

The Demography of 2232 Piedmont Avenue

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Abstract

The building at 2232 Piedmont Avenue in Berkeley, California, which has housed the Department of Demography since 1988, was designed by renowned architect Julia Morgan and occupied by one family prior to its sale to the University in 1958. Like other genealogies, the family history of the Kelloggs is traceable through ancestry.com via ProQuest and other public databases. In particular, U.S. census records from 1940 and earlier provide snapshots of the family that occupied 2232 Piedmont from its construction in 1909. An overview of these records offers some ethnographic insights into the earliest occupants of the building, their way of life, and into the building's configuration. It also provides a primer for the building's current occupants on using tools familiar to genealogists for demographic research. Finally, these records are interesting because of what they reveal about the objective quality in this particular instance of a type of historical population data that demographers frequently use. The substantial age difference between the head of household and spouse, 14 years and 7 months, was inaccurately recorded in 4 of 5 post-marital decennial censuses, with inconsistencies affecting the records of both spouses.

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1. Introduction

1.1. *The UC Berkeley Demography building and personal history*

As described in the March 2006 Historic Structure Report (HSR) of 2232 Piedmont Avenue,¹ the large house at the eastern edge of campus across the street from Memorial Stadium has been home to the UC Berkeley Department of Demography since 1988. Within a year of my arrival in 1996 as a Ph.D. student in economics at Berkeley, I had discovered the Demography Department through a job posting issued by Ronald Lee, a full professor in both departments. In a development surely not unique to my experience, I gravitated toward the welcoming, sociable atmosphere of the department and later became an NIA predoctoral trainee in demography before completing my degree in economics. Probably due in equal parts to its cozy but convenient characteristics, its welcoming occupants, its convenient location, and the time I spent there as a result of all this, the building itself has felt like an equal member of “the demography family” of current and former students and faculty.

Per the 2006 HSR, the building was purchased in 1958 from a bank acting as “Guardian for the Estate of Mildred Kellogg,” identified as the daughter of Walter Yale Kellogg and his unnamed wife. The HSR presents a brief biography of Walter Kellogg drawn from Husted city directories in 1903 and later, and an even briefer biography of Mildred Kellogg drawn from the oral account of a previous neighbor, Lee (Denny) Palsak of 2234 Piedmont. Palsak had indicated that Mildred’s “whole life was taking care of her father,” and that once Walter died, Mildred entered a period of decline and the house was sold.

Part of why the demography building is welcoming and vibrant is because its layout and quality of construction makes it an excellent space for a small academic department. The large living room on the eastern side of the main floor serves as an excellent seminar room, the billiards room on the southwestern side is a good meeting place, and most faculty offices, formerly bedrooms, are large, close together, but well insulated against sound. One of the many questions left unanswered by the HSR is why there were so many equally sized bedrooms, three plus a junior and a master, for a family of ostensibly only three.

1.2. *Population records*

Trainees in formal demography and researchers in demography, sociology, economics, and related disciplines are accustomed to working with aggregated population data or de-identified data on individuals and families. Genealogists tracing family trees, like other researchers in social science who conduct ethnographic research, may trace individuals through a variety of publicly available historical records.

¹ As of this writing, the entire 2006 HSR report was available as 13.3 MB download at http://www.cp.berkeley.edu/CP/PEP/History/HistoricReports/HSR/HSR_2232PiedmontFINAL_March2006.pdf, a node off a parent web page located at <http://www.cp.berkeley.edu/CP/PEP/History/planninghistory.html>

Records from the decennial U.S. census are helpful to all these groups. By law, complete census records with individual identifiers remain confidential for 72 years before the National Archives may release them publicly. De-identified data are available much sooner, and social scientists may be familiar with the Integrated Public Use Microdata Series (IPUMS) consisting of representative samples of census data through 2000, as well as other data products, that are available online at <http://usa.ipums.org>.

In April of 2012, the National Archives released digital scans of the entire 1940 census to the public via the Internet. These and earlier census records consist of entire pages out of ledger books, into which the enumerators sequentially entered residents of households they visited, one resident per line. City residents appear alongside their neighbors, who were typically visited in order of address.

