

Reproductive Freedom, Self-Regulation, and the Government of Impairment in Utero

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This article critically examines the constitution of impairment in prenatal testing and screening practices and various discourses that surround these technologies. While technologies to test and screen (for impairment) prenatally are claimed to enhance women's capacity to be self-determining, make informed reproductive choices, and, in effect, wrest control of their bodies from a patriarchal medical establishment, I contend that this emerging relation between pregnant women and reproductive technologies is a new strategy of a form of power that began to emerge in the late eighteenth century. Indeed, my argument is that the constitution of prenatal impairment, by and through these practices and procedures, is a widening form of modern government that increasingly limits the field of possible conduct in response to pregnancy. Hence, the government of impairment in utero is inextricably intertwined with the government of the maternal body.

Genetic testing and screening have rapidly developed as practices that produce knowledge about the genetic bases of an expanding number of ostensibly natural human characteristics and a host of risks posed to the integrity of that genetic material. The production of this new genetic knowledge has generated new questions with regard to (for instance) informed choice, autonomy, privacy, the quality of human life, and the properties that define a thing as a "human being." Any response that one gives to these questions relies upon certain philosophical assumptions about what exists, what is natural, what is a product of human invention and intervention, and what qualifies as normal. Furthermore, any given response to these questions implies a certain set of directives and prescriptions for human action.

In this article, I examine some of the discursive and concrete practices (bioethics, genetic counseling, the antidisability movement, and public policy) that surround the most publicly available form of genetic testing and screening: prenatal genetic testing and screening. I am concerned to point out what these practices presuppose, as well as to indicate their constitutive effects, and to suggest what prescriptions for action they put into place. In particular, I intend to show that these practices, and the testing and screening technologies themselves, contribute (each in its own way) to the naturalization and materialization of *impairment*, a relatively recent medico-juridical category that operates in the service of normalization.

To motivate the argument that impairment effectively comes into being by and through these practices and procedures, I draw upon Michel Foucault's claims about biopower, which he defined as the endeavor (usually by "authorities" of some kind) to rationalize the problems that the phenomena surrounding a group of living human beings, when constituted as a population, pose to governmental practice. Such problems arise with respect to the birthrate of a population, its health and longevity, sanitation and other conditions of its environment, and so on. Foucault noted that since the late eighteenth century, such concerns have occupied an expanding place in the government of individuals and populations. These problems (and their management), he claimed, cannot be dissociated from the framework of political rationality within which they emerged and developed their urgency: namely, liberalism (Foucault 1997, 73, and *passim*). Biopower is, in short, the strategic movement of modern forms of power/knowledge that work toward maximization of the conditions conducive to "life." In other contexts (Tremain 2001; 2002), I drew upon Foucault's insights about biopower in order to show how impairment is naturalized and materialized in accordance with the requirements of the U.K. government's Disability Living Allowance and the identity politics of disabled people's movements. In what follows, I extend the line of argument that I took in the earlier work on impairment in order to demonstrate how biopower ensures that impairments are generated in utero.

Barbara Duden and other feminists have argued that the formation of the fetus is, to a large extent, the history of its visualization in medical imaging techniques such as endoscopy and ultrasound (for instance, Duden 1993, 92). Lorna Weir has pointed out, furthermore, that the formation of the fetus is in addition the history of written statements, sampling technologies, and standardized blood tests, all of which impute a range of physiological and pathological properties upon a fetal body. From the mid-1950s, Weir explains, a number of key experimental articles appeared in print that multiplied knowledge of the fetus: articles about sex chromatin for the diagnosis of fetal sex (1955), ultrasound imaging of fetal skulls to determine fetal age (1963), the culturing of amniotic cells for chromosome, biochemical, and later genetic analysis (1966), and so

on. In short, the exponential increase in the number of “disorders” for which prenatal diagnosis became clinically available due to the introduction of these techniques amounted to a textual elaboration of the fetus as a discursive object (Weir 1996, 374–76).

My analysis of the constitution of ‘fetal impairment’ builds upon this earlier feminist work on reproductive technologies. In the first section of the article, I point out how descriptions of certain phenomena *as* fetal impairment have caused ‘prenatal impairment’ to emerge as an object of discourse and social existence. In particular, I show how a certain form of argumentation in disability theory and antidisability activism contributes to the constitution of this discursive object. In turn, I indicate how the presuppositions on which this manner of argumentation relies dovetail with claims made in mainstream bioethics and philosophy of science.

