Every information context is a CRiTical Race information Theory opportunity: informatic considerations for the information industrial complex

Anthony W. Dunbar

School of Information Studies, Dominican University, River Forest, Illinois, USA and Critical Race Theory collective (CRTc), Forest Park, Illinois, USA

Abstract

Purpose – This paper is an extension of a panel presentation delivered in response to a joint call for panels by the Social Informatics and Information Ethics and Policy Special Interest Groups for the 2022 Association for Information Science and Technology conference. The purpose is to introduce critical race frameworks and tenets as a lens to develop, assess and analyze the social informatics (SI) within information science (IS) research, professional discourse, praxis and pedagogical paradigms. This paper spotlights one of the presentations from that panel, an iteration of Critical Race Theory (CRT) designed specifically for information studies: CRiTical Race information Theory (CRiT).

Design/methodology/approach – Just as importantly, using SI as part of the context, the paper also includes a discussion that illustrates research and theory building possibilities as both counter and complement to the technocratic advances that permeate society at every level (macro, mezzo and micro), which can also be reasonably framed as the information industrial complex. Thus, CRiT joins other forms of critical discourse and praxis grappling with deconstructing, decolonizing, demarginalizing and demystifying the influence and impact of information technologies. While CRiT has global intentions and implications, this specific discussion has an extensive American focus.

Findings – If we consider the rapid pace in which techno-determinism is moving toward the vise grip of techno-fatalism controlled by frameworks generated from the information industrial complex, we can reasonably consider that humanity on a global basis is living within a meta-large technocratic crisis moment. This crisis moment is both acute and chronic. That is, the technocratic crisis is continuously moving quickly while simultaneously worsening over an extended period of time with no remedies and few responses to substantively address the crisis.

Research limitations/implications – Part of the nature of information and data is measurability. Thus, identifying compatible nomenclature connecting the descriptiveness of intersectionality (a seminal CRT tool) as a qualitative research method to the measurability of data connected to quantitative research, a mixed method approach moves from possible to plausible. Additionally, within IS, there are often opportunities to measure human engagement, such as social media content, search engine use, assessing practices of categorizations, and multiple forms of surveillance data as a short list. Hence, the descriptiveness of intersectional qualitative research "mixed" with the measurability of quantitative research within information settings implies exponential methodological possibilities.

Practical implications – CRiT is multilayered, on the one hand, with the intention of being a discipline-specific, information-specific form of CRT. On the other hand, CRiT theory building is interdisciplinary and transdisciplinary based on information as omnipresent phenomena. An ongoing challenge for CRiT theory building is identifying and working within a balance between, practitioners who typically throw anything and everything at practical problems, while scholars often slice problems into such small segments that practical

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understanding is severely limited. Embracing and integrating the dynamic interplay between developing ideas and using them is the key to evolving CRiT within the social sciences.

Social implications – There is plenty of room as well as a need for additional narrative discussing or challenging the use or appropriation of information from a technocratic approach, a counter to the information industrial complex.

Originality/value – CRiT is emerging and cutting edge in discussion that addresses the technocratic determinism found in most scholarly discourses.

Keywords Critical race theory, Social informatics, Critical mixed-methods research, CRiTical Race information Theory, Information industrial complex, Technocratic determinism

Paper type Practitioner Paper

Introduction/overview

While critical race-framed discussions are not unfamiliar within the information science (IS) discourse, it would be quite presumptive to state them as abundant. In the scholarly and professional literature, Critical Race Theory (CRT) has not been fully embraced and included within the IS discourse [1]. There has been some progress [2], including the groundbreaking edited work, Knowledge Justice (Leung & López-McKnight, 2021), which considers library and information science (LIS) from a CRT lens. The context of social justice work, which aligns with CRT aspirations, is most often discussed as sociological contexts related to the pedagogy of IS along with the issues at mezzo level of professional librarianship (Budd, 2003, 2013; Caswell, 2017; Cooke, Sweeney, & Noble, 2016; Cooke & Sweeney, 2017; Kumasi & Manlove, 2015; Pawley, 1998, 2006; Punzalan & Caswell, 2016; Raber, 2003; Radford & Radford, 2003; Sweeney & Cooke, 2018). There are also those who have used CRT related to information technology (Center for Critical Race + Digital Studies, n.d; Hamilton, 2020; Johnson, Shapiro, Disalvo, Rothschild, & Disalvo, 2021; and Ogbonnaya-Ogburu, Smith, To, & Toyama, 2020) [3].

Yet, there is still room as well as a need for additional narrative discussing or challenging the use or appropriation of information from a technocratic approach, a counter to the information industrial complex [4]. Powers and Jablonski (2015) frame the information industrial complex as a phenomenon that developed prior to the end of the Second World War: "Through various policy mechanisms, including subsidy, domestic and international policy reform, direct investment, and guidance, the U.S. government facilitated the rise of modern information and communications technologies, including, in particular, computers and the internet, funded their advanced technological development, and pushed for governance structures enabling their global reach" (p. 51). Moreover, "the symbiotic relationship between the U.S. government and the information sector does not bode well for the future" (p. 51).

While the corporate and governmental interests of a commodified information ecosystem have reached a level of well-embedded societal determinism, those embarking on critical race frameworks, be they pedagogical, praxis-based, research-driven, or theoretical in nature, are a necessary resistance to determinism evolving into fatalism (Licker, 2002). The technocratic advances that permeate society at every level (macro, mezzo and micro) require ongoing deconstruction, decolonization, demarginalization and demystification of the influence and impact of information technologies.

The timing of offering first the panel at the 2022 ASIS&T conference and subsequently this expanded component of the panel spotlighting CRiTical Race information Theory (CRiT) comes in the wake of the racial awakening summer of 2020, which led to an interest convergence (Bell and Derrick, 1980) for racial justice [5]. Applying interest convergence more specifically to IS shows that many information professionals have interest in racial justice not from a previous position of commitment to racial justice but rather, in many instances, from a moment of convergence within the momentum of international awareness of racial injustices magnified during the summer of 2020. Drawing from the literature, this particular type of IS interest

convergence usually plays out in performative acts where each variation of the performative can be considered a react and respond approach (RRA) (Birdi, Dunbar, Furner, & Ibekwe, 2022) [6].

As with most (if not all) interest convergence moments, the laser hot interest of the moment, particularly within the context of racial or social justice, is followed in short order by the subsequent chilling effect. This is certainly the case regarding the racial justice summer of 2020 (Kennedy, 2021; Crenshaw, 1988; Ottesen, 2022).

The evolution of social informatics pointing toward a critical race context

Social Informatic studies are often cognizant of the ways that people and organizations act in support of differing social values and beliefs, and have different positions of power in their various relationships (Kling, 1997) [7].

Social Informatics (SI) evolved from what has been framed as foundational and early work, often led by Rob Kling, when the primary focus was to explain the sociological aspects of information and communication technologies (ICTs) (Sanfillippo & Fichman, 2013). The early work "demonstrated that critical analysis provided more accurate explanations of computerization outcomes than simplistic determinisms" (p. 2). While this early work is noted as starting in the mid-1980s, driven by the need to understand the influence and impact on the sociocultural aspects of lived experience based on the ever-increasing integration of ICT in societal economic, political, professional/corporate and governmental infrastructures, engagements attempting to fully define SI continued into the next decade:

"A National Science Foundation-sponsored workshop, Advances in Social and Organizational Informatics, was held in November 1997 at Indiana University in Bloomington, IN During the workshop, participants struggled with the problems of defining SI as a field of study, focusing on its definition, fundamental concepts, research exemplars, and other components of field building. One outcome of the discussions was a working definition of social informatics as: The interdisciplinary study of the design, uses, and consequences of information, and information and communications technologies, and their interactions with institutional and cultural contexts." (Kling, Rosenbaum, & Hert, 1998, p. 1048). Thus, some of the SI scholarship began to stress the need to explore social possibilities of computerization, rather than functional computing efficiency and productivity alone. Kling and his colleagues worked to better understand sociotechnical interactions and social aspects of ICT, "in part to explain rapid technological change and in part to define SI" (Sanfillippo & Fichman, 2013, p. 6).

