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Technology as a Lens for Investigating Social and Cultural Norms in Japan

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Introduction

Technology and artifacts offer a productive lens to understand society, as they represent and shape the needs, values, and constraints of people within a certain socio-cultural context. Our daily interactions with technology tell a tale of who we are, both within our culture, as individuals, and in our ways of socializing and locating ourselves within socio-technical and cultural systems. I'm interested in understanding how Japan as a country integrates mundane technology into its social and cultural context. This is an important question given the ubiquitous role of technology in everyday life, and the role it will most likely have in the years to come. Rather than simply analyzing the role of mundane technology in Japan, I hope to illustrate the value of narratives as a way to uncover the cultural influence of technology. My goal in this paper is to offer a way of conceptualizing the impact that mundane artifacts have in our lives by combining theories from sociology, Actor-Network theory, and cultural ethnography, and elaborating on the idea of artifacts as actors in our social networks. If one considers that technology is always embedded in a specific socio-cultural and historical context, it is important to decipher this context in order to understand why certain technologies are more widely adopted than others, as well as what they represent and how they are used.

Due to my focus on Japan, it is important to take into account the Japanese "economic miracle" as it is said to be the groundwork for what Japan is today. In the post-World War 2 era, Japan became an increasingly strong economic power. "In only five years, from 1965 to 1970, Japan doubled its productive industrial capital stock - a feat never before accomplished by an industrious country. In international trade, Japan shifted from being mainly a provider of labor-intensive products (...) to being the world's leading exporter of steel, ships, optical goods, and consumer electronics" (Patrick & Rosovsky, 1976, p. 4). Lasting from the 1950s to the late 1990s, the post war era was synonymous not only with the growth of Japanese economy, but also with its urbanization, new

political and educational reforms, as well as other significant changes in society (Ito & Hoshi, 2020; Abe et al., 2018). It was during this period that Japan strengthened its industry of consumer electronics, giving rise to the perception that we still have today of Japan as a country where technology is a prominent part of the culture. This perception originates in the growth of famous Japanese tech companies (Mitsubishi and Sony), Toshiba development "the world's first laptop PC" in 1985 (though there is some contention around the title), and Japan's increasingly important role as a producer and provider in the robotics industry (Robertson, 2017, p. 17). The view of Japan as "high tech," however, does not only connotate complex technology, but also the use of mundane technology on a daily basis. The three technologies I plan on investigating in this paper – rice cookers, vending machines, and air conditioners – all find their origins of popularity and use in the 1950s. While this may have been more than half a century ago, these technologies have become ingrained into modern day Japan and its culture. This historical narrative in conjunction with the common perception of Japan as a "high tech" country makes it an interesting choice for investigating the role and impact of mundane technology in culture.

Methods

To explore mundane technologies in Japan and how they reflect and shape cultural mores, I embraced a qualitative approach (Emerson et al., 2011). My data collection consisted of three sources of data: ethnographic interviews (Spradley, 1979), a qualitative survey, and archival data. I did 6 ethnographic interviews. The interviews were open-ended, lasted from 60 to 90 minutes, and covered the background of the interviewees, as well as their perception of technology role in their everyday life and in Japanese society. I recorded the interviews and also took copious notes during the interviews. All my informants were of Japanese nationality, either living in Japan or in New York. They were between 20 to 60 in age, with various occupations such as musicians, graphic designers, and University workers. I was able to contact these persons either through my personal network or using a snowball technique (i.e., asking them to refer me to a friend). To complement these interviews and to provide flexibility to informants, as time zone differences made it complicated to schedule interviews, I developed a detailed qualitative survey inspired by my interview guide. The survey consisted of several short responses and open-ended questions, asking participants about their habits with technology as well as daily routines surrounding technology. I shared this survey with some contacts in Japan and collected a total of 8 responses. The respondents varied from high school students to professionals in various fields (marketing, entrepreneur, etc.). Their responses were unsurprisingly less detailed than the interviews but were in line with the themes that emerged from the interviews. Lastly, I did some archival research to understand the role of technology in Japan. In particular, I found that the Toshiba Museum had a

very rich section on technology in Japan. I reviewed their online historical archives on the different technologies they developed, such as TVs, air conditioners, light bulbs, etc. Their online historical section, particularly the one titled "First of their kind," provided me with a lot of rich insights on technological innovation in Japan since the 1920s. I focused my analysis on the narratives that were developed by Toshiba to describe these technologies and their integration into their customer's lives. Moreover, I investigated specific technologies (like air conditioning and vending machines) that nearly all interviewees mentioned to understand their history and evolution in Japan.

