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RACE[,] SCIENCE, HISTORY, AND LAW*

David S. Caudill**

Evolutionary psychology . . . can be used to justify every outcome. This is why [Steven] Pinker has persuaded himself that liberal democracy and current opinion about women's sexual autonomy have biological foundations. It's a "scientific" validation of the way we live now. But every aspect of life has a biological foundation in exactly the same sense, which is that unless it was biologically possible it wouldn't exist. After that, it's up for grabs.¹

While the practice of science is unavoidably a cultural activity, "embedded in" culture, the conventional epistemology of science is that "when sciences function at their very best, their institutions, cultures, and practices, including scientific methods, will contribute nothing culturally distinctive to the representations of nature that appear in the results of research."² Culture provides a framework, that is, but "should not influence the results of research in any culturally distinctive way."³ In this perspective, the cultural aspects of science are "accounted for" by distinguishing between those that are legitimate or supportive features and those that are illegitimate or unscientific. For example, when historians, sociologists, ethnographers, or rhetoricians of science variously identify the social, political, economic, institutional, professional, narrative, interpretive, and rhetorical features of science, an *accounting* process begins. Epistemic values (consistency, honesty) do not interfere, while social values (ethical concerns) do; institutional training, gatekeeping, and professionalization, along with negotiation and consensus-building techniques, and even dominant discursive regimes and governing metaphors or models can all be helpful (even though they sometimes lead to errors); rhetoric is more dangerous, unless it is ornamental; finally, race, class, and gender "values" are always controversial and problematic—these have no place in science.

* This article is based on a paper delivered at the 2003 Annual Meeting of the Mid-Atlantic People of Color Legal Scholarship Conference, held at Washington and Lee University School of Law (Jan. 30-Feb. 1, 2003).

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¹ Louis Menand, *What Comes Naturally* (book review of STEVEN PINKER, *THE BLANK SLATE: THE MODERN DENIAL OF HUMAN NATURE* (2002)), *THE NEW YORKER*, Nov. 25, 2002, at 98.

² See SANDRA HARDING, *IS SCIENCE MULTI-CULTURAL?: POSTCOLONIALISMS, FEMINISMS, AND EPISTEMOLOGIES* 3 (1998).

³ *Id.* ("Any and all social values that might initially get into the results of scientific research should be firmly weeded out as soon as possible through subsequent critical vigilance.").

“Race science” is almost always, therefore, a pejorative reference to a discredited series of episodes in the history of science. Nancy Stepan, in *The Idea of Race in Science: Great Britain 1800-1960*,⁴ identifies in the rise and fall of racial science—i.e., in scientific racism—

the impact on scientific arguments of strong if subtle convictions about the different moral, intellectual and physical worth of different human groups [E]vidence, often sketchy and incomplete, was unconsciously manipulated to fit preconceived notions. As a result, an objective assessment about human variation was prevented by practices and procedures embedded in science itself.⁵

Significantly, Stepan does not characterize race science as “pseudoscience,” since it was often first-rate scientists whose biases and overgeneralizations functioned within the “accepted canons of scientific procedure of their day.”⁶

So “natural,” deep, and fixed did the differences between human races seem to scientists . . . that the scientists’ view of human races served to structure the very reception they gave to novel scientific theories and to influence the interpretation they put upon new empirical data To a large extent, the history of racial science is a history of a series of accommodations . . . to the demands of deeply held convictions about the “naturalness” of the inequalities between human races.⁷

The blatant racism of Scottish anatomist Robert Knox—“with me, race or hereditary descent is everything; it stamps the man”⁸—was “shared . . . almost unconsciously” by most British scientists in the mid-nineteenth-

⁴ NANCY STEPAN, *THE IDEA OF RACE IN SCIENCE: GREAT BRITAIN 1800-1960* (1982).

⁵ *Id.* at xv.

⁶ *See id.* at xvi. *See also* STEPHEN J. GOULD, *THE MISMEASURE OF MAN* 21-22 (1981) (discussing racism among distinguished nineteenth-century scientists).

I criticize the myth that science is an objective enterprise, done properly only when scientists can shuck the constraints of their culture and view the world as it really is Science . . . is a socially embedded activity Much of its change through time [records] the alteration of cultural contexts that influence it so strongly.

Id.

⁷ STEPAN, *supra* note 4, at xx-xxi.

