

London School of Economics and Political Science

Considering Kids:

The Nature of Children's Claims to Justice

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A thesis submitted to the Department of Philosophy, Logic and Scientific
Method of the London School of Economics and Political Science for the
degree of Doctor of Philosophy, London July 2010

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Abstract

Children's rapid development and dependency distinguish them from adults and calls for significant additions to and revisions of leading liberal views. Over the course of chapters 2 to 5, I defend the following two views.

First, our obligations to children consist in meeting their needs. Specifying what children's needs are is a difficult task that is best met through a two-part strategy. While a liberal state can make use of a general and abstract characterization of children's needs, it must leave the more concrete specification of those needs to carers. The nature of caring relationships is such that the carers must be given space to act on their conception of the child's good.

Second, a proper understanding of the way genes and environment co-determine children's development challenges the exclusion of "natural primary goods" from the scope of distributive justice. While genes constrain developmental outcomes, the nature and extent of these constraints can only be established empirically. Consequently, it is not possible to categorically distinguish between the kinds of goods subject to distributive principles on the basis of a supposed origin in a genetic lottery.

In the final two chapters, I look at policy challenges raised by children. In Chapter 6, I explore how children's development affects the value of their opportunities for choice through an analysis of a proposed tax on sugar-sweetened beverages, and argue for a refined account of Alex Voorhoeve's Potential Value of Opportunities View that can accommodate these considerations. In Chapter 7, I

consider the fair distribution of risk between children in light of the *Grimes v. the Kennedy Krieger Institute* case. I argue that recognizing the importance of risk mitigation to children's health necessitates a refined understanding of benefit that is responsive to the endemic health risks in a child's environment.

Acknowledgements

We become independent practical reasoners through participation in a set of relationships to certain particular others who are able to give us what we need. When we have become independent practical reasoners, we will often, although not perhaps always, also have acquired what we need, if we are to be able to give to others who are now in need of what formerly we needed. We find ourselves placed at some particular point within a network of relationships of giving and receiving in which, generally and characteristically, what and how far we are able to give depends in part on what and how far we received.” (MacIntyre 1999, 99)

Alastair MacIntyre makes these comments in reference to the tasks of practical reason, but what his insights reveal about the social nature of our reasoning apply equally to the more theoretical aspects of a PhD. Over the past few years, I have been blessed to find myself in a particularly generous network of teachers, mentors, friends and family who have educated and supported me throughout this project. I have received so much from them, and I hope to honor those debts by sharing the generosity and love and they have shown me with my own students, colleagues, friends and family.

First and foremost, I would like to thank my advisors, Luc Bovens and Alex Voorhoeve, who assumed responsibility for my philosophical education, and supported me, even when my life pulled me far away from the LSE. They encouraged my philosophical and extra-philosophical work, giving me the space to pursue new lines of investigation, but patiently bring me back to the central questions when I went too far astray. They kept me on track through two jobs, two children and too many moves.

Luc introduced me to the world of political philosophy. He rekindled my love of philosophy during my MSc through his seminars and hours of conversation during which he enthusiastically guided me through many a puzzle. His supervisions were always very challenging, and his endless array of perplexing counter-examples taught me that no position is as simple as it first appears.

Alex was an exceptional supervisor. Over endless hours of supervision, he listened to many unformed ideas and guided me as they developed into chapters and themes. He pushed me to develop my own perspective, rather than merely pointing out where others may have gone wrong. He reminded me to slow down and recognize that often the arguments being made by others or the arguments that I was trying to formulate myself were more subtle than I first appreciated. He is an exceptional listener and incisive reader whose comments were an education unto themselves. I always left our supervisions having learned more about my own position as well as the position of those I was commenting on. He was also wonderfully flexible, available to talk in London, during visits to New York, over the phone, by email, and even during his sabbatical year in Boston.

I also have a deep debt of gratitude to all of the wonderful people who supported in this project during my time in New York.

Michael Weitzman took a chance on hiring a philosopher for the Department of Pediatrics at New York University. Though neither of us was completely clear what role of philosopher could play in the department, he generously gave me the time and space to find a home. I will be forever grateful for the opportunity he gave me to enter the worlds Pediatric Health Policy and Clinical Ethics.

My time at the Department of Pediatrics would not have been the same without the mentorship of Ed Fryer and Thomas Myioshi, who more than anyone

taught me about healthy policy and how to answer questions with data. They had endless patience as they guided me through rambling datasets and taught how to think about numbers and statistics. Our morning conversations about health policy provided a reservoir of insights and information that I continue to draw on, and their passionate commitment to using data to push policy and draw attention to lives of the disadvantaged remains an inspiration.

Bill Ruddick gave me a philosophical home in New York, and welcomed me into the Bioethics Community. His encouragement and belief in my research and teaching gave me confidence at a critical juncture in this project. His seminars on bioethics, life, and death were always stimulating, revealing new and unexpected perspectives on familiar topics, and often led me to examine my own work from a new angle.

I also have to thank the staff and volunteers at Citizen's Committee for the Children of New York. They opened my eyes to the practical realities of communities trying to raise their children well, as well as the political challenges faced in trying to overcome those challenges. They have shown me the difference a dedicated group of citizens can make.

I gratefully acknowledge the financial support of Marshall Commission, the London School of Economics, the Department of Philosophy, Logic and Scientific Method, and the American Academy of Pediatrics.

Finally, none of this would have been possible without the unending love and support of my family. My Mother, who shared her love of children and her commitment to improving their lives both one at a time through loving care, and as a group through political action. My Father, who taught me to appreciate a good argument, to stand my ground and to speak and write clearly while doing it. My

husband whose encouragement and support me saw me through tough times and helped me celebrate the successes, and who always made sure that I had time to finish my writing. And of course, my two daughters who every day share their love and joy with me. They remind me what it is to be a child and have taught me more than any book about what it is to be a mother and to love and care for a child. They are a source of endless inspiration and joy.

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1. Introduction

In presenting his theory of justice, John Rawls claims that his aim is to specify the “duties and obligations of persons under the fixed constraints of human life” (Rawls 1999a, 216). One of those fixed constraints would seem to be childhood. Indeed, childhood is one of the most certain experiences in a human life; while we will not all reach old age, and some will not reach adulthood, we all came into the world as children. Nevertheless, children are largely absent, not only from Rawls’s writings, but from the writings of most leading liberal theorists.

Silence about the nature of justice for children and the content of their fair claims on society is not unique, but part of the broader absence of the family from the scope of justice. As feminist critics have rightly pointed out, the family and the care traditionally provided within it – for children, the sick, the elderly, and the disabled, have, until recently, been excluded from our thinking about justice and equality with theorists treating adults as Hobbes suggested: “as if but even now sprung out of the earth, and suddenly, like mushrooms, come to full maturity, without all kinds of engagement to each other” (Hobbes 1966, 109).

Patently false assumptions like this are often used in philosophy and can be justified if they serve to simplify the case at hand, drawing our attention to critical issues isolated from extraneous details that could distract us and clutter our thinking. But, they can also become problematic when they create a distorted picture that draws out the wrong intuitions and leads us astray. Then, when we go to relax the assumptions, bringing the idealized case closer to our own, the theory is at best misleading and at worst must be entirely abandoned.

Consequently, while the exclusion of children from our thinking about justice may have been justified at one point, the task now is to relax those idealizations and bring our theoretical understanding closer to the practical changes faced. Accordingly, the aim of this dissertation is to just that. In particular, I will focus on three questions: (1) How are children excluded from the liberal understanding of justice? (2) What kinds of additions and modifications are necessary to include children in liberal thinking? And (3) How can we address the distinctive policy considerations raised by children? My responses to these questions are, for the most part, freestanding, such that the chapters can be read separately; later arguments do not necessarily presuppose the conclusions of earlier ones. Rather, the thesis is unified by a concern for understanding the implications of children's status as vulnerable and developing human beings for a broadly Rawlsian approach to justice.

In highlighting the absence of children from liberal thinking, and in particular, liberal thinking on distributive justice, I do not mean to imply that there has been no discussion of children in the wider moral and political dialogue. Dependency has been a defining issue in feminist writing on justice (see, for example, Noddings 1984, Okin 1991, Kittay 1999, Held 2006). This work has shed important light on the nature of dependency relationships, their political significance and the difficulties they pose for liberal political theory. Notably, Alasdair MacIntyre's recent work *Dependent Rational Animals*, provides one of the most systematic treatments of the significance of dependency for our political and social organization (1999). These arguments, however, have been advanced largely from the perspective on those providing care, e.g. mothers, and not from those being cared for, e.g. children. The significance of children's development has also received attention around the question of what is required for a liberal education, i.e. what kind of education is required if

children are to become fully participating adults in a liberal democracy. While fruitful, this focus has left other aspects of children's development virtually untouched (see, for example, Barry 2001, Gutmann 1987). Finally, there has been an increasing interest in the question of children's rights from a theoretical and practical perspective (see, for example, Archard 2004). This body of work has made significant contributions to our understanding of the challenges raised when integrating children into our political thinking and how we should begin to think about the content of their claims. Accordingly, my work does not pretend to start afresh, but rather aims to build this existing work by integrating some of its insights into current approaches to distributive justice.

How are children excluded from liberal thinking?

In looking at children's exclusion from liberal thinking, I take John Rawls's arguments for the nature of a just state as my starting point. Rawls's arguments have been foundational to contemporary approaches to distributive justice and placed the social contract tradition at the center of that thinking. However, this approach to justice also faces difficulties when we try to extend the approach to children. As a liberal account, Rawls's arguments give individual judgments about the good and what will promote one's interests a central place in the arrangement of a just state. Respect for an individual's distinctive conception of the good shapes his arguments for the content of citizen's claims, (to so-called "social primary goods"), the scope of those claims, as well as his approach to justification. For example, in the Original Position, participants must reach agreement about the basic structure of society for individuals who have a comprehensive conception of the good, but remain ignorant about what those conceptions in fact are.

This deference to an individual's conception of the good life is not viable in the case of children. At least for the vast majority of childhood, children lack an authoritative understanding of their good, so it is unclear how we should choose in matters affecting them. While Rawls takes a number of steps that could be taken as attempts to address this gap, I argue in the first chapter that ultimately, children remain excluded from his account.

A central reason why his approach falls short is that Rawls fails to recognize that children's interests are significantly different from those of adults. The account of adult interests that he uses, including the list of primary goods and the thin theory of the good, is both too broad and too narrow for the case of children. It is too broad in that children's interests consist not in all-purpose resources that can be used to advance their particular plans, projects and conception of the good, but rather in those goods that are directly useful to them, such as food, clothing, shelter, education, and relationships with others. Second, the account is too narrow as it fails to recognize the distinct interests that children have in virtue of their development and dependency. For example, they have a fundamental interest in developing into adults who can intelligently form and pursue a variety of aims in life, participate effectively in society and live on good terms with others. Accordingly, regardless of the ends that a child comes to have in adulthood, they have a fundamental interest in being educated, in developing their skills and talents, and in developing an authoritative understanding of the good. Similarly, as dependents, children have a fundamental interest in being cared for, that is, in having intimate relationships of a particular sort with specific adults.

I conclude that an essential first step towards recognizing children's standing in a broadly Rawlsian approach to justice is to develop a more robust, objective understanding of children's good that recognizes the distinct nature of their interests and that can serve as the basis for public justification.

How can children be included in our understanding of justice?

In the subsequent three chapters, I begin to explore the kinds of additions and modification necessary to more fully integrate children into a liberal approach to justice.

The most pressing modification called for by the analysis of Rawls's argument is a robust and objective understanding of children's interests. I begin to develop such an account in chapters three and four. In particular, I argue that children's claims are best captured by the concept of "need." While the concept of "need" carries significant moral pull, it has not played a central role in many recent theories of distributive justice. Critics charge that the concept is vague, and as a result is either construed too strongly, giving too many claims increased moral weight, or too weakly, circumscribing too narrow a category of goods to adequately capture our distributive obligations. In response, I offer an account of politically salient needs as those claims that identify necessary means to essential ends.

A distributive response to needs is particularly well suited to address children's claims because they are (1) objective; (2) concerned with the achievement of particular ends; (3) sensitive to the role that relationships with others play in a child's life. Interestingly, this shift towards needs for populations such as children is suggested by Rawls as a strategy that might be used to extend his arguments to

populations that have significantly different interests from those that he recognizes in his argument (Rawls 1982, pp 168 note 8).

In the subsequent chapter, I go on to develop this account of children's needs by identifying key aspects of their needs and proposing an initial list of children's politically salient needs. In particular, I argue that children's needs must respond to two distinct but intertwined perspectives: the needs related to the goods of their lived experience and the needs they have in virtue of the adults that they will become, that is, their developmental needs. The challenge for a liberal theory is to specify these needs in a way that remains neutral between different conceptions of the good life. I argue that this challenge can be met if the state identifies children's needs at a high level of generality. Identified as such, needs can be the subject of agreement between reasonable people holding diverse conceptions of the good life.

Nevertheless, specified at this level of generality, the list is also an inadequate to response to children, whose needs are very specific and context dependent. I argue that this precise specification of children's needs should be left up to their carers. The nature of caring relationships is such that the carers need to be given space to act on their conception of the child's good. For such relationships often involve detailed knowledge about the particular child being cared for, a profound dependence on the carer, a bond of trust between the carer and child, and inspired effort on the part of the carer on the child's behalf. The requisite attention, trust, and commitment require the carer to be free (within reasonable limits) to work towards the child's good as he or she sees it. Importantly, it is not only children's parents who engage in this act of caring, but also the communities to which a child belongs. To the extent that these communities care for that child, they also have a central role in specifying what that

child's needs are. This approach weakens the traditional dichotomy between the family and state, recognizing a wider array of parties not only have a stake in children's lives, but contribute or detract from that child's flourishing.

In the fifth chapter, I turn my attention to children's development and begin exploring its significance for the nature of their claims. Throughout contemporary liberal theory, the development of children's talents and (dis)abilities has been excluded from the scope of distribution through a collection of biological assumptions iconically referred to as the "genetic lottery." According to these assumptions, each individual's share of talents and (dis)abilities is determined at conception in the moment that the individual's genetic composition is set. These assumptions play a foundational role in structuring the distributive principles of John Rawls and other liberal egalitarians. In particular, Rawls and others use them to exclude talents and (dis)abilities from the scope of distribution.

I argue that when we examine these assumptions in light of our best understanding of the role of genetics in development, it is not justified to exclude talents and (dis)abilities from the scope of distribution. While genes constrain developmental outcomes, the nature and extent of those constraints can only be established through empirical investigation of individual traits. As a result, it is not possible to categorically distinguish between the kinds of goods subject to distributive principles on the basis of a supposed origin in a genetic lottery.

How can we address the distinctive policy considerations raised by children?

In the final two chapters I begin to look at some of the distinctive policy questions raised by children. In particular, I focus on two areas: (1) the scope of individual

responsibility and permissible paternalism and (2) the fair distribution of risk between children in society.

In chapter six, I turn to the first of these questions, using the case of the proposed tax on sugar-sweetened beverages. This policy would not only target children, but touches on one of the first choices that children are allowed to make for themselves, namely what they eat and drink. I suggest that the case raises questions about how children's gradual development interacts with the value of their opportunity sets, which in turn influences the scope of permissible paternalism and their responsibility the choices they make. Building on Alex Voorhoeve's Potential Value of Opportunities View, which in turn builds on Scanlon's Value of Choice View, I argue that we ought to take a child's development into account in two ways when valuing their opportunities. First, the developmental consequences of having opportunities for choice must be considered. Second, the child's gradually emerging rational capacities should be considered in much the same way as an adult's disposition of choice, i.e. as a characteristic of the individual that makes it more or less likely that she will choose well. In general, the younger a child is, the less capable she is to deliberate and make good choices, and so the more concerned we are with the outcomes of her choices, rather than the value of the opportunities presented to her. However, as the child ages, we become increasingly concerned with providing her with opportunities that encourage her to develop good dispositions of choice and a sense of responsibility. This gradualist strategy lays the groundwork for a more nuanced approach to determining both the scope of permissible paternalism in children's lives as well as children's responsibility for the choices that they make.

In the final chapter, I turn my attention to policy questions surrounding the fair distribution of risk amongst children. In the case of adults, risks are often considered fairly imposed on an individual when they are the result of individual choice. For reasons discussed throughout the dissertation, however, this approach cannot be extended to children. Recently, questions about what should be done instead came to the fore in the context of research ethics and the case of *Grimes v. the Kennedy Krieger Institute*. Specifically, the case raises concerns about the permissibility of preventive research involving children. I argue prevention is critical to children's health, and so it is important to recognize these potential benefits when evaluating research. In order to recognize the potential benefits that research into prevention presents to participants, it is often necessary to index the baseline from which risk and benefit is evaluated to the risks actually present in the participant's life, or adopt what I refer to as a "relative risk standard."

These standards raise concerns about exploitation as the potential risks and benefits posed by the research project will vary depending on the risks already faced by the study population. Some have argued that this situation is unfair as it condones research that offers inadequate benefits, or poses higher risks to some simply because they are worse off to begin with. In this chapter, I argue that concerns about exploitation on a relative risk standard can be allayed. A relative risk standard in research into preventive interventions is permissible when three conditions are met: (1) the risk being addressed by the research intervention is likely to mitigate a risk that has a demonstrable relationship with some adverse health condition; (2) all children stand to benefit from their participation in the research and the intervention aims at reducing a risk that the children face independently of their participation in the study so that any harm experienced by the participants is an unintended side-effect

of actions aimed at reducing the risk under study; and (3) there is no superior method of risk reduction with net clinical relevance to the participating population.

Throughout the dissertation runs the argument that children should be taken seriously as distinct subjects of political concern. Doing so, however, requires that we fully engage with their dependency and thoroughgoing development. Recognizing these characteristics in our distributive approaches calls for significant revisions of and additions to leading liberal positions. This work begins to explore some of those implications and in so doing hopes to make a contribution to our understanding of the nature of children's claims.

2. Children Behind the Veil

Children should be counted among those who are typically excluded from the deliberative processes and agreements defining a just state within the social contract tradition. Accounts of justice within this tradition argue that just arrangements are those that result from the agreement between parties. But what about those who do not or cannot participate? The outlier problem asks how we should understand the status of these individuals. Different social contract accounts generate distinct outlier problems, but women, historically disadvantaged minority groups, and those with mental and physical disabilities have fallen into the outlying population on at least some classic approaches to social contract theory (Williams 1991; Pateman 1988; Mills 1997; Nussbaum 2007; Kittay 1999).

Children are also excluded. However, their exclusion has received relatively less attention. While they share many of the characteristics of other outlying populations such as those with reduced rational capacity and dependency, they are different because we were all children. This fact has been taken to change or eliminate the difficulty all together. Over the course of this chapter, I will explore the place of children in a contemporary example of social contract theory: John Rawls's *A Theory of Justice*. Ultimately, I will argue that the account cannot accommodate children. Understanding why and how it fails will, I believe, point towards the kinds of modifications necessary for any account of justice that aims to bring children within its reach.

The Outlier Problem

The social contract tradition is motivated by the intuition that just arrangements in society are those that can be the subject of agreement between participating parties (Freeman 1990, 122-157). Accordingly, this approach places significant justificatory weight on the concept of agreement – a system is just to the extent that it can be agreed on by those subject to it. How this agreement should be understood varies between accounts, but it is characteristically conceptualized in terms of an idealized contracting or bargaining situation in which the parties must reach agreement on the principles governing the organization of society, i.e. on the principles of justice.

The claim made by these theories is that to the extent we identify with those in this hypothetical contracting situation and see the parameters of that context as fair and legitimate, the justifications offered and the resulting principles of justice are applicable not only in the hypothetical context, but to us as well. In relying on critical similarities between participants in the contracting situation and those to whom justice applies, this strategy places significant weight on the description of the parties involved. Most notably, it limits the scope of the resulting principles to those individuals who are sufficiently like the parties in the contracting situation, potentially leaving some as outsiders to the system of justice.

John Rawls's seminal arguments revived the social contract tradition in contemporary thinking about justice. As he recognizes, the account generates a substantial outlier problem for individuals with significant physical and mental disabilities. The exclusion of this population from his account is explicit and

purposeful; Rawls argues that it is necessary to abstract away from these permanent and significant disabilities to achieve a “clear and uncluttered” view of the demands of justice, and that considering the disabled “can distract our moral perceptions” (Rawls 1993, 20; Rawls 1999a, 84). On their own, such idealizations are not necessarily problematic, particularly if they help us to identify important intuitions. They only become problematic if they are distorting to the ultimate account, or if relaxing them to more readily address actual circumstances requires fundamental alterations to the theory that change what it says not only about the new cases, but also about the *central case* of healthy, fully functioning adults.

Critics argue that Rawls’s account faces both of these problems in the case of the disabled. For one, they charge that Rawls’s assumption that agreement is for mutual benefit not only excludes the disabled, who could be seen as “net takers” from the system of social cooperation, but also distorts the grounds for cooperation in society (Becker 2005). Second, relaxing these assumptions and including the disabled in the account results in fundamental changes to how we understand the content and representation of interests in the Original Position. Not only are the interests of the disabled notably distinct from those of the fully participating rational adults that Rawls discusses, but it is unclear how those distinct interests could be represented in the Original Position, particularly in the case of the mentally disabled who cannot, even in principle, participate in the deliberative process (Nussbaum 2007).

While they share many characteristics with these other outliers, particularly the disabled, the place of children in the social contract tradition has received relatively less attention. Children are dependents who cannot yet cooperate in or contribute to the systems of social production. At least as very young children, they

are also unable to identify their interests and so represent them in a deliberative process, even in principle. At the same time, there are important differences between the situation of children and the situation of other outliers such as the disabled. For example, while we will not all become disabled, we were all children. Moreover, children are developing. For the vast majority of children their capacities are expanding such that they will acquire the capacities assumed by the contracting situation in due time.

That childhood is a common experience has been taken by some to secure the place of children in Rawls's account, or at least to open his account to a straightforward extension to this population (for example, see Stark 2007, 127-145; Daniels 1988; Blustein 1982). For given that we all had needs as children that had to be addressed for us to develop into the adults that we are, it would be in our (adult) interest to design a society that would meet those needs (Stark 2007, 127-145; Daniels 1988). Rawls also implies that his account addresses children, maintaining that this account of justice applies to individuals over the course of a complete life, which would necessarily include childhood (Rawls 1999a, 110). Moreover, children are not explicitly excluded, as was the case for the disabled. Rather, Rawls makes a number of statements that might be taken to extend his arguments to this population. In particular, the just savings principle, the description of parties in the Original Position as heads of households, and his so-called principle of paternalism could potentially be read as individually or collectively securing children an appropriate place within Rawls's account of justice (Blustein 1982). The question I will consider over the course of this chapter is whether, so interpreted, these efforts succeed.

What Is The Basis of Children's Moral and Political

Claims?

Before we move on to consider the place of children in Rawls's theory there is an initial worry to address. Namely, what is the basis of children's moral and political claims, and what kind of political standing does this foundation provide for children?

Here we are primarily concerned with children's political standing and how it compares with the standing of adults in society. Foundational to an adult's political claims is the belief that they all stand as equals in society. On Rawls's account, this equality is an expression of man's common dignity, a dignity that they possess in virtue of their capacity for reasonable and rational choice. It is their rationality that allows individuals to become authors of their lives, choosing and pursuing projects in line with their evaluation of the ends. And, it is this rational capacity in conjunction with their reasonableness that gives them a capacity for a sense of justice and the ability to participate in the reciprocal and mutually beneficial associations of a just society. Not only are rationality and reasonableness the characteristics grounding our human equality, they also give political equality a determinate content as respect for these capacities (Rawls 1999a, 441-449).

Children possess neither of these capacities, but rather are in the course of developing them. As infants they are clearly not rational. Particularly as very young children, they do not have rationally considered preferences, projects, aims, or goals. They cannot form or revise a conception of the good, or choose and evaluate ends. As the child develops and matures, her rational capacity also emerges until at some point, most likely before the legal age of maturity, these judgments will reach the requisite

integrity. There will be fuzziness around the edges of childhood. Not all children will develop an authoritative rationality at the same time, nor will they develop this capacity at the same rate, and there will be some children who never develop it. At this point it is unclear what precisely distinguishes this young but authoritative rationality and judgment from those that are still immature¹. Despite this fuzziness, it is clear that for the great majority of childhood, the child's rationality has at best limited authority.

Children's developing rationality and their emerging moral sense put them in a precarious position in liberal theory. If rationality is the grounds of our common human equality and children are not rational, on what grounds are they equal? And what kinds of claims does it support?

Consequently, children seem to present a stark choice between our common sense moral intuitions about children's status in our moral and political world and the belief that human rationality underlies equality. When faced with this conflict, there are two options. On the one hand, we could weaken the conditions of equality. This could be accomplished by either (i) recognizing that rationality is one reason among many for extending considerations of moral equality or by (ii) reinterpreting the rationality requirement so that it can encompass children. On the other hand, we could simply revise our judgments about children's equality and argue that their reduced rationality does in fact give them a different, but not equal status (Singer 1993).

Rawls seems to suggest that it is children's equality that must be preserved.

He argues, for example that:

¹ For an interesting perspective on this question see Schapiro, 1999

“the minimal requirement defining moral personality refers to a capacity and not the realization of it. A being that has this capacity, whether or not it is yet developed, is to receive the *full protection of the principles of justice*. Since infants and children are thought to have basic rights (normally exercised on their behalf by parents and guardians), this interpretation of the requisite conditions seems necessary to match our considered judgments” (*ital added* 1999a, 445-446)

And similarly, he argues that *all* family members are guaranteed the basic rights and liberties secured in his account of justice:

“political principles do not apply directly to [the family’s] internal life, but they do impose essential constraints on the family as an institution and so guarantee the basic rights and liberties, and the freedom and opportunities, of *all* of its members. This they do, as I have said, by specifying the *basic rights of equal citizens* who are members of families” (*ital added*, 1999a, 468)

Accordingly, Rawls suggests that children fall within the scope of equality, and to secure this equality, he intimates both of the approaches noted above. First and foremost, he weakens the condition of rationality, arguing that it is rational capacity, not its active expression that grounds equality for persons. This potentiality is such that it “is ordinarily realized in due course” (Rawls 1999a, 442). Moreover, he suggests that the threshold set by the condition is set so low that there has never been any group of humans who lack this attribute (Rawls 1999a, 443)². Second, he argues that while our rationality is a sufficient condition for being considered an equal, we should be hesitant to view it as a necessary condition. For given that the requisite rationality is possessed by the overwhelming majority of humans and the judgments involved in assessing one’s rationality so intrusive and potentially disrespectful, there are strong pragmatic reasons for extending equality to all (Rawls 1999a, 443).

² Although his own explicit exclusion of those with severe mental disabilities suggests that he does not hold this position consistently.

Consequently, while it is rationality that explains human equality, Rawls argues that the condition of rationality ought to be interpreted quite liberally, both as a capacity and as a sufficient condition. These positions open the door to establishing children's equality on a Rawlsian approach and suggest that Rawls himself saw his account as including this population. On their own, however, these arguments provide a tenuous foundation for children's equality (Singer 1993).

For one, Rawls's potentiality argument for extending the scope of justice to children seems ad hoc, introduced merely to square his account with our moral intuitions. Nevertheless, it fails to clarify either the justification or content of that equality (Singer 1993, 19). Moreover, children are different from adults, a difference that is grounded in their developing and dependent nature. These considerations reasonably alter their standing in society in important ways, which Rawls's arguments do not address. For example, children are often thought to have restricted liberties and limited rights to political participation, such as the right to vote, whereas other rights, such as a right to protection and care may be broader. Second, if children are different and have distinct rights or claims because of those differences, what rights do they have and on what grounds?

While these are significant issues, I am going to put them to the side for the time being. For the purposes of this thesis, I will assume, as Rawls appears to, that children have significant political claims, but not take a stand on the basis of those claims or the question of whether those claims are claims of "equality" or something else. Rather, my focus throughout will be on developing a deeper understanding of the nature of those claims. My hope is that a better understanding of the kinds of claims that children make on a political society, and how they differ from the claims of

adults, is not only valuable in itself, and will also lay the groundwork for a more comprehensive look at their basis, and the question of children's equality in the future.

Children in the Original Position

At the core of social contract arguments is a belief that the legitimacy of social rules and institutions depends on them being freely and publicly acceptable to those subject to them. The nature of the agreement required varies widely between different social contract arguments. Ultimately, however, they are all described in terms of some process of practical deliberation that serves to justify the legitimacy of the principles. Consequently, at the heart of the argument is a description of that deliberative process, which Rawls animates through his account of the Original Position. The deliberative process that takes place in this context can be characterized in terms of three major considerations: the description of the parties involved, the rational processes involved, and object of agreement.

Description of the Parties

In contrast to other social contract theories, e.g. Hobbes's and Gauthier's theories, Rawls offers a moralized description of the parties in the contracting situation. In particular, the parties are symmetrically ignorant of their individual, and morally irrelevant, characteristics. Specifically, Rawls argues that they are ignorant of their sex, social class and position in society. They are also ignorant of their conception of the good and the particulars of their psychology (Rawls 1999a, 11, 17,

118, 149). Because they are equally ignorant, no individual can exert greater influence than another in the deliberations nor can they bias the outcome of the deliberation in their favor, and in that sense, they are equal. Consequently, it is this constraint that captures, most fundamentally, the intuitions of moral impartiality and equality embodied in Rawls's account (Rawls 1993, 50).

What remains behind the veil determines the considerations that can be used to justify the basic structure of a just society. Centrally, what remains is an idealized conception of the participants characterized in terms of their interests and rational capacities. First, as rational beings, individuals behind the veil are aware that they have a rational plan for life. While they are ignorant of their particular comprehensive or "thick" theory of the good, they know that they have a central interest in protecting their ability to pursue this conception, and so possess what Rawls refers to as the "thin theory of the good." This concern is adequate to justify their interest in the primary goods and their preference for more of these goods to less of them. Consequently, while deprived of most information about their good, participants have enough information that they can rank alternatives and understand that, in general, they are concerned with protecting their liberties, widening their opportunities and enlarging their means for promoting their ends, regardless of what those ends turn out to be (Rawls 1999a, 123).

