



Diaspora and Social Networks in a World War II Japanese American Incarceration Center

April Kamp-Whittaker¹ 

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Abstract

Social network data demonstrates how communities respond to changes in social structures, like those caused by diasporic movements. Network data from the Granada Relocation Center (Amache), a WWII Japanese American incarceration center in Southeastern Colorado demonstrate the social ties fostered by internees through participation in sporting activities. The importance of previous community membership in the development of social ties is seen in a social network analysis of sport team members. Network data is correlated to archaeological evidence of sporting facilities and their role in the development of community membership and social interaction among a diasporic population.

Keywords Social network analysis · resettlement · neighborhood · diaspora · Japanese American Internment

Introduction

Following the bombing of Pearl Harbor, President Franklin Roosevelt signed executive order 9066 in 1942. This created a legal precedent for the forced removal of approximately 120,000 individuals of Japanese descent from their homes along the West Coast. This forced diaspora dispersed the relatively concentrated population of Japanese Americans from their homes on the West Coast across multiple new population hubs in the form of incarceration centers. The event marked the beginning of a larger scale diaspora during and immediately following WWII as members of the West Coast Japanese American community moved from incarceration centers to areas outside the exclusion zone.

Diasporas scatter once concentrated populations with shared social ties over a wider area, raising the question how does the spread of these populations affect the function of previously existing social networks? Migratory movements of a population for

✉ April Kamp-Whittaker
kampwap@gmail.com

¹ Department of Anthropology, 1 University of New Mexico, MSC01-1040, Albuquerque, NM 87131, USA

voluntary economic, political or social reasons along with forced dispersal are all defined as diasporas as long as these populations share a real or imagined connection to an original homeland, like the strong ties found in the pre-war Japanese American population (Tsuda 2012). Social relationships that exist between members of a diasporic population are central to maintaining a sense of ethnic and community identity. Japanese American incarceration centers can serve as a case study in how communities forcibly separated through the process of removal, first to temporary detention centers and then incarceration centers, negotiated and attempted to maintain existing social networks. As archaeologists using material evidence of shared practices or community spaces, we see one component of social interaction, but are often challenged to identify or consider the impact of intangible activities and social bonds.

Using demographic and archival data from the Granada Relocation Center National Historic Landmark, referred to here by its more common nickname Amache, a WWII incarceration center in southeastern Colorado, I examine how social groups were formed and maintained as individuals moved in stages between communities in California, detention centers, and internment centers and consider how diasporic social ties may be visible in the archaeological record. Social networks refer to the connections or relationships made between individuals when they interact with each other (Kadushin 2012). In this article, data on participation in sporting events is used as a proxy for larger networks and as an example of interaction between community members. Here, network data are used to examine how social networks formed at different stages of a forced diaspora are maintained: I examine whether members of sports teams formed at temporary detention centers continued to play as a team following their move to Amache, how frequently members of a team are from the same community or area in California, and how sports teams at Amache facilitated the development of new social networks. An analysis of the importance of previous community membership on current social interactions among relocated populations may provide insight into archaeological evidence of social activities and consumption practices.

Data presented in this paper were collected at Amache, one of ten government-run relocation centers created to house Japanese Americans during WWII. Although officially called relocation centers, these facilities meet the definitional standards for a concentration camp and are currently referred to by a range of terms including concentration, incarceration, and internment centers (Daniels 2005; Himel 2015). At Amache the term generally agreed upon by members of the community is internment or incarceration center and, except when the historic concept is being referenced, these terms will be used interchangeably to refer to Amache. Amache is located in southeastern Colorado and the University of Denver has been conducting an archaeological research project there since 2008. This site has a rich archaeological and archival record, which facilitates the application of social network analysis to the archaeological record.

Previous Community Structures

Creating a picture of what previous communities were like facilitates understanding the impact of diaspora on a community. The experiences of individuals of Japanese descent both prior to and during internment appear to vary based on which type of community they originated from (Embree 1945; Miyamoto 1942), and this would have changed

their experience of the diaspora by altering the existing social networks in which they participated. Japanese Americans along the West Coast resided in both larger urban areas and more rural and agrarian communities. Within these urban and rural population centers, there also existed a further divide. Some communities housed large Japanese American populations with numerous social institutions while others had smaller populations or even individual families.

The distinction between urban and rural residents was part of the community dynamics that developed at Amache and former incarcerated reference it as determining certain types of social interactions, especially among teenagers and younger children (Harvey 2004; Kamp-Whittaker and Clark 2019a). Both oral histories and archival documents record the existence of youth gangs whose membership was based on the urban/rural community divide (Embree 1945; Nakahira 2008). With whom you attended a dance and socialized, and even lived near at Amache was in part dictated by your community. This evidence indicates both the integration of existing social ties into the daily activities of Amache's residents but also the role that previous community membership had on social life in the center.

Many Japanese American communities developed in the agricultural areas of California, which were heavily settled by Japanese Americans who worked as agricultural labor, leased, or owned land where they operated farms. Areas like the Sacramento Valley, where a number of towns such as Colusa, Yolo, and Yuba City (all represented by internees at Amache) or farming colonies such as Livingston near Merced were known for their Japanese American populations and agricultural produce (Matsumoto 1993; US Work Progress Administration 1957). Los Angeles was one of the large urban centers with a concentrated Japanese American population on the West Coast, including a *Nihonmachi* or Japantown that acted as a cultural and economic hub (Modell 1977), and the home of a significant portion of Amache's residents.

Finally, there were Japanese American families who worked or lived in urban and rural areas of the West Coast with small dispersed populations of Japanese Americans. Residents of these communities lacked social venues for establishing ties with the local Japanese American community (Miyamoto 1942). They were also more likely to attend Buddhist temples or cultural events in neighboring communities (Neiwert 2015). As a result, original social ties they had within the Japanese American community were less likely to have been relocated with them during the forced diaspora.

Residents at Amache who came from areas with large or concentrated Japanese American populations had access to multiple social institutions within their communities. Associations and organizations developed by the Japanese American community such as language schools, religious centers, cultural festivals, and sports teams were an important aspect of social life and helped provide support for Japanese Americans (Lukes and Okihiro 1985; Matsumoto 2014; Yoo 2000), both through the coordination of services and by providing a venue for interaction (Kitano 1976; Smith 2008). Participation in shared community events or organizations fostered the development of social ties among community members (Fugita and O'Brien 2011) and was important in creating and maintaining cultural and social identities (Regalado 2013). These communities were often incarcerated at the same detention, and then internment center, allowing for the retention of community ties and organizations (Spicer et al. 1969).