⁸ *See* ROBERT KNOX, *THE RACES OF MEN: A FRAGMENT* 6 (1850).

century.⁹ Paradoxically, racial science became more racist as it became more *scientific*—“based on a wider set of data, more sophisticated measurements, and a deeper knowledge of biological processes and functions”¹⁰ “The hierarchy of races was believed to correspond to, and indeed to be the cause of, what most people took to be the natural scale of achievement in the world, with the European on top and the African or aboriginal Australian invariably at the bottom.”¹¹ Notwithstanding Darwin’s own opposition to slavery and overt racism, his argument for evolutionary continuity “led, almost inevitably, to the use of lower races to fill the gap between animals and man. Later, scientists would find it only too easy to interpret Darwin as meaning that the races of man now formed an evolutionary scale.”¹² While anti-evolutionist Theodore Waitz (writing just after Darwin published *On the Origin of Species* in 1859) argued that “the absolute permanence of the physical type is nothing but a prejudice, possessing no scientific value whatsoever to serve as a basis for the assumption of a plurality of the human species,”¹³ environmentalism and monogynism gave way to an integration of racialist typology and polygynism with evolutionism.¹⁴

In the early nineteenth-century, “with racism firmly established in popular opinion and in science,”¹⁵ eugenics provided another scientific basis for prioritizing heredity over environmental factors. Although eugenics theoretically does not necessitate a link with race,¹⁶ scientific racism was reinforced by the science of human heredity until Nazi anti-Semitism “called forth from anthropologists the most consistent and straightforward repudiation of some of the myths of race science.”¹⁷ The role of race in science, however, remained unsettled—there are no pure or superior races, races do not differ in mental abilities, and culture is not defined by race, but what is “race,” and what is the new human science that replaced race science? “Race has lost its reality and naturalness, to such an extent that

⁹ See STEPAN, *supra* note 4, at 4.

¹⁰ See *id.* at 5, 46. See also HARDING, *supra* note 2, at 135 (“When a scientific community shares assumptions, there is little chance that more careful application of existing scientific methods will detect them.”).

¹¹ STEPAN, *supra* note 4, at 46.

¹² See *id.* at 55.

¹³ THEODORE WAITZ, INTRODUCTION TO ANTHROPOLOGY 101 (1863) (“It certainly cannot occur to any ethnographer to separate in the lands of the Moors, the Berber, Gothic, Phoenician, Roman, Greek elements, etc. . . . according to cranial shape . . .”).

¹⁴ See STEPAN, *supra* note 4, at 110.

¹⁵ See *id.* at 111.

¹⁶ See generally *id.* at 124-43.

¹⁷ See *id.* at 167.

probably the majority of scientists even go so far as to consider the word ‘race’ unnecessary for purposes of biological analysis.”¹⁸ A new non-racial, populational, genetic science of human diversity studies nature, and the studying of nurture—of racism and race relations—is given to sociologists, economists, and psychologists. Still, we worry that, in Stepan’s words, contemporary scientists are no more isolated today, “in a scientific ‘republic’ of their own,” than the race scientists of the nineteenth and early twentieth centuries, who “inherited from [their] larger society distinct social, philosophical, metaphysical, theological, political and aesthetic traditions, as well as scientific ones.”¹⁹ In short, does “race” continue unconsciously to shape “the way scientists [define] scientific problems and the scientific theories they put forward to explain them”?²⁰

Joseph Pugliese, in his study of forensic pathology, finds in that field’s “typical body charts” an “unacknowledged racialisation of bodies”—“unreflexive racist inscriptions . . . mark non-white bodies in the texts and handbooks of the discipline.”²¹ “In all the texts that I examined, the

¹⁸ See *id.* at 171. For example, in a PBS three-part documentary series entitled “*Race—The Power of an Illusion*,” race was presented as a social construction rather than a biological reality, since “current science tells us that biological races don’t exist.” See California Newsreel, *Race—The Power of an Illusion* (Apr. 24, 2003), <http://www.pbs.org/race/> (last visited Sept. 17, 2003). The third episode “uncovers how race resides not in nature but in politics, economics and culture.” See California Newsreel, *Helping Remedy American Myths About Race*, <http://www.newsreel.org/films/race.htm> (last visited Sept. 17, 2003). For a somewhat contrary view, see MICHAEL H. SHAPIRO, ROY G. SPECE, JR., REBECCA DRESSER, & ELLEN WRIGHT CLAYTON, *CASES, MATERIALS, AND PROBLEMS ON BIOETHICS OF LAW* 98-101 (2003).