Second, given that they are ignorant of both their particular commitments in life as well as aspects of their psychology, they are also mutually disinterested. This mutual disinterest does not imply that they are narrowly self-interested, as would be the case in a Hobbes's or Gauthier's social contract arguments. Rather, Rawls's arguments present a decidedly social picture of the deliberative process required to

justify an account of justice. He takes the social nature of reasons as primary, and it is these social considerations that constrain individual interests, rather than the other way around, with pre-existing, individual interests constraining the social agreement reached (Freeman 2007). In this light, their mutual disinterest captures a distinct conception of the reasons relevant to the deliberative process involved. In particular, it is an extension of Rawls's use of moral impartiality to capture the relevant equality behind the veil. It ensures, among other things, that in the deliberative context, there is no reason for any individual to favor another preferentially, but rather, all participants must evaluate claims on their merits, irrespective of who advanced them.

Together, these first two criteria define and limit the individual interests of participants behind the veil as securing their ability to pursue their conception of the good once the veil has been lifted, i.e. that they possess the "thin theory of the good."

Rationality of the Parties

The rationality of the participants is characterized by formal rationality and reasonableness. As formally rational, participants have a consistent set of preferences, can adopt ends, and can advance their ends with consistent means-ends reasoning. However, as merely rational agents, participants lack the moral sensibility that would allow them to engage in a society on fair terms of cooperation (Rawls 1999a, 586). It is this social aspect that is added by the concept of the reasonable. In particular, as reasonable individuals, participants behind the veil are capable of possessing a sense of justice and this fact is public knowledge amongst them. Moreover, they can be assured that whatever principles are agreed to will be adhered to once the veil is lifted.

The Object of Agreement

Behind the veil, the task of participants in the Original Position is to arrive at principles governing a just society, that is, its basic structure. As such, participants are aware that such principles are needed, i.e. that the circumstances of justice will obtain once the veil is lifted. These circumstances describe those conditions under which “human cooperation is both possible and necessary” (Rawls 1999a, 109). Cooperation in society is possible because there is a degree of harmony between the interests of individuals in society such that working together will lead to a better life for each. However, cooperation is necessary because there may be conflict between the interests of individuals and disagreement over their conceptions of the good. Once the veil is lifted, partiality will again be introduced and individuals will care more about their own interests and the interests and projects of those dear to them than about the projects of a citizen with whom they have no special ties. Accordingly, there may well be conflict over how resources should be used and how the benefits of cooperation should be distributed once the veil has been lifted. It is the function of the principles of justice to constrain the potential conflict by setting the terms of social cooperation and establishing the bases of public justification.

The Anomaly of Age

The Original Position does not describe an egalitarian society but rather gives expression to the core intuitions of equality, freedom, fairness and respect that must be manifested in any such account. Equality is expressed through the symmetrical ignorance of the parties, which ensures that no participant is favored in the deliberative process because of the contingent characteristics of their situation.

Respect is shown to participants by “treating them in ways that they can see to be justified” (Rawls 1999a, 586). Fairness is ensured through the common recognition of public standards of justification.

When we turn our attention to children, however, we encounter a problem. Behind the veil, age is anomalous. It appears on none of the lists of characteristics obscured by the veil (see, for example, Rawls 1999a, 11, 17, 118, 149). Not only is age not obscured, but Rawls also makes comments suggesting that participants are aware that they are adults. Most notably, the description of parties behind the veil characterizes them as contemporaries who are fully rational and fully participating members of society. These contemporaries can be of any age, so long as they are of the “age of reason” (Rawls 1999a, 126). Rawls refers to this assumption as the “present time of entry assumption” (Rawls 1999a, 121). He also characterizes them as “heads of household,” which indicates that they are adult members of households, not children.

This knowledge introduces the possibility of bias, and so of inequality, into the outcomes of the deliberative procedure. Rawls is aware of this possibility and notes that in the Original Position, age is anomalous (Rawls 1999a, 121). That participants know that they are not children presents two challenges to the equality secured behind the veil. First, participants know that they are adults; they know where they fall in the lifespan. Second, participants know that they are all of the same generation. Both pieces of information introduce the possibility of bias. As Rawls cautions, they could fail to make sacrifices, declining any responsibility to save for posterity (Rawls 1999a, 121). But, they could also fail to curtail their own interests for those children. They could fail to develop life plans and projects that would

support the development of children. Similarly, as a society, they could fail to create and invest in the institutions that ensure the care and development of children.

Rawls recognizes and takes steps to guard against the potential bias introduced by not obscuring information about age. In particular, he introduces three elements that each could be seen as responding to the challenge of age. The first two elements are modifications that he makes to his description of the Original Position, a constraint and a motivational assumption. The constraint is that while participants are contemporaries, the participants do not know what *generation* they fall into. They could be born in the present generation that they know, a generation 15 years ago or in generation born 100 years from now. Accordingly, they have no way of telling whether their society is poor or relatively wealthy, largely agricultural or already industrialized (Rawls 1999a, 154). Second, he assumes that representatives in the Original Position are *heads of households*. Importantly, the assumption is not intended to introduce any obligations to third parties, children or otherwise. Rather, the heads of household is what Rawls refers to as a *motivational assumption*, indicating that the individuals are disposed to act so as to further the wellbeing of their descendents (Rawls 1999a, 111). The third element that could be seen as responding to the challenge presented by children is his discussion of paternalism, which guides decision making on behalf of those who lack authoritative rationality, such as children. Ultimately, I will argue that these modifications individually and collectively fail to secure the position of children and hence fail to recognize the place of children in a just society.

The Just Savings Principle

The Just Savings Principle is Rawls's most direct response to the bias introduced by present time of entry assumption and is a direct response to participants' knowledge that they are all of the same generation. Rawls acknowledges that this awareness introduces bias. But the bias he is concerned with is not towards children per se, but rather, towards future generations. Accordingly, it addresses fair rates of intergenerational savings, and not the nature of existing children's fair claims (Rawls 1999a, 121).

The problem of savings refers to the challenge of fairly distributing the burden of capital investment and accumulation necessary to raise the social minimum and improve the standard of living for everyone. Necessarily, this development cannot be a reciprocal process; earlier generations could never benefit from the fruits of their labor realized by later generations. It is a multi-generational project, requiring that each generation both preserves the achievements of past generations and contributes their fair share to the continued development of society.

As representatives of continuing family lines, participants will be motivated to take into account the interests and needs of their descendants, particularly their most immediate descendants. From this perspective, Rawls argues that the task of participants is to determine what a fair rate of savings would be. For example, they may imagine themselves to be fathers and from this perspective "ascertain how much they should set aside for their sons and grandsons by noting what they believe themselves entitled to claim of their fathers and grandfathers" (Rawls 1993, 256). The rate decided on should reflect the increasing fortune of the society over time, and

aim at determining a fair rate of accumulation. The rate of savings will change as the wealth of society changes. As society becomes wealthier, there will be an increased ability to set aside funds for savings. This increase in savings only continues for a period of time. Once fair and just institutions have been established, and “all the basic liberties effectively realized, the net accumulation asked for falls to zero” (Rawls 1982, 255). At this point, the obligation to increase savings drops away, and only remaining obligation is to maintain the institutions that have been established.

The just savings principle defines the interests of future generations in terms of savings and capital accumulation in society. It secures these interests by introducing two elements in the basic structure. First, it establishes a principle of time neutrality such that participants are indifferent between benefits obtained now and those obtained in the future. Second, it grounds a principle of non-reciprocal cooperation over time. While important, these concerns are inadequate when we consider the interests of participant’s most immediate descendants, namely their children.

The claims of these existing children concern not just, or even primarily, the accumulation of wealth over generations. Rather, these children are concerned with being cared for and raised and with receiving adequate education. Yet on these issues the just savings principle is silent, and consequently, it is inadequate to secure children’s representation in the Original Position.

In other words, the just savings principle fails to address how we should balance the interests of children with those of individuals in other phases of their life who live alongside those children. As with most cases of justice, these questions arise when the interests and claims of these groups compete over limited resources. These

circumstances might arise, for example, when deciding how much to invest in new schools or day care facilities. Alternatively, they arise when a society must decide how much to invest in preventive medical services, which primarily benefit children, and how much to invest in acute care services, which primarily benefit the middle aged and elderly. It is questions like this that the just savings principle fails to address, and where the challenge of children's political claims are most pressing.

The just savings principle is the only consequence of the present time of entry assumption explicitly discussed by Rawls. This is surprising. When he first introduces the principle, he emphasizes that these motivations will be strongest toward our "most immediate descendants" (Rawls 1999a, 111). Yet also for these cases that the just savings principle is most clearly inadequate.

The Heads of Household Assumption

Rawls's silence on issues of children is not isolated. He is virtually silent about all issues that involve the family, saying only that the representatives in the Original Position should be understood as heads of households. This silence is justified, he suggests, because there is simply nothing further to be said. A theory of justice is concerned with the basic structure of society. Beyond the broad principles for social cooperation agreed to in the Original Position, it should not be concerned with the norms guiding personal associations within the institutions established (see, for example, Rawls 1993, 468; Rawls 1999a 7, 47, 70, 484). The treatment of children within families is a matter of such personal associations. It is internal to the family and so outside of the remit of justice.

His silence over the family, and more specifically regarding children's treatment, is also motivated by deference to the carer when it comes to the child. How a child is represented politically is something that should be dictated by the head of household representing them. If the head of household cares for her children, as Rawls assumes they do, i.e. it is natural part of human psychology, then, clearly, she will advance their interests in the Original Position (Rawls 1999a, 111, 255, 470). Nothing further is said about how she will or should understand or advance those concerns because this will be a deeply personal matter, motivated by her particular understanding of her good and the good of her child. As such, it is not a matter for political theory, but an issue internal to the family and individual.

Rawls expresses this attitude in his response to critiques that he inadequately addressed justice within the family. He emphasizes that how parents raise their children is not a political concern, but a private matter that society neither could nor ought to interfere with:

“These principles [of justice] do not inform us how to raise our children, and we are not required to treat our children in accordance with political principles. Here those principles are out of place. Surely parents must follow some conception of justice (or fairness) and due respect with regard to their children, but within certain limits, this is not for political principles to prescribe. Clearly the prohibition of abuse and neglect of children, and much else, will, as constraints, be a vital part of family law. But, at some point society has to rely on the natural affection and good will of the mature family members” (Rawls 1993, 470)

In light of these comments, one possible response to children's absence is that their interests are not a concern of justice, but a matter internal to the family. Accordingly, they are already being addressed through the positions advanced by the heads of households. No further discussion is given to these issues because no further comments ought to be made. It is a private matter.

Rather than including children within the sphere of justice, however, this approach merely distances them, and the family, from it. Rawls is not alone in separating the family from questions of justice. As feminist critics have pointed out, the family has been excluded from considerations of justice throughout the social contract tradition (Kittay 1999a; Okin 1979; Okin 1989; Held 2006; Young 1990). These critiques, however, have been offered from the perspective of women within families. They have raised concerns about whether or not the “heads of households” behind the veil can be female, questioned the justness the family institution, and the legitimacy of Rawls placing the institution of the family behind the veil, and so not making it the subject of deliberative agreement like other just social institutions are. These critics have much to say about the exclusion of children from constructivist approaches to justice. Children, like women, are acutely affected by the structure of the family and its place in society. However, children are impacted by the exclusion of the family from the scope of justice in ways that women are not. For example, participants do not know their sex behind the veil, but they do know that they are not children.

Consequently, it is important to distinguish between these two populations and consider consequences of the heads of household assumption specifically from the perspective of the child. In particular, I will present two concerns. First, the heads of household assumption makes children’s position in society contingent on unclear motivations of the heads of households, a contingency that both distorts and limits political engagement with children. Second, in uniting the interest of the child and carer into a single voice, Rawls violates the separateness of persons, and threatens the equality of both the child and the carer.

On the heads of household assumption, children's representation in the Original Position is secured through heads of households who are motivated to consider the interests of their descendants, particularly their most immediate descendants. But what exactly are they motivated to do? What interests do they recognize? How do they represent those interests that they do recognize? Rawls does not present a clear answer to these questions. In general, he remains silent, presenting the motivation as a bare motivation, disconnected from the individual's particular understanding of the good, any common understanding of children's interests, or pre-existing obligations and duties to third parties such as children generally, or one's own children in particular.

To the extent that he does discuss their foundation, he falls back on parental love for their child as one of the natural facts of human psychology that can be relied on in constructing an account of justice. For example, in the above quote regarding the legitimate privacy of parents in raising their children, Rawls notes that the treatment of children cannot ultimately be specified by justice but that society must rely on the "natural affection and good will" of carers and other family members. Similarly, in discussing children's moral development, which is fundamental to a well-ordered society, he argues that we can assume that children are raised in families and that within these families, we can suppose that the parents love their child (Rawls 1999a, 405). In light of comments such as these, it is reasonable to think that Rawls assumes a natural love of parent for child as part of the basic facts of human psychology, and so part of the information that heads of household would have and could act on behind the veil.

Nevertheless, neither silence nor a naturalized love and affection of a parent for a child are an appropriate account of the motivations of the heads of households in the Original Position. Silence about how the heads of household understand and represent the interests of children leaves the representation of children contingent on how the head of household understands their children's interests and their own obligation to represent those interests. Given that participants are denied any particular knowledge of this sort, they would have to base this judgment on general knowledge about children. However, Rawls says little about what this general understanding ought to be, and as I will argue as we go on, what he does say about our concerns generally, i.e. the thin theory of the good and the primary goods, is inadequate to capture the children's interests.

The supposed love of a parent for their child is also an inadequate guide to the representation of children within the Original Position, distorting the nature of a political concern for children. We do not have political obligations of fairness and equality to children because of the intensity of parental love. It is not because a mother loves her child that the child has a claim to adequate schooling or safe playgrounds. Rather, children have these claims as members of a political society of a certain sort. Moreover, grounding children's claims in a parental love implies that children are relevant to the political process only insofar as they exist in this kind of loving relationship. But, if children have claims in a political society, they have these claims regardless of the kinds of relations in which they find themselves. Indeed, it is often the children who lack loving, caring relationships who are thought to have the strongest claims on social resources.

Children exist not only within the family, but also within the wider political context. It is primarily in this wider context that we encounter the need for justice with respect to children. This relationship between society and the child is distinctly and importantly different from the relationship of a parent or carer with the child, the latter being dominated by the partiality of love and affection, and the former, driven by impartial, or at least less partial, regard for fellow citizens. This contrast is vividly illustrated with the case of voting, say for a school budget. In this context, the society engages with the child, not insofar as he is someone's child, but insofar as he is a member of society. The regard that the voter has for children impacted by the vote should not be shaped by or grounded in the love of a parent for the child, but by the same kind of considerations of justice, equality, and respect that would underlie the political act in any other context. By failing to recognize the importance of an impartial regard for children and their needs in political debate and in the context of justice, Rawls sentimentalizes and marginalizes the place of children in society.

More disconcerting still is Rawls's presentation of these sentiments of parents for their children as a natural and private matter that can be segmented off from political concern. To a limited degree, this is reasonable. Most parents deeply love their children. Raising children is also one of the most deeply personal projects that we pursue in life, and accordingly, it ought to be a reflection of our understanding of the good. As with other projects that are so deeply personal, it should be protected in a sphere of privacy that allows the individual to realize and express her values and life goals. Consequently, I agree with Rawls that political principles should not narrowly dictate or mandate how a parent raises her children.

Yet while I would grant Rawls all of this, it does not follow that the expression of a parent's love for their child, be it in the context of the Original Position, or in relationship between the parent and child within the context of the family can be segmented off from the political sphere. For one, the presence of affection and love of a parent for a child do not remove the need for principles of justice. As Susan Muller Okin points out in her seminal critique of Rawls, even when love and affection guide personal relations:

“it is essential that such higher moral sentiments and action, within the family as well as in society at large, be underwritten by a foundation of justice. Justice is needed as the primary, meaning most fundamental, moral virtue even in social groupings which aims are largely common and affection frequently prevails” (Okin 1989, 29).

Moreover, we must remember that even when these sentiments are present, they are not somehow separate from the political sphere. Rather, when, how, and even if these sentiments and judgments are expressed is highly influenced by the political and social context of the family.

Rawls recognizes and is acutely concerned with these kinds of influences in the case of our wider preferences and behaviors in life presenting it as a central concern of justice. For example, he emphasizes,

“The social system shapes the wants and aspirations that its citizens come to have. It determines in part the sort of persons they want to be as well as the sort of persons they are. Thus an economic system is not only an institutional device for satisfying existing wants and needs but a way of creating and fashioning wants in the future” (Rawls 1999a, 229)

Yet while he stresses this influence in the case of our wider preferences and choices in life, he either overlooks or marginalizes it when it comes to decisions regarding children and families. Nevertheless, these contextual influences are just as

central and formative in regards to our preferences and judgments regarding family and children, as they are other aspects of our life. One need only look at the variation in the treatment of children between cultures and countries and over time to see its import. To varying degrees, these cultures secured children's access to the resources, love and caring needed to grow and flourish. To varying degrees they recognized and valued the important work involved in raising children. While the personal relationship between parent and child may not be a matter of political justice, these preferences should not be seen as outside of, or immune from the wider social and political context. Just as we ought to be concerned about the impact of our choice of basic structure on these wider preferences, so too should we be concerned with the impact of these choices on preferences surrounding the family. Indeed, given the centrality of the family in the formation and maintenance of a just society, perhaps they should be given increased emphasis. In failing to recognize these influences, Rawls not only does an injustice to children but also places an arbitrary limit on the extent to which we can achieve a just society.

Rawls's silence about how a head of household represents their child, and seeming reliance on the natural love and affection in that relationship, is even more troubling given the nature of what he is suggesting that the heads of household do, namely, represent the interests of another in the Original Position. Given children's nascent rationality, some such form of proxy representation is inevitable. But such representation is *always* a risky matter that threatens the separateness of each, and Rawls simply does not adequately respond to this threat.

The representation of children through the voice of the head of household requires that the head of household aggregate the interests of these distinct individuals

into a single voice or representation within the Original Position. This is a dramatic departure from the core assumptions defining Rawls's procedural account of equality. As now, the weighing and balancing of competing interest and concerns is not the result of a public deliberative process between free and equal individuals, but rather a private matter internal to the mind of each participant. It is not governed by the sense of the reasonable secured by rational deliberation, but rather by the particularities of the individual's psychology. The head of household might forego her own interests and allow those of her child to dominate, or might refuse to cede her interest at all and relegate those of her child. Either way, neither the interests of the child nor the head of household are fully and independently represented to the deliberative process in which just institutions are determined. Indeed, through his representation of children, both immediate and those in the distant future, through the single voice of the head of household, he seems to open himself up to the very criticisms he levied against the utilitarian project, namely balancing "the gains and losses of different persons as if they were one" (Rawls 1999a, 25).

The family is not the only context in which Rawls introduces representatives into the deliberative process of the Original Position. In fact, all participants in the Original Position are conceived of as representatives. Rawls maintains that such representation does not threaten the separateness of persons because these (adult) individuals are assumed to have the same interests, namely, the thin theory of the good and the list of primary goods. As a result, representing those interests through a single voice does not compromise the representation of any particular individual's interests. Because of the unity of interests, there is no actual weighing and balancing of interests to be done in the Original Position. The task is simply to determine which principles should be used to guide such balancing once the veil has been lifted and

such conflicts do arise. Because of this unity, the deliberative process can be conceived as occurring in the mind of a single individual. While the reasoning process is still understood as a deliberation, the social nature of deliberation is not to be understood literally, but rather as a rational constraint, reflecting the requirement that principles of justice be justifiable to others and jointly committed to by all of those in society (Freeman 2007).

Children violate this unity. Their interests are not the same as those of a rational, independent adult member of society. As I will argue more extensively in the next section, their interests are not adequately captured by either the thin theory of the good or the account of primary goods. For example, children clearly have a central interest in being cared for – having an intimate relationship with another who ensures that their needs are met. Similarly, as children, they do not have an interest in freedom of movement or occupation, nor does income and wealth serve as the same kind of all-purpose good for them. Indeed, children have little to no ability to use money in accessing the goods that they do want, but are reliant on others to ensure that such all-purpose resources are used to meet their needs.

A unity of interests greatly simplifies Rawls's account. In light of it, the outcome of the deliberative process can be arrived at independently of any actual deliberation by simply answering the question: "Given these interests specified by the thin theory of the good and the list of primary goods, what would be chosen?" The actual deliberative process is secondary because all parties are in agreement. The solution reached by one individual is the same solution reached by 1,000 because they are all thought to have the same interests and reason in the same way. Ultimately,

these simplifications allow Rawls to argue that there is single, determinate solution to the deliberative process independently of actually having such a deliberation.

The plurality of interests introduced by children erases this simple solution as now the solution reached by one individual will not necessarily be the solution reached by many because they do not all agree about what is in their interest. Consequently, there is a need to introduce principles, perhaps in the form of rational constraints on the deliberative process, governing how the balancing is to take place. Given that these principles are precisely what is supposed to be justified by the deliberative process itself, the requirement raises significant challenges.

The heads of household assumption obscures the challenges introduced by children's distinct interests to maintain the unity of interests in the Original Position. In doing so, Rawls maintains the possibility of a determinate solution to the deliberations in the Original Position. But, in doing so, he also sacrifices an adequate representation of either children or heads of household. For, when we recognize that children's interests are distinct, there is actual weighing and balancing of interests to be done. As mentioned above, determining such principles or rational constraints for interpersonal deliberation would generate significant challenges in its own right. However, in placing that task in the mind of a single individual, there is an even greater need to specify explicit principles, as the constructivist approach of introducing rational constraints through the social nature of deliberation is not available.

These difficulties arise from the divergence of interests between children and adults, and more specifically, the divergence between the interests of children and their parents. There is a tendency to overlook the possibility of such divergence when

dealing with parents and their children. Quite often, the concerns of children and their parents are conflated. The child is presented as merely an extension of the parent, not a distinct individual. In certain cases, this is not particularly problematic as the interests of the child and the parent coincide. The parent may have no interest in the issue on her own (except for a second-order concern for the child's interests), or her interest and the interest of her child happen to coincide.

However, such overlap is by no means necessary, and it is these cases of conflict between the interests of distinct individuals that raise questions of justice (Rawls 1999a, 4). It is also precisely these cases that are obscured on the heads of household assumption. Admittedly, intimate dependency relations such as those that exist between a parent and child are one place where the individualistic assumptions of liberal political philosophy are most clearly problematic. Nevertheless, for distributive purposes, it is even more distorting to overlook the fact that there are ultimately two or more people involved.

This divergence in interests significantly complicates the task of the head of household, and more generally, the deliberative process modeled in the Original Position. For one, it introduces the challenge of how we are going to understand the interests of children in the Original Position. However, in recognizing their interests as distinct, we sacrifice the unity of interests that had existed between participants in the Original Position for a plurality of interest that recognizes the distinct needs of children in society. The unity of interests in the Original Position is critical to Rawls's argument as it is this unity that allows for a determinate solution to the deliberations that take place behind the veil. The plurality introduced by recognizing the distinctness of children's interests calls that convergence into question, and raises

challenging questions about how we understand the role of the deliberative element in Rawls's constructivist argument, how we understand children's interests, how those interests can be fairly represented in a deliberative process, and what the nature of such a fair deliberation would be.

The Principle of Paternalism

The just savings principle and the heads of household assumption exhaust Rawls's arguments that could potentially secure children's position in the Original Position. However, there is one more context in which Rawls presents arguments that speak to the position of children, namely, his discussion of the principle of paternalism.

The principle of paternalism speaks to how decisions ought to be made when it is necessary to make decisions on behalf of others because of their own compromised rationality (Rawls 1999a, 218-220). It states that as far as possible, the decisions taken ought to reflect the settled preferences and interests of the individual. When this is not possible, either because these preferences are not or cannot be known, the decisions ought to be guided by the understanding of the good found in the Original Position, namely the thin theory of the good and the account of primary goods. In other words, when the individual cannot act for herself and her preferences are unknown, the proxy decision maker ought to act as he would act for himself if his interests were represented only by the thin theory of the good and the list of primary goods.

At one level this principle would seem to be precisely what we were looking for to fill out the heads of household assumption as it provides guidance on how decisions ought to be made for those who cannot decide for themselves, such as children. However, while something like a principle of paternalism will be necessary if we are to represent children's interests in our thinking of justice, the principle of paternalism fails to achieve this aim for two reasons.

The first reason it fails is that the principle of paternalism is not applicable to decisions behind the veil, but rather enters later, as part of non-ideal theory. Rawls argues that participants behind the veil are to think of themselves as fully rational and independent persons, capable of managing their own affairs. As such, they need not consider how to ensure that their good is promoted if they cannot do it for themselves. The need for paternalistic principles only arises later, in the non-ideal context when the account to is applied to the existing contingencies, injustices and inequalities. He says, for example:

“In the Original Position the parties assume that in society they are rational and able to manage their own affairs. Therefore, they do not acknowledge any duties to self, since this is unnecessary to further their good. But once the ideal conception is chosen, they will want to insure themselves against the possibility that their powers are underdeveloped and they cannot rationally advance their interest, as in the case of children, or that through some misfortune or accident they are unable to make decisions for their good, as in the case of those seriously injured or mentally disturbed” (Rawls 1999a, 218-219)

As Rawls explicitly recognizes, children fall within the purview of the principle of paternalism (Rawls 1999a, 215). However, because the principle is not applicable behind the veil, it cannot be used in that context to guide decisions made on their behalf. Rather, the principle is an outcome of that choice situation. It guides proxy decision making only once the veil has been lifted.

In relegating the principles of paternalism to the non-ideal, Rawls further marginalizes children as a concern of justice. In the development of his account, Rawls is concerned with the ideal theory, a theory that defines a perfectly just scheme under conditions of strict compliance and no pre-existing contingencies that would compromise equality. It is a conception of perfect justice under the “fixed constraints of human life ” and is offered as a guide, the golden ring that we strive for in designing and reforming our actual institutions (Rawls 1999a, 216). In contrast, the non-ideal theory addresses the challenge of applying the ideal account to the contingencies, injustices and inequalities in the actual world. As Rawls says, it asks “which principles to adopt under less happy conditions” (Rawls 1999a, 216).

In placing those principles that would guide our decision making on behalf of children in non-ideal theory, Rawls is treating childhood in the same way as the other “less happy conditions of life” that he mentions. This is strange. Childhood is one of, indeed, one of the *most* fundamental, “fixed constraints of life.” Given that it is precisely these fixed constraints that Rawls claims to be addressing in his account, childhood should appear as one important aspect of his account.

The second reason that the principle of paternalism fails to secure the position of children is that it all too quickly lumps the good for children in with the good for all others. Not only does this cursory treatment fail to recognize the distinct dimensions in children’s interests, but it also glosses over other important distinctions within the good of those with reduced rationality. Consequently, even if the principle of paternalism were to be taken as a guide to decisions behind the veil, it would fail to adequately represent the interests of those parties it claims to represent.

In the absence of authoritative preferences, the principle of paternalism maintains that decisions ought to be guided by the account of the good present in the Original Position, namely the thin theory of the good and the list primary goods, or those things that a rational individual would want, regardless of whatever else they may want in life. While this account may suffice for those cases where we are making a decision for an adult who has temporarily compromised rationality, it does not suffice when we consider the other kinds of cases to which we would apply the principle such as those with permanently compromised rationality or, children.

Consider, first, the case of an individual who has a pathologically underdeveloped rational capacity. Here, we cannot be guided by their sense of the good, as it is their inability to develop such an authoritative sense that raises the need for paternalism in the first place. However, the understanding of primary goods as those things that a rational individual would want whatever else he wants is also insufficient. There are some goods, such as the social bases of self-respect that might plausibly extend to individuals in this population. But for other goods, the interests of the fully functioning adult and those of the individual with pathologically underdeveloped rationality will diverge. For example, income and wealth are included among Rawls's list of primary goods. They are included because they can be tailored to the particular resource needs of the individual, and so respect his status as author of his life. For an individual who lacks rationality, prioritizing multi-purpose resources in this way is problematic as the individual lacks the capacity to translate these kinds of all-purpose goods into things that contribute to their lives, such as food, clothing shelter, entertainment, and all of the other goods that income can supply. On the other hand, these individuals also have fundamental interests that income and wealth

cannot secure. Most importantly, as dependents they have a fundamental interest in having a carer who will ensure that their needs are met.

Similar concerns arise when we turn our attention to the child. As above, children do not have authoritative understandings of the good that can to guide decisions made on their behalf. While having such a conception and being able to organize and live one's life in light of it does form a reasonable developmental good for children, these developmental interests are nevertheless distinct from those of an adult pursuing their conception of the good. This is something that I will say more on over the next few chapters.

Furthermore, for similar reasons as those surveyed above, the list of primary goods developed for the case of a fully rational adult participant in society simply does not suffice to guide decisions on their behalf. If we take the bare idea of a primary good as those things that an individual would want, regardless of whatever else they want, the list provided is both too broad and too narrow. Like those with permanently undeveloped rationality, children also have no particular interest in income and wealth as all-purpose resources that can secure a wide variety of goods with which to pursue a life. As children they cannot transfer this general-purpose means into those resources for living, such as shelter and food, which are directly valuable to them. As a result, their interest is not best understood in terms of a general-purpose good such as wealth or income, but in those more specific resources that are directly beneficial. The account is also too narrow failing to recognize the dependency and developmental interests that the child has. Regardless of the ends that a child comes to have in adulthood, they have a fundamental interest in being educated, in developing their skills and talents and in developing an authoritative

understanding of the good. Similarly, as dependents, children have a fundamental interest in being cared for, that is, having their needs assured by another who looks out for them, protects them and sees to their development.

