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Say It Loud, I'm Black and I'm Proud: African Americans, American Artifactual Culture, and Black Vernacular Technological Creativity

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The actual *beginnings* of our expression are post Western (just as they certainly are pre-western). It is only necessary that we arm ourselves with complete self knowledge[;] the whole technology (which is after all just *expression* of who ever) will change to reflect the essence of a freed people. Freed of an oppressor, but also as [Askia] Touré has reminded we must be “free from the oppressor’s spirit,” as well. It is this spirit as emotional construct that can manifest as expression as art or technology or any form.

Amiri Baraka¹

“Say it loud, I’m black and I’m proud.” The rhythmically pulsating refrain of the James Brown song and the title of his 1969 album publicly vocalized the African American desire to reclaim, recover, and articulate self-claimed black identity and expression. Not surprisingly, the song became an anthem in black America during the late civil rights movement. A few years before the release of this album, Stokely Carmichael clearly articulated the meaning of black power that James Brown referenced in his song. In the same-titled book, *Black Power*, Carmichael defined black power as “a call for black people in this country to unite, to recognize their heritage, to build a sense of community. It is a call for black people to begin to define their own goals, to lead their own organizations and to support those organizations. It is a call to reject the racist institutions and values of this society.”² At a most basic level, Carmichael was calling for African Americans to gain control of their existences within the United States, as well as abroad, and to understand that there is something special, unique, and valuable about cherishing, nourishing, and supporting black people, black cultures, and black communities. In a similar way, Amiri Baraka, in the essay “Technology & Ethos,” was calling for black people to rethink their relationships with technology and take action to make technology more representative of black culture.³ More important, Baraka was arguing that through black technological utterances rooted within

black cultures, black communities, and black existences—or what I would call expressions of black vernacular technological creativity—technology would be more responsive to the realities of black life in the United States.

Carmichael and Baraka represent two of many critical black voices that have pointed out difficulties black people have encountered searching for a place of space within American society and culture. Yet, the commentary by Baraka is an unusual break from the traditional lines of criticism. In “Technology & Ethos” Baraka exposed the fact that of the many people, organizations, and institutions that have participated in derailing black struggles for power and equality, technology is infrequently part of the discussion. Currently technology—even with the ever-growing volume of technological critiques—is publicly understood to change society positively by making life more healthy, productive, and efficient, thus better. Americans are continually bombarded with seemingly endless self-regenerating progressive technological narratives. In this capitalist-supported tradition, the multiple effects that technology has on African American lives go underexamined. This uplifting rhetoric has helped obfuscate the distinctly adversarial relationships African Americans have had with technology.

In the article “Technology Versus African Americans” Anthony Walton contends that “the history of African-Americans since the discovery of the New World is the story of their encounter with technology, an encounter that has proved perhaps irremediably devastating to their hopes, dreams, and possibilities.”⁴ Technology such as the ships that transported African slaves to the “New World,” the overseers’ whips, cotton cultivation, “Jim Crow” rail cars, segregated buses, inner-city public housing, and voting machines have contributed, directly or indirectly, to the subjugation of African American people. Historically, technology has been a potent form of power in material form that has politically, socially, and intellectually silenced African American people, and in the worst cases rendered them defenseless and invisible. Cornel West has called this affect the black diaspora problematic of invisibility and namelessness. This problematic constructs “black people as a problem-people rather than people with problems; black people as abstractions and objects rather than individuals and persons; black and white worlds divided by a thick wall (or a ‘Veil’) . . . black rage, anger, and fury concealed in order to assuage white fear and anxiety; and black people rootless and homeless on a perennial journey to discover who they are in a society content to see blacks remain the permanent underdog.”⁵

Technology as material oppression is not the only way to consider African American technological experiences. As interesting as this mode of analysis

can be for thinking about the technological control of African Americans, it strips black people of technological agency. It inherently closes down discussions about the ways African American people consume and use technology, and conceals the reasons that black people produce meanings for technological artifacts, practices, and knowledge that regularly subvert the architected, or constructed, meanings of technology.⁶ A major limitation of this perspective is that it does not embrace the ways that African American people acquire technological agency by being resourceful, innovative, and most important, creative.

Studies of African American creativity often center on the vernacular. The black vernacular tradition is primarily associated with the production or performance of music, dance, literature, visual art, and sport.⁷ By recasting African American artistic and aesthetic creativity as American “survival technology,” Joel Dinerstein’s *Swinging the Machine* presents a case for engaging the technological.⁸ Techno-dialogic, Dinerstein’s term to explain how “the presence (or ‘voice’) of machinery became integral to the cultural production of African American storytellers, dancers, blues singers, and jazz musicians,” highlights the creative interplay between modern industrialization and black expressive culture.⁹ Dinerstein effectively relies on Mikhail Bakhtin’s dialogic theory of language to discuss how, during live artistic performances, black “musicians brought the power of machines under artistic control and thus modeled the possibility of individual style within a technological society.”¹⁰ As much as this essay embraces the intent of his work, especially his efforts to theorize “a cultural tradition of resistance to technology in African American expressive culture,”¹¹ it aims to extend black creativity by proposing the concept of black vernacular technological creativity to describe the ways African American people interact with material forms and affects of technology.

