
Classifying Diabetes; or, Commensurating Bodies of Unequal Experience

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It is a commonly known fact that there are two types of diabetes, type 1 (also called juvenile diabetes) and type 2 (also called adult onset diabetes). This medical classification is not without functional value both for diabetes prevention programs and for clinical treatments of the disease and the wide range of symptoms that often ensue, including loss of limb use, internal organ failure, sensory and vision loss, and—for male diabetics—erectile dysfunction. The classification establishes a formal commensurability among diabetics—both type 1 and type 2 diabetics are, precisely, diabetics—that at times serves to efface profound social and economic inequalities underlying incidence of the disease. Indeed, contemporary efforts to treat and prevent diabetes may actually deepen social inequalities because of how they use this classification. Given the rising prevalence of diabetes, a critical analysis of its socioeconomic contexts and the organization of medical knowledge about it is needed.

This essay picks apart the “typing” of people entailed in diabetes classifica-

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tion.¹ I contend that diabetes classification establishes the semblance of equality, in the sense of sameness in kind and worth, but actually reproduces inequality. The application of biomedical expertise and technologies renders diabetic bodies commensurate, even as individual diabetics face profoundly different circumstances of life and death. In the aggregate, the very different prospects of different diabetics hinge on the organization of material resources along with cultural knowledge. If “the power of a particular form of communication to commensurate morally and epistemologically divergent social groups lies at the heart of liberal hopes for a non-violent democratic form of governmentality,”² then medicine is surely as significant as the law in the modern-day politics by which inequality is acknowledged, obscured, or contested.³ The case of diabetes suggests that inequality is reproduced through dynamic interchanges between biomedical and broader social logics, including the espousal of equality as a social ideal. The concluding section of the essay outlines what a progressive politics that engaged these inequalities might look like.

Typing Diabetes: A Historical Overview

Diabetes comes from a Greek word meaning “to run through” or “to siphon.” The ancient Greeks understood diabetes as a condition in which food runs through the body instead of fueling it, eventually causing the flesh to melt down into urine.⁴ In the early 1700s, a physician noted the sweet taste of the urine produced by most, but not all, people classified as having diabetes, giving rise to the distinction between diabetes mellitus and diabetes insipidus.⁵ In Latin, *mellitus* means “honey” and *insipidus* means “lacking flavor.” Today it is known that the hormone involved in diabetes insipidus is not insulin, but rather ADH (antidiuretic hormone), which regulates the production of urine. In current popular as well

1. Ian Hacking, “Making up People,” in *Reconstructing Individualism: Autonomy, Individuality, and the Self in Western Thought*, ed. Thomas C. Heller and Christine Brooke-Rose (Stanford, Calif.: Stanford University Press, 1986), provides inspirational guidance in this regard.

2. Elizabeth A. Povinelli, “Radical Worlds: The Anthropology of Incommensurability and Inconceivability,” *Annual Review of Anthropology* 30 (2001): 319–34.

3. For a superb analysis of legal arguments that partly hinge on knowledge from biomedicine and epidemiology, see Sarah S. Lochlann Jain, “‘Come up to the Kool Taste’: African American Upward Mobility and the Semiotics of Smoking Menthols,” *Public Culture* 15 (2003): 295–322.

4. Michael Bliss, *The Discovery of Insulin*, 2nd ed. (Toronto: University of Toronto Press, 2000).

5. Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking, 1985).

medical usage, “diabetes” on its own refers to diabetes mellitus. Still, the very existence of the category “diabetes insipidus” underscores both how diabetes classificatory schemas have grouped together people with very different bodily conditions and how the grounds for defining diabetes as a disease in the Western medical tradition have shifted over time.

Claude Bernard, a pioneer in biomedical research, seized upon diabetes mellitus in the mid–nineteenth century as the cardinal example of the relationship between normal and pathological physiology. Its classic symptoms—intense thirst, intense hunger, frequent urination, and weight loss—could all be found in normal people but less often and to a lesser degree. For Bernard, the pathological state represented a quantitative extension of the normal state.⁶ Because he could not find evidence of sugar in the urine of normal subjects, Bernard supposed that his equipment was not sensitive enough to detect “normal” urine sugar levels. His insistence on the lack of qualitative differences between normalcy and pathology expressed the ascendance of eighteenth-century rationalism and the rejection of magical or religious explanations for disease. Bernard and other pioneers in biomedical research sought explanations for disease onset and outcomes in nature. Bernard’s view was that in each and every case of a given disease, the same physiological processes are necessarily in play.⁷

As early as 1875, academic physicians recognized two clinical presentations of diabetes mellitus. Patients with the first type were relatively young, often children: weight loss was marked, onset was acute, and death quickly followed. Patients with the second presentation tended to be older adults: they were often overweight, onset was slower, and they lived much longer. Still, at the outset of the twentieth century and even after the discovery of insulin, diabetes mellitus was a single disease category; it was recognized that juvenile patients seemed more severely affected than adult patients, but medical experts maintained that all exhibited the same disease.⁸

Researchers at the University of Toronto used experiments on dogs to discover the role of insulin in 1921.⁹ After researchers removed a dog’s pancreas, they

6. Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990); Peter Keating, “George Canguilhem’s ‘On the Normal and the Pathological’: A Restatement and Commentary,” in *Singular Selves: Historical Issues and Contemporary Debates in Immunology*, ed. A. M. Moulin and Alberto C. Cambrosio (Amsterdam: Elsevier, 2001).

7. Hacking, *The Taming of Chance*.

8. Chris Feudtner, *Bittersweet: Diabetes, Insulin, and the Transformation of Illness* (Chapel Hill: University of North Carolina Press, 2003).

9. Bliss, *The Discovery of Insulin*.

found that regular insulin injections could keep it alive. By the end of the first quarter of the twentieth century, insulin from pigs and cows became commercially available as a staple substitute for human insulin. The discovery of insulin led to a rethinking of the nature of diabetes. At first, medical researchers believed that diabetes was a function of a lack of insulin, so that insulin therapy could cure the condition.¹⁰ Dietary therapies involving a strict restriction of caloric intake, which had dominated early-twentieth-century diabetes treatment, seemed unnecessary once insulin became available. For the first time, children and adolescents afflicted with diabetes could survive well into adulthood. But by the late 1930s, it became clear that this approach did not cure diabetes; several health problems had arisen in adult diabetics treated with insulin, including obstructed blood vessels, impaired vision, and damaged kidneys. The extension of life afforded by insulin therapy allowed the late complications of diabetes to emerge more clearly.¹¹ Moreover, the same long-term complications were seen to occur in both main clinical presentations of diabetes. In other words, a scientific breakthrough unmasked a “natural history” shared by the two principal clinical presentations of diabetes by allowing juvenile patients to reach adulthood but not curing them.

