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Usage Through Diary Keeping

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UCLA

Sustainable LA
Grand Challenge

ABOUT THE PROJECT:

GENDER AND EVERYDAY WATER USE IN LOS ANGELES HOUSEHOLDS

This working paper series presents preliminary results from the Gender and Everyday Water Use in Los Angeles Study. Conducted by researchers at the UCLA Center for the Study of Women with the support of a Sustainable LA Grand Challenge Grant, this project investigates the important but understudied role of gender—as it intersects with race and class—in residential water use in Los Angeles. The goal of reducing residential water use requires nuanced understanding the ways that people use, think about, and value water. In the context of international development, policymakers and researchers understand that gender shapes water, especially because women and children are disproportionately responsible for procuring water. In the United States, feminist scholars long have found that divisions of labor and decision-making are often gendered. Putting together these two bodies of knowledge, along with the fact that women have led many American water struggles, from Standing Rock to Flint to Compton, it is surprising that gender remains largely absent from water management and water research in the U.S. This study found that women disproportionately are responsible for the household management of water and for its use in households. It connects everyday life to the large-scale questions of water scarcity and management that face our world in the twenty-first century.

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by Kelsey Kim

Introduction

“Roger¹ likes doing the low-hanging fruit,” Abigail said jokingly as she explained the division of labor in the household. “You know laundry—there’s always laundry, it’s easy. Just stuff it into the washing machine. The hard stuff is cleaning up the shower or scrubbing the toilets or something.”

Abigail and Roger are a couple in their thirties sharing an apartment in Beverly Hills. Though they discuss their household tasks as being somewhat equal (if one person cooks, the other cleans), Abigail still feels that she puts more personal effort into her housekeeping than Roger does, though she adds, “I think despite the differences, we’re not resentful.” Her professed care towards her work is also evident in an account she wrote in the diaries that we provided to record their household water usage: Abigail’s is eight pages

long with detailed descriptions of each activity and the amount of water used, while Roger’s is a few sparse pages. While both described their division of labor as somewhat egalitarian, their water diaries reflect a different reality.

As part of the UCLA Grand Challenge on Sustainable LA, our research team seeks to understand how Los Angeles residents use and think about water. Between 2017-2018, we interviewed thirty-six households from four Los Angeles neighborhoods: MacArthur Park (90057), Koreatown (90020), Beverly Hills (90210), and Inglewood (90305). Additionally, we provided each household with water diaries to record their household water usage over a period of four days. These diaries proved illuminating for several reasons. First, record-keeping, whether regarding the use of water (Lahiri-Dutt and Harriden 2008), electricity (Durand-Daubin 2013), food (Rebro et. al

1998; Billoft-Jensen et. al 2009), or other resource makes users more aware of their consumption and more apt to conserve. Second, but, as seen in the case of Abigail and Roger, these diaries also revealed an unequal and gendered division of labor not always apparent through interviews alone. In this paper, I reflect on the way these orientations towards unequal labor manifest in the water diaries. In its most basic function, participants utilized the diaries to help recall and describe their water usage during subsequent interviews. But most, if not all, of our participants also viewed the act of keeping the diaries itself as a practice of conservation. Although we did not frame our project as focusing explicitly on water conservation, when asked to reflect on the record-keeping process, most participants remarked on the diaries' ability to keep them water-conscious, implying that this was the purpose of the diary, and to a larger extent, our study.² But this differed from our own insight into the diaries. For us, they served as a reflection of gendered division of labor within households. While many of our participants reported a strong sense of egalitarianism during the interviews, the diaries complicate this by showing differing gendered contributions to household chores.

What Is A Water Diary?

Each participating household in our study was given water diaries to record their household water usage for two weekdays and two weekend days. The research team then followed up on this diary-keeping with an interview. Depending on their preferences, participants received either one diary per person, or one per water-using room (e.g. kitchen, bathroom, and laundry room). We gave participants general oral instructions to record all household water activity, including approximate time of day, length of time of the activity, and estimated volume of water used, if possible. If more than one person in the household was participating, we asked them to initial or sign their name next to their activity.

