this figure is misleading, and must be put into an appropriate context.

First, it must be remembered that the pre-colonial indigenous life expectancy in California was probably between an average of 15 and 20 years to start with, based upon current research, something that most modern critics of the mission system fail to mention.\(^4\) Second, it is now known from medical forensic analysis of skeletal remains that pre-colonial contact indigenous populations within North America suffered from a variety of debilitating diseases, including tuberculosis and pneumonia. Third, paleoanthropologists have also now documented increasing levels of malnutrition, poor health, and violence among indigenous people in the decades prior to colonial contact, which in turn resulted in a precipitous drop in indigenous life expectancy throughout much of pre-colonial United States. This situation was exacerbated by the overly crowded living conditions, poor sanitary practices, and generally promiscuous behavior (leading to more rapid transmission of infectious diseases) of pre-colonial native populations. Many have attributed these events to population levels within pre-colonial Americas reaching the carrying capacity of the environment, a situation that most likely existed in the mission region of California.

Fourth, since the mission system clearly represented a welfare state, including the provision of shelter and food for a baptism, and given the stratified structure of indigenous society, the mission likely first attracted the poorer, un-landed classes, rather than the landed, more affluent elites. This is supported by the descriptions of the early friars. Statistics regarding the relationship between class structure and life expectancy in pre-1900 United States (before the public good of government health support) indicate that the difference in life expectancy between high and low income levels close to 33%, and that the differences increase in more historical periods. In addition, research of the pre-colonial stratified indigenous populations in Mesoamerica and the Andes also indicates a large disparity

Two girls on Campo Reservation, nd. Edward H. Davis Collection ©SDHC OP 86_15752-130.
in health, nutrition, and life expectancy, with the poorer strata of society suffering greatly. Using this argument, one might expect the original pre-colonial life expectancy of those lower strata indigenous people who most likely entered the mission system would be around 15 years. Thus the analysis of the mission population suggests no real difference, or the mission system might have actually increased life expectancy among the lower strata populations it attracted. In addition, baptisms often occurred only when death was near, thus inflating the mission death rates.

Regarding violence, early Spanish writers constantly cited the endemic violence of pre-contact indigenous populations throughout the Americas as a justification for colonial activities. In many cases the conquistadors made considerable efforts to suppress intertribal violence in the early colonial years. However, in some locations, such as in the upper Amazon and Chile, as more and more speculators arrived and established extractive business operations, such as the production of latex and nitrate products, combined with aggressive local labor policies, indigenous intertribal warfare often shifted to rebellions against the Spaniards. In California, however, other than a few isolated incidents, intertribal indigenous homicide and vengeance attacks were essentially eliminated by 1800.

Conclusion

The founding of the San Diego Mission in 1769 can be viewed to be the opening of a final chapter of economic development activities that had begun exactly 250 years earlier, with the arrival of Cortés on the coast of Mexico in 1519. This final chapter can be argued to be the end of the era of Spanish colonial economic development efforts, the end of the humanist inspired era of Catholic Church sponsored and funded economic development, and, maybe most dramatically, the last opportunity for the native population to develop the needed skills before being exposed to the powerful buffeting of unconstrained growth and globalization of 19th century California.

In economics, an important concept is the notion of "revealed preferences," or the fact that an individual's real preferences regarding economic decisions given various alternatives are actually revealed by their actions, not words or pronouncements. No indigenous person was ever forced to be baptized, participate in the mission system, or move onto mission property. It was voluntary. Clearly, every native that entered the mission system made a rational choice suggesting that the mission life, for them, was better than the option of not associating with the mission. They revealed their preference for the mission strategy over their native culture, health status, social condition and economic status. This appeared particularly to be the case for the young women in indigenous California societies. In other words, as well established in institutional economic thought, weak institutional regimes are easily abandoned and new ones quickly established as productive technologies become more efficient, institutional arrangements become stronger, and ultimately people benefit.

If the period of economic development is seen to run from 1769 to 1827, when Franciscan Fathers Zalvidea and Barona wrote to Governor Echeandia in protest, then the economic development opportunity for the indigenous people can be said to have lasted for about sixty years. This is a very short period for a people to raise themselves from an essentially subsistence, Stone Age economy with substantial
structural limitations, to being able to compete on a global stage. Given the brevity, Fr. Serra’s sense of urgency expressed in 1773 is understandable. Given how much was accomplished in so little time, the Franciscan entrepreneurial development strategy in Alta California seems remarkable. And it almost worked. Ultimately, however, the loss of the land trust with secularization and the ending of the labor force advantages with the discovery of gold doomed much of California’s indigenous population to the reservation system.

