Sandra Becker

Beyond the (Ka)Boom: Nostalgia, Gender and Moral Concerns in the Quality TV Series *Manhattan*

The proclamation of "[t]elevision {being} the atomic bomb of culture" (first NBC vice president John F. Royal, qtd. in Anderson 93) in the wake of both the commercial medium of television and the development of the first atomic bomb in the Manhattan Project, was long forgotten in the post-Cold War, twenty-first century. 2019, instead, saw the celebration of HBO's nuclear disaster miniseries *Chernobyl*, breaking series' rating records and leading the end-of-the-year rankings (see Spangler; Seale).[1] The five-episode long, dramatized portrayal of the nuclear accident at the Ukrainian power plant near Pripyat on April 26, 1986, not only received wide critical acclaim (including ten Emmys and two Golden Globes), but brought back the dangers of nuclear energy, contamination and state secrecies to the small screens and into the lives and minds of millions of viewers in the US and around the world. While standing out in many regards, the historical drama series is by no means the only show addressing atomic energy and its hazards: US TV series like *Mutant Ninja Turtles* (1987-1996), *The Simpsons* (1989-present) particularly with its three-eyed fish "Blinky" (season 2, episode 4), as well as the recent Netflix 1980s set series *Dark* (2017-2020) and the third season of *Stranger Things* (2019), feature themes like nuclear energy, power plants and nuclear waste as a threat or source of mutations, evil, or perilous travel through time and into parallel worlds. While the first two examples can be traced back to lingering fears after the Chernobyl disaster (Falkof 932), the latter two can be regarded as a mix of heightened awareness of the risks that come with nuclear energy after the 2011 Fukushima Daichii nuclear disaster, of human-caused damages to climate and nature and of the 1980s nostalgia that awoke in the late-2010s.

Aside from the widely discussed 1983 ABC television drama *The Day After* (Baur 323-25; Harvey, 117-42; Walker 285), scholars have likewise often overlooked the plethora of twenty-first-century fictional TV series involving nuclear bombs. These have been booming in the widely celebrated age of so-called Quality TV. The term 'Quality TV' is used by journalists and scholars – similarly to Prestige TV, Complex TV or Transgressive Television –, to describe early-2000s original, cable channel produced fictional TV drama series, that helped resurrect the medium of television after its believed near demise in the digital age (see McCabe and Akass; Mittell; Däwes et al.). Although the twenty-first century was "not the apocalypse" (Tay and Turner 31) for television, those series that helped the medium escape its prophesied end frequently featured references to the atomic bomb and echo the apocalyptic nuclear fears of the previous century. *The West Wing* (NBC, 1999-2006; season 2, episode 9) and *24* (Fox, 2002-2003; season 2), for instance, both featured an episode or even whole seasons on nuclear bombs and terrorism. In *Jericho* (CBS, 2006-2008), *Battlestar Galactica* (Syfy, 2004-2009), and *The Handmaid's Tale* (Hulu, 2017-present) atomic bombs or nuclear wars are forming the backdrop for post-apocalyptic stories and dystopian scenarios, while a nuclear bomb served a double-role as both catalyst for and relief from the vampire virus-based apocalypse in the FX series *The Strain* (2014-2017) by Mexican filmmaker Guillermo Del Toro.[2] In *Heroes* (NBC, 2006-2010), the main storyline of its first season revolved around a future nuclear explosion of an atomic bomb in New York City, which the superpowered protagonists try to stop from happening.[3] The alternate story-worlds of Amazon's *The Man in the High Castle* (2015-2019) and HBO's miniseries *Watchmen* (2019), on the contrary, reflected on the post-WWII nuclear age and the Cold War, with their protagonists trying to avoid the potential use of the A-bomb.

The WGN America series *Manhattan* (2014-2015), also advertised as *Manh(a)ttan*, departs from these well-established apocalyptic or dystopian themes around the bomb in US television series (see Wissner, "TV and the Bomb").[4] Presenting its viewers with a fictional account of the real-life, secret, US government financed Manhattan Project during WWII (1939-1946), the historic drama goes back to the origin of the bomb itself. This circumstance promotes a shift back to early-1940s fears of technological

advancement and to the people who created the first atomic bombs, asking whether they should be regarded as monsters of mass destruction or "great men" heroically ending the war. This is not to say that later Cold War fears of human annihilation and the apocalypse (such as that of mad, perverse scientists like Stanley Kubrick's *Dr. Strangelove*) are entirely unrelated to those addressed in *Manhattan*, nor that the series' narrative has not been influenced by earlier accounts of nuclear weapons in US TV, film and pop culture.[5] But if HBO's successful miniseries *Chernobyl* is said to reflect on today's post-truth age in the United States under its 45th president Donald J. Trump and the worldwide rise of right-wing populism (Westmore 19), the often-overlooked, short-run Quality TV series *Manhattan* should be valued, this article argues, for its critical take on questions about (toxic) masculinity and specifically on what defines "great men" in history.[6] The notion "toxic masculinity," that has gained significant journalistic and scholarly attention since the #MeToo-movement in 2017-2018, in this context should not be understood as a sexually virile and violent form of masculinity prone to sexual assault, but as a power-hungry, competitive and violent form that endorses "technology, soldiering, [and] nuclear weaponry" (Hultman and Pulé 193). By having *Manhattan*'s white, male protagonists questioning what constitutes "great men," how" to best end WWII and whether the bomb actually offers an ethically acceptable solution, while also including the life stories, voices and actions of minorities, the series does unintentionally continue the critical analysis of "toxic (white) masculinity" that the US activist, Shepherd Bliss, started, when introducing the term during the 1980s Mythopoetic Men's Movement; not in search of an "ecologically inspired masculine ontology" (193), but a critical form of atomic nostalgia beyond the celebration of white, male genius and a nuclear super power.

The Manhattan Project itself – referring to the secret efforts of scientists in an officially non-existent location in Los Alamos, New Mexico, to build the first atomic bomb – may not appear at first glance as a fit story for a *critical* period drama; nor do pre-1960s period dramas themselves to many critics. Internationally acclaimed period dramas like *Mad Men* (AMC, 2007-2015) and the British Cold War espionage series *The Hours* (BBC Two, 2011-2012) have at times been accused of returning to a pre-1960s

era to justify the reproduction of the blatant sexism and racism of the time before the Civil Rights and Women's movements – and hence, to feed a white, male nostalgia (Ferrucci, Shoenberger, and Schauster 100; Vineyard).

In the case of *Manhattan*, another form of nostalgia seems even more likely: what the American sociologist Lindsey A. Freeman has called, in a different context, "atomic nostalgia," "a new form of longing, a distinctively American, post-nuclear, industrial-scientific vision of a lost utopia," that "rests in a mostly conservative and celebratory grove" (10) of American greatness and democratic power ensuring freedom. This form of nostalgia seems particularly intense in the political and cultural *Zeitgeist* of the contemporary United States, in which the series was produced. Take, for example, the ongoing fascination with the immediate post-WWII years of the Fifties of the current US President and his proclaimed aspiration to "Make America Great Again." The latter represents, as Tim Engles points out, "a form of nostalgia that was particularly appealing to white men" and thus expresses the desire to return to a "fantasized past" of "unchallenged white male dominance" (1). The wide appeal of Donald J. Trump's celebratory political rhetoric of greatness, technological advancement, conservative values and masculine virility reveals a wider "restorative nostalgia" in US society; a form of nostalgia that, as Svetlana Boym notes, understands itself "as truth and tradition" (xvii) and commonly advocates for a patriarchal gender order (Engles 1; Doane and Hodges 3). It stretches far beyond the atomic nostalgia that Freeman's study ascribes to former historic sites of the Manhattan Project and museums as well as "the Whiteness of the bomb" that Ken Cooper detects in the Manhattan Project memory culture; one that is centered around the white male narrative of "'Oppenheimer's Baby'" (80) and "the separate-but-equal histories of postwar American politics, with the rubric of 'Cold War' on the one hand and 'Civil Rights' on the other" (81).[7] In this light, the surplus of pre-1960s period dramas appears symptomatic of a profoundly nostalgic age, both in fictional TV and in the real-life nuclear world longing for a lost past of US greatness and unquestioned white, male dominance.