General Background on Japanese American Incarceration

The forced removal and incarceration of the Japanese American population along the West Coast began on February 19, 1942, with the signing of Executive Order 9066 by President Franklin D. Roosevelt. The bombing of Pearl Harbor was used as an explanation and catalyst to justify this incarceration, which was the culmination of years of racial discrimination. Executive Order 9066 allowed the exclusion of any and all persons from designated areas for the purposes of national security (Burton et al. 1999; Ng 2002), thereby creating a framework for Japanese Americans to either “voluntarily” relocate outside of the exclusion zone or be forcibly relocated.

Initially the West Coast was divided into two zones and the Japanese American population was encouraged to move to more inland areas out of the “prohibited zone” (Harvey 2004:30). In an effort to avoid being removed from the state, approximately 9,000 individuals who had the ability to move did so (Burton et al. 1999:32). This began the disruption of community ties as people began relocating to other communities, although these were often areas where other social ties (especially extended family) existed. Mandatory “evacuation” began on March 29, 1942, and encompassed an area extending from Washington State through parts of Arizona. Instruction notices were posted in neighborhoods and communities telling people when and where to assemble and what to bring (Burton et al. 1999).

Temporary detention centers

The first stage in the forced removal of individuals of Japanese descent from the West Coast was relocation into government-run assembly centers, more accurately termed “temporary detention centers.” These centers were established by the military to house evacuees until more permanent incarceration centers could be established (Ng 2002:31). Public facilities with large open spaces, such as the Santa Anita Racetrack, were hastily modified to serve as housing, creating inhospitable living conditions which lacked all but the most basic necessities (Commission on the Wartime Relocation and Internment of Civilians 1997; Hosokawa 1969). Each center served a designated geographic area, meaning that individuals living in one town were normally evacuated at the same time and sent to the same center (Matsumoto 1993). For example, residents of Livingston, California, were relocated to the Merced detention center. This mass removal to the same temporary detention center means that although social networks that extended outside of the immediate geographic area were disrupted, many community-based networks remained roughly intact (Fugita and Fernandez 2004), though they became disassociated from their points of reference, such as the social organizations or locations where these interactions took place.

Most residents of Amache were initially removed from their homes to the Santa Anita or Merced temporary detention centers. Exceptions to this come from two later influxes of internees moved to Amache from the incarceration centers of Jerome in Arkansas and Tule Lake in California. Incarcerates from these centers had been initially sent to the Fresno, Pinedale, Marysville, or Sacramento temporary detention centers.

Each temporary detention center was unique in its layout and the ability of incarcerates to self-organize. However, at all the detention centers incarcerates attempted

to improve living conditions both through physical modifications to the environment, such as planting gardens or modifying living quarters, and through the development of social organizations or activities (Burton et al. 1999). These included the creation of sports teams such as baseball (Harvey 2004:44; Regalado 2013). The self-organization that occurred within the temporary detention centers speaks to both the abilities of the Japanese American community to mobilize existing social ties and provides insight into how new ties may have developed as community members were forced to cooperate and share communal facilities. Although intended as impermanent housing, internees resided in these temporary detention centers for up to four months before being transferred to an incarceration center where most would remain until the end of the war in 1945.

Movement into and between camps

To transfer management of the internee population away from the military, the federal government formed the War Relocation Authority (WRA), a civilian agency. The WRA managed the relocation effort and coordinated the construction and oversight of Amache and most other relocation centers. The WRA had oversight of ten incarceration centers across the country, most located in remote areas (Fig. 1). Once construction was almost completed, internees were moved to one of the incarceration centers where they left military custody and entered the custody of the WRA. Amache opened in September of 1943 and was the smallest of the ten centers housing approximately 10,000 individuals during its three years of operation.

At Amache there is evidence that incarcerated were able to exert some influence over where they were placed on their arrival in the incarceration centers (Harvey 2004:76). As noted in the memoir of a former Amachean, “we three families stood together in the same spot and were pushed as a group with our baggage onto the open truck which had come to take us to the station. All three families were to be placed in the 8F Block” (Hirano 1983). Thus, neighbors were able to cluster based on their geographic point of origin. Multiple blocks at Amache exhibit high levels of regional grouping where households from a single city or geographic area dominated the block (Kamp-Whittaker and Clark 2019a). As time progressed and the center filled, later arrivals had fewer choices, increasing the presence of diverse residential blocks and exacerbating the diasporic impacts of removal.

Amache’s population during the three years it was in operation was not stagnant. While a majority of the population arrived in 1942 there was a constant movement of people in and out of the center. In 1943, the first of two large-scale transfers of internees occurred when the Jerome Relocation Center in Arkansas closed, and some internees transferred to Amache. In one of the most controversial acts of internment, internees were asked to fill out a misguided and confusing loyalty questionnaire. Individuals who failed to provide the correct answers, as defined by the government, were deemed disloyal to the United States and sent to Tule Lake in California. A small number of families and individuals deemed “disloyal” based on their answers to the questionnaire were transferred from Amache to Tule Lake and a larger number of “loyal” internees from Tule Lake were moved to Amache (Harvey 2004). These new arrivals were integrated into Amache and placed in empty apartments. Beginning in 1942, internees



Fig. 1 Map showing the extent of the exclusion zone, highlighted in grey, and the removal zones for incarcerated sent to Amache. The locations of the ten incarceration centers are identified as are temporary detention centers. Map by the author.

could also apply for temporary leave to work outside of Amache and relocate permanently to areas outside of the exclusion zone. This continued movement between internment centers and resettlement to other parts of the country meant that the center always had a dynamic population.