While the early development of SI was focused on the explanatory, there was a scholar who foresaw more fully the current integration, influence and impact of ICTs and the deterministic future that was soon to come. "In 1994 — before most Americans had an email address or Internet access or even a personal computer — Philip Agre foresaw that computers would one day facilitate the mass collection of data on everything in society" (Albergotti, 2021).

As Agre expressed, "research can now proceed on the basis of a radical interpretation of their significance, inevitably incremental in its practical effect but more sophisticated than it would have been otherwise, leading toward new and different problems. Or perhaps the predicted impasses have not been detected, in which case one might ask why they have been overlooked" (Agre, 1997, p. 150).

In turn, Agre begins to point more toward the (as it turns out, accurately) predictive:

Technical impasses can be overlooked for many reasons; they can be buried in vague or ambiguous language, in notational conventions, in experimental designs, in seemingly unproblematic assumptions, and in many other places. Critical methods might be helpful in discovering other ways in which technical troubles can be inadvertently hidden from view. But nothing can substitute for the daily work of trying to get things built and working. Technical research can only develop from within the designer's own practical work, and it will only progress when the designer's experience is neither channeled by self-reinforcing conceptual schemata from inside the field nor

delegitimated by incommensurable philosophies from outside of it. Cultivating the painstaking middle way between these hazards is probably not my own path any more, but it is very much what Collins (1990) [8] had in mind in his philosophically astute but constructively minded research on expert systems, and perhaps it will be a path for others in the future (Agre, 1997, pp. 150–151).

Advancing this discussion finds that the early years of ICTs and Internet development were not completely void of all critical engagement. Hamilton's (2020) insights and review of the literature specifically focus on race and ultimately connect ICTs and the Internet studies to critical race engagements. "For all of this vibrancy in early Internet studies, questions about race were often ignored. Indeed, the tech industry and many researchers posited the Internet as a utopia where racialized identities would cease to exist. In response, a critical body of scholarship emerged to critique the inherent whiteness in the early scholarship about the Internet and its obfuscation of the role of race in the structure and culture of the Internet. This field of study, which I refer to as critical race and digital studies, continues to be developed empirically and theoretically" (pp. 292–293).

Hamilton goes on to write, "at a basic level, colorblind racism takes the critique of colorblindness one step further to suggest that adherence to colorblindness—in the face of social facts and realities that point out the continuing significance of race itself constitutes a certain kind of racism. Within Internet studies [and ICT critiques], colorblind racism has been expressed through an imagining of the Internet as a racial utopia within which the social inequities of the physical world could be left behind" (p. 293). In essence, Hamilton describes how Internet and ICT studies tended to "whitewash" identity-based concerns in favor of a default approach that prioritizes white patriarchal hetero hierarchies.

One of the scholars Hamilton points to in their critique and review of the literature is Ruha Benjamin (2019). Benjamin coined "The New Jim Code," which refers to technocratic oppression resembling and recreating the powerful disenfranchisement of Jim Crow (1877–1950). As articulated by Benjamin, Race after Technology: Abolitionist Tools for the New Jim Code "integrates the tools of science and technology studies (STS) and critical race studies to examine coded inequity and our contemporary racial landscape. Taken together within the framework of what I term race critical code studies, this approach helps us open the Black box of coded inequity. 'Black box' is a metaphor commonly used in STS to describe how the social production of science and technology is hidden from view" (p. 34).

Benjamin writes, "critical race studies interrogates the inner workings of sociolegal systems. Using this hybrid approach, we observe not only that any given social order is impacted by technological development, as determinists would argue, but that social norms, ideologies, and practices are a constitutive part of technical design" (p. 22).

It is unrealistic to believe that an immediate and increased critical focus on the accelerating pace of ICT progression, artificial intelligence technologies and Internet optimization will in the moment or even eventually keep pace with the rate of exploitation within corporate data sharing. Understanding the daunting reality only elevates the importance of developing SI research tools as a counter to technocratic appropriation and oppression. By developing a critical race information framework specifically focused on both the institutional and cultural contexts of SI, what becomes visible and worthy of discussion are the authentic points of view and lived experiences of specific and unique sets of sociocultural identities. This makes the resistance to technological determinism a worthy and rigorous engagement to prevent technological fatalism as the information industrial complex continues to evolve and expand.

What is CRiTical race information theory?
The CRiT lineage (abbreviated)
CRiT is a rapidly developing iteration of CRT applied within information settings. As with any developing theory, CRiT too has lineage with ancestral roots.

It is reasonable to consider the Frankfurt School as the starting point of the critical theory to CRiT lineage. However, the work of the Institute of Social Research was set up by two prior moments in history that occurred in the nineteenth century. Auguste Comte's initiation of the positivist movement in 1830 marks the first precursor of critical theory. In this sense, positivism is the adversarial academic worldview that positions critical theorizing as an appropriate counterbalance (Comte, 1974; Macey, 2001). Just as importantly, it must be noted that the second significant moment of nineteenth-century history, which was influential enough to be considered a foreshadower of critical theory, is the development and evolution of Karl Marx' and Freidrich Engels' work [9].

Building further on the Marxist perspective, Jurgen Habermas' scholarship personifies the transition in critical theory building. The early writings of Habermas, those from 1950s through the 1960s, reflect an extension of traditional Marxist values applied in the more traditional manner of the Frankfurt scholars; more specifically, the Marxist-driven critical theory that addressed issues associated with overcoming modernity, early twentieth-century positivism, and the spread of fascism (Dews and McCarthy, 2001; Giddens, 1977; Held, 1980). An often raised and reasonable criticism of Habermas is that while he was a proponent of praxis-based scholarship, his work is heavy on the theory and light on the practice components of praxis. This criticism may be fair, but for the purposes of this study, it is the theoretical substance that best connects to the jurisprudence of critical legal studies (CLS). There may be few that connect Habermas to CLS, however, this pairing combined with the development of CRT serves as inspiration for CRiT.

CLS is where most folks begin to engage their understanding of CRT based on the recent spotlighting, misrepresentation and evolving divisiveness connected to CRT. In turn, Figure 1 begins by picking up the lineage and illustrating CLS as a more "modern era" jumping-off point, one most commonly referenced in the news media and on social media (Basu, 2021; Cobb, 2021; Fortin, 2021).