Early diaries included an instructional sample page (see Figure 1), though we omitted it with later participants in order to allow them the freedom to structure the diaries as they saw fit. By doing so, we sought to influence their thought process as little as possible, instead using the diaries to understand how *they* categorized and described their own water use.³ As a result, the diaries ranged in style and format. Most were structured similarly to the excerpt seen in Figure 2 (see page 4): In this four-person household in Inglewood, each included the date and time water

Sample Page:

Kitchen

Example: 10 AM - wash dishes, 25 minutes, medium water use (soaked dishes prior to washing) - VA

Example: 10 AM - wash dishes - VA

Morning:

Afternoon:

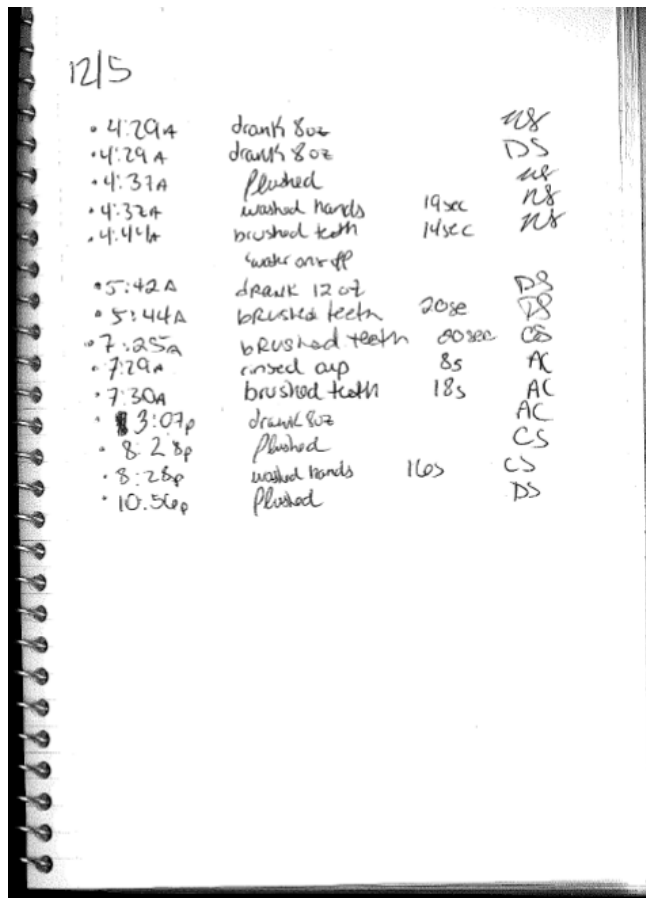
Evening:

Figure 1: Sample page provided to participants in early water diaries.

2. While we told participants that our work could impact water policy, we also stated that our research goals were to understand how LA residents use and think about water.

3. This lack of structure did not sit well with everyone. One participant, an engineer, had suggested creating tables in the diaries rather than giving out blank notebooks, arguing:

That way they don't have to think about it, because when we were recording this as it's happening, you know, "Oh, I do this for three minutes, ten minutes. Was this ten ounces? This was a number one or a number two." You know, it's like what information do I need to record? But if you actually provide that data, the formatting to begin with, it makes it a lot easier. So all they have to do is check I used it today and try to do it on time. I just have to follow the formula. It makes it a lot easier [that way].



(Left) Figure 2: A typical water diary entry, from a four-person household.