Camp layout and function

Amache was built based on specifications provided by the War Department and constructed by the Army Corps of Engineers and hired contractors. Amache was composed of a large residential area that contained barracks and primary services for the internee population and a second smaller section that contained an administrative area, a hospital, motor pool, and residences for center personnel. Like other incarceration centers, Amache was enclosed by barbed wire, punctuated by guard towers manned by military police, and topped with a searchlight. At Amache the residential area was divided into 34 blocks using a system of lettered and numbered streets (Simmons and Simmons 2004). Blocks within the residential section had a variety of uses: there was a block for the elementary school, two for the high school (one of which was a sports field), an empty block, a block that served as a commercial and public area, and 29 residential blocks that contained one-room apartments.

The 29 blocks used as residences and the elementary school block all contained 12 barracks, a recreation hall, a mess hall that provided three meals daily, and a communal building that contained latrines, showers, and laundry facilities (Fig. 2). Each barrack was divided into six apartments furnished with cots, a central light fixture, and a small coal burning stove intended to provide heat. The communal facilities were located in the center of each residential block, with the exception of the recreation hall which was located at the end of one row of barracks (DeWitt 1943). Recreation buildings provided a range of community services that varied throughout the blocks. Some served as preschools, churches, a town hall, or a Boy Scouts of America headquarters (Simmons and Simmons 2004). Each residential block was designed to contain the essential services needed for residents' daily activities and acted as neighborhoods. Communal dining and shared hygiene facilities along with the lack of privacy in the barracks forced block residents to interact. Many blocks began to develop unique identities including nicknames, planned landscaping, and the creation of shared community features like Japanese baths or playgrounds. Within the confines of Amache, new social networks were created and senses of community identity formed.

In some ways the internal structures of Amache resemble those of many urban population centers. Residential blocks functioned similarly to neighborhoods; there were schools, a central commercial area, and key civil services like police and fire (Kamp-Whittaker and Clark 2019b). One technique used by the Japanese American community to mitigate the impacts of their incarceration was the organization of social events and classes which created a way of connecting both to other internees and to the outside world (Dusselier 2008). Internally, neighborhoods and social groups organized dances, classes, and community wide festivals; while both churches and Buddhist temples were established. Branches of national organizations like the Blue Star Mothers, Young



Fig. 2 Historic image showing the layout of a residential block. Barracks run along the right side and communal facilities are visible in the center of the image. Image courtesy of the Amache Preservation Society, McClelland Collection.

Women's Christian Association, and Boy Scouts of America were created. Combined with the few employment opportunities offered within the centers, classes and social events created a skeletal semblance of the community structures in place prior to incarceration. Although individual communities might have been scattered across several residential blocks, the internal social structures developed by incarcerated created venues for the continuation of existing ties and the creation of new ties through participation in neighborhood and center wide social events, committees, and employment.

In October 1945, Amache officially closed, although internees had been leaving both temporarily and permanently to the interior of the United States since its opening (Commission on the Wartime Relocation and Internment of Civilians 1997). Germany's surrender and the imminent end of the war meant that many internees had already been anticipating Amache's closure and left during the summer of 1945. Many of those who remained until Amache closed were unsure of where to go or lacked resources to reestablish a life outside of the confines of the internment center. While a lucky few were able to return to their homes and farms in California, many were forced to restart their lives in yet another new locale. This final movement out of the incarceration centers further exacerbated the forced diaspora caused by internment by fracturing new community ties formed at Amache.

Archaeological Evidence of Community

Archaeologically, we see evidence of these community and neighborhood-level social ties recorded in extensive landscape features constructed by incarcerated and in material culture indicative of both shared consumption practices and communal activities – such as *sake* brewing (Kamp-Whittaker and Clark 2019a, 2019b). Incarcerated at Amache and other Japanese American incarceration centers extensively modified the physical landscape of the site, building private and community gardens, constructing playgrounds, and creating sports fields (Garrison 2015; Ozawa 2016; Tamura 2004). These landscape modifications speak to the desire of a community to provide needed facilities and the existence of social ties that facilitated the coordination of their construction and maintenance.

Archaeological evidence of sports fields at Amache provide one example of how social ties created during the process of removal might be visible archaeologically. There are two primary types of sports facilities found at Amache: large fields used for public events and smaller ones constructed in residential blocks and used primarily by block residents and those of surrounding blocks. From archival and oral historical evidence, we know that neighborhood-level sports included basketball hoops and baseball diamonds in several locations and spaces in the recreation halls for smaller sports like table tennis (Neal 1945). At a site level there were spaces for sumo wrestling along with football, baseball, and basketball.

During archaeological work, the University of Denver Amache project identified the remains of several sports fields (Haas et al. 2014; Starke 2015). Large baseball and football fields associated with the high school were located in the center of Amache, directly across from the school, and were a hub of social activity. During the 2014 season, a field survey and subsequent Ground Penetrating Radar (GPR) survey found the remains of one of the site's two sumo rings (Starke 2015). Like the high school sports fields, the sumo ring was also located at the center of Amache behind the internee-run co-op. Many of the large community

wide sporting events recorded in the internee run newspaper were held at these fields. The central location of these large public fields as well as the type of events held there would have made them a gathering point. In fact, historic images of sporting events show large crowds gathered on the periphery (Fig. 3). This is in contrast to smaller fields located in residential blocks that appear to have been used more by residents of the surrounding area.

Neighborhood-level sporting facilities are more ephemeral and harder to recover; however, during GPR and excavation in 2014 the remains of a baseball diamond were found in one block (Haas et al. 2014). Later oral histories confirmed that there had been a diamond in that location and both oral histories and archival sources document the existence of multiple smaller sports fields throughout the site. Many of the neighborhood-level facilities were located in large open areas at the center of the block. The central locations of these facilities at both a block and site level demonstrate the importance of sports as a mechanism to facilitate social interaction. While the prevalence of sports fields and their placement gives archaeologists insight into their role in socialization within Amache, archaeological evidence alone cannot indicate how these features acted in the formation or maintenance of social ties. How did residents use both public and semi public sporting events to maintain social ties disrupted through the process of diaspora? By moving beyond a simple examination of the existence and prevalence of sports fields to consider how they were being used we can understand their role in the processes of community building and maintenance.