In the early 1950s, technical advances rendered it possible to measure the amount of insulin in a person’s body.¹² These measurements confirmed that patients with the first clinical presentation of diabetes (now known as type 1 diabetes mellitus) produced no insulin at all but found that patients with the second presentation (now known as type 2 diabetes mellitus) produced varying quantities of insulin. This new knowledge provided a clear-cut rationale for insulin therapy for type 1 diabetes and, since 1955, oral hypoglycemic agents for type 2 diabetes. And it meant that the medical category “diabetes mellitus” thus expressly included people who cannot *produce* insulin and people who cannot properly *use* insulin.

Attempts to standardize definitions, nomenclature, and diagnostic criteria around the world began in earnest around 1952.¹³ Almost thirty years later, in

10. Canguilhem mobilized this understanding of diabetes mellitus in arguing for a departure from the views of Bernard on the nature of pathology. See George Canguilhem, *The Normal and the Pathological* (1943, 1966; New York: Zone, 1989); Keating, “George Canguilhem’s ‘On the Normal and the Pathological.’” The subsequent recasting of diabetes mellitus as two different diseases, type 1 and type 2, therefore invites reconsideration of Canguilhem’s influential argument.

11. Feudtner, *Bittersweet*.

12. Leslie Sue Lieberman, “Diabetes,” in *The Cambridge World History of Human Disease*, ed. Kenneth Kiple (Cambridge: Cambridge University Press, 1993).

13. Lieberman, “Diabetes.”

1980, an international consensus on classification and diagnosis of diabetes mellitus was reached under the aegis of the World Health Organization (WHO).¹⁴ The definition of diabetes mellitus came to hinge on the amount of glucose in the bloodstream rather than on the presence of sugar in the urine. Harkening back to Bernard's understanding of pathology, the distinction between the normal and the pathological state had been rendered quantitatively. But while Bernard objected to the use of statistics in medicine,¹⁵ the WHO diagnostic criteria for diabetes mellitus incorporated statistical correlations between blood glucose levels and the likelihood of health problems like kidney damage and vision loss. Within this category, specialists now regard type 1 and type 2 diabetes as fundamentally different diseases with different causes.

Diabetes classification extends the process of blood typing to the causal analysis of elevated blood glucose levels in different sets of patients. Since the late 1970s, diabetes specialists have understood type 1 diabetes as an autoimmune condition in which (for reasons that remain obscure) the body attacks the cells in the pancreas that produce insulin.¹⁶ Susceptibility to this autoimmune response has been tied to the section of the genome that determines blood types. Yet even in identical twins, concordance for type 1 diabetes is only about 30 percent.¹⁷ A more heterogeneous account of causation has emerged for type 2 diabetes. It is thought that the body produces an insufficient amount of insulin, or that the insulin produced fails to enable glucose from the bloodstream to enter the body's cells, or both. Researchers have identified a variety of genetic subtypes and believe susceptibility to be inherited, but type 2 diabetes has not been tied to particular genes or a particular section of the genome.¹⁸

Despite these differences between type 1 and type 2 diabetes, a broad consensus emerged for the first time during the 1990s that treatment should aim to normalize blood glucose levels in all cases of both type 1 diabetes and type 2

14. World Health Organization, *WHO Expert Committee on Diabetes Mellitus: Second Report*, WHO Technical Report Series No. 646 (Geneva: WHO, 1980).

15. Hacking, *The Taming of Chance*.

16. Adam M. Hedgecoe, "Reinventing Diabetes: Classification, Division, and the Geneticization of Disease," *New Genetics and Society* 21 (2002): 7–27.

17. Nir Barzilai and Harry Shamoon, "Diabetes Mellitus," in *Encyclopedia of Human Biology*, ed. Renato Dulbecco (San Diego, Calif.: Academic, 1997); Lieberman, "Diabetes."

18. Daniel C. Benyshek, John F. Martin, and Carol S. Johnston, "A Reconsideration of the Origins of the Type 2 Diabetes Epidemic among Native Americans and the Implications for Intervention Policy," *Medical Anthropology* 20 (2001): 25–64; Melanie Rock, "Figuring out Diabetes: Reckoning Kinship and the Causes of Sickness through Genetic Research," *Anthropology and Medicine* (in press).

diabetes.¹⁹ This consensus hinges mainly on randomized control trials that show that tight control over blood glucose levels corresponds, on average, with reduced incidence of all diabetic complications.²⁰ Treatment plans, however, are keyed to the typing of diabetes. For type 1 diabetics, specialists generally recommend self-monitoring blood glucose levels several times daily and three to five daily insulin injections (with dosage adjusted per the patient's glucose levels, food consumption, and physical activity). Improved outcomes have also been observed in type 2 diabetics who regularly monitor their blood glucose levels, and specialists maintain that type 2 diabetics should optimize their diet and exercise habits. If "lifestyle" changes fail to bring blood glucose levels under control, or if the "lifestyle" does not actually change or change enough, diabetes specialists maintain that most type 2 diabetics should take oral hypoglycemics, that is, pills designed to bring blood glucose under control. If these interventions are not enough, specialists will also prescribe insulin.²¹

How Classifying Diabetes Has Assisted in Recognizing Inequality

Before turning to how the classification of diabetes obscures and ultimately serves to perpetuate inequality, let us first consider how classifying diabetes enables a selective recognition of inequality. An adequate account of the complex contemporary

19. Chris Feudtner, *Bittersweet*; Harry M. Marks, "Anatomy of a Controversy: The University Group Diabetes Program Study," in *The Progress of Experiments: Science and Therapeutic Reform in the United States, 1900–1990* (Cambridge: Cambridge University Press, 1997); Melanie Rock, "Reconstituting Populations through Evidence-Based Medicine: An Ethnographic Account of Recommending Procedures for Diagnosing Type 2 Diabetes in Clinical Practice," *Health: An Interdisciplinary Journal for the Social Study of Health, Illness, and Medicine* 9 (2005): 241–66; Christiane Sinding, "Une molécule espion pour les diabétologues: L'Innovation médicale entre science et morale," *Sciences sociales et santé* 18 (1999): 95–120.