Public census records from other years are also available online behind various paywalls and sometimes for free at <http://familysearch.org>, a nonprofit arm of the Church of Jesus Christ of Latter-day Saints. One of the larger online providers is <http://www.ancestry.com>, which is available through ProQuest as *Ancestry Library*. These databases include digital scans of census pages and many other public documents that the providers have linked to the names of individuals appearing on the forms. The breadth of these databases is not immediately apparent. Whether all records from all censuses have been digitized or not is unclear. These databases also include less formal sources of information that appear to have been user-generated, whether crowd-sourced or simply shared, such as family trees. The reliability of these non-census sources is unclear, although the databases typically attach some type of documentation.

2. Methods

To explore the public history of Walter Yale Kellogg and Mildred Kellogg and 2232 Piedmont Avenue, I searched for records associated with their names in electronic databases available through the UC Berkeley Library and through *FamilySearch*. At UC Berkeley, I accessed them through the [“Electronic resources” link](#) off the main library webpage, where I then searched for “ancestry” and “historical newspapers,” pulling up *Ancestry Library* and ProQuest’s *Historical Newspapers*.

Linking observations of specific individuals across historical census records is complicated by the absence of any unique identifier, and thus a certain amount of educated guesswork is involved. The existence of multiple identifiers, such as parental characteristics in addition to name, is helpful, especially when names change over time due to marriage and other events. In this case, knowing the full name of a head of household combined with his exact address in 1940 made the initial search straightforward.

My primary sources are the censuses of 1870, 1880, 1900, 1910, 1920, 1930, and 1940, all accessed through the aforementioned searchable databases. The census of 1890 was largely destroyed in a fire prior to the establishment of the National Archives. Three

other key documents are death records provided by the San Francisco Area Funeral Home Records, 1895-1985, via *Ancestry Library*.

3. Results

The Walter Yale Kellogg family appears at 382 or 383 Bushnel Place in Berkeley in the 1900 census (Exhibit 1), and then at 2232 Piedmont Avenue in the remaining four publicly available censuses conducted after the 1909 construction of the house, in 1910, 1920, 1930, and 1940 (Exhibits 2-5). I also recovered census records from 1870 and 1880 for Walter Yale Kellogg (Exhibits 6-7), for his future wife Malvina Chase (Pelton Wilson) Kellogg (Exhibits 8-9), and records from 1930 for Malvina's three daughters from a previous marriage to Nathaniel Wilson: Minnie Ray (Wilson) Olney (Exhibit 10), Irvina (Wilson) Collyer (Exhibit 11), and Florence V. Wilson (Exhibit 12).

I also located death records for Walter Yale Kellogg (Exhibit 13), Malvina Chase Kellogg (Exhibit 14), and Mildred Kellogg (Exhibit 15). While they are not official death certificates, these funeral home records proved helpful in corroborating and clarifying the census records because they contain entries for date of birth and parental characteristics in addition to age. *Ancestry Library* also contained a U.S. passport application from 1918 for Florence V. Wilson (Exhibit 16), and searching *Historical Newspapers* returned a number of hits for Walter and Malvina Kellogg in the *San Francisco Chronicle*, three of which I include here (Exhibits 17-19), as well as one from the *Los Angeles Times* (Exhibit 20).

3.1. Family composition

The motivation behind an upstairs design with three full bedrooms (rooms 202, 204, and 210 on page IV-16 of the HSR) in addition to a junior bedroom (206) and the master bedroom (208) becomes clear in the census records. The Kelloggs had four daughters around the time of the construction of 2232 Piedmont Ave., three from a previous marriage of Malvina's in addition to Mildred [Exhibit 1]. Month and year of birth is recorded for each member of the household on the 1900 census form, and the records for Minnie Ray (Nov 1879), Irvina (Jul 1881), Florence V. (Aug 1883), and Mildred (June 1892) all appear to match data in other sources. All daughters are single and also under 20 years old in 1900.