A caution about genetics and race: there is a growing literature urging that for biologists, “there is no such thing as race,” or “race is not a scientific concept.” The idea of race is only “socially constructed and is thus a largely arbitrary classification having little or no connection to a fixed genetic inheritance

. . . One reason for this “skeptical view” seems to be that there is no precise definition of race—no necessary and sufficient conditions for ascriptions of race—and there are many indeterminate cases. But virtually all useful abstractions “fail” at various points—and this includes some important scientific concepts. (Indeed, their usefulness may rest in part on such flaccidity.)

. . . The point here is simply that [race] can’t be dubbed “nonscientific” just because of the absence of such definitive criteria

. . . It is hard to see how [the] statistical identifications [involved in blood sickly disorders or Tay-Sachs disease] are matters of pure “social construction” rather than “biology”. . . . Obviously, the entire human race isn’t hallucinating when it refers to differing racial groups.

Id. at 98, 100.

¹⁹ See *id.* at xiv-xv.

²⁰ See *id.* at xv (In race science, ideology was “embedded in scientific argument.”).

²¹ See Joseph Pugliese, “*Super Visum Corporis*”: *Visuality, Race, Narrativity and the Body of Forensic Pathology*, 14 *LAW & LITERATURE* 367, 368 (2002).

anatomical illustration of the human body was identifiably “Caucasian” or white European in appearance. The white body in these visual illustrations assumes universalist dimensions as it is represented as *the* template of the human body.”²² Such racialised images “position themselves as scientifically ‘neutral,’ ‘objective’ and ‘universal,’” and “[i]t is only against the foil and gauge of the white body that ‘racial pigmentation,’ ‘flared nostrils,’ ‘epicanthic folds’ and ‘crinkled hair’ attain their self-evident status as synecdoches of racial difference [–] physical attributes that are marked by a visual excess that transgresses the law of the body proper.”²³ When these attributes are presented (in one forensic medicine text) as “obvious features which need no medical knowledge,”²⁴ they not only “reproduce and consolidate racism as common sense” but “produce a series of discursive effects” wherein “whiteness is preserved in its anonymity” (e.g., “this man”) and racial or ethnic descriptions are reserved for non-white “outsiders” (e.g., “this Pakistani male”).²⁵ “The demand to keep whiteness as the *unsaid* ensures that whites continue to occupy a privileged position that is seen to transcend racial categories and descriptors This is what generates the sense of . . . unexpected naming of race and ethnicity in otherwise seemingly ‘race-free’ cases.”²⁶ Contemporary “neutral scientific drawings” must, Pugliese argues, be situated in the “long history of scientific racism” wherein the body of the white male functioned as a universal standard.²⁷

Returning to that history, another example involving science museum displays introduces the conflict between the erasure of race as a biologically significant category and multicultural efforts to maintain racial and ethnic identities.

²² *Id.* at 375. “At the level of racial representation . . . whites are not of a certain race, they’re just the human race.” RICHARD DYER, *WHITE* 3 (1997).

Iconographically, the “typical body” charts in [forensic pathology] texts bear a striking resemblance to the visual image of humans sent into outer space by NASA on the *Pioneer 10* spacecraft, where, uncoincidentally, the white body was imposed with the burden of representing the “generic” human to all other civilizations in the universe.

Pugliese, *supra* note 21, at 375.

²³ See Pugliese, *supra* note 21, at 376. Racial attributes are “finessed away from the white template body, only to be ‘discovered’ out there in the disordered world of racialised corporealities that exceeds the normativity of schematic borders and limits.” *Id.* at 376.

²⁴ See BERNARD KNIGHT, *SIMPSON’S FORENSIC MEDICINE* 32 (1997).

²⁵ See Pugliese, *supra* note 21, at 377-79.

²⁶ *Id.* at 379.

²⁷ See *id.* at 377.

