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Parental Responsibility in the Context of Neuroscience and Genetics, by Kristien Hens, Daniela Cutas, and Dorothee Horstkötter. Cham, Switzerland: Springer International Publishing; 2017. 246 pp.

Scientific understanding of genetically driven, neurobiological pathways that contribute to diverse developmental outcomes in children has advanced considerably in the past decade. As knowledge accumulates, various aspects of a child's health, well-being, and even character, are increasingly framed as amenable to external control, through pharmacological, behavioral, or genetic interventions. The mere possibility of external control of these outcomes in children raises the responsibility bar for parents and other caregivers whose decisions and actions moderate children's quality of life both now and in the future. This is the key and important insight that drives the edited collection under review. Its diverse authors successfully illustrate how new challenges and opportunities posed by advances in neuroscience and genetics may change the content of established parental responsibilities, and may even give rise to entirely new obligations for parents and for society.

The overall structure of the book consists of an introduction to the key questions and concepts discussed throughout the volume (Chapters 1–3); a predominantly theoretical discussion of some of

the different ways in which parental responsibility may arise in the context of various findings from neuroscience and genetics (Chapters 4–12); and two final chapters that consider how these responsibilities may play out in the “real world” for specific groups of people in specific cultural contexts (Chapters 13–14).

In the introductory chapter, the three editors provide an engaging and clearly structured summary of the book as a whole. This is an especially useful introduction, which sets the theoretical stage for what is to come, and helps the reader select subsequent chapters of the most personal interest or relevance. Generally speaking, the remaining chapters tend to cluster in pairs around a single theme: Chapters 5 and 6 focus on children's developing autonomy; Chapters 7 and 8 explore responsibilities incurred by women during pregnancy; and Chapters 9 and 10 provide responses to the principle of procreative beneficence. Therefore, the volume need not be read from cover to cover, but readers may wish to read chapters in pairs, because these often provide different perspectives on a single theme.

The first two authors contributed equally to the writing of this review.

Some of the book's chapters tackle well-worn philosophical ground, addressing questions such as "Do parents have a moral obligation to create the best possible child?" (Chapters 10 and 11) and "Is autism a disability to be cured, or an identity to be accommodated?" (Chapters 3 and 7). Although many voices have together built a substantial literature on these debates, the chapters in this volume helpfully draw out and summarize the central issues. For those well versed in the bioethics literature, some of the chapters may appear to lack originality, but the material will be useful for those new to bioethics.

Elsewhere the authors build on existing debates to explore new ground and introduce novel ideas. For example, in Chapter 5, Dorothee Horstkötter provides an original and thought-provoking discussion of a parent's responsibility to raise "self-controlled" children. Typically, discussions of the value of self-control draw upon insights from studies conducted by researchers in social psychology or the neurosciences. Such studies, including the now famous "marshmallow test," seemingly demonstrate how children who are able to resist temptation and delay gratification when very young have better outcomes in later life. Horstkötter provides a new, distinctly philosophical lens on these studies, by pointing at their limits; for example, that they impose the goal that the research participant is asked to achieve, instead of letting the participants set the goal themselves. Horstkötter argues that previous discussions of "self-control" often focus too much on children's ability to *control* their emotions and actions, but in so doing they fail to engage with the concept of the *self*. Horstkötter maintains that a fuller understanding of self-control requires that parents nurture their child's autonomy, so that the child learns to "set its

own goals, reflect on these goals, and consider them as reasons for action" (73). Because research from the neurosciences and social psychology arguably fails to measure "self-control" in this fuller sense, Horstkötter suggests that its relevance to parental responsibility may be more limited than previously thought.

Whereas Horstkötter applies a philosophical lens to a debate typically dominated by neuroscientists and social psychologists, in Chapter 11, Francisco Güell Pelayo challenges the philosophical argument of procreative beneficence with evidence from the scientific practice of *in vitro* fertilization (IVF). He focuses "on the genetic and epigenetic dimensions of development and the way in which this dynamic process affects the maturation of the gametes, the formation of the zygote, and the proliferation and differentiation of embryonic cells" (170). Güell argues that whereas choosing the "best" embryos may be easy work when done from the comfort of the philosopher's armchair, scientific evidence shows that the actual practice of selecting and implanting embryos during assisted human reproduction is fraught with risk and the potential for harm to the future child's health. Güell's argument seems to suggest that philosophical argumentation must be adequately informed by evidence from the "real world," implying that philosophers should consult neuroscientists and geneticists to inform their normative conclusions as regards parental responsibility. Further, Güell notes that "a responsible choice is an appropriately well-informed choice" (183), arguing that parents too must be provided with adequate information to negotiate their various responsibilities in an era of genetics and neuroscience.