By the time of the 1910 census, Minnie Ray Wilson, the eldest stepdaughter, is missing and had apparently moved out (Exhibit 2). She appears to have married William Olney, with whom she appears in the 1930 census at 2608 Warring Street (Exhibit 10), facing what is today the Clark Kerr campus of UC Berkeley, with coresident children Florence and William [jr.], aged 24 and 20.²

² References to a "Judge William Olney" associated with 2232 Piedmont appear in the 2006 HSR and other UC documents. I could find no evidence suggesting that either William sr. or William jr. on this side of the family tree was a judge.

Second-eldest daughter Irvina Wilson is still present in 1910, listed as aged 27, along with Florence and Mildred, and all are single (Exhibit 3). By 1920, Irvina has left, and by 1930, the only remaining coresident daughter is Mildred (Exhibit 5), who was also coresident in 1940 (Exhibit 5), the last publicly available census as of this writing. If the record linkages in *Ancestry Library* are correct, Irvina Wilson appears to have married Robert D. Collyer, with whom she appears in the 1930 census at 573 Center Street in Palo Alto, CA (Exhibit 11). That record indicates she first married when aged 32, which would have been around 1913 or 1914 if she was born in 1881 as the 1900 census recorded (Exhibit 1).

Third daughter Florence V. Wilson is coresident through the 1920 census (Exhibit 3), in which her age is listed at 34 years, but then appears in the 1930 census at 98 Monte Verde Street in Carmel-by-the-Sea, aged 47 and though still single, living with a 7-year-old adopted son named Francis Very (Exhibit 12). Various data in this and other records appear to support the linkage, abrupt as the transition may appear. Her parents' places of birth are correct: Malvina was born in California, while Nathaniel Irving Wilson was born in Maine. She is aged 47, consistent with the 1900 census (Exhibit 1) but at odds with her stated age in the 1920 census. In 1920 her occupation was listed as "social agent" at an "orphan asylum." This is roughly consistent with her stated occupation as "social worker" in a 1918 passport application (Exhibit 16). It is possible that she adopted an orphan.³

Examination of the 1940 census, the most recent publicly available census of the building's residents prior to its sale in 1958, shows three occupants (Exhibit 1): Walter Yale Kellogg, the 71-year-old head; Malvina, his 85-year-old spouse; and 47-year-old daughter Mildred, whose marital status was coded as married and then crossed out. There is a check mark next to Walter's name, perhaps an indicator that he spoke to the enumerator.⁴ All three had lived in the same house on April 1, 1935, and Walter's occupation is "secretary of firm" in the "manufacturing of lumber." Though aged 71, he reported 50 weeks of work during 1939, and a salary of \$5,000. The house at 2232 Piedmont is estimated to be worth \$20,000 or about a third of a million in today's inflation-adjusted dollars.

3.2 Coresident servants

Two of the five censuses of the Kellogg family identified coresident servants. The 1900 census record includes a 23-year-old Chinese-American male cook named Ling,

³ An interesting side note is that Florence's oldest sister Minnie Ray lived across the street from the modern-day Clark Kerr campus, which prior to 1980 was home to the California School for the Blind per an online history at <http://www.csb-cde.ca.gov/History.htm>. Whether orphans resided at the school is unknown, but there certainly were residence halls; today the structures are primarily dormitories for Cal students.

⁴ Census 1940 was the first in which enumerators were instructed to indicate the "name of the person furnishing information," by entering an "X" *after* that person's name. Here, we see a check mark before the name, but the enumerator appears to follow this different convention for the other single family dwellings on this page.

both of whose parents were first-generation Chinese immigrants (Exhibit 1). Ling was married at the time but his wife was not coresident.

In the 1910 census, 2232 Piedmont included a 22 year-old male servant of Japanese descent. The servant was a resident alien who had arrived in 1905. His name is difficult to read and may be Hisalsich Herana, per the *Ancestry Library* transcription, or perhaps it was Hisashi Hirana. According to the 2006 HSR, the original building blueprints indicate a “man’s room” for a male servant in the basement, modern-day room B-5.