As a movement, CLS was established in May of 1977 during the First National Conference on Critical Legal Studies. Of course, this conference marks the initial academic organizing of those that self-identify as critical legal scholars, yet, the roots of CLS can easily be connected to class analysis dating back to the 1930s as part of the depression era's economic social analysis (Hasnas, 1995; White, 1986). As such, it is safe to say there have been plenty of legal briefs, law
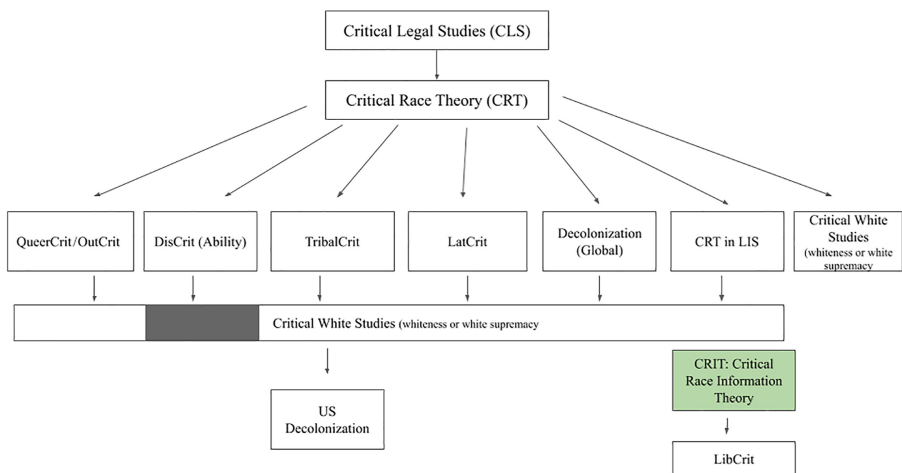

Figure 1.
Lineage of CriT

Source(s): Figure by authors

school courses, judicial decisions and judicial interpretations that have either discussed or confronted the interdependent relationship between social structure, social values, social constructs and the nature, traditions, doctrines and enforcements within the American legal system. The thrust of the CLS movement has focused on the limits of social equity and social consciousness within many aspects of legal jurisprudence. Put succinctly, CLS scholars identify and discuss points of oppression embedded within the American legal system.

Feldman (2000) surmises that "critical legal studies is perhaps best understood as a generational movement. From this vantage, the crits (CLS scholars) were those critical radical thinkers who entered the legal academy in the 1970s and dominated left legal thought for 15 years or so. The crits themselves were motivated greatly by their experiences as war protestors as well as by their profound disappointment with their own law school experiences [10]."

> The provocative question that launched the workshop—'What is it about the
>
> whiteness of CLS that keeps people of color at bay'—foreshadowed the
>
> eventual recognition that interrogating whiteness is an important dimension
>
> of any critical discourse on race. Unfortunately, this cutting edge intervention
>
> was not well received, particularly by some of the white male heavies of CLS.
>
> - Kimberle Williams Crenshaw discussing a 1985 watershed moment leading to the creation of CRT [11]

From a historian's perspective, one could point to a number of occurrences or historical events and make a case that it was the true start of the Critical Race Movement. It would be fair to suggest that the first published law journal article on affirmative action was the actual start. Any number of tipping points during discussions of race within the CLS movement could mark the CRT launching point. Perhaps a combination of the aforementioned might suggest that a progression of occurrences gave birth to CRT. Or we can simply accept that it was an event whose time had come. However, in the interest of this text, we pick up the story in 1987. This is when the blurred lines between the CLS and CRT movement become a little more focused.

According to Crenshaw, the 1987 CLS conference "promised to move the discussion of race to the center of CLS; a number of factors tempered the enthusiasm of many people of color associated with CLS. Many harbored serious reservations about the value of such a conference in light of the maelstrom prompted by the 1985 race workshop. Those of us who had experienced such resistance to the internal dialogue about race in CLS were concerned that the upcoming conference would sidestep the more controversial discourse and focus instead of developing a CLS critique of race in legal institutions 'out there'" (Crenshaw, 2002, p. 16). In short, the efforts made by scholars of color to bring the issue of race to the forefront both as a general point of reference and the main focal point of the 1987 CLS conference was a monumental task, not just in the organizing of an event but also in the work of overcoming pessimism and resistance in the form of institutional racism. More importantly, the future leaders of the CRT movement were taking control of "self," which is no easy task based on the embeddedness of racism in American society (then and now). In taking control of self, the Crits of color were setting into motion two dynamics. First, they were creating a self-expressive critique of racism and its impact on their identity development. Secondly, these "critical" pioneers were insistent that "white folk" take responsibility for their racism, as acts of individual behavior, as contributors to institutional racism, and as compliant recipients of white privilege.

In retrospect, the 1987 CLS conference turned out to be a watershed moment for more than just folks of color. This moment in time was a turning point for anyone who identified or self-identifies as disenfranchised from the normative center of social acceptability. Many of these

individuals have daily experiences within multiple identities of marginalized existence. Not only did the moment mark a new paradigm in the discussion of race but it eventually served (and currently serves) as a sort of social justice template. CRT has become a framework utilized by multiple identity groups from their lived experience vantage points, including CRiT. The Figure 2 below illustrates a snapshot (a pause to capture the moment, reflecting the breadth and developing depth of CRT) of what will continue to evolve as it applies to both CRT and CRiT.

CRIT-THREE DIMENSIONAL STRATEGY/APPROACH

	pedagogical	praxis	theoretical
	Curricular and Instructional	Converging Practices and Theory in to actions and activism	Creating new possibilities
	· academia course design & curriculum development · professional development curriculum · professional development consultation	· conducting theory building/exploratory research · developing professional (critical/cultural) best practices · Taking on engagements to be transformative vs performative	· evolving theories · newly developed theories · develop scholarship to broaden the CRT/CRIT discourse

Figure 2.
CRiT – three-dimensional approach

Source(s): Figure by authors

As noted by Snow and Dunbar (2022), "it is reasonable to consider that as CRT continues to expand and evolve within LIS, an even more intentional commitment to critical race theory [will also] lead to [the expansion of] critical race information theory (CRIT), similar to the way other subject areas have embraced CRT and enhanced their CRT discourse. For example, ethnic and indigenous studies have LatCrit and TribalCrit along with LGBTQ + studies having OutCrit, QueerCrit, and [DisCrit]. LIS fully claiming its relationship to CRT could be an enhancement to the equity and justice discourse within the discipline by having a positive impact on the recruitment (and retention) of students of color, further implementing critical pedagogy, broadening research, as well as epistemology related to knowledge, organization, and interaction" (p. 4).

The CRiT infrastructure
CRiT as a framework also aligns well as an instrument for analysis and assessment of informatics as components of research, activism and theory building. In doing so, CRiT lends opportunity to substantively counterbalance the heavily technocratic influences and applications within the information studies discipline. CRiT establishes "information" to be understood as phenomena that influence academic disciplines, sociocultural context, economic circumstances, health outcomes, and within everyday human interactions; thus, CRiT also exists as an interdisciplinary and transdisciplinary framework. CRiT in its current iteration has a three-dimensional approach. CRiT as pedagogy works in tandem with CRiT as praxis and CRiT as theory.

CRiT as pedagogy
There are three foundational components to CRiT pedagogy: a teaching philosophy, the learning theories and the course delivery method. The CRiT teaching philosophy has evolved and continues to evolve within each CRiT course designed and taught, each course session,

each interpersonal engagement with a learning community member (student), and with each collegial exchange about working our craft as well as each deep dive (or re-dive) into critical pedagogy literature. There has also been a cultivation of disposition and approach to this teaching philosophy that is a combination of audacity and humility; intentionality and exploration; resilience and rigor; along with reflectivity and responsibility.

That said, the CRiT teaching philosophy has both primary and secondary goals. The Primary Goal: develop socially conscious critical thinkers. The Secondary Goal: inspire critical content creators. The strategy toward achieving both the primary and secondary goals is drawn from a basic premise within Freirean pedagogy, which is to avoid narration as a dominant teaching method [12]. According to Paulo Freire, an exclusive lecturing style turns students into containers or receptacles to be filled, the banking concept of education, in which the scope of the action allowed to students extends only as far as receiving, filing and storing deposits. "The teacher presents [themselves] to the students as their necessary opposite; by considering their ignorance absolute, [the teacher] justifies their existence...students that accept this ignorance never discover they [also] educate the teacher" (Freire, 2005, p. 72). If we place the expectation upon information studies students to take on innovative and critical thinking in applying CRiT to the technocratic aspects of the discipline, then the philosophy of teaching must also facilitate that expectation.