To analyze my data, I used an inductive and interpretative approach in order to form a collective understanding of the socio-cultural role embedded in technology. I first reviewed all interviews' notes looking for emerging themes across all interviews. I noticed several key recurring concepts such as convenience and the normalization of certain aspects of life (for instance, what it meant to be Japanese). I then compared and contrasted these themes with the responses and examples provided by the survey's respondents. Three main technologies - vending machines, air conditioners, and rice cookers - inductively emerged from the analysis of the interviews and qualitative surveys, allowing me to explore their value through the narratives of the people I've talked to. I did some secondary research on each of these technologies to examine their history and evolution. I then went back to the different themes mentioned by my interviews and analyzed each technology in light of these themes. My reading of theories described below, such as ANT (Latour, 1993) and situated action (Suchman, 2007), informed my analysis.

Theoretical Background

I plan to discuss the three mundane technologies that emerged from my research (vending machines, air conditioners, and rice cookers) in light of three analytical dimensions. Firstly, I will explore how the sociological theory of Actor-Network can be used as a lens to investigate the cultural dimensions of technology and uncover the narratives created by people about day-to-day mundane technologies. Actor-Network theory, as developed by Bruno Latour, argues for non-human objects and artifacts to have as influential a role as humans within social contexts. In this paper, I embrace the interpretative and inductive methodology discussed by Latour in "Sociology of a Door-Closer" (under the pseudonym of Jim Johnson, 1998) and "The Pasteurization of France"(1993) so as to properly capture the narrative of the people I talked to. The purpose of this approach is to allow for the stories surrounding technology to develop themselves in an emergent, open-ended manner. Secondly, building upon the notion of social networks composed of human and nonhuman "actants," I investigate the role of mundane technology as a reflection and enactment of specific socio-cultural beliefs and values. Moreover, there is a "conversational" element in our relationship with technology as discussed

by Lucy A. Suchman in "Human-Machine Reconfigurations:" our interactions with technology are two-way; we "talk" to them and they "talk" to us too. Finally, I examine the question of how the design choices embedded in mundane technology reflect Japanese mores and cultural norms. By investigating how certain design and product decisions are made and replicated throughout Japanese products, it is possible to draw meaning and understanding not only of the perception of the "average" consumer, but of the values and preferences associated with them. This ties in strongly with the ideas of Edward T. Hall (1969) and Richard E. Nisbett (2004) with regards to perceiving and understanding how socio-cultural values are reproduced through various aspects of society, from behaviors to technology use and urban planning. Additionally, I build upon the work of Dorinne K. Kondo, who in her book "Crafting Selves" (1990), takes an anthropological approach to describing Japanese culture in the workplace, as well as in the broader scope of day-to-day life. Her analysis provided me with a background to interpret the narratives uncovered through my research.

By defining artifacts as actants in social networks we can show how the day-to-day mundane technologies we interact with reflect our culture and are embedded in social values. Through my interviews with Japanese people, either living in Japan or in the United States, three technologies in particular (vending machines, air conditioners, and rice cookers) were often mentioned and certain themes (such as convenience, tradition, simplicity, etc.) became more apparent. My epistemological stance in this project is qualitative, inductive and interpretative (Latour, 1993; Suchman, 2007). Therefore, my analysis does not aim to provide a "true" description of Japan, but rather discuss the socio-cultural narratives my analysis brings up, highlighting the value of technology as a lens to understand cultural practices and values.

Vending Machines and *benri*

When visiting Japan, it is difficult to ignore the presence of vending machines; while this is particularly true in larger cities like Tokyo or Osaka, you can also discover them in more remote regions of the country as well. In fact, in my personal experience (during the summer of 2018) working on a farm in Nagano, while the nearest store was easily a 45-minute bike ride through the mountains, you only had to walk a few minutes before arriving in front of two vending machines at the side of the road. While they originally appeared in Japan in 1888, "Vending machines became popular in Japan in the late 1950s. The pioneering vending machine was a 'Fountain-style Juice Dispenser,' a box mounted with a juice fountain. This was an unprecedented success thanks to its fountain performance and a reasonable price of just 10 yen per paper cup" (Att.Japan, 2018). Their successors, the vending machines, remain just as prevalent in Japan: "As of the end of 2008, the number of operational vending machines in Japan was approximately 5,260,000" (Att.Japan,