In failing to consider the differences between these cases, at the very least, Rawls indicates that the application of the principle of paternalism to the case of children is not a central concern. In glossing over the distinction between these cases, Rawls also fails to recognize that the account as it stands is inadequate to capture many of the central cases to which the principle of paternalism applies. That is, he fails to recognize that the account of the good guiding paternalistic decisions, namely the thin theory of the good and his catalogue of primary goods, is insufficient for cases of either *developing* or *underdeveloped* rationality. As a result, even if we were to extend the principle of paternalism to the heads of household behind the veil it would fail to secure equality for children as it fails to adequately capture their interests, how the good for them ought to be understood from the perspective of justice.

Conclusion

Children are an integral part of our moral, social and political community, and recognizing that standing would seem to be a condition of adequacy for any viable account of justice. Nevertheless, on one the most dominant, contemporary approaches to justice, namely, those that all in the social contract tradition, children are outliers. This omission is clearly evident in the arguments of John Rawls where the description of parties participating in the contract situation excludes children. Nevertheless,

Rawls seems to suggest that his account can account for children, maintaining that the equality applies to individuals over the course of their entire life. Moreover, he offers a number of arguments that could potentially address the position of children in society: (1) the just savings principle, (2) the heads of household assumption, and (3) the principle of paternalism. While in each of these assumptions and arguments he approaches the question of children's equality, they are neither individually nor collectively sufficient to secure children's place as equals in the Original Position. Rather, in his discussion of these assumptions, Rawls consistently fails to seriously engage with the question of what it is to be a child, and how the position of child, as child can be respected and secured.

3. Needs

Recognizing children's place in a just society requires an account of their interests. In the case of adults, this understanding is supplied, to one degree or another, by the individual's own preferences and understanding of the good. Such an option is simply not available in the case of children. While children should have a say in decisions affecting their lives and future, this input is not decisive. They simply lack the developed rationality and understanding of the good upon which such deference to their wishes would be based. As they develop, their role in these decisions increases. However, until they reach an age of maturity, some form of oversight is necessary. In the majority of cases, it is reasonable to expect that the child's parents will assume that role. As I urged in the previous chapter, however, respect for the authority of carers need not imply that the principles upon which such decisions are made are independent of objective criteria of those children's interests as well as considerations of justice and equality. To defer wholly to the judgment of carers leaves the nature of children's interests too unconstrained. Moreover, the absence of children and a robust account of their interest from our understanding of justice embodies a dismissive attitude that is inconsistent with respecting them as equals.

To develop an account of what justice demands in our treatment of children, it will be necessary to develop some objective standard of children's interests that can serve as a basis for political decisions impacting them. In calling a standard objective, I understand the criteria for appraising the child's wellbeing to be justified by more than the strength of the child's or parent's tastes and preferences for the particular

good. Rather, it is the reasons for a good's desirability that justify their importance. Insofar as the judgment rests on an assessment of *reasons* that a good is desirable and not simply an assertion of the strength of a preference, I take it to be an objective assessment (Scanlon 1998). This sort of approach need not exclude the individual's preferences and particular point of view when determining their interests. These subjective valuations can enter, for example, through an account that places a high objective value on providing the conditions under which individuals can develop and pursue their personal projects and interests. It is simply that the strength of these preferences cannot be the sole grounds of determination.

Over the next few chapters, I argue for such an objective standard to guide distributions to children. In particular, I will argue that insofar as we are concerned with children, this sort of standard is best understood in terms of children's *needs*. The concept of need has been invoked throughout contemporary distributive debates (see for example, Rawls 1999a; Sen 1992; Arneson 1990a; Cohen 1989; Scheffler 2003; Wolff 2002; Scanlon 1975). Nevertheless, the concept of need has not been a central concern of distributive theory, but rather has been invoked to clarify the more central concerns such as primary goods, resources, welfare, capabilities or opportunity.

It is not surprising that the concept of need would enter our moral and political dialogue. Claims of need have a strong and intuitive moral force (Wiggins 1998). The language of needs is used when advancing both public and private interests and claims and is usually invoked to raise the status of the claim by giving it a particular emphasis. In many instances, this emphasis is intended to distinguish the claim of need from those that reflect "mere" preferences or desires. Needs understood in this

way infuse our everyday moral experience; they are “the bread and butter” everyday moral practice (Reader and Brock 2004). A friend needs to talk, so we listen. An elderly man needs help to cross the street, so we offer him a hand. A diabetic needs insulin, so society makes it available to her.

However, this notion of a need is also fuzzy and prone to abuse, and its ambiguity has led some to reject the relevance of needs to moral and distributive dialogue despite their strong intuitive pull (Goodin 1985). As Goodin argues, the concept of a need is in many ways too strong. Satisfying a preference sometimes has greater moral pull than satisfying a need. At the same time, however, needs can also be too weak of a concept to capture our distributive obligations. Goodin argues that this is what happened in the arguments underlying Ronald Regan’s “safety net” reforms and the Elizabethan Poor Laws. In these cases, the concept was given such a tight construal that it cannot possibly capture the extent of our obligations (Goodin 1985, 624).

I believe the ambiguities surrounding the concept of need can be resolved, and once they are, the concept of need does in fact circumscribe an important category of urgent and politically salient claims. In the following chapter, I will go on to argue that these claims are particularly well suited to understanding our distributive obligations to children. Accordingly, the first half of this paper will be dedicated to tying down a determinate concept of need that clarifies its role in our distributive thinking. In the second half of the paper, I will consider that role more closely. I will conclude by considering the relationship between the concept of need that I have presented and Rawls’s concept of primary goods. While he ultimately rejects identifying primary goods with needs, the reasons he gives for his rejection are

illustrative, and suggest why shifting focus from primary goods to needs is particularly important when we turn our attention to children.

Needs

Necessary Means

All assertions of need aim at something or other; the need is *needed for* something. In some cases, such as the claim that “Felice needs to pass the bar to practice law,” the end for which the need is asserted, namely practicing law, is explicitly recognized. In other cases, such as the statement that “Louis needs shampoo from the store” or “Sam needs chemotherapy for lung cancer,” the end is not stated. Nevertheless, in all of these contexts some aim is implied. In the above cases, we might assume that Sam needs the chemotherapy *if he is going to survive the cancer*, and Louis needs shampoo *to wash his hair*. The connection between the need and the end for which it is asserted can be more or less complex. For example, the end for which the need is asserted can vary depending on the context, or it could be asserted for more than one end. John may need money to buy a warm jacket and Alex may need money to pay for his rent and groceries. However, none of this complexity negates the core observation that needs are always end directed; they are always needed for something or other.

In asserting a need we are saying more than simply that something is a means. The claim that Felice *needs* to pass the bar to practice law is not just a claim that passing the bar is a possible route to her end. It asserts something more. In

particular, it asserts that passing the bar is a crucial, perhaps a necessary means to that end.

This feature of needs is highlighted when we consider how a claim of need can be false. For example, Felice's claim that she needs to pass the bar would be false if there were other ways that she could become licensed to practice law. Similarly, consider the claim that "Andrea needs a car to get to work downtown." In this case, we could defeat her claim that she *needs* a car by pointing out that there are many other ways for her to get downtown. She could ride a bike, catch the subway, or walk. To the extent that these alternative routes are in fact possible, then we would have grounds for rejecting her claim of need. In this case, however, what we are rejecting is not the claim that having a car would be a way to get downtown, but rather that this particular approach to achieving the end, viz. driving, is in fact necessary.

This property of needs can be characterized in terms of their *substitutability*. In rejecting Andrea's claim to a car, what we are pointing out is that there are substitutes for a car that would serve her goal of getting downtown. To the extent that such substitutes exist, there is reason to challenge her claim that she in fact has a *need*. The substitutability of a means will often be influenced by the generality of the claim. Above, if Andrea had claimed that she needed transportation, as opposed to a car, the statement would not have been so easily dismissed. At the other extreme, if she had claimed to need a 2004 Ford Focus to get downtown, the statement would have been even less plausible as there is no clear reason why some other car, let alone some other form of transport would not suffice. In short, over-specificity will tend to

make needs statements false by creating viable substitutions whereas generality will tend to make them true.

A more difficult issue is determining when substitutions can be said to exist. Stating that a particular means is *necessary* is ambiguous. In what sense must those means be necessary? Suppose that Andrea lives 10 miles from downtown. In evaluating her need and possible substitutions for a car, we might consider the options of walking, biking and taking public transportation. Assuming that public transportation exists, all of these modes of transport are possible. Yet while they all exist, we might not want to consider all of them viable substitutions. While it may be *possible* (i.e. logically, nomologically) for her to walk 10 miles to work and back each day, this does not seem like a reasonable requirement, and if this were Andrea's only other option to get to work, many of us would agree with her in the assessment that a car was *needed*. In light of these considerations, I would suggest that the standard used to evaluate substitutions is one of *practical feasibility*, or the *reasonableness* of alternatives.

Admittedly, this idea of practical feasibility or reasonableness is vague and contestable, introducing significant contextuality into the concept of a need. In particular, it renders the necessity of a needs claim relative to at least three features of the context. For one, needs-claims will be relative to the *actual possibilities* that exist in that environment. We have already discussed this contextuality above when considering Andrea, who would not have needed a car if there had been a system of public transportation. Second, whether or not alternatives exist will also be relative to the *individual* who has the need. It seems likely, for instance, that what is reasonable for one person is not reasonable for another. While it might be reasonable to ask

someone to walk a mile to work, it might not be reasonable to ask them to walk that mile if they require crutches to do so. Finally, whether an alternative approach is seen as reasonable could be culturally and socially relative such that what is reasonable in one culture may not be reasonable in another.

Whether or not these dimensions establish or throw into question the necessity of particular means to a stated end will be a contestable matter. But so too is the notion of a need. Often when we debate about whether or not a claim of need is in fact a genuine assertion of need or something less, what we are debating about is precisely this issue of reasonableness of possible alternatives. Is it reasonable to ask someone to use one more burdensome means over another less arduous approach to the same end? Is it reasonable to ask someone to walk 5 miles to get clean water? If so, then we would argue that an individual who can access clean water within this distance has her need met. Similarly, if it is reasonable to ask a student to pay for his education, we may agree with the claim that he needs a loan to meet those costs and concede that he needs a scholarship only when loans are not available. Consequently, so long as the fuzziness of “needs” follows the fuzziness around practical feasibility or reasonableness of alternative means, we should not be overly concerned, and it could prove to be an asset in its application.

At this point, in our analysis, however, we need not resolve these issues, as they ultimately will have to be settled in each context through political dialogue. Our concern here is rather with identifying the central features of needs claims. In particular, I have argued that one central feature of a needs claim is to circumscribe necessary means to an end. In calling them necessary means, however, I am not

invoking any modal notions of necessity, but rather, the weaker notion of practical feasibility, which is a contextual and contestable idea.

Essential Ends

The kind necessity identified above cannot vindicate the special status we associate with claims of need. It is still too contingent. While needs may involve necessary means, this necessity is contingent on the ends for which they are sought. If the end is not necessary, then regardless of how crucial certain goods are to achieving it, there would be good reason to say that the individual does not really need those goods. Accordingly, we now ought to turn our attention to how these ends factor into our analysis of needs claims.

As before, we can gain insight into the nature of needs claims by considering how they can be rejected. When evaluating Andrea's claim that she needs a car, we already noted that this statement would be false if the means asserted were substitutable. However, even if we grant that Andrea needs a car to get to work downtown, insofar as a car is a necessary means, the claim of need could still be rejected. It could be rejected by pointing out that while she may need a car to work downtown, she doesn't really *need* to work downtown. Perhaps she doesn't need to work, or perhaps there are equally suitable jobs right down the street to which she could walk. In other words, a needs-claim always invites the further question about the status of the end for which one claims to need certain means. This concern is quite different from the previous consideration, asking for justification not of the means, but of the ends being advanced.

Whenever a need is asserted, this question about the end is invited. Sometimes it deflates the claim exposing it as a spurious need, if a need at all. For example, when Anne claims to need those new Prada shoes to keep up with Sarah, asking her whether or not it is important to keep up with Sarah quickly exposes the frivolity of the claim. While we might agree with Anne that having the shoes is necessary to “keep up,” the aim itself does not engage our moral concern. Nevertheless, there will also be a subcategory of needs in which the response to the question “but do really need *that*?” will arguably be yes. In these cases, not only are the means necessary to obtain the end but, the end itself is has a necessity associated with it. The end itself is needed.

To the extent that we can identify a set of needs that would fall under this description, we have identified a particularly absolute or pure sense of needing. For in these cases, not only are the means necessary for the end, but the end itself has a necessity or particular moral weight associated with it. In these cases, we can identify a sense of needing that has the potential to capture the moral salience we associate with *needs*. David Wiggins refers to this sense of needing as the “absolute sense of need,” and I will adopt this language, referring to these needs as ‘absolute needs’ (Wiggins 1998).

Necessity as a Lack of Volitional Control

But what is it to say that an end is itself necessary? Recent analyses of morally salient needs have emphasized volitional control as the relevant sense of necessity (Frankfurt 1984; Brock 1998). To the extent that the end is under volitional control, we can avoid the harm or the undesirable consequences of not satisfying it through an exercise of the will. Because we can avoid the undesirable consequences

by giving up the end, it is maintained that the claim lacks the special necessity we associate with morally important needs. These cases most often involve voluntary desires. For example, I may acquire a desire to go swimming at the beach tomorrow, and if I am to go, I need a bathing suit. This need however, carries with it no special necessity because it is simply the result of my having (volitionally) formed a desire to go to the beach and could just as easily have eradicated the desire and removed the need. However, not all ends are volitional in this sense. In these cases, in which having the end is beyond our volitional control, the harm resulting from not meeting it is also beyond our control. On these analyses, it is this lack of control over an impending harm that makes an end necessary, and so that makes a need absolute.

For example, Harry Frankfurt distinguishes two such categories of need: constrained volitional needs and non-volitional needs. The categories are delineated according to how the ends relate to the individual's desires. The former captures those needs that will lead to harm only in virtue of an ineradicable desire that the individual has for it; the desire generates the need. In these cases, the desires have taken on a "life of their own" that places them beyond our volitional control. As a result, the harm of not satisfying them is unavoidable. Obsessions fall into this category. For example, Frankfurt presents us with the case of a man "seized by the *idée fixe* that his life will be worthless unless he has a certain sports car" (Frankfurt 1984, 10). For this man, the end is involuntary and the harm unavoidable. Frankfurt claims, that as a result, the need is also morally salient. Note, however, that avoiding harm in this case is more a question of satisfying a desire and less a question of the good sought. If he did not have the desire, he also would not have the need. In contrast, non-volitional needs involve ends that exist independently of the agent's desires for them. I need to drink water, I need to breathe oxygen, and the harm

resulting from my not getting them is independent of my desire for them. Even if I have no desire drink water or to breathe, I will be harmed if I do not (Frankfurt 1984).

In her analysis of need, Gillian Brock agrees with Frankfurt's general analysis, emphasizing the involuntary nature of absolute needs (Brock 1998). But she argues that Frankfurt's analysis is incomplete because it is temporally ambiguous. Needs that are not under volitional control *now* may have been under volitional control at an earlier point, or may in the future come under our control. It is only if a need never was and could never come under our volitional control that it carries with it the special necessity of needing. The heroin addict, for example, lacks volitional control over his need for heroin, and so on Frankfurt's analysis his claim would be accorded the moral weight of an absolute need (Frankfurt 1984, 11). Brock, however, rejects this conclusion. In her view, there is something perverse about giving the addict's claim to heroin any special status simply because he cannot control it now if, he did have control over the end in the past, i.e. he could have chosen not to become addicted. To block conclusions such as this, Brock argues that Frankfurt's analysis should be augmented with temporal modifiers. While the addict may now lack volitional control, at one point he most likely had such control, and can in the future regain that control, say by going through a rehabilitation program. Accordingly, a need is only absolute if it is *currently* beyond volitional control, has been beyond volitional control in the *past* and will continue to lie beyond volitional control in the *future* (Brock 1998).

Necessity as Objectively Valuable Ends

While I would agree with Frankfurt and Brock that many if not all morally important needs are beyond our volitional control, this emphasis on voluntariness

misplaces the justification for the moral significance we associate with absolute needs. Concerns of responsibility run orthogonally to our identification of absolute needs. Neither present volitional control nor volitional control in the past nor the possibility of volitional control in the future invalidates a claim's status as a need. That is not to say that recognizing the possibility of volitional control is irrelevant to our moral evaluation of needs claims. But, what it does *not* do is challenge our assessment that the good is needed. In other words, whether or not a particular harm is or is not under our volitional control is a separate question from whether or not we consider the claim to be a claim of need.

To motivate this argument, consider Maria, a type-II diabetic who is dependent on exogenous insulin. Does she have an absolute need for insulin? She certainly would seem to. She will die if she does not get it, and so if she has any absolute needs, exogenous insulin would most definitely be one of them. Given this *prima facie* evaluation of her need, how should we understand the further information that this is a disease she acquired after being obese for 20 years, and that we can, with reasonable certainty say that if she had not been obese, she would not have developed the disease, and that she might cease to be a diabetic if she lost weight? In light of this information, it would be reasonable to think that at an earlier time she did have volitional control over the need for exogenous insulin; she could have lost weight and improved her diet. Now we might not think that this was in fact something that she had volitional control over. But, on the assumption that she did, I don't think that this information changes our judgment that Maria needs insulin.

A claim of need is a claim of dependency. I need a good if I am dependent on it to achieve a particular end. Absolute needs are statements of extreme dependency,

identifying those goods necessary for necessary ends. Volitional control, past, present or future, does not alter this state of dependency. In this instance, Maria will still die if this particular need is not met, and so if she is to have any ends whatsoever, her need for insulin must be met. Historical concerns about why she finds herself with this need do not alter her dependency on it, and for that reason, they do not alter the fact that she has a need, indeed that she has an absolute need.

Now that is not to say that this judgment of past volitional control or responsibility for having certain needs will not factor into a wider evaluation of the moral force of needs-claims. They may. For example, they might enter when making distributive decisions requiring us to weigh some claims of need against other claims of need. If we only have enough insulin for one person, and there are two people who need it, one who acquired the need through her own volitional acts, and another who was born with it, we might think that the claim of the later is stronger or that fairness requires that we prioritize her need over the other's (Voorhoeve 2008, Fischhoff 1978). This judgment, however, is not concerned with whether or not the individual *needs* the insulin, but rather, what priority these two different needs-claims should have in a fair distribution. These are distinct questions and ought to be evaluated separately.

For similar reasons, the possibility of gaining volitional control over a need in the future also does not invalidate something as being a need *now*. For example, learning that Maria could, by losing weight, also lose her dependency on exogenous insulin would not invalidate the claim that she needs insulin. Even though she can eradicate the need in the future, until she achieves that state, i.e. until she is no longer dependent on exogenous insulin, she will still die without the drug, and for that reason *needs* it. Again as before, her volitional control over the need might still be relevant

when we consider how to prioritize her need, particularly on an extended time frame, but that is quite a separate question from whether or not she has a need in the first place.

What this possibility of removing the need does highlight, however, is that when we adopt this longer timeframe, there are often new *substitutions* to consider as possible means for meeting her need. That is, in recognizing that she could remove her need for insulin in the future by losing weight, what we are recognizing is *not* that she does not currently have a need but rather that over this expanded time-slice possible *substitutes* to exogenous insulin do exist, namely losing weight. In light of this possibility, we might say that when considered over a longer time frame, the question about whether or not Maria needs insulin turns on the question of how reasonable it is to expect her to lose the weight. On this analysis, then, the notion of substitutability is more fundamental in identifying needs than the criteria of voluntariness, which was emphasized by earlier analyses.

At this point I have argued that neither volitional control over a harm in the past nor the possibility of it in the future invalidate the status of a claim as a claim of absolute need. But what about present volitional control? In the above cases of a need for insulin the harm is still beyond the individual's volitional control at the moment of assessing the need. Advancing this argument however, is difficult because as a matter of fact most absolute needs are beyond our volitional control, and this is what we would expect. For when a need is absolute, not only are the ends necessary, but so too are the means of obtaining them. As a result, no substitutes can be found, and without substitutes, there are no alternatives over which to exercise our volitional control. Consequently, in order to see how present volitional control and needing can

separate, we must consider the converse – a case in which the individual lacks volitional control, but in which we are hesitant to label it a need.

Frankfurt presents us with two such cases: the sports car fanatic and the drug addict. In each of these cases, Frankfurt argues that the individuals have a morally salient need because they lack the volitional control to avoid harm. Consider first the case of the sports car fanatic. In the case of the sports car fanatic, the individual is “seized by the *idée fixe* that his life will be worthless unless he has a sports car; and supposes the frustration for the car would be so deep that it would indeed ruin his life” (Frankfurt 1984, 10). Because this desire for the car is beyond his control, Frankfurt argues that it shares in the special priority associated with claims of need. And it shares in this priority because the harm of not satisfying it is unavoidable; no matter what the man voluntarily does, he “will suffer some harm – viz., frustration” if his need is not met (Frankfurt 1984, 9). The case of the heroin addict is similar. The addict has a drive for the drug, and this drive is beyond his control. Unlike the case of the sports car fanatic, the harm is not that of a frustrated desire, but rather, “a more specific condition, which is caused just by the lack of heroin” (Frankfurt 1984, 11). In contrast to the fanatic, this harm is independent of the addict’s desire for the drug. However, in both cases Frankfurt argues that the claims have the special necessity associated with needing precisely because the harm resulting from not satisfying the claim is beyond their control.

In both of these cases, however, the idea that these claims deserve a special moral status is unsettling. Frankfurt concedes this point noting that these needs seem to be “gratuitous or even perverse” (Frankfurt 1984, 10). Nevertheless, he argues that because they are beyond the individual’s volitional control, they share in at least some

of the special status associated with needing. I would challenge this conclusion and argue that in many cases it is precisely the involuntariness of the need that leads us to question their moral significance, and to question whether or not the morally significant claim is to have the supposed need satisfied.

First, consider Frankfurt's fanatic. This time, however, imagine that there are two individuals making claims on the car. In addition to the fanatic, there is also someone who just *really wants* the car, but will not suffer the same frustration that the fanatic will suffer if he does not get it. Perhaps he admires its superior craftsmanship. Frankfurt's contention is that the first individual should be given priority in this context because the harm that the fanatic will suffer is beyond his control, whereas in the case of the second, it is not (Frankfurt 1984, 10).

But, is the pull really to give to the man obsessed? The particular nature of this obsession might suggest a different response. It might lead us to question the authority of his claim that it is a car that he in fact *needs* the car. Is his need really for a sports car or is there something further that is driving this superficial need? And, even if it is for the car, does this claim demand a response from us?

At the very least, the troubling nature of these cases suggests that the lack of volitional control is not all that is behind morally salient claims of need. Consider why we hesitate to label the fanatic's claim a need. It cannot be the object of his desire. Many people admire fancy cars. This hesitancy, rather comes in part from the fact that the fanatic's desire is beyond his volitional control, because it has become an obsession and taken on a "life of its own." Frankfurt claims that this is the very property that gives the claim a special status. I would suggest, however, that it is precisely this property that makes us question whether or not the need is genuine.

Neither the fanatic nor others can make sense of it. He is simply consumed by it.

Because it is so opaque, we might question the true nature of his need – for what end is the car needed, and would providing that car in fact advance that end? The fact that the desire lies beyond the agent's volitional control suggests that it has become an obsession that is not contributing to the individual's conception of the good, but rather, has come to determine what his good is, independently of any rational reflection that the individual may have.

Similar observations hold for the addict. We are uncomfortable meeting the addict's need for heroin precisely because he is an addict and so lacks the capacity to rationally reflect on the value of end sought. If heroin were not addictive in this way, we would not be as hesitant to satisfy the desire. Similarly, we are not conflicted about giving a glass of wine someone who simply wants to relax after work.

However, we may be deeply concerned, or see it as immoral, to give to the same glass of wine to alcoholic who claimed to need it. Consequently, these cases suggest that not only is the involuntary nature of desire inadequate to elevate its status of that of a need, but indeed, its involuntary nature can lead us question the very status of the claim itself.

In these cases, however, the concern is not simply that the individual lacks volitional control over a particular end. We all need to eat and we lack volitional control over this (uncontroversial) need. However, this lack of volitional control does not lead us to question the drive to secure adequate food, or to think that the need for food is not a genuine need. Similarly, children lack rational control over most of their ends, yet this lack of control does not lead us to question whether or not they have genuine needs. Why in one case is the lack of volitional control labeled

irrational, and in the other, not? Why in one case are we hesitant to label the claim a need and in the other not?

What is behind this judgment, I would suggest, is some evaluation of the end being sought through the desired means (i.e. a car and heroin), and so of the potential harm caused by not satisfying the claim of need. The loss of wellbeing caused by not having adequate food is transparent; we all share it. We will all starve if we were denied adequate food. As a result, we can all understand the physical suffering, the loss of opportunity, and the threat of death brought on by not having adequate food. Similarly, we can recognize the role that food plays promoting our wellbeing. As a result, adequate food can consensually be judged as good, and conversely, the lack of it, *objectively harmful*.

In contrast, the fanatic's claim to need a fancy sports car is opaque. We cannot understand why a car should be necessary, or even how having such a car could contribute to his wellbeing. Because it appears peripheral in this way, it is unclear why "the frustration of his desire for the car would be so deep that it would indeed ruin his life" (Frankfurt 1984, 10). Consequently, in questioning his claim that he needs this fancy car, we come to an evaluation of the ends sought, and how not achieving *that end* would be harmful. He may be frustrated, as Frankfurt notes, but is that frustration really *harmful*? This line of questioning is even more evident in the case of the heroin addict. When we question the addict's claim that he needs heroin, what we are questioning is the end for which he claims to need the heroin, and whether in fact not achieving that end would in fact harm him. The heroin has some relevance to the addict's well being by relieving his immediate suffering.

Nevertheless, we might reasonably claim that meeting his supposed need for heroin is in fact what would cause most harm in the long run.

In both cases, what lies behind our judgments is the extent to which the claim of harm can be understood in light of an objective standard in relation to which harm is evaluated. The objectivity here comes from the goods being valuable across a wide range of lives. It is this commonality that renders the end objectively valuable, and also that gives it a particular moral urgency (Scanlon 1975).

What constitutes a good or flourishing life will, to some extent, vary between individuals and societies. For our purposes here, however, we are concerned with what constitutes a good life for the community of individuals in a just liberal society, and from this perspective, we do have one reasonable answer to the question. Namely, while individual conceptions of the good are assumed to differ in any liberal society, there are certain commonalities in the form that those conceptions will have, certain common interests and beliefs, which can be appealed to as the basis of agreement, and which, accordingly, can generate a thin or political theory of the good, sufficient to serve as the basis for agreement on the structure of society. In the case of adults, we can assume that while there is variation in the particular pursuits, aims, goals and projects, it is nevertheless true that the life of each individual will all involve the pursuit of such projects. As Jeremy Waldron points out, the “liberal must assume that all ethical commitment has a common form: that there is something like *pursuing a conception of the good life* that all people, even those with the most diverse commitments, can be said to be engaged in... they can recognize this [commitment] in others and they can focus on it as something to which political justification ought to be addressed” (Waldron 1987, 145). Moreover, we can assume

that adult citizens are reasonable in that they recognize certain constraints on their conception of the good. Specifically, they recognize the need to operate on good terms with others in the society; to accept fair terms of cooperation, terms that all citizens can agree to live by, and the value of “reciprocity and mutuality: all who cooperate must benefit, or share, in common burdens, in some appropriate fashion” (Rawls 1999a, 316).

For political purposes, it is these ends, viz. intelligently forming and pursuing a variety of aims in life, participating effectively in society and living on good terms with others, that are recognized as necessary and that can serve as the relevant standard in relation to which harms are judged. In light of this understanding of the good, we can recognize certain means as necessary to living this kind of life, and so recognize certain common (absolute) needs. We can also evaluate the harm caused by the absence of these goods by assessing the consequences of the deprivation for the pursuit of a life. While I will argue in the next chapter that this account is not directly applicable to children, as children, this understanding of the good does identify at least a central developmental good of childhood as developing into an adult capable of pursuing a life in accordance with their understanding of the good, and participating in society on good terms with others.

As before, the relevant notion of necessity is not a strong notion of logical or nomological necessity, but rather a weaker notion of political reasonableness, which reflects a general agreement about what is necessary in life between the diverse members of society. While we recognize that our particular lives and conceptions of the good vary, there is nevertheless characteristics that they all have, indeed, that they must have, namely, to pursue a life in accordance with our understanding of the good.

The challenge of identifying such goods is not unfamiliar, but what Rawls argues is offered by the list of primary goods. As discussed above, when the recognized ends are general, as is the case here, the necessary means will also be highly general. In this case the generality is important, as it allows for an objective standard by which to evaluate citizens' claims, but nevertheless permits significant variation between particular conceptions. In this way, the thin theory of the good and list of primary goods protect a space for the influence of individual preferences and conceptions of the good, thereby expressing respect for the diversity of preferences and life-plans of those in society.

This balance in favor of individual judgments shifts when we turn our attention to children as both the necessary ends identified, and the means needed to achieve that end need to be specified much more precisely. For one, most children lack the rational capacities and knowledge needed to intelligently form and pursue projects in their life in accordance with an understanding of the good. As a result, they must rely on others to do so for them. I will argue in the next chapter, that at an abstract level, the political community can reach agreement about what these goods should be for children, both insofar as the good concerns their life as a child, and insofar as it concerns their future as an adult citizen in society. Nevertheless, at this level of abstraction, the goods are still too general to be of use to the child. Consequently, I will go on to argue that the precise specification of the child's needs is something that should be left up to those who care for the child.

By identifying a single developmental goal for all children, this political understanding of the good is notably more specific than the account applied to adults. While the particulars of one's life pursuits in adulthood may vary significantly, the

means, including the capacities and resources necessary, to pursue a life of that sort are less variable. For example, while the primary goods recognize the interest that all adults have in freely choosing and changing between occupations, if a child is to have an opportunity to choose an occupation, she will need certain fundamental skills and capacities, including basic literacy and numeracy skills.