None of the other censuses include coresident servants. Their absence is remarkable given that the HSR identifies a second room in 2232 Piedmont, room 103 under the main staircase, as also originally intended for a servant according to the blueprints, in this case a maid. One might speculate that either the household was repeatedly between servants around enumeration days, or that the economics of hired help had changed sufficiently in the time between when the house was designed and when it was occupied that there were no coresident servants in 1920 and later.

3.3 *Walter Yale Kellogg and Malvina Chase (Pelton Wilson) Kellogg*

Other than the household rosters, probably the most interesting characteristic of the Kellogg family is that Malvina’s age in the 1940 census, 85, was 14 years older than that of her husband Walter, 71 (Exhibit 5). Death records concur that the age difference between Walter Yale Kellogg, born May 10, 1868, to George Henry Kellogg and Katherine Flint (Exhibit 13), and Malvina Chase Kellogg, born October 11, 1853, to John C. Pelton and Amanda Ray (Exhibit 14), was about 14 years and 7 months.

In the 1870 census, Walter Yale Kellogg is aged 2 and living with his parents and five older siblings in San Mateo (Exhibit 6). Ten years later, he is 12 and living with his parents and four sisters at 7 Glen Park Avenue in San Francisco (Exhibit 7).

Although she should have appeared in the census of 1860, there appears to be no record of Malvina Chase (Pelton Wilson) Kellogg in those data.⁵ She appears as Nancy Pelton aged 17 in the 1870 census, recorded on August 18 of that year, alongside her parents John and Amanda Pelton in San Francisco (Exhibit 8). Despite the difference in her first name, the match is plausible given the names and places of birth recorded for her parents here and on her death record (Exhibit 14). She should have been aged 16 on census day, but the absence of any sister of comparable age suggests this is merely an error in age reporting for Malvina. The lack of a match in the 1860 census could be due to some combination of her changing names, incomplete records, or coding errors.

In the 1880 census, Malvina C. Wilson appears as the 26 year-old wife of 47 year-old Nathaniel Wilson at 1420 Bush Street in San Francisco on June 4, 1880 (Exhibit 9). Her 64 year-old mother Amanda M. Pelton, a coresident, is listed as born in New Hampshire. Her name and state of birth are consistent with other records, but Amanda has somehow aged a total of 14 years between decennial censuses. Also coresident are

⁵ Searches for Malvina’s/Nancy’s parents in the 1860 data via *Ancestry Library* were also initially fruitless.

two sons, Frank and Wilbur, aged 20 and 15, an 11 year-old daughter, Mary, and a 6-month-old daughter Minnie. Although it is possible Malvina could have born Mary when she was 15, it seems more probable that only Minnie was Malvina's full-blood daughter, and that the three older children are Nathaniel's from a previous marriage. Minnie's age is consistent with her being born in late 1879; according to the 1900 census, she was born in November 1879 (Exhibit 1).

The absence of the 1890 census records are unfortunate, because Malvina's two younger daughters by Nathaniel Wilson, both born after 1880, should have appeared in it. But in any event, the census probably could not have answered the interesting question of how Malvina came to be married to Walter Yale Kellogg. A notice of a bond issuance by the California Door Company in the December 19, 1928, edition of the *Los Angeles Times* provides some potential clues (Exhibit 20). The notice lists Wilbur I. Wilson of Oakland as president of the company, George E. Wilson of San Francisco as vice-president and treasurer, and Walter Y. Kellogg of Oakland as vice-president. There is a 15 year-old Wilbur Wilson coresident with and son of Nathaniel Wilson in the 1880 census who would have been around 63 at the time of this notice.⁶ The 2006 HSR identifies Walter Yale Kellogg as an executive with the California Door Company by 1906 based on local records, while the 1900 census lists his occupation as "Secretary of Cal. D. Co." Whether Walter met Malvina through his connection to the California Door Company or came to work there after his marriage to Malvina is unclear. An online source of unknown quality that recounts the history of the California Door Company references "George and Nat Wilson" as co-founders of the company in 1884.⁷ It seems plausible that Nathaniel Wilson or at least his son Wilbur may have been involved with the company prior to Nathaniel's death, that Walter Kellogg was as well, and that Walter came to know Malvina, probably a wealthy widow given the apparent success of the company, through his corporate connections.

