

Constructing autonomy: smart homes for disabled veterans and the politics of normative citizenship

David Serlin*

Department of Communication, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0503, USA

(Received 8 December 2014; accepted 16 December 2014)

At a time when the US military is cutting costs for retired service members and veterans, there are many charitable and corporate organizations looking to fill in these gaps. For example, the US Department of Veterans Affairs offers small grants to enable some retrofitting of houses for disabled veterans. Meanwhile, charities offer purpose-built Smart Homes to a small minority of severely disabled veterans that utilise technological and spatial engineering and feed into the culture of what might be called home improvement pornography. Smart Homes for disabled veterans are situated at the intersection of various and discrepant fantasies – domestic, consumerist, gendered, professional, military-industrial – of the automated home, and as such are full of technologies that are marked as much by their claims to independence and autonomy as they are by their claims to security and privacy. This article explores the ways in which discourses of independence and autonomy – as instantiated through the example of the Smart Home – represent a contradictory historical shift, one that is structured around a simultaneous movement away from government commitment for the welfare of veterans and a movement towards the promotion of technology as a neoliberal tool for remaking the character of post-service civilian life and private citizenship. Veterans and their civilian counterparts are made dependent on technological devices which offer an illusion of autonomy but are highly orchestrated products of social control through which citizens are spatially and politically isolated.

Keywords: veterans; disability; technology; architecture; neoliberalism

In mid-November 2014, the *New York Times* announced that the US military had begun the process of reducing retirement pay, particularly for those at lower rank (Philipps 2014). Captain Tawanna Jamison, for instance, who has served 22 years in the army but only seven years as an officer, explained that while her officer colleagues could expect retirement pay of \$4500 a month, hers would be cut to less than half that because she had not accumulated enough years to merit the increase. “I could be facing bankruptcy”, she admitted to a reporter. Such cuts have resulted in the degradation of resources that were once promised by the 1944 Servicemen’s Readjustment Act (also known as the GI Bill), the package of benefits and entitlements awarded to retired members of the Armed Forces. This has led many military service personnel, as well as veterans of Iraq and Afghanistan, to admit publicly to increasing financial anxieties as well as emotional and psychological despair in the face of such cuts. As one army captain declared, “They took away who I am”. Such admissions sit awkwardly during an *annus horribilis* of scandals involving post-service care: in June 2014, the US House of Representatives awarded US \$1 million to the Department of Justice to conduct criminal investigations

*Email: dserlin@ucsd.edu

into the deaths of 35 veterans registered with the Veterans Health Administration (VHA) of Phoenix, Arizona, who reportedly died while waiting for treatment. For many, charges of neglect at the Phoenix VHA recalled the February 2007 scandal reported at Walter Reed Army Medical Center by *The Washington Post* in which it was revealed that, as early as 2004, veterans with post-traumatic stress disorder (PTSD) and amputations were living in squalid and even vermin-infested quarters while waiting for adequate medical treatment, highlighting the ethical incommensurability between the rhetoric of national sacrifice and the daily practices of care.¹

Curiously, announcements about the dismantling of support, both financial and institutional, for the long-term care and security of veterans sit in marked contrast with programmes that provide dedicated funds for special housing adaptations and technologies to make independent living possible for disabled veterans. Indeed, following the Walter Reed scandals, many of these grant programmes increased, not decreased, their funding packages. But however much improved, such awards can hardly compete with the juggernaut of privately funded philanthropic organizations that provide new homes for severely disabled (or, as they are sometimes identified, “catastrophically disabled”) veterans of the wars in Iraq and Afghanistan. In 2011, for instance, the Stephen Siller Tunnels to Towers Foundation – inaugurated in memory of Siller, a firefighter who died in the Brooklyn Battery Tunnel en route to the World Trade Center on 11 September 2001 – launched its Building for America’s Bravest programme. The Siller Foundation, the very name of which links 9/11 deaths to the invasion of Iraq as well as to the building of commercial projects like the Freedom Tower in Lower Manhattan, raises funds to create and build customized Smart Homes for quadruple amputees.

