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Biomedicine, the whiteness of sleep, and the wages of spatiotemporal normativity in the United States

ABSTRACT

The racialization of individuals in the contemporary United States is increasingly accomplished through institutional actors, including scientists and physicians. As genetic health risks, chronic disease treatments, and pharmaceuticals come to define Americans' understanding of themselves, a fundamental shift is occurring in the way medicine is practiced and its role in the production of subjectivity. Underlying these changes is an expectation of orderly bodies—of “white” bodies that exemplify social and cultural norms of biology and behavior. Fundamental to U.S. medical ideas of normativity is that the white heteronormative subject is the standard against which disorderly and nonwhite subjects are to be judged. I explore these ideas through the history and contemporary world of sleep: the clinical production and interpretation of related scientific data, advertising use of images of sleep-disordered patients who have been “cured,” and experiences of nonwhite Americans within mainstream sleep medicine. [*biopolitics, critical race theory, science studies, abstraction, normalcy, capacity, desire*]

As I wandered through the voluminous exhibition hall at the annual meeting of Associated Professional Sleep Societies (SLEEP) in Salt Lake City, Utah, in 2006, my curiosity was piqued when a middle-aged woman emerged from a nearby women's restroom outfitted in a full set of pajamas. Carrying a fuzzy blanket, she proceeded toward the display for Rozerem, a sleep aid that was struggling to find its place in a crowded pharmaceutical market. The display that year was an enormous three-dimensional rendering of the numerical digit 0 placed atop a pedestal. The woman ascended the pedestal from behind and lay down in a bed at the base of the 0, where she positioned herself for a nap, pulled the blanket up to her armpits to pin it under her arms, and pretended to be asleep. The 0 was intended to signify the recent advertising campaign in support of Rozerem, which emphasized “zero evidence of abuse, dependence, or withdrawal,” all concerns that plagued its competitors, including Sonata, Lunesta, and Ambien. Over the course of the day, each of the female sales representatives from the Rozerem booth took turns dressing in their nightclothes, ascending to the 0, and lying in the bed for a faux nap. All of the sales representatives were white, and although men also staffed the Rozerem booth, only the women appeared in the 0. This promotion was matched in the print advertising campaign, which also featured a sleeping white woman at the base of an oversize 0. White women—and white bodies—are often the center of sleep-related advertisements, as white women are the largest demographic among users of insomnia drugs. But the length to which sales representatives went to embody Rozerem's advertising campaign is uncommon; generally, booths at the SLEEP meetings are filled with interactive screens and other graphic means of information distribution, but the makers of Rozerem decided to demonstrate the material, somatic capacities of their pharmaceutical through enactment by sales staff.

Compare this use of white bodies to the everyday situation of Terry, a black city bus driver in Chicago. At the age of 48, Terry was admitted to a sleep clinic after consultation with the staff psychiatrist who had diagnosed him with acute depression. He was later diagnosed with sleep-onset

insomnia—that is, difficulty falling asleep due to heightened anxiety associated with troubled sleep—and obstructive sleep apnea (OSA). He was, by his own account, chronically sleep deprived, “unhappy and unhealthy.” “Am I depressed? Sure. But are some breathing exercises and some pills going to make things better? No. Look, I’m almost 50, I’m single, I’m overweight, I don’t think I’ve slept eight hours in one night in years, and I hate my job. Should I take my medicine? Probably, but it’s not going to fix any of my real problems.” Terry narrated a lifetime of disappointment and frustration to me, resulting, most recently, in his manager formally suspending him from his job because of his temper flare-ups at work; his return to work necessitated his seeking professional help for his behavior. I asked him if he thought that temporarily using sleep medication might not get his life back on track. “Why? So I can keep punching the clock? I’m 48, *forty-eight*, I’m past middle age, and it’s all downhill from here. If I start on the meds now, it’s going to be that way until I die. That’s what happened to my folks, and I’ll be damned if it’s going to happen to me too.” Terry saw in his diagnosis and treatment the latest chapter in a life of disappointments brought about by “where I grew up and who I am.” Rather than accept his medical categorization, Terry preferred to see his life as the accumulated effects of a history of disenfranchisement based on his being black and growing up on the South Side of Chicago. He was willing to accept the difficulties of not being medically dependent in favor of “just living my life.” As Terry makes evident, disorders—including particular forms of sleep disorders—are especially visible when individuals interact with mainstream U.S. society and its spatiotemporal expectations about social life, particularly with regard to family, school, and work obligations;¹ a disorderly body is recognizable in its inability to meet social expectations of normalcy.² Not being able to sleep in a regular and predictable way is enough to qualify a body as in need of medical intervention.

In this article, I argue that the bodies that U.S. sleep medicine produces are aspirationally “white”—that is, they are orderly, benign, unexceptional bodies, made “white” through medical interpretation and intervention. They are rendered white through their transformation into abstract data that are taken as corresponding to a known diagnostic category (Barthes 1988), and they can be treated to produce orderliness through the fostering of particular capacities, especially the ability to sleep at normative times. Drawing on the anthropology of race and science studies, I argue for a definition of whiteness that extends beyond racialized bodies to the abstract bodily capacities established through scientific and medical knowledge production. This framework provides a way of understanding bodies that exceeds their racial markers and instead focuses on how, through the demonstration of particular capacities, individual bodies meet the expectations of contemporary U.S. society,

embedded primarily in the spatiotemporal ordering of everyday life built on a history of racialized privilege and ideas about what normal, white bodies can and should do. My interest in “whiteness” in this setting grows out of the industrial and colonial history of managing forms of social belonging as mediated through the body and its governability (Berlant 1993; Piepmeier 2004; Wiegman 1995); in the United States, white bodies are unproblematically American bodies,³ although the category of who counts as white has expanded over time. Increasingly, whiteness is no longer about the body in the strict sense but about what bodies have the potential to do. By focusing attention on normative capacities associated with ideal American subjects, we can see how the capacities historically assumed to be based in the white, male body are increasingly not about the body itself but are idealized capacities that can be conceptualized through scientific data and produced through medical intervention to create modern, orderly subjects. The racial logic of capacities means that any individual can become white, as long as he or she meets the expectations of orderly, normative behavior. This outcome ultimately depends on the individual desiring to be a normative subject and finds its limit in social understandings of racialized bodies. Although institutional practices that rely on the abstraction of data in their control of bodies may accept a body as white, in the broader social world an individual is part of, the racial status of his or her body remains intact (Saldanha and Adams 2013).