3.4. Age differences and age reporting

To a demographer, the most striking patterns in the census data for the Kelloggs are in the age reports. There are discrepancies in records for several of the individuals I

⁶ Wilbur's middle initial appears to be a "J" in the 1880 census, as does infant Minnie Wilson's. Both seem to be incorrect. In the 1870 census (not shown), 7 year-old Wilbur J. Wilson is living with 38 year-old Nathl. J. Wilson and his wife Mary C. Wilson. Nathaniel's occupation appears as "Dealer in Sash & Blinds," which lines up with his 1880 occupation, "Sash Manufacturer." Nathaniel Irving Wilson also appears in the 1880 voter register of the 5th precinct, 12th ward of San Francisco (not shown) as a "merchant" at 1420 Bush, his address in the 1880 census. Presumably the middle initials of these men were actually "I" and not "J" as they appeared in the census. Wilbur Irving Wilson is a 30 year-old "Door & s'sh mr" living at the "SE cr Dur'nt&Har'sn" in the 5th ward, 5th precinct in Oakland's 1894 Great Register (not shown). An open question is whether a sash manufacturer such as Nathaniel would have been involved with the California Door Company.

⁷ <http://eldoradowestern.blogspot.com/search/label/California%20Door%20Company>. The source also claims that George and Nat Wilson originally formed a business in 1851 to "merchandize doors, window frames and millwork," and that they merged with competitors in 1884 to form the California Door Company. Windows typically require sashes and blinds, which may explain Nathaniel I. Wilson's stated occupation in the census and voting records.

have discussed, but the most pervasive and interesting are in those for both Walter Yale Kellogg and Malvina Chase Kellogg starting with the census of 1900.

Figure 1 plots stated and actual ages for Walter Yale and Malvina Kellogg by census year between 1900 and 1940, where I have assumed that the death records for both establish their actual birthdates and ages.⁸ It is similar to the Lexis diagram familiar to demographers, with additional trajectories for subjective age in addition to those for objective age. Subjective age trajectories can depart from the 45-degree line linking objective age to time. Both types of age are overlapping for both individuals in the 1870 and 1880 censuses, but in 1900, Malvina's age is understated by 6 years while Walter's is overstated by 8 years, with the same stated age of 40 for both even though the actual age difference was 14 years.⁹