In 1933, the Field Museum of Natural History in Chicago mounted an ambitious exhibition entitled *Races of Mankind*, which consisted of 101 life-size bronze sculptures [created by Malvina Hoffman] of the 'principal' human racial types The exhibition . . . was a huge success initially, attracting millions of visitors and much attention from the press.²⁸

Claiming scientific authority from its location in a science museum, the exhibit unwittingly "reified Western notions of class, culture and race, placing Europeans and white Americans at the peak of racial evolution."²⁹ By the 1960s, the exhibit was dismantled after coming under attack for being both scientifically inaccurate as well as socially indefensible; however, in the 1970's the figures were reinstalled outside the exhibition halls as random examples of people of the world.³⁰ By 1993, the sculptures could "be viewed by some visitors as remarkably evocative and authoritative depictions of humanity, not as monuments to racial hierarchy, nor as despicable totems of institutionalized racism, but as hopeful tributes to human spirit and diversity."³¹ The problem, as Tracy Lang Teslow points out, is that while the sculptures were supposedly transformed from race science to realistic examples of our glorious diversity, they remained stereotypical (Hawaiian surfing, African with spear, Chinese man pulling a rickshaw) and troubling.³² In contrast to the other full-size figures with exotic clothing and cultural trappings, the sculpture entitled "American, from Brooklyn New York" was a white body builder, "implying a transcendence of culture, of class, even of race . . ."³³ "The exhibition . . . implicitly, in its conception, arrangement and existence in a natural history museum, promulgated the idea that races are bounded, natural entities which we can objectively and unambiguously record and understand."³⁴ The idea that these particular "decorative objects" can be displayed on the periphery of the scientific exhibits, "without any order or hierarchy and without any anthropological information,"³⁵ to demonstrate the demise of race science and to celebrate diversity, seems on reflection simply naive.

²⁸ Tracy Lang Teslow, *Reifying Race: Science and art in the Races of Mankind at the Field Museum of Natural History*, in *THE POLITICS OF DISPLAY: MUSEUMS, SCIENCE, CULTURE* 53 (S. Macdonald ed., 1998).

²⁹ *See id.*

³⁰ *See id.* at 54, 73.

³¹ *See id.* at 54.

³² *See id.* at 64-66.

³³ *See id.* at 67.

³⁴ *Id.* at 69.

³⁵ *See id.* at 73.

Returning again to the history of race science, some of its critics in the early twentieth century provided a more compelling basis for the contemporary discourse of multiculturalism and of racial and ethnic identities. Both W.E.B. Du Bois (1868-1963) and Franz Boas (1858-1942) “criticized provincial and essentialist forms of identity” in response to their own experiences of marginalization and rootlessness.³⁶ In 1894, a hundred years before the American Association for the Advancement of Science (“AAAS”) would announce that “the concept of race . . . has no basis in fundamental human biology,”³⁷ Boas argued that notwithstanding the variations inside any single race, the “achievements of races do not warrant us to assume that one race is more highly gifted than the other.”³⁸ When Du Bois invited Boas to visit Atlanta University in 1906, where Du Bois was teaching history, Boas (in a commencement address) told his audience that they should be proud of their African past and the achievements of black kingdoms of the South Sahara.³⁹ Recognizing difference but not inequality, Boas encouraged a diasporic identity that Du Bois pushed further into “what might be called ‘anti-anti-racism’” by advocating “against the tendency to obliterate . . . racial differences and divisions.”⁴⁰

Instead of emphasizing physical characteristics, however, Du Bois stressed the commonality of “a vast family of human beings, generally of common blood and language, always of common history, traditions, and impulses, who are both voluntarily and involuntarily striving together for the accomplishment of certain more or less vividly conceived ideals of life.”⁴¹

This effort to undermine biologicistic reductionism, while at the same time retaining notions of “blood” and introducing modern ideas of nationhood, has been defended by Lucius Outlaw as a *cluster* concept of “race,” “draw[ing] together under a single word references to biological, cultural,

³⁶ See Julia E. Liss, *Diasporic Identities: The Science and Politics of Race in the Work of Franz Boas and W.E.B. Du Bois, 1894-1919*, 13 CULT. ANTHROP. 127, 128-29 (1998).

³⁷ See Robert Lee Hotz, *Is Concept of Race a Relic?*, LOS ANGELES TIMES, Apr. 15, 1995, at A1 (reporting on February 1995 AAAS meeting in Los Angeles, California).

³⁸ See FRANZ BOAS, *Human Faculty as Determined by Race*, in A FRANZ BOAS READER: THE SHAPING OF AMERICAN ANTHROPOLOGY, 1883-1911 222, 227 (G. Stocking ed., 1974), quoted in Liss, *supra* note 36, at 131.