Black vernacular technological creativity is characterized by innovative engagements with technology based upon black aesthetics, or, in Albert Murray’s terminology, the “technology of stylization.”¹² This differs from Dinerstein’s approach in that black vernacular technological creativity is a process of engaging material artifacts as opposed to performing black-informed expressive or aesthetic representations of technology. Yet it is similar, in that black vernacular technological creativity results from resistance to existing technology and strategic appropriations of the material and symbolic power and energy of technology. These maneuvers enable African American people to reclaim different levels of technological agency. Some resistant responses and technological appropriations are stronger, more politically motivated, and culturally embedded than others. As a result, black vernacular technological

creative acts—spanning the continuum from weaker to stronger—can be seen in three ways: redeployment, reconception, and re-creation.¹³ Redeployment is the process by which the material and symbolic power of technology is reinterpreted but maintains its traditional use and physical form, as with blues musicians extending the perceived capability of a guitar without altering it. Reconception is the active redefinition of a technology that transgresses that technology's designed function and dominant meaning, as in using a police scanner to observe police activities. Re-creation is the redesign and production of a new material artifact after an existing form or function has been rejected, as in the case of DJs and turntablists developing new equipment. In developing this framework, the goal is not to make evaluative statements or privilege one type of black vernacular technological creativity but to express multiple ways that African Americans as culturally and historically constituted subjects have engaged the material reality of technology in America.

To explore black vernacular technological creativity, familiar ways of examining the nature of technological experiences have to be rethought. As effective as existing approaches to the study of technology are for understanding technological developments by members of dominant cultures in Western society, they are lacking in their abilities to handle the creation, development, and use of technology by those racially marginalized. Since these theories aim to assess technological activity by dominant groups, they are limited in their ability to address the wide variety of technological experiences that fall outside of the realm of dominant cultural experiences. Unfortunately, many existing social theories of technology also do not address the significance of absence—in specific, the significance of the theoretical absence of African Americans from technological decision making and what these absences can tell us about the nature of technology in America. In many cases, perception of what “counts” as technological activity is deeply intertwined with deleterious representations of the racialized other. In other words, technological activities that cannot be effectively categorized within the dominant canon of science and technology fall to the wayside.

One cannot expect African Americans, who have traditionally been relegated to peripheral sites within American society and culture, to interact with technological products analogously to the members of the dominant American culture. It is the misconception of fair and equal Americanness—reeking of the value-neutrality of technology—that is highly responsible for the systematic disregard for technological activities that are peripheral to the dominant society's. By understanding that the locations of black people within American society are the historical by-products of a businesslike effort to fix racism within

American culture, a new set of questions to explore technology and African American lives emerges. Questions contemplating how technology has been “raced” throughout American history, as well as how to understand and see African American technological agency, are essential for a broader conception of the complex nature of race in the creation, production, and use of technology. New questions will produce a more textured understanding of the roles that black people have played as producers, shapers, users, and consumers of technology within American society and culture.

American Culture, African Americans, and Theories of Technology

Historically, technology has been one of the defining elements of American society. Individual American technological ingenuity, from Samuel Morse to Bill Gates, has been a hallmark of American culture and an important factor in building a financially prosperous nation.¹⁴ However, questioning the ways technology and American culture have been co-produced has been a twentieth-century enterprise. Works by Siegfried Giedion, S. Colum Gilfillian, William Fielding Ogburn, and Lewis Mumford began a more thorough analysis of the social components of technological development.¹⁵ By midcentury, Abbott Payson Usher, Lynn White, and Leo Marx began to recontextualize our understanding of the nature of technology in American society and culture.¹⁶ Marx's *The Machine in the Garden*, which began as an article first published in *New England Quarterly*, marks an important turning point in study of technology and American culture.¹⁷ Though reworked and extended by John F. Kasson's *Civilizing the Machine* and David E. Nye's *American Technological Sublime*, *The Machine in the Garden* would become, as Jeffrey Meikle has argued, the “starting point for all attempts to understand the complex connections among developing technologies, their representations in text and image, and the multiple realities of American cultural experience.”¹⁸ In addressing the connections between technology and nature, technology and progress, technology and inventive/engineering achievement, and technology and nationalism, Marx eloquently presented a set of themes that subsequently would shape and direct the future study of technology and American culture.

By the late twentieth century, the connections between technology and American culture Marx presented would become central to the emerging field of science and technology studies. Many researchers began to ask, with a critical edge, if technology is truly autonomous within the societies they inhabit and whether or not technological changes drive social changes.¹⁹ This research endeavored to reexamine how individuals and groups (re)shape and

(re)construct meanings for new and existing technology.²⁰ Eventually more effective tools, such as those exhibited in the systems approach, the social construction of technology (SCOT), and actor-network theory emerged to unpack the complex interconnections between technology and American society. The systems approach is clearly displayed in *Networks of Power*, Thomas Hughes's transnational study of the developments of electrical distribution systems in Berlin, London, and New York. This approach "analyzes technology as heterogeneous systems that in the course of their development acquire a technological momentum that seems to drive them in a specific direction with a certain autonomy."²¹ Wiebe Bijker and Trevor Pinch articulated SCOT in the article "The Social Construction of Facts and Artefacts."²² SCOT focuses on the development of technological artifacts as relevant social groups negotiate to "close," or stabilize, the meanings of these artifacts. In *Science in Action* Bruno Latour outlined a dominant version actor-network theory.²³ This model argues that for a technology—an artifact, a practice, or constitutive knowledge—to be successful, a seamless web, or network, of "durable links tying together humans and nonhuman entities," or actants, must be created.²⁴

The systems approach, SCOT, and the actor-network theory met when Bijker, Hughes, and Pinch edited the highly influential *The Social Construction of Technological Systems*.²⁵ This volume illustrated the common ground between the three methods of analysis. John Law, in the article "Technology and Heterogeneous Engineers," pointed out the three main similarities. "First, they concur that technology is not fixed by nature alone. Second, they agree that technology does not stand in an invariant relation with science. Third . . . they assume that technological stabilization can be understood only if the artifact in question is seen as being interrelated with a wide range of nontechnological and specifically social factors."²⁶

But, this is about as far as their commonalties can be taken. Differences arise when researchers use these methods to determine the agents of technological change and development. SCOT locates the power to shape technology within human actors' social interests, whereas the systems approach has no such loyalty to overarching human technological agency. Technology can shape society as well as other technology. Technology can potentially have momentum, be autonomous, and be deterministic. Actor-network theory goes one step further to say that there are no inherent differences between human and nonhuman actors. They are all "actants" and should be treated symmetrically.