In the second section, I argue that the expansion of prenatal testing and screening technologies, and the production of a discourse on risk in genetic counseling and prenatal diagnostics, also contribute to the reification of prenatal impairment. This discourse of risk implicates these practices and procedures in relations of power in ways that, for the most part, have not been critically interrogated. For while many feminists, bioethicists, and others have called for the development of protocols designed to maximize the extent to which testing and counseling situations will be noncoercive and value neutral, few of these theorists have sufficiently problematized the very notion of risk on which these practices and procedures depend.¹ Furthermore, while most bioethicists, obstetricians, genetic counselors, and even many feminists claim that the availability of genetic counseling and technologies to test and screen prenatally—for impairment—enhances women’s capacity to be self-determining and make informed reproductive choices, I contend that this emerging relation between pregnant women and reproductive technologies is a strategy of biopower. Indeed, my argument in what follows is, in sum, that the constitution of prenatal impairment (by and through these practices and procedures) is a widening form of modern government, that is, a calculated mode of influence that increasingly limits the field of possible conduct in response to pregnancy. Hence, I am concerned to show that the government of impairment in utero is inextricably intertwined with the government of the maternal body. Through the government of their own bodies, pregnant women are enlisted to facilitate the normalization of the fetal body.

TESTING AND BIOPOLITICAL STRATEGIES

The prediction and presence (or absence) of prenatal impairment loom large in the information that prenatal testing and screening allegedly report, where impairment is conceived as a natural flaw or defect that can be eliminated

through the termination of a given pregnancy and that, ideally, will someday be correctable through the use of germ-line genetic therapies. Hence, many bioethicists have attempted to articulate principled ways to determine which impairments prenatal testing should be used to predict and whether a defensible line can be drawn between the types of impairment that it is morally permissible to selectively abort and the types of impairment that it is morally impermissible to selectively abort. In one recent account, moreover, several prominent bioethicists have argued that justice demands the genetic correction and enhancement of embryos and fetuses with “defects” in order that the persons they will become can “fully participate in the cooperative framework of society,” where a “fully cooperating citizen” is one whose “opportunity range” is compatible with “normal species-typical functioning” (Buchanan, Brock, Daniels, and Wikler 2000).

Because predictive testing strategies are directed toward progressively earlier and earlier stages of a pregnancy, along with the fact that *in vitro* fertilization and preimplantation diagnosis are becoming more and more widely available, disabled people and their allies are gravely concerned that the aforementioned conception of impairment seems to be the chief motivation to develop the technology. For example, the authors of a position statement produced under the auspices of Disabled People’s International-Europe (DPI-Europe) assert that “congenital impairments” are not intrinsic flaws or deficits that demand to be corrected or eliminated, but rather are descriptively neutral characteristics that are, nevertheless, integral to the species gene pool. These authors argue, therefore, that the use of prenatal genetic diagnosis, genetic therapies, and selective abortion in order to prevent lives deemed not “normal” (by virtue of impairment) threatens human diversity. They argue, furthermore, that national and international governing bodies ought to declare that the selective abortion of “impaired fetuses” violates the human rights of “people with impairments.” In addition, the authors of the DPI-Europe statement advance arguments with regard to the expressive character of prenatal testing and selective abortion of impaired fetuses, arguments according to which the selective abortion of fetuses “with impairments” puts into public discourse a discriminatory message that disabled people’s lives are not worth living, nor worthy of support. These authors contend, furthermore, that the selective abortion of impaired fetuses is on a par ethically with selective abortion on the basis of “fetal sex,” and, therefore, not selecting impairment ought to be recognized as a modern form of eugenics. Indeed, the authors of the DPI-Europe statement call upon governing bodies to generate instruments that outlaw these eugenic practices, instruments analogous to those that are already used internationally to prohibit so-called sex selection (Disabled People’s International-Europe 2000).

In order to oppose prenatal testing for impairment in these ways, the authors of the DPI-Europe statement presuppose the conception of disability that has

been predominant in the disabled people's movement in the United Kingdom since the 1970s, and that has more recently received international attention. This conception, which is generally referred to as "the social model of disability," was intended to sever the terms of causation for disability that are promulgated on medicalized models of disability. Medical models of disability represent that state of affairs as the inevitable consequence of a personal lack or defect. By contrast, on the social model, disability is represented as "a form of social disadvantage which is imposed on top of one's impairment," where "impairment" is construed as the lack of a limb or part thereof or a defect of a limb, organ or mechanism of the body (UPIAS 1976, in Oliver 1996, 22). On the social model, furthermore, impairment and disability are claimed to be conceptually distinct categories, between which there is no causal relation (Shakespeare 1992, 40, in Oliver 1996, 39; Priestley 2003). In other words, impairment neither equals disability, nor causes it. To paraphrase one of the first proponents of the model: impairment is a description of the body, but disablement is nothing to do with the body (Oliver 1996, 35).