WGN America's series *Manhattan* is of interest because it counters this nostalgia, even though its story is loosely based on the historic Manhattan

project. The series not only differs from earlier audiovisual accounts of nuclear bombs and the overall atomic memory culture in the US addressed by Freeman, but also in its portrayal of men, women and minorities from the supposedly sexist, racist storylines of other celebrated period dramas. This article thus argues that *Manhattan* not only adheres to an "anti-nostalgic mood," but that it devotes equal screen time to male and female concerns and reflections on their lives, giving voice to the subaltern and social issues that are often left out.[8] This is not to say that its cast is not predominantly white. But by showing inequalities due to sexism and racism and giving the respective discriminated characters a voice, background stories, and screen time for development, *Manhattan* is a step towards a liberal defense of certain progressive notions threatened by Trumpian nostalgia and hence towards often-claimed criticality of early-2000s Quality TV series. Before turning to the series and its reflective form of nostalgia, it is important to reflect upon the intertwined history of the two "white" technologies (K. Cooper 80-84, 92-93, 95; Dyer 84).

Starting with Fear and a Kaboom: Parallels in the History of Television and the A-bomb

> April 30 – President Franklin Delano Roosevelt gives a speech to open the New York World's Fair and become the country's first president to appear on television. The National Broadcasting Cooperation (NBC), owned by RCA, broadcasts the ceremony, thus becoming the first television network in the US to begin regular broadcasting. […]
> August 2 – Albert Einstein writes President Roosevelt about developing an atomic bomb and the idea for the Manhattan Project is born. […]
> September 1 – Nazi Germany invades Poland, beginning World War II in Europe.
> (Grimes and Steiner 371)

This list of events from 1939, compiled by the two television industry veterans J. Williams Grimes and Ron Steiner, indicates how historically interwoven the development of the two then-nascent technologies, TV and the atomic bomb, are. That fact remains a surprising lacuna in TV Studies,

with accounts of the history of television in the United States commonly focusing on early fictional TV content and the establishment of the three networks, NBC (National Broadcasting Company, 1939), CBS (Columbia Broadcast System, 1941), and ABC (American Broadcasting Company, 1948) out of the former radio stations (Lotz 22-23). This is all the more surprising, given the rhetorical fallout this historical interweaving had in discourses on the medium of television in the US context. About twenty years after NBC's first vice-president John F. Royal proclaimed "[t]elevision is the atomic bomb of culture" (qtd. in Anderson 93), the chairman of the FCC, Newton N. Minow, gave a speech at the meeting of the National Association of Broadcasters in Washington, DC, on May 9, 1961, in which he equated the "age of television" with "the atomic age":

> Ours has been called the jet age, the atomic age, the space age. It is also, I submit, the television age. And just as history will decide whether the leaders of today's world employed the atom to destroy the world or rebuild it for mankind's benefit, so will history decide whether today's broadcasters employed their powerful voice to enrich the people or debase them. (397)

While the medium has often been criticized for its triviality and dangerous celebration of pure entertainment (Postman 80), other scholars countered it by referring to the boomers' need for comedy:

> The unspeakable horror that palpable Armageddon conjures for the rational mind makes comedy particularly appealing. Under the threat of faceless end-of-the-world button pushing, there is an honest urge, if not responsibility, […] to find a use for the static energies of cynicism. The bomb itself is best written into daily consciousness as a kind of punch line to history. (Marc 148)

Beyond the historical circumstance and its long-lasting rhetorical effects, the two technologies overlap in other ways too. Both were developed and tested in parallel as weapons of war and surveillance during and post-WWII. As TV scholar Lynn Spigel writes, television was used "as a surveillance and reconnaissance weapon during World War II" (47). Having started the first research into airborne television technology as early as 1935, the Radio Corporation of America (RCA) – and owner of

NBC (Grimes and Steiner 371) – teamed up with the Office of Scientific Research and Development (OSRD) after 1941 (Abramson 3). The OSRD was the same federal government agency that set up the Manhattan Project together with the war department in 1942. Next to the mobile RCA Image Orthicon for aircraft-based, long-distance intelligence gathering, particular effort was put into the development of the so-called Mimo-Miniature Image Orthicon, a 50-pound light-weight camera "to be mounted in the army ROC high angle radio-controlled bomb made by the Douglas Aircraft : 'Company' (Allen 113; Abramson 5, 8)." As Spigel mentions, the public had been made aware of the fact that television technology was used for military purposes since the 1930s and was offered details on it in postwar "men's magazines on science and mechanics (47)." While this information might have potentially added to the already existing fear of some to allow "the new technology 'television'" into their homes, it also added to the new interest in science and technology. Historian Elaine Tyler May, in this context, points out that the dropping of the atomic bombs on Hiroshima and Nagasaki in August 1945, not only marked the beginning of the Cold War and the "atomic age," but also "the era of the expert" (29) or – as Paul Boyer writes – the age of the "atomic scientists" (47-106), whom US citizens looked up to for guidance on how to manage their lives and fears of the potential annihilation of humanity.

The post-WW II domestic ideal of the nuclear family life in the suburbs equally goes back to the Manhattan project scientists, WWII and television; a fact that the *Manhattan*'s show-runner, Sam Shaw, has acknowledged in interviews (see Kenneally; VanDerWerff). The new suburban family domicile and the nuclear TV families of the Andersons of *Father Knows Best* (CBS/NBC, 1954-1960) and the Nelsons of *The Adventures of Ozzie and Harriet* (ABC, 1952-1966) were both an expression of and a distraction from nuclear anxieties (May 26, 138-39). As historian Elaine Tyler May points out, the government-supported move away from the big cities as potential target areas for a nuclear attack to the suburbs goes back to the recommendations of the *Bulletin of the Atomic Scientist* on "defense through decentralization" (161).[9] Initiated by the Atomic scientists of the Manhattan Project, like the biophysicist and founder of the *Bulletin of the Atomic Scientist* Eugene Rabinowitch, "the earliest planned

suburban communities in the US," as Shaw points out, "were modeled off Los Alamos, [meaning] that the very nature of modern America [had been] constructed out in that desert in the early 1940s" (indirectly qtd. in VanDerWerff).

Federal financial support encouraged the move to new suburbs like Levittown. The Veterans Administration (VA) program created under the 1944 Servicemen's Readjustment Act (or GI Bill of Rights) provided mortgage insurance for white veterans, enabling them to buy a single-family house for them and their newly united, nuclear families in the suburbs (May 161). Only two years after the GI Bill passed, the majority of white families in the United States lived in their own, single-family homes (162). This was followed by a rapid increase of households with TV access: Between 1946 and 1950, the "[n]ational penetration rates for television rose from 0.2 percent [...] to 9 percent" (Spigel 32); and "by the 1950s, televisions were selling at a rate of over 5 million" (May 163). With the move from radio to TV of both audiences and programming, the early radio show-based, urban ethnic working-class sitcoms like *Mama* (CBS, 1949-1957) and *The Goldbergs* (NBC/CBS, 1929-1956) became more nuclear family-centered on television, in accordance with the ideology of the "new melting pot" of the suburbs (Lipsitz 356; Whyte, qtd. in May 28). American studies scholar George Lipsitz argues that these shows solely served the purpose "to explain and legitimate fundamentally new social relations" (362) after WWII. Apart from mentions in scholarly works on family portrayals in US TV series by Lipsitz, Cantor, Brooks and Taylor (26), these ethnic working-class series seem to be almost absent from the collective memory of the 1950s USA; strongly influenced by the white, suburban sitcom families of the Andersons, Nelsons and Co. with their authoritative, breadwinning "super-dad[s]" (Cantor 210) and stay-at-home mothers (see Douglas).