Date: Tuesday 7/25

Location: Bathroom

Time: Morning

Hand wash, medium water, 7 secs
 Brush teeth while in the shower, medium water, 2mins
 Shower, medium water, 5 mins
 Deodorant application, medium water, 4 secs

Time: Evening

Wash hands, medium water, 7 secs
 Wash hands, medium water, 9 secs

Location: Kitchen

Time: Evening

Rinse 5 vegetables, medium water, 1min
 Hand wash, 8 secs
 Rinse 6 potatoes, 1 min
 Rinse medium sized cooking pan, 30 secs
 Rinse large onion, 5 secs
 Hand wash, 9 secs
 Rinse 4 pieces of fish, 1 min
 Hand wash, 15 secs
 Use ~2 cups of water from faucet to make hot tea
 Rinse medium sized cutting board 1 min
 Hand wash, 10 secs
 Soak piece of clothing on small bucket, ~3 cups of water

(Right) Figure 3: Excerpt from an audio-recorded water diary.

usage took place, a short description of the activity, and their initials. In another example, as seen in Figure 3 (see page 4), the couple audio-recorded and transcribed their water usage. And in households with children, parent(s) would either record entries for them, or allow their children to record for themselves. For the Lopez household, the children recorded their own water use in prose format (see Figure 4 on page 6), while in the Sanchez household, both Kathryn Salazar Sanchez and her husband Cesar Sanchez recorded water use for themselves and their two children, complete with illustrations by Kathryn (see Figure 5 below).



Figure 5: The Sanchez household's bathroom water diary (names redacted).

The water diaries served as a useful tool for participants to recall and expand on their water use during interviews. In Marianna Obrist et. al's (2008) study of household TV use, they found diary-keeping, coupled with other forms of recording such as photographs, gave researchers a fuller picture of participants' day-to-day activities than interviews alone. Similarly, Tracey Crosbie (2006) found in

her study on travel and communication that diaries proved useful as a secondary tool which augmented the interviewing process (5). In our interviews, we began by asking participants to reflect on keeping a water diary—if there were any difficulties, or if they noticed anything about their water usage they hadn't noticed before. As I explain in the following section, participants most commonly responded that the diaries made them more aware of just how much water they were using on a daily basis.

Conservation

When asked to reflect on the water diaries process, Regina, a 31-year-old woman living with her boyfriend Victor in Koreatown, responded:

Regina: ...It was kind of fun, thinking about the water usage I did. Even the days after I finished tracking, I started thinking about it more, like if I touch something dirty with my fingertips, I'll go and not wash my hands but just splash a little, and I would think about things like that. Just notice it more, even though I wasn't recording it because it's not part of the four days. But yeah, in general, just being more conscious, which I guess the point was.

Regina, like many others we interviewed, perceived the goal of our study as creating consciousness and promoting water conservation through the diaries. Because most saw the water diaries through this lens of conservation, when prompted on the diary-keeping process, they often expressed how it made them more conscious of their water use and how they changed their actions because of it, a practice Bolger et. al (2003) described as *reactance*.⁴ But while conservation was a common outcome of the water diaries, it was not solely due to newfound consciousness of their water usage. Participants also changed their practices to lessen the inconvenience of recording. In Rebro et. al's (1998) study on food diaries, participants consumed less food than their usual habits "to lessen the inconvenience of recording food intake" (1). Similarly, our participants lamented at the tediousness of recording every shower and toilet flush. Rachel, a graduate student in MacArthur Park, and her boyfriend Daniel, expressed:

Daniel: In the beginning [the diary] was entertaining.

Rachel: Yeah, it was fun the first day.

Daniel: The first and second day it was fun.

Rachel: But then after a while it was like, I don't want to do this.

4. In studies utilizing diary-keeping like Rebro et. al (1998), the goal of the diaries is not to teach conservation, but to collect data on participants' regular activities or usage. One of the issues with diary-keeping as a method, then, is that users often change their habits for conservation or convenience.

Tuesday 9/5/17
 I showered at 7:07am and ended at 7:20am
 Note that when I shower I brush my teeth in there for about 2 minutes. When I showered I would say medium.

Sink Water Use: I wash 1 plate, 1 cup. low water use and got a ~~medium~~ medium cup and served water to drink some. Time 6:32pm

Wednesday 9/6/17

Shower: 7:03am - 7:14am medium water use. Brushed my ~~teeth~~ teeth in shower took approximate 1 minute and 30 seconds.

Prestroom: 7:20 - 7:21am flushed after use. I would say low water use.