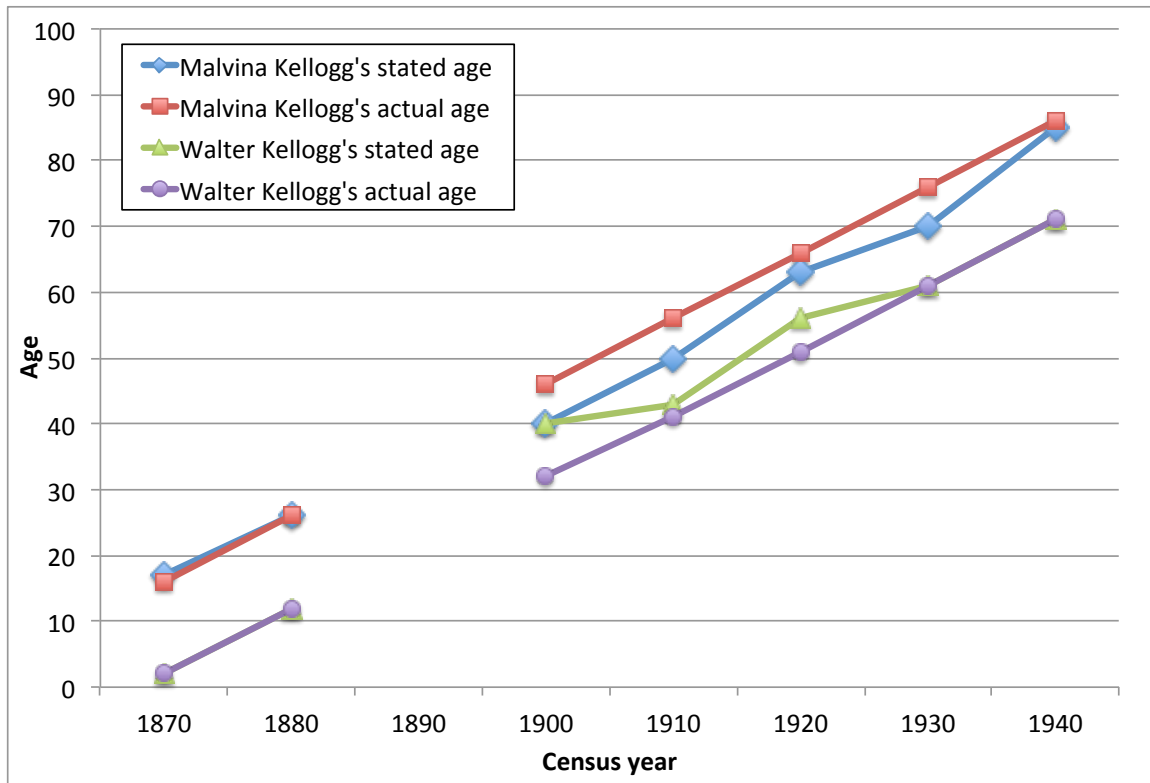


Figure 1. Stated and actual ages of Walter Yale Kellogg and Malvina Chase (Pelton Wilson) Kellogg in decennial census data, 1870 to 1940.

The subjective age difference is 7 years in the 1910 census, when the family was living at 2232 Piedmont, and it remains at 7 in the 1920 census. In both those years, Walter's age was overstated and Malvina's was understated. In the 1930 census, when only their full-blood daughter Mildred remains coresident, the stated age difference has

⁸ The shift in census day from June or July in the 1870, 1880, and 1900 censuses to January or April thereafter is responsible for a one-year narrowing of the actual age difference between Walter and Malvina. The census asks about age at last birthday, and Walter was born in May.

⁹ Their stated years of birth in the 1900 census are consistent with their stated ages and are 1860 and 1859 for Walter and Malvina respectively. Their birth months are reported correctly.

widened to 9 years and is solely due to a 5-year understatement of Malvina's age. In the 1940 census, Walter's age is correct, and Malvina's age is understated by just a single year. Although the 1950 census records will not be publicly released until 2022, it seems likely that they will reveal no differences between subjective and objective ages of Walter and Malvina.

Several other specific examples of age misreporting in these data are telling. Malvina's mother Amanda M. Pelton, who was 7 years older than her husband in the 1870 census (Exhibit 8) somehow gained 14 years of age between the 1870 and 1880 censuses (Exhibit 9). Malvina's youngest daughter with Nathaniel Wilson, Florence V., who was born in August 1893 (Exhibit 1) was correctly listed at age 16 in 1900, was 25 in the 1910 census while coresident at 2232 Piedmont, 34 in the 1920 census, and then reported her age as 47 in the 1930 census after she had moved to Carmel-by-the-Sea (Exhibits 1, 2, 3, and 12).¹⁰ Youngest daughter Mildred, coresident the entire time, went from 7 in 1900 and 17 in 1910, to 25 in 1920, 30 in 1930 (Exhibit 4), then to age 47 in the 1940 census (Exhibit 5). The age of oldest daughter Minnie Ray, 20 in the 1900 census, appears not to have been misstated, while second-oldest daughter Irvina is correctly 18 in that census but then is aged 27 in 1910, when she was really 28.