CRiT pedagogy adheres to two learning theories: Vygotsky's cultural-historical theory of learning and critical constructivist approaches to learning [13]. The combination of Vygotsky's cultural-historical theory along with critical constructivism emphasizes that "In many contemporary educational settings... students and teachers are not encouraged to confront why they tend to think as they do about themselves, the world around them and their relationships to that world. In other words, such individuals gain little insight into the forces that shape them—the construction of their consciousnesses" (Kincheloe, 2005, p. 49).

The CRiT pedagogy utilizes a Community Learning Model delivery method through which the teaching philosophies and learning theories come together in a complementary and supplementary manner within the learning community; thus, generating learning as place and space. Accordingly, a learning community "promotes and maximizes the individual and shared learning of its members. There is ongoing interaction, interplay, and collaboration among the community's members as they strive for specified common learning goals" (Lenning, Hill, Saunders, Solan, & Stokes, 2013, p. 7). CRiT learning communities have a shared responsibility between the learning community leader and the learning community members in the facilitation of the learning content and administration of the learning community activities.

Beyond the suggestions and implications authored in this text, CRiT is already actively serving a pedagogical purpose, in the form of two fully designed courses within the School of Information Studies MLIS program's regularly offered courses at Dominican University in Illinois [14].

CRiT as praxis
The praxis approach is driven by the intentionality to be transformative versus simply serving as performative within research and theory building as well as in pedagogical endeavors to transform spaces (Freire, 2005), in understanding that performative engagements are entrenched in symbolism and rhetoric. Even when working optimally, performative actions seldom, if ever, result in transformation; in a best-case scenario, solely performative acts result in rituals and ritual-making (La Belle, 1986). Conversely, CRiT as praxis is intended to result in transformation. "[A] transformative experience changes you epistemically and personally. It's an experience — perhaps short-lived and intense, perhaps gradual yet substantive —that brings about a profound epistemic and personal shift" (Paul & Quiggin, 2020, p. 561). Through CRiT, transformation may range from acts of resistance to

oppression and/or retrenchment to working toward funding allocation or policy amendment/ recreation (Glass, 2001). The intentionality of a CRiT praxis should generate a sense of urgency, if not intensity, in bringing transformation to IS/LIS education. CRiT as praxis has the possibility of offering ample opportunity to interrupt and, as it evolves, disrupt the habitual muscle memory of performative social justice rhetoric and responses.

Again, beyond authoring abstract suggestions, CRiT as Praxis currently exists in the world. The Critical Race Theory collective (CRTc) is a fully functioning community of international, interdisciplinary and intersectional scholar-activists who are committed to cultivating knowledge and information across borders. This community is most interested in developing knowledge justice tools for dismantling white supremacy and oppressive hierarchies as they manifest in spaces of work, education and society [15].

CRiT as theory
In order to thoroughly address "What is CRiT?", the concept must be operationalized. The infrastructure of CRiT builds from three distinct sources: two previously expressed CRT tenet frameworks; two tenets developed to provide an information context; and seminal CRT Tools.

The existing CRT tenets that are part of the CRiT infrastructure come from Delgado, Stephanic, and Harris' "Basic Tenets of Critical Race Theory" in the third edition of *Critical Race Theory: An Introduction* (2017, pp. 9–11) as well as modified version of the CRT tenets framing presented by Kumasi *et al.* (2020) in *A Preliminary Study Interrogating the Cataloging and Classification Schemes of a K-12 Book Discovery Platform through a Critical Race Theory Lens*. CRiT draws from four clearly stated tenets, listed in Figure 3 under "Existing CRT Tenets." Similarly, there are two information context tenets in the operationalization of CRiT, stated in full in the "Information Context Tenets" heading in Figure 3. The first tenet is the grounding premise of CRiT. The second tenet speaks not only to understand the *current* IS/ LIS discourse but also the new paths and frontiers information will reach as *future* IS/LIS discourses unfold to either join current discourses or replace them. The third resource pool completing the juxtaposition of connotative and denotative shaping of CRiT are the CRT Tools. The CRT tenets of interest convergence and intersectionality (Delgado *et al.*, 2017; Kumasi *et al.*, 2020) are repositioned as CRT Tools in CRIT. The traditional CRT tools of counterstory and whiteness as property round out this resource pool, detailed in the "Seminal CRT Tools" section of Figure 3.

Leading into the next discussion, it is most important to note the Information Tenets within CRiT:

(1) Every aspect of information, including its form, use, structure and infrastructure can be analyzed in order to understand the ways in which it reflects and represents the beliefs, values, practices and politics of our society; and how in turn such dynamics affect individuals and groups that are traditionally positioned in society as marginalized or disenfranchised.

(2) Every information context is an opportunity for a critical race discussion or analysis. Everywhere information engages society: CRiT is a viable lens to assess that engagement through.

Discussing CRiTical race information theory, informatics and the information industrial complex

The traditional approach to understanding the social consequences of ICTs in society is to trace their direct social effects, based on the assumption that their information processing capabilities are powerful and transformative. For example, this approach holds that the ICTs that constitute the

TENETS & FRAMEWORK OF CRiT

EXISTING CRT TENETS

Racism is ordinary, not aberrational – "normal science," the usual way society does business, the common, everyday experience of most people who experience marginalization. Thus, there is a permanence of racism.

The social arrangement of white-over-color ascendancy serves important purposes, both psychic and material, for the dominant group. The notion of white supremacy is real.

CRT asserts that race is a social construct, As such, race and races are products of social thought and relations. Not objective, inherent, or fixed, they correspond to no biological or genetic reality; rather, races are categories that society invents, manipulates, or retires when convenient.

Differential racialization is another form or expression of white supremacy: the ways the dominant society racializes different minority groups at different times, in response to shifting needs such as the labor market, and its consequences.

INFORMATION TENETS

Every aspect of information, including its form, use, structure, and infrastructure can be analyzed in order to understand the ways in which it reflects and represents the beliefs, values, practices, and politics of our society; and how in turn such dynamics affect individuals and groups that are traditionally positioned in society as marginalized or disenfranchised.

Every information context is an opportunity for a critical race discussion or analysis. Everywhere information engages society: CRiT is a viable lens to assess that engagement through.

SEMINAL CRT TOOLS

Counterstories-Writing that aims to cast doubt on the validity of accepted premises or myths, especially ones held by the majority.

Interest convergence-Thesis pioneered by Derrick Bell that the majority group tolerates advances for racial justice only when it suits its interest to do so.

Intersectionality-Belief that individuals and classes often have shared or overlapping interests or traits.

Whiteness as Property-Notion that whiteness itself has value for its possessor and conveys a host of privileges and benefits.

Source(s): Figure by authors

infrastructure of the Internet have altered drastically the ways in which people communicate across geographic and social divides.

Kling (1998), p. 1047

At present, the theoretical and empirical development of the field of critical race and digital studies is in a period of considerable development. In recent years, numerous academic monographs and articles theorizing about the interplay between race and the Internet have entered the academic debate.

Hamilton (2020), p. 297

What Kling points out as the traditional approach to utilizing SI as stated in 1997 remains the default approach of the present. Often research on ICTs related to SI takes the narrative tone of discussing the impact and influence of the technology, which is a more friendly, less deterministic way of expressing the realities of the information industrial complex. That perspective, on the other hand, turns somewhat of a blind eye to the vantage point of those most disenfranchised by "information processing capabilities [that] are powerful and transformative." It is not to say there has been complete radio silence regarding more critically conscious approaches to applying the context of SI to the rapidly progressing technocratic uses of advancing digital technologies; those scholarly expressions have been

along the lines of small bleeps on the radar versus amplifiable sound carried by strong and vibrant signals.