As productive as these approaches have been for the study of dominant technological voices, products, and experiences, they have been equally unproductive for those traditionally marginalized within American society and

culture. Feminist technological critic Judy Wajcman has argued that these methods of investigating the social and cultural implications of technology overlook “the ways in which technological objects may be shaped by the operation of gender issues,” and how technological developments are “shaped by a set of social arrangements that reflect men’s power in the wider society.”²⁷ Wajcman’s work exploring gendered components of technology has clearly broadened our understanding of the ways gender imbalances have influenced our technological world.²⁸ The inattention to gender issues that Wajcman indicated is reflected in the comparable indifference to racial issues in analyzing the creation, development, production, and distribution of technology. As result, these approaches theoretically shut down discussions about black technological experience.

For example, Thomas Hughes’s systems approach is not particularly applicable to the experiences of African American inventors of the late nineteenth and early twentieth centuries. There could not have been black system builders similar to Alexander Graham Bell, Thomas Edison, or Henry Ford. Since late-nineteenth-century America reverberated with renewed enthusiasm for overt racism—beginning at the end of Reconstruction and culminating in the United States Supreme Court’s *Plessy v. Ferguson* decision in 1896—most people of African heritage found the traditional avenues followed by inventor-entrepreneurs closed. African American technologists, engineers, and inventors could never reach the position to wield the power and resources necessary to construct a technological system. Granville Woods, the most successful black inventor of this period, attempted to invent and develop systems of railway locomotion and inductive communication. Due to the institutionalized racism within technical communities, the hope of being a system builder never materialized for him.²⁹ The lives and experiences of the most promising African American inventors reveal that black people could construct only the components of a system and never the system itself.

Actor-network theory is also limited in its ability to handle culturally embedded racism. Anthropologist David J. Hess contends that the actor-network approach “is not very good at explaining why some actors are excluded from the game and why the playing field is not level . . . for this reason categories such as race, class, gender, colonialism, and industrial interests tend to be absent from actor-network analyses.”³⁰ Moreover, African Americans traditionally have not possessed the power to gather large interrelated groups “of disparate elements of varying degrees of malleability,” and heterogeneously engineer.³¹ It is even more difficult to talk about how marginalized people participate in seamless weblike networks of interaction when often they are not allowed into

the web. More often than not, members of the dominant American culture enrolled black people against their will, as in slavery and forced segregation. Actor-network theory neither accounts for the processes of how the dominant American culture oppressed and purposely marginalized a segment of American society, nor how it reinvented the margins of society for its own supremacist and colonizing purposes.³²

The first version of SCOT was not particularly applicable to the marginalized status of African Americans. For SCOT, relevant social groups, which can be “institutions and organizations . . . as well as organized and unorganized groups of individuals,” are deemed the most important factor in shaping and designing a technology for a specific meaning or purpose.³³ Since African Americans historically have been denied basic human rights, participation in the larger American processes of social, cultural, and technological development has been extremely limited.

Stewart Russell’s critique of SCOT is right on the mark in regard to race. Russell indicates that SCOT’s discussion of closure, or the adoption of a technological feature, is highly misleading since it has overtures of “consensual acceptance” which may not always be the case. To this end Russell writes, “a group which stands to lose out from an imposed technological change . . . will probably not have been consulted, and certainly will not ‘see the problem as being solved.’”³⁴ Langdon Winner’s critique of social constructivist theories of technology cogently addresses the issue of power. Winner argues “insofar as there exist deeper [*racial*,] cultural, intellectual, political, or economic origins of social choices about technology or deeper issues surrounding these choices, the social constructivists choose not to reveal them.”³⁵ As a result, SCOT can be seen as reinforcing racist stereotypes and supporting the constructed inferiority and marginalization of black people by building a program of investigation that obscures black Americans’ ability to shape technology products.

A reassessment of SCOT by Trevor Pinch and Ronald Kline, and the focus on users of technology rather than producers, created new opportunities to examine African Americans and technology.³⁶ The finer language that defines a relevant social group as a fluid assemblage of individuals who share a common meaning of an artifact opens up interpretive flexibility to acknowledge and consider a multitude of coexisting technological meanings for a variety of social groups and creates an opportunity to study how African Americans, and other marginalized peoples, create their own relevant social groups that decide which technologies work for them and how to use them. However, as productive as this approach can be, SCOT still is limited by overlooking structural factors such as institutional racism, regional discrimination, economic dispar-

ity, and a host of other factors that have led many forms of African American technological creativity to be categorized as inferior.³⁷

The creativity of black people often has been framed in this pejorative way. For instance, African American artists, writers, and musicians such as Jacob Lawrence, Langston Hughes, and Miles Davis, at different moments in history, have been constructed as primitive, Africanized, and animalistic. Interestingly, this primitivized creativity is not extended to African American people when it comes to the technological realm, because primitives cannot be technologically sophisticated. In the technological realm, creativity by African Americans is regularly dismissed as cleverness, instead of being interpreted as smart, ingenious, or innovative.