2018) . Despite having experienced this myself, it wasn't until the first few interviews that I realized how much presence these machines had in people's day-to-day lives. Particularly, all my interviewees, when mentioning "vending machines," couldn't help but refer to the concept of 便利 (benri), or convenient. The term 便利 (*benri)* was used to describe many aspects of daily life, such as the use of phones to make paying easier and more accessible ("You never have to worry about forgetting your wallet, you just need your phone" told me one of my interviewees living in Japan), or the perceived efficiency of the transportation system. Interviewees currently living in New York emphasized how the metro and trains in Japan were "extremely on time" contrasting it with their experience of the subway in New York. Within this culture of convenience, my analysis suggests that vending machines play a role in "permitting" people this fluidity in their daily lives. What is particular about vending machines in Japan is that they are not just restricted to snacks and drinks. "There is a vending machine for everything," I was told by one of my interviewees, who proceeded to give me some examples: from warm meals to beauty products, and all other forms of daily items someone could possibly want. By being able to get nearly anything on the go, my interviewees explained to me how vending machines were particularly helpful when in a rush or if they forgot to buy something. Rather than simply being a method of buying the occasional snack, they act as a safety net for forgetfulness, providing an alternative solution to having to return home or going out of your usual way to buy a product. In fact, the variety and extensive amount of goods provided by vending machines was sometimes compared to コンビニ (*conbini*), or convenience stores, which were also held in high regard due to their wealth of products and services: "They're open 24/7. They're small, but they have everything," stressed one of my interviewees. As such, vending machines play a role of maintaining fluidity and convenience in daily life.

More than simply providing convenience, they also are an effective reminder of the perceived safety of Japanese society. This safety seemed to be widely accepted amongst the people I talked to. For instance, one interviewee exemplified how safe they felt by stating: "even if you were to pass out drunk on the street, you could wake up in the morning and nothing would be stolen." There were many other reasons as to why my interviewees felt safe: having stores open and lights on 24/7, or pick-up services to take you home after going out for a drink, etc. There was a distinctive form of "trust" that nothing bad would truly happen to you, and that you were safe at all times.. When talking to a person who had been living in New York since 1996, they made note that they didn't believe vending machines would work in the city, as there was a higher chance that "they would be vandalized" in contrast to the ones in Japan. Unlike other countries where vending machines are primarily kept inside, "[Japan's] low rates of vandalism and petty crime ensured that vending machines could be placed outside" (Att.Japan, 2018). The safety

associated with vending machines, as illustrated by the lack of abuse of its services by Japanese citizens, was understood by interviewees as a reflection of the safety of Japanese society itself. While this narrative may not represent the truth of the matter with respect to safety, it does provide an interesting perspective regarding the value of vending machines as more than just an object; the availability of such public technology and services can subconsciously make people feel more secure and trustworthy of those around them. These concepts of safety and convenience seem to be very aligned with the Japanese vision of a "harmonious society," as described by some of the interviewees, and highlight certain beliefs and social values. The high value put on this overarching concept of society and integration with others is mentioned as well by Kondo in her experience living there: "The demands and obligations of Japanese social life came to assume increasing importance in my life. The time I was living in my own apartment, I was an active member of many different social networks" (Kondo, 1990, p. 21).

The ideals of *benri* and safety also seem to have had an influence on the design of vending machines. For example, the Suica card, which is a card used in Tokyo for accessing the transit system, can also be used to make purchases at these vending machines. The implementation of multiple functions in the Suica card is yet another example of this integration of all services in one single artifact, reflecting this attempt to simplify the experience of Japanese citizens, offer convenience and create harmony. Additionally, the concept of vending machines as a whole, especially those with glass displays, represent the trust that an unmanned machine with goods on display won't be taken advantage of, demanding a certain level or respect from its user. The narrative surrounding vending machines therefore expresses a message through its design and embedded values, as it represents to its user both the perceived convenience and safety of Japanese society.