Sink Water Use: Washed 1 plate and 1 cup medium water used 6:24 pm
 Drank water about at 8:23 am low water use

Thursday 9/7/17

Shower: 7:13 - 7:26am medium water use. Brushed my teeth in shower took around 2 minutes.

Sink Water Use: 1 plate wash 6:25pm medium water use.

(Left) Figure 4: A child's water diary entry in prose format.

8/24/2017
 9:30PM 1 LOAD OF CLOTHES - MEDIUM - MP

8/25/2017
 7:00PM SPRINKLERS - HIGH MP

9/2/17
 10:30AM LOAD OF CLOTHES - HIGH - MP
 11:45 LOAD OF CLOTHES - HIGH - MP
 7:00PM SPRINKLERS - HIGH - MP

9/3/2017
 10:15 AM LOAD OF CLOTHES - HIGH MP
 12:00PM LOAD OF CLOTHES - HIGH MP

(Right) Figure 6: The Peters' laundry and outdoor water diary.

Rachel and Daniel were not the only participants to express weariness over the diaries. But despite the tediousness, both later commented that the diaries made them more mindful of their water usage in the end. Upon reflection, Rachel added, “I think it made me more conscious of what I was using water for when I was doing the project because I would have to write it down, so I’d think about like, ‘Oh, do I really need to rinse this now? But like, can I group all my water use together so I can only have to write it down once?’” The monotony of recording every act of water usage caused Rachel to implement more conservation-friendly habits, rather than waste time writing down multiple instances of water usage.

But the Shahidi household, a family of four living in Beverly Hills, had differing views toward the diaries. Alyssa Shahidi, a 28-year-old psychologist, commented, “My experience was very typical, but it was interesting because it made me more conscious and mindful of how much water I really do use on a regular basis, and it made me realize I don’t necessarily have to have the water running, during every single use. I can like, turn it on and off and use it as needed.” While Alyssa had a positive view of the diaries, her mother Leila felt differently, stating, “I was using water, like always I was using, and it was on and off. So, whatever I needed to use it, I was using. That’s it, I mean, [the diaries] didn’t change anything in my life because I know how to use water.”

While it was not our intention, Leila viewed the diaries as a barometer measuring her water consciousness and water knowledge. Alyssa, similar to Regina and Rachel, admitted to becoming more mindful of water usage through the practice of diary-keeping. But for Leila, the diaries were not special—she already knew how to conserve water.

Although we did not tell participants that we were looking for their water conservation techniques through the diaries, or that the diaries should create more water-conscious habits, most viewed them this way nonetheless. Some even showed a sense of pride in how the diaries changed their habits, or how water-conscious they appear through the diaries. But while many were eager to tell us the ways in which they saved water, very few had the same enthusiasm towards describing who did what within the household.

In interviews, most households described the division of household labor as equitable, but as I elaborate in the next section, the diaries illustrate a different reality.

Division of Labor

Throughout our interviews, the topic of division of labor tended to cause the most tension or denial for our participants.⁵ Very few households stated outright that their chores were unequally distributed or gendered in any way; in fact, most explained their division of labor through preferences or availability.

Mandy and Arlo Peters live in Inglewood with their elementary school-aged son, Philip. Both work in education; Mandy is a staff member at a university, while Arlo is a school teacher. When asked about their division of labor, they describe it as equal, with each of them having somewhat flexible, self-assigned tasks. During the interview, Mandy established herself as the main dishwasher, while Arlo’s main chores were the laundry and monitoring the outdoor sprinkler system. When asked how they decided to divide the tasks in this particular way, they responded:

Mandy: *I don’t know.*

Arlo: *I think it just worked out this way. I guess what it is, is I pretty much—I make sure Philip’s stuff is washed and ironed so I guess I just took that upon myself, doing his stuff. And I’ll wash everybody else’s stuff and I’ll make sure his stuff is washed and ironed. It’s one of those things you just take on I guess, without having to have a meeting about it.*

Mandy: *And then I do most of the cooking.*

When prompted again about the division of labor, they continued:

Mandy: *It’s not really gendered. I mean he does the laundry which is I guess a traditional female role, and like sometimes he will wash the dishes. I cook most of the time just because I like to cook, but now he’s starting to cook a little bit more, but we’re sharing the task. And kind of like the child stuff, Arlo does a lot of like, you know, [Philip’s] bath...things traditionally like the women’s roles. So I think that we do the task not really thinking about if it’s [for] men or women, it’s just really like who, I don’t know, likes to do it? Or I don’t know, I don’t want to say capable, but just like who wants to do it? We don’t really think about that it’s more like—*

Arlo: *It just needs to get done.*

Mandy: *Yeah, it just needs to be done.*

5. See Megan Baker’s (2019) paper for more on the gendered division of labor amongst our participants.

Figure 7: The Peters' kitchen water diary.

8/24 8:28pm: WASH HANDS - LOW - MP

9:00 PM : LOAD DISHWASHER - ^{30 MINS} MEDIUM - MP

8/25

9:00PM WASH HANDS - LOW MP

9:30 SOAK DISHES - LOW MP

9/2

9:00 AM - FILL POT W/WATER (GRITS) - MEDIUM MP

10:30 SOAK POT - LOW - MP

9:30 PM LOAD DISHWASHER - MEDIUM - MP

10:00 - MADE LEMONADE - LOW - MP

9/3

7:45 AM - FILL POT W/WATER (GRITS) - MEDIUM MP

8:15 SOAK POT - LOW MP

3:30 PM FILL POT W/WATER (PASTA) - MEDIUM MP

3:35 WATER FOR BROCCOLI - LOW MP

8:30 LOAD DISHWASHER - MEDIUM MP

Both Mandy and Arlo deny that their division of labor is based on gender; rather, they argue it is based on skill, time, and preference. However, their diaries do not reflect the roles they described for themselves in the interview. In their water diary for the laundry room and backyard (see Figure 6 on page 6), it was Mandy who recorded doing several loads of laundry, as well as monitoring the sprinklers, even though these were supposedly Arlo's tasks. But this did not result in an exchange, with Arlo taking on Mandy's tasks; as seen in Figure 7 (see page 8), Mandy also recorded doing the cooking and the dishes for those days.

These diary entries do not prove that Mandy often takes on Arlo's chores, or that their household labor is always unequally divided. But within the mixed-gendered households in our study, we did notice in the water diaries a pattern of women doing more housework, or describing their household labor in far more detail than the men.

Perhaps some of the strongest evidence to this claim is the absence of data. Several men in participating households either opted out or dropped out of the project, leaving us with only one person's account of the entire household's water usage. On the day of our scheduled interview with Regina and Victor, Regina informed us that Victor decided not to participate in our project after all. When we arrived for the interview, she explained that he was too busy and did not have time to do the water diaries. But in positioning Victor as "too busy" to participate, she also understated her own availability and labor, in which she is the main "cooker and cleaner," in addition to holding a full-time position as a social media and marketing manager.⁶

Conclusion

In Kuntala Lahiri-Dutt and Kate Harriden's (2008) intra-household study of water use in Australia, their use of water diaries revealed household power dynamics, showing differential "access to and control over resources and decision-making power" (Lahiri-Dutt and Harriden 2008:230). Similarly, our water diaries revealed the role women play in their household water labor and management. As a supplement to the interviews, the diaries showed discrepancies in the participants' perception versus the reality

of their division of labor. While few households would readily admit to gendered division of labor, the diaries illuminated what was often unspoken in interviews. No participating household viewed the diaries as recording labor. Instead, most saw it—and to a greater extent, our project—as recording water consumption and promoting conservation. Although it was not our intention to reorient our participants, the diaries nonetheless offered two different perspectives on water usage, providing insight into both water conservation and household labor.

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6. Although he didn't do the water diaries, we asked Regina if Victor would still participate in the interview. Regina told us he would most likely be home in time. While we were waiting for him to arrive, Regina pulled out her phone and tracked him on an app, showing him to be at a friend's house. He did not come home for the interview.

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