Background on social networks

Social network analysis is a method to both map networks of relationships and measure levels of interaction (Brughmans 2010; Wasserman and Faust 1994). Analysis of social



Fig. 3 Football game at the 10F diamond showing crowds gathered watching the game and the high school visible in the background. Image courtesy of the Amache Preservation Society, McClelland Collection.

networks allows us to consider the relationships between different individuals or groups in a system, and analyze what commonalities might generate these ties (Borgatti et al. 2013). Networks can be visualized using a system of nodes, representing individuals or locations, linked by ties that represent common attributes, such as coparticipation in an event. While network theory is more commonly used in cultural anthropology and sociology it has been employed to understand archaeological data especially in relationship to ideas of identity and interaction between communities (Hart and Engelbrecht 2012; Mills et al. 2013; Peeples and Haas Jr 2013) and in a few historical archaeological contexts (Orser 2005; Purser 1991; Shackel et al. 1998). For example, Mills et al. (2013) utilized the frequency of trade goods, both decorated ceramics and obsidian, to track diachronic changes in social interaction between prehistoric Southwestern sites during a period of migration and aggregation. In archaeological applications, artifactual evidence serves as proxy for social ties and demonstrates the utility of network analysis as an alternative means for considering how different communities interacted, traded, or self-identified.

Although the archaeological implications of network analysis are still being developed, its utility in considering the role of community in social interaction is well established (Scott 2012). Locally based networks of support are formed through recurrent face to face interactions, such as those fostered through shared residence in a neighborhood or participation in community organizations (Henning and Lieberg 1996; McPherson et al. 2001). Locally based social networks influence residential mobility as individuals relocate or choose to remain in a neighborhood in order to maintain social ties (Dawkins 2006). Residents of Amache were members of multiple local communities, or home places (Massey 1994), and carried those social relations with them during forced removal. Research on contemporary immigrant and refugee communities has demonstrated the importance of social networks in the reestablishment of community (Crisp 1999; Loizos 1999). Some refugee communities use social networks to replicate previous groups and community identities and to unite in the face of shared challenges and vulnerabilities (Williams 2006). Networks formed through the process of relocation have major influences on the lives of refugees, providing support and helping to re-establish identities (Williams 2006). A similar process occurred during internment, as members of the Japanese American community are forcibly removed to detention centers and later to incarceration centers.

Changing the definition of what constitutes a network and how we define members and ties affects the results by changing the scope and types of interactions included (Wellman 1996). In the context of this paper, a social network is defined as a network of direct contact and interaction, through participation in sporting events and membership on the same team. In this paper I am conducting a four-mode analysis where nodes represent either an individual, a team, a town, or a temporary detention center. Each network was created using the membership of a sports team recorded in a newspaper article. The networks trace the movement of team members through different stages of community: hometown, detention center, and residential block, to map team members affiliations with earlier communities. Nodes are connected by ties representing an individual's participation in a team or sporting event. Distinguishing nodes based on attributes related to their membership in social communities, both at Amache and prior to their incarceration, allows the social composition of sports teams to be identified. Individuals become nested within the places they have lived and locations where sports

teams may have formed. These immaterial networks of interaction are materialized in the archaeological record in the form of sports fields, allowing archaeologists to consider how places on the landscape acted as centers of activity and community building.

Social Network Analysis as a Method

Social network analysis can indicate the ways in which new communities were formed following the diaspora but also show the ways in which some communities worked to retain their previous social connections. Fugita and O'Brian (2011) argue that the pre-war Japanese American community shared extensive social ties across dispersed geographic areas fostered by participation in shared social events. For brevity, this paper draws on a limited sample of data and focusing on social ties created through participation in organized sports.

Sports at Amache were organized through several venues and their organization mimics that of other social activities. Informal games organized by groups of friends were common, but an official recreation department existed that coordinated intramural leagues. League teams played both against other teams from Amache and against teams from outside the center in the form of All-Star teams composed of the best players in each sport (Harvey 2004:126). The high school also had a sports league and organized teams composed of students that played against both the Amache intramural and teams from other schools. Sports were a popular activity and participation high, for example the high school basketball league had 28 teams, 280 players, and over 150 games were played in the 1944-45 year (Anderson 1945).

Sporting events provide a unique opportunity to consider the three primary types of social networks at Amache –pre-incarceration, those formed at detention centers, and those formed at Amache. Sports teams, both informal and formal, were an important component of Japanese American social life in communities across the West Coast prior to their incarceration (Chin 2016; Regalado 2013). Some sports teams were formed at Merced, Santa Anita, and other temporary detention centers and we know from archival sources that these teams appear to have sometimes migrated intact and continued to play at Amache. Other teams are affiliated with pre-incarceration communities, such as some of the farming colonies (Lukes and Okihiro 1985). For example, the Livingston Dodgers brought their uniforms and equipment with them to Merced (Regalado 1992), played there, and continued to play after removal to Amache, demonstrating the power of sports as a method of maintaining consistent community ties. Finally, a majority of teams at Amache were formed there. These consist of two dominant types – those centered around the residential block and those around membership in some other organization or friendship group. Part of the network analysis allows us to further consider and expand how these affiliations functioned.

Amache's extensive archival record makes it possible to conduct a social network analysis of interactions between residents using articles from the internee-run newspaper – the *Granada Pioneer* – and a combination of archival directories and government records for demographic data on individual participants. Published every Wednesday and Saturday between 1942 and 1945, the *Pioneer* was written by internees and widely circulated at Amache (Harvey 2004). The *Pioneer's* primary focus is the incarceration center itself, and articles provide a detailed record of camp events, the locations where

they occurred, and names of participants, making it essentially a hometown newspaper (Gebhard 2015). This is reflected in announcements for weddings, community festivals, lists of employees or committee members for internee run organizations, party and festival reporting, and coverage of sporting events – the most common social activity covered by the paper.

A challenge of using archival documents to recreate social networks is inherent reporting bias. For example, the *Granada Pioneer* had an entire section devoted to sports within the center, but the section was still focused on football, basketball, and baseball over less common sport activities, such as sumo or table tennis. This creates a heavy focus on the participation of young males; however, coverage of sporting events encompasses a wider range of demographic categories than some other activities by representing both female participants and older males.