Air Conditioners and Designing for Cultural Norms

Air conditioners in Japan are a prime example of the impact and relevance of history in the development of a technology. Many Japanese companies have prided themselves with making advances in air conditioning; between Toshiba, Panasonic, and Daikin, all three have made claims to improvements in air conditioning between the 1950s to 1970s (Toshiba; Daikin, Panasonic). One key difference between the American and Japanese understanding of Air-conditioners, mentioned in all my interviews, was their dual purpose as both a cooling and heating system (This was also an example that shows how the interpretation of the technology varied regionally: for instance, because Okinawa is a southern island with a warmer climate than Tokyo, the dual function was not seen as important). One of my interviewees explained in detail why air conditioners were used as a heating system, or at least the history as they had learned it. They correlated it with the concept of traditional Japanese

houses being made of wood; the combination of extensive centralized heating with a flammable material, they explained, would have been dangerous. The interviewee also told me that another cause for the lack of centralized heating was the size of homes. Indeed, the lack of space in Japanese housing didn't really allow for the implementation of more cumbersome appliances. For instance, one of my interviewees living in a 1K (an apartment with a kitchen) in Tokyo described it as "extremely small and cramped. You don't have a lot of space." Due to these historical and physical constraints, alternate methods of heating and cooling were developed, more adapted to the traditional Japanese living space. While the air conditioner was seen as one heating system, there were other forms also mentioned, such as the *kotatsu*, a low table with a heat source underneath and a blanket to trap it in. The development of these multiple technologies offering individual heating reflects the role of traditional heating: "traditional heating in Japan involves either warming small spaces close to residents or warming the residents themselves" (Fuji & Lutzenhiser, 1992, p. 221). Therefore, the use of air conditioners over central heating becomes a reflection of this tendency, setting a precedent and standard for such appliances. When asking my interviewees about the subject of technology in general and what aspects they prioritized, a lot of emphasis was put on portability and comfort, as well as efficiency and how little noise it made. "There isn't a lot of space," emphasized an interviewee, "particularly for Tokyo residents," so products that don't take up too much room as well as provide multiple functions (an "efficient" use of space) are much more appealing. Because of these needs, an expectation for technology to reflect these criteria became instilled and created a loop; due to the needs of Japanese households, technology was created to fit the role. In doing so, this reinforced the expectations for what technology in Japan should be, further emphasizing criteria for Japanese "standards."

On their museum's website, Toshiba provides details with regard to the development of appliances, including the creation of the "World's First Set-Free Room Air Conditioner." Some of the design decisions made by Toshiba stood out from this historical summary. First, "the development team reached a conclusion that sales would increase if customers could install air conditioners by themselves where they wanted" (Toshiba). This design decision – to make the product portable and easy to install by customers - reflects the ideal of *benri* (convenience). This design rationale echoes a comment made by one interviewee: there is a "high standard of service" in Japan, so companies and products that are much more user-friendly and considerate tend to fare better in the market. The ideal of convenience was also illustrated by the small size of the air conditioners which were designed to fit in the constraints of Japanese living spaces. Additionally, Toshiba also aimed to design a product that would "fit in aesthetically" (Toshiba). The implementation of aesthetic values in design is rather common yet remains representative of how the purpose and role

of a product can afford it certain "creative" privileges; it can give a product the power to shape and express norms and standards. In this instance, Toshiba wanted their air conditioner to be perceived as a form of furniture, and their design choices were guided by their perception/ideal of what a "traditional" Japanese room would look like. The design and use of the air conditioner not only reflect a certain historical and cultural context, but it also illustrates how technology plays a conversational role between the company and its customers in communicating and establishing norms (in this case both functional and aesthetic norms). Through the demands of the context, air conditioners emerged to take on the portable and multi-functional role its creators thought users desired, as well as representing companies' perceived standards of their ideal customer. In doing so, the historical context combined with the companies' interpretations of the ideal customer not only played a part in creating expectations for air conditioners as a whole, but also in contributing to the standard to which "Japanese" appliances and technologies should be held. The function of design and implementation of perceived cultural demands allows for the normalization of the demands of consumers, as well as uncovers what aspects they value in technology.