In 1858, when plantation owner Oscar J. E. Stuart attempted to patent the double cotton scraper that his slave Ned invented, Attorney General Jeremiah S. Black firmly determined that “a machine invented by a slave, though it be new and useful, cannot, in the present state of the law, be patented. I may add that if such a patent was issued to the master, it would not protect him in the courts against persons who might infringe it.”³⁸ The Patent Office made it abundantly clear that inventions by slaves were not worthy of patent protection. The implication was that slaves were not human beings and definitely not citizens. With this reasoning, it was inconceivable for the Patent Office to grant a Negro a patent.³⁹ Even when American society began to accept the fact that African Americans did invent, black inventors were framed in a negative context. Some even went to the extent of denying that black people possessed American ingenuity. A white attorney expressed this perception by making the following comment in a patent rights battle involving a black inventor: “It is a well-known fact that the horse hay rake was first invented by a *lazy negro* [*sic*] who had a big hay field to rake and didn’t want to do it by hand.”⁴⁰ The stereotype of black inferiority, fueled by the Uncle Remus trickster character of American folklore, implied that African American people invented in order to sustain poor work habits rather than to produce creative solutions to existing problems.⁴¹

The acknowledgment of the margins, and those activities, people, and institutions that exist and thrive there, are fully absent from all of these approaches, because they consistently focus on winners of technological controversies and why certain technology has won. It would appear as if African Americans, throughout American history, did not have the ability to make technological decisions of their own and have led lives in which technology was foisted upon them. By overlooking the implications of race, many theories of technology limit the examination of African American technological experiences. Yet, it

is not just these theories that have shaped black relationships to technology. Technology, as well as racist ideologies that have been built into the material structure and form of technology, has also been used to do racist work.

Race-ing Technology

In discussing *Time* magazine's cover photo of O. J. Simpson after his arrest, John Fiske discloses how technology can be used to reinscribe and maintain negative representations of African Americans within the dominant American culture. Moreover, Fiske's work alludes to the ways technology is "raced" and embedded with racialized politics. On June 27, 1994, *Time* magazine editors selected Matt Mahurian's "photo-illustration" of O. J. Simpson for the cover. Unbeknownst to readers, the image was technologically darkened. This came to only light after *Newsweek* printed the same unaltered image on its cover. O. J. Simpson was not black enough, so by enrolling computer-related technology to produce the valued racialized image, *Time's* staff reconstituted his visual representation to meet the dominant American culture's perceived expectations of a black felon. The magazine's editor exhibited *Time's* insensitivity to American racial identity politics when he commented that the image "lifted a common police mug shot to the level of art, with no sacrifice of truth."⁴² Yet to a large number of African Americans who disapproved of the altered image, there was a significant sacrifice of truth. The editor did not see anything wrong with technologically darkening O. J. Simpson's image, because O. J. Simpson was being presented as a criminalized black man. The implication here is that blackness, regardless of hue, carries the same meaning: black = criminal. In this way technology is being used to dislocate racism; that is, "racism is dislocated when it is apparently to be found only in the behaviors of a racial minority and never in those of the white power structure."⁴³ This dislocated racism can be more clearly seen in the editor's rationale for darkening the image.

The harshness of the mugshot—the merciless bright light, the stubble on Simpson's face, the cold specificity of the picture—had been subtly smoothed and shaped into an icon of tragedy. The expression on his face was not merely blank now, it was bottomless. This cover, with the simple, non-judgmental headline "An American Tragedy," seemed the obvious right choice....First, it should be said (I wish it went without saying) that no racial implication was intended, by TIME or by the artist. One could say that it is racist to say that Blacker is more sinister, and some African Americans have taken that position in the course of this dispute.⁴⁴

The racism tied up in this photographic manipulation is dislocated onto African American people and represented by black anger. The result of these types of

interactions is that black people are perceived to overreact and misconstrue certain acts as racist, while simultaneously the fictitious racelessness of whiteness is stabilized by the denial of the power of race in America.

As critical as Fiske is of those who use the technology, he does not address the problematic technological politics this case presents. For instance, this technologically modified image is considered to be devoid of racism because of the assumed value-neutrality of technology in conjunction with the disavowal of the American fetishism of black criminality. In a sense, the technology mediated a re-representation of the “true” image, to “fix” it and make it “right.” Thus, to make it “right” was to make it darker. Those technologically transmogrifying O. J. Simpson’s image did not acknowledge what Franz Fanon calls the process of “epidermalization.”⁴⁵ That is, in the most basic sense, much of the information that people read, interpret, and use, that results in differential power and racial relations, is inscribed within skin, skin color, and the body.

In bringing together race, technology, and representation, Richard Dyer in *White* has examined how photographic technology was created from a racialized perspective. Dyer exposes photographic and cinematographic whiteness, and the ways in which producers of the related technology have used white skin tone and color as their reference. Dyer writes that film

stocks, cameras, and lighting were developed taking the white face as the touchstone. The resultant apparatus came to be seen as fixed and inevitable, existing independently of the fact that it was humanly constructed. It may be—certainly was—true that photo and film apparatuses have seemed to work better with light-skinned peoples, but that is because they were made that way, not because they could be no other way.⁴⁶

As this image-replicating technology developed, the white facial skin tone was used as the “standard” to determine the success or failure of each technology. To this end, Dyer argues, “experiments with, for instance, the chemistry of photographic stock, aperture size, length of development and artificial lighting all proceeded on the assumption that what had to be got right was the look of the white face.”⁴⁷ With the racially valenced underlying design principle that white facial skin tone was normal and everything else was abnormal, photographic technology was constructed to privilege and perfect representations of whiteness. The way this has played out for nonwhite people, in specific for African Americans, is that photographing black people is frequently considered to be a “problem.” This is another instance in which we can see the dislocation of race and racism. Instead of viewing the technology as the problematic, we see blackness as the problem. Alterations are made onto the black body (as in reflective makeup, oiling, stronger lighting), rather than the technology itself.

