

Technology and Independent Living

The Global Aging Experience Project

DAVID PRENDERGAST
JOHN SHERRY
SIMON ROBERTS
TIM PLOWMAN

INTEL CORPORATION

In 2006 anthropologists from Intel's Digital Health Group launched a multi-year, multi-sited ethnographic research project designed to develop a global, comparative understanding of the practices and meanings associated with the later life course. The ultimate goal was to identify ways in which technology might support "healthy aging." The first leg of this project saw research conducted in 75 older households in seven European countries. The sample included older people with physical and cognitive impairments, those living with life-long or chronic diseases, and healthy older people, as well as informal caregivers and healthcare experts from each nation. The qualitative data was supplemented by detailed institutional and policy-oriented research reports focused on aging in each region. Analysis led to the identification of major tropes constituting the experience of aging that potentially align with applications of information and communications technologies. In this article we describe a few of the people we've met, as a way of introducing some high-level findings in our ethnographic work and how they have shaped the questions we ask as we imagine new technologies of independent living for the future.

As we looked across different geographies and cultures of Europe, we saw a number of factors that make a difference in what technologies might be deemed appropriate. For instance, in the United States older people most often live alone or with a spouse, which encourages a mode of thinking about technologies such as sensors that would provide real-time status indicators to remote caregivers. This is rendered less relevant in parts of the world where multi-generational households are the norm. Another difference had less to

do with technologies we were directly working on, but influenced how we imagine people's lives. For example, "public life" plays a much more important role in daily living for people in many parts of Europe than in the US. People engage social networks that are often broader and involve more casual but valued relationships, and older adults frequently populate public markets, cafés and other important "third places." As we thought about "aging in place" in Europe, we were struck that this means so much more than the four walls of the home—it means inhabiting an entire community.

Guiseppe's Back Stairs

"Guiseppe" is a 77-year-old man who lives with his sister in a small town in Tuscany, in his own home facing a village square. At the back, it opens onto a beautiful garden. He has had two hip replacements. Despite serious difficulties, including the need to use canes or a walker, Guiseppe makes a daily tour of the village square, often multiple times, as a form of physical and mental practice. "To keep going is the important thing," he tells us. When the weather is so bad that venturing outdoors is impossible, Guiseppe walks an endless circuit around his dining room. At night, lying in bed, he dreams of a time when he can make it down his back stairs to the garden, which he hasn't seen in two years. He imagines every step, every place he would grab the handrail, as he plots his route.

Guiseppe quickly became a source of inspiration for us in several ways. First, he reminded us to think in terms of aspirations, not limitations. Though he has been subjected to a progressive loss of mobility and requires routine medical attention, he still looks *forward* to being able to use his back stairs again. It is the daily struggle to overcome his painful condition that gives him purpose. If technology is going to truly serve people, it has to reach beyond the simply physical, or even cognitive, needs that may be associated with aging, and address

the human desire for fulfillment and meaning.

For individuals such as Guiseppe, our colleagues have been working on a dense array of sensors embedded in flooring to measure footfall, or gait. To work, this technology relies on a fairly "clean" record of footprints on the floor sensors, to track subtle variations over time that might indicate changes in a person's ability to get around—potential indicators of an impending fall. As we showed our colleagues videos of people like Guiseppe in his home, they were struck by just how "messy" human locomotion really is. With canes, walkers or "surfing" through the home, hanging on to corners of table tops or backs of chairs, older people with mobility impairment create a pattern on the floor that would confound such sensors. This is a good example of how our "messy" real-world data informs technology design.

Mary's Television

"Mary," 92, lives in County Cork, in the south of Ireland. She has an unplugged television in her bedroom. "That is for when I get old," she tells us, "When I have to spend more time in bed."

This statement is typical in the sense that it conveys Mary prefers not to think of herself as old, but is unusual in that it indicates she

decline presents a tremendous challenge in terms of thinking about any kind of intervention, technological or otherwise. If we wait until people recognize a need, we are going to be too late to provide them with assistance in preparing for and effectively coping with that need. How can we design technologies that not only deliver value to people today, but also adapt to (abruptly) changing needs in the future?



Trini's Window

"Trini" lives in the south of Spain, not far from the city of Seville. Her home is a second story apartment in the village where she has spent her entire life. Because there is no elevator in her building, she doesn't come down to the street as often as she used to. Widowed, with no immediate family, she still has a network of people who care about her. Because she lives in a warm and beautiful part of the world, her windows are nearly always open. This has enabled a simple and highly effective system of what might be called "wellness checking." Her niece, a local shopkeeper, calls up to her every day, "Can I bring you anything?" "I don't just listen to her words," the niece tells us later, "I listen to how her voice sounds. If she's not well, I can tell by the sound of her voice."

This simple routine, enacted millions of times a day in villages and neighborhoods throughout the world, is packed with insights about values we must build into our technologies, particularly the need to support a community-

COMMENTARY

is planning ahead for being less able-bodied, something that many of the older people we met do not do. Reflecting a pattern we saw consistently throughout our research, she related her recent life history to us as a progression of meaningful events: the death of her husband; her retirement; her daughter's move from Dublin to Cork; her own move to Cork a few years later, when after a fall she realized she needed to be closer to her daughter and grandchildren.

Watershed events such as these form a landscape not of gradual loss, but rather of longer periods of relative stability, punctuated with dramatic change. This pattern of

based approach to health in places where public life factors heavily in the daily routines of older people. The "window routine" speaks of the value of tracking, simply and unobtrusively, indicators of changing health or ability. Presently, most people don't attend to these indicators, but rather mark the progression of aging by watershed events. But what if we *could* track minute changes, and perhaps stave off some of these watershed events?