Sleep is an exquisite example of what I refer to herein as a “capacity.” In his reading of Spinoza’s materialist philosophy, Gilles Deleuze (1988:97) sees capacity as the ability to act and be acted on and to shape one’s bodily being in the world. All life on Earth sleeps, but how one sleeps—whether human, animal, or plant—differs across species, historical setting, and social organization. U.S. adults tend to sleep in consolidated nightly patterns, usually between seven and nine hours each night. But most individuals have the ability to sleep in more fragmented fashion, either in two or more periods at night or supplementing a short night’s sleep with a daytime nap. Around the world, these patterns and expectations vary, with many societies being organized around shorter nightly sleep and daily naps (Steger 2003). In some cases, there are physiological barriers to this nightly pattern, including such disorders as OSA, restless legs syndrome (RLS), insomnia, and narcolepsy. In each case, an individual’s capacity for achieving normative sleep is shaped by physiological mechanisms, many of which contemporary sleep medicine can treat. To seek such medical treatment, an individual needs to desire a particular form of sleep. U.S. sleep medicine is built on a foundation of normative ideas about sleep—namely, eight consolidated hours of nightly sleep—such that individuals come to see other forms of sleep as disordered and desire interventions to achieve that nightly ideal. In any given

environment, capacities are simultaneously hindered and fostered to shape the body and the world, and in each case, they serve as the material basis for engagement with the world.

Shifting attention away from the racial markings of bodies and toward capacities opens up terrain for thinking through race and its relationship to the changing demands of “control societies” (Deleuze 1995). Deleuze argues that the era of monolithic disciplinary institutions had come to an end by the 1990s and that those entities have been superseded by overlapping, fragmentary control societies, each of which has its own expectations about the behavior of individuals. Building on Michel Foucault’s (1988, 1994, 1995) theorization of disciplinary institutions—the barracks, prison, hospital, and school—Deleuze suggests that the production of a particular form of normative individual has been fractured and that there are now many competing normative ideals based on assumptions within each of the institutions with which an individual interacts in his or her everyday life. One’s workplace, school, doctor, and family all have normative ideals they are striving to produce in an individual, and these ideals may complement or contradict one another. To live up to these ideals, individuals are compelled to develop flexible capacities that allow them to meet different expectations of behavior, as demonstrated in Emily Martin’s (1994) study of the immune system and changes in U.S. society in the 1990s. Deleuze characterizes the individual’s relationship to control societies as one of “debt” in which the person is always striving to catch up with demands placed on her or him and so be recognized as a subject; this aim provides a vector for action and an incentive to behave in ways demanded by the institutions that make up contemporary control societies. In the following discussion, I examine a series of sites where ideas about capacities are communicated—clinics, conferences, magazines, and Americans’ everyday lives—and how the communication of ideas about sleep dovetails with ambient ideas about race and its relationship to normal and abnormal bodies. Central here is how behaviors become the basis for thinking about whether a body belongs to society—whether a body counts as a subject—through its apparent achievement of the normative ideals embedded in dominant spatiotemporal orders of everyday U.S. life. Sometimes normativity is achieved through medicine, but, increasingly, the means to produce particular capacities are available as by-products of contemporary consumer societies through self-help regimes, over-the-counter pharmaceuticals, and other consumer products.

Central to my argument here is the imbrication of orderliness and whiteness, whereby **orderliness is construed as a capacity of white bodies**. Many scholars of whiteness have highlighted the role of privilege that whites have over racially marked social others (McIntosh 1988; Puzan 2003; Wise 2011). Key to their approaches are the actual bodies of

white people: Privileges accrue to individuals not because of their behavior but simply because of their visible physiology, primarily skin color. Alongside this literature, work has emerged on nonnormative whites—“hillbillies” and the working poor (Hartigan 1999, 2005) as well as European immigrants who are not accepted as white despite their phenotypic similarities to normative white bodies (Lott 2013; Roediger 1991). As I discuss below, this work has led scholars to begin to argue that **whiteness is both a symbolic form concretized in particular bodies and a set of capacities that can be applied to a variety of bodies to assess their qualities** (Anderson 2003). Orderliness is one of the capacities of whiteness, as can be seen in how discourses of normalcy are applied simultaneously to white bodies and to expectations about social behavior in clinical settings, medical imagery, and Americans’ everyday lives. The importance of this capacity can clearly be seen in how disordered sleepers strive toward normative uses of time, particularly work, school, and family schedules, which is often the basis for clinical interventions. To abide by a normative schedule is to metonymically be part of mainstream U.S. society, which, historically, has been constructed as white, upper-middle class, and heterosexual (Blank 2012; Frankenberg 1993; Lott 2013). **Whiteness increasingly exists beyond the racialized, symbolically white body and is produced through scientific abstraction as a set of capacities made apparent in the behavior of individuals.** These capacities are structured by the demands of society and popular conceptions of the normal body and can be shaped by medicine. The capacities for orderly sleep and the assumption that they are coterminous with whiteness is communicated through contemporary scientific and medical media and practice (Briggs 2005), which employ whiteness as an implicit device rather than explicitly foregrounding it. Individuals confront this whiteness in their interactions with mainstream U.S. sleep medicine, often in clinical settings when individuals seek diagnosis and treatment. In an era of biopolitical interest in behaviors and the quantitative measurement of individuals and society (Foucault 1990; Rose 2006), the abstraction of data and diagnostic categories at the heart of biomedicine facilitates this turn toward capacities instead of bodies.