NOTES


2. From la Perouse’s (Jean François de Galaup, comte de La Pérouse) journal (M. Margolin, Monterey in 1786: Life in a California Mission, Berkeley, CA: Heyday Books, 1989). This also appeared to be la Perouse’s preferred strategy, as he talks about the “advantages of society founded on the rights of the people; to establish among them the possession of property...and by this new order of things to engage everyone to cultivate his field” (Margolin, p. 71).

3. This was to be a monopolistic government controlled export enterprise utilizing the productive resources of missions and presidios for the Chinese “sea otter” market in particular. Noted by de la Perouse (Margolin, p. 100).


8. A mathematical proof is provided in N. Gennaioli & I. Rainer (Ibid.).


can see the impact of technology adoption in the evolution of indigenous buffalo hunting strategies from the 17th to 19th century. During the pre-contact period, indigenous buffalo hunts were large communal efforts often involving stampeding buffalo herds over cliffs or into prepared traps. After the adoption of the Spanish horse, indigenous buffalo hunts were still communal actions, but smaller mounted hunting parties since multiple arrow hits were generally required to bring down a single animal. With the later adoption of the European rifle, indigenous hunts became individual affairs since a single hunter with a rifle could easily kill an animal. See B. Benson, “Property rights and the buffalo economy of the Great Plains” in R. Anderson, B. Benson & T. Flanagan (eds.), *Self-Determination: The Other Path for Native Americans* (Palo Alto: Stanford University Press, 2006), 29-67.


19. In San Diego, trade with the indigenous population during the first couple of years after contact was additionally hampered by low crop production, chronic illnesses, and lack of supply ships.

20. Fages (1769) Ibid.

21. An example of the low technology in the region is that although San Diego indigenous populations used bows and arrows for both hunting and warfare, they had not yet developed the “composite” bow, something that European, Chinese, and North African cultures had developed several thousand years earlier. The composite bow offered substantially greater penetrating power, distance, and accuracy than the simple wood and sinew bow.

22. For example, forensic analysis of pre-contact indigenous burial sites in the San Joaquin Valley in central California indicates that approximately 10% of the males had projectile (arrow or spear) injuries. For all of California, the osteological evidence points to an increase in violence during the period AD 1200-1500. This level of intertribal violence is well supported by recorded observations of early Spanish observers in California (and French explorer de la Perouse). As expected in fragmented static societies, large-scale warfare in California was rare, while small group raiding and revenge killings were both common and deadly. In addition, while many pre-contact North American indigenous populations participated in cannibalism, scalping, ritualistic killings,


25. The earliest contact letters (circa 1769 and 1770) indicated that hurt or wounded natives would be immediately brought to the Spanish camp for treatment.

26. Duggan is one of the few researchers that have specifically examined the inherent dilemma of Scholastic economic theology, Franciscan attitudes toward poverty, and their management of the California missions, essentially as entrepreneurs, manufacturers, and exporters. See M. Duggan “Laws of the Market vs. Laws of God: Scholastic Doctrine and the early California economy,” History of Political Economy, 37, No. 2 (2005), 343-370.

27. Letter, 12/22/1827. As Duggan notes, there was some minor disagreement as some Franciscan writers argued for the concept of communal land, that is mission land should be managed more like monastic lands, communally owned and worked by all, rather than as a trust for future private ownership by the natives. This attitude is actually more in line with the Benedictine community model of productivity and land tenure.

28. As codified in the Recopilación de leyes de los Reynos de las Indias, 1680.

29. There is a commonly repeated myth that the California Mission friars attempted to employ inappropriate European agricultural techniques, however, there is simply no evidence for this conclusion. For the San Diego Mission, the first year’s harvest proved very difficult, but this was due primarily to the poor location of the first mission, the poor health of the Spaniards, and the extremely poor land of the region. In fact, the evidence clearly points to a program to transfer highly appropriate technologies to the native population. The Franciscans had over 100 years of experience in Mexican mission management, all the friars had university educations, the Apostolic Missionary College of San Fernando in Mexico City, in particular, had an excellent education program of local environments, plus most of the friars, including Father Serra, had decades of professional experience in managing mission agricultural activities in various regions of Mexico.


31. The mission friars constantly had problems with misbehaving presidio soldiers, often complaining about this problem to superiors. Unfortunately, although the Franciscans gained the right to demand recall of such soldiers in 1773, this was rarely enforced by the Spanish authorities in Monterey or Mexico. Abusive Spanish soldiers from the presidios remained a problem throughout the history of the California missions, and certainly undermined the progress of the missions.