As the necessary ends become more specific, so too do means recognized as necessary to achieve those ends. For example, to learn to read, all children will require a similar and significant investment of time and energy on the part of teachers who instruct them. The nature and course of this development is similar enough between children that we can also identify more precise categories of the means necessary to achieve the ends. That is not to say that there is not variation between children in what is required to support their development, or to deny that these variations lead to variation in the absolute needs of children. Rather, it highlights that not only can we identify a specific end as necessary, but that we can also identify certain means that are generally necessary across all children for achieving that end.

In short, even the thin, political conception of the good becomes notably thicker when applied to children, and likewise, the needs recognized by account of the good are also significantly more numerous when applied to children. How it “thickens,” and what needs are recognized will be a function of how we understand children’s development, and is the topic I will turn to in the next chapter.

Primary Goods and Needs

There is clear overlap between Rawls's concept of primary goods and the understanding of needs argued for here. Nevertheless, Rawls resists identifying needs and primary goods. While he does not clarify the reasons for his resistance, I will suggest that he falls short of understanding primary goods in terms of citizen's needs because a distributive response towards needs is concerned not just with the provision of means, but also with the achievement of a particular end. It is this end-directedness that is problematic for Rawls. I will suggest, however, that it is this same end-directedness that is critical for children. That said, my aim in this section is not to defend an outcome-oriented distributive approach to children, but rather to suggest that a needs-based response to children leads us in that direction.

The canonical reading of primary goods is not in terms of need, but in terms of the all-purpose means that citizens require in pursuit of their life. They are goods, the basic resources that can be used by all individuals in constructing and pursuing their life, whatever their aims, plans and projects may be. In particular, they supply the "the social background conditions and all-purpose means generally necessary for forming and rationally pursuing a conception of the good (Rawls 1982, 169). As argued above, the end served by these means, namely, the thin theory of good should, for political purposes, also be understood as necessary.

This apparent similarity between these concepts is worth further exploration as the relationship between primary goods and needs has been a matter of some debate. Throughout his writing, Rawls often characterizes primary goods as needs. This comparison first emerges as a peripheral description in *A Theory of Justice* (Rawls

1999a, 80). In later works, particularly *Political Liberalism*, needs emerge as a central interpretation of primary goods. In fact, his central discussion of the topic occurs in a section entitled “Primary goods as citizens’ needs” (Rawls 1993, 187-190). He argues that primary goods not only correspond to citizens’ needs, but in fact *define* those needs for political purposes: “given the political conception of citizen, primary goods specify what their needs are – part of what their good is as citizens – when questions of justice arise.” (Rawls 1993, 188).

While this reading of primary goods as needs takes on ever increasing significance, at no time does Rawls attempt to clarify the idea of need, or even suggest how the concept deepens or elucidates our understanding of primary goods. Rather, the explanation tends to work the other way round, with Rawls taking advantage of the intuitive moral force of needs to clarify his construct of primary goods as all-purpose means. That said, the relationship between primary goods and needs is not transparent or obvious. Indeed, many of his critics have argued that Rawls distributive account is problematic precisely because it is so insensitive to needs (see, for example, Sen 1979; Dworkin 1981, 2000). Others still have explicitly rejected a needs-based reading of primary goods (Waldron 2000, 1986).

I would suggest that while the concepts are similar, Rawls resists characterizing his distributive arguments in terms of needs because of critical differences between the two concepts. In particular, needs exist in virtue of the ends for which they are asserted. Accordingly, a distributive response to needs is concerned with the achievement of that end-state. Consider, for example, a need that has transparent and persuasive moral force – the need for food. In particular, consider a starving man’s need for food. If we only give this man a slice of bread, he will still

be starving; he will still have an absolute need for food. His absolute need does not go away until he is no longer starving. In other words, the concept of a need unites the means and ends, and accordingly, a distributive response to need is concerned not just with the provision of means, but with the ends achieved with those means. That is not to say that needs-based response necessarily achieves the end-state for the individual. We might adequately respond to the starving man's need for food by giving him the money with which to buy adequate food. At the very least, however, what distinguishes a response to need is that a consideration of the extent to which the end can be achieved with the means offered.

Rawls explicitly rejects a concern with this sort of end-directedness in the distribution of primary goods. He argues for a distribution of primary goods precisely because they are means, separated off from end-states such as individual welfare or preference satisfaction. He argues, for example that "the use of primary goods, however, relies on a capacity to assume responsibility for our ends. This capacity is part of the moral power to form, to revise, and rationally pursue a conception of the good." (Rawls 1982, 169) He rejects this kind of end-directedness for two reasons. First, he argues that citizens do and should take responsibility for their ends. Second, it allows the state to remain neutral to the particular ends that individuals will pursue. In this way, the distributive response respects the individual as the rational author of her life. Both of these attitudes are evident in the following comments:

Another difficulty is this. It may be objected that expectations should not be defined as an index of primary goods anyway but rather as the satisfactions to be expected when plans are executed using these goods.... Justice as fairness, however, takes a different view. For it does not look behind the use which persons make of their rights and opportunities available to them in order to measure, much less to maximize, the satisfaction they achieve. Nor does it try to evaluate the merits of different conceptions of the good. Instead, it is assumed that

the members of society are rational persons able to adjust their conception of the good to their situation. There is no necessity to compare the worth of the conceptions of different persons once it is supposed they are compatible with the principles of justice” (Rawls 1999a, 80)

In rejecting the identification of primary goods and needs, what Rawls rejects is not the similarity between the concepts, but the distributive implications of thinking of primary goods in terms of needs. In particular, he rejects the relationship between the means provided and the ends achieved that is inherent in the concept of need. In the case of adults, ensuring that one’s means are adequate to advance one’s interests is the individual’s responsibility. As a result, he argues that a distributive response to adults does not respond to need, but to primary goods.

These reasons that Rawls gives for rejecting the identification of primary goods and needs do not apply to children. They are not responsible for the pursuit of their ends, nor as children are they responsible for the ends that they pursue. Rawls does not consider what is the appropriate distributive response to individuals who lack the requisite responsibility³. I would suggest however, that when the individual cannot be responsible for either the ends chosen or the pursuit of those ends, our distributive response must be more concerned with outcomes – with what the individual’s ends are and with whether or not the individual can in fact achieve those ends with the means provided.

³Rawls does, however, suggest that a shift to needs might be called for when extending his account to populations that violate two of his underlying assumptions: the assumption that all citizens require roughly the same resources to pursue their life and that citizens are citizens are “normally active and fully cooperating members of society over a complete life” (Rawls 1982, 168). When these assumptions are violated, he suggests that a distributive response to need, will “serve as an essential complement to the use of primary goods” (Rawls 1982, note 8 pp 168).

An outcome-oriented distribution, like a distribution oriented towards needs, is also consistent with the approach taken when providing many social services for children. For example, educational policy in the US requires not merely that children have the opportunity to go to school by providing accessible, free schools, but also that children attend those schools. Moreover, once in school, the emphasis is on their achieving certain critical skills, not just that they could achieve those skills if they made use of the resources provided by the school such as teachers, books and computers. Admittedly, the concern with outcomes is not absolute. Children's' achievements in school are not identical. They vary in accordance with the quality of their schools, their own effort, the effort of their parents and their natural dispositions. Nevertheless, variation is only tolerated within a narrow range. Specifically, all children are expected to achieve at least a level of competence in fundamental skills. Failure to achieve this level is viewed as a failure of the school and the policy, not the responsibility of the child. As a result, when children do not meet this level, the children are offered remedial education, and it is their teachers and schools that are held accountable.

This emphasis is explicit in the "No Child Left Behind" policy currently governing educational policy in the US. The act states that its aim is "to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments"

(<http://www.ed.gov/policy/elsec/leg/esea02/107-110.pdf>). The emphasis in the policy is on the achievements of students. In fact, the concept of opportunity for children is interpreted primarily in terms of what children accomplish, not in terms of the resources provided to them. This emphasis holds for all children, irrespective of their

personal characteristics, demonstrated capacities, or family situation. In particular, the act argues that special attention must be given to the outcomes of “low-achieving children in our Nation’s highest-poverty schools, limited English proficient children, migratory children, children with disabilities, Indian children, neglected or delinquent children, and young children in need of reading assistance”

(<http://www.ed.gov/policy/elsec/leg/esea02/107-110.pdf>).

Conclusion

At the outset of the chapter, I noted that despite the strong intuitive moral force of needs claims, the concept has not played a central role in our thinking about just distributions. I also argued that this absence was due in part to vagueness in the concept of needs that suggested that it was both too strong and too weak of a concept to support our intuitions. Too many claims could be advanced as needs and claims of need were too minimal to fully capture our obligations regarding a fair distribution in society. Over the course of this chapter, I have attempted to resolve that vagueness by identifying an absolute sense of need as those means necessary for necessary ends. A political understanding of the good captures the necessary ends, and determining what is reasonably required to achieve that end in light of the particulars of the society in question identifies the necessary means. Once this vagueness is resolved, the concept of need captures the nature of children’s claims, which unlike those of adults, are not just to opportunities to pursue their good, but also to the realization of certain essential ends in their lives through the support of those who care for them.

4. Children's Needs

What are children's needs? And who is responsible for meeting them? Answering these questions is a difficult task, especially in the light of the divergent conceptions of children's needs that exist in a liberal society. In this chapter I will argue for the following two answers. First, a liberal state should make use of a general and abstract characterization of children's needs, understood as the necessary means of securing two kinds of goods: the goods of a child's lived experience and the goods of development. The latter are the goods children will need to develop into adults with the capacities required to intelligently form and pursue a variety of aims in life, to participate effectively in society and to live on good terms with others.

Second, I will argue that a liberal state must leave the more concrete specification of those needs to a child's carers. The nature of caring relationships is such that the carers need to be given space to act on their conception of the child's good. Within the broad categories of familiar needs, children's specific needs are highly particular and variable. It often takes detailed knowledge and discernment to figure out these particular needs and how to meet them, and this knowledge and judgment is often available only to a person who is in an intimate caregiving relationship with that child. Moreover, caregiving relationships involve a profound dependence on the carer, a bond of trust between the carer and child, and inspired effort on the part of the carer on the child's behalf. The requisite attention, trust, and commitment needed to sustain these relationships will be more likely to develop when

the carer is free (within reasonable limits) to work towards the child's good as he or she sees it.

A note on terminology before I begin; in discussing the essential caregiving relationships in a child's life, I will often use the example of the parent-child relationship. This is the most intense, intimate and essential of the caregiving relationships in a child's life. In speaking of parents, here and throughout, however, I am not referring to a child's biological parents, but to what David Archard has referred to as a child's "moral parents," that is, those individual(s) who have assumed primary responsibility for a child and engage in the intimate, consistent and conscientious caring of a child that is essential in her upbringing (Archard 2004, 61).

Children's Needs and State Neutrality

Raising and caring for children is necessarily based on and passes on to children an understanding of the good. This influence most obviously comes from their parents and immediate family. But children are also influenced by the relationships they have with the wider community -- their friends and teachers, coaches, babysitters, clergy, scout leaders and the like. This influence extends farther to the wider society and political and institutional context that the child finds herself in. For example, in mandating school attendance and setting the educational curriculum, the state exerts a direct influence on the values of children. Through taxation policy, mandatory maternity and paternity leave, and establishing institutions from hospitals and health insurance, to daycare centers and parks and recreational

opportunities, the state also influences how carers are able to care for children, and thereby share their own understanding of the good with them.

As Brian Barry observes, someone will inevitably shape the concept of the good that the child comes to have. The state can either actively assume that role themselves, or defer to other groups, but in either case, they must take a stand as to who it is that shapes children's development:

it is indeed impossible for the state to take no responsibility for how children turn out; however, whereas with adults it can be claimed with some show of plausibility that absence of state intervention leaves people to pursue their own goals, with children it simply means handing them over to parents, private schools, churches, scout troops or any other organization that can get hold of them... the question here is not *whether* deliberate attempts should be made to modify character, but merely who should carry out the attempts and in virtue of what title (parent or citizen) he should do it. A child is equally subject to the ideal-regarding judgments of other people whether the locus of decisions is the political community or some smaller and less inclusive group (Barry 1965, 78-79)

What then should that influence be?

How we answer this question is of paramount importance to children, both because of its influence on the lives they will lead as children, but also for its influence on the lives they will come to lead as adults. It is also important to the many adults in society, from parents to teachers, doctors, social workers and others who dedicate significant portions of their life to caring for children. These individuals have taken children into their lives and care for them and in so doing have made the flourishing of those children part of their own. To take children's lives on in this way, these carers need to be able to endorse the values towards which the care is directed, an issue I will say more on in section 3.

When we consider the rearing of children from the perspective of the individual children and carers involved, our attention is directed towards that care as an individual expression of the good. For those who care for children, the care they provide is an important part of their good. For the children cared for, the care they receive shapes the conception of the good that they come to have. Accordingly, we become concerned about protecting this expression through the maintenance of state neutrality. From the view of the individual, it would be partial and oppressive both for children and those who care for them if the state was overly restrictive in the values it allowed adults to express through their care and communicate to children.

At the same time, however, raising the political community's children well is a shared good and so ought to reflect shared values. It is a shared good in a number of ways. For one, all citizens in a tolerably just society have an interest in raising children because the future character of a society is dependent on it (Archard 2004, 209). Moreover, they (or their descendants) will have to live, work and cooperate with the children as adults in society. Finally, they regard a just society as intrinsically good and something that they want perpetuated through into future generation (Rawls 1993, 201-206). For this reason, citizens have an interest in children becoming young adults who are able to succeed and contribute to the wider society, get a job, form stable friendships, have a family, and an interest in certain political values and virtues being passed on to them.

Second, raising children is something that can only be achieved in concert with others. As one receiving care, we are dependent on others in the community to meet our needs and as one giving care, we ourselves become dependent on others to support us as our time is dedicated to the needs of others (Kittay 1999). Indeed, it is a

recognition of and response to this dependency in both ourselves and in others that draws us into and often defines communities.

In the need to work together to provide care, we also recognize that the nature of the care we give and receive in the wider community is not up to us as individuals, but must be negotiated with those others participating in that giving and receiving of care. Since I must work with you to achieve the good, I must reach agreement with you about what we are trying to achieve. For example, if children are educated in schools, we must reach some agreement with our community about what the content of their curriculum should be. Similarly, we rely on hospitals, physicians, nurses and other health care providers to provide acute care; in turn, we give these individuals and institutions authority to set the nature of the care provided by setting standards of practice, and the rules and regulations governing that industry. Indeed, the very ability of parents to provide care for their children is also shaped by their wider community through constraints such as family leave and taxation policies. To echo the old adage, it takes a community to raise a child, and in working together to respond to this dependency, a community realizes a distinctive kind of good. Namely, it realizes a collective good; a good that is not particularly mine or yours, but goods that I share in common with you (MacIntyre 1999, 99-109).

Consequently, there is a need to reach a balance in the political response to children. On the one hand, the state must respect particular comprehensive conceptions of the good held by citizens, and the role that raising children and sharing values with them plays in that lives of its citizens. On the other hand, raising children is a common good. It is something that we as a political community have an interest

in and something that we can only achieve in concert with others. As a result, it must ultimately be grounded in common values.

The Political Recognition of Needs

A state can balance these concerns of, on the one hand, respecting the diverse conceptions of the good pursued by its citizens and adopted by children, and on the other hand, recognizing that raising children is a shared good that must reflect shared values, through a two-part response. First, the state should endorse a general and abstract characterization of children's needs. This abstract characterization can form the basis of constitutional guarantees and direct the creation and formation of central institutions in society. Second, it should leave the precise specification of those needs to the judgment of those who care for the child.

This approach reflects the positive understanding of political neutrality endorsed by Rawls, according to which a state is neutral between conceptions of the good when it acts on principles or values that all reasonable people who are in search of a conception of the good that can be used for political purposes can agree to, despite their differences.

As reasonable individuals, citizens recognize constraints on their conception of the good and on the nature of the agreement they can reach with others. In particular, they recognize the need for "*fair terms of cooperation*, that is, terms each participant may reasonably be expected to accept, provided that everyone else likewise accepts them" and endorse values of "reciprocity and mutuality: all who cooperate must benefit, or share, in common burdens, in some appropriate fashion"

(Rawls 1999b, 316). In contrast, unreasonable conceptions reject the constraints of social cooperation and the burdens of public justification.

As Rawls argues, such an account is neutral because:

“The view as a whole hopes to articulate a public basis of justification for the basic structure of a constitutional regime working from fundamental intuitive ideas implicit in the public political culture and abstracting from comprehensive religious, philosophical and moral doctrines. It seeks common ground – or if one prefers, neutral ground – given the fact of pluralism. This common, or neutral, ground is the political conception itself as the focus of an overlapping consensus” (Rawls 1999b, 459)

Importantly, for Rawls, the presence of an overlapping consensus is not contingent on the particular distribution of comprehensive conceptions that happen to be present in society. Rather, it captures what is common between all such reasonable conceptions and thereby allows all citizens to endorse the political account from their own particular understanding of the good. (Rawls 1993 141-2; 147)

On this understanding, political neutrality does not require the state to eliminate all conceptions of the good from political argument and from its understanding of the right. It would be impossible to do so (Rawls 1999a, 449-50). Indeed, we see the necessity of a conception of the good in the political sphere in the case of children for whom some conception of their good is required for political action on their behalf. What we are after is a political conception of the good that can be the subject of an overlapping consensus between reasonable persons (see, for example, Rawls 1987). Accordingly the challenge presented by children is that of justifying essential ends in children’s lives in terms that all reasonable people can accept. In other

words, can we, using a political conception of the good, identify ends that are essential to the lives of children and so can guide the care that we provide?

Towards a List of Children's Needs

Needs have a complex structure, identifying both essential human ends and the means deemed reasonably necessary to achieve those ends. I argued in chapter 2 that this structure is particularly important in the case of children, who often lack essential capacities and so must depend on others to ensure that their essential ends are advanced. However, in creating a list of needs, this complexity raises the question of how needs should be identified. Here, I chose to categorize needs on the basis of the essential ends pursued. To identify morally salient, or absolute, needs, we will then have to identify what means are reasonably necessary for the achievement of these ends.

I adopt this approach for several reasons. First, it is the ends that determine what means are reasonably necessary for their achievement. Second, we find more overlap at the level of ends; what means are deemed reasonably necessary for their achievement will be dependent on the context in which they are pursued. As argued in chapter 2, they will be contingent on the actual possibilities present in that environment, the individual and her particular characteristics, and the economic, political and cultural traditions of the society in which the ends are pursued.

That said, the distinction between means and ends is not clear-cut. The ends identified below are all valuable in themselves. However, many of them are also valuable as parts of something greater that is, in its turn, valuable in itself. For example emotional integrity is valuable in itself, but it is also valuable as an element

of sound reasoning. The ends identified below may also be valuable as means to further ends. For example, we value health as something good in itself, but it is also an essential means of creating and maintaining social relationships and exercising our reason and imagination.

As with all such lists, this list is likely to be incomplete. It may omit some ends that come to be judged as essential to a good life, and there may be other, more felicitous expressions of these same categories. The list may be colored by cultural bias and by the particular concerns at hand. Accordingly, I do not present it as a final statement, but as a starting point in the political dialogue about what is essential in the lives of children.

Nevertheless, the task of putting forward a list of this sort is particularly critical in the case of children. Lists focus public dialogue. They serve as a springboard for discussions about the priorities and tradeoffs made in designing the policy, and in articulating the goals of policy, and they clarify the aim of policy evaluation, helping us understand when and how are efforts are working, or not (Alkire 2002a, 183).

These assets are particularly critical when integrating children into policy. Children often cannot raise their voices in political dialogue. Most cannot speak up when their needs go unmet or point out how policy affecting them may be unsatisfactory. While lists do not erase these challenges, they do mitigate them by focusing dialogue and evaluation squarely on the concerns of children

The content of the list offered below is not novel, but rather includes the familiar categories contained in countless lists throughout the literature from

philosophy, sociology, economics, psychology, medicine, and development studies and related disciplines. Because these categories are so familiar, I have said little about them, choosing instead to merely gesture towards the broad areas of human value and purpose that they represent (Grisez 1987)⁴.

The Categories

Health

We are vulnerable, physical beings. Our survival and ability to pursue goods in life is dependent on the proper functioning of those bodies and minds. Broadly, we refer to that state of proper, integrated functioning as health and its absence as disease. For our purposes here, I would suggest that the concepts of “proper integrated functioning” and “disease” are best understood in relation to an empirically grounded account of species-typical functioning. With proper integrated functioning understood as the norm, and disease understood as deviations from that norm (Borse 1977, 61-84; Borse 1975, 49-68; Daniels 2008; Daniels 1985). The idea of norms and deviations invoked here are not merely statistical in nature, but rather make reference to further theoretical ideas about the design of the organism.

Security

Threats to our body and life can come from disruption of our health, but can also come from violent acts by other people or by nature. We are concerned with protecting ourselves from those threats.

⁴ For a comprehensive review of the literature, see Alkire 2002a, 2002b. My list has been most strongly influenced by Martha Nussbaum’s work defining those shared aspects of human life that constitute the human good and can provide the moral basis for constitutional guarantees (1999) and John Finnis’s work identifying ultimate ends of human action (Grisez, G., J. Boyle, and J. Finnis. 1987), as their aims in creating their lists most closely resemble my own. Nevertheless, I have also drawn from: Ben-Arieh 2000; Doyal and Gough 1991; Ramsay 1992; Maslow 1943; Brazleton and Greenspan 2000; Narayan et al 2000.

Particularly as we turn our attention to children, however, we recognize that humans do not just need physical security to live and to flourish; they also need the emotional security that comes from unconditional love, often of a parent. This love is communicated through their continuous, conscientious and intimate care for the child, their responsiveness to her needs, and the joy that they take in her company and in her actions (MacIntyre 1999; Rawls 1999a, 405-8). In the presence of this love, the individual develops a sense of self-worth, and the confidence with which to explore the world.

Emotional Integrity

One of the most distinctive features of living a human life is the range and depth of emotions that we experience. The scope of emotions is wide and includes experiences as diverse as anger, fear, pleasure, love, grief, longing and gratitude. The simple capacity to experience these emotions is an important good in itself. Consequently, it seems reasonable to hold that the capacity to experience emotion is an important good in itself, and to maintain that an individual would be harmed if they were prevented from or unable to experience a range of emotions. Nevertheless, emotion is so fundamental to human life that the complete inability to experience emotion is exceedingly rare limited only to scattered instances of severe brain injury⁵. Nevertheless, there are many lesser conditions in which one's personal and political circumstances and history blight one's emotional experience, overly limiting its range and expression. In such cases, the restoration of a full range of human emotions often becomes a central end in itself.

⁵ In his account of emotion, Antonio Damasio offers detailed descriptions of a few such patients who he argued lacked emotional experience because of injury to their frontal lobe (Damasio 1994)

Emotional experience also allows us to properly engage with the world. When emotional systems break down the resulting harm is often an incongruity between our environment and the emotional responses and the behaviors evoked (DeSousa 1990, 990; Rorty 1980, 143). This incongruity can generate significant distress, thwarting our ability to properly understand and engage with the wider world. For example, the harm posed by an anxiety disorder is not the experience of anxiety per se, but rather that the experience of anxiety has lost its ability to direct our attention us to potential threats. Consequently, integrity between our circumstances and our emotional experiences and responses is also an essential good.

Social Relationships

Relationships with others are fundamental to the quality of our lives and to our wellbeing. Most evidently, our intimate relations with friends and family are intrinsically valuable and some of the most important commitments in our life. The sharing of a life through these relationships brings great joy, pleasure, and contentment, and similarly, great pain, grief and suffering when they are disrupted. As MacIntyre argues, these relationships are also essential to our capacity to reason well. It is through them relationships that we come to “think constructively about our good in practical terms in everyday life” (Voorhoeve 2009, 120-21; see also MacIntyre 1999, 81-83). For example, in dialogue with our friends, our own views and assumptions are subject to criticism, and we can come to see our beliefs, goals, and projects in a new light.

The valuable relationships in our lives extend far beyond these cases of intimacy. These other relationships – with our neighbors and others in the wider society and economy – are also central to our life pursuits. In particular, they ground

our sense of community and belonging, and our feeling that we are a respected and valued as a member of a group.

Reason and Imagination

Perhaps the most distinctive aspect of the human good is the development and use of reason and imagination. It is these goods that allow us to think, to form beliefs, and have reasons for action. Like emotion, reason and imagination allow us to represent, understand, organize and experience the world. They allow us to stand back from the world, to consider it, critically examine it and deliberate about it. Imagination allows us to consider alternative views of the world and of our own lives, representing them as they could be or could appear to us. Through practical reason, we apply these capacities to our own lives, standing back from and evaluating our pursuits, values and reasons for action. It is through those deliberations that that we come to form, revise and pursue a conception of the good.

Two Perspectives on Needs

These categories resemble those on many lists throughout the academic literature. This literature has focused largely on adults. In extending these insights to children, however, we do not need to consider additional ends, but rather to consider these recognized ends from the perspective of children. To do so, however, we must in fact consider them two perspectives: in light of the lives children lead as children as well as lives they will come to lead as adults. Both of these perspectives are essential. The developmental impact of children's experiences is far reaching, creating the foundation and frame from which they will construct their lives. But childhood is

also a way of being, and an essential part of each of our lives, and so we should not disregard the good realized during it.

Children's Lived Experience

In considering the good in children's lives, we should start by considering the quality of their lives as lived by them. This perspective follows from an understanding of the good as a property of a life lived and asks us to take seriously the experiences and perspective of the child as a child.

While this perspective of the child as a child has been overlooked throughout much of philosophy, it is given a classic expression in Rousseau's *Emile*, in which he celebrates the unique gifts of childhood, urging parents and tutors to respect those goods and not to wholly sacrifice them for the good of the child's development into an adult:

Love childhood, indulge its sports, its pleasures, its delightful instincts. Who has not sometimes regretted that age when laughter was ever on the lips, and when the heart was ever at peace? Why rob these innocents of the joys which pass so quickly, of that precious gift which they cannot abuse? Why fill with bitterness the fleeting days of early childhood, days which will no more return for them than for you? Fathers, can you tell when death will call your children to him? Do not lay up sorrow for yourselves by robbing them of the short span which nature has allotted to them. As soon as they are aware of the joy of life, let them rejoice in it, go that whenever God calls them they may not die without having tasted the joy of life.... Mankind has its place in the sequence of things; childhood has its place in the sequence of human life; the man must be treated as a man and the child as a child (2003, 213).

This perspective on the good is important to adults as well as children. As adults we pursue many projects and goods because they will help us achieve goods in the future. But this instrumental value is not exhaustive – we also value these projects and pursuits for what they contribute to our lives and we value these contributions

independently of any contribution that they may make to some future, imagined life. Indeed, we would regard any adult who viewed their activities only in terms of what they would contribute to their future as missing out on much of the value that these experiences offer. While children are distinguished from adults by their rapid development, this difference does not remove the need to recognize the importance of these experiences, projects and pursuits to the child's lived experience.

We are reminded of the independence of this perspective when we consider children with developmental disabilities who will never become independent adults fully participating in society. Consider, for example, the case of Ashley who came to public attention after her parents requested a complete hysterectomy, the removal of her breast-buds, and pharmaceutical intervention to prevent her further physical growth and sexual development. At the time, Ashley was about 6 years old. Nevertheless, she had the mind and experiences of a three-month old, the age at which her brain stopped developing. While it was determined that her mind would never progress beyond that of a three-month old, her body continued to develop; she grew larger and prematurely began to enter puberty.

As she grew, it also became more difficult for her parents to care for her, leading to the request by her parents to arrest her physical and sexual development. This request was met with significant hesitation and concern, both by the physicians involved, and also by the wider community. They were concerned that the treatments would violate Ashley's autonomy or take valuable experiences and opportunities away from her. These concerns are misguided. They fail to appreciate that Ashley's good was wholly subsumed by her lived experience at any moment (Singer 2007). She could not develop the mental capacities of a normal, fully functioning adult, or

even of a toddler, and so there was no need to consider her developmental good.

Ashley's life was permanently that of a three-month old, occupied by physical comforts, visual and auditory stimulation, being held and carried around. These were her only ways to participate in the world and they constituted her good. Because her physical growth threatened the ability of her caretakers to provide her with these goods, preventing that growth was a viable means of promoting her wellbeing. For this reason, the physicians who ultimately performed the surgery were justified as it protected and promoted the goods that were open to Ashley.

Children's Developmental Ends

In the political context, the critical developmental end of childhood is the child developing into an adult with the capacities required to intelligently form and pursue a variety of aims in life, to participate effectively in society and to live on good terms with others. While we continue to develop throughout our lives, childhood development is particularly critical from the political perspective because it is so formative and thoroughgoing making it a time of pronounced developmental vulnerability.

During childhood this development is thoroughgoing. All aspects of the child mature: sensory and perceptive capacities, cognitive, capacities, emotional and social skills. They acquire language and learn to express themselves. Their bodies mature, and as they grow in size and strength, they learn to coordinate and use their bodies. In the child, these developmental processes are intricately intertwined. Healthy development in children does not result from isolated influences or even a single type of influence or experience, but reflects the cumulative effect of positive and negative influences across various domains, such as emotional, physical and cognitive

development, over an extended period of time. The level of development in one domain can have significant consequences for another. For example, children with even mild developmental delays participate in less sustained play with peers and have more difficulty forming friendships (Craig 1993; Gertner 1994). Similarly, severe acute or chronic illness may adversely impact a child's social, cognitive, and emotional development unless protective interventions are pursued (Gerhardt 2007,; Cantrell 2004).

Because it is a time when so many of the individual physiological and psychological systems are forming, childhood is also a period of pronounced vulnerability as the impact of influences on the child is amplified.