That said, Hamilton (2020) points to what is now an *emergence* of critical race and digital studies work, which falls considerably short of critical race and digital work being (fully) *established* in IS or across other disciplines more broadly. This discussion does not aim to purport CRiT as a panacea for the lack of critical race work addressing technocratic power across the globe; yet, there is certainly a profound need for intentional efforts to interrupt, disrupt, deconstruct and decolonize ways that social informatics are used to further subordinate the very (disenfranchised) communities who should gain more of the benefits of the "powerful and transformative" attributes SI has to offer.

Making it CRiT
Establishing the Making it CRiT framework rests heavily upon the Information Tenets within the Tenets and Frameworks of CRiT. The CRiT information Tenets differentiate CRiT from the broader application of CRT along with clearly articulating that CRiT is related to but also operates independently from both CRT in LIS/IS and the more recently articulated LibCrit discourses. Thus, to reiterate, the Information Tenets state:

(1) Every aspect of information, including its form, use, structure and infrastructure can be analyzed in order to understand the ways in which it reflects and represents the beliefs, values, practices and politics of our society; and how in turn such dynamics affect individuals and groups that are traditionally positioned in society as marginalized or disenfranchised.

(2) Every information context is an opportunity for a critical race discussion or analysis. Everywhere information engages society: CRiT is a viable lens to assess that engagement through.

To add further from the seminal monograph *Theory Building*, "the central issue is to know the materials out of which a [scientific/social scientific] theory is built and the manner in which these components are articulated to each other...this essentially is descriptive knowledge and the more profound the descriptive knowledge, the better is the theory likely to be. By better it is meant, of course, that the theory more accurately mirrors the empirical domain it attempts to describe" (Dubin, 1978, 237).

Thus, the building of a CRiT will consist of describing and defining the following:

(1) a coherent description, explanation and representation of observed or experienced phenomena

(2) a set of interrelated constructs (concepts), definitions and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena

(3) a set of tested empirical observations, a way of theorizing and to the product of that theorizing, or a means of explaining social reality

In essence, the process of Making it CRiT applied to SI and information industrial complex is an exploratory and explanatory endeavor with empowerment intentions. Following the true nature of information which is inextricably connected to most parts of our lived experiences, CRiT should have an exploratory nature that follows closely or at least attempts to keep moderate pace with the technocratic advances. Thus, CRiT research and praxis should function with the same assertive exploratory curiosity to critically analyze and assess ICTs as do the research and social applications generated by the information industrial complex. Simply stated, CRiT as a process of theory building can (and should) lead to the open

dialogue, in essence, the describing of new critical race theories, terminologies and forms of praxis, which ultimately leads to the construction of (additional) tools and frameworks when utilized form paths of resistance as well as routes for socially and culturally detours for the roads of techno-determinism that point toward the fatalistic destinations within the information industrial complex.

Even more specifically, the parts and process come together in a "Making it CRiT" context. With (social) informatics as the prevailing context and the information industrial complex as the metaphoric protagonist, makes logical the introduction of an additional scaffolding instrument: The Making it CRiT Chart in Figure 4. This scaffolding instrument illustrates both the CRiT Tenets and Framework along with a listing of specific examples of information settings and contexts. Obviously, any Making it CRiT process needs a point of application. Upon determining the subject, topic, and/or focal point of consideration, Making it CRiT can commence.

A mixed-methods application for CRiT

One of the points listed in the Information Setting/Context section of the Making it CRiT chart (Figure 4) illustrates the information's relationship to data, and clears a path to discuss mixed-methods possibilities. Part of the nature of information and data is measurability. In turn, if we identify compatible nomenclature that connects the descriptiveness of intersectionality (one of the seminal CRT tools) as a qualitative research method to the measurability of data connected to quantitative research, a mixed-methods approach moves from possible to plausible. For example, Intersectionality can present multiple ways people self-identify through quite descriptive means related to a research question or setting. In quantitative research terms, these multiple perspectives could be considered variables. We can juxtapose the more qualitative descriptive attributes of intersectionality to discuss the impact of each variable as a standalone (independent) specific occurrence or occurrences. Intersectionality by design highlights when multiple yet distinctly different specific occurrences happen concomitantly (Dunbar & Corble, 2022).

Adding further, within IS, there are often opportunities to measure human engagement, such as social media content, search engine use, assessment of forms of categorizations, and multiple forms of surveillance data to offer a short list. Hence, the mixed method opportunity becomes more clear. The descriptiveness of intersectional qualitative research "mixed" with the measurability of quantitative research within information settings implies exponential methodological possibilities. This same approach can be applied to CRT tools beyond intersectionality such as microaggressions, interest convergence and racial battle fatigue.

Closing it out

CRiT has one additional layer: the notion of CRiT having, on the one hand, the intention of being discipline-specific:, a form of CRT developed for information-specific context. On the other hand, CRiT theory building is both interdisciplinary and transdisciplinary based on information as omnipresent phenomena (Awan, 2022; Choi & Pak, 2006; Kroeze *et al.*, 2019). As such, an ongoing challenge for the early stages of CRiT theory building will be the continuous process of identifying and working within a balance between, "Practitioners [who] typically throw anything and everything at practical problems, while scholars often slice problems into such small segments that practical understanding is severely limited" (Swanson & Chermack, 2013, p. 2). If we align with the notion of IS and LIS as applied disciplines within the social sciences then, "Embracing and integrating the dynamic interplay between developing ideas and using them is the key to growing and advancing applied disciplines [through theory building]" (Swanson & Chermack, 2013, p. 2).

Figure 4.
Making it CRiT chart

Source(s): Figure by authors

If we consider the rapid pace in which techno-determinism is moving toward the vise grip of techno-fatalism controlled by frameworks generated from the information industrial complex, we can reasonably consider that humanity on a global basis is living within a meta-large technocratic crisis moment. This crisis moment is both acute and chronic. That is, the technocratic crisis is continuously moving quickly while simultaneously worsening over an extended period of time with no remedies and few responses to substantively address the crisis.

It is with these thoughts in mind that I present CRiT as a tool to join other forms of critical praxis and resistance to grapple with deconstructing, decolonizing, demarginalizing and demystifying the influence and impact of information technologies and the fatalism that awaits at the gates of the information industrial complex.

> . . .we should consider how private industry choices are in fact public policy decisions. They are animated by political values influenced strongly by libertarianism, which extols individual autonomy and corporate freedom from government regulation.

- Ruha Benjamin (2019), p. 6)

Notes

1. Most often within the "IS" context of information studies versus information science. Additionally, the context referenced here is grounded in the Western literature, primarily American.

2. See Bowers *et al.*, 2017, Dunbar (2006), Dunbar (2008), Dunbar (2021), Furner and Dunbar (2004), Hall (2012), Hughes-Hassell and Cox (2010), Hughes-Hassell (2013), Kumasi (2012), Kumasi (2021), Leung and López-McKnight (2020), Matthews (2020), Snow and Dunbar (2022), Stauffer (2020) and Walker (2015) as a non-exhaustive list.

3. This is by no means an exhaustive list nor intended to be exclusionary of those not mentioned; it merely notes that CRiT is not alone nor leading the charge in applying critical race frameworks to the technocratic discourse within IS or in resistance to the information industrial complex more broadly. Benoît's forerunning work (2002) should not be overlooked as well. The inclusions of Hamilton's text (2020) cover considerable ground in the context of reviewable and applicable literature.