The data presented here were gathered from a sampling of every third edition of the *Pioneer*, which ran from October 1942 to September 1945 (Densho Digital Archive) (for a list of editions sampled - <https://core.tdar.org/dataset/454708/list-of-granada-pioneer-newspaper-surveyed-for-network-data>). A total of 46 issues of the newspaper were sampled creating a data set containing 169 sporting events, each with between two and 20 participants. A sporting event was added to the dataset when an article contained the full name of two or more individuals residing at Amache who were engaged in a face to face interaction – such as playing together on a team. Data on participant names, the event type, and location of the event were collected and compiled into a database. The name of each participant was then correlated to a site-wide residential directory that contains key demographic information for that person, such as residential block at Amache and their town of origin. This residential directory has been compiled using four publicly available sources. Two sources were generated by the internee community, a directory created for the 1976 Amache reunion that lists residents' names and place of origin along with their barrack and a historic residential directory published in 1943 and again in 1945. The WRA Form 26, and the Final Accountability Roster are two censuses created by the government to collect demographic data on the incarcerated population as they were detained in 1943 and then as they left the incarceration centers. The process of combining newspaper data showing individual activities and the participants in that activity with general demographic data created a large dataset that could be used to consider the mechanisms through which social networks around sports could be formed or maintained.

Using these data, I created a four-mode network of individuals participating in sporting events and their locational attributes. An edge list was created linking each participant to their hometown, temporary detention center, and residential block. Each of these attributes represents the physical location where a social interaction may have occurred and the potential development of community ties, or social networks. This creates a data set where overarching patterns in the locations where social relationships were formed can be seen and moves away from an analysis of each individual's interactions to consider larger processes of community formation.

Discussion and Analysis

Residents at Amache were members of multiple communities prior to their incarceration, all of which were disrupted by their forced removal. This analysis is focused on

two types of communities for which data is readily available and that mirror communities found in other diasporic settings – the hometown from which incarcerated were removed and the temporary detention center to which they were initially relocated. Data on social interactions taking place through sports were pulled from the larger data set, and entries missing data on hometown of origin, detention center, and residential block at Amache were removed. This created a data set of 43 interaction events with 35 named teams and multiple other interactions involving unnamed groups for a total of 1,925 dyadic interactions. Data were then processed to look at how social networks were being maintained through sports. I examined two components, (1) whether individual teams could be classified based on when and where they were formed, and (2) the actual vs. expected frequencies of interaction via sports teams for hometown, detention center, and block. I focused on three teams and one network composed of all teams' affiliation with different temporary detention centers as exemplars of how social processes appear to have functioned within sports teams. The network analyses are supplemented by a one proportion z-test and χ^2 analysis of the probabilities of the frequencies of interactions between players on sports teams based on their hometown and temporary detention center.

The network data on team formation shows that many of the teams at Amache were affiliated with specific places. Teams affiliated with hometowns, temporary detention centers, and places at Amache all existed. An initial step in the analysis was identifying team affiliation based on team names. A number of teams have names that specifically reference places. These include teams like the Livingston Dodgers (Livingston, CA), Deltans (Delta CA), or Sepol Ramblerettes (Sebastopol, CA) who are referencing members' hometowns. Other teams were formed at temporary detention centers or have team members all from the same detention center. These two types of teams are built around membership in earlier communities at towns in California and temporary detention centers. Several teams have names that indicate an affiliation with occupations or places of residence at Amache, such as the Motorpoolers, Firemen, or Pioneer Newshawks (Table 1). An examination of the residential block affiliation of several of the teams where there is a more complete listing of members shows teams with significant populations drawn from the same block or group of neighboring blocks. These teams represent the creation of new social groupings following diaspora and the role of neighborhoods in reestablishing community connections. Teams associated with employment or the high school reflect other locations where incarcerated were interacting and creating new social ties.

The second method for identifying team membership and thinking about formation processes is to conduct a network analysis looking for patterns in team membership. This method looks for commonalities in the demographics of team members and codes nodes based on each player's attributes and team membership. To conduct this analysis each team was analyzed independently. Team members are not always completely listed in the newspapers and some sporting events document players from two team simultaneously. In these cases, every example of a sporting event where that team participated was aggregated. Aggregating data for one team allows team membership to be determined based on co-occurrences across sporting events. Once the team members have been identified, a network graph can be formed linking members of the team based on residence in locations where the sports team may have formed. Network graphs of two teams from Amache show the influence of previous community membership and the continuation of social ties through sports team membership.

Table 1 Team names drawn from archival sources grouped by affiliation. The team names listed here have known affiliations based on archival sources and network analysis and do not include all sports teams at Amache or all of those listed in the network data

Pre Amache		Amache	
Team Name	Sport	Team Name	Sport
Home Town		Center Wide	
Deltans	Baseball	High School Varsity Teams	All Sports
Ramblerettes	Softball and Basketball	All Stars Teams	Baseball and Basketball
Dodgers	Baseball	GI Nisei	Baseball
		Firemen	Baseball
Temporary Detention Center		Motor Poolers	Basketball
Ko Nut	Baseball	Newshawks	Baseball
Rambos	Baseball		
Katonks	Basketball	Block	
Rockets	Basketball	12E Kuzus	Basketball

The Sebastopol Ramblerettes and the Zephyrs are two teams whose players originate from the same community in California. For the Ramblerettes, this affiliation is made clear in their name - Sebastopol references the community of Sebastopol, CA. The network data from Amache reflects the continuation of these community ties with 73% (8/11) of team members coming from Sebastopol (Table 2, Fig. 4). Team membership was based on an affiliation with the community of Sebastopol and initial relationships were the foundation for future ties. Community affiliation for the Zephyrs was determined based on the network data. Sixty seven percent (4/6) team's members were from the town of Colusa, CA. Although not all players were from the same town, the team was reinforcing social connection between members from that earlier community.

The network graphs for these two teams also demonstrate the complex picture of social ties at Amache. Sports teams linked members to earlier communities but also acted to help form new social ties in Amache. The same team could be both reaffirming earlier social ties and helping establish new ones. Members of the Zephyrs and Ramblerettes were predominantly from the same hometown, but there were additional team members that were not from these communities. For both teams all the players had initially been sent to the Merced detention center, so some of the social ties might

Table 2 Summary data for the networks graphs for three sporting events presented in this article. Ramblerette and Zephyr teams show the grouping of players based on hometown, detention center, and residential block. These teams were organized around affiliations to earlier communities. In contrast, the All-Stars, which was organized at the city level shows no clear affiliation to a hometown, or block.