³⁹ See W.E.B. DU BOIS, *BLACK FOLK: THEN AND NOW: AN ESSAY IN THE HISTORY AND SOCIOLOGY OF THE NEGRO RACE* vii (1939).

⁴⁰ See Liss, *supra* note 36, at 132.

⁴¹ See *id.* at 132 (quoting W.E.B. DU BOIS, *The Conservation of Races, American Negro Academy, Occasional Papers, No. 2*, in W.E.B. DU BOIS: WRITINGS 817 (1986)).

and geographical factors thought characteristic of a population.”⁴² Echoes of Du Bois’s *cluster* concept of race can be heard in Outlaw’s own recent description of his doctoral dissertation:

Part of the core agenda of the Black Power Movement was to call for, in very forceful, critical terms, the remaking of Negroes into Black people, and *African* people in America, who were to be properly defined and identified, and who were to properly understand themselves as being defined and identified, by a shared culture made distinctive by being constituted by elements the meanings and living experiences of which were decisively those of *black* people. It was to the philosophical articulation of these proper understandings that I was so very anxious to contribute.⁴³

Updating his thesis, Outlaw continues to believe that Americans “can embrace and nurture to good ends non-invidious affirmations of racial and ethnic identities.”⁴⁴

Reminiscent of Wendy Williams’ warning that feminists can’t have it both ways—equal rights based on sameness *and* special treatment based on difference,⁴⁵ the acknowledgment of “race” as a cluster that includes biological “factors” seems to carry a cost. After all, the scientific establishment has finally, in the official discourse of the AAAS, rendered race irrelevant to biology; in the cognitivistic craze to prioritize nature over nurture, the last discovery you want made is that race *means* something at the level of neuronal hardware. Nevertheless, the traditional and persistent notion that race is either a biologically significant category (as it was for race scientists) or a social construction (based only on a common cultural and historical inheritance) is itself problematic.

Charles Sheperdson draws upon Lucius Outlaw’s conception of race as a *mixture* of physical features and cultural matters (including language, behavior, and ideas) in his challenge to simplistic distinctions between nature and nurture.⁴⁶

⁴² See Liss, *supra* note 36, at 132-33 (quoting Lucius Outlaw, ‘Conserve’ Races? *In Defense of W.E.B. Du Bois*, in W.E.B. DU BOIS ON RACE AND CULTURE 20 (B. Bell, E. Grosholz & J. Stewart eds., 1996)).

⁴³ See Lucius Outlaw, Jr., *Cultural Hermeneutics and Racialized Life-Worlds: Unfinished Work*, 24 PHIL. & SOC. CRITICISM 101, 102 (1998).

⁴⁴ See *id.* at 107.

⁴⁵ See Wendy Williams, *Equality’s Riddle: Pregnancy and the Equal Treatment/Special Treatment Debate*, 13 N.Y.U. REV. L. & SOC. CHANGE 325 (1985). On the “dilemma of difference,” see also MARTHA MINOW, *MAKING ALL THE DIFFERENCE: INCLUSION, EXCLUSION, AND AMERICAN LAW* (1990).

⁴⁶ See Charles Sheperdson, *Human Diversity and the Sexual Relation*, in *THE PSYCHOANALYSIS OF RACE* 46 (C. Lane ed., 1998) (citing Lucius Outlaw, *Towards a Critical Theory of Race*, in *ANATOMY OF RACISM* 58 (D. Goldberg ed., 1990)).

Cultural critics today might be tempted to insist that race . . . is *really* a symbolic effect, a contingent product of discursive practices that is wrongly “naturalized” as a biological fact. Directly opposed to these critics . . . certain members of today’s scientific community celebrate “the revival of interest in the biological roots of human nature” . . . , claiming that race is *really* a biological fact.⁴⁷

These “familiar alternatives,” Shepherdson points out, tend to eclipse the history of both the term “race,” which does not have a unified meaning, and “the *disciplines* that promise to explain it, including contemporary cultural theory and genetic analysis.”⁴⁸ Even those scientists who, in light of genetic diversity, dismiss racial classifications based on visible features as an error of the past may fail to see that the representational or imaginary physiology of racial groups persists as a mixture of “superficial” nature and cultural invention.