4. The lineage of the information industrial complex points to Guérin (1939), initiating the framework for the military industrial complex (MIC) in *Fascism and big business*. Eisenhower (1961) mainstreamed MIC as a concept in his presidential farewell address. Among other antecedents are the prison industrial complex (Davis & Shaylor, 2001); the academic industrial complex (coined by sociologist Richard L. Harris) as the uncomplicated notion of the commercialization of academia (Culliton, 1982; Lee, 2003), as well as Powers and Jablonski (2015) generating the next iteration: the information industrial complex.

5. "Translated from judicial activity in racial cases both before and after Brown, this principle of 'interest convergence' provides: The interest of blacks in achieving racial equality will be accommodated only when it converges with the interests of whites" (p. 523). The application of interest convergence has evolved beyond those of identifying as black and has further evolved beyond the limited application of race.

6. RRAs in most instances are

    1)Temporary – giving a momentary response to a circumstance, crisis and/or conversation offering very little opportunity for sustained transitions or transformation.

    2)Performative – with the new interest accompanied by new awareness, temporary change is camouflaged as actual transformation (a sustained new form or disposition). The performative efforts or "Theatre of the (faux) Woke" ends up being the sustained outcome versus actual transformation of attitudes, resource allocations or societal structures.

    3)Appropriating – in the midst of sharing applicable information and the awareness that follows, what usually happens is that leadership, authority, resource (fiscal and human capital) and social capital all remain at the same level of equity they were in prior to the response to the circumstance, crisis and/or conversation of the (racial justice) moment, which in most instances is a disposition of entrenched and rigid inequity. Subsequently, the full appropriation occurs when all aspects of the response become mechanisms to sustain or further entrench inequity (p. 57).

7. This quote is attributed to content that once appeared on the homepage of the School of Library and Information Science at Indiana University (IU) as noted by Kling himself. The URL is no longer active. Closely related content is available on the Social Informatics page of the Rob Kling Center for Social Informatics at IU, see https://rkcsi.luddy.indiana.edu/about/social-informatics/

8. This quote points to Collins (1990). *Artificial experts: Social knowledge and intelligent machines*. MIT Press.

9. The work of Marx and Engels and the movement and philosophy of Marxism have an almost exhaustive amount of literature. The effort here is not to scale the mountain of literature covering Marxism, but rather to emphasize that the Frankfurt School scholars were foundationally Marxist. Thus, the work of Marx and Engels is the philosophical base for a critical theory path leading to CRiT.

10. Some of the "founding crits," who produced the seminal scholarship of the CLS movement subsequently became the energy and scholarly intellectual inspiration for CRT. The list includes Derrick Bell, Duncan Kennedy, Karl Klare, Catharine A. MacKinnon, Elizabeth Mensch, David Trubek, Mark Tushnet and Roberto Mangabeira Unger.

11. Crenshaw (2002), p. 16. Also, read the chapter note (12) on page 29.

12. While the literature is ripe with Freirean narratives and interpretations of Freirean narratives, at this point in time, CRiT as innovative pedagogy draws primarily from Freire, (2014). Pedagogy of the oppressed/Paulo Freire, translated by Myra Bergman Ramos, with an introduction by Donald Macedo. In *Pedagogy of the oppressed* (Thirtieth anniversary edition). Bloomsbury.

13. Learners are believed to be enculturated into their learning community and appropriate knowledge, based on their existent understanding, through their interaction with the immediate learning environment (Liu and Matthews, 2005).

14. The two courses offered are
   1) Introduction to CRiTical Race information Theory (LIS 732) – The course introduces the concept of Critical Race information Theory (CRiT), which is grounded in the framework of Critical Race Theory (CRT). The course traces the legacy of CRiT from the Institute of Social Research, which led to Critical Legal Studies (CLS) then to CRT and the eventual development of CRiT. Other viable discussions toward understanding CRiT as both an Information Studies inter- and intradisciplinary endeavor include critiques of multiple aspects of Critical Librarianship. Delivered with a CRiTical Cultural approach and utilizing a learning community model, the course provides opportunities for learners to engage CRiT/CRT as an emerging contribution to the research, pedagogy and practice(s) of Information Studies.
   2) CRiTical Race information Theory: Power of The capture Moment/CRiT:PoTCM (LIS 762) – This course is grounded in the framework of Critical Race Information Theory, utilizing both the tools and purposeful intentionality of Critical Race Theory (CRT), namely equity and justice along with critical thinking, advocacy and activism. Delivered as CRiTical Cultural Pedagogy, the course provides opportunities to explore and analyze the realities of "captured" human information identities. In this course, learning community members will explore information as product, process and as an interdisciplinary endeavor. Additionally, the impact and influence of "power" must also be considered from the point of view of both the empowered and the disenfranchised.

15. The author brought together the CRTc in 2021 and currently leads the group in the capacity of the International Lead (IL)– Beyond the role and responsibilities of an (scholarly communication chief-) Editor, the IL is accountable for ensuring that the CRTc engagements both internal and external remain aligned with the current vision and core values established by the CRTc. The IL provides leadership and direction by identifying, securing and allocating resources for the CRTc. Additionally, the IL takes on the responsibility of CRTc community cohesiveness; while also developing projects that assist CRTc members in fulfilling their individual professional development aspirations.

References

Agre, P. (1997). Toward a critical technical practice: Lessons learned in trying to reform AI. In Bowker, G. C., Star, S. L., Turner, W., & Gasser, L. (Eds.), *Social Science, Technical Systems, and Cooperative Work: Beyond the Great Divide* (pp. 131–158). Routledge: Taylor and Francis Group.

Albergotti, R. (2021). He predicted the dark side of the Internet 30 years ago. Why did no one listen?. Available from: https://www.washingtonpost.com/technology/2021/08/12/philip-agre-ai-disappeared/

Awan, W. Z. (2022). Differentiation between Interdisciplinary and Transdisciplinary Concepts. *My Research News*. https://imaqpress.com/2678/differentiation-between-interdisciplinary-and-transdisciplinary-concepts/.

Basu, S. (2021). In *Conversation: Jelani Cobb on the backlash to critical race theory*, January 20, 2022. Available from: https://player.fm/series/apple-news-today/in-conversation-jelani-cobb-on-the-backlash-to-critical-race-theory

Bell Jr., & Derrick, A. (1980). Brown v. Board of Education and the interest-convergence dilemma. *Harvard Law Review*, *93*(3), 518. doi: 10.2307/1340546.

Benoît, G. (2002). Toward a critical theoretic perspective in information systems. *Library Quarterly*, *72*(4), 441–471.

Benjamin, R. (2019). Race after technology: Abolitionist tools for the new Jim code/Ruha Benjamin. In *Race after technology: Abolitionist tools for the New Jim Code*. Polity.

Birdi, B., Dunbar, A. W., Furner, J., & Ibekwe, F. (2022). Eliminating racism in education for knowledge organization and library and information science: An intercontinental position statement. *Knowledge Organization Across Disciplines, Domains, Services, and Technologies*, *19*, 49–62.

Bowers, J., Crowe, K., & Keeran, P. (2017). If you want the history of a white man, you go to the library": Critiquing our legacy, addressing our library collections gaps. *Collection Management*, *42*(3-4), 159–179. doi: 10.1080/01462679.2017.132910.

Budd, J. M. (2003). The library, praxis, and symbolic power. *Library Quarterly*, *73*(1), 19–32. doi: 10.1086/603373.

Budd, J. M. (2013). Informational education: Creating an understanding of justice. *Education, Citizenship and Social Justice*, *8*(1), 17–28. doi: 10.1177/1746197912448710.

Caswell, M. (2017). Teaching to dismantle white supremacy in archives. *The Library Quarterly*, *87*(3), 222–235. doi: 10.1086/692299.