Building for America’s Bravest works in conjunction with RISE (Restoring Independence and Supporting Empowerment), a programme initiated in 2011 by the Gary Sinise Foundation, the eponymous charity started by the well-known actor and conservative Republican. Unlike Siller’s bodily sacrifice in the line of duty, however, Sinise credits his commitment to veterans’ causes to his portrayal of Lieutenant Dan Taylor in Robert Zemeckis’s 1994 film *Forrest Gump*, a role for which the character’s double amputee status was produced through computer special effects. A press release from the Sinise Foundation explains that each Smart Home is “customized to ease the day-to-day challenges” of veterans, with features “like retractable cooktops, cabinets and shelving, automated lighting, heating, air-conditioning and window treatments controlled by an iPad, as well as elevators, roll-in bathrooms, front-load washers and dryers, intercom systems, and automated doors,” which promise to “*help restore their independence in countless ways.*”² Corporate donors to the Tunnels to Towers and the Sinise Foundation include American Airlines, Carpet One, Commercial Metals, General Electric, Keystone Electric, Schubert Design, Sysco, and large big-box chains stores, such as Home Depot, that have been associated over the years with cable networks like HGTV and television series like *Extreme Makeover*.

I do not wish to condemn the earnest efforts of those who would seek to make life more comfortable for veterans who have sacrificed their bodies and minds in the line of military duty. But projects like Building for America’s Bravest and RISE, for all of their generosity, displace the responsibility for care that historically has been associated with the Veterans Administration as well as the many local and national charitable organizations that grew out of the ubiquitous presence of service personnel and veterans throughout American life. The irony of using the acronym RISE for beneficiaries who are predominantly wheelchair users notwithstanding, such a project illustrates the enormous gulf that has developed in the early twenty-first century between investment in veterans

through the private sector and divestment in veterans through increasingly austere government policy. The cost of building, designing, and outfitting a brand-new Smart Home is approximately US \$500,000 – half the cost of the investigation into alleged wrongdoing at the Phoenix VHA.

In this essay, I am interested in the ways in which discourses of independence and autonomy – as instantiated through the example of Smart Homes for disabled veterans – represent a contradictory historical shift, one that is structured around a simultaneous movement away from government commitment for the welfare of veterans and a movement towards the promotion of technology as a neoliberal tool for remaking the character of post-service civilian life and private citizenship. The enthusiasm for cutting-edge Smart Home technologies for the disabled gives the broad impression that all deserving veterans will get special attention and care – who, after all, would deny a severely disabled veteran a brand new Smart Home? At the same time, such enthusiasm makes invisible the fact that such homes represent a tiny minority of disabled veterans following their military service; according to Sinise’s RISE website, only 30 Smart Homes will have been built or will have been under construction as of 2014. Consequently, the failure of bureaucratic agencies to care for veterans in a sustained way give credence to the neoliberal philosophy that private philanthropy and private capital are the most expedient ways to address social needs including those of the problems of the returning veteran. The Smart Home is a seductively soporific blanket, one that obscures the less-than-glamorous experiences of a disproportionate number of veterans who have sacrificed themselves in the name of the nation.

Although the capacity for architects and inventors to build home environments that would successfully automate domestic activities (e.g. cooking, cleaning, dishwashing, doing laundry) was first realized in the first decades of the twentieth century – as evidenced in the public’s response to the hugely popular “Electric Home of the Future” exhibit sponsored by General Electric at the 1939 New York World’s Fair – the concept of the Smart Home is a product of Cold War fantasies of domestic engineering and autonomous living.³ Indeed, the etymological link between “automatic” and “autonomous” is not to be trifled with, coinciding as it does with dreams of private home ownership inaugurated by the GI Bill’s mortgage programmes that enabled veterans of World War II to purchase brand-new homes filled with shiny new appliances for the explicit purpose of growing civilian populations and sustaining heteronormative bliss. As Margo Canaday has argued her 2010 book *The Straight State*, the GI Bill was a mechanism to promote and privilege heterosexual family life through the medium of homeownership (Canaday 2012). Those who had been dishonourably discharged for homosexuality, Canaday argues, were not only professionally and socially stigmatized but were prevented from enjoying the same benefits of homeownership, educational allowances, and job retraining as their heterosexual counterparts. Ironic, then, that support for veterans has been significantly diminished in an era when the dismantling of “don’t ask, don’t tell” should have enabled a new generation of openly lesbian, gay, bisexual, and transgender soldiers to engage those benefits and entitlements after 70 years of denied access.