In this article, I show how the biopolitical emphasis on capacities facilitates and is facilitated by a series of related processes. These processes include the production and application of clinical data by physicians and researchers in sleep clinics; the circulation and enactment of medical and scientific images in magazines, conference presentations, and marketing campaigns; and the reformulation of everyday life on the basis of hegemonic conceptions of consolidated human sleep. Each of these processes depends on the quantitative conception of life embedded in contemporary biopolitics (Foucault 2008), made actionable through

abstraction and the materialization of abstract data. I take the science and medicine of sleep in the United States to be paradigmatic of broader changes occurring in the fabric of U.S. biomedicine, at once racially manipulative and productive of abstract data and their applications (data at times construed as existing beyond race) through which the control of bodies and society is attempted. As Wende Marshall has written in the context of HIV/AIDS research, “In 21st century scientific discourse, the white body continues to stand as the unmarked, healthy norm in ideological, political and physical senses” (2005:2517); whiteness is an abstract category that is produced through scientific research on “basic” biological processes accepted as the foundations of orderly bodily being. Moreover, whiteness is materialized in the practices of medicine through the production of normalcy in aberrant bodies via treatment regimes. Whiteness is constructed by scientists and maintained through medical treatment; for this promulgation of whiteness to be effective in society more generally, however, disordered sleepers must desire to become normative sleepers.

From January 2003 through April 2007, I conducted archival and ethnographic research, first in the Twin Cities in Minnesota and then in Chicago, Illinois. The research began at the pseudonymously named Midwest Sleep Disorder Center (MSDC), where I attended weekly case discussion meetings and departmental lunches and also visited the overnight sleep clinic. I conducted formal and informal interviews with clinicians, researchers, and patients and their families at the clinic and at other locales throughout the Twin Cities. I also attended local support groups for individuals diagnosed with OSA and RLS and conducted archival research at the University of Minnesota’s Wagensteen Historical Library of Biology and Medicine, which houses medical monographs from the 19th and 20th centuries. In February 2006, I relocated to Chicago to conduct further research, including archival research at the Special Collections Research Center at the University of Chicago’s Regenstein Library and ethnographic research with patient support groups throughout the Chicago metro region. Over three and a half years of research, I informally interviewed over 80 disordered sleepers and conducted life history interviews with another 40. In addition, I conducted a dozen interviews with sleep clinicians and additional interviews with sleep technicians and other clinic staff. In the following discussion, I draw on interview data from individuals who identify as experiencing one or more sleep disorders, ethnographic descriptions of meetings in the clinic, and media analysis of conference presentations and advertisements.

Whiteness, science, and sleep

Although scholars have long focused on racialized aspects of medicine related to nonwhite bodies, comparatively little research has focused on the production and uses of

whiteness as an abstract capacity in biomedicine and its related sciences. Historical studies of colonial situations constitute one site where whiteness in science and medicine has emerged as a concern. Foremost among this scholarship is Warwick Anderson’s work on race in Australia. Anderson shows that in colonial Australia the racial markers of bodies were secondary to the capacities the bodies exhibited. As Anderson writes, whiteness “seems to have stood for any corporeal feature *except* color . . . [whiteness was] a type, mobile and standardized . . . [and later] dissolved into variations across a population” (2003:2). For colonial actors in Australia, skin color was not as soluble an object of analysis as the capacities of the body were, whether intelligence, the ability to acclimate to tropical climates, or “a cultural legacy and thought style” (Anderson 2003:2); whiteness was apparent in bodies—in the color of skin—but also in the capacities that they displayed. My argument here is similar to Anderson’s. My focus is not white bodies per se, but the mechanisms by which white bodies come to be associated with a particular form of normative behavior and to represent it abstractly through scientific representations. The distinctive sense of whiteness that Anderson sees as having been deployed in colonial Australia is analogous to the differentiation between symbolic whiteness and whiteness as a capacity: Symbolic whiteness is founded on the particular features of a racialized body, marking one body as white and others as nonwhite; whiteness as a capacity, however, focuses on the bodily behaviors of individuals as indicative of particular, racialized capacities. This latter perspective allows for obviously nonwhite bodies to be white in their behaviors.

As a theoretical rubric and object of analysis, whiteness has often been approached in two ways. The first is as the slippery racial category of North Atlantic whites, particularly as it has been used to proffer distinctions between normative whiteness and its variations. One example in this tradition is Eric Lott’s *Love and Theft* (2013), which systematically shows how nonwhite immigrant groups in the 19th-century United States came to be recognized as white, largely as an effect of other nonwhites becoming U.S. citizens via immigration or emancipation; the inclusion of these groups depended on their appropriation and performance of blackness as a symbolic form and set of behaviors, which distanced them from other racially white, yet unintegrated and undesirable populations. As John Hartigan (2005) has argued, this approach to whiteness as a symbolic feature of particular bodies often reifies the facticity of “white” as a racial category and leads to a flattening of heterogeneous experiences of whiteness. Hartigan’s critique dovetails with the second approach to whiteness, namely, the construction of “race neutrality,” most apparent in Helán Page and R. Brooke Thomas’s (1994) discussion of “white public spaces” in U.S. medicine. According to Page and Thomas, there is a “need for a

visible variable by which to segregate access to resources,” but, simultaneously, there is a “need to regard patients as homogeneous, and to universalize their treatment while denying racism” (1994:114). Since Page and Thomas’s early theorization of whiteness in the context of U.S. nursing, little attention has been paid to whiteness in medical anthropology and science studies (cf. Marshall 2005); in the absence of a sustained critique, the normativity of whiteness—and white bodies—has persisted as an assumption in the practice and theorization of medicine.

Scholars, however, have paid increasing attention to the assumptions about race embedded in modern science and medicine and to the troubled legacies predicated on racial inequalities in scientific research and medical practice that find their logics in the problematic symbolism of race in the United States. Recent work has focused on the use of race as a significant marker in the commercialization and practice of medicine (Kahn 2004; Rouse 2009) and as a meaningful designation in genetic science (Montoya 2011; Reardon 2004). This literature has emerged out of a body of historical and sociological work on the enrollment of racialized populations in scientific knowledge production, particularly in the context of colonial and postcolonial power relations (Anderson 2006; Arnold 1993; Epstein 2007; Jones 1993; Wailoo 1999, 2001). Throughout this literature, one focus has been how **race creates a meaningful object of governance at the same time that it enables inclusion of particular populations in scientific research and claims to citizenship** (Whitmarsh and Jones 2010). To take the most famous example, Oliver Wenger’s Tuskegee experiments, conducted on a small population of black sharecroppers in Macon, Alabama, were enabled by the power relations that existed between rural, black southerners and white Public Health Service officials. In Macon, scientific observation served as a means of governance, in this case resulting in long-term reliance by the project’s subjects on medical professionals who provided inadequate health care (Jones 1993; Reverby 2009). A similar structure of client–patron relations exists throughout racialized medical and scientific practice, in which white professionals represent institutionalized power structures to black or otherwise racialized clients (Levy 1985; Puzan 2003). What has resulted from this form of medical and scientific practice and governance is a bifurcated body of scientific knowledge: On one side is “basic” science, often taken by scientists and physicians to produce an abstract, nonracialized body of data (Rabinow 1996); on the other side is highly racialized data, seen by scientists and physicians as establishing the essential biological differences between populations (Montoya 2011). What lies at the foundation of this scientific and medical practice is the production of knowledge that is applicable across bodies, in the service of producing masses of orderly, controllable, white bodies; in all cases, the interpretation and application of abstract data serve in the treatment of the

individual and in resolving symptoms to the extent that he or she can meet normative social expectations of behavior.