The preceding examples highlight the importance of interdisciplinarity in this collection. Its authors draw on rich and varied expertise across the fields of

philosophy, psychology, bioethics, family sciences, and law. Notably, however, there are no “pure” neuroscientists or geneticists among the contributors to this volume. Rather, a team of predominantly bioethicists and practical philosophers bravely—and, we think, competently—take it upon themselves to explain findings from the “hard sciences” in language that lay readers will understand. This means that the book is accessible for those with little knowledge of neuroscience and genetics, although it also perhaps raises the question of what other topics or issues might have been included had neuroscientists or geneticists also contributed chapters to this volume. As Callard and Fitzgerald note in their discussion of interdisciplinarity in neuroscience, we are all constrained by the methods, assumptions, frameworks, and argumentative styles of our respective disciplines. “Different modes of investigation carry with them different archival legacies, and conventions of thinking and writing.”¹ Therefore, it should be noted from the outset that this is a book predominantly written by philosophers and bioethicists, and, therefore, readers from those same disciplines will perhaps feel more at home within its pages than those who come with expertise in neuroscience or genetics.

Given the ethical expertise of many of the contributors, we were surprised at the lack of strong action-guiding arguments within many of the chapters. Although this volume comprehensively illustrates the various challenging situations that parents face as a consequence of advances in genetics and neuroscience, it overall fails to provide solutions to these challenges. For example, Chapter 14 poses three questions at the outset, one of which is: “How do we responsibly negotiate and integrate the possibilities of new biomedical opportunities with traditional Yoruba beliefs and ethics in a way that promotes the

best care for children with Sickle Cell Anaemia?” (209). Although the chapter describes a number of relevant considerations that might help answer this question, no practical solution is proposed. The author concludes by recommending that “an ethically informed policy framework in the Nigerian health-care system should aim for an integration of the traditional childcare outlook with findings and possibilities brought about by contemporary medicine and genetics. An attempt to formulate such a framework is the subject of a different work” (217). Many, although not all, of the other chapters adopt a similar approach, outlining the relevant questions, considerations, and debates, but declining to propose any solution that might be workable in practice. We wonder if this is because of the aforementioned lack of involvement of those who, in their everyday clinical or research jobs, are confronted with the pressure to give an answer to the ethical issues discussed.

In addition, the volume neglects a small number of important areas. Although the topic of the book is “parental responsibility,” we felt that the discussion could have benefited from a recognition that developments in genetics and neuroscience may responsabilize mothers and fathers in different ways, and that society often holds higher standards for mothers than for fathers as regards responsibility for the child’s well-being. The “mother-blame” topic is touched on in the first chapter (4); however, it seems to us that a book about parental responsibility should have proposed a more extensive discussion, given the abundant literature on these issues.^{2,3}

Further, the discussion of early intervention (Chapter 4) would have benefited from reference to the “0–3 paradigm,” which has been particularly influential on policy in the United Kingdom and the United States. This movement draws

from scientific research in the fields of epigenetics and neuroscience to show that the first years of life are especially important, because at this age a child is most developmentally malleable or “plastic.” A number of articles have questioned the ethical implications of the drive toward early intervention in United Kingdom policy. Particularly concerning is the rise of what some call “parental determinism,”⁴ which arguably misuses scientific evidence to create new and arduous responsibilities for vulnerable parents, while overlooking the role of governments and others to make changes at a societal or structural rather than individual level.^{5,6,7,8} We believe that the book should have included this interesting discussion to enrich the debate further.

This said, some authors in this volume *do* recognize that to fulfill their newly acquired responsibilities, parents need to be supported by relevant social institutions (Chapters 7, 9, and 12). For example, if parents are responsible for their children’s proper gender development, Simona Giordano argues, then social institutions such as schools also have a responsibility to challenge stereotyping gender markers, for example by abolishing different uniforms for boys and girls (147). This recognition of societal responsibility is a key strength of the volume, and builds on the work of others who have criticized the ways in which individuals are often unable to respond to new responsibilities that emerge as a result of scientific developments, without support from more powerful individuals who are able to implement wider structural changes.⁹

Further, some authors do not merely assume that new parental responsibilities exist; on the contrary, they question whether the advances in genetics and neuroscience impose a moral obligation on parents to take action in all areas

of life that have become amenable to control. For example, by illustrating the complex and sometimes hardly defensible implications of a child’s right to fertility preservation, Daniela Cutas (Chapter 12) ultimately argues that parents should concern themselves less with their duty to utilize genetic technologies to preserve their child’s capacity for reproduction, and instead teach their children that the value of parenting is not limited to having genetically related children.

To conclude, in almost all its parts, this book is accessible to philosophically minded readers, healthcare professionals, and the general public. However, it perhaps appeals most to the intellectual interests of the philosophically minded scholar, which might prove frustrating to those parents and healthcare professionals searching for guidance on how to fulfill their own responsibilities to their children or pediatric patients.

—Arianna Manzini, Rose Mortimer, and
Irina Singh

Notes

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