Through these alterations, the misperceived value-neutrality of the technology and how the technology is raced can continue to be hidden. As effectively as Dyer points out the racialized nature of photographic technology, he neither addresses the material consequences these acts of potential technological violence can have on black people, nor does he discuss how racialized technology continues to maintain and sustain white hegemony.

In the article “Do Artifacts Have Politics?” Langdon Winner presents an approach to address race, racism, and technology as well as how technology can be racialized. Winner describes how New York City public works builder Robert Moses designed several Long Island overpasses, leading to certain recreational facilities, to prohibit access by undesirable others. Winner writes that “automobile-owning whites of ‘upper’ and ‘comfortable middle’ classes, as he [Moses] called them, would be free to use the parkways for recreation and commuting. Poor people and blacks, who normally used public transit, were kept off the roads because the twelve-foot-tall buses could not get through the overpasses.”⁴⁸ Thus, one man was able to embed his racial ideology within these technological artifacts, thereby racializing them during their construction and eventual use. Winner’s example is not without its critics, but his work challenges us to think about how to critique technological activities from a racial vantage point.⁴⁹ By acknowledging that technological artifacts, practices, and knowledge can be racialized, Winner opens up a larger discussion about racial politics and technology in American culture.

What can move us forward in understanding issues of race, racism, African American experiences, and technology is to not focus on and give too much explanatory power to “authorial intentions” in order to produce the definitive meaning of a technology.⁵⁰ We must “engage the ambivalence of artefacts” and the multiple meanings this ambivalence creates.⁵¹ By acknowledging the tensions between discordant discourses and accepting nondominant communities as legitimate locations from which to explore the nature of technology within American culture, we can embrace the complexity and contradiction in technology and societies. Specifically for African Americans, this approach validates asking how African Americans see, view, feel, understand, and interact with technology from their own perspective. When we redirect our position of analysis for African Americans, we can begin to ask questions that address the ways African Americans often view technology differently than others. The move away from the object, to the person or the community, creates new opportunities to study the ways those marginalized engage technology within their everyday lives.

In this regard, black intellectuals Martin Luther King Jr. and Amiri Baraka articulated similar, yet different, visions of why, when considering the place of technology in the world, we should focus on the individuals and community rather than on material objects. As with Winner, their brief writings on technology can open new avenues to explore why and how African Americans through black vernacular technological creativity can redeploy, reconceive, and re-create technology.

Black Vernacular Technological Creativity

Martin Luther King Jr., in his posthumously published book *Where Do We Go from Here: Chaos or Community?*, began to critically examine the deepening divide between morality and technology. In the chapter titled “The World House,” King expressed concern about the ways he saw modern science and technology and freedom revolutions shaping the emerging global community. He saw a great deal of change, but he also was unsure if we had the capacity to embrace each other as equal human beings, break the tradition of human exploitation, and use technology to bring communities together rather than destroy them. King wrote, “We must work passionately . . . to bridge the gulf between scientific progress and our moral progress. One of the great problems of mankind is that we suffer from a poverty of spirit which stands in glaring contrast to our scientific and technological abundance.” He signaled his concern that “the richer we have become materially, the poorer we have become morally and spiritually” and cautioned that “when scientific power outruns moral power, we end up with guided missiles and misguided men.”⁵² King pressed for a revolution in values not only cultural but also technological. He argued that technological development did not have to be oppositional to a global moral vision. He was also troubled by what he saw as the potential for technology, if used inhumanly, to exploit individuals, communities, and societies. King was calling for “a shift from a ‘thing’-oriented society to a ‘person’-oriented society,” and declared that “when machines and computers, profit motives and property rights are considered more important than people, the giant triplets of racism, materialism, and militarism are incapable of being conquered.”⁵³

Of course King’s critique was situated within the context of sixties-era protest, which demanded the reassessment of the expanding military industrial complex.⁵⁴ But his critique also was situated within the context of the emerging technological medium of television. King, and the civil rights movement, effectively appropriated the power of television. Sasha Torres contends that television, as a technology of representation, powerfully displayed the civil

rights protests to the larger, primarily white, American society and altered the way that white America saw and viewed African Americans.⁵⁵ The technologically mediated televisual representation of terrible events such as the attack on the Selma-to-Montgomery marchers as they crossed the Edmund Pettis Bridge changed how many people saw the movement. White audiences began to sympathize with the civilized marchers, who were being brutalized as they peacefully demonstrated for their rights. Torres shows that television can be a fertile location to ask questions about technology in relation to American race relations, politics of representation, and African American life. However, this appropriation does not specifically represent black vernacular technological creativity. Civil rights activists were not actively engaging the technology of the television to alter the way they were presented to American society. Thus, as much as television recontextualized the civil rights movement, the change in black televisual representation was quite serendipitous.