Contemporary U.S. sleep science and medicine are predicated on the idea that human bodies require approximately eight hours of sleep each night. This number changes over the life course—more for infants and during puberty, less after age 60—but provides the baseline against which nonnormative sleep is judged. This normative amount of sleep is assumed to take place at night, resulting in the “11 to 7” model of sleep; that is, humans are expected to sleep eight hours each night, generally between 11 p.m. and 7 a.m. Modest variances from this norm are clinically and socially acceptable, but extreme variations need to be explained by work demands, emergencies, or pathology. If an individual sleeps otherwise—although appropriate during some periods of life—this apparent choice can be seen as dangerously antisocial or unhealthy as the individual ages. **This everyday baseline of behavior and biology is the whiteness of sleep; it is abstract, normative, and the basis for individual and institutional control in the production of orderliness.** Nonnormative sleep needs to be brought into alignment with these expectations. As bodies are acted on to sleep in expected ways, they become normal; they become white, as evidenced in their behaviors. In so doing, they also meet social expectations of behavior more generally—in work places, school, family life, and recreation—and constitute what E. P. Thompson (1993) referred to as having “customs in common” as a result of time-discipline. Indeed, people come to have not just customs but also bodies in common as somatic experiences become similar across a population controlled through implicit expectations and medical intervention. In the following three sections I show how these expectations and interventions are negotiated in U.S. clinical settings, communicated in scientific and medical media, and lived in the experiences of nonnormative sleepers.

Generating and applying whiteness

Sunday through Thursday nights at the MSDC followed the same pattern: Patients and their families would check into the clinic shortly after having dinner, usually arriving between 7:00 and 9:00 p.m. The patients would then be assigned to observation rooms, which were standard hospital rooms, each outfitted with a bed and special equipment to monitor sleepers, including a variety of sensors that were attached to the body, video cameras, and microphones. The patients would ready themselves for bed by putting on pajamas and attending to their own nightly hygiene rituals, and then they would be outfitted with the monitoring devices. Afterward, they would be left to approximate their own pre-bed routines transposed to the hospital, often reading, watching TV, or talking on the phone before turning off the

room's lights. Patients might fall asleep early or late, but almost invariably they eventually fell asleep, despite the hospital room setting and monitoring devices affixed to their bodies. They were, after all, exhausted—all were chronically sleep deprived for varying reasons. From the nearby monitoring room, sleep technicians observed the sleepers via the medical instruments. If a patient began to have an apnea attack, a progressive closure of the airway during sleep, a technician would enter the room to affix a continuous or bilevel positive airway pressure machine (CPAP or BiPAP, respectively) to aid in breathing. If a patient began to exhibit parasomnia behaviors—like sleepwalking or dream enactment—a technician might simply make notes or might enter the patient's room to ensure that he or she did not remove the monitoring devices or endanger him- or herself by moving around in the unfamiliar space. Depending on the kind of sleep disorder, the technician might give the patient a prescribed medication to alleviate symptoms. Generally, by 2:00 a.m., most of the medical interventions had occurred and the night's clinical activity was over; most patients were fast asleep, and the technicians were reading novels, playing cards, or watching videos. On the rare occasion that a patient required further attention, the technicians were there to help, using the doctor's intervention plan to guide their actions.

Around 8:00 a.m., the MSDC's physicians filed into work and consulted with the sleep technicians on the patients' sleep. This consultation focused on the output of the various monitoring devices and, primarily, the polysomnography report, a compilation of all the sensors' data rendered in abstract form. Disorderly sleep could be diagnosed when these data were compared against baseline understandings of what normal sleep looks like when rendered as a series of lines on a computer screen. Any perceivable variation from the norm could index a variety of sleep disturbances, and the clinicians frequently used this information to confirm preliminary diagnoses. Often it took little medical intervention to produce a normal night's sleep, but in some cases intervention was a protracted process that might disrupt a patient's life substantially (Wolf-Meyer 2009). In producing a night's sleep that met the expectations of patients, the clinic helped individuals to maintain their standing in society, whether it was at their workplace or school or among their family; the pathologization of and medical intervention into aberrant sleep helped them to maintain the normative spatiotemporal rhythms of U.S. society (Wolf-Meyer 2012). However, like Terry, many patients decided against their recommended medical treatments, choosing not to use their apnea prostheses and medications, often because of difficulties associated with the prescribed therapy.

Noncompliant patients commonly faced a series of social difficulties. They needed to make arrangements with employers, schools, and their families to accommodate

their nonnormative sleep behaviors, situations that were often stressful and sometimes resulted in the loss of employment, failure in school, and divorce. Individuals were often faced with demands from their insurance companies to abide by treatment or face the loss of medical coverage. At their most successful, they might develop a strategy to fit their work to their sleep needs. One who did so was Dee, a self-employed hairdresser who changed her salon's hours to accommodate her delayed sleep phase disorder.⁴ Often, individuals who chose not to take their medication ended up on disability, unable to work normal hours or the shifts necessitated by most workplaces (Wolf-Meyer 2009). Clinicians perceived these individuals as choosing to live with the many social and physiological difficulties their disordered sleep entailed rather than accept a trusted medical treatment and its promise of a more normal everyday life. Although they were generally supportive of these decisions, their support was often tinged with concern about future, unpredictable complications associated with lack of medical oversight.