I have indicated elsewhere (Tremain 2001, 2002) why one ought not to accept the social model argument according to which there is no causal connection between impairment and disability. By drawing upon Foucault's argument that modern relations of power produce, in the sense of forming and defining, the subjects whom they subsequently come to represent, I argued that the impairments proponents of the social model claim to exist apart from disabling social arrangements are actually produced in accordance with certain requirements of those arrangements; that is, disability *precedes* the idea of impairment, an idea that in turn provides the justification for the multiplication and expansion of the regulatory effects of disabling practices. In addition, I argued that these "impairments" are *materialized* as universal attributes (properties) of subjects through the iteration and reiteration of rather culturally specific regulatory norms and ideals about (for instance) human function and structure, competency, intelligence, and ability. As universalized attributes of subjects, furthermore, impairments are *naturalized* as an interior identity or essence on which culture acts in order to camouflage the historically contingent power relations that materialized them as natural in the first place. That the discursive object that has come to be called impairment is claimed to be the embodiment of some natural defect, deficit, or lack conceals the fact that the constitutive power relations that define and circumscribe 'impairment' have already put in place broad outlines of the forms in which that discursive object will be materialized. In short, the impairments that proponents of the social model of disability allege to underlie disability, and that proponents of the medical model of disability claim in effect to equal disability, are not essential, biological characteristics (namely, attributes) of an allegedly prediscursive body that social practices variously discover, mistreat, devalue, or valorize. On the contrary, those putatively

natural impairments are the products of (among other things) disciplinary knowledge/power, scientific, medical, and administrative practices, bioethical discourses, and disability identity politics.

Indeed, some of the assumptions about prenatal testing and screening for impairment advocates of the social model make actually resemble presuppositions that are generated from within the domains of molecular biology, biomedicine, and most bioethical discourses themselves. For although these opponents and proponents of prenatal testing and selective abortion *do not agree* about the disvalue of an impairment, they are *in agreement* inasmuch as they assume that impairments are real entities, that is, intrinsic properties or attributes of individuals, which exist prior to, and independent of, social norms, practices, and policies. Notwithstanding the fact that proponents of the social model misunderstand the productive machinations of modern power, it seems politically and theoretically misguided for them to claim that the term ‘impairment’ is a value-neutral—that is, “merely descriptive”—designation, for there can be no description that is not also a *prescription* for the formulation of the object (person, practice, or thing) to which it is claimed to innocently refer. A truth-discourse (such as either the social model or the medical model) that is purported to (merely) describe phenomena contributes to the constitution of its objects.

Following G. E. M. Anscombe, most philosophers regard it as a truism that intentional action always takes place under a description. This insight has far-reaching social and political implications that should not be underestimated. For the possible courses of action from which people may choose, as well as their behavior, self-understandings, habits, and so on are not independent of the descriptions available to them, nor do the available descriptions occupy some vacuous discursive space. On the contrary, descriptions, ideas, and classifications work in complex cultural matrices comprising institutions, practices, power relations, and material interactions between people and things (Hacking 1999). Furthermore, the ways in which concepts, classifications, and descriptions are imbricated in institutional practices, social policy, intersubjective relations, and medical discourses put in place the limits of possible action for humans. Indeed, ideas, descriptions, and classifications are integral elements in the disciplinary regimes of modern government. Thus, it is politically hazardous to claim, as proponents of the social model do, that the category of impairment is prior to, and can be dissociated from, the cultural matrix of contingent governmental practices that bring it into being as that sort of thing—that is, that generate certain phenomena *as* impairment in order to limit the possible responses to these phenomena.

While Bill Hughes and Kevin Paterson (1997) allow that the approach to disability I recommend would be a worthwhile way to map the constitution of impairment and to examine how regimes of truth about disabled bodies have

been central to governance of them, they nevertheless claim that the approach ultimately entails the “theoretical elimination of the material, sensate, palpable body” (333–34). The argument of these disability theorists begs the question, however; for the materiality of the (impaired) body is precisely that which ought to be contested. In the words of Judith Butler, “There is no reference to a pure body which is not at the same time a further formation of that body” (Butler 1993, 10). Furthermore, the antifoundationalist approach to disability I recommend does not deny the materiality of the body, but rather assumes that its materiality cannot be dissociated from the historically contingent practices that bring it into being—that is, bring it into being as that sort of thing (Tremain 2001).