Center for Critical Race Digital Studies (n.d.). Center for critical race + digital studies, February 6, 2023. Available from: https://www.criticalracedigitalstudies.com

Choi, B. C. K., & Pak, A. W. P. (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness. *Clinical and Investigative Medicine. Medecine Clinique Et Experimentale*, *29*(6), 351–364.

Cobb, J. (2021). TheMan behind critical race theory. The new yorker. *Annals of Equality*, Sept 20, 2021 Issue. Available from: https://www.newyorker.com/magazine/2021/09/20/the-man-behind-critical-race-theory

Collins, H. M. (1990). *Artificial experts: Social knowledge and intelligent machines*. Cambridge, MA: MIT Press.

Comte, A. (1974). The positive philosophy/with a new introd. By Abraham S. Blumberg. *The positive philosophy*. AMS Press.

Cooke, N. A., & Sweeney, M. E. (2017). *Teaching for justice: Implementing social justice in the LIS classroom*. Sacramento, CA: Library Juice Press.

Cooke, N. A., Sweeney, M. E., & Noble, S. U. (2016). Social justice as topic and tool: An attempt to transform an LIS curriculum and culture. *Library Quarterly*, *86*(1), 107–124. doi: 10.1086/684147.

Crenshaw, K. W. (1988). Race, reform, and retrenchment: Transformation and legitimation in antidiscrimination law. *Harvard Law Review*, *101*(7), 1331–1387.

Crenshaw, K. W. (2002). The first decade: Critical reflections, or 'A foot in the closing door'. In Valdes, F., Culp, J. M., & Harris, A. P. (Eds.), *Crossroads, Directions, and a New Critical Race Theory* (Vol. 49, pp. 9–32). The Regents of the University of California UCLA Law Review.

Culliton, B. J. (1982). The academic-industrial complex. *Science*, *216*(4549), 960–962.

Davis, A. Y., & Shaylor, C. (2001). Race, gender, and the prison industrial complex: California and beyond. *Meridians*, *2*(1), 1–25.

Delgado, R., Stefancic, J., & Harris, A. (2017). *Critical Race Theory: An Introduction* (3rd ed.). New: York University Press.

Dews, P., & McCarthy, T. (2001). Habermas: A critical reader. *European Journal of Philosophy*, *9*(2), 247–254.

Dubin, R. (1978). *Theory building* (Rev ed.). New York, NY: Free Press.

Dunbar, A. W. (2006). Introducing critical race theory to archival discourse: Getting the conversation started. *Archival Science*, *6*, 109–129. doi: 10.1007/s10502-006-9022-6.

Dunbar, A. W. (2008). Critical race information theory applying a CRITical race lens to information studies/by Anthony W. Dunbar. Thesis (Ph.D.) *Critical race information theory applying a CRITical race lens to information studies*. UCLA, 2008.

Dunbar, A. W. (2021). Introduction to Part II: The courage of character and commitment versus the cowardliness of comfortable contentment. In Leung, S. Y., & López-McKnight, J. R. (Eds.), *Knowledge Justice: Disrupting Library and Information Studies through Critical Race Theory* (pp. 131–139). MIT Press.

Dunbar, A. W., & Corble, A. R. (2022). Intersectional tools for building inclusive houses of knowledge: Review of introduction to intersectional qualitative research (Esposito and Evans-Winters, 2022). *Education for Information*, *38*(4), 427–435. doi: 10.3233/EFI-220061.

Eisenhower, D. D. (1961). Presidential farewell address, [Speech]. Available from: https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/farewell-address/1961-01-17-press-release.pdf

Feldman, S. M. (2000). American legal thought from premodernism to postmodernism: An intellectual voyage. *American Legal Thought from Premodernism to Postmodernism*. Incorporated: Oxford University Press.

Fortin, J. (2021). What is critical race theory?, A brief history explained. New York, NY: The New York Times. Available from: https://www.nytimes.com/article/what-is-critical-race-theory.html?.?mc=aud_dev&ad-keywords=auddevgate&gclid=Cj0KCQjwwY-LBhD6ARIsACvT72MdxYtJti_hoDTHqcY0XbLPT01XGFLQddlJ1dhYT34tL0IAfhhk-fwaAthYEALw_wcB&gclsrc=aw.ds

Freire, P. (2005). Pedagogy of the oppressed/Paulo Freire; translated by Myra bergman Ramos; with an introduction by Donald macedo. *Pedagogy of the oppressed (Thirtieth anniversary edition.)*. Bloomsbury.

Furner, J., & Dunbar, A. W. (2004). The treatment of topics relating to people of mixed race in bibliographic classification schemes: A critical race- theoretic approach. *Advances in Knowledge Organization*, *9*, 6.

Giddens, A. (1977). Studies in social and political theory. *Studies in social and political theory*. Basic Books.

Glass, R. D. (2001). On Paulo freire's philosophy of praxis and the foundations of liberation education. *Educational Researcher*, *30*(2), 15–25. doi: 10.3102/0013189X030002015.

Guérin, D. (1939). Fascism & big business—introduction by dwight MacDonald. In Merrill, F. & Merrill, M. (Trans.), *Fascism & big business*. Pioneer.

Hall, T. D. (2012). The black body at the reference desk: Critical race theory and black librarianship. Available from: https://scholar.google.com/citations?view_op=view_citation&hl=en&user=6GtBNPoAAAAJ&citation_for_view=6GtBNPoAAAAJ:u-x6o8ySG0sC

Hamilton, A. M. (2020). A genealogy of critical race and digital studies: Past, present, and future. *Sociology of Race and Ethnicity*, *6*(3), 292–301. doi: 10.1177/2332649220922577.

Hasnas, J. (1995). Back to the future: From critical legal studies forward to legal realism, or how not to miss the point of the indeterminacy argument. *Duke Law Journal*, *45*(1), 84–132. doi: 10.2307/1372948.

Held, D. (1980). Introduction to critical theory: Horkheimer to Habermas/David held. *Introduction to critical theory: Horkheimer to Habermas*. University of California Press.

Hughes-Hassell, S. (2013). Multicultural young adult literature as a form of counter-storytelling. *Library Quarterly*, 83(3), 212–228. doi: 10.1086/670696.

Hughes-Hassell, S., & Cox, E. J. (2010). Inside board books: Representations of people of color. *Library Quarterly*, 80(3), 211–230. doi: 10.1086/652873.

Johnson, B., Shapiro, B., Disalvo, B., Rothschild, A., & Disalvo, C. (2021). *Exploring approaches to data literacy through a critical race theory perspective*. Atlanta, GA: Learning Sciences Faculty Publications. doi: 10.1145/3411764.3445141.

Kennedy, R. (2021). *The right-wing attack on racial justice talk*. Washington, D.C.: The American Prospect, Available from: https://prospect.org/api/content/12961e08-1fb5-11ec-b78b-12f1225286c6/

Kincheloe, J. L. (2005). Critical constructivism primer, P. Lang. Available from: http://catdir.loc.gov/catdir/toc/ecip055/2004030296.html

Kling, R. (1997). Social informatics home page. Available from: http://www.slis.indiana.edu/SI/index.html,pageinactiveand archived,reflects originalcitation

Kling, R. (1998). A brief introduction to social informatics. *Canadian Journal of Information and Library Science - Revue Canadienne des Sciences de l'Information et de Bibliotheconomie*, 23(1-2), 50–85.

Kling, R., Rosenbaum, H., & Hert, C. (1998). Social informatics in information science: An introduction. *Journal of the American Society for Information Science*, 49(12), 1047–1052. doi: 10.1002/(SICI)1097-4571(1998)49:123.0.CO;2-V.