Although the clinic served as a site where abstract data were applied to the lives of individual patients, its location in a research hospital meant that it was also a site for generating and policing data more generally, particularly in relation to normal and abnormal bodies and their behaviors.

Data were thus often interpreted as depicting normative, orderly behavior and, by extension, white bodies. When racial markers were discussed, they were often mentioned in relation to white bodies or assumptions about "normal" bodies. This pattern can be seen in two aspects of the production and application of abstract data about sleep. The first is how data are produced and taken to be representative of "normal" sleep and associated behaviors. Key here is how orderliness is associated with "normal" sleep. The second aspect is the movement from abstract data to particular bodies, specifically in contexts in which issues of race appear; the racialized body is compared to the "normal" body, which, in these cases, is explicitly a white body. The mechanism that unites the appraisal of the physical bodies of patients and the abstract body of data about sleep is the discourse of normalcy; *normal* is used to describe both basic scientific findings about human sleep and the physiology of patients.

During a weekly staff meeting following the annual national SLEEP conference, Dr. McCoy, one of the senior clinical researchers at the MSDC, asked if any of the staff had seen anything of particular interest at the conference. Dr. Stephens, a senior pulmonologist at the hospital and an affiliated clinician, took the opportunity to report on a workshop he had participated in that focused on revising the manual for scoring normal sleep, a massive project that has 50 medical researchers working on six different taskforces. The manual was developed in the late 1960s, and this is the first concerted effort to revise it since then. A clinician

visiting from a nearby sleep clinic opined that the manual is like the “bible for sleep stages” and that the revision is like the “King James Bible,” as it will give clinicians throughout the United States a new standard for their clinical observations. The lead sleep technician, Ingrid, asked if there was resistance to the revision from industry, and Stephens explained that both industry and technical groups were being consulted throughout the development of the manual, which both helped the sleep researchers further refine their scoring and alleviated tension between the various groups. One of the other sleep technicians, Theodore, raised the question of how various groups use different voltage ratings to score slow wave sleep; Dr. MacTaggart, one of the staff pediatricians, said that “in children and the elderly, voltage is quite different from what is reported for normal adults and [that] there is little consistency.” Stephens explained that this is one of a number of issues researchers are addressing in relation to “discrepancies between different cohorts within the population and the baseline norm.” Another is the quantification of delta wave sleep, which, he said, “could prove how much restful sleep people are actually getting.” This observation opened a more general conversation about using delta wave sleep as a marker for restful sleep, since subjective reports from patients of restfulness and objective quantification of delta wave sleep were often mismatched. Throughout the conversation, abstract measures like “delta wave” and “slow wave” sleep were employed to conceptualize what normal sleep is, and, by extension, what it looks like when it is graphically represented and embodied in an individual. By enshrining normal sleep in the scoring manual used by clinics throughout the United States, a particular, abstract, normal body serves as the basis against which all disorderly sleep is to be measured.

At a staff meeting months later, MacTaggart presented the case of a 16-year-old girl she had recently seen who has “borderline intelligence,” a history of sexual abuse, and symptoms related to posttraumatic stress disorder. The girl was a “normal [sleeper] up until about 12,” but now she wakes her parents up in the middle of the night and complains that she only sleeps intermittently. When given a subjective sleep log, she only filled in 16- and 20-minute slivers of sleep; when she was put on an actigraph, readings showed that she actually sleeps six to seven hours a night, and, in the head neurologist’s words, that her “actigraphy is normal.” Dr. Richards, the head neurologist, then commented that he “doesn’t know how labs without actigraphs treat insomnia” because there is often a mismatch between subjective experiences of sleep and its objective measurement. Actigraphs are wrist-worn devices that measure bodily movements throughout a 24-hour period; the data show periods of movement and rest and offer a rough assessment of how much sleep an individual has during a measured period. The transition that occurs between discussing the patient as an individual and how her behaviors are measured

with an actigraph shows how data are collected, compared to baseline understandings of normal sleep, and used to assess whether the individual is “normal” or abnormal.

In the following two clinical reports, racialized bodies—or racial assumptions—are compared to “Caucasian” or “normal” baselines to come to an understanding of possible causes of sleep disorder symptoms. In the first case, MacTaggart reported on a child who was born prematurely and, now two years old, has “airway issues.” MacTaggart went on to say that the baby has “globby tonsils” and that she is a “risky surgery candidate” because she has a blood disease that would hinder her recovery. Richards asked if MacTaggart had considered using steroids to treat the child, joking that it was a treatment preferred by Dr. Sascha, who runs a sleep clinic “in a strip mall next to a pizza place.” In response, MacTaggart performed an exaggerated, skeptical face to the general laughter of the staff. Richards insisted that it “could work, but that it should only be used in a patient that is a surgery risk.” McCoy then interjected that he “didn’t know that steroids had any effect on tonsils or lymphonal tissue.” McCoy then asked if the baby is “Caucasian” (MacTaggart affirmed that she is), thinking that “if the baby were African American, it might be due to a keloid formation.” Richards concluded the discussion by saying that the patient is a good example of risk outweighing benefit and that he agreed with MacTaggart that they should “watch and wait” to see if, as the child aged, she grew out of the problem.

At another staff meeting, MacTaggart made a brief announcement about the craniofacial clinic and its relation to the sleep clinic, saying that it was seeing a number of patients with the kind of problems that brought the two clinics together in the first place. She was referring to patients diagnosed with, for example, Treacher-Collins, a rare chromosomal abnormality that results in bone formations in the skull that can lead to breathing disorders, including symptoms like OSA. This led her to a discussion of a Laotian boy she had recently seen with a “flattened face,” although he did not meet any of the clinical criteria for a straightforward diagnosis. MacTaggart remarked that the child had “the worst case of preschool OSA [she] had ever seen.” Richards asked if there were hereditary aspects to the boy’s flattened face, to which MacTaggart replied that the family was generally “quite normal looking, although rather small,” as most Laotian immigrants are.