The distinction between impairment and disability that proponents of the social model draw parallels the early second-wave feminist sex-gender distinction, in whose terms ‘sex’ denotes a universal, biological substrate and ‘gender’ signifies the culturally variant configurations of that entity. Despite the fact that a great deal of feminist scholarship—such as Donna Haraway’s analyses of the racialized and gendered investments of primatology (1990), Butler’s insights into the performativity of gender (1999), and Anne Fausto-Sterling’s research on intersex (2000)—has demonstrated the artifactual and contingent character of the category of ‘sex,’ many disability theorists and other authors continue to use the parallel, by appealing to an objective, transhistorical, and transcultural notion of ‘sex,’ in order to motivate a number of their rhetorical strategies. To take one example, some draw an analogy between the ways that degrading cultural norms and values, exclusionary discursive and social practices, and biased representations produce disability and how these phenomena operate in the service of sexism (for example, Oliver 1991). To take another example, some use the analogy from sexism to identify inconsistencies and double standards between the treatment of sexual discrimination in public policy and law and the treatment in the same domains of disability discrimination (for example, Silvers, Wasserman, and Mahowald 1998).

As I have argued elsewhere, however, the analogical arguments that disability theorists and others (including antidisability activists) make from sex not only reinstitute and contribute to the naturalization and materialization of binary sex, but they also facilitate and contribute to the naturalization and materialization of impairment. For the analogical structure of these arguments requires that one appeal to clear distinctions between ‘males’ and ‘females,’ and ‘men’ and ‘women,’ as well as assume a stable and distinct notion of ‘impairment.’ In the terms of these analogical arguments, furthermore, ‘sex’ and ‘impairment’ are represented as separate and real entities, each with unique properties, and each with an identity that can be distinguished from the identity of the other. Thus, engagement in this manner of argumentation prevents disability theorists

and antidisability activists from considering the implications for work in the field of the questions that the phenomena of intersex raise; in particular, this manner of argumentation renders disability theorists and antidisability activists unable to interrogate the ways in which the biomedical-scientific arm of the matrix of heterosexual normativity *naturalizes* and *materializes* intersex (a category that itself presumes binary sex) as ‘impairment,’ that is, as states of affairs (“Klinefelter’s syndrome,” “congenital adrenal hyperplasia,” and so on) to be managed, controlled, corrected, and indeed eliminated (Tremain 2001).

While the previous criticisms of analogical argumentation in disability studies and antidisability activism are directed at the analogical arguments that theorists and activists make about actual living human beings, it seems plausible to apply these remarks to the analogical arguments that they make from selective abortion on the basis of sex to selective abortion on the basis of impairment (for instance, Saxton 2000; Wolbring 2001; Priestley 2003). That is, it seems plausible to consider the *constitutive effects* of these analogical arguments from “fetal sex” to “fetal impairment”; in particular, it seems plausible to argue that this subjectification of the blastocyst, this *projection* of allegedly neutral characteristics *onto* the blastocyst, contributes to both the naturalization of disability as “impairment” and the naturalization of gender as “sex.” Furthermore, it seems plausible to point out how this mode of argumentation actually subjectifies the blastocyst *as a fetus*, that is, a “fetus” with the allegedly objective, transhistorical, and transcultural human properties (attributes) of “sex” and “impairment.” Indeed, because “the fetus” has been turned into a subject in this way, it has become a site of contestation between antidisability activists, antiabortionists, and feminists (among others), as well as an object of government, despite the fact that in most jurisdictions “the fetus” does not exist as a legal entity (Weir 1996).

It should be pointed out that when disability theorists (and antidisability activists) argue that selective abortion on the basis of impairment is on a par ethically with selective abortion on the basis of sex, their claims apply only to the abortion of “female fetuses.” They do not interrogate, indeed, they do not acknowledge, the selective abortion of blastocysts that are predicted to be “ambiguously sexed” humans, except inasmuch as those blastocysts are deemed to be impaired. This, then, is another way in which the analogical arguments that disability theorists (and antidisability activists) make from sex to impairment implicitly reinforce a naturalized dichotomy of sex and simultaneously *prop up* the way that intersex is pathologized in current medical and juridical practices. Interestingly, most feminist arguments against selective abortion on the basis of sex make reference to the expressive character of sex selection as it pertains to the social standing of *women and girls only*, with the proviso that sex selection is permissible if it prevents the birth of infants with so-called sex-linked

disorders. Notice that these feminist arguments elide the tired distinction between sex and gender by appealing to a form of sex determinism and, in doing so, they too serve to naturalize binary sex and pathologize intersex.