In contrast to the strong presence of nuclear sitcom families and the first nuclear-themed Sci-Fi series, the live broadcasted atomic bomb tests of the early 1950s are surprisingly less present in both the works of scholars and the cultural memory in the US. Long before the first episode of the Sci-Fi series *The Twilight Zone* (CBS, 1959-1962) aired, "the first one to show the atomic bomb being dropped on US soil" (Presnell and McGee 40; see also

Wissner, "TV and the Bomb"), "television became the preferred medium for representing the spectacle of atomic blast once nuclear weapons testing began within the borders of the United States in 1951" (Anderson 93). The television set not only took over the role as central "family room" furniture (Spigel 39) that propagated the consumption-based, white nuclear family, but it offered a space for both the "thrill of atomic empowerment" (25) and "the efforts […] to tame or 'domesticate' the fear" (26), to borrow the words from May's summary of the changing attitude towards the bomb from the 1940s to the 1950s. These juxtaposed tendencies can be traced in the telecasted transmission of nuclear bomb tests between 1951 and 1953. The very first live broadcasting of an atomic bomb test took place on February 6, 1951, at 5:30 A.M. (PDT). It was an unauthorized, clandestine undertaking by the employees of the Los Angeles stations KTLA and KTTV, who had positioned their camera on top of a Las Vegas hotel and aired the pictures live via their transmitter at the 200 miles away Mount Wilson Observatory (see Hart; Doherty 8). As KTLA reporter Stan Chambers recalls:

> We couldn't get near the field, because it was all top secret. Klaus [Landsberg, station manager] sent a crew to Las Vegas and put them on top of one of the hotels […] They kept the camera open for the flash of light that would come on when the blast went off […] We stayed on the air, they waited for the right time, and all of a sudden there was the flash. The people watched it, Gil [Martin, newsman in Las Vegas] described it, [Robin] Lane [station staff at Mount Wilson] talked about it, and that was our telecast. That one flash. You just see this blinding white light. It didn't seem real. (qtd. in Hart)

The record audience number for this early morning live telecast that Chambers reports, is a demonstration of the thrill and interest both in the bomb and the new medium of television.

In order to feed the hunger for information and to tame and further domesticate the two technologies, the following tests at the Nevada Proving Grounds (better known today as Nevada National Security Site, NNSS) were broadcasted across the whole of the US (Doherty 9-10; "Miss Atom Bomb"). The broadcasted tests from the so-called Operation Tumbler-Snapper test series took place on April 22, 1952 and those from

the Operation Upshot-Knothole test series on March 17, 1953 at Yucca Flat, Nevada (Doherty 9). While the first of these official tests turned out to be a failure, due to the orthicon tube of the camera being damaged from the intense brightness of the blast, leaving audiences hearing merely a "bomb away" before the screen blackened almost completely, the second test was set-up with care by the Atomic Energy Commission (AEC) and the Federal Defense Administration (FDA) (Doherty 9). The FDA had joined the atomic weaponry test operations in fall 1951 and under the name project "Operation Doorstep" (Eden 166) set up a "Doom Town" (Doherty 10) for the test on March 17, 1953, featuring "two wood-frame houses, eight backyard shelters, and 'fifty automobiles of various types, colors, and operating conditions'" (166). "The tremendous atomic burst over Doom Town in Nevada," as historian Thomas Doherty quotes a reporter, was not only a made-for-TV event about the marvels of technological advancement in the nuclear age, but brought the mushroom cloud and the potential effects of an atomic blast from the door step of a suburban home into the "family room" via its central piece of furniture, the TV set (Spigel 39).[10] All three big networks NBC (Morgan Beatty), CBS (Walter Cronkite) and ABC (Chet Huntley) had reports together with the military at the official observation site and ran repetitions of the live-program (Doherty 10). These telecasted atomic bomb tests thus set off an "atomic fever" (or rather "atomic numbing") that celebrated and consolidated the acceptance of both technologies ("Miss Atom Bomb" n. pag.; Lifton, qtd. in May 26), but also a number of more "unrealistic but reassuring civil defense strategies" (May 26) that documentaries like *The Atomic Cafe* (1982) and episodes like *Masters of Sex*'s episode "Fallout" (season 1, episode 10) make fun of.

Beyond the Ka(boom): Anti-Nostalgic Elements in the Portrayal of Gender and Technologic Concerns in *Manhattan*

> From this expanse of solitude, a great secret is soon to be revealed to the whole of man. At the dawn of 1945, great minds toil sleeplessly. Their tools, the very principles of the universe. Their aim, nothing less than a lasting peace for the world entire. [...] It would be a hulking task for a deity. But these are not

> gods. These are mortals. These are men. They have hopes and dreams, needs and desires. They have fears and misgivings for what the future may hold. […] They are the makers of a coming history we are all headed toward. […] History is too often not what happened, but what was recorded. A lie set down on paper with wet ink becomes a truth when dry. […] Such is the case of this history, here in the quiet desert. Here we find men whose achievements will be snatched for the glory of others, whose sacrifices will be forgotten as detritus. […] The cleanest telling would draw one great man in whom we could find a teachable narrative, an exemplar of what, should we give it our all, we could become. […] But those stories are myths. This is, as best I understand, that honest story. It is not simple, and few emerge untarnished. It is a story of the unknowable future and all the gnarled turns the present takes on its journey toward the world of tomorrow. (Journalist Woodrow Lorentzen in *Manhattan*, season 2, episode 5, "The World of Tomorrow")

The short-run TV series *Manhattan* tells in twenty-three episodes spread over two seasons a fictional account of the life and work of the nuclear scientists at the secret facility of the Manhattan Project at Los Alamos, New Mexico (1939-1946). It is produced by show-runner Sam Shaw (screen writer for *Masters of Sex*) and executive producer and director Thomas Schlamme (director for episodes of *West Wing* and *The Americans*) and aired between July 27, 2014 and December 15, 2015 on the basic cable channel WGN America. Even though it received an Emmy for its main-title design in 2015, produced by Imaginary Forces (the creative minds behind the Emmy-winning title of Netflix's *Stranger Things*), it was ultimately cancelled due to low audience numbers (see Rose).[11] The narrative of its first season starts on July 2, 1943; a day marked by "61 Countries At War/ More Than 40 Million Casualties/ 766 Days Before Hiroshima" as is stated in letters on the screen in the very first minutes of episode one (season 1, episode 1). While thus centered around historic facts and featuring historical figures like Leslie R. Groves and Robert Oppenheimer, its story revolves around the fictional scientists Frank Winter (John Benjamin Hickey) and Charlie Isaacs (Ashley Zukerman). Winter is the head of the Implosion Group, one of two teams of scientists in a race against each other and Nazi Germany in building the first atomic bomb. Isaacs has been recruited for Reed Akley's (David Harbour) team working on a gun

type atomic bomb called "Thin Man." He only learns about the real aim of his new job at what has been advertised to him as a governmental project for scientists at "Harvard with sand" (season 1, episode 1) once he and his wife Abby (Rachel Brosnahan) and son Joey arrive at PO Box 1663. Being terrified by the task itself, Charlie soon comes to realize that project "Thin Man" will not work. Against the rules of secrecy and compartmentalization at the military camp on "the Hill," Charlie approaches Frank and secretly teams up with him to advance the implosion bomb model. Once their secret activities are uncovered, Akley commits suicide and Frank takes on all the blame for Charlie's and his enterprise. Being completely cast out from the work of their husbands, Charlie's wife Abby and Frank's wife Liza (Olivia Williams) create their own carrier path and secrets. The second season focuses on the last year before the Trinity Test on July 16, 1945 – "21 Days Before Hiroshima" (season 2, episode 1). Accompanied by Frank Sinatra's song "This is the beginning of the end," the viewer learns about how Charlie has restructured the project and become one of its fiercest supporters. Frank and others though lose their faith, trying to sabotage the testing of the implosion bomb "Little Man;" "Unaware that on the eve of the Trinity Test 'Fat Man,' the optimized sibling of 'Thin Man,' had already been shipped to the Pacific Theater; Frank and the others lose their faith, trying to sabotage the testing of the implosion bomb 'Little Man.'"