Fantasies of homeownership were also concurrent with fantasies of automated home features that facilitated heterosexual autonomy. The October 1956 issue of *Playboy*, for instance, featured a single bachelor’s apartment (including a bathroom with a mural near the toilet replicating the cave paintings at Lascaux) replete with hi-tech amenities for cooking, washing, garbage disposal, and personal hygiene, all of which made it possible to seduce a woman while keeping one’s all-access pass to heterosexual masculinity fully charged (Playboy’s Penthouse Apartment [1956] 1996). Tempered versions of such fantasies were also fully on display in 1960s cartoons like *The Jetsons*, where even the

availability of a robot maid does not diminish the power of the automated house to take care of household activities with the touch of a button. The energy crisis of the 1970s may have encouraged some homeowners to experiment with energy efficient and do-it-yourself (DIY) technologies like solar panels and composting, but the promise of the automated house could not be kept from the dreams of builders and homeowners looking to seduce consumers with comfort and convenience despite unnecessary and extravagant energy use. Throughout the 1970s and 1980s, in an attempt to capture the interest of upwardly mobile workers and the embrace of newly available domestic technologies of the post-Vietnam era – including programmable microwave ovens and coffee makers, videotape recorders, and cable television – home builders around the United States began promoting early versions of what we would recognize as Smart Homes in newly planned suburban towns and housing developments absorbed into large metropolitan regions. The American Association of Homebuilders coined the term “smart house” in 1984 (Harper 2003).

But the Smart Home speaks to something far more seductive than automated relief from domestic chores. In a military context, the Smart Home relies upon fantasies nourished during the Cold War of the autonomous soldier who has full technological control over his immediate environment. Indeed, one could argue that the Smart Home marketed and sold to families in the postwar era is the civilian counterpart to military-industrial fantasies of technologically controlled and artificially produced synthetic environments, such as underground nuclear bunkers, or laboratories beneath the sea or on the surface of the moon. Certain technologies of consumer convenience, like the radio-controlled garage door opener or the cybernetic armature of the home security system, are examples of the transfer of military technology to the civilian sphere. Today’s Smart Home is made possible by the incorporation of wireless technologies and digital infrastructures that permit users to access security features, heating, ventilation, and air conditioning (HVAC) and water systems, appliances, and even home maintenance via remote control. These cybernetic systems – what makes a Smart Home “smart” in the first place – index both the smartness of the individual and the smartness of the private home, newly reimagined as an impenetrable fortress allied more to containing post-Snowden breaches of personal security and data theft than embracing the Jetsons’ world of labour-saving devices.

More than two decades ago, Andrew Ross observed that the ubiquity of “smart” also references a millennial sensibility embodied in consumer objects:

this is the way things are now when people are reminded that they are going to be outsmarted by virtually everything they come in contact with: smart buildings, smart streets, smart cards, smart drugs, smart fluids, smart food, smart bars, smart kitchens, smart docks, smart tunnels, smart highways, smart money, smart sensors, smartware, smart weapons, smart cars, smart windows, smart yellow pages (everything but smart presidents) (Ross 1993).

The Smart Home is the residence that shelters this new smartness, with room enough to accommodate not only domestic insecurity but also the many cosmopolitan entrepreneurs and hipster app designers who define the “smart economy” and have succeeded where so many others have failed. This must explain why advertisements by service providers for new Smart Home technologies feature neatly polished (and able-bodied) fathers and mothers raising thermostats and securing doors and windows remotely through their dedicated smart phones apps while on vacation.