32. Letters from the San Diego Presidio commanders in 1774 anticipated violence, and requested more military supplies and arms.

33. The term “elites” as we use it within an economic framework refers to both political and religious leaders.

34. An account of the attack is described in a letter by Fr. Palou approximately 2 weeks after the attack.

35. Richard Henry Dana’s famous novel, Two Years Before the Mast, describes the exporting of hides from the missions and surrounding ranches in both San Diego and San Juan Capistrano, between 1834 and 1836, at the final period of decline and decay of the California missions.

36. The crumbling remains of the San Diego Mission was sold in 1845. It did not return to the Catholic Church’s control (along with a few acres) until 1865.

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38. 1797 to 1815 seemed to be the peak economic period for the San Diego Mission.


40. In fact, the San Diego Mission Indians had a much lower mortality, with a death rate of 56 per 1,000 versus the 78 per 1,000 for all the California missions (Carrico, 1997). This death rate is similar to the estimated death rates of pre-colonial societies under similar stratified conditions as pre-colonial contact California indigenous cultures. See for example, A. Robson & H. Kaplan, “The evolution of human life expectancy and intelligence in hunter-gather economics,” *American Economic Review*, 93, No. 1 (2003), 150-169.

41. As a comparison, historical demographic research suggests that life-expectancy in pre-colonial Africa was between 20 and 22 years. For example, see G. Campbell, “The state and pre-colonial demographic history: The case of nineteenth-century Madagascar,” *Journal of African History*, 32 (1991), 415-445. It should be noted, however, that these African populations were more technologically advanced, had better food sources and more centralized government than the pre-colonial Alta California populations. Studies of isolated modern day hunter-gatherers and forager-horticulturists groups, including the Tsimane people in north-central Bolivia, indicate that 50 percent never make it to age 15. Empirical research, such as D. Jones, “The persistence of American Indian health disparities,” *American Journal of Public Health*, 96, No. 12 (2004), 2122-2134, also report that the average life-expectancy in pre-colonial indigenous rural societies was much less than 25 years, significantly lower than equivalent European societies during the same time. For example, in 17th century England life-expectancy is estimated around 40 years; see E. Wrigley & R. Schofield, *The Population History of England 1541-1871: A Reconstruction* (Cambridge: Harvard University Press, 1981), while the life-expectancy was even higher among early 17th century New England colonists; see T. Tate & D. Ammerman, *The Chesapeake in the Seventeenth Century* (New York: W.W. Norton, 1979, p. 158). Pre-contact California and other southwestern natives typically lived under harsher conditions than other pre-contact North American populations, and thus probably had much lower life-expectancies than other native groups. In addition, mathematical population models indicate that the Central Mexican population decline of 90% in the century immediately after the Spanish conquest was most certainly caused by introduced multiple “virgin field” pathogens (similar mathematical population decline functions as seen in the single “virgin field” pathogen responsible for the European Black Plague), and indicates no conquest induced homicide or native extinction components in the depopulation statistics; see T. Witmore, “A simulation of the sixteenth-century population collapse in the basin of Mexico,” *Annals of the Association of American Geographers*, 81, No. 3 (1991) 464-487. Given that multiple pathogens were probably introduced by the Spanish into the Southern California environment, one would have expected a much higher death rate, given the Central Mexico experience, than actually seen under the mission system. All of this points to the conclusion that the Mission system might have substantially reduced the expected death rate given the experience of other North American and South American regions that did not have dominant mission framework associated with Spanish colonial efforts.

42. As previously mentioned, death rates of about 54 per 1,000 reported by the San Diego Mission statistics are within the range typically seen in poor forger-horticultural pre-colonial indigenous societies.

43. There is also some evidence that the main period of epidemic disease and population decrease among the native population in California was not during the mission period, but after secularization of the missions and increased interaction with the general Mexican and later U.S. populations. For example, the 1872 document, *The Case of the Mission Indians in Southern California, and the Action of the Indian Rights Association in supporting the Defense of their Legal Rights*, states that “Suffering, hunger, disease and vice have cut down more than half of their numbers in the last thirty years” – implying from the early 1840s.

44. The California mission period under the Franciscans was clearly influenced by the ideals of the humanist oriented Catholic “reformation” of the 16th and 17th centuries in Europe.

45. The basic concept of revealed preferences in understanding economic behavior was pioneered by economist Paul Samuelson, see P. Samuelson “A Note on the Pure Theory of Consumers’ Behaviour,” *Economica* 5, (1938), 61-71.