Team name	# of Players	# of Towns	# of Residential Blocks	Proportion from Same Town	Proportion from Merced	Proportion from Same Block
Ramblerette	11	4	4	8/11	11/11	8/11
Zephyr	6	3	3	4/6	6/6	4/6
All-Stars	7	6	6	2/7	6/7	2/7

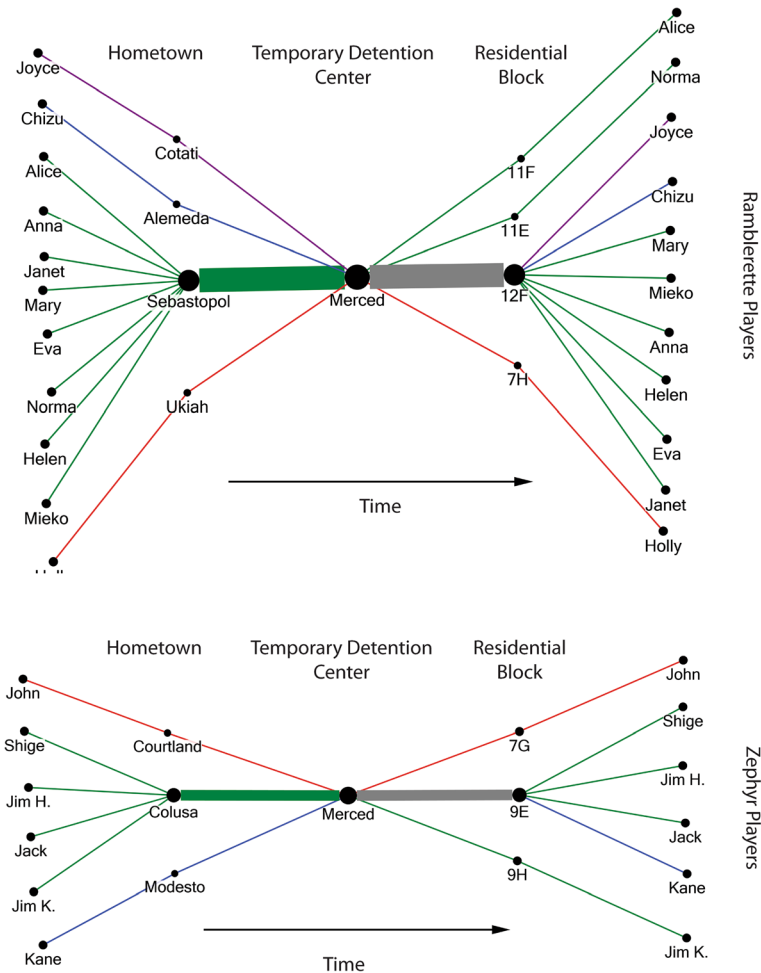


Fig. 4 Network graphs for the Ramblerette and Zephyr teams. Each graph follows the movement of team members from their hometowns to Amache to visualize how earlier community membership influenced the composition of the team. Graphs created using NodeXL (Smith et al. 2010).

have been formed in this location. An examination of the ties in the network data indicates that team members not from Colusa or Sebastopol were often coresidents of a residential block at Amache with team members from those communities. For example, the Zephyrs were mostly from the town of Colusa (4/6 players) and most of them lived in Block 9E (4/6). The two team members who were not from Colusa lived in 9E with team members from Colusa. A similar process is happening for the Ramblerettes. Most team members are from Sebastopol and live in Block 12F (6/11 players). Of the remaining players, two are from Sebastopol but live in other blocks indicating that team membership was connecting residents from the same town in California despite residence in different part of Amache. The remaining three players were not from Sebastopol, but two live in Block 12F with several other players on the team. Only one

team member has no obvious association with either the block or town of Sebastopol. What these two examples show is the retention of ties to earlier communities and the development of new social ties at Amache.

Coding the different sports teams and events based on commonalities in block residence, detention center, and place in California shows that these interactions can be grouped into several categories with some regularity. Some teams were clearly composed of members from the same community in California or residential block. Detention center is more difficult to code accurately. Outside of the teams with names or known affiliations to a detention center it is difficult to be sure that data on those relationships are as robust, since a majority of players were either from Merced or Santa Anita. Teams often had a membership exclusively from one detention center, but this may reflect chance more than the existence of strong social ties. Sports teams with names readily identifiable as linked to temporary detention centers are also found mainly in 1942 and 1943 (see Table 1). This probably relates to several factors – many of these players were younger men and were more likely to leave Amache so teams were not stable, and over time friendships created at the detention centers became less important. What is key to note is that teams with a clear connection to earlier places and friendships were created elsewhere but maintained at Amache. This signals the importance of these connections in the establishment of new communities.

There are a number of teams and sporting events where the participants appear to have no obvious connection either during or prior to internment. These are almost exclusively teams that are formed for all-star or championship-style games and were composed of the best players from a number of different teams or teams that are directly affiliated with the high school and so are connected by a common age component rather than a place of residence. An analysis of these teams shows team members drawn from a wide diversity of hometowns (seven players from six towns), most were still detained at Merced, but at Amache they lived in six different residential blocks (Fig. 5, see Table 2). Only two players came from the same hometown, and they lived in the same residential block (12F) at Amache. These center-wide teams would have been important in the creation of a more generalized sense of community. Within Amache, social interactions occurring within the residential block and through employment put new networks in motion. Previous and current community membership played a strong role in the development of social ties at Amache.

A second metric for considering the role of participation in previous communities on current social interaction at Amache is to conduct a one proportion z-test to test the significance of different levels of participation and compare the expected vs. actual interactions seen in the network. This is calculated based on the assumption that if previous social interactions (by hometown or detention center) do not influence the membership of sports teams the composition of these teams would be random and based on the percentage of Amache's population that each town or detention center represented. Instances where the actual deviates significantly from the expected are indicative of the influence of previous social networks on team membership.