3.5 Records of the family's activities

ProQuest's *Historical Newspapers* database includes several articles with links to Mr. and Mrs. Walter Yale Kellogg from the early 20th century. They illustrate the Kellogg's relative stature in Bay Area society. Of particular interest are *San Francisco Chronicle* articles from 1911 mentioning Mrs. Kellogg's attendance at a Bohemian Club concert at Central Theater in San Francisco (Exhibit 17). Another from 1913 lists a chamber music concert that took place on October 23 at 2232 Piedmont Avenue (Exhibit 18). A third from 1920 regards a local movement's efforts to lobby Congress for a national annual Armistice day on behalf of veterans of the First World War (Exhibit 19). Mrs. Walter Y. Kellogg is listed as a member of the executive board of the League for Protection of American Prisoners of War, described as being organized in Berkeley.

The latter record is interesting in light of the passport application submitted by Florence Very Wilson in 1918, who intended to travel to France to perform "Red Cross war work" (Exhibit 16). Concern about world events was probably not uncommon during these years, but it is striking that both mother and daughter took relatively active interests.

4. Discussion

The house constructed for the Kellogg family at 2232 Piedmont Avenue in Berkeley has proved to be an excellent home for a small academic department in part because its second floor may have been designed to house three stepdaughters and a younger full-blood daughter in addition to the resident couple. The broad similarity of the

¹⁰ The motivation for this one-year overstatement of Florence's age at last birthday on April 5, 1930 is unclear.

two large bedrooms on the eastern side of the second floor (rooms 202 and 204)¹¹ contrasts with the smaller design of the bedroom (206) located adjacent to the grander master bedroom (208). Family dynamics can hinge on more than age, but it is tempting to imagine the youngest daughter Mildred in the smaller room 206, closest to her parents, with the older daughters occupying in the larger and fancier bedrooms. But the two larger eastern bedrooms also contrast with the medium-sized bedroom on the western side (210), which had access to a porch and possibly once a view, now largely obstructed by university buildings. Census records do not show eldest daughter Minnie Ray residing at the house, and it is also possible the fourth bedroom was intended instead for guests.

It is interesting that only one resident servant ever appeared in the census records for the house, a male Japanese resident alien who presumably lived in the basement room designated for a servant (B-5). Whether this was due to the changing economics of the time, to deteriorations in family finances, or to random chance is unclear.

The recorded use of the house as a small concert venue in 1913 is also noteworthy for what it reveals about the uses of the house. The musicians and audience probably utilized the large living room running the full length of the house on the eastern side (room 100), a characteristic sometimes associated with Julia Morgan's designs. Today, this room houses academic seminars, small classes, and recitation sections and is arguably the most integral part of the department aside from the staff offices.

An unexpected and provocative finding in the census data were the multiple instances of age misreporting and their precise character. Demographers are often concerned with the quality of age data in developing countries where central record-keeping is less well funded and less reliable. Technically, none of the sources I have examined here are of a quality high enough to be the final word on the precise dates of birth and ages of the Kellogg family. Birth and death certificates or Social Security records would be preferable. But the accumulated perspectives provided by these publicly available records appear sufficient to state with relative certainty that the self-reports of age in census records from 1900 through 1930 for both Malvina and for Walter deviated systematically and substantially from their actual ages.

The manner of these deviations is interesting because they consist of more than just understatements of an older wife's age. Probably because of the existence of coresident daughters, whose ages would have belied a greater understatement of their mother's age, the husband's age was overstated by a significant amount. In 1900, the most salient of these instances, Walter's age was overstated by 8 years, or 25 percent of his actual 32 years, while Malvina's was understated by 6 years or about 13 percent of her actual 46. Given Minnie Ray's presence at age 20 that year, this pattern is consistent with a desired lower bound on age at first childbearing also of 20. Another reason to overstate Walter's age could have been to make it plausible that he was Minnie Ray's father, but if that were the motive, then she and her sisters should not have had a different last name. It is also conceivable that Walter's true age was actually a secret. But in that

¹¹ That room 202 originally contained a sink in the northwest closet per the 2006 HSR also suggests a status gradient between the occupants of these two bedrooms that might reflect sisters of different ages.

case, one would expect to see his subjective age rising 10 years by 1910, while instead it rises only 3 years.