Kroeze, J., Travica, B., & Zyl, I. (2019). Information systems in a transdisciplinary perspective: Leaping to a larger stage. *Alternation: Interdisciplinary Journal for the Study of the Arts and Humanities in Southern Africa, Sp24*. doi: 10.29086/2519-5476/2019/sp24.2a2.

Kumasi, K. (2012). Roses in the concrete. *Knowledge Quest*, 40(5), 32–37.

Kumasi, K. (2021). Getting InFLOmation: A critical race theory tale from the school library. In Leung, S. Y., & Lopez-McKnight, J. R. (Eds.), *Knowledge Justice: Disrupting Library and Information Studies through Critical Race Theory*. The MIT Press, 299–315. Available from: https://direct.mit.edu/books/oa-edited-volume/5114/chapter/3075331/Getting-InFLOmation-A-Critical-Race-Theory-Tale

Kumasi, K. D., Godwin, A. E., Petrides, L. A., & Karaglani, A. (2020). A preliminary study interrogating the cataloging and classification schemes of a K-12 book discovery platform through a critical race theory lens. *Open Information Science*, 4(1), 108–121. doi: 10.1515/opis-2020-0009.

Kumasi, K. D., & Manlove, N. L. (2015). Finding "diversity levers" in the core library and information science curriculum: A social justice imperative. *Library Trends*, 64(2), 415–443. doi: 10.1353/lib.2015.0047.

La Belle, T. J. (1986). *Nonformal education in Latin America and the Caribbean: Stability, reform, or revolution?* New York, NY: Praeger.

Lee, F. R. (2003). *Academic industrial complex*. New York, NY: The New York Times. Available from: https://www.nytimes.com/2003/09/06/arts/academic-industrial-complex.html

Lenning, O. T., Hill, D. M., Saunders, K. P., Solan, A., & Stokes, A. (2013). Powerful learning communities: A guide to developing student. *faculty, and professional learning communities to improve student success and organizational effectiveness* (1st ed.). Stylus Pub.

Leung, S., & López-McKnight, J. (2020). Dreaming revolutionary futures: Critical race's centrality to ending white supremacy. *Communications in Information Literacy*, 14(1). doi: 10.15760/comminfolit.2020.14.1.2.

Leung, S. Y., & López-McKnight, J. R. (2021). Knowledge justice: Disrupting library and information studies through critical race theory. MIT Press. Available from: https://direct.mit.edu/books/edited-volume/5114/Knowledge-JusticeDisrupting-Library-and

Licker, P. (2002). A gift from the gods? Components of information technological fatalism, determinism in several cultures. *The Electronic Journal of Information Systems in Developing Countries*, *7*(1), 1–11.

Liu, C. H., & Matthews, R. (2005). Vygotsky's philosophy: Constructivism and its criticisms examined. *International Education Journal*, *6*(3), 386–389.

Macey, D. (2001). The Penguin dictionary of critical theory/David Macey. *The Penguin dictionary of critical theory*. Penguin Books.

Matthews, A. (2020). Racialized youth in the public library: Systemic racism through a critical theory lens. *Partnership*, *15*(1), 1–17.

Ogbonnaya-Ogburu, I. F., Smith, A. D. R., To, A., & Toyama, K. (2020). Critical race theory for HCI. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–16). doi: 10.1145/3313831.3376392.

Ottesen, K. (2022). *An architect of critical race theory: 'We cannot allow all of the lessons from the civil rights movement forward to be packed up and put away for storage'*. Washington, D.C: *Washington Post Magazine*. Available from: https://www.washingtonpost.com/lifestyle/magazine/an-architect-of-critical-race-theory-we-cannot-allow-all-of-the-lessons-from-the-civil-rights-movement-forward-to-be-packed-up-and-put-away-for-storage/2022/01/14/24bb31de-627e-11ec-a7e8-3a8455b71fad_story.html

Paul, L. A., & Quiggin, J. (2020). Transformative education. *Educational Theory*, *70*(5), 561–579. doi: 10.1111/edth.12444.

Pawley, C. (1998). Hegemony's handmaid? The library and information studies curriculum from a class perspective: Possible class discrimination in the information professions. *Library Quarterly*, *68*(2), 123–144. doi: 10.1086/602955.

Pawley, C. (2006). Unequal legacies: Race and multiculturalism in the LIS curriculum. *Library Quarterly*, *76*(2), 149–168. doi: 10.1086/506955.

Powers, S. M., & Jablonski, M. (2015). The information-industrial complex. In Powers, S. M., & Jablonski, M. (Eds.), *The Real Cyber War: The Political Economy of Internet Freedom* (pp. 50–73). University of Illinois Press. doi: 10.5406/illinois/9780252039126.003.0003.

Punzalan, R. L., & Caswell, M. (2016). Critical directions for archival approaches to social justice. *Library Quarterly*, *86*(1), 25–42. doi: 10.1086/684145.

Raber, D. (2003). Librarians as organic intellectuals: A gramscian approach to blind spots and tunnel vision. *The Library Quarterly (Chicago)*, *73*(1), 33–53.

Radford, M. L., & Radford, G. P. (2003). Librarians and party girls: Cultural studies and the meaning of the librarian. *The Library Quarterly (Chicago)*, *73*(1), 54–69.

Sanfillippo, M., & Fichman, P. (2013). The evolution of social informatics research (1984-2013): Challenges and opportunities. In Fichman, P. & Rosenbaum, H. (Eds.), *Social Informatics: Past, Present and Future*. Cambridge Scholars Publishing. Available from: http://eprints.rclis.org/20331/

Snow, K., & Dunbar, A. W. (2022). Advancing the relationship between critical cataloging and critical race theory. *Cataloging & Classification Quarterly*, *60*(6-7), 646–674. doi: 10.1080/01639374.2022.2089936.

Stauffer, S. M. (2020). Educating for whiteness: Applying critical race theory's revisionist history in library and information science research: A methodology paper. *Journal of Education for Library and Information Science*, *61*(4), 452–462.

Swanson, R. A., & Chermack, T. J. (2013). *Theory building in applied disciplines*. Penguin Random House. Available from: https://www.penguinrandomhouse.com/books/575172/theory-building-in-applied-disciplines-by-richard-a-swanson-and-thomas-j-chermack/.

Sweeney, M. E., & Cooke, N. A. (2018). You're so sensitive! How LIS professionals define and discuss microaggressions online. *Library Quarterly*, *88*(4), 375–390. doi: 10.1086/699270.

Walker, S. (2015). *Critical race theory and the recruitment, retention and promotion of a librarian of color: A counterstory* (*1*, p. 27). Atlanta, GA: Faculty Scholarship.

White, G. E. (1986). From realism to critical legal studies: A truncated intellectual history. *Southwestern Law Review*, *40*, 819.

Further reading

Ridley, M. (2015). The myth of basic science. *Wall Street Journal*. Available from: https://www.wsj. com/articles/the-myth-of-basic-science-1445613954

About the author

Anthony W. Dunbar (Tony) is an associate professor in the School of Information Studies at Dominican University, where he serves as the i School's Equity, Inclusion, and Justice Coordinator. Additionally, he is an adjunct sociology professor at Lewis University, teaching both the introductory sociology course and the Diversity and Social Justice offering. Dr Dunbar's research builds on the racial and social justice frameworks of Critical Race Theory (CRT). His current efforts focus on developing curriculum, scholarship and activism to expand the CRT framework into a platform specific for Information Studies, namely CRiTical Race information Theory (CRiT). He is also the founding organizer of The Critical Race Theory collective (CRTc), https://crtcollective.org/. Tony is one of the hosts of the CRTc podcast, The Organic Intellectuals. Anthony W. Dunbar can be contacted at: adunbar@dom.edu, adunbar@ crtcollective.org