White audiences' newly found sympathy for the nonviolent civil rights protesters did not carry over to the Black Panther Party for Self Defense. The potent images of gun-toting Huey P. Newton, Bobby Seale, and a host of other Black Panther Party members redeployed the gun and precipitated an important reversal of its technological power. Guns were instruments traditionally used to control—in the loosest sense of the word—black bodies. But the Black Panther Party members inverted this power. They redeployed guns as effective and visible artifacts to create a sense of fear among many white Americans, the same fear that many African Americans had felt for generations. This appropriation by the Black Panther Party of the material and symbolic power of the gun, against those who had used it so powerfully to subjugate African Americans, enabled them to claim power African Americans infrequently access.⁵⁶

Following in this black nationalist tradition, Amiri Baraka would level a critique of technology from a black perspective. In “Technology & Ethos,” Baraka wrote that “machines (as Norbert Weiner said) are an extension of their inventor-creators. That is not simple once you think. Machines, the entire technology of the West, is just that, the technology of the West . . . Political power is also the power to create—not only what you will—but to be freed to go where ever you can go—(mentally and physically as well). Black creation—creation powered by the Black ethos brings very special results.”⁵⁷ Baraka felt that the West had long ago gone down the wrong path in attempting to technologize humanity rather than humanizing technology. In his opinion, the Western technological tradition of creating “technology that kills both plants & animals, poisons the air & degenerates or enslaves man” was misguided.⁵⁸

Baraka was equally interested in probing what could happen and the questions that could be asked if black people had technological power and became agents of technological change:

Think of yourself, Black creator, freed of european [*sic*] restraint which first means the restraint of self determined mind development. Think what would be the results of the unfettered blood inventor-creator with the resources of a nation behind him. To imagine—to think—to construct—to energize!!! How do you communicate with the great masses of Black people? How do you use the earth to feed masses of people? How do you cure illness? How do you prevent illness? What are the Black purposes of space travel?⁵⁹

In a sense he was asking how black people could express their own creativity and design technology that would represent their social, cultural, and technological aesthetics. He would get to the heart of this question through an analysis of a typewriter.

A typewriter?—why shd [*sic*] it only make use of the tips of the fingers as contact points of flowing multi directional creativity. If I invented a word placing machine, an “expression-scriber,” *if you will*, then I would have a kind of instrument into which I could step & sit or sprawl or hang & use not only my fingers to make words express feelings but elbows, feet, head, behind, and all the sounds I wanted, screams, grunts, taps, itches, I'd have magnetically recorded, at the same time, & translated into word—or perhaps even the final xpressed thought/feeling wd not be merely word or sheet, but *itself*; the xpression, three dimensional—able to be touched, or tasted or felt, or entered, or heard or carried like a speaking singing constantly communicating charm. *A typewriter is corny!!* The so called fine artist realizes, those of us who have *freed* ourselves, that our creations need not emulate the white man's, but it is time the engineers, architects, chemists, electronics craftsmen, ie film too, radio, sound, &c., that learning western technology must not be the end of our understanding of the particular discipline we're involved in. Most of that west shaped information is like mud and sand when you're panning for gold!⁶⁰

Baraka clearly stated that the typewriter—a technology designed by someone who did not see the world from a black perspective—could not fit his aesthetic sensibilities. He used the typewriter to ponder what the results of black technological creativity would look like if black people were freed from Western technological domination. But Baraka, like King, would cautiously ask, “What is our spirit, what will it project? What machines will it produce? What will they achieve?” He demanded that black technological expression be humanistic, which in his words “the white boy has yet to achieve.”⁶¹

A more recent example of what Baraka alluded to can be seen with the creative technological reconception at Black Liberation Radio. In 1986 DeWayne Readus (soon to be known as Mbanna Kantako) began Afrikan Liberation

Radio (which became known as Black Liberation Radio in 1988 and is now Human Rights Radio) in his apartment located in the John Hay Homes public housing complex in Springfield, Illinois. Readus was already well known locally for his activism regarding public housing issues.⁶² The radio station began as a means for the John Hay Homes Tenants Rights Association to organize the residents and began weekly broadcasts in January 1988.⁶³ Initially, the station mainly aired mixes, rap, reggae, political and social commentary, and occasionally listener phone calls. The station had a total power of one watt, and, due to the segregated nature of Springfield, most of Springfield's black population could receive the broadcast. The event that changed the position of Black Liberation Radio with Springfield's black community was the broadcast of what would become known as the Gregory Court massacre.

The events began to unfold on March 19, 1989, when the emotionally unstable Douglas "Dougie" Thomas held his girlfriend, Karen Lambert, and her sister, Nicole, hostage. During the forty-two-hour standoff, Thomas's family members wanted to talk to him, convince him to let the women go, and surrender. The Springfield police apparently were minimally responsive to the family's requests and eventually entered the apartment by force after shooting two canisters of tear gas through a window. In the end, Thomas shot the two women and himself; only Nicole was not fatally injured.⁶⁴ In the following week there was a great deal of disagreement between the black residents and the police regarding the order of the events that resulted in the deaths of Dougie Thomas and Karen Lambert. It was unclear to many if Thomas had shot himself and the Lambert sisters before the tear gas or because of the tear gas. After this incident, Black Liberation Radio led the questioning of Springfield's police and began to broadcast police activity and air the resident encounters with police brutality. Soon Black Liberation Radio was harassed for its activism, as well as for broadcasting without an FCC license.⁶⁵

Readus/Kantako said his station was a form of electronic civil disobedience. Thus, he clearly knew what he was doing. His technologically driven response was not an accidental by-product of his hobby. He understood this set of technological objects as a potent means of regaining power and a voice within an oppressive local system. More important, Black Liberation Radio rearticulated the politics of surveillance in this African American community. The station supported an "inverted 'neighborhood watch,'" and observed "the police [and city officials] as the [violent and] threatening intruder."⁶⁶ Black Liberation Radio creatively reconceived surveillance technology to surveil the surveillants. As a result of this technologically and culturally rooted inversion of power, African Americans living in the Hay Homes renegotiated their

relationships with the oppressive dominant power structure. This powerful reconception of a set of technological products of surveillance was based on the needs and desires of a black community.⁶⁷