In some cases, positive and negative developmental influences have an additive effect and since developmental risks often cluster over time in socially predictable ways, the cumulative effect of these influences can be quite substantial (Sameroff 1987; Elford 1991; Kuh and Smith 1997; Ben-Shlomo 2002). This clustering of risk is vivid when we consider the interaction between socioeconomic status and a child's development. A family's socioeconomic status will have a significant impact on their capacity to secure safe housing, nutrition meals, high quality child-care, and other resources and experiences that foster health and development (Becker 1981; Brooks-Gunn 1995, 27-97; National Research Council and Institute of Medicine 2000, 267-295). It is also likely to impact the parent's own ability to parent and to invest time, energy, and emotional resources into their children (Brooks-Gunn and Duncan 1997). As these risks accumulate over time, they become increasingly associated with lower school achievement in children (Duncan 1998; Blau 1999). In turn, the child's achievement in school is strongly associated with

their ability to secure stable, productive, and meaningful work as adults. While none of these influences on their own is very significant, the cumulative impact of the clustering of risks over time is and can have lasting consequences for the life of the child.

In other cases, experiences during discrete developmental periods can have amplified or unalterable consequences for future development. These so-called critical and sensitive periods of development tend to occur when cognitive and biological systems are emerging or undergoing massive reorganization, as it is during these periods that original patterning is laid down. Accordingly, the vast majority of them occur during childhood. For example, failure to develop secure attachment to a carer during the first year of life can result in difficulty developing strong relationships later in life and compromises mental health (Tronick 2007). While these health effects can be modulated by attentive and responsive caregiving later in life, as with many characteristics of physical and mental health, they are significantly more difficult to ameliorate outside of the critical developmental window (Liu 1997; National Research Council and Institute of Medicine 2000, 30-31, 90).

As a result, we must recognize childhood as a unique and essential period of development. There are certain goods that can only be achieved during childhood and others that can only be achieved with a significantly greater investment of time and energy if pursued outside of that window. For other developmental processes, the impact of childhood experiences may not necessarily be greater during that critical window, but if these risks (or benefits) begin accumulating during childhood, they nevertheless have an amplified effect on the course of our lives. This leaves the child particularly vulnerable to the nature of its early experiences, but critically it also

creates a degree of resilience as these developmental processes create opportunities to significantly influence those developmental trajectories through the provision of targeted resources (National Research Council and Institute of Medicine 2000).

Integrating the Two Perspectives

Both the goods of lived experience and development should be taken into account when considering the good for children. In leading liberal theories of justice, however, there has been a tendency to consider only the latter. For example, in Richard Arneson's and Ronald Dworkin's accounts of distributive justice, childhood figures only as a period in which a certain process of education and preference formation must take place in order for adults to have the capacities to freely adopt and pursue their life plans—capacities which they assume are present in developing their accounts of distributive justice among adults (Arneson 1990b, 179; Dworkin 2000, 159).

While Rawls spends more time considering children, his accounts also fall short, engaging with children's lives only insofar as their education and moral development impact upon the stable continuation of a just state. He notes, for example, that their education should prepare them to be fully participating members of society with knowledge of their political rights and the capacities required to be self-supporting (Rawls 1999a, 397-441). His most sustained engagement with children is concerned with demonstrating that the process of moral development necessary to create a stable, well-ordered society is a process consistent with children's emotional, social and moral development. While he emphasizes that a secure and loving family is critical for this development, describing how parental love contributes to the emergence of a sense of justice in the child, he gives no

consideration to the economic, social and political requirements of supporting families to ensure that they all provide the love and care needed. Indeed, this narrow focus on children's developmental goods has prevented all these writers (and most of central liberal theory) from fully engaging with the lives of children and considering the contribution of things like care and love; play and exploration to children's lives and the responsibility of the state in supporting these goods for them.

While it is important to recognize the need to consider both of these perspectives, from the practical perspective, attending to a child's developmental needs will, for the most part, also ensure them a flourishing life as a child. Accordingly, any political theory that fully attends to children's development will in so doing have a tendency to promote a good life for the child, as a child. That is, there is a general congruence between the two perspectives. For the most part, a child is interested in and takes joy and excitement from those experiences that respond to their developmental needs.

Consider, for example, an infant. An infant's life is dominated by their felt bodily experiences – of comfort and discomfort, hunger, thirst, sleepiness and awareness. One of the first developmental tasks that they face is learning how to regulate and organize these experiences. They accomplish this task by establishing a relationship with at least one adult carer who through the relationship helps them, in a process often referred to as “attachment”.

Through the attachment process, the infant establishes communication with the carer that allows her to convey her internal states, and in so doing, helps ensure that her needs are met (Tronick 2007). For example, most adults who spend any

amount of time with an infant quickly learn to distinguish between their cries and can know from its pitch and rhythm if the child is hungry, tired, hurt or bored.

Infants who establish effective communication with their carers seem to not only lead happier lives as infants, but also to lead more successful lives as adults. It is thought, for example, that through the attachment relationship, infants learn positive coping mechanisms to maintain their self-regulation and develop a sense of mastery in their behavior as they become skilled at signaling and being understood by their mother (Tronick 2007). In contrast, infants who do not establish a secure attachment seem to express more negative and withdrawn emotions (Tronick 2007).

The failure to create secure attachment relationships is not only detrimental to the child's lived experience, but also compromises their development. Children in secure attachment relationships are more likely to engage in the exploratory behavior critical to early learning. They are more likely to develop a sense of competency and efficacy as they learn that they can influence others and affect the world (National Research Council and Institute of Medicine 2000, 230). As these children age, they are also more likely to form positive supportive relationships with teachers and friends (National Research Council and Institute of Medicine 2000; Sroufe and Egeland 1991; Sroufe 1993). They have more balanced self-concepts, a more developed capacity for memory; a more sophisticated grasp of emotion, and are more capable of managing stressful situations and exhibit a more robust conscience (National Research Council and Institute of Medicine 2000, 236-7).

Consequently, the developmental task of establishing secure attachment is not only critical to the child's future wellbeing but also structures their lived experience as an infant. These intimate relationships are the central social relationships in any

infant's life, and it is through these relationships that the infant begins to organize and so to understand their emotional responses to the world. Engaging in this kind of social interaction with their carer is a central activity for them, and a source of endless joy and excitement in their life. These relationships are also absolutely essential to their health and survival as it is only through these relationships that a child's needs are met.

Meeting Children's Needs

In the political context, the list enumerated above guides the establishment of constitutional guarantees and institutions purposed with securing these ends for children and thereby meeting their needs. But in isolation, the list is inadequate. The ends described above are overly general to adequately capture children's claims. I will argue that because of the nature of the caregiving relationship, the precise specification of these needs should be left up to a child's carers, both her parents and those others in the community who care for her. Allowing carers this discretion recognizes the role that caring for children plays in their lives, but more importantly, recognizes the importance of these intimate relationships for children.

What is a Caregiving Relationship?

Caregiving relationships are fundamentally concerned with responding to the needs of others. But importantly, they are concerned with responding to those needs in a particular kind of way: with empathy, attentiveness, and sensitivity to the other person (Held 2006, 39). Moreover, in speaking of caregiving relationships, not simply

caring generally, we are interested in those instances in which a carer has made a commitment to consistently and conscientiously care for a child, and not those instances in which we are presented with the urgent need of a stranger and are called on to care for him. The nature of that commitment and how it is made can vary somewhat between carers. In the case of a parent, the obligations may arise by bringing a child into their life through adoption or childbirth; in the case of a teacher or doctor, it may arise by joining a profession. At its foundation, however, these commitments all arise from a recognition by the individual that the child is dependent on him to ensure that certain of his needs are met, and that by virtue of this dependency, he assumes new fiduciary responsibilities to ensure that those needs are in fact met, either through his own actions or by transferring that responsibility to another.

Importantly, the commitment to care is made in advance of knowing how extensive the care one is required to give will be (MacIntyre 1999, 90-91). A parent makes the commitment that he will love *this* child regardless of what particular characteristics he has and regardless of how extensive his needs may be. While more circumscribed, other carers make similar commitments. A teacher is committed to educating the children in her class regardless of how great their educational needs may be. Although, in some cases meeting this obligation may be best accomplished by transferring the care of a child to another individual more capable of meeting the child's needs.

These relationships are essential in the lives of children. However, the role that the relationship plays in meeting the child's needs varies. For some of these needs, such as the need for sustenance, the relationship is itself secondary to meeting

the need. It is simply an additional means required for the child to access particular resources. For example, someone must acquire and prepare the food for a young child, but so long as there is someone who provides the child with nutritious food in adequate quantities in a form that they can consume, the child's needs are met. However, for other needs, such as the need for emotional security and social relationships, a particular relationship is itself essential to the child's need being met. For example, children have a vital interest in being in a uniquely intimate and loving relationship with their parents (Liao 2006). As discussed earlier in the context of infant attachment, these relationships provide children with the physical and emotional security they need to grow and flourish. Trust in their parents and faith that their parents will be there for them and care for them unconditionally is essential to their sense of security and to the development of their own sense of self worth. In most of these instances in which the relationship is itself essential to meeting the need, the particular relationship that the child is in is non-fungible and cannot be easily replaced by another individual assuming the same role. Rather, the capacity of the adult to meet the child's needs is built up over time as the child learns to trust and love the adult.

To respect the importance of these relationships in the lives of children, and also the importance of the relationships in the lives of those who care for them, it is best to leave the precise specification of a child's needs up to those who have entered into caregiving relationships with children. Carers are best positioned to identify and respond to children's needs. Moreover, the intimacy, trust and commitment needed to sustain these relationships justify giving carers discretion (within reasonable limits) to work towards the child's good as he or she sees it.

Recognizing a need is always an act of empathic understanding. It requires that we evaluate the other's situation in light of their interests, their good and their dependency. The carer must "feel with" the child, as Nel Noddings describes it (1984, 17-18). Some needs are so obvious that this act of empathy goes unnoticed. We see a child drowning and immediately know that she needs someone to save her; we see an infant with a wet diaper and immediately know he needs to be changed. However, in most cases, recognizing and responding to needs is much less obvious and requires more intimate and particular knowledge of this child and her situation. Different children in the same situation may need very different things. For example, a child who is disruptive in class may be bored and need greater stimulation, whereas another child may need more structure and discipline. This kind of particular and intimate knowledge of a child and her needs is built up, learned, over the course of a relationship and is essential to good care. This is particularly true for young children who cannot communicate their needs directly and so must rely on their carer to be able to read their signs and understand their communication.

While this empathic understanding is fundamental to a carer's responsiveness to needs, she can only respond to needs that she can recognize and she can only recognize needs in the context of her own knowledge and understanding. A carer's capacity to empathize with the child, to take on that child's position and to know how to respond depends also on her more general knowledge as well as her personal understanding of the good. This understanding is, in turn, influenced by empirical knowledge and understanding of, say, children in general, along with her history of experience with children more generally and cultural knowledge and norms about how children are to be cared for.

In recognizing that we can only respond to a child's needs from the perspective of our own understanding of the good is not to say that carers only understand a child's good as an extension of their own. The child's good is different in many important respects from that of the carer, and caring well requires that he understand this separateness. The carer must use his empathic imagination to step out of his personal frame of reference into that of the child (Noddings 1984, 24). It necessitates that the carer understand the child's good, not simply as an outgrowth of his own, but as distinctly the child's. It is a vice of parenting and caring in general not to recognize a child's separateness and to substitute a projection of our needs for genuine empathy with the child's.

Consider for example, an infant's need for food. While the need is basic, responding to it is not simple. When a carer hears a child cry, for example, he does not immediately know if it is because she is hungry, tired, bored, or, perhaps, she just needs to blow off some steam. He might consider how long it has been since she last ate and evaluate that information in light of her habits and how often he believes children need to eat. He might listen to her cry to see if it has that pitch distinctive of her cries for hunger or the whine characteristic of boredom. Successfully accomplishing this task requires a degree of empathic imagination; he needs to empathize with her, imagining the world from her perspective as well as his own. If he judges that she is hungry, he will then have to decide what to feed her, i.e. how to meet her need, which is again influenced by a similar series of considerations.

Critically, however, the appropriate response to the child's hunger will be underdetermined by the facts, e.g. her nutritional needs. In most cases, the carer will resolve this ambiguity with reference to her understanding of the child's preferences

and circumstances, as well as her own values and beliefs about what is best for the child. For example, if the carer thinks that it is wrong to eat animals, he may not feed her meat. In general, the more intimate the relationship, the more these values will influence the decision of the carers. However, even in less intimate relationships such as those we have with our physicians, the discretion of the carer is still important. In the United States, for example, a common concern about government involvement in medical care is that this involvement would lead to an over-specification of our needs, and in this way take away the discretion of our physicians in whom we have more trust and who has more intimate knowledge of our particular health needs.

The fine-grained nature of children's needs, combined with the intimate awareness of a child required to identify and respond to those needs, and the underdetermined nature of that response in light of the facts, justifies giving carers discretion over how a child's needs will be met. How much discretion a carer is allowed will be determined by a number of considerations, including the intimacy of the relationship and the context in which the relationship arises. What these limits are and how they differ is something I will have more to say about later in the chapter.

Sustaining Caregiving Relationships

Caring is not just an intimate awareness; it is an intimate responsiveness (Held 2006; Noddings 1984, 10; Ruddick 1998, 13-14). When we care for a child, we are not just aware that she is hungry or tired or bored, or aware of how that child's needs could be met. Caring for a child is fundamentally about responding to that awareness. Care includes the motivation, "I must do something." Upon hearing the cry of her child, a mother caring for her child cannot help but be startled into action, becoming prepared to act, even if the required action is to restrain her desire to

comfort the child, letting her cry so that she learns to put herself back to sleep. It is this active responsiveness, this meeting of a child's needs that integrates children's lives into the lives of their carers.

Take the example of a child's parents. Through their responses to the child, parents take a child's life as part of their own, giving their time and energy and sharing their way of life as well as their love and affection. For parents, the amount of time and energy dedicated to raising a child is great, and, as a result, children are a central project in most parents' lives, at least while the children are being raised. To take a child's life on in this way, however, requires that carers have a degree of autonomy over how their children are cared for (Archard 2004, 176). It requires that the values expressed through the care they provide are consistent with their own values and understanding of the good. If it were otherwise, raising a child could be an alienating experience, a task or a job that they perform, not an expression of their life and love for the child.

We recognize the general importance of having consistency between our values and pursuits in life. It is one reason why we strive to protect a sphere of choice around these matters, protecting freedoms of occupation, movement and association. Caring for children is also a central project in the life of carers, which likewise calls for a sphere of privacy within which carers can exercise discretion over how their children are raised. Moreover, sustaining consistent caregiving relationships is essential for the child. It allows her to bond with her carers, to develop the trust that they will be there for her and respond to her needs, and the security and confidence from which to explore the world (Alstott 2004, 17-18; MacIntyre 1999, 90-91)

While these commitments are most evident in parents, parents cannot meet all of their children's needs. Accordingly, caring for children is a core commitment in the lives of others in the community including teachers, physicians, nurses, social workers, ministers, childcare providers and the like. In many cases, children require the care of others with a particular expertise: a pediatrician with expertise in child health, a teacher with expertise in literacy, a counselor with expertise in teaching children how to manage difficult transitions in life. In other cases, non-parental adults are needed simply to provide alternative perspectives and to educate the child about a broader range of life possibilities, or to support the parents in their efforts to care for their children.

Like parents, these teachers, doctors, social workers and other community members also make caring for children an important commitment in their lives. To make that commitment, they also require a degree of discretion in providing that care such that the care they provide reflects their best judgment about the child's needs and in this way is consistent with their values. How consistency is ensured in the case of non-parental carers differs slightly from the parental case. These individuals usually come into the lives of children by joining communities and institutions that endorse shared values. Parents in turn choose communities, institutions and ultimately their children's carers within those institutions and communities because they can endorse those values and expect those values to underlie the care given to their children. Consequently, these non-parental carers are obliged to follow the norms and standards of the institutions through which they come into contact with children. Nevertheless, these norms cannot fully specify the nature of the care provided. Just as in other instances of care, the carer must exercise his or her own judgment and discretion in determining the precise nature care that is called for. Consequently, for these non-

parental carers, while it is the institutions that define the limits of the care they provide, there is still a need to allow these carers some leeway in how they respond to the child, to ensure that it reflects their understanding of the child and her needs as well as the values that underlie the institution through which she provides the care.

Limits to Caregiving

I have offered two arguments for why the nature of caregiving relationships necessitates giving carers discretion over how they meet a child's needs. The first points towards the instrumental value of allowing carers this discretion; they are in a privileged position to make these necessary judgments about children's needs. The second argument cites the characteristics inherent to these highly valuable relationships; children need intimate relationships of this sort to flourish, and for carers to share of themselves with children, taking those children's lives on as part of their own, they must have some discretion over how the child's needs are specified.

In recognizing the role that carers play in shaping children's lives, I am not arguing that carers have unrestricted discretion over how that child's needs will be met. I am not suggesting, for example, as Charles Fried does, that parents have the right to "form one's child's values, one's child's life plan" because they have this right to do those things for themselves (1976, 152). Such a view blurs the distinction between parent and child, ignoring the child's individuality. From the moment they enter into the world, a child is a distinct person; their needs, drives, desires and perspectives are their own. They are, from the very beginning, "embodied willfulness" (Ruddick 1995, 215-17). It is the obligation of parents and carers to be respectful and responsive to this willfulness, standing back from their particular perspective so they can be receptive to the child.

The arguments presented above constrain carers in their response to children's needs in several ways. Most importantly, they take the child's interest in being cared for as the over-riding consideration. It is the child's dependency and need for care that generates the caregiving relationship and so it is the child's needs that justify giving those carers discretion over how children's needs are met. That is not to say that the parents do not have an interest in the relationship, or that their interests should be disregarded. But, in assuming responsibility for a new life, part of the commitment made by parents is to ensure that the child is being cared for, so that at a minimum, the child has a minimally decent life (Archard 2004, 140-141). Similarly, in entering into a caregiving relationship, the other carers in a child's life also assume a duty to give that child's needs priority in their dealings with him. Accordingly, these arguments direct us towards a version of the "priority thesis" according to which a duty of care is prior to, justifies and defines the scope of a carer's discretion (Blustein 1982, 104-113).

Accordingly, the central constraint on the authority of carers to specify children's needs is that they in fact meet that child's needs to the extent that is reasonably possible and insofar as those needs fall within the scope of their relationship with the child. While a carer has discretion over how a need is met, they do not have discretion over whether or not a child's needs are met. How the carer understands those needs, both the essential ends and the reasonably necessary means, are further constrained by the list presented above.

There are a number of ways in which a carer can fail to realize a need in a child's life. First, the carer could fail to recognize an end as described on the list as essential in the life of a child; for example, a parent may reject the child's need for

relationships with peers. A carer could also fail to recognize the reasonably necessary means required to achieve an end. For example, a parent may reject modern medical techniques to treat their sick child, preferring instead to rely solely on spiritual healers. Finally, the carer may recognize the various ends on the list, but disagree about how they should be weighed against each other when they cannot be jointly attained together.

Each of these failures would be grounds to question the carer's authority to specify the child's needs. If it is determined that a child's needs are not being met, it is a further question what should be done about it. Who is responsible for the failing? Is it the mother who leaves her child alone during the day while she works, or broader community in failing to ensure adequate, accessible childcare? Even if it is determined that it is the carer who bears responsibility, dissolving the relationship is not necessarily the appropriate remediation as this action can also jeopardize the child's needs. Moreover, it is exceedingly difficult for the state to replace these relationships, as the poor outcome of foster children attests to. My concern here, however, will not be with the appropriate response to a carer's failure to meet a child's needs, but with the question of on what grounds we can determine when a child's needs are not being met.

In some cases, whether or not a carer has failed in one of these ways will be obvious. A child is not being fed and is starving. A child consistently shows up at the hospital with broken bones and bruises from being beaten. A toddler is left home alone for hours. A parent isolates their children, not allowing them to form relationships with peers or others outside of the family. Many of these would be

classified as cases of abuse or neglect, and they form a clear limit on the authority of carers.

However, in a great number of cases, the question of harm will be more contentious. In these cases, the carer has not abdicated their responsibility to care for the child, but rather disagrees with others in society about the nature of the care required by the child. This would be the case in the above example of a parent who did not believe that modern medicine was a necessary means to health for their child, preferring instead to rely solely on spiritual healers. In this case, the parent does not reject health as an essential end, but rather disagrees about the necessary means. Disagreements about the nature of a child's schooling could also fall into this category. Consider, for example, the case of the Amish, who have defended their right to determine the content of their children's education and to remove their children from formal schooling at age 14. In this case, the Amish do not disagree with the wider society that education is essential end, or even that children must receive the education necessary to enter into society as a fully participating adult member. What they disagree with the state about is what community it is that the children are being prepared for, and so what knowledge and skills are necessary for that membership (Barry 2001, 207, 242-243).

In these difficult cases, as well as the more obvious cases, it is the state's responsibility, as the carer of last resort, to decide if a child is being harmed (Barry 2001; Archard 2004; Alstott 2004). Placing this final authority with the state is justified by its interest in the child as a member of that community, as well as the state's paternalistic interest in the wellbeing of the child. At a minimum, this constraint argues that the carer cannot base their interpretation of a child's needs in an

unreasonable conception of the good. Children must be raised to accept the responsibilities of social cooperation and the burdens of public justification (Rawls 1999b, 316). Furthermore, parent's choices about raising their children should meet the burdens of public justification; they should be able to justify their actions in terms that all can accept (Clayton 2006). For example, this constraint would reject the sole use of a spiritual healer as means to restore a child to health if the efficacy of that healer could not be demonstrated except by appeals to faith in a particular religion. That said, this constraint would not prohibit parents from sharing their faith with their children, as this sharing itself meets important needs of the child, and so can be justified by appeals to more than the truth of the faith.

In addition to the political concern that children be raised to be reasonable citizens in society, the emphasis on public justification in this constraint also responds to the state's paternalistic interest in the child's wellbeing. As dependents, children are vulnerable to the shortcomings of those who care for them. Their carers may lack certain kinds of knowledge and through their ignorance the child could be harmed. They may have adequate factual knowledge about what the child needs and how to satisfy those needs but may lack empathy and be limited in their ability to see the world from their child's perspective. As a result, they may be insensitive or unresponsive to the child's needs. Similarly, they may be limited in the lives that they can imagine for that child, and as a result prepare her for only a very limited number of futures. Or, they may themselves have a flawed or overly narrow understanding of the good. The constraint of public justification protects the child from these shortcomings and from the harms that could result. As dialogue with others in our community, friends, family, colleagues and experts, is the best protection against the

inevitable shortcomings in our reasoning and understanding of the good (MacIntyre 1999, 96).

Conclusion

If children's legitimate claims on a society are to have their needs met, we must be able to identify what children's needs in fact are and who is responsible for meeting them. Over the course of this chapter, I have offered a partial justification of such an account, identifying key aspects of children's needs and proposing a preliminary list those needs. In particular, I argued that children's needs should be identified through a two-part process. First, the state should make use of a relatively general, and abstract characterization of children's needs, which can serve as the basis of constitutional guarantees and guide the creation of basic institutions in society. These needs included on this list should be understood as those means necessary to realize two kinds of essential goods: the goods of the child's lived experience, and developmental goods, understood as those goods necessary for the child to become an adult capable of intelligently forming and pursuing a variety of life projects and living on good terms with others. Second, the precise specification of a child's needs must be left up to those who assume responsibility for the child's care. The nature of caring relationships is such that the carers need to be given space to act on their conception of the child's good. Identifying and responding to a child's needs often requires detailed knowledge about the particular child being cared for, and bond of trust between the carer and child capacities that can only be developed over time in the context of a consistent caregiving relationship. Moreover, providing care often requires an inspired effort on the part of the carer on the child's behalf, and so

becomes an important element of their own good. Consequently, protecting this space for the carer promotes both the child's interests in being cared for and carers interest in being able to provide that care.

5. Lucky Genes

Our talents and skills fundamentally shape our lives, influencing our preferences and pursuits and ultimately the resources at our disposal to pursue a life. Accordingly, the distribution of talent and (dis)ability is at least a *prima facie* concern of a just society. However, these goods have not traditionally been the focus of distributive policy. Rather, they have been treated differently from resources such as wealth and primary goods, and perhaps with good reason, as talent and (dis)ability are different from these other goods. Talents and (dis)abilities cannot be transferred between individuals, at least not in the way that distribution is usually conceptualized. A brilliant physicist cannot simply give away her mathematical prowess in the same way she can the money received for winning the Nobel Prize. Second, while there is a sense in which they are resources to be used in the pursuit of our lives, talents and (dis)abilities are constitutive of the individual in a way that possessions and other external resources are not.

In this paper, I will take a closer look at this distinction in goods and the distributive response emerging from it. In doing so I will focus primarily on the arguments of John Rawls where this contrast appears in the distinction between social and natural primary goods. Social primary goods are “at the disposition of society” and consist in “rights, liberties, opportunities, and income and wealth” (Rawls 1999a, 54). In contrast, possession of natural primary goods such as “health, vigor,

intelligence and imagination,” may be influenced by society, but are not “so directly under its control” (Rawls 1999a, 54). Rather, their distribution is set through a “natural lottery,” which is biological in nature and therefore lies beyond the reach of social policy. This distinction has exerted significant influence on the subsequent development of liberal theory, so I will at times draw on other writers, such as Ronald Dworkin who echoes Rawls’s distinction in his own contrast between ‘personal’ and ‘impersonal’ resources⁶. While there has been disagreement over the details of how distributive principles should respond to these different types of goods, there is a relative consensus on the general strategy. In particular, the approach has been to redistribute the economic rewards that come from the exercise of talent and (dis)ability and in this way partly decouple these from both our own life prospects and the division of social primary goods⁷.

I will challenge the validity of this distinction and its role in shaping distributive principles. In Section One, I will look specifically at the distinction made by Rawls and Dworkin, examining its justification and the role it plays in structuring the scope of distributive principles. In Section Two I will move on to clarify some of the intuitions behind the distinction, which are captured in the iconic image of a “natural lottery”, before considering possible interpretations of the biological claims made by Rawls and Dworkin in section three. I will argue that these interpretations support neither the distinction between natural and social primary goods as

⁶ In Dworkin’s account, ‘impersonal resources’ refers to transferable goods such as money, housing and health care; in contrast, ‘personal resources’ include the various skills and talents that allow each to transform goods into the kind of life they find valuable, yet are non-transferable (Dworkin 2000,300).

⁷ Because it focuses on the skills and capacities that individuals achieve or have the opportunity to achieve, the capabilities approach is a possible exception to this trend. Instead of redistributing resources to decouple life prospects from these capacities, it is oriented towards the distribution of opportunities to develop capacities themselves.

constructed by Rawls nor the distributive responses to these. Finally, in Section Four I will begin to sketch some of the implications of weakening the distinction between natural and social primary goods and the broadening of distributive principles that comes with it.

The Natural Lottery and the Distribution of Talent and (Dis)ability

Unlike the goods commonly subject to distributive policy, such as wealth and income, talents and (dis)abilities require biological development. At the most general level, two developmental factors are recognized as contributing to the emergence of talent and disability. On the one hand, there is that which is given by nature, which is often referred to as the outcome of the natural or genetic lottery, and on the other hand there are social and environmental factors. The social and environmental factor most often discussed with reference to children's development is the family; however, other goods such as monetary resources and schools are also mentioned.

The iconic notion of a natural or genetic lottery expresses the idea that our talents and (dis)abilities are, at least in many ways, beyond our individual or collective control. These characteristics are given by nature through an arbitrary stroke of luck occurring at conception. Because this distribution is given by nature, however, it is taken as a given, fixed point in the design of a just state. As Rawls notes, "the distribution of natural assets is a fact of nature and no attempt is made to change it," for example through distributive policy (Rawls 1999a, 92). Indeed, "within the limits allowed by the background arrangements, distributive shares [of social primary goods] are decided by the outcome of the natural lottery; and this

outcome is arbitrary from a moral point of view” (Rawls 1999a, 63-64). In other words, even within a perfectly just distributive system, the natural lottery will be an ineliminable element of luck and inequality imposing an ultimate constraint on the equality that can be achieved.

This concept of a natural lottery has exerted significant influence on the subsequent development of liberal theory. Most notably, Dworkin’s distributive account is significantly motivated by the concern that Rawls did not do enough to mitigate the consequences of this lottery, which he explicitly identifies as a “genetic lottery” (Dworkin 2000, 445). Dworkin argues that this lottery is fundamental not only to how we understand ourselves and our physical bodies but also to how we understand others. Indeed, Dworkin says that the boundary between chance and choice that the lottery represents “is the spine of our ethics and morality” (2000, 444). It reflects the belief that:

Our physical being – the brain and body that furnishes each person’s material substrate – has long been the absolute paradigm of what is both devastatingly important to us and, in its initial condition, beyond our power to alter and therefore beyond the scope of our responsibility, either individual or collective. The popularity of the term “genetic lottery” itself shows the centrality of our conviction that what we most basically are is a matter of chance not choice” (Dworkin 2000, 445-446).

As (dis)advantages that the individual did nothing to deserve, the talents and (dis)abilities bestowed in the lottery is the epitome of what a just society ought to respond to under the liberal framework. While the outcome of the lottery may itself be beyond the reach of society,⁸ this need not be an impediment to furthering justice. It is simply a fact of nature and concepts of justice do not apply. What is a question of justice is how our institutions respond to these facts. And in general, the favored

⁸ Except through direct manipulation of the genome or eugenic policies

response has been to decouple, as far as is possible, these natural facts of talent and (dis)ability from our life prospects. As Rawls argues:

“The natural distribution is neither just nor unjust; nor is it unjust that persons are born into society at some particular position. These are simply natural facts. What is just and unjust is the way that institutions deal with these facts” (Rawls 1999a, 87-88)

Accordingly, the idea of constitutive luck embodied in the lottery metaphor plays a central role in framing the distributive response to variation in talent and (dis)ability as one of dissociating our life prospects from the arbitrariness of the lottery. As Rawls argues, the two principles of justice seek to “mitigate the influence of social contingencies and natural fortune on distributive shares [of social primary goods]” (Rawls 1999a, 63). Since the genetic talents and (dis)abilities cannot themselves be transferred, this end is best accomplished by weakening the link between the distribution of transferable social goods such as wealth and income from the distribution of talents and (dis)abilities.