From this [latter] perspective, “man” would be that animal who lives not by nature alone, but by symbolic norms that provide a supplementary means by which the population would regulate itself To arrive at a properly human science, we must isolate a relationship between culture and nature, so as to suture them in a functional hierarchy: “man” appears whenever a biological need is

“[R]ace” is *not* wholly and completely determined by biology, but is only partially so. Even then biology does not *determine* “race,” but in complex interplay with environmental, cultural, and social factors provides certain boundary conditions and possibilities that affect racion and the development of “geographical” races Nor does the modern conceptual terrain of “evolution” provide scientifically secure access to race-determining biological, cultural, social developmental complexes distributed among various groups Racial categories are fundamentally *social* in nature and rest on shifting sands of biological heterogeneity.

Id. at 68.

⁴⁷*Id.* at 46-47 (quoting CARL N. DEGLER, IN SEARCH OF HUMAN NATURE: THE DECLINE AND REVIVAL OF DARWINISM IN AMERICAN SOCIAL THOUGHT 64 (1991)).

[T]his is the alternative that contemporary debates frequently propose with regard to a number of disparate phenomena, including race, homosexuality, schizophrenia, and many other things: The object in question is either grounded in biological causes, like hormones or skin color, or viewed as a social construction that is destined to pass away, like democracy, the nation-state, or atomic weapons.

Id. at 49.

⁴⁸*Id.* at 51.

regulated by representation⁴⁹

In Foucault's terminology, "man appears as a being possessing *functions*—receiving stimuli (physiological ones, but also social, interhuman, and cultural ones), reacting to them, adapting himself"⁵⁰ Thus when Foucault argues that we live by representation, he is not (according to Sheperdson) arguing for the discursive construction of all things, as if living up to the caricatures of postmodernist theory by its critics in the culture wars. But neither, of course, is Foucault a biological reductionist when he speaks of adaptation. In general terms, Sheperdson appropriates Foucault to recommend that we avoid both (i) proceeding "as if the 'natural' dimension of the body were independent of all cultural overlay—as if the biological domain were autonomous and *prior* to any merely symbolic matter,"⁵¹ and (ii) belief in "the discursive construction of all things."⁵² More specifically, we should avoid viewing "race" as *either* (i) "a product of cultural practices or a purely symbolic phenomenon . . ."⁵³ or (ii) "a biological fact, separate from culture and language, and from all the mechanisms of imaginary subjectivity that denature human life."⁵⁴ Representation is "not secondary to the biological domain; it drives raciation as much as any factor the scientists have identified."⁵⁵

We might therefore use the term "science of difference," notwithstanding the risk of historical contamination, (i) to designate the interest in "race" as a combination of "natural" features and cultural (including historical, social, and geographic) factors, and (ii) to distinguish that interest from discredited "race science," from the contemporary scientific view that "race" is biologically irrelevant, and from the view that culture is relatively powerless against "human nature." Both racism and voluntary racial identities therefore have links to nature (in addition to their obvious links to culture) not only because they are based in part on superficial physical differences, but because they are based in representational functions—we all represent each other and society, to ourselves, even as we are *represented* by others and society.⁵⁶

⁴⁹ *Id.* at 56-57.

⁵⁰ See MICHEL FOUCAULT, *THE ORDER OF THINGS: AN ARCHAEOLOGY OF THE HUMAN SCIENCES* 357 (1966), quoted in Sheperdson, *supra* note 46, at 57-58.

⁵¹ See *id.* at 60.

⁵² See *id.* at 53.

⁵³ See *id.* at 60.

⁵⁴ See *id.* at 61.

⁵⁵ See *id.*

⁵⁶ See FOUCAULT, *supra* note 50, at 352-53.

On the other hand, the history of race science is a reminder that science itself is also a representation, thus any “science of difference” will be constructed not only in accordance with observational and methodological conventions, but also in accordance with institutional, social, and rhetorical conventions. For example, concerns persist that “the biological use of race in genetics, as the last refuge of racist ideologies, continues”⁵⁷ One justification for using racial labels in the field of public health is the data showing that different “racial” groups “can have different—and potentially dangerous—reactions to common medications such as heart drugs, tranquilizers, and painkillers.”⁵⁸ However, “[r]esearchers also may find an inherited, racial linkage where none exists, or overlook the medical effects of what people eat, where they live and how they are treated. Even when groups are closely related genetically, ethnic variations in diet can radically alter reactions to medications and other important medical characteristics”⁵⁹ Nevertheless, race continues to be used as a scientific variable in biomedical research.⁶⁰