20. See Diabetes Control and Complications Trial Research Group, "The Effect of Intensive Diabetes Management on Macrovascular Events and Risk Factors in the Diabetes Control and Complications Trial," *American Journal of Cardiology* 75 (1995): 894–903, and "The Effect of Intensive Diabetes Management on the Development and Progression of Long-Term Complications in Insulin-Dependent Diabetes Mellitus," *New England Journal of Medicine* 329 (1993): 977–86; United Kingdom Prospective Diabetes Study Group, "Effect of Intensive Blood-Glucose Control with Metformin on Complications in Overweight Patients with Type 2 Diabetes," *Lancet* 352 (1998): 854–65, and "Intensive Blood-Glucose Control with Sulphonylureas or Insulin Compared with Conventional Treatment and Risk of Complications in Patients with Type 2 Diabetes," *Lancet* 352 (1998): 837–53. For further discussion and analysis of this consensus, see Rock, "Reconstituting Populations through Evidence-Based Medicine."

21. Canadian Diabetes Association Clinical Practice Guidelines Expert Committee, "Canadian Diabetes Association 2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada," *Canadian Journal of Diabetes* 27, supp. no. 2 (2003): 27.

politics of diabetes demands no less. Furthermore, examining how the classification of diabetes enables acknowledgment of *certain* forms and degrees of inequality can set the stage for pinpointing some limitations in these forms of recognition.

My contention that the classification of diabetes ultimately obscures at least as much as it illuminates inequality may come as a rude, counterintuitive shock to many diabetes researchers and advocates. I say this because recent epidemiological surveys have consistently found that type 2 diabetes is increasingly found in disadvantaged populations and subpopulations. In the United States, where diabetes statistics are more accurate than in many other developed countries, type 2 diabetes is more common among black, Hispanic, and Native American than among white members of the population; it is more common among women than men and among people with lower levels of education and income.²² In Canada, type 2 diabetes is three to five times more common among Aboriginal than among non-Aboriginal members of the population (although the average age of the Aboriginal population is younger, and type 2 diabetes risk generally increases with age); and, as in the United States, it is more common in women than men and among people with lower levels of education and income.²³ Type 2 diabetes is epidemic among Aboriginal people in Australia,²⁴ and in Britain it is found dis-

22. Sandra A. Black, "Diabetes, Diversity, and Disparity: What Do We Do with the Evidence?" *American Journal of Public Health* 92 (2002): 543–48. U.S. diabetes statistics are among the most accurate in the world because the U.S. government regularly conducts a survey that incorporates blood glucose measurement, allowing the tabulation of the number of people who have been diagnosed, remain undiagnosed, or are at very high risk for type 2 diabetes. This survey has shown that about one-third of all type 2 diabetes cases remain undiagnosed. Similar results have been obtained in Canada, which offers universal insurance for medical care; see Lawrence A. Leiter, Aiala Barr, Andre Belanger, Stanley Lubin, Stuart A. Ross, Hugh D. Tildesley, and Nathalie Fontaine, "Diabetes Screening in Canada (DIASCAN) Study: Prevalence of Undiagnosed Diabetes and Glucose Intolerance in Family Physician Offices," *Diabetes Care* 24 (2001): 1038–43. Undiagnosed type 1 diabetes is not a pressing public health problem because type 1 diabetes tends to present acutely; type 1 diabetics often learn of their diagnosis following an emergency hospital visit.

23. Canadian Diabetes Association Clinical Practice Guidelines Expert Committee, "Canadian Diabetes Association 2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada"; Chris Green et al., "Geographic Analysis of Diabetes Prevalence in an Urban Area," *Social Science and Medicine* 57 (2003): 551–60; Health Canada, *Diabetes in Canada*, 2nd ed. (Ottawa: Centre for Chronic Disease Prevention and Control, Population and Public Health Branch, Health Canada, 2003), www.hc-sc.gc.ca/pphb-dgspsp/publicat/dic-dac2/english/01cover_e.html.

24. Mark Daniel et al., "Glycated Hemoglobin as an Indicator of Social Environmental Stress among Indigenous versus Westernized Populations," *Preventive Medicine* 29 (1999): 405–13; Mark Daniel et al., "Social Environmental Stress in Indigenous Populations: Potential Biopsychosocial Mechanisms," *Annals of the New York Academy of Sciences* 896 (1999): 420–23; Samantha J. Thompson and Sandra M. Gifford, "Trying to Keep a Balance: The Meaning of Health and Diabetes in an Urban Aboriginal Community," *Social Science and Medicine* 51 (2000): 1457–72.

proportionately in Asian and black populations.²⁵ Researchers have estimated that the total number of cases will reach 366 million by 2030, more than double the worldwide prevalence in 2000.²⁶ Much of this projected increase will likely come from type 2 diabetes in the urban areas of developing countries, such as India, China, and Brazil, where type 2 diabetes prevalence is expected to double.²⁷ The aggregate analysis of type 2 diabetes shows that these cases are not randomly distributed. And these aggregating processes clearly pivot on disease classification. In this regard, the classification of diabetes has contributed to the recognition of inequality.

In addition, recognition of the evolving nature of inequality has been abetted by a certain degree of stability in the classification of diabetes over the course of the twentieth century. At the beginning of the twentieth century, diabetes was associated with affluence; one hundred years later, type 2 diabetes had become associated with relative poverty.²⁸ This shift reflects the evolving global reach of capitalism and colonialism, which precipitated increased access to commodity foods, decreased reliance on local food sources, and reduced physical activity.²⁹ Thus not only has diabetes classification anchored epidemiological portraits that reflect contemporary forms of inequality, it has also provided some measure of how much has recently changed in the embodiment of inequality.

The increasing association between inequality and type 2 diabetes has become part and parcel of how certain disenfranchised constituencies have pressed claims for greater appreciation of their plight. In the case of Aboriginal groups in former settler colonies, such as Canada, Australia, and the United States, this develop-

25. John Kennedy Cruickshank et al., "Sick Genes, Sick Individuals, or Sick Populations with Chronic Disease? The Emergence of Diabetes and High Blood Pressure in African-Origin Populations," *International Journal of Epidemiology* 30 (2001): 111–17; P. M. Greenhalgh, "Diabetes in British South Asians: Nature, Nurture, and Culture," *Diabetic Medicine* 14 (1997): 10–18; Jackie Landman and John Kennedy Cruickshank, "A Review of Ethnicity, Health, and Nutrition-Related Diseases in Relation to Migration in the United Kingdom," *Public Health Nutrition* 4, special issue no. 2B (2001): 647–57; Nigel Unwin et al., "Comparison of the Current WHO and New ADA Criteria for the Diagnosis of Diabetes Mellitus in Three Ethnic Groups in the UK. American Diabetes Association," *Diabetic Medicine* 15 (1998): 554–57.