Within Rawls’s account, this feat is accomplished through the difference principle, which redistributes social primary goods to counteract the arbitrariness of the lottery, representing:

“an agreement to regard the distribution of natural talents as in some respects a common asset and to share in the greater social and economic benefits made possible by the complementarities of this distribution. Those who have been more favored by nature, whoever they are, may gain from their good fortune only on terms that improve the situation of those who lose out. The naturally advantaged are not to gain merely because they are more gifted, but only to cover the costs of training and education and for using their endowments in ways that help the less fortunate as well.” (Rawls 1999a, 87)

As this quote highlights, talents and disabilities are inputs into the system of social cooperation, gifts of nature distributed by the fates much as the distribution of natural

resources, such as gold and oil, between nations would be understood. What is a concern of justice is not how nature has distributed these gifts, but rather how they factor into the system of social cooperation, contributing to and influencing the outcome of social production.

The conclusion that the distribution of talent and (dis)ability lies outside distributive concerns is slightly puzzling. At the outset, Rawls acknowledged that the distribution of talent and (dis)ability is determined not just by the natural lottery but also by social circumstances. He explicitly recognizes that “the extent to which natural capacities develop and reach fruition is affected by all kinds of social conditions and class attitudes” (Rawls 1999a, 64). He places particular emphasis on the family and its resources in determining which and to what extent the child’s resources will be developed. To the extent that the distribution of talent and (dis)ability is influenced by these latter factors, they would seem to be subject to the basic structure and so not to lie as far beyond distributive principles as many of the above remarks would suggest.

Yet, while these factors are recognized, it seems that their role remains secondary; their course is set and constrained by the natural lottery. Their influence may be positive and fruitful, leading to successful development and the full expression of the potential contained in the lottery, or unfruitful, leaving the potential unrealized. In either case, however, development is presented as an unfolding of the potential given at conception. These assumptions underlie Rawls’s comments that talents can be “developed or left unrealized” in any particular social environment (Rawls 1999a, 63). To speak of a talent being left undeveloped, we must have a

conception of that talent as present in the individual (i.e. in the genome) independently of its development.

This attitude is also articulated in the principle of fair equality of opportunity, which holds that “assuming that there is a distribution of natural assets, those who are at the same level of talent and ability, and have the same willingness to use them, should have the same prospects of success regardless of their initial place in the social system” (Rawls 1999a, 63). In the case of adults, it may be reasonable to compare the relative talents of individuals. For example, if we imagine two adults competing for a position on a professional baseball team, we can understand the idea of them being equally talented. With this idea in hand, we can make sense of the intuition expressed in the principle of fair equality of opportunity, as claiming that if these two players are equally good, they should have the same opportunity to get on the team.

However, when applied to a life as a whole, as Rawls suggests it ought to be, the meaning of this is less clear. For, in applying it to a life, we must also apply it to children who are not in *possession* of their talents and (dis)abilities but are rather in the course of developing them. To do so, however, we must have some idea of the child’s talents and (dis)abilities as a quantity that can be known *prior* to its development. It is only in such cases that we could determine which children had “the same level of talent and ability” and so determine when they have been given the same prospects (Rawls 1971, 63). Given Rawls’s earlier discussions about the natural lottery, the most reasonable suggestion would be that, before their expression, the potential for these talents is present in the individual’s “nature,” in her genes.

Consequently, at the foundation of Rawls’s distributive arguments lie a collection of assumptions regarding the developmental processes behind talent and

(dis)ability. Some of these assumptions refer to the possible influence of social primary goods. However, his distributive arguments are most strongly shaped by beliefs regarding the developmental consequences of the natural or genetic lottery. In particular, the lottery is given prominence, effectively determining the distribution of these natural primary goods and thereby acting as an ultimate constraint on equality in a society.

Neither Rawls nor Dworkin explicitly discusses the assumptions, largely biological in nature, underlying the distinction between the kinds of resources subject to distributive concern. Rather, they assume these as part of the common assumptions or “natural facts” from which a theory of justice can be built (Rawls 1999a, 87; Dworkin 2000, 443-445). The question then becomes, what might these common facts or shared understandings be? Are these assumptions justified in light of our best understanding of the developmental process?

Lottery Luck and Responsibility

Before we move on to consider the biological assumptions underlying the lottery, there is an initial worry to address. There is something odd about using the language of a lottery to talk about the genes we are born with. For *whose* luck is it to be born with these genes rather than those? The lottery metaphor suggests that there is some individual who remains constant across outcomes of the lottery and for whom the outcomes could be judged good or bad, just or unjust. But is this a coherent idea when considering the genes that we are born with? This problem is particularly acute if we understand the genes or characteristics set in the lottery as constitutive of one’s

identity, for in that case changing an individual's genes would make them into a different person (Hurley 2003).

One possible solution to this difficulty is to stipulate that the traits distributed in the lottery are not identity-fixing. Under that assumption, there could be a single individual who remained constant across various constellations of genetic material. The difficulty with this approach, however, is that this weaker reading cannot ground the kind of broad judgments about constitutive luck reflected in the natural lottery, as what characteristics are and are not identity-fixing will itself be highly contestable (Hurley 2003). Certain genes or collections of genes may be understood as identity-fixing for the individual, whereas others may be judged accidental. As a result, this approach will not preserve the role that the lottery metaphor has played in explaining generalized judgments about the scope of constitutive luck in distributive theory.

Perhaps a more fruitful suggestion, also offered by Hurley, is to clarify our understanding of the "luck" invoked in the lottery metaphor. Instead of thinking of the lottery robustly as referring to a particular kind of distributive process, we could understand it as making a weaker claim about the absence of responsibility for the traits resulting from the moment of the lottery (Hurley 2003). Referring to a "natural lottery" in the distribution of talent and (dis)ability simply makes the claim that we are not responsible for the distribution of these traits. Over the remainder of this paper, I will understand talk of the lottery as invoking this thinner reading, and understand use of the lottery as referring to the idea that we are neither individually or collectively responsible for these traits⁹.

⁹ Hurley also argues that the language of a "lottery" is simply unhelpful and should be avoided. I would agree with her that the lottery metaphor is confusing and has certain

That said, my concern here will not be with the question of whether or not we are responsible for the resources purportedly distributed through the lottery. Rather, my focus will be on the assumptions, largely biological in nature, that have been invoked to ground the judgment that we are not responsible, individually or collectively, for the distribution of talents and (dis)abilities. These assumptions emphasize significant constraints on development that each of us receives at conception, and that are therefore the product of constitutive luck. The influence of these constraints on the developmental process is sufficiently strong as to severely limit the amount of control or influence that we can have, either individually or collectively, over the outcomes of the process. If they prove to be false, it is still a further question as to whether or not the individual, or some group of individuals can then be held responsible for those distributions and what the implications of that responsibility are for the fair distribution of benefits and burdens in a society.

Behind the lottery

Both Rawls and Dworkin introduce the idea of a natural lottery as part of the common understandings or “natural facts” from which a theory of justice can be built (Rawls 1999a, 87; Dworkin 2000, 443-445). But what are those shared, or “folk” biological ideas upon which they are drawing in introducing the idea of a natural lottery, and are these justified in light of our best understanding of developmental processes?

incoherent implications. Nevertheless, I will continue to use it throughout this paper as it is the language used in the original presentation of these arguments, and it expresses what I will argue are a number of fundamental assumptions about the nature of development.

What I shall argue is that the lottery metaphor falls within a more general collection of folk-biological ideas known as the “conception/donation” view (Mameli 2005, Mameli and Bateson 2006; Bateson and Mameli 2007, Mameli 2007). The conception/donation view offers an explanation for the uniquely reproductive capacities of biological systems whereby organisms create new organisms resembling themselves, i.e. “like begets like”. Armadillos beget armadillos and oaks beget oaks. The phenomenon applies, albeit in a more qualified way, to the particular characteristics of biological organisms. Tall parents tend to have tall children and dogs with short tails usually produce pups with short tails. This phenomenon has been known and used by humans for millennia, and discussions of it can be found at least as early as the writings of Hippocrates and Aristotle (Mameli 2005, 365-399).

That ‘like begets like’ in biological organisms describes an outcome observed in biological lineages. Throughout the history of biology, the explanation offered for this phenomenon has been some version of a “conception/donation” view, according to which “reliable reoccurrence of features within lineages is due to the transfer, at the moment of conception, of some developmentally specific material from parent to offspring” (Mameli 2007, 39). Our understanding of the nature of this donated material has changed significantly over the years from the miniature versions of the mature organisms posited by the preformationists of the 17th century to the genetic material thought today to underlie the process. Nevertheless, what has remained constant throughout these permutations is the belief that this material, which is donated by the parents at conception, is the material that explains the direction of development and so ultimately the features the organism comes to have. Mameli goes as far as to suggest that the conception/donation view is so fundamental to biological thinking that “the basic assumptions have driven and shaped the process of scientific

discovery,” remaining unquestioned throughout the history of the discipline (Mameli 2005, 376).

The lottery metaphor falls within the general category of conception/donation views of biological inheritance. It argues that at some canonical moment the individual is endowed with some developmentally crucial material, i.e. genes, that fundamentally shapes the phenotype that she will come to have. Indeed, the lottery metaphor only makes sense if what is given in that lottery has a definite prominence in the development of the individual’s traits, for if it did not then the claim that its outcome determines the distribution of natural goods simply would not make sense.

More importantly, an assumption such as the conception/donation view is needed for the lottery to distance, as it does, the distribution of talent and (dis)ability from the system of social production. Assume, for example, that the lottery metaphor was referring to a much more generalized form of conception luck, such that the luck one was subject to involved not only the particular developmental material joined at conception, but also the family and wider society into which one was conceived. While these factors are arguably a form of luck that we all face and that influences our talent and (dis)ability in life, they are not distanced from systems of social cooperation but are themselves a product of it.

Consequently, I suggest that the lottery metaphor falls within the more general collection of folk biological ideas described by the conception/donation hypothesis. In particular, I will understand DNA to be the conceptional/developmental material in question. While Rawls is not explicit about this matter, he does make comments in this direction (Rawls 1999a, 63). It is also the direction in which both the philosophical and the social debate have moved since Rawls’s arguments.

DNA and Models of Development

For DNA to play the role postulated by the lottery metaphor, it must have a particular prominence in determining developmental outcomes. Over the course of this section, I will argue that there is no understanding of the role of DNA in development that secures this prominence for DNA. While it is undeniable that it plays a very important role in development, it is neither a fixed nor an ultimate constraint on one's talents and (dis)abilities. As a result, its participation in development cannot ground a categorical distinction in the kinds of goods that are relevant to distributive justice, or in the distributive principles adopted in response.

In presenting this argument, I will consider a number of different explanations of genetic involvement in development. All of these accounts highlight important contributions of genes to developmental processes. However, when properly understood, *none* of them justifies the kind of uniquely privileged contribution of genes assumed in the lottery metaphor. Moreover, the most plausible account of development, which recognizes the structured interplay between the organism and its environment over the developmental course of the organism, provides the least support for a stark distinction between the contribution of non-genetic and genetic factors in development and for privileging of the latter as determinate in development.

Causal Priority

Development is the process through which an organism becomes successively more complex and integrated in its functional body systems and behavioral responses (Halfon 2000; Hochstein 1998). It is a physical process, albeit a very complex one that involves the interaction of numerous causal factors over an extended period of

time. Accordingly, the most straightforward sense in which DNA could be privileged in development is if DNA is uniquely important as a cause of development, perhaps by being causally necessary or sufficient for the development of traits in a way that non-genetic factors are not.

Nevertheless, there is no simple sense of causal necessity or sufficiency that can ground the priority of DNA in development. In isolation, genes do nothing. Their transcription into RNA, their translation into protein and the construction of cells, tissues, organs and organisms from all of these require structured interaction with a host of other resources at all levels of biological and non-biological organization. Consequently, considered on its own, DNA is not sufficient to cause any phenotypic trait, except perhaps for the degenerate trait of having that sequence of DNA.

There is also no simple notion of necessity that will secure the priority of DNA in development, as the interaction between the genome and environment is, again, necessary for the development of any trait. While genetic material, indeed specific genetic material, is necessary for the development of particular phenotypes, so too are a host of other non-genetic resources. While it is true that a fetus's brain will not develop without the correct constellation of genetic material, it will also not develop in the absence of folic acid; both are equally necessary for neural development. At least in word, recognition of this necessary interaction between genes and environment for all phenotypes is the "official view of modern developmental theory" (Johnson 1987, 149).

An Informational Approach to Genetic Prominence

While interaction is necessary to the development of all traits, the prominence of genes may still be maintained if it is possible to identify a sense in which the genetic material is uniquely necessary for development by distinguishing between the roles that DNA and these further factors play in development. While the entire constellation of resources may be necessary, DNA will still be privileged if it is necessary in a unique way, for example by determining the specificity of the developmental outcome in a way that environmental resources do not.

In contemporary debates, the unique role most plausibly suggested for DNA is that of providing developmental information. As Paul Griffiths has articulated the intuition: “genetic causation is interpreted deterministically because genes are thought to be a special kind of cause. Genes are instructions – they provide information – whilst other cause factors are merely material” (Griffiths 2001).

The idea of information as a cause of development is elliptical. Information is not the kind of thing customarily thought of as a cause in physical systems. However, as Susan Oyama has pointed out, in contemporary biology information has come to be understood as “a special kind of cause among all the factors that may be necessary for a phenomenon, the cause that imparts order and form to matter,” and in occupying this position information has replaced earlier gods and vitalistic forces as the pre-existing form of the organism (Oyama 2000b). In this context, a cause provides information to the extent that it accounts for the emergence of form and order in biological systems. It is a formal cause in the Aristotelian sense. In explaining the emergence of order, informational discourse in biology speaks to the distinctively teleological nature of causal processes in biological development. The informational

approach also resonates with a popular understanding of DNA as reflected in metaphors of DNA as supplying a “blueprint” or “program” for development.

The notion of information in biology is also used in a related, but perhaps more specific way, as accounting for the particular differences between members of the same species. In this use, a cause provides information to the extent that it can explain why one particular developmental outcome occurred as opposed to another (Mameli and Bateson 2006, Oyama 2000b, Oyama 2000a). Information causes are invoked in order to explain why one person differs from another, or this pear differs from that one, rather than to explain why this is a person or a pear in the first place.

If DNA provides a privileged source of developmental information, the lottery metaphor can perhaps be vindicated. For if our DNA can be said to uniquely contain developmental information because it specifies developmental outcomes, then the link between our DNA and our developmental outcomes, i.e. our traits and (dis)abilities, will be sufficiently strong for us to claim that these developmental outcomes are, like our DNA sequence, a matter of constitutive luck.

Over the course of molecular genetics, three concepts of genetic information have emerged in an attempt to explain the unique developmental contribution of DNA: genetic information as an elaborate code script, DNA as a source of information in a causal-communication system, and DNA as containing teleosemantic information. In all these approaches, DNA can be said to provide developmental information. However, none of these accounts can identify DNA as a privileged source of developmental information. Either the sense in which the genome is said to hold information is false, or, when it is interpreted so as to be true, DNA is not the only factor providing developmental information. As a result, an informational

understanding of the role of genes in development cannot secure their priority in determining outcomes, and so cannot link developmental outcomes to genes any more strongly than to non-genetic causes.

Genetic Information as Code-Script

The first attempt at characterizing genetic information argues that genes contain an elaborate code-script that specifies the organism's developmental program. This suggestion emerged very early in the history of molecular genetics and has exerted significant influence on the subsequent development of the field (Sarkar 1996). For example, in Schrodinger's seminal lecture "What is Life?" he frames the challenge of inheritance as that of understanding how the nucleus of a cell could possibly contain all the information necessary to direct the development of an organism (Sarkar 1996, Schrodinger 1944). The prophetic solution he posits is that the nucleus contains an elaborate "code-script" that directs the process of development and leads to the emergence of a new organism (Schrodinger 1944). Accordingly, upon the discovery of the double-helix structure of the genome with its distinct, linear patterns of A:T/C:G pairings, the sequence quickly became identified as the basis of this developmental code:

"The phosphate-sugar backbone in our model is completely regular but any sequence of the pairs of bases can fit into the structure. It follows that in a long molecule many different permutations are possible, and it therefore seems likely that the precise sequence of bases is the *code which carries the genetic information*" (Watson and Crick 1953, 964).

The idea that developmental information consists of a simple code gained significant traction in the early development of molecular genetics (Sarkar 1996, Gamow, Rich, and Ycas 1955, Lederberg 1956, Mazia 1956). In these early accounts, however, there was also ambiguity as to what precisely was encoded in genes. The

synthesis of protein is a complex, multi-stage process. We can safely overlook many details of the process. However, it is important to understand that it involves two main stages. In the first, a sequence of nucleotides in the DNA molecule is “transcribed” into a corresponding sequence of RNA. This sequence of RNA then acts as a template for protein synthesis, as it is “translated”, three nucleotides at a time, into the sequence of amino acids that will constitute the protein. Once synthesized, there are then further biological processes responsible for modifying the string of amino acids to make a functional protein, and yet a further question as to what role this protein will play in shaping the organism’s phenotype. Consequently, DNA could have coding relationships with at least four different intermediaries in the process. In particular, there could be a coding relationship between: (1) DNA and RNA, (2) DNA and amino acid sequence in the protein, (3) DNA and protein structure and function (4) DNA and phenotype. To a great extent, each subsequent relationship assumes the former and makes increasingly strong claims about the informational content of the DNA code. For example, a coding relationship between DNA and protein function must assume a strong coding relationship between DNA and RNA, as well as between DNA and protein sequence.

The coding relationship explicitly hypothesized by proponents of a genetic code holds between the sequence of nucleotides in the DNA and the sequence of amino acids in the protein. Crick makes this identification explicit, stating that “by information I mean the specification of the amino acid sequence of the protein” (Crick 1958, 138). However, in the early days of molecular genetics, the distinction between a coding relationship between DNA and a protein, and DNA and a developmental outcome was obscured because determination of the protein sequence was seen as the crucial question - once the sequence of amino acids in the protein is

determined, so too are the subsequent questions about protein structure, function and phenotype (Sarkar 1996). For example, Crick argued that protein sequences encoded in DNA “are the most delicate expression possible of the phenotype of an organism” (Crick 1958, 142).

Consequently, in the early days of molecular genetics, a strong interpretation of genetic coding emerged that argued for a rigid relationship between the sequence of nucleic acids and the ultimate phenotype. All specificity in protein function was attributed to the DNA sequence, so that there was a unidirectional flow of information from nucleic acid sequence to protein function. This understanding of the genome has been foundational in molecular biology, canonized by Crick in what persists today as “the central dogma” of molecular biology:

The Central Dogma...states that once ‘information’ has passed into protein it cannot get out again. In more detail, the transfer of information from one nucleic acid to nucleic acid, or from nucleic acid to protein may be possible, but transfer from protein to protein, or from protein to nucleic acid, is impossible. Information means here the precise determination of sequence, either of bases in the nucleic acid or on amino acid residues in the protein. (Crick, 1958 153).

If legitimate, this strong reading of genetic coding would go some way towards justifying the distinction between natural and social primary goods and cordoning off the former from direct considerations of distributive justice. In this view, the organism’s ultimate phenotype is “delicately expressed” or encoded in the gene. It posits a strong and unique role for DNA in development, so that it embodies, to a significant degree, the ultimate form of the organism.

However, this strong reading of genetic coding is not sustainable. The relationship it posits between DNA and proteins, and ultimately an organism’s phenotype, is simply too strong. At each stage, moving from the DNA to the

organism outlined above, the information contained in the genome is modified and augmented through interaction with the environment so that it can no longer be claimed that the genome is unique in containing developmental information.

For one thing, the coding relationship between triplets of nucleic acids in DNA and amino acids in proteins only holds for nucleic acid sequences in particular genetic contexts. For example, a string of three consecutive alanines, one of the four nucleic acids in DNA, codes for the amino acid lysine in a protein. However, it only has this correspondence when the three alanines occur in the particular genetic context that defines a “coding region” of the genome, rather than regulatory, or so-called “junk DNA,” which is thought to have no particular function.

Moreover, the sequence of nucleotides in a coding region has only an indirect relationship with the final sequence of amino acids in the protein. For example, as the DNA is translated into a protein through the RNA template it is processed. This processing can involve removing, adding, changing or rearranging the sequence of nucleic acids as they were encoded in the DNA, thereby altering the amino acid sequence of the protein that is ultimately synthesized. How this processing proceeds will depend not only on the wider genetic context, but also on the cellular characteristics, such as what other proteins are present and in what concentration, the presence of catalysts, cellular PH and the like.

More significantly, however, the sequence of amino acids in a protein is only indirectly related to the protein’s function. Protein function is contingent on a host of considerations, including the presence of other proteins and materials in the cell and broader environment. The complexity of the relationship between a DNA sequence and a phenotype is evident even in the simplest of organisms, such as *E. coli*. The *E.*

E. coli bacterium has been a favorite model organism in molecular genetics since the time of Watson and Crick because of its relatively simple and well-behaved genome. The organism contains about 4,000 genes compared to our nearly 20,000. Each cell contains only one copy of genetic material (compared to our two), and it replicates by cloning itself, meaning that to reproduce it simply copies its genome and divides into two, thus producing two genetically identical bacteria.

As the organism of choice in early molecular genetics, its simplicity has also been cited as the inspiration for the strong understanding of genetic coding (Sarkar 1996). Nevertheless, even these relatively simple genetic clones exhibit vastly different phenotypes in traits such as stamina and metabolism that are fundamental to their survival. For example, when given food but restrained from accessing it, the cloned bacteria will display variable levels of motivation, with some bacteria trying for twice as long as others to swim towards the food. Alternatively, when given food, some clones will eat ravenously while others consume the sugar only reluctantly (Zimmer 2008).

In *E. coli* clones these differences are not genetic differences, but rather arise from variation in the rate at which they are synthesizing the same proteins. This protein synthesis occurs in bursts, with the timing of the bursts the result of random variation in the cell and its environment. For instance, variation in the rate at which the bacteria eat the sugar lactose can arise through the simple coincidence of a bacterium happening to be in a burst of synthesizing lactose-consuming channels. If the bacterium happens to also find itself in a lactose-rich environment it will draw in a lot of the sugar. This excess sugar can then disrupt the function of proteins that would otherwise suppress the synthesis of more lactose channels; more channels are

synthesized, causing the organism to consume more lactose, thus further disrupting the inhibitor proteins. In other words, the simple coincidence of the timing of the burst and the presence of lactose in the environment traps the bacterium in a “sugar-feasting feed-back loop” (Zimmer 2008).

Consequently, even in the simple *E. coli*, the relationship between the organism’s sequence of DNA and the ultimate phenotype expressed is highly indirect, influenced by a host of factors from random variation to the presence of food in its environment. As I shall argue in greater detail below, moving up the ladder of biological complexity only expands the number of causes and possible influences, thus further weakening the link between the sequences of nucleotides found in our genome and the traits and behaviors expressed.

Recognizing this complexity strongly challenges the presence of a coding relationship between DNA and phenotype and, as the intricacies of protein synthesis and biological development have become better understood, the strong claims of genetic coding have disappeared from mainstream biological thought. Nevertheless, some have argued that there is an important insight in the concept of a genetic code that ought to be preserved (Godfrey-Smith 2000b). In particular, when properly qualified to recognize the complexity of the RNA processing mentioned above, DNA does nevertheless have an important and unique relationship with the sequence of amino acids in a protein. Simply stated, genetic sequences that are not present cannot be translated into proteins. In specifying the sequence of amino acids in a protein, DNA does play a unique and crucial role in development. To acknowledge this contribution, the coding relationship should be recognized, but it should be strictly limited to the relationship between DNA and the sequence of amino acids in a protein.

As Godfrey-Smith has argued, the notion of a genetic code was pivotal in solving the problem of how amino acids are sequenced in a protein, and it is this role alone that the genetic code plays in cellular and developmental processes (Godfrey-Smith 2000a, 2000b).

Even if the coding relationship could be adequately qualified, this weaker reading of genetic coding would not suffice to ground the lottery metaphor or to justify the distinction between natural and social primary goods that rests upon it. As vividly illustrated by the case of *E. coli*, and readily acknowledged even by the strongest proponents of the limited genetic coding view, it simply cannot secure the required link between genetic sequence and developmental outcomes (Godfrey-Smith 2000b).

Consequently, the idea of our genome as containing an elaborate code-script cannot secure the priority claimed for genes in the development of talent and (dis)ability. When given a strong interpretation, such that the coding relationship holds between the genome and developmental outcomes, the account could support the assumptions underlying the natural lottery. However, this strong reading is false and fails to reflect our best understanding of the role played by DNA in development. In contrast, when the coding relationship is weakened so as to be biologically plausible it is no longer the case that DNA plays a uniquely determinate role in development and so this weaker reading cannot support the claims made by the lottery metaphor.

The Causal-Communications Account of Genetic Information

The second approach to genetic information, the causal-communication account, offers a formal approach that looks at the transmission of information from one system, such as the genome, to another system, such as a developing organism. The two systems are said to be communicating through a channel when the state of one system is systematically dependent on the other so that a change in the one predictably leads to a change in the other (Shannon and Weaver 1949). In this system, the genome and the phenotype are the two systems communicating with the developmental context, including the intracellular, extracellular and extraorganismic factors present over the developmental history of the organism, constituting the communication channel. The genotype carries developmental information to the extent that alterations in it lead to corresponding changes in the organism's phenotype, which it often does. For example, a single nucleotide change in the hemoglobin beta gene carries information that leads to a change in the hemoglobin protein and results in sickle cell anemia.

Again, if the genome alone can be said to contain developmental information in this sense, then it would go some way towards grounding the distinction between natural and social primary goods, as it would explain how it is that the genome specifies the organism's developmental outcomes. Moreover, the account does identify a sense in which genes can be said to carry developmental information; alternations in the genome do lead to predictable changes in the organism's phenotype. The difficulty, however, is that the genetic sequence does not uniquely play this role. While variation in the genome leads to changes in the phenotype and so contains developmental information, changes in the environment also lead to

phenotypic changes and so would also have to be recognized as containing developmental information. Just as the ultimate phenotype systematically depends on the genetic sequence, it also depends on the phenotype-environment interactions taking place over the developmental history of the organism. To the extent that the genome is identified as a source of developmental information, so too must these non-genetic resources be so identified. Whether it is genes or environment that is identified as the source of information merely reflects which of the two is held constant, and so constitutes the channel, and which is allowed to vary and thereby may be identified as sending a signal. Indeed, this kind of reversibility of the signal source and channel conditions is a fundamental theorem of communications theory (Griffiths 2001).

Consider, for example, a complex trait such as obesity. If we wanted to identify the genome as the source of information for this trait, we would isolate the genetic effect by holding environmental influences constant, either experimentally or statistically. However, the experimental design can just as easily be reversed, allowing the environment to vary against a fixed genetic background. In this case, the environment would be identified as carrying developmental information. Both of these experimental approaches have been pursued and have yielded important information about the etiology of diseases and phenotypes such as obesity (Dina et al. 2007, Frayling et al. 2007; Hjelmberg et al. 2008; Simoes et al. 2008).

What such experiments do not achieve, however, is an identification of either the environment or the genome as the *privileged* source of developmental information. As a result, they cannot secure the priority claimed for genetic information in the lottery metaphor. Consequently, the causal-communication

understanding of developmental information is ultimately too broad to distinguish the unique and privileged role for the genome in development which is assumed in the lottery metaphor.

Teleosemantics

The causal-communication approach to developmental information is purely formal. It makes no attempt to capture the content of what is being communicated, and many have suggested that this is why it is inadequate to explain the uniquely significant contribution of genes to development. What makes the genome important in development is not merely that it signals or causes the development of particular traits, but that genes specify particular developmental outcomes. They are “directed at” or are “for” the phenotypes they cause, providing the program or blueprint for development. It is this intentional content, and not merely the formal characteristics of information, that must be captured if we are to explain the unique role of genes in biological systems (Godfrey-Smith 2000b; Maynard Smith 2000).

Nevertheless, it is unclear how any physical system could contain intentional information. While this problem is not unique to the genetic context, a defense of the semantic reading of genetic information requires some explanation as to how it is that genes contain this content.

The most plausible response to this challenge comes from the teleosemantic approach, which takes advantage of the directedness of evolution to ground intentional content (Millikan 1989; Papineau 1987). In this argument, the intentional content of a physical system corresponds to the content that it was selected to have.

For example, the hemoglobin-beta gene was selected in evolution because it produces a protein, hemoglobin-beta, which carries oxygen to our cells. This function improves the survival of the organism and enhances its selective advantage. Consequently, it is this function that the gene is about.

This is a very strong reading of genetic information as it posits a relationship between DNA sequence and developmental outcome. Accordingly, it would also provide a strong defense of the distinction between natural and social primary goods. If genes alone can be said to carry information in this stronger sense, then it would be possible to privilege them as a cause of development. For, regardless of the developmental context, the genome would specify developmental information and this content would exist independently of the developmental expression. Where the developmental outcome is altered by non-genetic factors it is not that these causes provided developmental information, but that the environment has *misinterpreted* the message of the genome. The developmental expression is in error; the environment is not providing further information. However, I shall argue that the teleosemantic account cannot secure this content without also attributing it to non-genetic factors. As a result, it cannot identify a uniquely privileged role for genes in specifying developmental outcomes, nor can it justify the stark distinction between natural and social primary goods.

The teleosemantic account attributes informational content to DNA on the grounds that a sequence of DNA was selected for a particular function that is necessary for survival (Maynard Smith 2000). However, if genes contain information because of their selective histories, any inheritance system that produces intergenerationally stable variation could be a source of developmental information.

Much more than our genes is inherited in this way and much more than our genes is potentially subject to natural selection (Griffiths 2001).