Apart from the clearly gendered nature of the project reflected in the non-fictional names of the bombs Thin, Fat and Little Man, the first quarter of the series frequently features rhetoric around masculine virility, ranging from the competitive, complicated relationship between Charlie Isaacs and Frank Winter to that among the male members of Winter's research team who vie with each other for women's favor. In an argument, Isaacs, for instance, compares Winter to his imprisoned father, who used to take him along when he went out gambling: "[…] [T]he most pathetic part [is] […] that he was *never man enough* to admit to himself that he was a sinking ship" (season 1, episode 2). Not being "man enough" is clearly an attack on Winter's masculinity, indirectly questioning his ability to lead a scientific research project. Winter's team members Jim Meeks (Christopher Denham) and Paul Crosley (Harry Lloyd) follow a similar rhetorical pattern. When Meeks asks Crosley why it is him who has to do

the risky job of carrying the TNT to the explosion test site, Crosley says it is because he has no children. Meeks counters that neither does Paul have children, to which Paul answers, showing off his macho male virility and his previous successes with dating women at the camp: "No, but there's a chance I will" (season 1, episode 1). Masculinity and male genius are also central to Reed Akley's motivational speech to Isaacs. Trying to appeal to his assumed masculine drive towards competition, Akley tells him that he is a "once-in-a-generation mind" and that he is "competing with" Werner Heisenberg, "the world's most brilliant scientific mind [...] running Hitler's bomb project" (season 1, episode 3). In the same vein, J. Robert Oppenheimer (Daniel London) tells Winter when rejecting the request to grant the implosion group more equipment and man power to develop a bomb twelve weeks ahead of Akley's team that: "A man is made by his belief. As he believes, so he is. The Army believes in the Thin Man" (season 1, episode 3). The talk about masculine genius and virility is in fact taken to its extreme, when Winter's mentor and friend Glen Babbit (Daniel Stern), lays out to Isaacs and his colleagues their conceptual mistake in approaching the gun type bomb design by using the metaphor of his "big beefcake of a guy"-neighbor who couldn't satisfy his wife, who later on finds her joy with a "slick shrimp"-salesman, who gives her the "one good bang" (S01E05). However, the tone and rhetoric around masculinity changes in the course of the first season, bringing, particularly in the second one, the question of what it means to be a "great man."

In particular, *Manhattan*'s main protagonists do not fit the role models of the commonly celebrated men and scientists of the real-life Manhattan Project. The fictional scientists Frank Winter and Charlie Isaacs neither resemble the likewise fictional Reed Akley, the head of the Thin Man-project, who Frank Winter criticizes for being too clean shaven and well-dressed (season 1, episode 1) and only working from 9 to 5 in the midst of a world war (season 1, episode 4), nor the fictional version of the real-life Manhattan Project's scientific leader, J. Robert Oppenheimer, who "keeps the train running with salesmanship and charm" (Col. Emmett Darrow in season 2, episode 4) and brushes the talk of "*great men*" aside, stating: "Great men? Pasteboard masks" (season 2, episode 4). Charlie Isaacs and Frank Winter are both deeply concerned about what being a "great man"

means in life and – even more so – in the face of building a weapon of mass destruction. Right after learning about the gadget he is supposed to help build Isaacs is experiencing extreme stress symptoms, like nose-bleeding, sweating, and the room spinning around (season 1, episodes 1 and 2). Referencing the Jewish story of "The Golem of Prague," he tells Winter about his fear that they might be creating "Frankenstein's monster" that they won't be able to control (season 1, episode 1). The visiting Danish physicist Niels Bohr further heightens his concerns, warning that: "*Good men* invent bigger and more efficient methods for humankind to exterminate itself, hoping the world will lose its hunger for horror. But our species seems to have an insatiable appetite" (season 1, episode 4). His character, though, undergoes a 180 degrees transformation, suggesting as scientific representative to the Target Committee of Washington officials to drop the bomb not on an uninhabited island, but a city in Japan with the argument that: "We have to be monsters today, to stop the monsters of tomorrow" (season 2, episode 9). This though does not happen without Isaacs voicing his frustrations along the way with his own shortcomings as project manager in season two, since his "brain can't requisition B-29 bombers" (season 2, episode 4) and he lacks the diplomatic salesman charm of Oppenheimer. Moreover, after the failed pre-test to the Trinity Test, Isaacs shows himself deeply frustrated about the purpose of his work: "You come here believing that you're here to save lives. And you tell yourself you sacrifice the few to save the many. Pretty soon, [pause] everything's negotiable and you can't remember what you came here for in the first place. It's all turned around" (season 2, episode 8). In the end, Isaacs seems to have come to terms with the fact – as his former group leader, Reed Akley, remarked shortly before taking his life – that "*great men* are not always *good men*" (season 1, episode 12).

Frank Winter, Isaacs' critic, friend, and antagonist over the course of the series, is also an outsider from the beginning and undergoes a 180 degrees transition. In the very first episode, he is plagued by a nightmare of a mushroom cloud that threatens to swallow his wife and daughter, accompanied by The Ink Spots' song "I don't want to set the world on fire" (season 1, episode 1). He often suffers from ringing ears, works long hours, drinks a lot of whiskey and is restlessly pressured by the felt need to end

the war as soon as possible. Flashbacks to his time in the military in WWI (season 1, episode 4) and moments where he zooms out of the family dinner worriedly thinking out loud that "seven million people live in New York," making it "the most densely populated city in America" (season 1, episode 1), are thus paired with him continuously referring to the numbers of dead soldiers and war casualties: "A hundred American kids have been buried since the last time we walked through that gate. By tomorrow morning, there'll be 100 more. And you want me to slow down?" (season 1, episode 1) Winter, the one initiating the Manhattan Project by convincing Einstein to write a letter to the President in 1939 as is later on revealed (season 2, episode 3), becomes one of its harshest critics: even though his mentor and friend Glen Babbit, who arranged the meeting with Einstein in 1939, repeatedly tells Winter that "[i]t doesn't matter if you're a good man" and that "[a]ll that matters is that you are the man to end this war" (season 1, episode 13), Frank Winter starts to actively fight for better worker protection since "68 accidents [occurred] in the tech area since the start of 1945," demands a seat on the Target Committee via his own version of The Franck Report (season 2, episode 6), channels money to his wife's project on the impact of radiation on humans and the planet project (initiated by Fedowitz in season 2, episode 6), and even tries to sabotage the Trinity Test on July 16, 1945 (season 2, episode 10). With a changed mindset on what it takes to save the world, he keeps on trying to do the right thing and be a good man behind the scenes, rather than a great one making big decisions. These two deeply conflicted men do not personify the great, celebrated nuclear scientists working on a gadget to change the world for the better as J. Robert Oppenheimer – often referred to in the spirit of atomic nostalgia as "the father of the atomic bomb," while he was himself very much troubled by the implications of his successful work (see "Speech to the Association of Los Alamos Scientists," 2 Nov. 1945, qtd. in Smith and Weiner 315-25).