In similar ways to the Black Panther Party and Black Liberation Radio, resistance has been a motivating factor for musicians in the reconception of technological artifacts, practices, and knowledge.⁶⁸ One example of this can be seen with DJs and the act of scratching. Scratching is the purposeful manual manipulation of an LP recording in the reverse direction of the spinning turntable to produce a “scratching” noise. Depending on the speed, duration, and the music already inscribed on the LP record, scratching can produce a plethora of sounds. When DJs began scratching, they subverted the fundamental meaning constructed for record players as well as for that of the LP records. What is significant about this basic maneuver is that it drastically diverges from the principal meaning embedded in the technological network associated with records and record players: to listen to prerecorded sound/music. DJs were thus able to creatively reconceive the technological products associated with recorded music and the knowledge associated with their functions based on their own black/ethnic musical sensibilities.⁶⁹

The sonic and cultural priorities that led these musicians to reconceive recording equipment began to exert a broader influence as the popularity of hip-hop music exploded in the 1980s and 1990s. Initially, existing technology was incapable of reproducing the desired sounds. Musicians such as Herbie Hancock, who embraced the tonal flexibility of synthesizers, would often have to “hack” them to produce sounds like those exhibited in his Grammy award-winning single “Rockit”.⁷⁰ Others, like Eric Sadler—one of the producers of Public Enemy’s incendiary hip-hop album “Fear of a Black Planet” (1990)—who desired to reproduce a gritty, dirty, and for him, more authentic sound, had to rely on a different approach. During an interview, Sadler explained why he preferred to work in a less than pristine studio. “One of the reasons I’m here in this studio is because the board is bullshit. It’s old, it’s disgusting, a lot of stuff doesn’t work, there are fuses out . . . to get the old sound. The other room, I use for something else. All sweet and crispy clear, it’s like the Star Wars room. This is the Titanic room.”⁷¹ Even though he had access to a much newer studio, he specifically wanted to use this seemingly inferior equipment because it allowed him to create a rich, rough, bass-heavy sound that emulated the “old sound” of records from the 1960s and 1970s that he valued. What he called the “sweet and crispy clear” sound produced by the newer equipment simply did not fit his aesthetic, sonic, or cultural priorities.

As hip-hop became an important part of American culture, and represented an extremely lucrative market, the music industry came to embrace the technological tweaks of early hip-hop musicians and directly supported the development of equipment designed specifically to tap into this market. DJ legend and hip-hop pioneer Grandmaster Flash was instrumental in re-creating a set of new technological objects and practices that addressed black cultural needs. Moreover, Grandmaster Flash's engagement with technology, like Readus/Kantako's, was not an accident. He had a history of technological innovation. He commented that it was his "love of technology, and specifically electronic equipment, that got me into DJing over 20 years ago. I remember stepping to the packed schoolyard jam with my equipment and records in hand ready to debut my new innovation, The Quick Mix Theory. Like a mad technoscientist, I had spent months holed up in my room testing dozens of needles, sampling sounds and perfecting my newest experiment."⁷² His technological rhetoric acknowledges that he understood he was re-creating technology based on his own personal aesthetics as well as using scientific methods to develop his technique.⁷³ A newer extension of his technologically rooted creativity can be seen in Rane Corporation's Empath mixer. Grandmaster Flash played a key role in this device's technical design, and in a 2003 interview he spoke of his often contentious, but ultimately successful, working relationship with Rane:

The items on a mixer that you touch the most were too far away and other items that you touch weren't there. So when I made that phone call to Rane, I told them that . . . I did have a problem with some things. So when I had conversations with [Rane's director of sales] Dean Standing, all my frustrations of 25 years were coming up. They finally said, "Flash, what do you want with the mixer?" And I just flooded them with what I wanted. I met with [Rane engineer] Rick [Jeffs] and that was probably the closest thing to a fistfight that it could possibly get. With his genius, he'd say, "Flash, but it's not normally done this way." And I'd say, "But you must!" He'll say, "The mixer doesn't have enough room for that." And I'd say, "Well, you gotta squeeze it." He said, "What's going to be the output format?" And I told him XLR, quarter-inch, and RCA! He'd come back with, "Why don't we do two of the three," and I'd say no. As I gave him my wish list, he'd have to keep going back to the schematic diagram and make it work.⁷⁴

Flash overrode the reservations of the engineers to produce one of the most innovative DJ mixers on the market today. In the end, whether it is the valorization of old equipment, the subversion of the phonograph through scratching, or the collaboration between turntablists and the music industry, the vernacular technological creative innovations of hip-hop musicians have deeply imprinted black cultural aesthetics, priorities, values, beliefs, and sensibilities on the dominant culture. I think Tricia Rose says it best when she writes:

Rap technicians employ digital technology as instruments, revising black musical styles and priorities through the manipulation of technology. In this process of techno-black cultural syncretism, technological instruments and black cultural priorities are revised and expanded. In a simultaneous exchange rap music has made its mark on advanced technology and technology has profoundly changed the sound of black music.⁷⁵

Within the exploration of techno-black cultural syncretism and black vernacular technological creativity lies the potential to end the silence surrounding African American technological experiences.