Perhaps the most vivid illustration of a non-genetic inheritance system of this sort is that of epigenetic inheritance. Epigenetic inheritance systems refer broadly to any biological mechanism that causes a change in gene expression without a corresponding change in the DNA sequence, and that persists over cell divisions, and in some cases across generations. This kind of regulation is fundamental to embryonic development during which a single cell multiples and differentiates into all of the diverse tissues and cell types present in an adult organism, without any change in the underlying gene sequence. However, it can also play a role in disease etiology. For example, in Norrbotten, the northern-most province of Sweden, harvests can vary significantly from one year to the next. While they are usually sparse, they are sometimes overflowing. During these times of abundance, residents overeat so as not to waste the bounty. However, researchers have found that because of epigenetic changes to their genomes, the grandsons of men who had experienced the wide swings in their daily intake as children due to years of abundance interspersed into the normally sparse harvests, died 32 years earlier than the grandsons of men who had not experienced these variations in childhood (Bygren 2001).

The importance of regular epigenetic inheritance is perhaps most vividly illustrated in those instances where the system breaks down and offspring receive an altered system of epigenetic regulation. Such alterations have been linked to a wide array of diseases including Angleman syndrome, Prader-Willi syndrome, Beckwith-Widemann syndrome, bipolar disorder, Tourette syndrome, schizophrenia and autism (Jirtle and Skinner 2007). Epigenetic modifications have also been associated with

more common diseases including diabetes, male infertility and numerous cancers (Jirtle and Skinner 2007; Zambrano et al. 2005; Cesani et al. 2003; Anway and Skinner 2006; Chang et al. 2006).

Epigenetic inheritance provides the most uncontroversial instance of non-genetic inheritance that is subject to natural selection. But the scope of what is inherited can plausibly be seen to extend much further than these modifications to encompass the distinct patterns of interaction between the organism and its environment over its developmental history that are reliably reproduced over generations and that are integral to the organism's development (Griffiths 2001; Griffiths and Gray 1994). To the extent that the genome contains information merely because of its selective history, so too should these patterns of interaction.

Just as it does not make sense to talk about a gene as producing or causing a phenotype in the absence of these structured environmental resources, it also does not make sense to speak of a gene as being selected outside the particular developmental environment that reliably leads to a phenotypic outcome conferring selective advantage on the organism. Consider human skin. The development of healthy skin is an important developmental outcome that has clear selective advantages, playing many roles in the integrity of the organism. Human skin, however, could only have evolved in an environment that had adequate supplies of vitamin C, as the human body cannot synthesize this chemical, but is dependent upon it. In the absence of it, skin, teeth, gums and capillaries do not develop normally but rather are covered in the ulcers and sores characteristic of scurvy (Mameli 2005, 385). Moreover, it is not just environmental resources that are critical, but also the spatio-temporal structuring of those interactions over the developmental history of the organism, as the many

instances of critical and sensitive periods of development in systems as diverse as the vision, stress responses and interpersonal relationships vividly illustrate (National Research Council and the Institute of Medicine 2000).

In response to these examples, one might argue that what the above examples illustrate is merely that stability in environmental conditions is a necessary condition for selection, not an outcome of selection. As such, these developmental resources are not a *source* of information for development, but rather a *precondition* for the genome to contain the information that it does, i.e. a precondition for selection (Maynard-Smith 2000).

What this response overlooks, however, is that, while developmental resources such as the presence of sunshine or vitamin C in the environment are not themselves modified by selective pressures, the nature of the interaction between the developing system and these environmental resources is highly contingent, so that a change in the developmental interactions caused by variation in either the genome or the environment could substantially modify the developmental significance of interaction with these fixed environmental resources (Griffiths and Gray 1994). It is the interaction and its developmental significance that is reliably reproduced over generations, and it is these interactions that are a product of natural selection. To the extent that semantic content is set through a process of natural selection, it is only this interdependency, i.e. the interaction between the organism and the environment, that can contain information.

Ultimately, the teleosemantic approach to genetic information cannot secure the priority of the genome in development. The selective advantage of any particular gene in the organism depends on much more than the sequence of nucleotides. In

particular, it depends on the spatio-temporally structured series of interactions with the broader cellular, organismic, and extra-organismic factors in its environment. It is these patterns of interaction, and not merely the genome, that are reliably reproduced over generations and are subject to natural selection. As a result, it is also these patterns of interaction that are most plausibly understood as containing information on a teleosematic approach.

Developmental Systems

The accounts discussed above all fail to identify a sense in which the genome uniquely carries developmental information. The accounts fall short by failing to recognize the contingency of genetic influence on the broader developmental context of the organism. To appreciate the role of genes in development, these interdependencies must be recognized. This recognition will not be achieved by simply reversing the dichotomy, locating the relevant information outside the genome in the environment, as this merely relocates the problem. Just as the environment is necessary to understanding the genetic contribution, so too is the genome necessary to understanding environmental influence. Developmental information does not emerge in biology through the imposition of form and order from either the genome or the environment. Rather, the information, the form, is itself constructed through the *interaction* between genome and environment in the context of the developmental history of the organism.

Rather than locating developmental information in the genome, this approach to developmental information argues that the source of order and form, the generation of phenotypic constancy and diversity, is located in the *developmental system* of the organism. The developmental system is understood to encompass the spatio-

temporally structured, historically contingent process of interaction between genome and environment. The assorted elements in the ensemble are recognized equally as causes because no one alone is sufficient for development, and variation in any can lead to variation in the outcome (Oyama 2000a, 200b, Lewontin 1983, Waddington 1960). Moreover, it is this entire system that is reliably reproduced over generations and that leads to the emergence of biological form.

This developmental systems approach fundamentally challenges the priority given to genes in the natural lottery. For insofar as developmental information emerges only through the historically contingent interaction between genetic and non-genetic factors, it is not the case that genes contain fixed developmental information, nor is our lot of talents and (dis)abilities fixed at conception through our genetic endowment.

The above argument rejects the idea that developmental outcomes are specified in genomes, or that genomes are even a particularly privileged source of this information. But cannot something of the intuition behind the lottery be saved by integrating these interactionist insights into the lottery metaphor? In particular, the interaction between the environment and the genome is constrained in important ways. DNA may not determine the outcome, but it could nevertheless constrain it by limiting the range and type of possible interaction. Indeed there is good reason to think that something along these lines is the case. Humans only develop from fertilized human eggs and a lion never hatches from a crocodile egg. Consequently, while there may be variation in the developmental outcomes from any particular genome, these outcomes are constrained by the limited range of possible interactions between genome and environment.

This talk of genetic constraint is quite vague, and I suggest that it is best understood in terms of a developmental robustness or *developmental canalization*. The idea of developmental canalization was first developed by Waddington, who defined the idea as “the capacity [of development] to produce a particular definite end-result in spite of a certain variability both in the initial situation from which development starts and in the conditions met during its course” (Waddington 1975, 99, see also Ariew 1999). The intuition here is that the development of all traits requires interaction between the genome and the environment. However, in some cases, the precise nature of that interaction can have significant implications for developmental outcomes, whereas for other traits developmental outcomes are insensitive across a range of possible interactions, be they changes in the genome, environment or spatio-temporal structure of that interaction. These latter cases, i.e. those that are insensitive to variation, would be developmentally robust or canalized.

In light of this concept, the lottery metaphor could be reinterpreted as a claim with regard to environmental canalization in development - that traits given in the lottery are those that are relatively insensitive to environmental perturbations, but sensitive to variation in the genetic sequence. In such cases the trait would be resistant to social policies as relatively few alterations in the environment would alter the developmental outcome.

The notion of developmental canalization does capture some of the intuitions behind the lottery metaphor. Nevertheless, it is important to recognize that what it does not do is justify any stark or categorical contrast between the kinds of good subject to considerations of justice. In this account all traits are sensitive to some environmental variation and insensitive to other variation. The degree to which this is

the case is an empirical, contingent question, the answer to which depends on the range of environments and genomes being considered (Lewontin 1974; Mamei and Bateson 2006). Understood as such, the idea of canalization does not support a categorical distinction in the kinds of goods potentially subject to considerations of justice, but suggests that this is an empirical conclusion that can only be justified by substantial scientific investigation.

Implications

In light of these considerations, we are left with a more nuanced view. Our genome does not contain a program for development. The phenotypes that each of us comes to have emerge over the course of development through the interaction of the genome with the environment. As a result, the distribution of talent and (dis)ability in society is not set through a genetic lottery. That is not to say that there are not constraints on the talent and (dis)ability that each of us could develop. Both the genome and the range of possible environments introduce constraints. Given a genome, certain developmental results will be robust against a range of environmental variation. Similarly, given a particular developmental environment, certain results will be robust against a range of genomic variation. Nevertheless, the nature and extent of these constraints is an empirical and contingent matter that reflects the actual range of variation the environment genomes that are observed. Where any particular trait falls along a scale of canalization is an empirical, contingent fact.

This refined understanding of biological developmental does not support the lottery metaphor as used by Rawls and Dworkin. In this metaphor, responsibility for

the distribution of talent and (dis)ability in society is denied because of the role that biology plays in their development. In the refined understanding of development advanced here, this simply is not the case. The distribution of talent and (dis)ability is something that emerges as individuals develop and interact with the range of possible environments. Neither genetic nor non-genetic factors can be given *a priori* priority in determining or constraining developmental outcomes. Genes do not exert any special or privileged control over developmental outcomes. Rather, the nature of that control is something that emerges over the course of development through interaction with the environment. To the extent that development reflects this broader context, it is also sensitive to the basic structure and distributive principles embodied by it.

The influence of the basic structure on development significantly blurs, if not erases, the distinction between social and natural primary goods as constructed by Rawls. To the extent that the distinction was grounded in a judgment that the potential distributive reach of the basic structure was limited by the natural lottery, the distinction does not hold. There is no stark line that can be drawn with reference to our biology between those traits that are and are not susceptible to the broader social context. Consequently, just as concern with justice and fairness leads us to consider the impact of our fundamental social institutions, i.e. the basic structure, on the distribution of rights, liberties, opportunities, resources and the social bases of self-respect, so too must we consider their impact on the distribution of talents and (dis)abilities.

Appreciating this influence presents the question of whether and to what extent society ought to be concerned with the distribution of these goods. What constitutes a fair distribution of talent and (dis)ability is a far reaching question that I

will not attempt to answer here. However the implications of these arguments extend even further into our thinking about distributive quality as these talents and (dis)abilities are not distributed in the same ways as other resources. They must develop over time, and so policies directed at them will have to engage with that process of development and consider what are fair and just policies in relation to development.

This kind of engagement will significantly alter distributive theory, as the structure of distribution will have to become sensitive to the structure of development. This orientation will have many implications, but perhaps the most significant shift comes with the awareness that in development time is not neutral. It matters not only what is distributed, but also when in the context of an individual's life goods are received. As Neal Halfon articulated with regards to the distribution of health care resources over the course of an individual's life:

“experiences missed at one stage of life may not be as effective if they are provided later, even if they are more intensive. Unlike financial resources, which can be equalized over time through interest payments, developmental inputs are not necessarily fungible. Lost years and missed developmental opportunities often cannot be recaptured or can be recaptured only at an extremely high cost. It appears that many developmental outcomes, choices and resources are available only during specific developmental windows, with a disproportionate number in the early years of life” (Halfon and Hochstein 2002, 456)

Most notably, an awareness of the time-sensitivity of development will orient our distributive concern towards children, as childhood development exerts significant influence over the course of each of our lives. It is during this period that the original form of the organism emerges, and as the organism continues to develop, it does so from and in the context of this original form. As a result, childhood is a period of developmental vulnerability and sensitivity during which the presence or

absence of resources can have an amplified and lasting impact on the life of the individual. Consequently, a distributive concern with developmental processes will have a tendency to orient our attention to childhood and the kinds of distributive principles that should be applied to them and their development.

Over the course of this essay, I have argued that the distribution of talents and (dis)abilities is potentially subject to the consideration of justice, just as is the distribution of wealth and income. Its exclusion from these considerations has been grounded in a collection of beliefs about their origin in a natural or genetic lottery that distributes them at the moment of conception. However, after reviewing our best understanding of the role of genes in development, I have argued that this exclusion was not justified. Genes undeniably constrain developmental outcomes, but knowledge of this influence can only be established through empirical investigation into individual traits. As a result, it is not possible to categorically distinguish between the kinds of good subject to considerations of fairness and equality on the basis of some supposed origin in a natural lottery.

6. Children and the Cost of Choice

In this chapter, I will map out ways that markets can create problems for children by analyzing how choice can be harmful or beneficial for children. In particular, I will focus on how developmental processes during childhood affect the value of opportunities for choice for children. Children's choices and opportunities for choice influence the development of their dispositions to choose and thereby the value of the choices and opportunities they face not only as children, but also as adults.

I will develop this argument by looking at the current obesity epidemic facing much of the developed world. In the United States, approximately 34% of adults and 17% of children are obese, with an additional 34% of adults and 15% of children classified as overweight (Flegal 2010). Increased weight places these individuals at higher risk for a number of diseases and disabilities including heart disease, diabetes, cancer, hypertension, stroke, liver and gallbladder disease, sleep apnea and other respiratory problems, degeneration of their bones and ligaments, as well as fertility problems (Centers for Disease Control and Prevention 2010).

When obesity develops in childhood it is particularly tenacious. Childhood obesity initiates the development of chronic diseases such as type-2 diabetes and cardiovascular disease prematurely, making it more likely that these children will suffer from these afflictions earlier and in a more severe form as adults. While it is possible to halt or reverse this development by losing weight, either as children or later as adults, over 80% of obese adolescents remain obese as adults, only exacerbating the risks to their health (Whitaker 1997).

The public health and policy challenges presented by obesity are particularly difficult because its core causes, namely our food and activity habits, are such an integral part of our daily lives, reflecting the most common and often unconsidered choices we make throughout the day. Moreover, these behaviors tend to be deeply embedded in our development, shaped by family, history, culture and community. Indeed, food is one of the first domains in which children begin to exercise choice and assert their own preferences. Accordingly, food is both one of our most basic personal choices and a central determinant of our health and wellbeing, and as such, these policy questions bring the morally salient issues about development, choice and wellbeing into sharper relief.

The Sugar Tax

To focus the discussion of government involvement in food choices, I will concentrate on one particular policy proposal that has been put forward in both the United States and the United Kingdom. The proposal is to place a tax on the sale of sugar-sweetened beverages (SSBs) such as soda, fruit drinks and “sports drinks.” While proposals vary, there is reason to believe that even a modest tax of a one-penny-per-ounce, or \$0.12 on the average can of soda, would have a substantive impact. Consumption of these beverages is highly elastic. A penny-per-ounce excise tax, for example, is predicted to generate an 8-13% reduction in SSB consumption. Even if 25% of those calories were to be replaced by other foods, this would lead to a weight loss of about 2 pounds per person per year. This weight loss would be sufficient to cause substantial reduction in the risk for obesity and associated diseases across the population (Brownwell and Frieden 2009).

Sugary drinks are targeted for public concern because they are the single largest dietary influence on recent obesity trends (Brownell and Frieden 2009, 1805-08). Between 1977 and 2002, consumption of SSBs doubled in the US across all age groups, and just in the last decade, it has increased by 30% (Duffey and Popkin 2007; Nielsen 2004). Systematic reviews of the literature have consistently found that increased consumption of SSBs is associated with increased caloric intake, weight gain, diabetes and obesity (Vartanian 2007; Malik 2006). For example, adults who drink one or more sodas a day are 27% more likely to be overweight or obese than those who do not drink soda, whereas a 2009 study found that a reduction of SSB intake was significantly associated with weight loss (Babey 2009; Chen 2009).

The shift, however, has been particularly pronounced in children and adolescents for whom SSB now accounts for 10-15% of their daily calories (Nielsen and Popkin 2004). Increased consumption of SSBs is associated with increases in caloric intake and weight gain in children and adolescents (Healthy Eating Research and Bridging the Gap 2009). Consumption of SSBs as early as age 5 is positively associated with overweight and obesity throughout childhood and adolescence (Friorito 2009). With each extra daily serving of SSBs, an adolescent's chance of becoming obese increases by 60% (Ludwig 2001).

In this paper, I consider the justifiability of a tax on sugar-sweetened beverages insofar as the policy impacts children, and consider the question: how should we assess the potential impact of the policy on this population? I will argue that we should adopt a modified version of the Potential Value of Opportunities View proposed by Alex Voorhoeve, which, in its turn, builds on Thomas Scanlon's Value of Choice View. Neither of these accounts have been applied to children, so a central

task of this chapter will be to make those extensions. In doing so, I will argue that we should set policy priorities in part based on its impact on the opportunities to choose and to develop dispositions of choice during childhood, even if the potential harm or benefit of those dispositions is not realized until adulthood.

The Value of Choice View

Scanlon argues that if our reasons for valuing a choice are strong enough, then we have reason to complain if the government interferes in that choice through paternalistic policies. However, if the choice is sufficiently valuable to preclude government interference, then we must bear responsibility for being given that choice, i.e. we have no reason to complain if we then come to harm as a result of being given that opportunity (Scanlon 1998, 248-294).

Scanlon develops this position with competent adults in mind. In this section, I will argue that the categories of value identified by Scanlon can be extended to children with some slight modifications. Just as these values provide a guide when evaluating the impact of a policy on adults, they can also guide us when evaluating policy implications for children.

Instrumental Value

The instrumental value of choice refers to the utility of choice as a means for satisfying our preferences and ensuring future enjoyment. For example, when I go shopping I want to choose my own clothes because I think that my choosing will make it more likely that the clothes I have are clothes that I will enjoy wearing. This

value points to the utility of choices as a means for ensuring future satisfaction. Since it is the utility of choice that is at issue here, this value is relative to there not being better methods of satisfying my preferences and conditional on the circumstances of choice (Scanlon 1998, 252).

This conditionality is particularly relevant when we consider children. Children are just developing their capacities for choice, and as a result their choices will, in general, be a less reliable method to ensure their future satisfaction. For example, the instrumental value of a child choosing his own dinner off a menu is conditional on the child having some familiarity with the items and not being distracted by inconsequential considerations, such as a funny name for a dish. As a result, it is more likely in the case of children that there will be other methods of satisfying children's current preferences that are equally reliable as giving them a choice, than in the case of adults.

Developmental Value

While choice can still be an important means to satisfying children's preferences, contrary to adults, for children, much of the instrumental value of choices comes in their contribution to a child's development. Because Scanlon focuses only on adults, however, his account overlooks this important value.

Opportunities for choice have significant pedagogic value for the child. They are a means to informing the child's preferences and developing his deliberative capacities. While children will make mistakes in the process, these mistakes will teach them valuable information about their preferences and values and how to make choices consistent with them when faced with options. Because this learning

involves experimentation with the different options present, the development of children's preferences will be significantly influenced by the options with which they are presented. It will be difficult for a child to develop a taste for fine art if they are never exposed to it, and similarly, it will be difficult for a child to develop a taste for fresh vegetables if their diet consists only of fast food.

When we attend to the developmental nature of children's preferences and deliberative capacities, we see not only that these capacities emerge gradually over childhood, but also the life-long impact that these developmental experiences can have for the child. The options that a child faces not only shape their preferences, habits, and dispositions to choose as children, but also the preferences, habits and dispositions that the child will come to have as an adult.

Consequently, there is a need to strike a balance between, on the one hand, giving children the space to develop their preferences and capacities for deliberation, and so the space to experiment and make errors and, on the other hand, adequately protecting them from the harm that could come to them, both as children through a bad choice, and as adults through the development of problematic dispositions of choice.

Representative Value

The representative value of my choices refers to the value of using choices to express my values and see aspects of myself represented in the world. I want to choose the clothes I wear not only because my choosing will make it more likely that I have clothes that I enjoy wearing, but also because my clothes are an expression of who I am. They may indicate my identification with social groups, feelings about my

body and myself, or perhaps my feelings about another person if, for example, I am out on a date. But, this can be the case only if I am free to choose what I wear.

This value again applies equally to children and adults. We have all come across a three-year old who insists on wearing the outfit of their choice to the grocery store, even if that outfit consists in purple, sparkly fairy wings over a red sweater with plaid pants. For her, choosing what she wears is an opportunity to experiment with her clothes and to express herself, and not simply a means for ensuring comfort on her outing.

Symbolic Value

In many instances, it is not the ends we achieve through our choices or the representative value of the choice that we are concerned with, but rather the mere fact of the choice itself. This is particularly, but not exclusively, true for those choices that individuals commonly have. When having a choice is the social norm, not having that choice suggests that there is something about the individual that makes her unable to decide for herself. Most centrally, it is often taken to express a judgment that the individual lacks the capacities necessary to make the choice, and as such that she does not have the moral standing normally accorded an adult member of the society. Denying choice to an individual can single her out in a way that is demeaning and stigmatizing.

This value is again relative (at least in part). However, in this instance it is relative to the culture and social norms we find ourselves in. For example, in the United States today, most young adults would find it insulting if their parents chose their spouse, as this is not the norm in that culture. However, in communities, such as

many in India, where arranged marriage are the norm, having one's parents exercise that choice would not necessarily be insulting to a young adult.

While Scanlon presents this value with adults in mind, that is, thinking of the relevant standing as that of an adult member of society, children are also sensitive to the symbolic value of choices (Scanlon 1998, 252-253). Being allowed to make choices that their friends are denied can be source of great pride for a child, indicating they possess a greater level of adult-like abilities. For children, exercising choice is an important and desirable form of independence; it is a sign of their maturity. So, being denied a choice that their peers are given is taken to be particularly insulting, indicating that they are not as mature or as capable as their peers.

The Value of Choice and the Sugar Tax

These categories are not exhaustive of the reasons that we might value a choice, nor will all values apply to all choices. However, they do identify several key factors. Moreover, the understanding of why a choice is valuable that they offer sheds light on why it may be important to protect a choice and reject potentially paternalistic policies. If the values at stake are substantial enough, and if what can be gained by individuals through the exercise of their choice (relative to constrained choice) is more valuable to them than what they might lose, then we would have reason to complain if the choice is interfered with or taken away. Consequently, this framework provides a useful perspective from which to assess the impact of the proposed sugar tax.

Instrumental value

My choosing what I drink is likely to ensure that I drink beverages that I find enjoyable. Just like adults, children have tastes and preferences about the food they eat. In many cases, these preferences are intimately responsive to our internal states. How thirsty am I? Am I craving something with citrus? In other cases, they simply reflect our tastes, the social context, or habit. Both adults and children have an interest in satisfying these tastes and taking pleasure in their food and drink. To the extent that it is this kind of instrumental value that we are concerned with, the sugar tax would have a negative value.

That said, the tax is not a prohibition on these drinks, but only makes their consumption more expensive. John Stuart Mill argues that this difference is only a difference of degree. By making the goods more expensive, a tax ultimately becomes a prohibition for some:

To tax [goods] for the sole purpose of making them more difficult to be obtained, is a measure differing only in degree from their entire prohibition; and would be justifiable only if that were justifiable. Every increase of cost is a prohibition, to those whose means do not come up to the augmented price (Mill 2005, 66).

In the case of the sugar tax, however, the increased cost is modest enough that it would function less as a complete prohibition and more as a mechanism to moderate the consumption of these goods. Indeed, most individuals could modify their consumption patterns to absorb at least some of the costs. Moreover, those individuals for whom it would function as a prohibition will be mostly children, as they have less disposable income and are more price-sensitive than adults (National Research Council, Institute of Medicine 2005). Because of their cognitive immaturity, i.e. lack of

knowledge about the world and themselves, choices in general have less instrumental value for children, and so these constraints do not result in the same loss of value as they might in the case of an adult.

Instrumental value reconsidered: long-term consequences of SSBs

Framing the instrumental value of choice in this way highlights the immediate satisfaction achieved through my choice of beverage. However, there is no reason that we should give these preferences prominence. What we eat and drink serves not only to satisfy our thirst and hunger, and fulfill our desires for certain flavors giving us immediate pleasure, but also contributes to our health and wellbeing. Accordingly, we should consider not only the implications of a sugar tax on the satisfaction of children's current preferences, but also on their temporally extended interests in health and wellbeing.

The presence of inexpensive, abundant, SSBs significantly compromises children's health. As outlined above, excessive consumption of SSBs has been identified as the single largest contributor to the rise in obesity in the United States among children and adults alike. While SSBs are not solely responsible, they certainly make a significant contribution to the problem.

Developmental Value

Importantly, however, health-related behaviors, including diet and behavior patterns, develop early in life and often extend into adulthood. Even when the preferences and behaviors are not maintained throughout adulthood, childhood preferences nevertheless form the foundation for and context of all future development. In other words, childhood and adolescence form a "critical period" for

the development of our long-term preferences. As a result, there is a particular need to attend to the developmental impact of children's choices, considering not only the direct impacts of their choices for their wellbeing, but also how those choices will influence the development of their preferences as children and throughout their lives.

The sugar tax could make an important contribution to supporting the healthy development of children's food-related preferences. Because children are more price-sensitive than their adult counterparts, the tax would have a more significant impact on their consumption patterns. In reducing their consumption, the tax would impact not only their weight as children, but also potentially the preferences, habits and dispositions that they develop. Moreover, a tax such as this would convey a message about the potential harm of these goods. This message would not only inform the development of the children's dispositions, but would go some way to offsetting children's tendency not to consider the long-term consequences of their food choices. Consequently, there is reason to believe that a sugar tax would support the long-term development of healthy food-related preferences in children.

Representative Value

The representative value refers to the value of choices as expressing our values and attitudes. The passage of a sugar tax could have implications for what the choice to drink SSBs expresses. Taxes, such as the proposed sugar tax, articulate a shared public judgment about the value of SSBs. The passage of a sugar tax could be taken to signal both that (1) SSBs are harmful to individual health and should be consumed at most in moderation and (2) that excessive consumption of these drinks imposes undue costs on society at large for which the individual should be held responsible. As a result, the choice to consume these beverages in the presence of

the tax might be taken to indicate the that individual does not share this judgment, is not concerned about the costs of his choices on others, or is not concerned about his own health.

Moreover, this kind of public judgment runs the risk of increasing the stigmatization of overweight and obese individuals. Over the past decade, apparent discrimination of overweight and obese individuals has increased significantly (Puhl and Heuer 2009). Overweight and obese individuals report discrimination in employment, barriers in education and biased attitudes from health professionals due, in large part, to pervasive stereotypes that overweight individuals are lazy, unmotivated, lacking in self-discipline, less competent, non-compliant and sloppy. As a result, there is a measurable pay gap between overweight individuals and normal weight individuals. For example, one national, longitudinal study found that even after controlling for sociodemographics, an increase of 6.4 pounds resulted in a 9% decrease in wages for white women. Such a decrease is comparable to the difference of 1.5 years of education, or three years of work experience (Puhl and Heuer 2009). Not only are these prejudices widespread, they are also socially acceptable, echoed throughout the media and expressed through characters in television and film, in programs directed to adults and children alike (Puhl and Heuer 2009).

In articulating a public judgment about the badness of sugar consumption, a sugar tax runs the risk of legitimating and further exacerbating these problematic stereotypes which impact children and adults alike. That said, the representative meaning of a tax is not fixed, but is shaped by public perception and dialogue about the underlying motivation for a tax. As a result, it can be strongly influenced by how

the policy is presented, communicated and debated by the government, the media and the wider public.

Symbolic Value

The symbolic value of choice is particularly important in the case at hand. Food choices are some of the most familiar and banal choices we make throughout our day, and as children, they are also some of first choices we are allowed to make for ourselves. Having the government interfere in those decisions or being denied them outright could be deeply demeaning, suggesting that we do not have the capacity to make even the most basic of choices in our life.

Nevertheless, the proposed sugar tax raises fewer symbolic concerns for children. Much of the force of the symbolic value of choice lies in there being a distinction between children and adults, such that part of the humiliation when an adult is denied a choice is that they are being treated “like a child.” For a child, however, it is expected that they be treated “as a child,” part of which is having their choices restricted. As a result, for children, there is greater symbolic significance in being given choices, rather than in being denied choices. For this reason, the symbolic dis-value of interfering with a child’s food choices is not as significant since childhood is defined in part by occupying a different kind of standing, one in which a person is more eligible to have things provided to her (since she cannot provide for herself) hand in hand with not having a full range of choices available to her due to her stage of development.

However, even in the case of adults, our choices of food and drink are not unrestricted. There are many subtle influences on our food choices. To illustrate

their impact, Sunstein and Thaler use the example of a cafeteria (Sunstein 2006). If we imagine the task of a cafeteria manager, there are many decisions that she will have to make which can have profound influence on the food eaten by her customers. What foods should be served? What ingredients should be used? In what order should the food be presented? Suppose that the manager has knowledge about how the order of the food influences customer choices. How should she use this information? Organizational decisions of this sort are inevitable, be it in a cafeteria or public policy, and while we don't often think of them as structuring our choices, they can have a significant impact on our behavior.

The ways in which government influences the food choices of children and adults toward more nutritious options are far more extensive than that of a cafeteria manager. It issues guidelines about nutritious diet through programs like the food pyramid, and directly influences what individuals eat through regulation of and subsidies for school lunch and breakfast programs, Food for Women, Infants and Children (WIC) and food stamps. Through all of these policies, government influences the food we eat and the preferences we have

The Value of Choice and Choosing Well or Poorly

What then would the Value of Choice View say about the permissibility of the sugar tax? For both children and adults, the policy potentially impacts the instrumental, developmental, representative and symbolic value of choice. The policy requires us to balance the instrumental value of being able to enjoy inexpensive SSBs with the long-term disvalue of gaining weight as a result of excessive consumption of

these drinks and, for children, developing problematic dispositions of choice that will make them more likely to gain weight as adults. We must also take into account the symbolic significance of having the government interfere in these choices and the potential for these policies to increase stigmatization of overweight individuals.

But of course, the importance of these values differs significantly between children and adults. For children, the symbolic significance of the tax would be less, because it is more common for parents and government alike to be involved in their food choices. We might also be more concerned about the developmental disvalue of having such an abundance of these drinks, which not only leads to obesity in children, but also contributes to obesity in adulthood by encouraging children's preferences for these drinks, setting some of them on a path to health-threatening dispositions to choose as adults.