The broader patterns in age reporting appear to support the hypothesis that someone in the household wished to understate Malvina's and later her unmarried daughters' ages, ostensibly in order to understate the age differences of spouses or prospective spouses. If the 1870 record of the Pelton household and the 1880 record of the Wilson household show us the same mother-daughter dyad, then it would appear that Malvina probably inherited her mother's proclivities for understating her age, and probably for the same reasons.¹² At 50, Amanda Pelton was 7 years older than her husband John in the 1870 census (Exhibit 8), but that age difference would have been 11 years if her updated age in 1880, 64, were the correct one (Exhibit 9).

Malvina's daughters either married men more similar in age or did not marry. Minnie Ray's husband William Olney was 51 in the 1930 census (Exhibit 10), one year her senior.¹³ Irvina, 47 in the 1930 census, was four years older than her spouse, Robert D. Collyer (Exhibit 11).¹⁴ Florence and Mildred appear not to have married, although this is clearer in Mildred's case because of her death record (Exhibit 15).

The broader implications for how we understand historical census records are not entirely clear but are certainly worth discussing. The obvious question is how prevalent age misreporting such as we have seen here might have been among historical birth cohorts and time periods similar to those of the Kelloggs. Self-reported census data in the IPUMS and other databases suggest that husbands have typically been older than wives, although these very data are what are called into question by findings here. But if we are willing to assume that the subjective age difference can be understated but cannot switch sign, then the relevant share of couples in this time period in which the husband is younger than the wife is about 13 percent, according to IPUMS data for the 1900 sample. This is neither a large nor a small number, but without any other sense of how prevalent age misreporting is among the "eligible" subpopulation, not much more can be said.

In principle, age misreporting of this type could be responsible for some of the observed differences in age-specific mortality schedules between men and women. If age is correctly reported on the death record, as it appeared to be in the case of Malvina Chase Kellogg, but is understated on census records, then measured mortality rates will be too low at young female ages, where denominators are larger than they should be, and may be too high at older female ages, where denominators are smaller. The patterns would be precisely reversed for men with older wives like Walter Yale Kellogg. Given

¹² Another possibility is that it was Malvina who responded to the census enumerator's questions in these and later censuses, and that only she understated the ages of family members, but that seems far-fetched.

¹³ Draft registration documents (not shown) support this age for William.

¹⁴ In the 1940 census (not shown), Robert and Irvina Collyer are still coresident with their son Robert jr., who has aged 10 years between censuses. Robert sr. is still listed as a proprietor of a book shop. But Robert's and Irvina's stated ages, 56 and 53, appear to be switched, and Irvina's (stated as Robert's) is one year too young. The census page markings indicate that the enumerator spoke to both Robert and Irvina, and that may be the reason their ages are switched.

how Walter's and Malvina's reported ages converged with their actual ages as they both grew older, the effect on measured older age mortality may be muted or not present at all. In any event, the magnitude of this potential effect depends on a number of unknown factors, most notably the prevalence and degree of the underreporting.

Another question is whether similarly motivated couples might tend to misreport their ages outside of historical periods. The mode of interview for the decennial census was in-person enumeration prior to 1960, when the Census Bureau largely replaced enumerators with mailed out forms. An earlier change was prior to the census of 1880, when trained census-takers began to replace essentially untrained U.S. marshals. Although individual census records remain confidential for 72 years, it clearly seems as though some individuals either did not approach answering enumerators' questions in that way, or they had so carefully crafted and memorized a set of replacement birthdates and ages that those had practically become that family's reality. Which story is correct bears implications for the objective quality of census data in modern times, when anonymity or at least privacy from neighbors and peers seems more obvious. Social norms and perceptions have also changed, of course, adding another free variable that could significantly attenuate this historical pattern in modern data.

Thus while any wider implications of the patterns we see in the census enumerations of the Kellogg family remain unclear, the partial reconstruction of their life courses here is interesting and enlightening. The University of California was lucky to have purchased a building with a layout so convenient for a group the size of the Department of Demography, a configuration due in equal parts to the vision of Julia Morgan and the composition, desires, and means of the Kellogg family.