The idea that impairment (construed as an intrinsic human characteristic) is a stable and distinct category, a real entity, with transhistorical and transcultural properties, presupposes that there is a scientifically indisputable category of 'normality' from which the former category can be distinguished. While earlier medical, philosophical, and scientific doctrines defined normality in terms of ideal or absolute characteristics, modern notions of normality focus primarily on "functional ability" (Cho, Cohen, and Sistla 2003). The notion of *normal species-typical functioning*, which has gained considerable currency in mainstream bioethics, is a case in point. The notion of species-typical functioning does not originate from within the field of bioethics itself, but rather has been imported into that discourse from the work of philosopher of science Christopher Boorse (1977, for instance). Philosopher and historian of biology Ron Amundson remarks although the use of the word "typical" in the term "typical function" seems to suggest statistical assessment—that is, what constitutes the common or usual function—Boorse actually intends the notion to imply the *normal* function of members of a species. Boorse claims that the distinction between "normal" and "abnormal" function is an empirically grounded implication of biomedical science. Normal and abnormal function are distinct natural kinds, objective facts of the natural world. "Normal function" carries a double implication. First, normal function is statistically common in the species; abnormal function is rare. Second, normal function is the most successful, or (in Darwinian terms) the most fit. The claim is that the more an organism diverges from its species average, the worse it will function.² Amundson (who is also an antidisability activist) notes that although Boorse presents his theory as an empirical claim about biology, it is widely used to support normative consequences in the bioethical writings of Norman Daniels, Dan Brock, and others (Amundson 2003, 4). These normative conclusions imply that disabled people have a lower quality of life (by virtue of impairment) and that such lives should be prevented.³ Amundson contends, however, that these conclusions, and indeed this entire discussion in biomedical ethics, are biased against disabled people and their civil rights because philosophers have failed to come to terms with the political conceptions of disability that the disabled people's movement has developed (Amundson 2003, 1).

Amundson also argues that Boorse's contribution to this discussion in bioethics misrepresents biomedical science. Neither functional uniformity nor the association between statistical typicality and excellence of function is a scientific discovery about the biological world. Amundson explains that information supplied from a wide number of biological disciplines suggests that we should expect

a wide range of functional variation, not a narrow match between functional typicality and functional success.⁴ To take one example, evolutionary biology does not imply functional uniformity as an outcome of evolution; to the contrary, functional variability is a *basic* assumption of Darwinian natural selection. To take another example, conformity among members of a given species is not implied by the facts of developmental biology; rather, developmental plasticity and functional adaptation suggest that we should expect *variation* in the functional organization of the bodies of species members, *not* strict conformity. As Amundson puts it, there is so much functional variation among humans, and it is so multidimensional, that the belief in an objective correlation between typicality and functional success is scientifically untenable (Amundson 2003, 4–5; see also Amundson 2000).

THE GOVERNMENT OF RISK

The inventors of prenatal testing and screening did not intend them as universal procedures to be applied in all pregnancies; yet, they are increasingly institutionalized within standard protocols for prenatal care and maternal “risk management” (Browner and Press 1995; see also Lippmann 1991). For example, although sonar screening was initially developed to benefit women deemed to be at “increased risk” in pregnancy, it is a screening technique that is now advocated as a test to be used in every pregnancy (Duden 1993, 27). This normalization of prenatal diagnostics contributes to the objectification of impairment insofar as it cultivates the notion that pregnancies can be classified, that the classifications that are generated can imply risks of a real entity called “impairment,” and that the existence of this entity is logically and temporally prior to the identification of those risks. The state-administered program of maternal serum alpha-fetoprotein (AFP) screening that was instituted in California in the mid-1980s to provide universal screening for Down syndrome, spina bifida, and other neural tube “defects,” is an early example of the normalization of prenatal diagnosis.

In 1986, California became the first state in the United States to mandate that all providers of prenatal care must offer the AFP screen to every pregnant client who enters care prior to the twentieth completed week of pregnancy; in addition, the state mandated that all prenatal care providers must maintain records that demonstrate that they have offered the AFP screen to each of these eligible clients. By 1990, over 60 percent of eligible Californians were screened with the AFP test, in comparison to 40 percent in 1986 (State of California 1990, 28, in Browner and Press 1995, 310–14).

The neural tube formations that the AFP screen was designed to predict seem to be multifactorial in origin and occur in the United States in approxi-

mately one to two live births per thousand. For every one thousand women who undergo the AFP test, however, between fifty and one hundred of them will receive positive—or “abnormal”—readings. Since the AFP test is only a screen, each of the women in the latter group will require additional testing before she can receive a definitive diagnosis: repeat AFP screening, one or more sonograms, amniocentesis, or some combination of these screens and tests. In one of several articles based on their study of this state-mandated program of prenatal screening, Carol Browner and Nancy Press point out that despite the fact that the AFP screen cannot provide definitive diagnoses and that few of the women whose intake interviews they observed were actually given sufficient information about the test, most of the women accepted the offer of it. That the test is offered universally and is state administered lends legitimacy to the notion that prenatal testing is an inherently good (and, therefore, necessary) intervention of which pregnant women can avail themselves (Browner and Press 1995, 314–17).