Rice Cookers: Connecting Tradition and Modernity

As with the other technologies mentioned in this paper, the rice cooker was developed in the 1950s by Toshiba (Rich, 2015). It was created in the post-war era after housewives were surveyed by a Toshiba salesman, and they realized that one of the most difficult tasks was preparing "perfect rice" (Ewbank, 2020). Ever since then, rice cookers have become an essential part of Japanese households. Usually in the first part of the interview, I would list examples of different everyday technologies (such as smartphones, portable heaters, coffee makers, etc.), and at the mention of the rice cooker, all the interviewees acknowledged its importance and emphasized the necessity of owning a rice cooker. This "need" for a rice cooker is closely tied with the notion of Japan as being both high tech while remaining very set in its tradition, as was conveyed through my conversations with my interviewees. While one may not think of rice cookers as representative of the term "high tech," they are a perfect example of this dynamic between tradition and modernity; the standard norm for how rice should be consumed, a strong representation of tradition, was automated in order to provide a more convenient solution. For instance, one of my interviewees explained how their grandmother who currently lives in Kyushu, Fukuoka, (in the countryside) would use a specific method, *Dokaman* (or as they referred to it, the "original version of the rice cooker"), which according to the interviewee "makes the rice taste better." When they moved to Tokyo in the 2000's, the interviewee switched from using the *Dokaman* method to using a rice cooker instead, as *Dokaman* "takes more time." In doing so, this allowed them to preserve the taste and texture of rice without the inconvenience of constantly

needing to watch and monitor it. This illustrates the rice cooker's role in bridging the gap between the traditional method of cooking and a more "modern" approach.

The importance of the rice cooker is also illustrated in the following statement by one of my interviewees: "As a Japanese person, one thing that's a must is a rice cooker." The 'standardization of a rice cooker in a Japanese household is an example of setting a norm, not only with regards to the importance of the appliance, but in defining a "Japanese person." Japanese society was portrayed as one of conformity, where it is important to align yourself with the norm rather than stand out. Kondo reflecting on her experience as a Japanese American living in Japan described a situation where the norm is challenged: one might look Japanese but not behave in a Japanese way. Hence, Kondo noted "How could someone who looked Japanese not be Japanese? In my cultural ineptitude, I represented for the people who met me the chaos of meaninglessness. Their response in the face of this dissonance was to make me as Japanese as possible" (Kondo, 1990, p. 12). The idea of a homogenous Japanese society is one that came up a lot in my interviews: "You go to the subway and you look around, and everyone's the same," stressed one of my interviewees. The references to the rice cooker and how it is associated with "what it means to be Japanese" (an expression used by most of my interviewees) suggest that the standardization of being Japanese is not limited to personal traits; it also includes how a person lives and what they own. Hence, rice cookers reflect back upon their users the cultural narrative of homogeneity, through the assumption that every "normal" Japanese person must have one.

The practice of using a rice cooker is crucial for multiple reasons. By automating the entire process of cooking rice and turning off on its own when cooking is done, the rice cooker makes the cooking process easy and accessible to unskilled users. In fact, it is also useful for skilled cooks, aiding them in difficult tasks: "the rice cooker prepared not only rice but also takikomi gohan, a finicky rice dish with a soy-based sauce that often burned" (Atlas obscura). Still, to make full use of all its functions, the users need to know precisely what kind of rice/cooking they want. While in my case, my rice cooker has a simple on and off switch, the Japanese rice cooker offers various settings for different types of rice, length of cooking, etc. Moreover, the design allows for the cultural values and standards of taste and consistency, usually achieved through traditional methods of cooking, to be made convenient and easily replicable. Hence, the rice cooker's functions allow its users, such as the interviewee from Kyushu, to continue eating the type of rice they are accustomed to while facilitating the cooking process. However, the development and widespread use of rice cookers in homes have also allowed companies to start integrating features that augment it from simply replicating a cooking process. On this subject, I was told by one of my interviewees that "rice cookers are becoming more advanced, you can use them as a home

bakery." Indeed, multiple methods can be found online on how to use rice cookers in order to bake cakes. Not only is this an interesting example of how users can redefine the function and purpose of technological artifacts, but it also demonstrates the transition back and forth between the concepts of tradition and modernity. By applying the traditional concept of steaming rice to a technology, and then using that same technology to bake, a connection is made between traditional methodologies and the development of new purposes for the technology. While the design in and of itself remains true to function, the implied meaning and role of technology can change through the ways users interact with it, and with time, can serve to change the purpose and embedded values of technology.