In these cases, race and racialized features serve as mechanisms to understand physiological difficulties and differences. In the case of children, a hereditary explanation might be the easiest route to understanding the cause of a problem. But it only makes sense in a clinical practice that assumes that white bodies do not experience racially marked hereditary problems. Taken as a set, these clinical conversations point to how the “normal” body is conceptualized, both in its presentation as abstract data, as in the

case of the scoring manual for normal sleep, and in its materially embodied form, which is assumed to be “Caucasian” or white. Objective clinical knowledge, in the case of U.S. biomedicine, depends on the construction of the normal through scientific testing, as in the case of sleep scoring techniques and values. It also depends on the ability to conceptualize the normal as an ideal type against which patients are compared, a skill that may be implicitly learned rather than explicitly taught. The nightly observation and clinical interpretation of physiologies and behaviors is how the whiteness of sleep is promulgated. In the following section, I turn to sites beyond the clinic where this idealization occurs and look at how ideal types circulate to produce and materialize the abstract whiteness at the heart of U.S. medicine emblemized in advertising campaigns.

Representing orderliness

The 2005–06 advertising campaign for Ambien CR—a controlled-release formula of the drug, which was developed to build on the earlier marketplace successes of Ambien—featured a white, slim, blond woman dressed in a pink jacket and blue slacks, representative of the model U.S. sleeper. At the 2006 SLEEP meeting, female sales representatives for Sanofi-Aventis, the manufacturer of Ambien, took turns dressing up as this model American, wearing matching outfits and wigs. The advertising makes the benefits of Ambien CR clear by featuring the model sleeping serenely throughout the night and then walking on a sunbeam upon awakening. The character at the center of the campaign is at once abstract and made material in the actions of the sales representatives who take turns embodying her; in so doing, in less directly material ways, they are inviting the audience to embody her as well—if not in her totality, at least to the extent of partaking in the same chemical supplement to their everyday lives to produce a similar capacity for consolidated sleep. Like the example of Rozerem’s enactment of its advertising campaign, Ambien’s central advertising image stepped off the page to show how abstract concepts can be materialized in everyday life. While those taking sleep medications might not be physiologically white, they can become white in their adoption of orderly everyday behavior, a capacity granted to them through the efficacy of medicine. These examples are explicit; below, I focus on more implicit figurations of the orderly white body and how they circulate in medical imagery.

During my fieldwork, I regularly attended medical conferences, workshops, and meetings of the national SLEEP organization. Presenters ubiquitously relied on PowerPoint presentations, often with high-contrast yellow text on a blue background to be legible to audience members at the back of 500-person conference halls. One of the most frequently used images in presentations was that of the circadian clock and its related physiological states centered on Leonardo da

Vinci’s Vitruvian Man—an image easily found on the Internet and therefore a handy PowerPoint graphic. The Vitruvian Man stands in the center of the image, with a clock circling him. Rather than specific times being marked on the clock, the 24-hour period is demarcated by a series of biological states and processes associated with the circadian cycle (i.e., high alertness in the morning, best coordination before midday, deepest sleep in the middle of the night, bowel movement likely in the morning, etc.). Images like this one, which rely on the use of clip art and other abstractions of human bodies (Wolf-Meyer 2008), simultaneously accomplish two things: First, they establish a normative progression for the healthy body and everyday life; second, they situate the normative everyday as centered on the white, male body, rendered in abstract form. This is not to ascribe intent to presenters in promulgating these normative assumptions about social life and bodies but, rather, to suggest that **the abstract whiteness of sleep science and medicine circulates without explicit engagement on the part of scientists and physicians. Rather than an explicitly communicated tenet of the science and medicine of sleep (cf. Briggs 2005; Briggs and Mantini-Briggs 2003), whiteness is an ambient normative assumption undergirding clinical practice based on ideas about nature.**

Implicit uses of race appear in medical advertising, much like the Ambien and Rozerem examples. In surveying the 2005–11 run of *Sleep Review*—the primary trade publication aimed at sleep scientists, clinicians, and affiliated medical professionals and the one that features the broadest array of sleep-related advertisements—I found only a handful of advertisements depicting a nonwhite body. Similarly, during the same period, *SLEEP*, the academic flagship journal of sleep researchers and clinicians, had an equally small number of nonwhite bodies. Over half the content of *Sleep Review* is advertisements: The publication subsists entirely on advertising revenue, and advertisements can include anything from quarter-page ads for fluffy cozies for CPAP and BiPAP machines to multipage inserts promoting newly approved pharmaceuticals. In its nonadvertising content, *Sleep Review* includes “state of the science” summaries and editorials, aimed at physicians, nurses, and technicians—and, in more than one sleep clinic I visited, it could be found in the waiting room, where patients could read it as well. *SLEEP*, by contrast, is paid for by members of the largest professional organization of sleep researchers and clinicians in the United States, but it still contains advertisements for sleep pharmaceuticals alongside academic articles intended for a scientific audience. Advertisements in *SLEEP* were much more likely than those in *Sleep Review* to appear in popular media and were often part of a diverse marketing campaign. Of the bodies represented in these two publications, most appear to be between the ages of 40 and 60 (the target market of many sleep pharmaceuticals and technologies); there are few examples of babies,

children, adolescents, or teenagers, figured as patients or others in patients' social lives. These advertisements collectively represent the whiteness at the heart of U.S. medicine: When the bodies are treated, they are orderly, unremarkable bodies, often enjoying a social interaction with a loved one; when they are untreated, they are disorderly, antisocial, and in need of medical intervention at the level of the individual.

An advertisement for ReQuip, the first drug shown to be effective for the resolution of symptoms associated with RLS, is an example of such individualized disorder. Individuals who experience the symptoms associated with RLS complain of sensations in their limbs—generally their legs but also their arms—that compel them to move their body. These sensations are particularly intense during periods of immobility. During wakefulness, individuals can move their limbs either by gesticulating with their arms or walking or bouncing their legs; at night, lying in bed, individuals find themselves moving their legs and arms, often disrupting their own ability to fall asleep and also disturbing anyone sharing a bed with them. A ReQuip advertisement captures this experience of RLS, showing the restless sleeper, a white middle-aged woman, moving her legs as if to ease her RLS symptoms. More importantly for my argument here, it stresses the antisociality of a sleep disorder like RLS: The woman sleeps alone, or, if she is sharing a bed with someone, the experience of RLS is individuating to the point that that other person need not appear in the image. The nature of disordered sleep is reduced to the individual; if it is shared, that sharing is secondary to its individualization. This individualized experience—pronounced in the case of RLS—is treatable through medicine acting on the individual to render her sleep orderly again. Only once this therapeutic intervention has occurred can normative social relations be reestablished.