Though some pregnant women are reluctant to undergo prenatal testing and screening, many women derive a sense of satisfaction and personal fulfillment from the fact that their pregnancies are technologically managed (Morgan 1998, 96, 97, and *passim*). Kathryn Morgan (1998) has argued that when the elements of a medical matrix are incorporated into the self-understandings and self-knowledge of individuals like this, the subjects constituted through the process experience themselves as people who are *autonomous* and *active* in their medical encounters. Morgan explains that a medical gaze and surveillance are most effectively produced when individual subjects actively support, use, and demand to use medicalizing concepts, vocabularies, and practices by claiming them as their own and by seeking out an active involvement in the medical technologies in which they become invested. As this kind of medicalized self-management ensues, Morgan points out, the discourse that is generated frequently appeals to certain conceptions of responsibility, self-control, self-interest, and self-determination; moreover, many people who become ensconced in this self-management characterize the lived reality that they experience in terms of a genuine increase in their personal power and decision making (Morgan 1998, 96).

The claim that the practices and mechanisms of a medical matrix operate most effectively when they position subjects as autonomous and free implicates those practices in liberal governmentality. Foucault coined the term “governmentalities” to refer to rationalities of government, that is, systems of thinking about the practice of government that have the capacity to rationalize some form of that activity to those who practice it and to those upon whom it is practiced (Foucault 1997, 73, and *passim*). After Foucault, Nikolas Rose (1996) and others have pointed out that liberal governmentality operates at a distance

from individuals by guiding, influencing, and limiting their actions in ways that accord with the exercise of their freedom. For power functions best when it enables subjects to act in order to constrain them. Indeed, although power appears to be only repressive, its most effective exercise consists in guiding the possibilities of conduct and putting in order the possible outcomes. The production of these practices, these *limits* of possible conduct, furthermore, allows the discursive formation in which they circulate to be naturalized and legitimized (Tremain 2001; 2005).

German disability theorist Anne Waldschmidt (1992) assumes this conception of power to argue that genetic testing and prenatal diagnoses are elements of a new form of eugenics that is practiced with the active participation of the individuals concerned, once they have been informed of the supposed facts and have given their consent. "Neo-eugenics," Waldschmidt writes, has shed its past authoritarian roots and has developed an apparently democratic approach. Neo-eugenics does not need to operate through direct forms of coercion, pressure, open repression, or control. The state and society no longer need to intervene in order to urge people to do their eugenic duty, because now people "voluntarily" adhere to eugenic lines of reasoning individually, without having been expressly told to do so. Waldschmidt contends that neo-eugenics functions so well precisely because it is supported and practiced "from below," that is, by the average person on the street; it does not need to be enforced from above by the police and the authorities. Indeed, not even the human geneticists and genetic counselors appear to be acting on their own authority; rather, they seem merely to accord with the wishes of their own women clients (Waldschmidt 1992, 165; cf. Shakespeare 1998).

In a comprehensive, ethnographic study of genetic counseling discourse, Rayna Rapp (1999) writes that the genetic counselors whom she observed described their goals as giving their clients "reassurance." In the discourse of genetic counseling, "to give reassurance" means to return one's clients to the general population of pregnant women, each of whom is said to have a "background risk" of 2 to 3 percent that she will give birth to a child "with an impairment." If older clients (that is, clients over age thirty-five) decide to forgo testing (in particular, amniocentesis), their genetic counselors tell them they will undertake a *larger* risk because their "age-related risk" must be added to that "background risk" (Rapp 1999, 70, and *passim*). The demarcation of "age-related risk" (a statistical marker that actually fluctuates in accordance with modifications in the technology itself) is intended to outweigh the percentage of procedure-induced miscarriages, which, by current estimates, occur about 1 percent of the time (Rapp 1999).

The circulation of "age-related risk" produces what Abby Lippmann has referred to as "iatrogenic anxiety" (Lippmann 1991, 3). For while it has long been known that older women are more likely than younger women to give

birth to babies who present with Down syndrome, only the recent generations of statistically graded pregnant women have been given specific risk figures and led to identify generic pregnancy anxieties with their respective ages and the statistical category to which they have respectively been assigned. It is no coincidence that the prenatal procedures the medicalized approach to pregnancy promotes are offered to pregnant women as the means by which to assess and alleviate the problem of risk that fostered this iatrogenic anxiety in the first place (Lippmann 1991, 3, and *passim*). For although the medical and scientific communities represent genetic counseling as a value-neutral means through which to elaborate the options for action available to pregnant women that would enable them to make decisions regarding testing and its possible outcomes, the reification of “age-related risk” (that the practice of genetic counseling facilitates) is a technique of government which enlists women to become *self-regulating* and *self-disciplining* (Weir 1996; Lippmann 1991; Rapp 1999). As Foucault pointed out, this is a characteristic and troubling property of the development of the practice of government in Western societies: the tendency toward a form of political sovereignty that is a government “of all and of each,” the effects of which are to totalize and to individualize (Gordon 1991, 3). Indeed, the power of the modern state to produce an ever-expanding and increasingly totalizing web of social control is inextricably intertwined with, and dependent upon, its capacity to generate an increasing specification of individuality in this way (Rajchman 1991, 104)