Smart Homes for disabled veterans are situated at the intersection of these various and discrepant fantasies of the automated home – domestic, consumerist, gendered,

professional, military-industrial – and as such are full of amenities that are marked as much by their claims to independence and autonomy as they are to their claims to security and privacy. While many Smart Homes features for disabled veterans are adapted from assisted-living environments designed and created for hospitals and elder care, they just as easily follow the adaptations of the luxury housing market, manifest in the expansion of hi-tech features for upwardly mobile consumers.

Of course, many of the features associated with the Smart Home design for disabled veterans predate the current moment by decades. The design of lowered countertops and kitchens, support bars for bathtubs, showers, and toilets, and wide hallways that incorporate ramps have been used in the homes of disabled users as a result of activists (many of whom were polio survivors) who helped to spawn the Independent Living Movement in the early 1970s. This was a period during which disability rights activists literally put their bodies on the line, often in harm's way, to protest lack of access to public facilities, transportation, education, and employment (Charlton 1998; Nielsen 2012; Pelka 2012; Fleischer and Zames 2001). Disability rights activists in US cities like Berkeley, Denver, and Seattle worked alongside architects and urban planners, treating public and private spaces as laboratories for experimenting with new architectural and technological approaches to accessibility. In almost all cases, however, when new designs were implemented (if they were implemented at all) it was within existing structures, whether as additions or as renovations. These were typically conducted in modest living arrangements, reflecting the fact that in the late 1960s, many disabled adults in the United States who were not formally institutionalized or cared for by family members lived in group home settings and received supplemental government support.

Contemporary Smart Home design for disabled veterans is not only an example of technological engineering but also – perhaps even more significantly – one of spatial engineering. In 2014, for instance, a Smart Home built in a Pittsburgh suburb for Marine Corps Sergeant Doug Vitale, wounded in Afghanistan in 2001, was announced as a “Colonial-style residence” of 3000 square feet with “an elevator, therapy room, and lift system designed to get [Vitale] from bed to bathroom. He can use an iPad to activate electronic control systems” (Cato 2014). Large open floor plans allow wheelchair users to move between domestic spaces as well as the private space of the bathroom without having to adapt to the constraints of a conventional house layout. Kitchens feature not only central islands typical of suburban kitchens but also computer-controlled appliances and cupboards. Shelves, countertops, and preparation surfaces attached to hidden hydraulic mechanisms can be raised or lowered via wireless command. In the bathroom, a tiled half-wall demarcates bathing space from where an accessible toilet and sink are located. Indeed, Smart Home bathrooms are cavernous by even luxurious suburban American standards, featuring floor-to-ceiling tiled interiors that are large enough for a wheelchair user to bathe him- or herself (or else with assistance from another person) beneath rain shower jets directed from multiple angles.

The scale of these technological and spatial affordances provided by the Smart Home outstrips any resources available through the US Department of Veterans Affairs under the (confusingly similar) granting programmes of Specially Adapted Housing (SAH) and Special Housing Adaptation (SHA). The maximum dollar amount allowable for SAH grants in fiscal year (FY) 2014 was US \$70,465, while the maximum dollar amount allowable for SHA grants in FY 2015 will be \$14,093.⁴ But access to such resources is organized entirely around a calculus of needs assessment that depends on the degree, severity, and even bodily location of the disability in question. For example, an SHA grant “of up to \$50,000 may be awarded for the purpose of adapting a home to meet the needs

of a veteran who has suffered a debilitating service-related injury”.⁵ But the purchase and installation of an elevator (typically in the US \$30,000–40,000 range) might force the veteran to reconsider the initial choice, or forfeit future adaptations, or else seek out non-military loans, family savings, and the generosity of local charities and contractors. Thus, while grant programmes provide support for disabled veterans, those whose disability does not adhere to categories that constitute the designation “severely disabled” must learn to be flexible as well as patient.