A ResMed advertisement provides a counterpoint to the ReQuip figuration of the disorderly sleeper; it offers a view of the effects of treatment, as a middle-aged white man and woman hold hands while relaxing on the beach—the inversion of the ReQuip advertisement in that the normative intimate relationship is at the center of the ad. ResMed markets prostheses for the treatment of sleep apnea, foremost among them, CPAP and BiPAP masks. Sleep apnea is a disorder that affects a bed partner as much as the disorderly sleeper him- or herself. Individuals with sleep apnea experience a progressive constriction of the airway during sleep, finally resulting in temporary asphyxiation. The sleeper startles awake, drifts to sleep once more, and the cycle begins again. This process is loud, as labored breathing akin to snoring is associated with the choking process, followed by a deep inhalation of breath. It can happen a few times every hour or, in extreme cases, once every minute. Many people functionally sleep through this whole process, as they are severely exhausted from their disrupted sleep and unaware

of their own apnea; their bed partners, however, are often sleep deprived as well because they are unable to sleep through the apnea cycle. As a result, many bed partners find other places to sleep, often disrupting the normative expectations of shared beds. The ResMed advertisement plays on this social disruption by showing how, with treatment, individuals can return to their previous intimate relationships. Again, this outcome depends on the affected individual accepting treatment and, in so doing, returning social relations to their orderly progression. Unlike the disorderly sleep of the ReQuip sleeper, after the treatment of sleep apnea with a ResMed prosthesis, order is restored to everyday life. However, in both cases, white bodies serve as the embodiment of the sleep medicine's assumed subject.

The abstraction of sleep and its pathologies depends on the construction of the white body as the normative ideal, as devoid of content and yet full of capacities for specific behaviors that can be materialized in the lives of individuals through the use of medicine. This can be seen in the model forms of life that are promoted through advertisements, which at once depend on normative expectations of behavior but also provide models through which experts and lay persons think of themselves and others. Throughout *Sleep Review*, *SLEEP*, and popular advertisements for sleep-related treatments more generally, the white body is the abstract basis for promoting ideas about health and social integration; when nonwhite bodies are used in sleep advertisements from the period I reviewed, they are explicitly shown undergoing therapy—in the language of contemporary medicine, they are “compliant.” Like the image of daily circadian rhythms that circulates at sleep conferences, embedded in these images of orderly and disorderly sleepers are normative assumptions about individual behavior. While most of these representations of individual natures gone awry are confined to the page or TV screen, the Ambien CR and Rozerem advertising campaigns capture the broader communicative action of scientific and medical media: However ambient it may be in its circulation and its use of whiteness, it insinuates itself into our daily lives through advertising as well as the actions of others, who have been subtly influenced in their interactions with media representations of abstract whiteness.

The spatiotemporal rhythms of disorder

The normative ideals of sleep in U.S. society can be seen in the widespread acceptance of eight hours of nightly sleep as normal sleep by clinicians and lay Americans; this assumption also provides the basis for what the spatiotemporal order of everyday life should be. Sleep, as Americans know it today, is the artifact of 19th-century industrial efforts to consolidate the workforce (Wolf-Meyer 2011). As workers moved from the countryside to the cities in North America and Europe, they found themselves confronting

less flexible workdays as their employers sought to maximize their use of sunlight; workdays would often last from dawn until dusk, disallowing workers from napping during the day (Roediger and Foner 1989). More importantly, what used to be a dusk until dawn period set aside for sleep and nighttime activity, wherein individuals would often sleep in two periods of three to four hours interrupted by a period of wakefulness (Ekirch 2001), was now regimented by the need for consolidated sleep, as individuals had little time between one shift and the next. As individuals returned home from a long workday of industrial labor, they tended to consolidate their sleep out of exhaustion, sleeping about eight hours each night; previously, they might have been able to take a nap during the day if tired, arrive at work late and work late, or otherwise rearrange their work schedules to meet desires for sleep (Le Goff 1982).

With the rise of industrial labor, individuals were suddenly working for strangers and were at risk of losing their jobs if they sought any modification of their work schedule. Physicians took it on themselves to lobby in favor of this labor reorganization, and in tracts and monographs they chided those who slept in biphasic fashion as immoral and lazy (Wolf-Meyer 2011). The result of this change in sleep habits was that many workers began to complain of insomnia—a complaint previously associated with the aristocratic class, who could also afford personal doctors. The eventual victories of labor unions to shrink the workday could do nothing to reverse the new conception of human sleep as consolidated; once consolidated sleep had established itself as a norm in relation to the workplace, it quickly became accepted as a norm within the burgeoning study of human physiology at the turn of the 20th century (see Wolf-Meyer 2012:ch. 2). Only toward the end of the 20th century would researchers begin to take seriously the need to think about other forms of sleep (e.g., Stampi 1992; Wehr 1992) and how those forms of sleep might be both naturally occurring (i.e., not pathological) and possibly therapeutic.

The normative powers of this model of consolidated sleep can be most easily seen in the lives of disorderly sleepers. George, a white male who was 35 when I interviewed him and had only recently been diagnosed with narcolepsy and an uncategorized circadian rhythm problem, recounted that he had experienced severe sleepiness his entire life and, throughout his high school years, had relied heavily on caffeine, in the form of energy drinks and soda, to be able to maintain himself throughout the day.

I was basically self-medicating [in high school]. I was very religious about time to bed [and] time to get up. It was just my nature. I drank a lot of caffeine—a lot. I didn't drink coffee, but I would easily drink (let's say) 12 Diet Cokes a day, sometimes more. Energy drinks—Red Bull, stuff like that. Now [since diagnosis and treatment] I drink two cups of coffee a day, in the morning.

The spatiotemporal ordering of U.S. social life provides George with the basis for thinking about his disorderly sleep and gives him a form to adhere to through the use of caffeinated drinks. Pretreatment, George's life caricatures "normal" social life, governed by static institutional school and work times that individuals are forced to adhere to through whatever means are available to them. There is nothing natural about these institutional times; their "naturalness" is produced through the hegemonic status of normative uses of time and space associated with white bodies in the 19th and 20th centuries.