This complex, changing rhetoric around masculinity shows – in the words of Lorentzen's description of the Manhattan project quoted above – that "these are not gods. These are mortals. These are men. They have hopes and dreams, needs and desires" (season 2, episode 5); and even more importantly they are scientists. Driven on the one hand by curiosity and a

creative, inventive spirit, doing what is right channeled into the language of masculinity brings up the question of what "great men" that change history actually are made of, what makes their actions "great" and whether striving for the "greater good" – as, for example, with the goal "to save the many" (season 2, episode 8) as Isaacs states, reiterating the military saying (first mentioned in Latin by Col. Alden Cox; season 1, episode 1) – is an ethically justifiable goal after all. While the TV series *Manhattan* creates overall a "nostalgia mode" (Grainge 6) by including historic events and facts of the period as well as incorporating architecture, design, references to pop culture and brands of the time, its main protagonists feel constantly alienated from the people surrounding them on the Hill and at times even from their task and initial motivations.[12] The expression of gendered concerns about atomic technologies by its main, fictional protagonists and their feeling of alienation is what I suggest calling "anti-nostalgic" elements or an "anti-nostalgic mood" in WGN America's period drama. I borrow the conceptual ideas from Paul Grainge, who suggests a "mood/mode distinction" (11) of nostalgia in the medium of television, and from Dan Hassler-Forest. The latter notes in his analysis of Richard Linklater's film *Dazed and Confused* (1993) that the movie "avoid[s] glamorizing or fetishizing the reconstructed past it portrays" by having its characters "[…] repeatedly [expressing] their strong sense of alienation from their own historical moment" (203). Whereas Hassler-Forest refers to it as "post-nostalgia," I prefer to speak of it as "anti-nostalgic" elements or an overall anti-nostalgic mood that shifts the attention from an easy, uncritical enjoyment of the past and, in this case, the beginning of the atomic age and the USA's post-WW II power by having its characters acknowledge the underlying serious moral problem. In the context of the increased celebration of the US's atomic achievements in the form of uncritical "atomic nostalgia" for both powerful bombs and great men since the early-2000s that Lindsay Freeman detects (10), this approach to the atomic heritage of the United States should be understood as doing more than just adding a coat of moral gloss to the Manhattan Project.

Aside from these anti-nostalgic elements, *Manhattan* portrays the Hill as an inclusive parallel world of open-minded scientists. That does not mean that they eschew racism or stereotypes about ethnic minorities;

Isaacs, for example, is accused by his fellow Jewish government interrogator Occam alias Avram Fischer (Richard Schiff) that he sold intelligence to the Russians to save his wife's cousin in Minsk, "'cause family is everything" (season 1, episode 13). Likewise, the main cast is white, but *Manhattan* does include black and female nuclear scientists and gives those that suffer from racism and sexism a voice and a background. The only black scientist, Theodore Sinclair (Corey Allen), is introduced in episode seven of the first season. The audience learns that he had been competing for the Forbes prize with Charlie Isaacs and had helped to build the nuclear plant at site X (Oak Ridge, Tennessee). While he as a nuclear physicist is the expert and invested in the reactor project, he is merely treated as a secretary by the administrative staff, being banned from the reactor room though in the end he is the only one able to keep it from entering nuclear meltdown. As he seems to metaphorically summarize both the reason for the rising reactor temperature and his own situation at the plant: "Sometimes the most crucial elements in a reaction are pretty much invisible. Sometimes they're barely allowed into the building" (season 1, episode 7). Sinclair is witty and does not shy away from grasping a chance for promotion (letter to Frank Winter, season 1, episode 7; season 2, episode 4), nor to address head on the racism he experiences, particular when not among scientists. Arriving at Los Alamos with 1.12 grams of plutonium from site X and being welcomed by Glen Babbit, who asks him whether he had any problems finding his way to PO Box 1663, he frankly replies: "I had trouble finding a taxi in Santa Fe that would pick up a Negro" (season 1, episode 12). Whereas earlier movies like *Fat Man and Little Boy* (1989) commonly center on the famous, white military leader of the Manhattan Project, General Leslie R. Groves (played by Paul Newman) and the "father of the atomic bomb" J. Robert Oppenheimer, *Manhattan* includes real-life inspired non-white characters. George Johnson, Ph.D., one of at least six African-American scientists working on the Manhattan Project, who is mentioned in the 1955 *Ebony* magazine story "Secret City of Sudden Death," could have served as an example.[13] Similar to Louis 'Fritz' Fedowitz (Michael Chernus) and Glen Babbit, who react confused by Sinclair's remark on the problematic nature of living in a segregated country, Sinclair's potential real-life character inspiration, George Johnson,

is quoted in that article as stating: "there is no racism at Los Alamos, the scientists mostly being very progressive people. In Los Alamos, I feel like I'm a real citizen" (qtd. in Landrum 1). The series extends this favorable portrayal of so-called minorities to the mixed Indigenous, Mexican-American community living in the area – even though only in a handful of episodes (season 1, episodes 7 and 9; season 2, episode 7). Particularly interesting and closely tied to the storyline of *Manhattan*'s protagonist Frank Winter are the scenes at the funeral of his housemaid's brother in the episode "The New World" (season 1, episode 7). After the death of the brother of Paloma (Tailinh Agoyo), her family asks Frank to use his security clearance and military contacts to arrange for a burial in their sacred lands. Not only do Frank and Liza Winter as the non-Spanish speaking, white employers come across as ignorant, when they wonder "Did you know her brother was in the Pacific?" (Liza) / "Did you know she had a brother?" (Frank), but less cultured – both unfamiliar with the rites of their close neighbors at the Hill, and with the poetry of Robert Frost in the case of Frank Winter. The poet is cited by the burial ceremony leader, Anciento (David Midthunder), who thanks Winter for his help by quoting Robert Frost's poem "Mending Wall" *stating* (towards Frank): "Maybe I just never met the right fence?" (season 1, episode 7). Even though the Indigenous community otherwise only plays a minor role in the series, other characters in *Manhattan* likewise address the issue of the camp area being not rightfully theirs. The ballistic expert and ordnance supervisor, Lazar (Peter Stormare), for example, mentions how the territory ended up in the hands of the military via a rancher's son, who went to college in order to live his life in a city: "Smart men make stupid choices. Cattle rancher stole it from the Indians anyway. [...] You think we would be out here trying to save the world on some sacred Indian land?" (season 1, episode 9). This form of inclusivity and reflective historical acknowledgement of racism, segregation and disrespect for Indian land and people, hence adds another layer of anti-nostalgia onto WGN America's TV show. The series' revisionism thereby not only resists an unreflective atomic nostalgia, but works against the very particularly gendered and racialized nostalgia associated with Trumpism and other iterations of reactionary conservatism, prone to celebrate white, male genius and power. It does so by showing the

limits of the expertise of Frank Winter, who is neither able to communicate in Spanish, nor familiar with Robert Frost's poem and therefore not likely to grasp Anciento's comment.