Conclusion

African American technological experiences need to be studied to alter the current discourse of American technology, rather than to multiculturalize our narrow understanding of technology in America. With new multicultural and multiracial approaches to understanding the nature of technology and American culture, traditional narratives can no longer produce, contain, and maintain the explanatory power they once possessed. To develop a more thoughtful analysis of African American technological experiences, we need to think differently about the questions we ask and the tools we use to answer those questions. Technological knowledge must be interrogated, because it is inextricably intertwined with relations of power that are regularly applied to regulate black existences. Stuart Hall writes, "Knowledge linked to power not only assumes the authority of 'the truth' but has the power to make itself true. All knowledge, once applied in the real world has real effects, and in that sense at least, 'becomes true.'"⁷⁶ Following from Hall, it can be said that what we know about the relations between black people and technology primarily comes from dominant subject positions that unfortunately tell us more about how African Americans are controlled and regulated than about how black people engage technology from their own locations within American culture. The existing approaches used to understand technology in American society and culture overlook racialized power and conflict when they reduce everything to various forms of negotiation. This is not to implicate or label social theories of technology as forms of epistemological imperialism in the manner in which Edward Said writes about orientalism; but Said's thoughts are insightful.⁷⁷ In writing about colonialism and imperialism, Said inveighs that "both are supported and perhaps even impelled by impressive ideological formations that include notions that certain territories and people require and beseech domination, as well as forms of knowledge affiliated with domination."⁷⁸ Just as the intellectual work of which Said writes is tainted from the very beginning,

social theories of technology are besmirched by similar dominant cultural efforts that are intended to maintain domination, but are concealed within the rhetoric of flexibility and freedom.

To gain a deeper understanding of black vernacular technological creativity, it is vital to examine the experiences of African Americans from where they stand in American society and culture rather than from the dominant position reflecting back on black lives. Black vernacular technological creativity is rich in historical value and replete with rebellion, resistance, assimilation, and appropriation in forms we would often not recognize and in places we are not accustomed to looking. It is from this space that we can see how black people reclaim a level of technological agency by redeploying, reconceiving, and re-creating material artifacts in their world. By focusing on black vernacular technological creativity and engaging in uncovering the multiple layers of black communities and their interactions with technology, we can avoid making the “they are all the same” essentialization of the marginalized mistake regarding African Americans.⁷⁹

Technology is often thought of as a value-neutral “black box” for inputs and outputs. Critical studies of technology have opened the black box, but there are many hidden compartments that still need to be explored. To access these concealed compartments, or the “blackness” in the black box, we need to reassess and expand our study of technology to examine how racially marginalized people, such as African Americans, interact with technology and how technology mediates multiple African American experiences with racism. To address African Americans and technology, we must think about the ways in which black people see race and racism—important realities of everyday black existence. This is difficult because race and racism, in relation to technology, have always been hidden in a mysterious place of “unlocation.”⁸⁰ By uncovering African Americans creating technological artifacts, practices, and knowledge that have become parts of the American material and technological cultures, black people will become visible metaphorically and materially. This work will enable black people to move out of the shadows, lift the veil, remove the mask, and solidify and develop decidedly positive technological representations and existences for African Americans within American society and culture.

Notes

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3. Baraka, "Technology & Ethos," 155–57.
4. Anthony Walton, "Technology Versus African-Americans," *Atlantic Monthly* 283.1 (January 1999): 16.
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6. Ronald Kline, "Construing 'Technology' as 'Applied Science': Public Rhetoric of Scientists and Engineers in the United States, 1880–1945," *Isis* 86 (June 1995): 197; Leo Marx, "The Idea of 'Technology' and Postmodern Pessimism," in *Technology, Pessimism, and Postmodernism*, ed. Yaron Ezrahi, Everett Mendelsohn, and Howard P. Segal (Amherst: University of Massachusetts Press, 1994), 14; Judy Wajcman, *Feminism Confronts Technology* (College Station: Pennsylvania State University Press, 1991), 14–15.
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8. Joel Dinerstein, *Swinging the Machine: Modernity, Technology, and African American Culture between the World Wars* (Amherst: University of Massachusetts Press, 2003), 22.
9. *Ibid.*, 126.
10. *Ibid.*, 130.
11. *Ibid.*, 25.
12. Albert Murray, *Stomping the Blues* (New York: McGraw-Hill, 1976), 90.
13. Black vernacular technological creativity is related to the ways Ron Eglash has written about technological appropriations by marginalized peoples. See Ron Eglash, Jennifer L. Croissant, Giovanna Di Chiro, and Rayvon Fouché, eds., *Appropriating Technology: Vernacular Science and Social Power* (Minneapolis: University of Minnesota Press, 2004).
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17. Leo Marx, "The Machine in the Garden," *New England Quarterly* 29 (March 1956): 27–42.
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19. Donald MacKenzie and Judy Wajcman, *The Social Shaping of Technology: How the Refrigerator Got Its Hum* (Philadelphia: Open University Press, 1985).
20. Wiebe Bijker, "Sociohistorical Technology Studies," in *Handbook of Science and Technology Studies*, ed. Sheila Jasanoff, Gerald E. Markel, James C. Petersen, and Trevor Pinch (Thousand Oaks, Calif.: Sage Publications, 1995), 229–56.
21. Bijker, "Sociohistorical Technology Studies," 250.
22. Thomas P. Hughes, *Networks of Power: Electrification in Western Society, 1880–1930*, (Baltimore: Johns Hopkins University Press), 1983; Wiebe E. Bijker and Trevor Pinch, "The Social Construction of Facts and Artefacts, or, How the Sociology of Science and the Sociology of Technology Might Benefit from Each Other," *Social Studies of Science* 14 (August 1984): 399–441.
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30. David J. Hess, *Science Studies: An Advanced Introduction* (New York: New York University Press, 1997), 110.
31. Law, "Technology and Heterogeneous Engineers," 113.
32. Russell Ferguson, "Invisible Center," in *Out There: Marginalization and Contemporary Cultures*, ed. Russell Ferguson, Martha Gever, Trinh T. Minh-ha, and Cornel West (Cambridge, Mass.: MIT Press, 1990) 9–14.
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43. John Fiske, *Media Matters: Everyday Culture and Political Change* (Minneapolis: University of Minnesota Press, 1994), 272.
44. *Ibid.*, 273, quoted from Gaines, "To Our Readers," 4.
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