By contrast, Smart Homes built for veterans by the Gary Sinise Foundation and the Siller Tunnels to Towers Campaign are not based on typical logistics of adaptation or renovation. Rather, they are brand-new homes, some costing as much as half a million dollars, styled along the aesthetic of the McMansion. Speaking at the dedication of retired Marine Sergeant and triple amputee veteran Michael Nicholson’s new Smart Home in Tampa, Sinise declared that Nicholson “will be able to live *a more independent life style* which will, in turn, enable him to lead *the best life possible*.”⁶ The Smart Home is thus imagined not just as a medium for independent living but a medium for achieving (or at least giving the appearance of) a particular kind of middle-class lifestyle that is presumptively normalized as the basis for imagining the modern American citizen and the “best life possible”. Indeed, one could argue that, in a post-Cold War context, the Smart Home works to contain imperial anxieties about the scale and scope of American lifestyle as well as its gendered, racial, and class character, even while fundamentally exacerbating those anxieties. Hydraulic shelves, disguised as regular kitchen amenities and raised and lowered by iPads, may serve symbolically as devices for encouraging users to live “the best life possible” by keeping those anxieties hidden.

To a great extent, the symbolic and material functions of the Smart Home for disabled veterans are resonant with the long-term use of compensatory technologies in the service of recuperating functionality for those living with a disability. This is one of the central tropes of industrial modernity. Significantly, however, it is also a fundamental part of the arsenal of visual images associated with disabled men, both contemporary and historical. Images of disabled veterans and industrial workers shown in “before” poses with radical amputations and “after” poses with new prosthetic devices, for example, have been important rhetorical tools for rehabilitating public attitudes towards disabled masculinity since the invention of photography in the mid-nineteenth century (Serlin 2006). Similarly, images of disabled men aiming crossbows or playing basketball have appeared for decades on national postage stamps, long before the emergence of international sporting competitions like the Paralympics (Klein, Swan, Meade, Serlin 2006). These are artefacts of an enormous visual archive devoted to the recuperation and preservation of masculine power that effectively articulates what the late Australian journalist and disability activist Stella Young called “inspiration porn”: the idea that such images, framed by sentimental and feel-good motivational rhetoric, have the dual function of making the nondisabled feel better about themselves while simultaneously holding the average disabled person to an impossibly high standard (Young 2012). The Smart Home is arguably but one more example of this kind of inspiration porn, which, when combined with the ubiquitous porn of home improvement and interior design envy, reveals how contemporary culture compensates for disability by redirecting the tools of ownership over one’s body to recover one’s damaged masculinity.

Despite such rhetorical appeals to inspiration, the psychic weight that damaged masculinity places on the social imagination cannot be overestimated, particularly in a volatile historical moment grappling with the long-term care of physically and psychologically traumatized veterans. As retired service members, disabled veterans take up (or are

expected to take up) domestic space in a different way than their nondisabled counterparts do. It is no coincidence that the concepts of independence and autonomy, physically embodied in claims to personal space, permeate both military and post-military service. Taking up space – that is, the presumptive ownership of space – by virtue of one’s gender is typically accorded a natural entitlement in institutions like the military that depend upon and privilege conventional expressions of heterosexual masculinity. And yet taking up space, the burden of heterosexual masculinity’s *noblesse oblige*, is also exactly the opposite of how we have come to understand the disenfranchisement of those – such as women, children, the elderly, the poor, and the disabled – who merely “take up space”. Through the interventions of rehabilitation medicine and philanthropy, veterans are deployed within other domestic arrangements in which they are deliberately positioned to take up and embody space in order so that they do not merely “take up space”, a status that is dialectically linked to the “space” they occupy in political discourse.

But the impact that the disabled veteran – especially the severely disabled veteran – has on how we understand public and private space is never a *fait accompli*. Taking up space can be either a passive or an active phenomenon, capable of creating something that either confirms or else subverts or transforms the conventions of masculinity altogether. In 2004, for instance, the photojournalist Nina Berman published a series of controversial portraits of recent veterans in her book *Purple Hearts: Back from Iraq* (Berman 2004).⁷ Berman’s photographs highlight the difference between the technological bounties associated with the aftermath of war, as promoted during George W. Bush’s presidency, and the unglamorous and often painful lives of veterans readjusting to civilian life. In Berman’s work, many of the veterans – both those with visible and those with invisible disabilities – live within group homes, rehabilitation centres, and in modest apartments, where domestic life revolves around makeshift technologies and second-hand prosthetics (if they exist at all). These are disabled male bodies that do not follow easy inspirational scripts of heroism, whose daily lives introduce the uncomfortable realities of economic and racial differences in the rehabilitation process that are typically erased or disavowed by the media’s focus on Smart Homes occupied by wounded warriors.