It is not the mentioning or portrayal of inequalities *per se* that makes *Manhattan* such an outstanding example of the historical race for the bomb, but that it gives subaltern characters a voice and screen time to speak up and develop over time. This is not only true for racial or ethnic minorities, but also for female characters. It is true that sexism is prevalent in *Manhattan*, as in many pre-1960s period dramas. This becomes most obvious in scenes like that of Isaacs' tour through his new workspace in Dr. Reed Akley's "Thin Man"-group, when his guide, Tom Lancefiel (Josh Cooke), states on entering an office room filled with desks of women working on type writers: "You're looking at the best equipped lab in the country. Two Van de Graaff accelerators, our own cyclotron, and the finest computers money can buy. Computers, this is the youngest buck who ever won the Forbes Prize. Say hello to Charlie Isaacs." To which all the women respond in a chorus of high pitched, sweet voices: "Hi, Charlie" (season 1, episode 1). It does not help correct the derogative portrayal of these brilliant women doing both typing and the math for the nuclear physicists, that they are shown as being bribed by Frank's implosion team into running their numbers through the night with gifts of otherwise scarce nylon stockings (season 1, episode 1). As with the changing male rhetoric in the course of the first season, the portrayal of women becomes more complex, allowing for the exploration of their working life on the Hill and their voices. Even women working behind the scenes of the military- and scientist-led operation show pride in their jobs. As does the pregnant Gladys (Rebekah Wiggins), when introducing Isaacs' wife Abby to her new job at the telephone switch board: "Truth is, this job is just like Harvard. Getting in is the hardest part" (season 1, episode 2). This remark not only elevates their status as otherwise merely scientists' wives doing administrative tasks, but which highlights the fact that all women have to pass a lie detector personality test before they are entrusted with a job at the Hill; making them an elitist circle. Getting hold of one of these prestigious positions, Abby Isaacs develops over the course of *Manhattan*'s twenty-three episodes from a woman, who considers being the "mother of

a five-year old [being] plenty of job for [her]" (season 1, episode 3), to an alienated wife starting an affair with her neighbor and co-worker Elodie Lancefield (season 1, episodes 7 and 11), who thinks about leaving her husband and getting an abortion (season 2, episode 1), to a happy, Jewish pregnant soon-to-be mother of two, introducing her gynecologist to the Talmud and the ascribed meanings of different shades of red of female blood (season 2, episode 4), to a designated switch-board worker who feeds her husband relevant "intelligence" (not gossip; season 2, episode 4) and supports his career, to a worried mother making sure she gets her son away from the Hill and his monstrous Dad who is preparing the Trinity Test (season 2, episode 9).

Even more so than Abby Isaacs, the character of Liza Winter, who holds a Ph.D. in botany and had to "walk[] away from a tenure track lectureship in the Ivy League" (season 1, episode 4) and is deeply frustrated with not being allowed to undertake or publish papers as a Manhattan Project-member (season 1, episode 5), has her own story as a wife and inhabitant of the military camp in Los Alamos and voice as a woman. As she jokingly states to her husband: "I am not most women" (season 1, episode 1). Or as her similarly outspoken teenage daughter Callie states (Alexia Fast): "You in the kitchen is the definition of abnormal" (season 1, episode 1). Liza Winter, with her job as a botanist seemingly modeled on the real-life Katherine "Kitty" Oppenheimer, regularly clashes with the military staff at the Hill (season 1, episodes 1, 5 and 11), runs for election to the town-hall (season 1, episode 12), suspects deleterious radiation effects on the flora, fauna, and inhabitants on the Hill (season 1, episodes 9 and 10) and later on heads the project on researching the effect of radiation on humans and the planet (season 2, episode 6). She does not shy away from having an educative sex talk with her daughter's boyfriend, letting him know that "[p]remarital sex was not invented in 1944" (season 2, episode 1), addressing her mental health struggles (season 1, episode 12; season 2, episode 1) or stealing equipment from the hospital to do her clandestine research (microscope, season 1, episode 6; Geiger counter, season 1, episode 10). She easily outpaces the medical doctor, Dr. Adelman (Adam Godley), in his limited knowledge on the harmfulness of radioactive material, given that he admits to Frank Winter that he only had a week's training

in radiology (season 1, episode 6), and is able to reassure Abby with both scientific facts and empathy after a late-term miscarriage that it was not caused by radioactive contamination of the camp (season 2, episode 5).

WGN America's *Manhattan*, in light of the otherwise male-centered narrative and memory culture of the Manhattan Project, does not only include complex female characters, the representation of their development and voices, but also highlights female nuclear scientists. Just as the pre-1960s sexism prevails in the series, there are not many women among the scientists; even less so among the atomic research staff. The exception both in the WGN America series as well as the wider world of US audiovisual entertainment (between 2007 and 2017), in which female engineers (2.6%) and physical scientists (6.4%) have been reported as consistently scarce ("Portray Her" 12), is Helen Prins (Katja Herbers), from the Netherlands. Prins holds a Ph.D. in physics and worked at Princeton before joining Winter's implosion group. She is aware that she is higher in rank than many of her male colleagues (season 1, episode 4) and that this makes her exotic at the time: "A girl with a Ph.D. is like a monkey with a harmonica" (season 1, episode 2). She could be modeled on the likewise unmarried, female nuclear physicist with a Ph.D. title, real-life Manhattan Project-member, Jane Roberg, who worked at Los Alamos (Howes and Herzenberg 59). She has the wit and confidence to explain to Fedowitz how to get one of the military women from the cantina to sleep with him and to calling out Isaacs for being "melodramatic," when remaining shocked after the almost nuclear meltdown incident at the reactor at site X (Oak Ridge, Tennessee). The series allows her to voice her frustration about "[a]cademia choos[ing] a black man over a woman every time" as well as her sadness over the sacrifices she had to make as a woman "to do what [she] loves" (season 1, episode 7). Given the war-related once in a life-time chance to work on the Manhattan Project, the audience learns that she was forced to end the relationship with her fiancé, a Princeton Classics professor, and get an abortion: "Classics wouldn't come, so I laid down on a metal table in a duplex in Teaneck" (season 1, episode 7). Her confidence and feminist spirit is echoed in her insisting on "hav[ing] a choice" (season 1, episode 9 and 12), but also her less concerned opportunism to take any chance during the war to follow her scientific vocation. She thus tears up the letter

Sinclair gives her, in which he asks Winter to be allowed to join the project, to stay the only minority representative with a Ph.D., and offers to start the reactor at site X herself, stating to Isaacs who is concerned about the twenty-two unchecked security risks: "What? Somebody's got to sail into history books. It might as well be a woman for once" (season 1, episode 7).

Conclusion

In contrast to the widely celebrated HBO series *Chernobyl*, which uses the 1986 nuclear plant incident to comment on the danger of lies and cover-ups in the post-truth age, *Manhattan* offers alternative perspectives on the historic Manhattan Project and the Trinity Test, thereby unintentionally creating a narrative of reflective atomic nostalgia. At the same time, both TV drama series and the respective time periods they are set in have more in common than just the nuclear theme. While the 1980s are commonly acknowledged as the height of "nuclear fear" induced by the Cold War and the Chernobyl catastrophe, the late-1970s and 1980s, in fact, also saw the upcoming trend of the nostalgic desire for the 1950s – music, TV series, fashion, family life, morals; the latter influenced by the conservative turn in the course of the introduction of neo-liberalism in the United States (see Brown; M. Cooper, Sprengler; Dwyer). Simultaneous with survey data finding that Americans believe the 1950s to having been a happier, safer and better time to live in, voices from the 1980s men's movement to the current US president have been bemoaning the loss of great men and overall America's greatness (see Coontz 33; Jones et al. 27) – ironically so had political figures in the 1950s. In the November issue of the 1958 *Esquire Magazine*, the historian and critic Arthur Schlesinger Jr. had already proclaimed "The Crisis of American Masculinity;" in the same year, he decried furthermore "The Decline of Greatness," calling his era "an age without heroes" that is witnessing "the decline of strong leadership" (23).