In fact, [however] the use of race and ethnicity in biomedical research is problematic because it is caught in a tautology, both informed by, and reproducing, “racialized truths.” We assume that racial differences exist, and then proceed to find them. While the scientific validity of racial distinctions between human populations has long since been disputed, the cultural logic of stratifying populations by race/ethnicity exerts a powerful pull—it is a highly ritualized scientific practice enshrined in law and government regulation.⁶¹

Because courts of law regularly “enshrine” science as a means to stabilize legal disputes, and especially because DNA evidence represents a type of “gold standard” in criminal trials, we should be particularly attentive to the institutional, social, and rhetorical aspects of contemporary science.

[F]orensic genetics [stages itself] as a type of conduit that merely delivers and brings to light, through a series of scientific

⁵⁷ Joseph Pugliese, *Identity in Question: A Grammatology of DNA and Forensic Genetics*, 12 INT’L J. SEMIOTICS L. 419, 438 (1999).

⁵⁸ See Robert Lee Hotz, *People Are Same, but Different*, LOS ANGELES TIMES, Dec. 20, 2002, at A41.

⁵⁹ See *id.*

⁶⁰ See Sandra Soo-Jin Lee, Joanna Mountain, & Barbara Koenig, *The Meanings of “Race” in the New Genomics: Implications for Health Disparities Research*, 1 YALE J. HEALTH POLICY, LAW, AND ETHICS 33, 54 (2001).

⁶¹ *Id.* at 55.

methodologies, what is already there. The danger . . . is [in] reproducing the notion that the forensic evidence is somehow beyond the structuring operations of mediation and potential error; . . . the forensic evidence may risk appearing tautologically scientific, that is, self-evidently factual and thereby incontrovertible.⁶²

To the extent, for example, that “DNA profiles are dependent on the construction of racial and ethnic subgroups that are conceptualized in purely biological terms,”⁶³ then in light of the “widespread agreement...that biologically distinct races do not exist,”⁶⁴ the profilers are unwittingly engaged in legendary “race science.”

In the contemporary discourse of law/science relations, the tendency to idealize science persists alongside the failure to take seriously the institutional, social, and rhetorical features of the scientific enterprise.⁶⁵ The history of “race science” provides, even today, an exemplary warning to those who view “scientific discourse . . . as a transparent medium which simply delivers, in an unmediated manner, the resident, inner truth of nature.”⁶⁶ To the extent that a new “science of difference” breaks down the opposition between nature and nurture in the construction of race, it also provides a model for breaking down the opposition between nature and society in the legal construction of science.

⁶² See Pugliese, *supra* note 57 at 421; see Soo-Jin Lee et al., *supra* note 60, at 51 (“An unintended byproduct of the genomics revolution is a naïve, almost religious faith in the power of genetics. The gene has become a powerful cultural icon; genetic explanations have a price of place in the popular imagination.”) (footnote omitted).

⁶³ See Pugliese, *supra* note 57, at 422.

⁶⁴ See Soo-Jin Lee et al., *supra* note 60, at 35. “The scientific evidence is clear that genetic variation does not neatly map onto socially meaningful groups.” *Id.* at 68. See also Stuart Hall, *The Question of Cultural Identity*, in MODERNITY AND ITS FUTURES 274 (S. Hall, D. Held, & T. McCrew eds., 1993):

Race is a *discursive* not a biological category. That is to say, it is the organising category of those ways of speaking, systems of representation, and social practices (discourses) which utilize a loose, often unspecified set of differences in physical characteristics—skin colour, hair texture, physical and bodily features, etc.—as *symbolic markers* in order to differentiate one group socially from another.

⁶⁵ See generally David S. Caudill, *Ethnography and the Idealized Accounts of Science in Law*, 39 SAN DIEGO L. REV. 269 (2002).

⁶⁶ See Pugliese, *supra* note 57, at 421. “The personifying trope of ‘resident’ here figures identity as a self-identical entity naturally *inhering* in a person’s DNA.” *Id.* at 420. “What I’m drawing attention to here is one of the fundamental presuppositions of forensic genetics: that DNA identity predates the operations of discursifications and textual labor; that it is always already there, merely awaiting the exegetical work of the forensic scientist, who will simply decode, decipher and transcribe it.” *Id.*