26. Sarah Wild et al., "Global Prevalence of Diabetes: Estimates for the Year 2000 and Projections for 2030," *Diabetes Care* 27 (2004): 2569.

27. Wild et al., "Global Prevalence of Diabetes."

28. Lieberman, "Diabetes."

29. Benyshek, Martin, and Johnston, "A Reconsideration of the Origins of the Type 2 Diabetes Epidemic"; Leslie Sue Lieberman, "Dietary, Evolutionary, and Modernizing Influences on the Prevalence of Type 2 Diabetes," *Annual Review of Nutrition* 23 (2003): 345–77; Melanie Rock, "Sweet Blood and Social Suffering: Rethinking Cause-Effect Relationships in Diabetes, Distress, and Duress," *Medical Anthropology* 22 (2003): 131–74.

ment is particularly visible. Advocates and progressive researchers have pointed to Aboriginal type 2 diabetes as evidence of the suffering that colonialism continues to impose and to substantiate claims on resources.³⁰ Qualitative studies have repeatedly shown that Aboriginal peoples themselves often attribute their high rates of type 2 diabetes to colonialism and neocolonialism.³¹ Aboriginal leaders and allied researchers have thus marshaled the category “type 2 diabetes” to garner greater social recognition for the lived effects of persisting inequality and also to chart a more hopeful course for the future.³²

A distinction between biomedical and lay perspectives on diabetes is also found in qualitative studies of type 2 diabetes in non-Aboriginal people.³³ These

30. Benyshek, Martin, and Johnston, “A Reconsideration of the Origins of the Type 2 Diabetes Epidemic”; Daniel et al., “Glycated Hemoglobin as an Indicator of Social Environmental Stress”; Jeff Reading and Earl Nowgesic, “Improving the Health of Future Generations: The Canadian Institutes of Health Research Institute of Aboriginal Peoples’ Health,” *American Journal of Public Health* 92 (2002): 1396–1400; Rock, “Sweet Blood and Social Suffering”; Eموke J. E. Szathmary, “Non-Insulin Dependent Diabetes Mellitus among Aboriginal North Americans,” *Annual Review of Anthropology* 23 (1994): 457–82; T. Kue Young et al., “Type 2 Diabetes Mellitus in Canada’s First Nations: Status of an Epidemic in Progress,” *Canadian Medical Association Journal* 163 (2000): 561–66.

31. Patricia Boston et al., “Using Participatory Action Research to Understand the Meanings Aboriginal Canadians Attribute to the Rising Incidence of Diabetes,” *Chronic Diseases in Canada* 18, no. 1 (1997): 5–12; Linda C. Garro, “Individual or Societal Responsibility? Explanations of Diabetes in an Anishnaabe (Ojibway) Community,” *Social Science and Medicine* 40, no. 1 (1995): 37–46; “Intracultural Variation in Causal Accounts of Diabetes: A Comparison of Three Canadian Anishnaabe (Ojibway) Communities,” *Culture, Medicine, and Psychiatry* 20, no. 4 (1996): 381–420; Yoshi Iwasaki, Judith Bartlett, and John O’Neil, “An Examination of Stress among Aboriginal Women and Men with Diabetes in Manitoba, Canada,” *Ethnicity and Health* 9, no. 2 (2004): 189–213; Julie Sunday, John Eyles, and Ross Upshur, “Applying Aristotle’s Doctrine of Causation to Aboriginal and Biomedical Understandings of Diabetes,” *Culture, Medicine, and Psychiatry* 25, no. 1 (2001): 63–84; Thompson and Gifford, “Trying to Keep a Balance.”

32. Sherri Bisset et al., “Legitimizing Diabetes as a Community Health Issue: A Case Analysis of an Aboriginal Community in Canada,” *Health Promotion International* 19, no. 3 (2004): 317–26; Mark Daniel et al., “Effectiveness of Community-Directed Diabetes Prevention and Control in a Rural Aboriginal Population in British Columbia, Canada,” *Social Science and Medicine* 48, no. 6 (1999): 815–32; Joel Gittelsohn et al., “Use of Ethnographic Methods for Applied Research on Diabetes among the Ojibway-Cree in Northern Ontario,” *Health Education Quarterly* 23, no. 3 (1996): 365–82; Reading and Nowgesic, “Improving the Health of Future Generations”; Carolyn Smith-Morris, “Reducing Diabetes in Indian Country: Lessons from the Three Domains Influencing Pima Diabetes,” *Human Organization* 63, no. 1 (2004): 34–46.

33. Thomas A. Arcury et al., “Diabetes Meanings among Those without Diabetes: Explanatory Models of Immigrant Latinos in Rural North Carolina,” *Social Science and Medicine* 59, no. 11 (2004): 2183–94; Marlene Z. Cohen et al., “Explanatory Models of Diabetes: Patient Practitioner Variation,” *Social Science and Medicine* 38, no. 1 (1994): 59–66; Steve Ferzacca, “Lived Food and Judgements of Taste at a Time of Disease,” *Medical Anthropology* 23, no. 1 (2004): 41–67; Steve Ferzacca, “‘Actually, I Don’t Feel That Bad’: Managing Diabetes and the Clinical Encounter,” *Medical*

studies have compared biomedical with lay views on the causes of diabetes onset and progression (i.e., worsening); they have found that biomedicine is seen to represent a dominant but not omnipotent force whose practitioners often fail to engage with the patient's own views or with the views of the patient's family and community. By focusing on lay views in disadvantaged populations, such research has underscored the existence of inequality. In so doing, it has reflected and furthered a broader inquiry into the operation of biomedical power.