Annette, a young black woman who had experienced excessive sleepiness since the age of five, similarly treated her symptoms with legal stimulants. At the time of our interview, she worked for the U.S. military as a medical administrator and had become increasingly aware of the role that her sleepiness played in her life throughout the course of boot camp. I asked her if she self-medicated with caffeine, and she responded,

Oh, god, yes. What is it, ephedrine pills? Me and those were best friends. I always had some. I went through about eight or nine Mountain Dews a day. Um, yeah, and it still didn't help, that's what I found hilarious—that I could go to sleep drinking Mountain Dew like it was nothing. Caffeine pills—No Doz—is what got me through boot camp. I always had the shakes, but I thought it was normal. I didn't enjoy the ephedrine, but I took it when I had to.

I slept during my classes, I always have. I'm lucky enough that I'm fairly intelligent and functioned [well]. There were parent-teacher conferences a lot during high school, because I had teachers complaining about me sleeping in class and my mom would just make a deal with them, like "If she drops below an A, tell her to wake up. Otherwise just let her sleep." I slept my way through school; I don't remember much of high school. Every class was nap time. You learn the methods behind it, like sleeping with your eyes open, or ways to position your book [to sleep behind it]—I knew it all.

Annette and her mother both thought that her behavior in the classroom was dictated in part by her biological predisposition toward sleepiness; her mother was willing to intervene on her behalf to ensure that Annette was able to meet the institutional expectations of a student while still accommodating her desire for sleep. Annette's later reliance on caffeine throughout her adult life—while possibly startling—is not exceptional. As Annette's and George's cases demonstrate, the social arrangements of everyday U.S. life conspire to produce chemically and technologically influenced subjects, individuals who can often only function to the level of others' expectations through reliance on chemical means, a decision they are compelled to make for themselves and that is understood as an individual desire

rather than a necessity. In accepting these demands and using chemical fixes, they attain an orderly body, white in its capacities if not its racial markings.

Conclusion

Race has long been of interest to anthropologists, both in terms of the physiological markings of the body and their cultural interpretations and social impacts, and in terms of the behaviors of individuals as indexing their social belonging. Skin color, skull shape, the size and shape of sensory organs, and body shape itself have all provided the basis for lay and anthropological analysis, establishing the grounds for an anthropology of race that has extended from Franz Boas to the present. Building on this attention to bodies by attending to behaviors and how behaviors are increasingly being fostered by institutions and produced through chemical interventions, race as abstracted into data and materialized through interpretation and practice opens up new terrain: that of race as a capacity, known through the actions and inactions of the body and made apparent in the behaviors of individuals. Attention to racialized capacities has the potential to complement the anthropological study of race as situated on the body and to enhance understanding of the body as it is performed, enacted, and produced. This is not to focus ethnographic attention solely on clinics and laboratories but, instead, on all institutions that depend on assessing, monitoring, and shaping the capacities of individuals as they interact with other social actors and everyday institutional and natural environments. That is, by focusing on behaviors and capacities, the nature of modern control societies will become increasingly apparent, as will their effects on individuals. Situating ethnographic attention on capacities, particularly with a focus on race, means potentially unsettling assumptions about normative social orders and their associations with nature: Is it natural to sleep eight hours each night, or did it become normal because of the dominance of white laborers for whom consolidated sleep was desirable? It also may entail rethinking racial categories and their histories, as those histories come to be framed around bodies and their behaviors rather than their physiology. As behaviors become racialized and the capacity to be orderly is associated with whiteness, these behaviors and capacities float free from particular bodies and become applicable to any body—at least potentially. Where and when they do not become a means for assessing a body and how it functions, and opens up yet other avenues for understanding how racial prejudices interfere with the interpretation of particular bodies and situations. For the clinical staff I discuss above, for George, Annette, and Terry, and for the marketers behind Rozerem and Ambien, whiteness is something that can be achieved through medical intervention, at least to the extent that orderly everyday behavior is synonymous with whiteness as a

capacity. But seeking and accepting medical intervention depends ultimately on one's desire to achieve this orderliness, and, for some like Terry, such a desire is lacking, potentially because of the history of race in the United States and the implicit whiteness embedded in medicine and social norms.

This attention to capacities is not to dismiss the lived reality of race and racism in the United States and elsewhere, where physiology continues to be the site of complex and seemingly intractable social tensions. Despite social scientific attempts to debunk the validity of race, in many places it continues to be a valuable category for defining the self and social others. But, alongside this interest in the validity or invalidity of race, it behooves anthropologists to consider how race is mutating as a result of scientific understanding of it and of various cultural understandings of what race allows a body to do and be. This is not to flirt with postracial fantasies but to reject them entirely: Even if Americans move beyond prejudice based on physiology, the complex history of race in the United States will continue to inform institutional practice, from medicine and science to education, the law, the family, and beyond, in profound and subtle ways. Ethnographic attention to these seemingly invisible conceptions of race, bodies, and behaviors has the potential to disrupt how institutions produce racialized understandings of individuals and their capacities and how individuals come to desire particular modes of being in the world and subject themselves to institutional demands and interventions to be normal.

Notes

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1. The social scientific literature on space and time is voluminous, but I draw primarily from poststructuralist geographers who highlight the immanent nature of space and time in relation to the body and social life (Massey 2005; Thrift 1996), particularly in the wake of Henri Lefebvre's (2002, 2004) work on the concept of "everyday life" as a category of capitalist action. I discuss this approach at length in my introduction to *The Slumbering Masses* (Wolf-Meyer 2012).

2. I employ *disorder* rather than *disease* or *disability* to encompass the breadth of experiences that can be seen as requiring medical intervention, which often move beyond reductive physiological states (e.g., an infection, a tumor, a lost limb, an inhibited sense) and toward behavior. I discuss these distinctions and their correlations to kinds of medical practice in the United States in depth in "Therapy, Remedy, Cure" (Wolf-Meyer 2014).

3. I use *American* throughout this article to denote people and communities in the United States of America. Some scholars of North and South America point to the exclusivity of this term, but in this article I abide by popular naming conventions among my interlocutors; that is, people in the United States of America think of and refer to themselves as American.

4. I discuss Dee's case at length in *The Slumbering Masses* (Wolf-Meyer 2012:ch. 3).

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