Shorn of its technological accessories, disability is perceived to communicate weakness, frailty, effeminacy, and even anti-sociality. By contrast, Berman’s work reclaims space for the social experiences of veteran experience without the pornographic appeal of technological accessories. These are spaces – personal, domestic, social – that inspire different models of disabled embodiment as well as disabled masculinity, often forged in the shared experience of convalescence and mutual dependence. These are powerful, and empowering, forms of taking up space, particularly for veterans and their families whose physical and psychic traumas rarely, if ever, take up space beyond the pages of an op-ed column.

Some scholars in disability studies have pointed to the ways in which the rise in technological resources for people with disabilities has redefined disabled access to the public sphere and the private spaces of the home (Hamraie 2012; Imrie 1996; Williamson 2011). But one could argue that Smart Home technologies do not redefine disabled access for the disabled veteran; rather, the forms of technological mediation available through the Smart Home merely extend the shelf life of the automated, cybernetic, and wireless communication and defence technologies to which members of the modern military are already well acclimated. Technology is the central and ineluctable medium of continuity through which modern military experience is fully realized – a medium that simultaneously integrates and isolates service members and veterans alike within larger networks that exceed their individual capacities. In this sense, veterans, like

their civilian counterparts, are made technologically dependent on devices and networks that provide the illusion of autonomy but in fact are highly orchestrated and technologically mediated products of social control. The disabled veteran may in fact be the test case model for all future citizens who are socially and technologically networked through the conveniences of the private home as their compensation for being spatially and politically isolated.

Until recently, the military was one of the last examples – along with academia, civil service, and certain sectors of organized labour – of a professional career path for which one’s long-term commitment would be rewarded with generous benefits, secure pensions, and seemingly unlimited resources of care. The shifting tides of neoliberal economic policy, however, have encouraged the military to join the private sector in embracing contract employees and automated technologies, substituting the culture of the “Band of Brothers” with the “Army of One.” There are severe consequences to the military’s move to wean nearly four generations of service personnel and veterans off of the government teat. But the most pernicious result of this now-familiar and intransigent embrace of the logics of austerity is the sustained breakdown and corruption of institutions and services of caregiving. The irony of the Smart Home is that it is designed for the most vulnerable members of an institution whose *raison d’être* has been defined by the concepts of cohesion, brotherhood, and the collective will – a position that was invoked for two decades in defence of “don’t ask, don’t tell” as military policy. It is as if what the military values in the realm of training and combat cannot be transferred to the realm of the private individual or the domestic sphere.

Within such an environment, the novelty and seduction of technologies associated with the Smart Home jettison the larger social and political questions about the failure by the military to take care of all of the members of its family on an equal basis. This technological bounty not only shelters the military’s imperial ambitions – we can restore that which we destroy – but also indulges in sentimental feelings that link the comfort and care of the disabled veteran not to the Department of Veterans Affairs but to corporate sponsorship. Many veterans who lose limbs or eyes and ears are invited to take part in a government-sponsored culture of rehabilitation that celebrates the cutting edge of technological innovations like prosthetic devices and neural implants. But the Smart Home, sanctioned not by the government but by private philanthropy, is proffered as the ultimate compensation for military service – a reward available to the unluckiest. The appeal of the Smart Home, the domestic version of inspiration porn, is thickened by the emulsifying agent of untroubled patriotism, the reductive qualities of which both disguise and displace the larger political economies of war.

Acknowledgements

For thoughtful comments and assistance on earlier drafts of this essay, thanks to Rachel Adams, Aaron Belkin, Aimi Hamraie, Louise Hickman, and Brian Selznick.

Notes

1. For an impressive collection of materials related to the Walter Reed scandal, see the online archive of documents at <http://www.washingtonpost.com/wp-dyn/content/article/2007/10/22/AR2007102201183.html> (last accessed 8 December 2014).
2. RISE website, <http://www.garysinisefoundation.org/programs/restoring-independence-supporting-empowerment> (last accessed 8 December 2014), italics mine.