For most hometowns in the sport network the actual number of interactions between people playing sports recorded in the network data is not significantly different from the expected. However, this does not hold true in several cases. Large communities and communities that made up a significant percentage of Amache's population like Sacramento or Los Angeles had significantly fewer social interactions at a site level

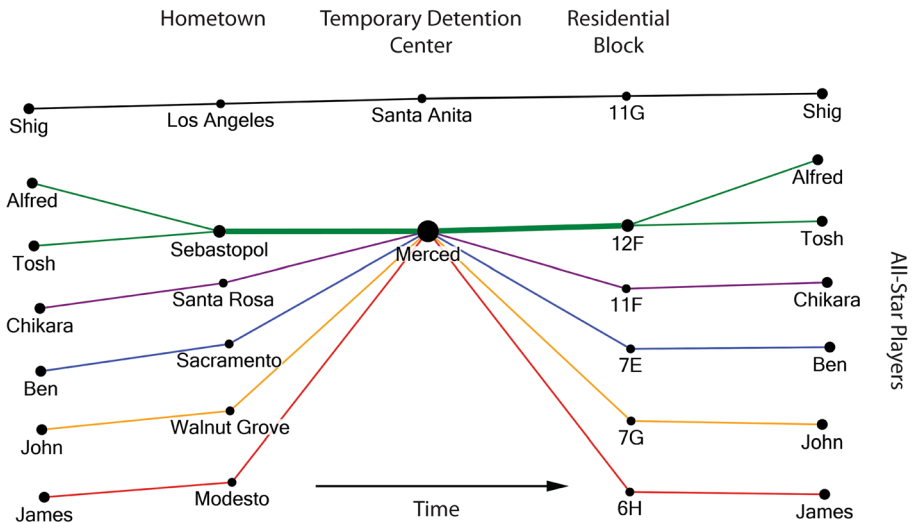


Fig. 5 Network graph for the AA All Star Team tracing players’ memberships in earlier communities and residential blocks at Amache. Team membership is more diverse and interestingly, only one player is associated with the Santa Anita Detention Center while all others are affiliated with the Merced Detention Center. Graph created using NodeXL (Smith et al. 2010).

than would be expected given the percentage of Amache’s population each of these communities represent. Conversely, rural communities with a significant Japanese American population had higher levels of participation in sports than expected based on their percentage of Amache’s population (Table 3).

As well, results from the detention center data support the observation made when coding the team membership. People who were detained at Merced are participating in sports at a much higher frequency than people who were held at Santa Anita. Approximately 4,500 incarcerated at Amache were from Merced and 3,063 from Santa Anita. A

Table 3 Expected vs. actual counts for a sample of urban and rural communities representing those with large and small pre-war Japanese American populations. This shows the differences in participation levels between large communities and small agrarian ones

Community Type	Towns	# of Players	% of Players from Town	% of Amache Residents from Town	P-Value
<i>Large Urban</i>	Sacramento	6	3.60	7.90	0.032
	Los Angeles	32	19.40	27.38	0.019
<i>Large Rural</i>	Colusa	10	6	2.04	0.002
	Sebastopol	17	10.30	2.70	<.0005
	Walnut Grove	15	9.10	3.79	0.003
<i>Small Rural</i>	Ukiah	2	1.20	0.45	Not Significant
<i>Small Urban</i>	Sausalito	2	1.20	0.13	0.02
	Long Beach	1	0.60	0.86	Not Significant

Table 4 Chi² analysis of participation in sports teams based on affiliation with temporary detention centers. Expected values are based on the population for each temporary detention center residing at Amache

Temporary Detention Center	Observed**	Expected	Degrees of Freedom	Chi ² Value*
Santa Anita	76	304	2	684
Merced	1,392	656	2	389.1

*Bold numbers are significant with a p-value < .001

**Observed is the number of interactions recorded in the network data

Chi² test of the expected vs actual frequency of participation in sports was statistically significant for both detention centers (Table 4).

This pattern is also visible in the network data. When looking at a bimodal graph of team members based on affiliation with a detention center the disparities in participation between Merced and Santa Anita are visible (Table 5, Fig. 6). Involvement in sports at Amache appears to have a relationship to temporary detention center and regional affiliation. The cause of differences in participation levels is unclear, but there are several possible explanations based on the historical record. For this aspect of the social network data individuals from the Santa Anita detention center may just be underrepresented and not interacting as frequently with other groups at Amache, or not interacting in ways captured in the network data. This may reflect the types of communities that passed through the detention centers, since residents of Santa Anita were mainly from the Los Angeles area while Merced housed more from smaller agrarian communities.

Sports were an important component of social interaction especially in smaller communities where a higher percentage of young adults may have been involved in these teams. The structure of relocation may also have facilitated the removal of teams

Table 5 Summary data for the temporary detention center affiliation network. The table shows the relationship between team membership and residence at one of two temporary detention centers. The table is divided into sections analyzing the whole graph and then the two nodes representing the temporary detention centers.

Summary Data for Whole Network				
	Total # of Nodes*	Total # of Edges	Total number of Actors	Total # of Sports Teams
All Detention Centers	23	67	259	0.0000087
Summary Data for each Detention Center				
	Potential Actors**	Actors***	Edges	# of Teams Associated with Center
Merced	4,500	210	39	39
Santa Anita	3,063	49	28	28

*Each node represents a team with edges connecting team members to their affiliated detention center. The edges are weighted based on counts of players from that team who were incarcerated at the detention center.