Discussion

Through my research, I have explored the value of an inductive methodology to elicit narratives that uncovered the roles artifacts can play within socio-cultural contexts. From a methodological standpoint, conversing with and listening to interviewees allowed me to be sensitive to emerging themes while recognizing the specificities of individual narratives. Furthermore, I've embraced an understanding of technology as an actant in social networks (Latour), illuminating the connections between social, cultural, and historical contexts and illustrating how these contextual elements are embedded in artifacts. Actor-Network theory suggests that technology is active rather than passive and thus forces certain interactions based on its "demands" for the user. This was exemplified in the way my interviewees, while emphasizing the ease of use of the rice cooker, also assumed a certain know-how on "perfect rice." The rice cooker required a user who was culturally competent when it came to rice cooking, and knew what the desired end product (i.e., the taste and texture of the rice) should be. Placing these nonhuman actants within a socio-technical network helped illustrate how, by interacting with them, users are not only affirming these values onto technology, but in turn having these same values reflected back onto them: vending machines for my interviewees became both a representation and an expectation for convenience. The roles mundane technology played according to my interviewee's experience and narratives was very similar to the concept of "everyday totemism" proposed by Jerolmack and Tavory, which highlights the "deeper and more enduring ways that nonhumans anchor the social self" (Jerolmack & Tavory, 2014). Non-human objects and artifacts can be understood as totems as they are able to convey cultural norms and, in turn, are shaped by cultural and social expectations of individuals. This process of reflection is encapsulated when, through its design, mundane technology becomes embedded with cultural norms and standards that normalize both products and the consumer.

The use of narratives is a generative methodological tool as it illustrates the ever-changing nature of relationships in social contexts; they are not set in stone and their lack of "solid state" gives them both

flexibility as well as added complexity. It therefore prevents us from assuming a fixed understanding of culture. My interviews showed how our relationship to technology develops, and as technologies evolve, they take on different meanings, sometimes even diverging from their intended purposes (Suchman, 2007). The factor of convenience, which was frequently described as positive by interviewees, was also described by some as the reason for growing isolation in Japanese society. For example, the added importance of smartphones in day-to-day life was expressed by a couple interviewees as resulting in the decreased need to interact with others (such as store clerks) due to easy payment methods and transactions, and automated/online shopping. Similarly, vending machines could be seen as a way to escape human contact, to the point of furthering isolation. Both of these examples highlight the ambiguous relations we have with technology, as well as the complexity of our perspectives on socio-cultural values and the ability for technology to take on multiple roles. Throughout my interviews, the narratives didn't always align between different people, or would even sometimes change within a single interview. This ambiguity is similarly described by Kondo in her own ethnographic experience as fragmentation of self; "this collapse of identity was a distancing moment. It led me to emphasize the difference between cultures and among various aspects of identity" (Kondo, 17). As I would converse with interviewees, they would break down the different aspects of their identity, reevaluating themselves as individuals versus as part of Japanese society. In these variations lies the reason for focusing on how people perceive their situation and context to be, especially vis-a-vis technology, as it defines the expectations and views, but also conflicts, surrounding such artifacts.

The idea of tradition shaping technology is another key example of this intertwining of narratives; on one hand, tradition can be maintained with technology. For example, typical Japanese bathrooms (mentioned by several interviewees), which have a bathtub with a shower on the side, replicate the tradition of first cleaning yourself and then soaking in the water. An Interviewee who lived in New York mentioned how much they missed this aspect of bathing; you shower first to wash yourself and then simply relax in the bath, very similar to the *Onsen* (or hot spring) experience. On the other hand, traditions can lead to an evolution in technology: the bidet that was separated from the toilet is now integrated into the toilet itself, in addition to other features such as heated seats, turning a toilet into a complex piece of technology. Thus, traditions can be changed by the technology that was originally meant to support them. However, in some cases, technology can be conserved despite the existence of alternatives, as illustrated by the continued use of fax machines in Japanese society, which was still deemed necessary in sending health documents with regard to Covid-19 (Ryall, 2020). This illustrates how traditional office culture and the associated bureaucracy can offer strong resistance to new digital practices. These various

examples show how cultural norms and values shape, and in turn are embedded, in everyday artifacts and objects (Nisbett 2004; Hall 1969).

As mentioned in the introduction, this paper did not aim to provide a "true" description of Japanese culture, but rather a description of the "perceived" reality as enacted through the use and design of everyday technology. The intent was not to make claims about Japanese society, nor to associate it with ideas or criteria in order to define it, but rather to understand how people in Japan perceive their own society. While we can never immerse ourselves completely in someone else's culture, by listening to their narratives we can better understand how and why they see the world the way they do. By inviting people to share their stories about mundane technologies, narratives provide a generative approach to culture – one that avoids making comparative claims about cultures from a Western point of view, and instead offers a way to unveil people's multiple and changing understandings of cultural norms and values.

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