While most qualitative research on lay diabetes knowledge has stressed the contrasts between how patients and biomedical practitioners understand diabetes, an important study has called attention to their similarities.³⁴ Steve Ferzacca's ethnographic work with U.S. veterans diagnosed with type 2 diabetes and their physicians revealed shared commitments to cultural referents such as self-discipline, productivity, and health. Yet he also found that this shared logic contributed to idiosyncratic regimes of self-care and hybrid clinical practices that could be (and often are) interpreted as lacking compliance with expert guidelines. The existence of a standard classificatory terminology for diabetes, in Ferzacca's analysis, assists in recognizing inequality refracted through biomedicine as an institution and also the labor force, housing, and consumption patterns. Ferzacca's ethnography invites reflection on whether cookie-cutter prescriptions (i.e., the same treatment and prevention recommendations for all) have become part of how social inequality is sustained and lived.³⁵ For despite the focus on standardization in biomedicine, it is important to recognize that the actual circumstances and histories of patients involve heterogeneous clinical and self-management practices.³⁶

My own work has examined how the classification of diabetes has been used strategically to collapse very different populations together. These collapsing strategies could potentially mitigate inequality. One notable instance is the Ca-

Anthropology Quarterly 14, no. 1 (2000): 28–50; Ron Loewe and Joshua Freeman, "Interpreting Diabetes Mellitus: Differences between Patient and Provider Models of Disease and Their Implications for Clinical Practice," *Culture, Medicine, and Psychiatry* 24, no. 4 (2000): 379–401; Jane Poss and Mary Ann Jezewski, "The Role and Meaning of *Susto* in Mexican Americans' Explanatory Model of Type 2 Diabetes," *Medical Anthropological Quarterly* 16, no. 3 (2002): 360–77.

34. Ferzacca, "'Actually, I Don't Feel That Bad.'"

35. See also Ferzacca, "Lived Food and Judgements of Taste at a Time of Disease."

36. Eric Mykhalovskiy, Liza McCoy, and Michael Bresalier, "Compliance/Adherence, HIV, and the Critique of Medical Power," *Social Theory and Health* 2, no. 4 (2004): 315–40; Eric Mykhalovskiy and Lorna Weir, "The Problem of Evidence-Based Medicine: Directions for Social Science," *Social Science and Medicine* 59 (2004): 1059–69; Stephan Timmermans and Marc Berg, *The Gold Standard: The Challenge of Evidence-Based Medicine and Standardization in Health Care* (Philadelphia, Pa.: Temple University Press, 2003).

nadian Diabetes Strategy.³⁷ Two weeks before the policy was announced, the American actress Mary Tyler Moore had met with Canada's prime minister and health minister and a coterie of handpicked advisers in Ottawa. Moore has type 1 diabetes and has long served as the international honorary chair of the Juvenile Diabetes Foundation (JDF), whose mission is to find a cure for diabetes and its complications through research. As its name suggests, JDF focuses on type 1 diabetes, even though type 2 diabetes accounts for 90 percent of all cases. What is significant is that Moore spoke in Ottawa for *all* diabetics, and this was rendered possible by how the condition is classified.

JDF's strategically inclusive approach, embodied in the person of Mary Tyler Moore, helped bring about Canadian government funding for improvements in national data gathering on type 1 *and* type 2 diabetes as well as for programs specifically designed to prevent type 2 diabetes. Moreover, fully half the funds allocated under the Canadian Diabetes Strategy have gone toward the Aboriginal Diabetes Initiative. Prior to Moore's visit to Canada, Aboriginal leaders and allied researchers had lobbied vigorously for more action on Aboriginal type 2 diabetes. Yet the intervention by Moore likely attracted greater public attention and public money earmarked for type 2 diabetes, specifically among Aboriginal groups. Given that many Canadians oppose "special treatment" for Aboriginal people, the creation of an Aboriginal Diabetes Initiative under the umbrella of a broader Canadian Diabetes Strategy was a strategic redress of inequality. Diabetes classification provided a framework within which to recognize disparities between the health status of Aboriginal and non-Aboriginal people in Canada; at the same time, it led to promises to improve the prospects of type 1 diabetics and their families as well as that of baby boomers and seniors (a significant proportion of the voting population) for whom type 2 diabetes is a common health threat.

How Classifying Diabetes Obscures and Perpetuates Inequality

The previous section demonstrated how diabetes classification has been integral to the recognition of inequality in at least three ways. First, epidemiological surveys have shown that diabetes is unevenly distributed and increasingly associated with disadvantage of various kinds. Second, studies of how people experience and think about diabetes (type 2 diabetes in particular) have drawn attention to power

37. Melanie Rock, "Deaths, Taxes, and the Midas Touch of Mary Tyler Moore: Accounting for Promises by Politicians to Help Avert and Control Diabetes," *Medical Anthropological Quarterly* 17, no. 2 (2003): 200–232.

dynamics and imbalances. Third, the collapsing of populations through the strategic use of diabetes classificatory criteria has proved useful in securing funding, for instance. Nevertheless, I will argue that diabetes classification has obscured and perpetuated as much as it has illuminated inequality.

If individuals are entitled to life, to an equal amount and quality of life, then diabetic individuals must have access to effective treatment (professional advice, pharmaceuticals, and so forth), and they must care for themselves in line with recommended guidelines. As with many chronic diseases, recommended treatments for type 2 diabetes as well as for type 1 diabetes make many demands on patients' everyday lives and bodily experiences in the name of preventive self-management.³⁸ This emphasis on liberal self-governance over the individual body and its ills—the idea that individuals can and should manage themselves—has cast patients, physicians, nurses, dieticians, pharmacists, governments, and private enterprise in supporting and interrelated roles.³⁹ A sense of urgency in diagnosing and treating as many type 2 diabetics as possible has been sustained by epidemiological findings that type 2 diabetes is on the rise and by the fact that, even in developed countries such as the United States and Canada, roughly one-third of all type 2 diabetics remain undiagnosed and that available pharmaceutical therapies can effectively control blood glucose levels.⁴⁰ Meanwhile, experimental therapies, notably transplantation of insulin-producing cells, have brought about publicity and renewed concern for type 1 diabetes; and JDF has stressed the unfairness children face in dealing with a potentially deadly and disabling condition. Yet renewed concern about diabetes has also papered over inequality.

First, it cannot be overemphasized that not every diabetic has access to pharmaceutical treatment or clinical services. Diabetes and its complications are very costly to treat, and not every diabetic has health insurance. In the United States, for example, the ranks of the uninsured surely contain undiagnosed and untreated type 2 diabetics. Yet even in Canada, which boasts universal insurance for physi-

38. Ferzacca, "Lived Food and Judgements of Taste at a Time of Disease" and "'Actually, I Don't Feel That Bad'"; Mykhalovskiy, McCoy, and Bresalier, "Compliance/Adherence, HIV, and the Critique of Medical Power."

39. Rock, "Deaths, Taxes, and the Midas Touch of Mary Tyler Moore" and "Numbered Days, Valued Lives: Statistics, Shopping, Pharmacy, and the Commodification of People," in *Values and Valuables: From the Sacred to the Symbolic*, ed. Cynthia Werner and Duran Bell, Society for Economic Anthropology Monographs No. 21 (Walnut Creek, Calif.: AltaMira, 2004): 282–306.