**Potential actors represents the number of individuals at Amache who were sent to each temporary detention center

***Actors is the number of players involved in sports

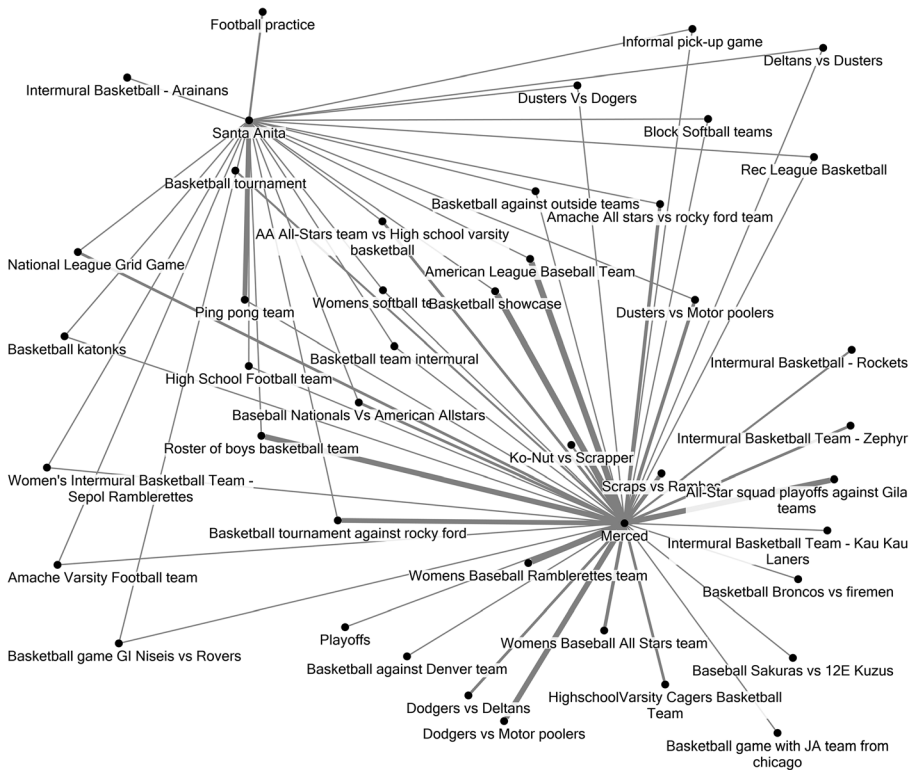


Fig. 6 Network graph showing sports teams in relationship to players prior temporary detention centers. This illustrates differences in the participation of incarcerated based on detention center with Merced dominating the network. Graph created using NodeXL (Smith et al. 2010).

from smaller communities relatively intact, further facilitating their continued existence at Amache. Some of these higher than expected levels of interaction are driven by individual players who are overrepresented in the sample; however, even when these individuals are removed these communities and the Merced detention center are still overrepresented.

Although these results only represent a sample of data from Amache, they demonstrate that association with previous communities influences how people created or maintained social networks. There may be some small errors in the sample caused by the fact that certain individuals are overrepresented in the sport network due to their participation in multiple events. However, this potential sampling issue does not fully account for the variation indicated. The number of people from a dispersed community in one block and the type of community they initially originated from are important in the creation and maintenance of social networks following a diaspora.

Large urban or semi urban communities who had a significant Japanese American population prior to internment and whose population is concentrated in several residential blocks at Amache appear less likely to participate in social interactions at a center-wide scale and may be interacting more in their own blocks, and so are not captured in the network data. The fact that these large population centers do not seem to

be interacting heavily with other people from the same town may also be a legacy of the community's original size. Although designations for neighboring communities such as Gardena or Hollywood are used, individuals from the Los Angeles area are often simply recorded as coming from LA, leaving out variations in subcommunity or neighborhood that may have had a strong impact on how well individuals actually knew each other prior to incarceration. Having a large enough population from the same community in close proximity may also mean that they are less dependent on the development of new social networks and can rely more heavily on networks formed prior to internment.

Smaller communities (such as Colusa or Walnut Grove) are more likely to interact with other residents of the same community. This may be due to several factors. Former residents of these smaller communities may have been more likely to have known each other well prior to incarceration or be family members. Since these communities had smaller populations prior to their incarceration they were not grouped as heavily into the same residential neighborhoods at Amache. This dispersal combined with smaller population numbers may have made the continuation of interactions between community members through center-wide social activities a central method in the development of new social networks and in maintaining their existing social ties.

Conclusion

Data from Amache present an analysis demonstrating the continuation of social ties in a diasporic community and provides social data that can be connected to the built environment of an archaeological site. The analysis highlights a critically important issue for diasporic communities: how continued participation in previous communities impacts new community structures, especially in cases where new social networks and community ties are being negotiated. This exploration allows us to consider how changing social affiliations might be visible archaeologically. Network and archival evidence from Amache demonstrate that while site residents created new social ties, they also actively retained ties to a source community or hometown, and perhaps even strengthened them, by continuing to participate in social activities with co-residents of earlier communities.

Clearly, there are other factors that would have contributed to the formation and function of social networks and community interaction within internment centers but interaction through sporting events acts as a window into these processes. Generational differences and the divide between residents from urban and rural areas have already been identified as factors that influenced some interactions (Shew 2010; Yoo 2000). Although these factors may be part of the underlying organization, the role of previous social ties in influencing how internees at Amache were socializing cannot be overlooked, as they created differences in the social practices of individuals and some neighborhoods. While it is hard to identify exactly which social ties are driving every interaction, it is possible to create broad patterns and generalities which indicate that social groups formed prior to and during their forced diaspora are playing an important role in the structure of social relationships within Amache. Connecting historic social interactions to archaeological data can inform our interpretations of communal spaces, such as sport fields, and artifactual evidence of social interaction.

Participation in existing networks would have supported the continuation of material practices performed by members of that community prior to the diaspora. As new networks formed, and individuals interacted with diverse groups, one would expect material practices to shift. One example from Amache comes from a WRA report—a young man retains membership in a group affiliated with his previous rural community and removal to the Merced Detention Center. Part of this membership is to affect a more stereotypically “rural” form of dress. As he develops new social ties in a group of young men from LA he changes his wardrobe to mimic their style, modifying his clothing to look more like a zoot suit (Embree 1945). Here we see a material manifestation of changing social affiliation. As ties to previous communities and lifestyle are weakened the types of material culture this young man is using alter to fit the demands of a new community.

In the network analysis sports teams like the Ramblerettes visualize processes of continuity but also change in social networks. Here residents of a block joined an existing sports team formed by members of an earlier community. These team members would have socialized and played together using sports fields in theirs or a neighboring block, engaging with the material environment of the site. Landscape features at Amache speak to both the maintenance of localized neighborhood and community identities but also to the formation of a new site wide community affiliated with residence at Amache.

Most residential blocks had neighborhood landscape features, in this case sporting facilities like basketball hoops and small sports fields that served their residents, these reinforced localized ties and neighborhood- or community-based teams. There were also public landscape features that served the entire site. In this example I discussed sports fields associated with the high school and a large sumo ring. These communal fields helped establish new ties by connecting residents through participation in all-star and championship teams. Communal fields also connected residents of multiple localized teams and teams based on earlier communities by engaging them in intramural leagues. Sports fields act as archaeological evidence of the scales of community membership happening at Amache. Network data and the archaeological record document the process of through which residents attempted to retain earlier community ties while creating a new sources of community cohesion at Amache.

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