3. For an example of contemporary enthusiasm for the exhibit, see the cover story “The Electric Home of the Future,” *Popular Mechanics* 72:2 (August 1939).
4. For further information related to special adaptive housing for disabled veterans, see the US Department of Veterans Affairs web portal, <http://www.benefits.va.gov/homeloans/adapted-housing.asp> (last accessed 8 December 2014).
5. Quoted from the US Department of Veterans Affairs web portal, <http://www.benefits.va.gov/homeloans/adaptedhousing.asp> (last accessed 8 December 2014).
6. Sinise, quoted in “‘Building for America’s Bravest’ Dedicates ‘Smart Home’ to Local Wounded Veteran Michael Nicholson,” RISE press release (9 January 2014), at <http://www.garysinisefoundation.org/press-releases/%E2%80%9Cbuilding-america%E2%80%99s-bravest%E2%80%9D-dedicates-%E2%80%98smart-home%E2%80%99-local-wounded-veteran-michael> (last accessed 8 December 2014), italics mine.
7. See also Berman’s online catalogue of photographs and interviews associated with the Purple Hearts project, <http://www.purpleheartsbook.com/> (last accessed 8 December 2014).

References

- Playboy’s Penthouse Apartment. (1956) 1996. Reprinted in Joel Sanders (Ed), *Stud: Architectures of Masculinity*. 54–67. New York: Princeton Architectural Press.
- Berman, N. 2004. *Purple Hearts: Back from Iraq*. London: Trolley Books.
- Canada, M. 2012. *The Straight State: Sexuality and Citizenship in Twentieth-Century America*. Princeton: Princeton University Press.
- Cato, J. 2014. “Wounded Marine Corps Veteran to Get Keys to ‘Smart Home’ in Peters.” *Pittsburgh Tribune*, July 3. Accessed December 8, 2014. <http://triblive.com/mobile/6315458-96/vitale-marine-corps>
- Charlton, J. 1998. *Nothing About Us Without Us: Disability Oppression and Empowerment*. Berkeley: University of California Press.
- Fleischer, D. Z., and F. Zames. 2001. *The Disability Rights Movement: From Charity to Confrontation*. Philadelphia: Temple University Press.
- Hamraie, A. 2012. “Universal Design Research as a New Materialist Practice.” *Disability Studies Quarterly* 32 (4). Accessed December 8, 2014. <http://dsq-sds.org/article/view/3246/3185>.
- Harper, R. 2003. *Inside the Smart Home*. esp.18–19. New York, NY: Springer.
- Imrie, R. 1996. *Disability and the City*. London: Sage.
- Klein, J., G. Swan, T. Meade, and D. Serlin. 2006. “Licking Disability: Reflections on the Politics of Postage Stamps.” *Radical History Review* 94 (Winter 2006), 228–232.
- Nielsen, K. 2012. *A Disability History of the United States*. Boston, MA: Beacon.
- Pelka, F. 2012. *What We Have Done: An Oral History of the Disability Rights Movement*. Amherst: University of Massachusetts Press.
- Phillips, D. 2014. “Army Cuts Hit Officers Hard, Especially Ones Up From Ranks.” *New York Times*, November 14, 2014, A2.
- Ross, A. 1993. “The New Smartness.” *Science as Culture* 4 (1): 94–109. doi:10.1080/09505439309526375.
- Serlin, D. 2006. “Disability, Masculinity, and the Prosthetics of War, 1945–2005.” In *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future*, edited by M. Smith and J. Morra, 155–183. Cambridge, MA: MIT Press.
- Williamson, B. 2011. “The Right to Design: Disability and Access in the United States, 1945–1990” PhD diss., Department of History, University of Delaware.
- Young, S. 2012. “We’re Not Here for Your Inspiration.” *The Drum*, July 3. Accessed December 8, 2014. <http://www.abc.net.au/news/2012-07-03/young-inspiration-porn/4107006>.