40. Melanie Rock, "Making Diabetics Count: A Qualitative and Quantitative Study of North American Print Media Coverage," *American Journal of Public Health* (in press), and "Reconstituting Populations through Evidence-Based Medicine."

cian services and hospital stays, insurance coverage is uneven for the pharmaceuticals, blood glucose meters, and the related supplies necessary to treat type 1 and type 2 diabetics in accordance with current recommendations. One reflection of unequal access to treatment is that many Canadian drugstores expressly cater to wealthier diabetics with private insurance plans.⁴¹ And in poorer countries, where type 2 diabetes is increasingly common and type 1 diabetes certainly occurs, there is limited access to insulin, hypoglycemic pills, blood glucose monitors, and so on. While medical services and technologies have had success in preventing individual cases of type 2 diabetes or its complications, disparities in access to these services mean that inequality has further widened. Inequality is perpetuated because those with the greater advantages to begin with are more likely to be able to exploit advances in treatment.

Second, and more perniciously, the emphasis on diagnosing and treating diabetes overlooks the question of incidence. Even if access to treatment were uniform, which it is not, the fact remains that new cases of type 2 diabetes arise increasingly in disadvantaged populations. Moreover, among these populations, diabetic complications tend to set in more quickly and with more serious consequences so that equalizing access to treatment for all diabetics would be unlikely to produce uniform health outcomes.⁴² Access to medical services, including diagnostic services provided under the auspices of an individual entitlement to life, cannot stem the tide of new type 2 diabetes cases and associated health problems.

Thus the current emphasis on expanding access to timely diagnosis and intensive treatment for type 2 diabetes does not address its root causes. Instead, pharmaceutical treatments focus on correcting physiological mechanisms at the level of the individual patient.⁴³ Diabetes has been understood and approached as a problem with elevated blood glucose levels, so pharmaceutical treatments have been designed to lower these levels. This mechanistic approach to the sick body, however, does not address why type 2 diabetes has become so common and why it is so prevalent within disadvantaged populations.⁴⁴ Many diabetes specialists

41. Rock, "Numbered Days, Valued Lives."

42. Alan Cass et al., "Exploring the Pathways Leading from Disadvantage to End-Stage Renal Disease for Indigenous Australians," *Social Science and Medicine* 58, no. 4 (2004): 767–85; Grethe S. Tell et al., "Racial Differences in the Incidence of End-Stage Renal Disease," *Ethnicity and Health* 1, no. 1 (1996): 21–31; Young et al., "Type 2 Diabetes Mellitus in Canada's First Nations."

43. For further discussion of the distinction between mechanism and cause, see Rock, "Figuring out Diabetes"; Allan Young, "Internalizing and Externalizing Medical Belief Systems: An Ethiopian Example," *Social Science and Medicine* 10 (1976): 5–23.

44. Rock, "Sweet Blood and Social Suffering"; Geoffrey Rose, "Sick Individuals and Sick Populations," *International Journal of Epidemiology* 14 (1985): 32–38.

readily acknowledge that type 2 diabetes incidence stems from social, cultural, political, and economic conditions, but while they seem to lack faith in the feasibility of changing these conditions, they believe in the efficacy of pharmaceuticals.⁴⁵

Additional ways in which diabetes reproduces social inequalities should be noted. Genetic epidemiological survey results have often been interpreted in ways that racialize health disparities.⁴⁶ Conversely, explanations for diabetes complications have often cast “lifestyle” risks as individual attributes amenable to self-control and have led to an understanding of type 2 diabetes as a preventable epidemic that can be averted through individual control over diet and exercise. What this account overlooks is the fact that diabetes is a disease not because of elevated blood glucose per se but because of the health risks this causes. And any number of circumstances and situations can raise blood glucose levels, such as the lived experience of social stratification and its emotional dimensions.⁴⁷ Moreover, while the underlying causes behind suboptimal diets and physical activity levels vary greatly, many of them boil down to the historical structuring of inequality. Individualizing risk for diabetes complications and type 2 diabetes onset amounts to likening socially unequal groups with very different histories.

There is another sense in which the categorical definition of diabetes in relation to blood glucose levels effaces inequality. Recall that the diagnostic threshold for diabetes pivots on the risk of kidney damage and vision loss—diabetes specialists refer to these as microvascular complications. Diabetes is also strongly associated with heart disease, or what specialists refer to as macrovascular complications. Heart disease is the main cause of death among diabetics. Significantly, the association of blood glucose levels with heart disease begins below the diagnostic threshold for diabetes.⁴⁸ In fact, macrovascular risk has not been used to define that threshold precisely because macrovascular risk rises gradually. (By contrast, microvascular risk rises sharply at a particular blood glucose concentration.) In contrast to those with less glucose in their bloodstreams, people whose blood glucose levels are elevated yet fall below the diagnostic threshold for diabetes are

45. Rock, “Figuring out Diabetes” and “Reconstituting Populations through Evidence-Based Medicine.”

46. Benyshek, Martin, and Johnston, “A Reconsideration of the Origins of the Type 2 Diabetes Epidemic”; Robyn McDermott, “Ethics, Epidemiology, and the Thrifty Gene: Biological Determinism as a Health Hazard,” *Social Science and Medicine* 47, no. 9 (1998): 1189–95.

47. Rock, “Sweet Blood and Social Suffering.”

48. Hertz C. Gerstein, “Dysglycaemia: A Cardiovascular Risk Factor,” *Diabetes Research and Clinical Practice* 40, supp. no. 1 (1998): 9–14.

therefore already more likely to develop cardiovascular disease and to die from it. The recommended clinical response to this issue is to monitor closely and prescribe pharmaceuticals.⁴⁹

Yet vulnerability to macrovascular disease is likely to be especially pronounced in disadvantaged groups. Cumulative stress arising from social conditions,⁵⁰ or what some anthropologists have called “social suffering,”⁵¹ can raise blood glucose levels.⁵² Moreover, independent of lifestyle risks such as smoking and high-cholesterol diets, social stratification tracks with coronary heart disease mortality.⁵³ In short, inequality can directly lead to higher blood glucose levels and heart failure. Even modest changes to population risk profiles may produce better overall outcomes, but diabetes classification reflects and reinforces an emphasis on medical treatment for individuals who are at especially high risk.⁵⁴ The diagnosis of diabetes marks an individual as high risk; but harm is not evenly distributed among diabetics. The harmful effects of elevated blood glucose and its root causes may be present even if blood glucose levels do not (yet) meet the diagnostic criteria for diabetes.