This case also provides insight into thinking about how seamless and inconspicuous technology

See *Technology* on page 10

The Public Lives of Aging

JASON ALLEY
UC SANTA CRUZ

Baby boomers. Pensions and 401(k) plans. Anti-aging medicine. Gay retirement communities. New assistive devices and technologies. "Aging in place." The Gray Panthers. Japanese centenarians on American television. The universality and specificities of aging—though intricately explored in early and mid-twentieth century anthropology's analyses of kinship, social change and personality—have not been given the same attention we bring to other arenas of ethnographic inquiry. The time has come for anthropologists to move beyond the codified worlds of the hospital, the skilled nursing facility, and the senior center and allow our intellectual imaginations to freely travel to new field sites for research among the elderly. In this brief article, I propose we focus on the public lives of aging. Such an approach would require merging our long-standing interest in thickly describing individual lives with multi-sited methodolo-

gies that circumnavigate diverse public spheres and scapes.

The elderly are as diverse and heterogeneous as other social groups, so why anthropologists have returned time and time again to the world of the clinic or care facility at the expense of the libraries, cafés, churches, bars and streets where seniors craft intricate lifeworlds for themselves is puzzling to say the least. This is not to say that the lives of the elderly are not shaped significantly by the variegated medico-care facilities that exist in the contemporary world, but in privileging such environments we run the risk

of contributing to the place-based essentialisms we have critiqued with rigorous reflexivity in recent years. As we have learned to question the bounded Petri dishes that characterized earlier understandings of culture, we should remind ourselves that insights about aging are to be found in a wide range of social worlds. The vitality of ordinary life often affords older people more opportunities for maneuvering across publics than a limited focus on institutional care settings would otherwise suggest.

Aging in Media

In addition to examining the politics of growing older in diverse locales, as anthropologists we would do well to focus on how aging is made public by family members, social workers, artists, entrepreneurs, government officials, activists, media-makers and elderly people themselves. Film, television, magazine covers and other visual media reveal a range of strategies for making aging public in contemporary social life. *The Alzheimer's Project*, a series of documentary films produced by the cable television network HBO in collaboration with the National Institute on Aging, is an interesting illustration of the mingling of public and private lifeworlds,

as well as the sentimental and the sensational. The first documentary, *The Memory Tapes*, offers snapshots of individuals who have been affected by memory loss, sliding with verité zeal from clips of driving to deathbed scenes in a seeming quest for melodrama. The website for the series (www.hbo.com/alzheimers) allows visitors to view all of the films online, and includes information on



The aging artist as auto-ethnographer: filmmaker Agnès Varda with camera in tow. Photo courtesy zeitgeistfilms.com

disease basics, trends in scientific research, and links to government and non-profit organizations. A Facebook page connected to the series has been set up where people have created portraits of loved ones nestled amongst tabloid truths like "Alzheimer's is the second most-feared illness in America, following cancer."

Such renderings exist in marked contrast to the auto-ethnographic representations found in films and videos like Agnès Varda's *The Gleaners and I* or Barbara Hammer's *A Horse Is Not A Metaphor*, which offer musings on what creative expression looks like amidst age and illness. Where the

engagements with the modifiers "applied," "activist" or "public" as a way of clearly positioning our work on terrain outside of our academic comfort zones. I ally myself with the spirit of these calls but here want to articulate a word of caution. Although our work with elderly informants is of undoubted value to current conversations around the futures of healthcare and social welfare systems, we need to be honest about the circumscribed corners experts in other fields and arenas (including public policy) would like to paint us into.

I recall my first sustained period of fieldwork with the municipal office for services and programs addressing the needs of older residents in San Francisco. My supervisor, a social worker by training and aging services bureaucrat by profession, was genuinely curious about my perspective, but finding common ground sometimes proved challenging. Earlier this year she actively suggested I lend my skills to conducting "consumer satisfaction" surveys with another city agency that coordinates in-home care for low-income elderly and disabled San Franciscans. Though this was intended as a possible research lead, the idea was offered during a discussion on budget cuts, with applied anthropology serving as a substitute for shrinking social services.

It can be valuable in such situations to remind ourselves of the importance of using our training to facilitate programs organized *by* and *with* our research populations, rather than simply *for* them. In being skeptical about problematic ineffectual, or poorly-

COMMENTARY

perspectives of Varda and Hammer prove vital is in their unapologetic figuring of frailty as enabling—as well as constraining—everyday life and artistic praxis. Unpacking the public lives of aging will require analyzing these visions and voices with the same diligence as those circulating in more publicized media spheres.

An Applied Anthropology of Aging?

In recent years, many anthropologists have suggested we supplement our ethnographic

grounded interventions for the elderly; questioning research limited to service provision and institutional care contexts alone; and tracking the ways aging is rendered palpably public across diverse contexts and media, we can forge a critically insightful anthropology of aging.

Jason Alley is a PhD candidate in the department of anthropology at UC Santa Cruz. He is currently conducting fieldwork on senior housing issues and aging in place in San Francisco.

Technology

continued from page 9

must become to actually deliver value in people's lives. Trini's niece performed her "monitoring" in the midst of other valued social interactions, in a way that was as lightweight as one could imagine. We must aspire to create technologies that are similarly embedded in the simplicity of daily life, and meaningful both to older people and those who care for them.

David Prendergast, John Sherry, Simon Roberts and Tim Plowman are social and medical anthropologists working in Intel Corp's Digital Health Group. Working within multidisciplinary teams of engineers, clinicians and designers, they utilize and translate social science and ethnographic research to co-design and iteratively develop culturally appropriate independent living technologies for older people.