Atomic tourism, nostalgia and celebration of US science have foregrounded both a great nuclear, peace-bringing world power nation and its great military men and scientists. The post-WWII "fantasy of the good life" (Berlant 3) and of prosperous life in the suburbs is thereby as much

tied up with the happy TV family of 1950s TV series of the beginning of the medium's triumphant move into US living rooms as well as with the atomic bomb and its suburban life inspiring secret communities of the Manhattan Project. *Manhattan* breaks with atomic nostalgia. Set just before the 1950s during WWII, the scientist protagonists are not only led to believe that they are working against the German Nazi staff led by Heisenberg on the part of the military, as Winter finds out in the second episode of season 2, but they find themselves more than once doubting their project's goal: the building of the first atomic bomb. Ethical concerns about the use of this weapon of mass destruction take center stage in the second season – having its main protagonists Frank Winter and Charlie Isaacs switch sites. Not only does *Manhattan* diverge from the American post-WWII power glorification of the atomic bomb and its Manhattan Project's creators by adding the anti-nostalgic element of serious ethical concerns and doubt in its mainly male protagonists and their gendered rhetoric about "masculinity," but the TV series includes intelligent and critical minority characters and voices into its narrative. This "reflective" form of nostalgia (see Boym xviii) in the series, that Freeman otherwise found to be underrepresented in the 2010 US memory culture, resembles that of the likewise scientist-focused 2005 release of the opera *Doctor Atomic* by John Adams. Whereas *Doctor Atomic* is mostly focused on white, male scientists like Robert J. Oppenheimer and their moral concerns in the last weeks before the Trinity Test, featuring only two women, namely Oppenheimer's wife Kitty and his Tewa Indian housemaid Pasqualita, the WGN American series *Manhattan* more inclusively embraces the voices, life stories and long-term development of white male, female and black scientists. Even though their screen time is beyond that of the series' white, male fictional protagonists and their overall number below real-life historical data, *Manhattan* represents a first step in television history towards a reflective, inclusive atomic nostalgia, that Lindsey Freeman hopes to see develop in the United States; as she puts it, "atomic nostalgia rests in a mostly conservative and celebratory grove [at the moment], [...] it doesn't have to stay there" (11).

Notes

[1] To be exact, the miniseries has been produced by HBO in cooperation with Sky Atlantic and as such is a US-British co-production. Until June 2020, a year after its final episode aired, *Chernobyl*'s ratings on the Internet Movie Data base (IMDb) have though been lowered by 0.3 points to 9.4/10, leaving the HBO miniseries surpassed again by AMC's hit series *Breaking Bad* with a rating of 9.5/10.

[2] For an analysis of the FX TV series *The Strain* with regard to gender and masculinity portrayals see Becker.

[3] The central episode in *Heroes*' first season on the explosion of the nuclear device is titled "How to Stop an Exploding Man" (season 1, episode 23). More than an unintentional reflection on the gendered discourses around the atomic bomb and nuclear weapons-based visions of power, the long-believed atomic weapon turns out to be a powerful, supernatural man.

[4] The spelling of the series title with the "a" in brackets is based on the posters for the second season of the series.

[5] In fact, Wissner shortly names *Manhattan* in her 2018 piece on "TV and the Bomb" as yet another example of the "varying influences from the Cold War," that she lists. Since there is no further explanation as to which themes and aspects she perceives as proof for Cold War influence, the author of this essay will in the following acknowledge that the series has, of course, been influenced by earlier portrayals of the bomb in fictional audiovisual narratives, but emphasize that *Manhattan*'s unique approach to the making of the bomb mixes historic facts with fictional characters and storylines.

[6] The usage of the term "toxic masculinity" is here based on its introduction by the US activist and psychology lecturer, Shepherd Bliss, during the 1980s Mythopoetic Men's Movement. Arguing "for an ecologically inspired masculine ontology," Hultman and Pulé summarize from his writings, Bliss "confronted technology, soldiering, nuclear weaponry and men's addiction to power" (193), by deeming them toxic.

[7] On November 10, 2015, shortly after the publication of Freeman's book on the uranium producing Site X of the Manhattan Project in Oak Ridge, Tennessee, Secretary of the Interior Sally Jewell and Secretary of Energy Ernest Moniz signed the memorandum for the establishment of the Manhattan Project National Historical Park. <http://www.energy.gov/management/office-management/operational-management/history/manhattan-project/manhattan-project-0>.

[8] An "anti-nostalgic mood" can also be found in period drama series like *Mad Men* (AMC, 2007-2015) or *Masters of Sex* (Showtime, 2013-2016), I would argue.

[9] Rabinowitch co-authored the Franck Report, submitted to the US government in June 1945. The group of nuclear scientists who signed the report therein asked the US government to refrain from using the bomb against Japan to end WWII. The report itself is named after the German Nobel Prize-winning physicist, James Franck.

[10] The term "family room" was later on coined by Nelson and Wright (Spigel 39).

[11] For detailed information and interviews with the creatives see <http://www.artofthetitle.com/title/manhattan/>.

[12] I here borrow the term from Film and Television scholar Grainge, who in return borrowed it from Fredric Jameson and added a new meaning to the "nostalgia mode," one that "maintains a sense of nostalgia's relationship with postmodernism, existing as a retro style, but it rejects the assumption of amnesia and historicist crisis common to much postmodern critique" (6). Other than Jameson, who defines the aesthetic mode of nostalgia as "cultural style" of postmodernism, bereft of any meaningful content, in his seminal work *Postmodernism, or, the Cultural Logic of Late Capitalism*, Grainge advocates that "meaningful narratives of history or cultural memory can be produced through the recycling and/or hybridization of past styles" (6).

[13] The "Black History Month Special Feature, 2012" on BlackPast.org furthermore lists the following black chemists and Ph.D.'s: Dr. Lawrence H. Knox (1906-1966), his older brother, Dr. William J. Knox, Jr. (1904-1995), Dr. Samuel Proctor Massie (1919-2005), Dr. Moddie Daniel Taylor (1912-1976) as well as the African-American mathematician, Dr. J. Ernest Wilkins (1923-2011).

Works Cited

Abramson, Albert. *The History of Television, 1942 to 2000*. Jefferson: McFarland, 2003.

Allen, Jeanne. "The Social Matrix of Television: Invention in the United States." *Regarding Television: Critical Approaches – An Anthology*. Ed. E. Ann Kaplan. Los Angeles: The American Film Institute, 1983. 109-19.

Anderson, Christopher. *Hollywood TV: The Studio System in the Fifties*. Austin: Texas UP, 1994.

Baur, Philipp. "Nuclear Doomsday Scenarios in Film, Literature, and Music." *The Nuclear Crisis: The Arms Race, Cold War Anxiety, and the German Peace Movement of the 1980s*. Eds. Christoph Becker-Schaum, Philipp Gassert, et al. New York: Berghahn, 2016. 322-37.

Becker, Sandra. "'Time is of the Essence, Doctor:' (Post-)Apocalyptic Fiction, White Fatherhood, and Anti-Intellectual Tendencies in FX's *The Strain*." *Embodying Contagion: The Viropolitics of Horror and Desire in Contemporary Discourse*. Eds. Sandra Becker, Megen de Bruin-Molé, and Sara Polak. Cardiff: Wales UP, 2021 (forthcoming).

Berlant, Lauren. *Cruel Optimism*. Durham: Duke UP, 2011.

"Black History Month Special Feature, 2012 – Scientists and Technicians of the Manhattan Project." *BlackPast.org.* 29 Jan. 2012. <http://www.blackpast.org/african-american-history/black-history-month-special-feature-2012-scientists-and-technicians-manhattan-project/>.

Boyer, Paul. *By the Bomb's Early Light*: *American Thought and Culture at the Dawn of the Atomic Age.* New York: Pantheon, 1985.

Boym, Svetlana. *The Future of Nostalgia*. New York: Basic Books, 2001.

Brown, Wendy. *In the Ruins of Neoliberalism: The Rise of Antidemocratic Politics in the West*. New York: Columbia UP, 2019.

Brooks, Marla. *The American Family on Television: A Chronology of 121 Shows, 1948-2004*. Jefferson: McFarland, 2005.

Cantor, Muriel G. "The American Family on Television: From Molly Goldberg to Bill Cosby." *Journal of Comparative Family Studies* 22 (1991): 205-16.

Chernobyl. Created Craig Mazin, dir. Johan Renck. 6 May- 3 June 2019. HBO.