In short, an individualizing and totalizing conception of risk governs genetic counseling and prenatal diagnosis. This conception, with its language of “age-related risk,” “added risk,” “background risk,” and “reassurance,” *individualizes* insofar as it attaches risk to the bodies of particular subjects; in addition, this conception of risk in pregnancy *totalizes* insofar as it generates statistical subpopulations, that is, “risk-groups.” In terms of this conception of risk in pregnancy, furthermore, an increasing number of variations between humans are attributed to allegedly prediscursive genetic structures. Lippmann refers to the epistemological trajectory of this assumption as “geneticization,” which she defines as the ongoing process by which differences among individuals are reduced to their DNA codes and assumed to be genetic in origin (Lippmann 1991, 18; cf. Novas and Rose 2000). Both a rationality and a practice, geneticization attaches risk to genes and, in doing so, creates putative populations whose members are linked only by virtue of the fact that they share the same statistical probability with respect to that genetic risk. As Rapp repeatedly shows, this conception of risk in pregnancy relies upon rather culturally specific assumptions that in many cases muffle or conflict with other epistemic strategies by which pregnant women from diverse cultural backgrounds understand risks that are posed to them and to their children (Rapp 1995, 176; 1999, 70). In short, the government of risk in pregnancy is a culturally contested domain.

Since the end of the nineteenth century, the technology of risk, in all of its various epistemological, economic, moral, juridical, and political modalities, has become a central organizing principle of governmentality in the West. As various authors have noted, the political and conceptual power that risk has gained is concomitant with the rise of statistical and probabilistic thinking from the eighteenth century onward (for instance, Rapp 1995). Foucault attributed the cascade of statistical assessments and interventions that has prevailed to the strategies of biopower, which from the late eighteenth century has worked toward increasingly comprehensive management of the life of individuals and populations. In the second half of the eighteenth century, Foucault explained, items such as the ratio of births to deaths, the rate of reproduction, and the fertility of a population, together with a series of related economic and political problems, become biopower's first objects of knowledge and the targets that it seeks to control. This, he noted, was the historical moment in which the first demographers began to measure these phenomena in statistical terms (Foucault 2003, 243).

In fact, the collection of statistics about populations and deviancy is an integral component of the modern state apparatus. As Ian Hacking points out, however, the bureaucracy of statistics and probabilities does not only create administrative rulings; to the contrary, statistics and probabilities also determine classifications within which people must think of themselves and the options that are open to them (Hacking 1991, 182, 194). Hacking explains that many of the modern categories we use to think about people and their activities were put in place by attempts to collect numerical data. Thanks to these efforts on the part of a host of administrative, juridical, medical, industrial, and economic bureaucracies, new kinds of people have come to be counted and new statistical metaconcepts (of which the most notable is "normalcy") have been engendered (Hacking 1991, 182–83). Hence, the emergence of risk may be seen as a technology of modern government.

One of the foundational premises of prenatal diagnosis and genetic counseling is that risks in pregnancy exist in reality, that is, have an objective, prediscursive existence. Without the tests that make prenatal risk calculable, however, there would be no risk in pregnancy *per se*. Risk does not exist apart from the rationalities, practices, and techniques that make risk calculable and attach it to certain objects, which the technologies effectively bring into being as those kinds of things. As François Ewald remarks: "Nothing is a risk in itself, but anything *can* be a risk; it all depends on how one analyses the danger, considers the event" (Ewald 1991, 199; emphasis in original). Risk is a means by which to order reality. The category of risk enables previously incalculable events to be represented in a form that makes them governable in certain ways, with certain techniques, for the satisfaction of certain goals. In particular, risk is one element of the diverse forms of calculative rationality that are deployed

“to [govern] the conduct of individuals, collectivities, and populations” (Dean 1999, 177). As calculative rationalities, that is, forms of risk assessment incite compliance with techniques and practices that regulate, manage, and shape human conduct in the service of specific ends. For to describe the possibility of a certain future event as a risk is to ascribe negative value to the actual occurrence of such an event and to imply that certain measures ought to be taken to avoid it. Since the possible courses of action from which people may choose are not independent of the descriptions available to them under which they may act, and since the available descriptions are embedded in a cultural matrix of (among other things) institutions, practices, and power relations (Hacking 1999), analyses of risk must consider the kinds of objects to which risk gets attached, the kinds of knowledge that risk makes possible, the techniques that are employed to identify and discover risk, the technologies that are mobilized to govern it, and the political rationalities and programs that deploy it (Dean 1999, 175–97).