So far, this essay has sought to call attention to the politics of two dimensions of diabetes classification: the distinction between normalcy and pathology (i.e., when a person can be said to be diabetic) and the distinction between type 1 and type 2 diabetes. I have argued that these two dimensions of medical classification interlace with inequality in ways that have largely escaped notice, in part because they have been used at times to demonstrate the existence of inequality but also because they occur within a culturally sanctioned quest for equality in longevity and quality of life through medicalization. The classification of diabetes disguises inequality in at least one other way. This classificatory dimension

49. Rock, “Reconstituting Populations through Evidence-Based Medicine.”

50. Daniel et al., “Glycated Hemoglobin as an Indicator of Social Environmental Stress” and “Social Environmental Stress in Indigenous Populations”; Jo C. Scheder, “A Sickly-Sweet Harvest: Farmworker Diabetes and Social Inequality,” *Medical Anthropological Quarterly* 2, no. 3 (1988): 251–77; Emoke J. E. Szathmary and R. E. Ferrell, “Glucose Level, Acculturation, and Glycosylated Hemoglobin: An Example of Biocultural Interaction,” in *Medical Anthropology Quarterly* 4, no. 3 (1990): 315–41.

51. Arthur Kleinman, Veena Das, and Margaret Lock, eds., *Social Suffering* (Berkeley: University of California Press, 1997).

52. For further discussion, see Benyshek, Martin, and Johnston, “A Reconsideration of the Origins of the Type 2 Diabetes Epidemic”; Rock, “Sweet Blood and Social Suffering.”

53. Michael G. Marmot et al., “Employment Grade and Coronary Heart Disease in British Civil Servants,” *Journal of Epidemiology and Community Health* 32, no. 4 (1978): 244–49.

54. Rose, “Sick Individuals and Sick Populations” and *The Strategy of Preventative Medicine* (Oxford: Oxford University Press, 1992).

concerns the distinction between communicable and noncommunicable diseases. Periodic increases in type 1 diabetes incidence have been linked with viruses; however, both type 1 diabetes and type 2 diabetes qualify as noncommunicable diseases.⁵⁵

Communicable diseases stem from the direct or indirect transmission of an infectious agent or its toxic products to a susceptible host.⁵⁶ Infectious agents must be present for these diseases to set in (i.e., they are necessary causes of individual cases), but their spread depends largely on social conditions.⁵⁷ Noncommunicable diseases, by contrast, do not necessarily involve transmission of an infectious agent. Crucially, diseases classified as noncommunicable can reach epidemic proportions due to social forces and conditions. Type 2 diabetes provides a case in point. Why, then, persist in classifying type 2 diabetes as noncommunicable? Why essentialize the nature of a sickness with reference to nonhuman entities such as viruses? Why not pay more attention to social conditions that spread sickness?

There is no disease or illness known to humankind whose spread is not tied to the intimate politics of contact and embodied experience. From this perspective, all sicknesses communicate and are communicable (i.e., transmittable) in terms of knowledge structures and material manifestations. The supposedly noncommunicable type 2 diabetes pandemic is no less symptomatic of inequality than AIDS or tuberculosis. Indeed, there is no way to know whether the inequality bound up with type 2 diabetes in Aboriginal peoples across Canada indexes less suffering or inequality than AIDS in Africa or Haiti. A logic of triage, which is central to biomedical practice and can also infiltrate public recognition of problematic social conditions,⁵⁸ should not pivot on a misleading distinction between

55. Lieberman, "Diabetes."

56. John Last, ed., *A Dictionary of Epidemiology*, 4th ed. (Oxford: Oxford University Press, 2001).

57. Paul Farmer, *Pathologies of Power: Health, Human Rights, and the New War on the Poor*, California Series in Public Anthropology No. 4 (Berkeley: University of California Press, 2003); Vinh-Kim Nguyen and Karine Peschard, "Anthropology, Inequality, and Disease: A Review," *Annual Review of Anthropology* 32, no. 1 (2003): 447–74.

58. Paul Farmer, "An Anthropology of Structural Violence," *Current Anthropology* 45, no. 3 (2004): 305–25, and "On Suffering and Structural Violence: A View from Below," in *Social Suffering*, ed. Arthur Kleinman, Veena Das, and Margaret Lock (Berkeley: University of California Press, 1997); Laurence Kirmayer, "An Anthropology of Structural Violence (Comment)," *Current Anthropology* 45, no. 3 (2004): 321–22; Stephen Hiltgartner and Charles L. Bosk, "The Rise and Fall of Social Problems: A Public Arenas Model," *American Journal of Sociology* 94 (1988): 53–78; Rock, "Making Diabetics Count."

communicable and noncommunicable diseases. Inequality is masked if this distinction is held to mean that communicable diseases automatically trump “non-communicable” ones in terms of severity and need for redress.

Concluding Thoughts

Could the situation be any different? Might the typing of diabetics allow for the recognition of inequality without also obfuscating and instantiating social inequalities? Can we imagine a progressive politics that takes into account the contemporary contexts of diabetes and the dire predictions for its future?

A progressive stance that acknowledges the reality of diabetes must be concerned with more than controlling life and death. It requires a politics that is sensitive to how people’s bodies are produced and governed.⁵⁹ It must offer more than criticism; it must offer and substantiate hope.

There can be no denial of difference. Any utopian vision of a perfectly healthy population is eugenic, through and through. Tackling social inequalities in health, in other words, is not the same as seeking to eliminate sickness or death altogether. Nor is imagining a world in which diabetes does not correlate with disadvantages as radical as imagining a world without diabetes. As the corporal nature of inequality shifted within and between human populations in the twentieth century, the relationship between diabetes and inequality changed, and these shifts must now be confronted. The JDF’s impact on Canadian diabetes policy highlights how redress of the inequalities embodied in the type 2 diabetes epidemic will not always come about through an explicit recognition of its political dimensions. Yet a progressive politics must involve recognizing that diabetes is a contemporary public health and social problem due to forces of political economy and related inequalities.