Coontz, Stephanie. *The Way We Really Are: Coming to Terms with America's Changing Families*. New York: Basic Books, 1997.

Cooper, Ken. "The Whiteness of the Bomb." *Postmodern Apocalypse: Theory and Cultural Practice at the End*. Ed. Richard Dellamora. Philadelphia: Pennsylvania UP, 1995. 79-106.

Cooper, Melinda. *Family Values: Between Neoliberalism and the New Social Conservatism*. Cambridge: MIT Press, 2017.

Däwes, Birgit, Alexandra Ganser, and Nicole Poppenhagen, eds. *Transgressive Television: Politics and Crime in 21st-Century American TV Series*. Heidelberg: Winter, 2015.

Doane, Janice, and Devon Hodges. *Nostalgia and Sexual Difference: The Resistance to Contemporary Feminism*. New York: Routledge, 2013.

Doherty, Thomas. *Cold War, Cool Medium: Television, McCarthyism, and American Culture*. New York: Columbia UP, 2003.

Douglas, William. *Television Families: Is Something Wrong in Suburbia?* Mahwah: Lawrence Erlbaum Associates, 2003.

Dwyer, Michael D. *Back to the Fifties: Nostalgia, Hollywood Film, and Popular Music of the Seventies and Eighties*. Oxford: Oxford UP, 2015.

Dyer, Richard. *White: Twentieth Anniversary Edition*. Abingdon: Routledge, 2017.

Eden, Lynn. *Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Devastation*. Ithaca: Cornell UP, 2004.

Engles, Tim. *White Male Nostalgia in Contemporary North American Literature*. London: Palgrave Macmillan, 2018.

Falkof, Nicky. "Heroes with a Half Life: *Teenage Mutant Ninja Turtles* and American Repression of Radiophobia after Chernobyl." *The Journal of Popular Culture* 46 (2013): 931-49.

Ferrucci, Patrick, Heather Shoenberger, and Erin Schauster. "It's a Mad, Mad, Mad, Mad World: A Feminist Critique of *Mad Men*." *Women's Studies International Forum* 47, Part A (2014): 93-101.

Freeman, Lindsey A. *Longing for the Bomb: Oak Ridge and Atomic Nostalgia*. Chapel Hill: North Carolina UP, 2015.

Grainge, Paul. *Monochrome Memories: Nostalgia and Style in Retro America*. Santa Barbara: Praeger, 2002.

Grimes, J. Williams, and Ron Steiner. "Chapter 18: Television." *Media Selling: Television, Print, Internet, Radio*. 4th ed. Ed. Charles Warner. Malden: Wiley-Blackwell, 2009. 371-409.

Hart, Hugh. "Feb. 1, 1951: TV Shows Atomic Blast, Live." *Wired.* 1 Feb. 2010. <http://www.wired.com/2010/02/0201ktla-atomic-test/>.

Harvey, Kyle. *American Anti-Nuclear Activism, 1975-1990: The Challenge of Peace*. Basingstoke: Palgrave Macmillan, 2014.

Hassler-Forest, Dan. "Richard Linklater's Post-Nostalgia and the Temporal Logic of Neoliberalism." *The Global Auteur: The Politics of Authorship in the 21st Century Cinema.* Eds. JeremiSzaniawski and Seung-hoonJeong. New York: Bloomsburry, 2016. 199-215.

Howes, Ruth H., and Caroline L. Herzenberg. *Their Day in the Sun: Women of the Manhattan Project*. Philadelphia: Temple UP, 1999.

Hultman, Martin, and Paul M. Pulé. *Ecological Masculinities: Theoretical Foundations and Practical Guidance*. London: Routledge, 2018.

Jameson, Fredric. *Postmodernism; or, The Cultural Logic of Late Capitalism*. Durham: Duke UP, 1991.

Jones, Robert P., et al. "The Divide Over America's Future: 1950 or 2050? Findings from the 2016 American Values Survey." *Public Religion Research Institute (PRRI).* 25 Oct. 2016. <http://www.prri.org/wp-content/uploads/2016/10/PRRI-2016-American-Values-Survey.pdf>.

Kenneally, Tim. "'Manhattan' Creator on Doomsday Drama: 'Americans Never Met an Apocalypse They Didn't Like'." *The Wrap.* 27 July 2014.<http://www.thewrap.com/manhattan-creator-on-doomsday-drama-americans-never-met-an-apocalypse-they-didnt-like/>.

Landrum, Shane. "'In Los Alamos, I Feel Like I'm A Real Citizen': Black Atomic Scientists, Education, and Citizenship, 1945-1960." *Cliotropic.org* (2005): 1-33.<http://cliotropic.org/blog/wp-content/uploads/2010/03/Shane-Landrum-In-Los-Alamos-2005.pdf>.

Lifton, Robert J. *Broken Connections: On Death and the Continuity of Life*. New York: Simon & Schuster, 1979.

Lipsitz, George. "The Meaning of Memory: Family, Class, and Ethnicity in Early Network Television Programs." *Cultural Anthropology* 1 (1986): 355-87.

Lotz, Amanda D. *The Television will be Revolutionized*. New York: New York UP, 2007.

Manhattan. Created by Sam Shaw, directed by ThomaSchlamme. Season 1 & 2. 27 July 2014/15 Dec. 2015. WGN America.

McCabe, Janet, and Kim Akass, eds. *Quality TV: Contemporary American Television and Beyond*. New York: Tauris, 2007.

Marc, David. *Demographic Vistas: Television in American Culture*. Philadelphia: Pennsylvania UP, 1984.

May, Elaine Tyler. *Homeward Bound: American Families in the Cold War Era*. New York: Basic Books, 2008.

Minow, Newton N. "Television and the Public Interest."*Federal Communications Law Journal* 55 (2003): 395-406.

"Miss Atom Bomb." *Nevada National Security Site.* Aug. 2013. <http://www.nnss.gov/docs/fact_sheets/DOENV_1024.pdf>.

Mittell, Jason. *Complex TV: The Poetics of Contemporary Television Storytelling*. New York: New York UP, 2015.

Nelson, George, and Henry Wright, *Tomorrow's House: A Complete Guide for the Home-Builder*. New York: Simon & Schuster, 1945.

Perkins, Will. "Manhattan (2014)." *Art of the Title*. 30 Sept. 2014. <http://www.artofthetitle.com/title/manhattan/>.

"Portray Her: Representations of Women Stem Character in Media." *Geena Davis Institute on Gender in Media* (2018): 1-29. <http://seejane.org/wp-content/uploads/portray-her-full-report.pdf>.

Postman, Neil. *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*. New York: Penguin, 1985.

Presnell, Don, and Marty McGee. *A Critical History of Television's* The Twilight Zone*, 1959-1964.* Jefferson: McFarland, 2008.

Rose, Lacey. "WGN America Chief Explains Why HeCanceled 'Manhattan'." *The Hollywood Reporter*. 10 Feb. 2016. <https://www.hollywoodreporter.com/news/manhattan-canceled-wgn-america-chief-863528>.

Schlesinger Jr., Arthur M. "The Crisis of American Masculinity." *Esquire.* November 1958. <http://classic.esquire.com/article/1958/11/1/the-crisis-of-american-masculinity>.

—. "The Decline of Greatness." *The Politics of Hope*. Cambridge: Riverside Press, 1962. 23-33.

Seale, Jack. "The 50 best TV shows of 2019: No 3 – *Chernobyl*." *The Guardian*. 17 Dec. 2019. <http://www.theguardian.com/tv-and-radio/2019/dec/17/best-tv-shows-2019-no-3-chernobyl>.

Smith, Alice K., and Charles Weiner. *Robert Oppenheimer: Letters and Recollections*. Cambridge: Harvard UP, 1980.

Spangler, Todd. "HBO's 'Chernobyl' Is Now the Top-Rated TV Show on