GOVERNMENTALITY AND THE POLITICS OF NORMALIZATION

In sum, when the constitutive efficacy of risk is appreciated, the eugenic impetus behind prenatal testing and screening becomes evident. If analyses of prenatal testing and screening were to shift their emphasis to *governmentality*, that is, if theoretical analyses of these practices were redirected from their current location in the realm of bioethics and situated within the domain of *biopolitics*, the starting point of inquiry could shift from argumentative claims that take the ‘impaired fetus’ as a natural kind to a thick description of the administrative, medical, prenatal, scientific, and discursive constitution of ‘impairment’ by and through these technologies of normalization. Furthermore, the liberal governmentality that facilitates the birth of the practices of biopower also spawns reactions to that apparatus, some of which have been articulated in the language of reproductive freedom. Thus, a governmental perspective on prenatal testing and screening enables one to recognize that the feminist achievement of “reproductive choice” and the genetic counseling which is claimed to enhance that ostensible autonomy operate as effects of what Foucault called the “polymorphous character of liberalism,” by which he meant liberalism’s capacity to both foster and engage criticism of itself, as well as to subsequently recuperate that critique in the service of certain political ends (Foucault 1991; see also, Weir 1996).

Foucault was concerned to show the centrality of the norm to modern forms of governmentality, and to the matrix of biopower in particular. In the final chapter of *The History of Sexuality*, Volume One, provocatively titled “The Right of Death and Power over Life,” Foucault explained biopower’s normalizing strategies in this way:

A power whose task is to take charge of life needs continuous regulatory and corrective mechanisms. . . . Such a power has to qualify, measure, appraise, and hierarchize, rather than display itself in its murderous splendor; it does not have to draw the line that separates the enemies of the sovereign from his obedient subjects; . . . it effects distributions around the norm. . . . The law operates more and more as a norm, and . . . the juridical institution is increasingly incorporated into a continuum of apparatuses (medical, administrative, and so on) whose functions are for the most part regulatory. A normalizing society is the historical outcome of a technology of power centered on life. (1978, 144)

The importance of the government of prenatal impairment for normalization cannot be overstated. Over the past two centuries, in particular, a vast apparatus, erected to secure the well-being of the general population, has caused both the disabled subject and the idea that disability has a biological foundation—impairment—to emerge into discourse and social existence. An understanding of biopower's normalizing strategies allows one to analyze the constitution of prenatal impairment in ways that avoid the reductive arguments about misogynistic science and patriarchal medical practices that have tended to condition earlier feminist analyses of reproductive technologies and control of the maternal body (for an account of these arguments, see Sawicki 1991, 67–94). For the argument from governmentality does not assume that women who undergo prenatal testing and screening or who insert themselves in genetic counseling contexts have been duped by the ideological forces of some distant and overarching external power, nor even does it imply that these women make morally bad personal decisions. Instead, the argument from governmentality indicates how practices of liberal governmental power have produced people with certain kinds of subjectivities. The practices have constituted subjects whose actions are governed through the exercise of their own capacity to choose in accordance with the norm(al).

NOTES

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1. Some exceptions to this omission in feminist analyses of prenatal testing are Weir 1996; Rapp 1995, 1999.

2. Even if we accept Boorse's notion of species-typical functioning, this claim seems incorrect. If members of a species that function *below* the statistical species average function worse, then members of a species that function *above* the statistical species average should function better.

3. See, for instance, Dan Brock's remarks in a presentation entitled, "Genetic Testing and Selection: A Response to the Disability Movement's Critique," that he gave to the 10th "Genetic Technology & Public Policy in the New Millennium" symposium in November 2002. Addressing criticisms from the disabled people's movement, according to which he has ignored what disabled people say about their own lives, Brock asserted, "*our* notion of how good a person's life is [isn't] fully determined by their own subjective assessment." Even with modifications to the environment, Brock claimed, disabled people live with "*real* disadvantages." Thus, "severe disabilities" [among which Brock counts blindness and "mental retardation"] should be prevented with the use of amniocentesis and abortion. The prevention of "severe disabilities," Brock pointed out, is not for the sake of a given child, but rather for the sake of less suffering and loss of opportunity in the world. In addition, he claimed, "it's a mistake to think that the social and economic costs are not a legitimate concern in this context" (Brock in Carlo, 2002/2003; emphases added).

4. While it might be thought that accepting a wide range of variation as normal would rescue Boorse's concept of normal function from the observed facts of functional variability, in practice it renders the concept moot. If 'normal' merely means "successful function by whatever means that is achieved," then Boorse's empirical claim that statistically typical function is the most successful has turned into the tautology that functional success is successful.

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