Facing up to the reality of inequality embodied in the type 2 diabetes epidemic entails rehashing what we think about causality and giving serious thought to research on human health. To locate causality simultaneously in human bodies and social relationships, as a progressive politics inclusive of diabetics would require, raises several issues. Much as the nature/culture binary has been decried and deconstructed, we still do not have a vocabulary adequate to the type 2 dia-

59. Michel Foucault, *Histoire de la sexualité: La volonté de savoir*, vol. 1 (Paris: Gallimard, 1976), “La ‘gouvernementalité’” and “Naissance de la biopolitique,” in *Dits et écrits: 1954–1988*, vol. 3: 1976–1979, ed. Daniel Defert, François Ewald, and Jacques Lagrange (Paris: Gallimard, 1994); Lochlann Jain, “‘Come up to the Kool Taste’”; Achille Mbembe, “Necropolitics,” *Public Culture* 15 (2002): 11–40.

betes epidemic. Most research on culture and within cultures remains bound by what we imagine to be the “social” side of the skin. And even this research does not deftly cope with the cumulative corporal effects of inequality and hardship. Meanwhile, most research on the “biological” side copes poorly with social relationships and often conflates physiological mechanisms with root causes.

Can we imagine social inequalities so powerful that the effects of drugs might vary across socioeconomic strata? Inequalities so powerful that they affect people’s blood glucose levels, irrespective of how much they eat, what they eat, or how physically fit they are? The type 2 diabetes epidemic demands that we do, and yet these questions remain marginal to research on diabetes. What is more, tackling them in ways that might help people live longer and better lives will mean sorting through what we might imagine and advocate as solutions.

Doing so will also mean coming to grips with a crucial twentieth-century invention: the randomized control trial (RCT). The RCT is key to evidence-based medicine (EBM), an increasingly influential sociocultural and socioeconomic phenomenon and an obligatory passage for marketing new medications.⁶⁰ When medications, including diabetes medications, have been shown to be effective in RCTs, this raises the stakes for a progressive politics. First, there is the question of access to proven and experimental medications. In HIV/AIDS, access politics have been incorporated into RCT research, surrounding debates and activist struggles.⁶¹ The politics of medication access have been less visible for type 1 and type 2 diabetes.

A second set of questions arises for type 2 diabetes and the manifold health problems related to it. These concern our commitment to type 2 diabetics as well as people who may suffer ill effects associated with elevated blood glucose levels without ever developing “full-blown” diabetes. Again, these people are likely socioeconomically disadvantaged. The questions that I have in mind arise from trying to grapple with the knowledge that socially mediated environments contribute directly to the onset and course of type 2 diabetes. Would social changes avert new cases of type 2 diabetes? If so, would intervening in such ways imply a reduction in inequality? And, given that RCT results have shown that exist-

60. Mykhalovskiy and Weir, “The Problem of Evidence-Based Medicine”; Timmermans and Berg, *The Gold Standard*; Michael Traynor, “Introduction,” special issue, “Understanding the Evidence-Based Movements,” *Health: An Interdisciplinary Journal for the Social Study of Health, Illness, and Medicine* 7, no. 3 (2003): 265–66.

61. Steve Epstein, “Activism, Drug Regulation, and the Politics of Therapeutic Evaluation in the AIDS Era: A Case Study of ddC and the ‘Surrogate Markers’ Debate,” *Social Studies of Science* 27, no. 4 (1997): 691–726.

ing medications work, will it be possible or necessary to produce favorable RCT results on modifying social and physical environments? In other words, why not spend all available resources on medications that have been shown to be effective?

While many researchers might like to have RCT results in hand showing conclusively that social interventions can be as effective as medications, not all agree on the possibility of doing so. Indeed, a World Health Organization committee maintains that RCTs are not generally appropriate in health promotion mainly because social interventions must be adapted to the local setting in order to work.⁶² Meanwhile, the United Kingdom's Medical Research Council maintains that social intervention RCTs may be appropriate, provided that they standardize the content and delivery of the intervention.⁶³ In June 2004, the *British Medical Journal* published an argument that takes a different tack. In the article entitled "Complex Interventions: How 'Out of Control' Can a Randomised Controlled Trial Be?" the authors contend that standardization should not be conflated with exactly uniform interventions.⁶⁴ The present essay will close with a few thoughts on what this line of argument might imply for strategic essentialism in support of a more progressive politics, one that does not ignore or gloss over diabetes.

First, the authors' argument allows scope for recognizing that diabetics enrolled in a pharmaceutical RCT will be diabetic for different reasons. For some but not all, the ill effects of inequality will constitute a root cause of diabetes. Grouping together type 2 diabetics in any RCT should be understood as an instance of strategic essentialism.

Second, allowing for the possibility of social intervention, RCTs throw into relief the reality of different effects from interventions of all kinds. Whether an intervention involves ingesting medication or involving local leaders, not everyone will fare as well. It is not now standard to report on socioeconomic variation in pharmaceutical trials, but it is certainly possible that those who benefit most from medication tend to be those with greater financial and other social

62. World Health Organization, *Health Promotion Evaluation: Recommendations for Policy-Makers; Report of the WHO European Working Group on Health Promotion Evaluation* (Copenhagen: WHO Regional Office for Europe, 1999), www.who.dk/document/e60706.pdf (accessed December 9, 2004).

63. Medical Research Council, *A Framework for the Development and Evaluation of Randomized Control Trials for Complex Interventions to Improve Health*, MRC Health Services and Public Health Research Board, 2000, www.mrc.ac.uk/pdf-mrc_cpr.pdf (accessed December 9, 2004).

64. Penelope Hawe, Alan Shiell, and Therese Riley, "Complex Interventions: How 'Out of Control' Can a Randomised Controlled Trial Be?" *British Medical Journal* 328, no. 7455 (2004): 1561–63.

resources—which underscores that a progressive politics cannot stop at questions about access.

Third, medications and other interventions that have been shown to be effective in RCTs enter a nonrandomized world, so questions about efficacy and standardization extend to the afterlife of all successful RCTs. The point of an RCT is to test but only as a step toward implementation. Social researchers have already shown that medications and other interventions that have been tested in RCTs enter people's bodies and lives in divergent ways; a progressive politics needs to keep firmly in mind what these various implementations end up looking and feeling like.⁶⁵

Fourth and finally, a more progressive politics will need to grapple with the relationship between inequality and myriad forms of social control. The RCT is clearly a form of social control. Whether the RCT design can be put in service of social equality by testing social interventions remains to be seen and is a matter that deserves more discussion.

No matter what, it is worth asking further questions about what RCTs are and do. In the interim, diabetes and related health problems continue to be produced unevenly along socioeconomic lines, and for many, hope centers on new medications being tested in RCTs. Hoping for anything different may entail coming to terms with the RCT.

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65. Mykhalovskiy, McCoy, and Bresalier, "Compliance/Adherence, HIV, and the Critique of Medical Power."

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