For adults, it is less clear how these values would balance out. Some, either because they are predisposed to obesity or because they are more concerned with their health and weight or because they know they have real difficulty resisting temptation, would find significant disvalue in the abundance of inexpensive SSBs in the market and so welcome the government's involvement. However, others might resent any such involvement. As Scanlon acknowledges, "people disagree sharply about the value of various choices and opportunities to choose," (Scanlon 1998, 255) and it is these disagreements that lies behind the controversy over potentially paternalistic policies. To what extent and how should we take this variation into account?

Scanlon argues that for the most part, we should rise above these controversies by analyzing the opportunities for choice with reference only to what he refers to as the "generic values" at stake in the situation, "that is to say, general conclusions about

the reasons that individuals in a situation of a certain kind typically have” and not the “reasons that a specific individual may have given all of the facts about his or her situation” (Scanlon 1998, 255, 263). Along these lines, Scanlon argues that the generic reasons constraint directs us to compare the weightiness of the burdens imposed by the policy and the importance of the benefits it offers in light of reasons that individuals have “in virtue of their situation, characterized in general terms, and such things as their aims and capabilities and the conditions in which they are placed” (Scanlon 1998, 204-208). What the constraint explicitly excludes are: (1) an individual evaluating a policy in light of his particular circumstances, as well as (2) general information about the likelihood of individuals falling into either the category of those who benefit from the policy or those who are burdened by the policy (Scanlon 2000, 208). He argues that this constraint is necessary because not all of a person’s preferences and projects give rise to claims on others, and to require more of the government would be too demanding, requiring the government to collect and analyze too much data, leading to uncertainty about whether everyone’s claims had been met.

Scanlon is not clear how restrictive this constraint is meant to be, urging instead there is a need to resist the pressure to make our principles ever more fine-grained, taking into account greater and greater variation in needs and circumstances (Scanlon 2000, 205). However, there is good reason to either interpret it broadly, as allowing in significant information about the impact of policies on subpopulations, or to reject the constraint outright. As Voorhoeve points out, recognizing that not all of a person’s preferences and projects give rise to valid reasons does not lead to a strong constraint that all such considerations should be excluded, but rather to the weaker position that only those aspects of their situation that impact goods that do give rise to

claims should be considered, i.e. those goods that are useful across a wide range of views about the good life (Voorhoeve 2008, 189). Moreover, it is routine for the government to take into account the information about how different subpopulations are or would be impacted by a policy (Voorhoeve 2008, 189-190). Indeed, doing so is a central task of policy analysis and evaluation, and this information is continuously used to refine and revise policies that are ineffective.

The challenges raised by the different responses to a policy across a population are particularly important given our current task of extending Scanlon's views to a population that includes children. While Scanlon does acknowledge the need to address children as a separate population, it is unclear how this can be accomplished given his constraint of generic reasons. Moreover, I will argue below that when we consider the value of choices for children, it is often important to consider the details of their situation. They bear little to no responsibility for it and these details can significantly impact the value of the opportunities that they face.

In response to these challenges, Voorhoeve argues that we can better accommodate these concerns by valuing opportunities not by the generic values they present but rather by what he refers to as "the potential value of these opportunities" to each individual. The potential value of an opportunity is determined by two considerations. First, we should consider the value the person can achieve by choosing the various options. The values here can be broadly construed as Scanlon presents them, i.e. instrumental, representative and symbolic values, with the addition of developmental value in the case of children. Second, we must consider how disposed the person is to choose the better options and avoid the worse ones (Voorhoeve 2008, 195-196). The more disposed she is to choose her worse options,

the less valuable the opportunity set is for her. Critically, these two considerations apply only to those individuals with adequate information and choice making capacities; if an individual lacks either of these, then the value of an opportunity is simply what they in fact achieve when faced with it. Using Voorhoeve's language, I will refer to this view as the "potential value of opportunities view" (PVOV).

A central insight of the PVOV is that we need to account for difference in individuals' dispositions to choose well or poorly given a particular choice context. To highlight this point, Voorhoeve assumes that an individual is not responsible for her dispositions of choice. He also points out that public policy has a significant role in shaping our circumstances of choice. Government often has knowledge about how different individuals will respond to the choice circumstances created by a potential policy. In any particular choice context, it may be the case that most individuals choose well. However, if that choice context raises the risk that some will choose poorly, the government has a reason to take this information into account when designing policy. Indeed, if the magnitude of the harm and/or the likelihood that some will make a harmful choice is great enough, it can outweigh the importance of providing them with the opportunity to choose, even if this means that some individuals will be subject to a minor but unavoidable harm as a result (Voorhoeve 2008).

To illustrate, Voorhoeve discusses an example (originally due to Scanlon) of evaluating policies to remove toxic waste. Being outside during removal of the waste will sicken those exposed, and the government must decide how to manage the risk and protect the population from these harms (Scanlon 2000, 256-267, Voorhoeve 2008).

On one policy, “Inform Everyone,” the government adopts an extensive advertising campaign to inform the entire population of the toxic waste removal and of the need to stay indoors. It knows, however, that these warnings will heighten the curiosity of someone who we will call “Curious.” Despite the warnings, Curious will go outside during the transport and be exposed to the toxins, and as a result, he will come down with a severe and incurable form of emphysema.

On the second policy, “vivid warning,” the government will spend more on a particularly graphic advertising campaign. The campaign is very effective and everyone who sees it will be convinced not to go out during the transport of the waste. But, because the campaign is so expensive, it cannot distribute the advertisements as widely. As a result, there will be one person who does not see the advertisements, goes outside for their daily walk during the transport and comes down with severe incurable form of emphysema. We can call her “Walker”.

On the third policy option, “Low Emissions,” a new technology to cover the toxins during transport makes it possible to reduce the particles released into the air during transport of the waste. Because of these reductions, anyone exposed will only suffer a minor, annoying cough for a week with no lasting consequences as opposed to the incurable emphysema. However, because of the increased cost of this technology, the advertising campaign cannot ensure that everyone will receive the warning and as a result, Walker will again be taking her morning stroll and be exposed to the transport. Curious, however, will receive the warning and will stay indoors because, with the material covered, there will be nothing for him to see.

Voorhoeve argues that we should choose the policy of “Inform Everyone” over “Vivid Warnings” because the harm caused through the two is the same, but

“Vivid Warnings” takes away a valuable choice from Walker that Curious has under “Inform Everyone,” namely the choice not to be exposed to the toxins by remaining indoors. However, he argues that we should prefer the policy of “Low Emissions” over “Inform Everyone” because we not only need to consider the value of the best outcomes that people can choose, but also the dangers posed to individuals by the combination of the presence of worse outcomes and these individuals’ dispositions to choose poorly and come to harm as a result. That is, “Low Emissions” removes a significant danger of irrevocable harm that Curious could come to as a result of choosing poorly at the cost of imposing a minor and transient harm on Walker that she could not avoid by choosing well. Imposing this harm on Walker is justified, he argues, because we have a claim not to face the danger caused by being put into circumstances in which we are disposed to choose poorly and end up harmed as a result (Voorhoeve 2008, 195). All things equal, our claim not to be faced with the danger that we will choose poorly is less than our claim not to be exposed to a danger that we cannot avoid by choosing well. However, if the harm that would result from choosing poorly is greater, as in the case of Curious, it can outweigh the imposition of a lesser harm on someone through no fault of their own, as in the case of Walker under the policy of “Low Emissions.”

In sum, this argument recognizes that “being exposed to danger of choosing badly is a bad thing, and renders [an] opportunity set less valuable” (Voorhoeve 2008, 199). Accordingly, in evaluating policies there is a need to strike a balance between the value of giving individuals choices and holding them responsible for those choices, with the potential harm that could result from a bad choice. If the potential harm that could be realized from two policies is the same, then we should favor the policy that gives individuals a choice to avoid that harm, over one that denies them

that choice, i.e. we should favor Inform Everyone over Vivid Warnings. But, if the harm that could come to an individual as a result of an imprudent choice is great enough, it can justify imposing a lesser harm on an individual, i.e. we should favor Low Emissions over Inform Everyone.

Children's Development and the Modified Potential Value of Opportunities View

The PVOV has significant resources to assess the impact of policies, such as the sugar tax, on children, but to make use of these resources, the view needs to be modified. The PVOV suggests that we should assess the value of children's opportunities simply by what they achieve when faced with those opportunities. Specifically, it first assumes that an individual's dispositions of choice are given and second, it maintains that we should assess the potential value of the opportunities faced by an individual only if the person has sufficient information and rational capacities. The fact that children go through stages of development challenges the first assumption that our dispositions are given. Moreover, given that children are generally held to not meet the latter criteria, this two-staged approach would exclude children from the more thorough analysis of the values present in the opportunity and the individual's dispositions of choice, arguing instead that the value of their opportunities is simply the value of what they achieve in the given situation. For example, if the examples offered by Voorhoeve involved children, we would not regard the outcome of Curious under the policy "Inform Everyone" as different from the outcome of Walker under "Vivid Warnings" because both policies resulted in the

same harm, i.e. one person being exposed to the dangerous toxins that resulted in incurable emphysema. Voorhoeve argues that from the perspective of children and other individuals with insufficient information and rational capacities, the fact of choice is inconsequential for our analysis; what matters is how they end up.

This exclusion of children from the more robust analysis argued for in the PVOV needs to be remedied if it is to function properly in informing policy. Children are subject to public policies, and as argued above, these opportunities for choice are valuable to children for many of the same reasons that they are valuable to adults. These values are not only important to the child as a child, but critically, they are also important to the adult the child will become by fostering the development of the child's rational capacities, dispositions, habits and preferences. Indeed, the impact of policies on the welfare and development of children are often the most contentious elements of policy debate and so must be addressed in a full analysis of the policy. To recognize these complexities under the PVOV, it is necessary to relax the assumption that our dispositions for choice are given and consider the development of those dispositions.

The PVOV introduces a threshold. We only assess the value of what an individual can achieve through their choices and their dispositions to choose if they have sufficient information and decision-making capacities. But both of these capacities develop over childhood, and we should recognize this development in our account of the value of choice for children, and also in considering their responsibility for the choices that they make. I develop the argument below using the case of decision-making capacity. However, I take it that the same argument applies to children's gradual acquisition of information with which to make decisions. In

particular, I will argue that we should relax Voorhoeve's threshold approach, assessing instead to what extent any individuals, such as children, are capable of making good decisions. To the extent that they are not disposed to make good choices, their opportunities for choice are less valuable¹⁰. On this Modified PVOV, we would assess the value of the child's opportunity by the value of the options that children face, understood as the extended accounts of instrumental, developmental, representative and symbolic value offered above, and the child's disposition to choose her better options and avoid her worse options.

A child's disposition to choose well or poorly will be largely determined by her maturity. In general, the more immature a child is, the more likely it is that she will make bad choices. As Scanlon observes, one reason we don't hold children responsible for their choices is not that "they cannot choose wisely (after all, many of them do), but rather that they are so likely not to do so" (Scanlon 2000 262). Their rational capacities are less developed and so they are less able to evaluate their options in light of their values and a conception of how they want to live their life. Similarly, their preferences are more immature and unstable. As Tamar Schapiro argues, the instability of children's preferences and perspective on the world is a defining characteristic of the child: "The condition of childhood is one in which the agent is not yet in a position to speak in her own voice because there is no voice which counts as her own." (Schapiro 1999, 729, see also Noggle 2002, 100). Because the child lacks clear direction from their values and preferences, whether or not a

¹⁰ On the PVOV, Voorhoeve makes the simplifying assumption that adults are not responsible for their dispositions. On any full account concerning adults, this assumption would have to be justified or relaxed. If relaxed, there may be further reasons to distinguish the case of adults and children, and to adopt Voorhoeve's strategy in the case of children. At least initially, children are not responsible for their dispositions and so require some protection against harms that could result through bad choices. If, however, we hold at least some adults responsible for their dispositions, we might be hesitant to adopt Voorhoeve's strategy.

child makes a good choice is particularly sensitive to the context that she finds herself in.

Children's vulnerability to the choice context is evident in their food choices. For example, food advertising has been shown to have a significant impact on children's eating behaviors (Goldberg and Gorn 1974; Gorn and Goldberg 1977). Children, particularly young children, are especially vulnerable to advertising. They are neither able to distinguish between commercial and non-commercial content nor to recognize the persuasive intent of the commercials. As a result, they are unable to evaluate the commercial as a biased message aimed at motivating them to buy a particular product (APA task force on advertising and children 2004). More specifically, food advertising has been shown to directly influence children's food choices, and increase the frequency of their snacking (Goldberg 1978, Bolton 1983). Nevertheless, children are exposed to incredible amounts of food advertising. Depending on their age, children view around 300-450 hours of food advertising each year, which amounts to around 4,400 food ads for children 2-7 to over 7,600 food ads for children 8-12. Of these ads, 98% are for calorie-dense, nutrient-poor foods such as SSBs, snack foods and fast-food, which children are disposed to prefer even in the absence of advertising (Gantz 2007). As a result, this advertising is highly successful, influencing food preferences, requests for the purchase of advertised foods, consumption of those products and overall daily-calorie intake. The impact of this advertising is further exacerbated by the abundance of these advertised foods in children's environments such as their schools, their relative affordability, and children's innate preference for sweeter, fattier foods. The end result is that food advertising has been associated with the increased rates of obesity among children and youth (National Research Council and Institute of Medicine 2006).

Consequently, the choice context surrounding food exerts a particularly powerful effect on children's eating behaviors and preferences. In the case of SSBs, it exploits their innate preferences for sweeter foods, their relatively constrained financial resources and their inability to distinguish advertisements and to resist their messaging.

In this way, a child's immaturity is similar to Curious's impetuous curiosity; it is part of her dispositions of choice and explains why she is vulnerable to making bad choices, particularly in certain contexts. On the Modified PVOV, then, a child's immaturity is understood as making it more likely that she will choose poorly, and so that discounts the value of choices for that child, making it more important to focus on the outcome of being given a choice, rather than the potential value of that choice. In addition, because of their role in shaping the dispositions of choice that the child will come to have as an adult, the poor choices that she makes as a child can also decrease the value of the opportunities that she faces in adulthood.

In general, the younger a child is, the more vulnerable she will be to choosing poorly, and so the less valuable her opportunities will be for her. For very young children, this would justify taking choices away from children or restricting their options to only those choices that would promote their interests. When giving a toddler a choice for dinner, it is wiser to ask "do you want peas or carrots for dinner tonight?" rather than "what do you want for dinner tonight?" As the child gets older and more mature, for the most part, they are also more capable of making good choices, and there is less need for such rigid paternalism. As John Locke argued, as a child ages, and "grow[s] up to use of reason," acquiring more life experiences and rational capacity, the "rigor" of parental paternalism should be "gradually relaxed"

(Locke 2001, sec 41). Similarly, as they become increasingly able to make decisions for themselves, the opportunity to make choices becomes increasingly valuable, and more justification is needed to deny the child that choice.

In light of children's gradual development, the Modified PVOV argues for three changes to the PVOV. First, it takes into account the developmental value of choices for children. Second, it argues that as children mature, we should be increasingly concerned with valuing their opportunities in light of their opportunity set rather than the outcomes achieved. Third, it opens the door to making assessment of responsibility for dispositions in adults. To illustrate, we can return to our examples of Walker and Curious. If Walker and Curious were very young children, the PVOV view would argue that we should not distinguish between the outcomes of Curious on Inform Everyone and Walker on Vivid Warnings as all that matters is the outcomes of the policy. For very young children, the Modified PVOV would agree. Very young children have such undeveloped rational capacity for choice that they cannot be held responsible for their choices. What we are concerned about is outcomes and protecting from harm. However, the two views begin to diverge when we discuss older children. Whereas the judgment of the PVOV would remain the same throughout much of childhood, i.e. until he met the threshold for information and rational capacity, the modified view would argue that as the child develops their rational capacities, it not only becomes more important to value their opportunity sets in light of the opportunities presented as opposed to the outcomes realized, but also to take into consideration the value of having those opportunities for the development of their dispositions of choice.

As such, this view argues against the assumption often made in liberal theory “that we can identify a canonical moment in a person’s life such that the person is not responsible for her preference formation up to that point but can be deemed responsible for any further preference changes that are concomitants of life options she knowingly chooses” (Arneson 1990b, 179). While made to simplify analyses, the assumption is distorting. Our capacities for reason and deliberation do not emerge in a canonical moment at the age of maturity but develop over childhood. By disregarding this developmental process the assumption of a canonical moment turns our attention away from the developmental processes, which require support and direction from the wider society.

Moreover, a gradualist approach is more in line with our actual behavior towards children. We do not all of a sudden hold a child responsible for their choices and actions the morning of their 18th birthday, but begin placing these responsibilities on them gradually as their capacities mature. For example, the Convention on the Rights of the Child maintains that the views of children should be given a weight that is proportional to their maturity in making decisions that impact them (CRC article 12.1, Archard 2004, 65). For example, children are given greater discretion over health care decisions as they age; whereas a child of four may only be asked to assent to the care they receive, a child of 16 is usually given full rights of consent with the power to decline medical procedures and treatments (AAP Committee on Bioethics 1995; see also Archard 2003, 158).

A similar gradualism is called for when assessing the value of choices to children and their responsibility for the consequences of those choices. Consider, for example, the following cases. If we assume that the harm suffered in each case is the

same and that we could take some action to prevent these harms from occurring, the question I want to consider is what should be the order of priority in preventing the harms if we cannot prevent them all? In discussing these examples, I am not concerned with proposing an all things considered judgment, but rather, with mapping out how one particular set of considerations, relating to our developmental histories, should be evaluated.

Sara is five years old. She is the daughter of obese parents and is fed a very unhealthy diet. In addition to drinking an average of six glasses of sugary fruit punch every day, her meals consist primarily in fast food and pre-made frozen meals and are bereft of fresh fruits and vegetables. At five she is obese, weighing around 75 pounds and has been diagnosed with type-II diabetes.

Grant is sixteen and has just been diagnosed with type-I diabetes, a metabolic form of diabetes whose etiology is not completely understood, but is not thought to be related to the person's diet and lifestyle choices, nor can it be cured through lifestyle changes.

Maria is also sixteen and by most accounts, she eats too much and exercises too little. Most days, she comes home from school and watches TV until dinnertime. While she watches TV, she snacks on food. While there are healthy options in the house, there are always chips and soda as well, and she much prefers these to fruits and cheeses. Both of her parents work, so for dinner, they often get fast food – hamburgers, fried-chicken or pizza. But, other nights they cook, and try to make sure that there are enough fruits and vegetables included. For lunch at school she gets food from the school cafeteria, which, like her dinner, usually consists of hamburgers or chicken nuggets with fries or pizza. It is not that the school fails to offer any other

options for lunch--there are also things like salads and grilled chicken sandwiches-- but she did not really like those foods, so never chooses them when she goes through the line. Maria does not think much about what she eats. She chooses what she likes out of what is offered. She knows she is heavier than her friends, but as far as she can tell, she just eats what her other friends at school eat. However, Maria is obese and has recently been diagnosed with type-II diabetes.

According to the Modified PVOV present above, we should prioritize policies that would prevent the harms experienced by Sarah and Grant over Maria. At 16, it is reasonable to assume not only that Maria's deliberative capacities are more developed than Sarah's, but also that she has the capacity to begin evaluating her choices in light of her values and the kind of life that she wants to live. Accordingly, it is also reasonable to begin holding her responsible for the consequences of her choices. In contrast, both Sarah and Grant have had harms imposed upon them. At five, Sarah has little capacity for practical reason and no control over her environment. As a result, it is unreasonable to hold her responsible for the condition she finds herself in or to expect her to actively change it. Similarly, Grant's diabetes is also a harm that has been imposed upon him by his biology, and independently of his choices.

That is not to say that Maria does not have any claims for support. As I will argue below, the reasons to prevent the harms experienced by her are stronger than those of many adults who have still more mature deliberative capacities and who received more support in the development of healthy preferences, habits and dispositions. Here, the claim is more limited. It is simply that, in so far as Sarah's and Grant's conditions are independent of their deliberative capacities, either because of immaturity or biology, there is reason for them to have a priority in our policy making

that Maria does not, and we have a reason to support programs to prevent this harm that we do not have in the case of Maria.

In responding to the value that opportunities for choice present to children, we are not just concerned with how their immaturity makes choices more difficult, but also with how the options they are presented with and the choices that they make shape their lifelong dispositions of choices. By recognizing how dispositions of choice impact the value of our opportunities for choice, the PVOV is particularly well suited to accommodate this critical period of development during childhood. In particular, the PVOV argues that when children's development is supported, and they form dispositions of choices that lead them to make wise choices, the opportunities that the child faces throughout her life are more valuable, and when the development is not supported, her opportunities are of less value. Accordingly, it argues that we should therefore not just be concerned with any present harm (or benefit) that children derive from their options when choosing between policies, but also what impact those policies will have on the habits, preferences, and dispositions to choose that children are developing.

To illustrate, add the following cases to the ones presented above. If again we assume that the harms are equal in all cases and that we could take some action to prevent the harms from occurring, what should be the order of priority in preventing the harms if we cannot prevent them all?

Charles is thirty and suffers from a (fictional) genetic condition that gives him wholly irresistible cravings for fat and sugar. As a result he is highly disposed to make bad food choices. When confronted with options, he simply cannot resist fried food and sweet drinks. He has other options. When he goes shopping he could afford

to buy the fruits and vegetables, but he is overcome by his cravings. As a result, he is obese and has developed type-II diabetes.

Mark's story is the same as Maria's. As an adolescent, he spent his afternoons watching TV and generally avoided sports. While he certainly had options concerning what he ate and knew that fruits and vegetables were healthier for him than junk food, he preferred to snack on chips and soda. His parents made an effort to cook with fresh food, but worked hard so many nights they just ate take-out hamburgers, fried-chicken or pizza. Similarly, at school, he had healthy options, but would usually just pick the foods he liked. As a kid, he did not think much about what he ate. He was overweight, but it did not bother him much. As far as he could tell, he was fine, just like his friends.

If we fast-forward to Mark as a thirty year-old adult, not much has changed when it comes to his food and activity choices. He prefers junk food and take-out to fruits and vegetables. His job keeps him so busy that, for the most part, he buys take-out on the way home from work and snacks on soda and chips out of the vending machines during the day. He could buy groceries and cook his own meals, but he simply does not want to. At this point, however, Mark's sedentary lifestyle and bad food choices are catching up with him. He is classified as obese and has developed type-II diabetes.

Finally, consider Erin. At sixteen, she is on the basketball team and plays every chance she gets – after school on the high school team, in the evening and weekends with his friends, at camps during summer vacation. Her parents are also very athletic and so do what they can to support Erin's sports. She likes pizza, hamburgers and junk food, but eats lots of different foods. She really likes oranges

and feels that when she eats more fruit, she performs better in games. And anyway, cooking and mealtime are an important time for her family. They eat together most nights, and her Dad is a great cook.

However, if we fast-forward to Erin as an adult, her story starts to look more like Mark's. She has a demanding job and just does not seem to be able to make the time to exercise and cook nutritious meals. As a result, most of her meals come from take-out and the vending machine at work. She knows she should prioritize her health more and make the time to go to the grocery so she has more fresh food around, but just seems unable to make the time. Since she left high school, she has gained a significant amount of weight and has developed type-II diabetes.

If, as in the case of Sarah and Grant, we assume that the harm is the same in all cases, regardless of whether it is suffered as a child or as an adult, who should we prioritize for the preventive intervention if we cannot help everyone?

Sarah and Grant would still be given priority as neither of them can be asked to bear any responsibility for the harms they suffer. To this group, however, we should also add Charles, who like Sarah and Grant, had a harm imposed upon him. The fact that the harm imposed by a genetic condition was mediated by his choices does not matter as decisions were still dissociated from his deliberative capacities and so not truly his own.

Priority should next be given to Mark and Maria. As adolescents they had choices and information about what options would promote their health. They made choices about what they were going to eat and what they were going to do with their time. Nevertheless, they both have claims for support insofar as their preferences and

dispositions did not develop in ways that encouraged a healthy life, either as a child or as an adult. Given that they can only be held partially responsible for the development of their preferences, they have a claim to support insofar as that development gave them bad dispositions of choice, dispositions that put them into harm's way. They grew up in households that did not encourage them to form healthy preferences about food and exercise. Moreover, their schools and communities did not challenge these views, but rather facilitated the development of bad preferences and dispositions.

The central difference between the cases of Mark and Maria is that Mark became obese and suffered the associated harms as an adult, whereas Maria experienced these harms as an adolescent. But this difference does not make for a moral distinction between their claims in the case at hand. We ought to be equally concerned with preventing both harms. In both cases, their developmental history placed them in a position in which they were disposed to choose poorly. While it is conceivable that Mark could have avoided these harms by altering his preferences, habits and dispositions as he aged into an adult, the Modified PVOV approach sets policy priorities in part based on opportunities to choose and to develop dispositions to choose during childhood. In other words, we prioritize not by asking what is owed to individuals as adults, but by asking what is owed to them as children. The Modified PVOV approach directs us to pursue policies that intervene to allow and encourage children to form preferences, habits and dispositions to choose that will lead them to choose wisely as adults. Because no such intervention occurred in the case of Mark's development, and because he instead was encouraged to develop preferences, habits and dispositions of choice that led to his unhealthy behaviors as an adult, it is this obligation to Mark that was not met when he was a child and that

would justify giving the prevention of this harm more priority than identical harm that comes to a person who entered adulthood with dispositions to choose well.

Finally, we have reason to give the least priority to Erin. Unlike Maria and Mark, Erin did develop healthy preferences, habits and dispositions of choice as a child. Her parents ensured that she not only understood the importance of healthy eating and physical activity, but that she enjoyed them by supporting her participation in school sports and by prioritizing family dinners. While Erin was not disposed to choose poorly by her development, she nevertheless did. As a result, her claims for support are the weakest.

Throughout these examples, I have focused on one set of considerations having to do with our developmental histories and the value of choice for children that should be taken into account when deciding between policies. This does not mean that all things considered, the priorities that I have outlined should prevail. It may very well be the case that in light of other considerations, such as pragmatic concerns about limited information on the part of government, a desire for the government not to publicly pass judgment on people's choices and dispositions, the priorities would be different.

The Sugar Tax and the Modified Potential Value of Opportunities View

I have argued for a gradualist approach to assessing the value of opportunities to children, and thereby their responsibility for the choices that they make.

Dispositions of choice develop over childhood. As they develop and mature, we are increasingly able to assess information and make decisions in light of our values and considered preferences. Similar to Voorhoeve's example of Curious's impetuous curiosity, developmental immaturity makes us vulnerable to bad choices, and so discounts the value of opportunities to choose when we may come to harm as a result of our choice. However, as we age, we become increasingly able to manage our options and so to assume responsibility for our choices. Consequently, on the Modified PVOV presented above, we should account for the developmental immaturity of our decisional capacities in much the same way as Voorhoeve accounts for poor dispositions of choice, when those dispositions are given and beyond our responsibility. On this argument, developmental immaturity is simply one source for the dispositions for choice that are given and beyond our responsibility.

What, then, would the Modified PVOV say about the permissibility of the sugar tax? Above, I noted two potential harms of the sugar tax. The first was the instrumental disvalue of having greater government interference in our choice of drinks. The second disvalue was the possible negative representative value that the tax could have by further exacerbating negative stereotypes of overweight and obese people. I noted that this latter negative value was also highly dependent on the particulars of how the policy was presented and discussed by the government, media and wider public. Because these implications are so specific to the actual implementation of the policy, I cannot say more about them here beyond the recognition that these consequences could be significant and so could outweigh any positive value presented by the tax. As a result, there is a significant burden on the participating parties to be aware of this possibility and do what they can to construct the public debate in a positive, non-stigmatizing fashion.

If we turn our attention to the other values affected by the tax, we see that the tax imposes a cost on some for the purpose of placing others in a choice context in which they are more disposed to choose well. In particular, it increases the cost of SSBs for everyone, children and adults alike, to reduce the likelihood that children will consume excessive amounts of these beverages. For reasons mentioned above, these costs, however, will fall most significantly on adults. The potential benefits will be shared both by children and adults. Specifically for children, however, the modification of the choice context will have significant instrumental and developmental value. It not only decreases the likelihood that they will consume excessive amounts of these beverages as children and suffer from overweight and obesity as children, but it also supports the healthy development of their preferences, habits and dispositions, making it more likely that they will make wise choices as adults. As a result, the policy would increase the value of opportunities for children to choose their food as children as well as the value of their opportunities to make these choices as adults. Given the significance of these benefits, they would seem to outweigh the minor increase in cost that must be borne by adults, and so the policy would be justified on this view.

One potential criticism of this analysis is that it overlooks the role and responsibility of parents for forming children's preferences, habits and dispositions and places too much responsibility for these tasks in the hands of the state.

Parents do have the primary obligation for ensuring and overseeing their children's development, including the development of their rational capacities and the formation of their preferences and perspective on the world. Indeed, this is a central

way in which parents share their lives with their children. Nevertheless, it is unreasonable and unrealistic to hold them fully responsible for this development.

Children live and participate in a wider society, and they absorb the norms, dispositions, ideas and attitudes reflected in that society. Mandatory education and the provision of free public education is the most explicit way that the wider community communicates these values, beliefs and ways of life to children (Barry 2001, 225-233). However, these norms are also communicated both to parents and children through laws and statutes, such as laws about drug and alcohol use in children, minimum driving ages, curfews, and mandatory school attendance, taxation policy, such as increased taxes on tobacco goods and alcohol, as well as through public culture and the arts. All of these mechanisms together influence the child's development, shaping their preferences and the context in which they exercise their choice. When the influence of these policies on children's development is made explicit, they can be powerful tools for promoting children's development and supporting parents in raising children, and when their influence on children is overlooked, they can be quite disruptive. Rather than overlooking the role of the parents, then, these arguments recognize that parents cannot raise children alone and that in many cases, the influence of the wider society is greater than the influence they can exert on their own.

Conclusion

Obesity has become a central public health challenge throughout much of the western world. The challenges it presents are particularly tenacious because the

causes of obesity involve the routine behaviors of our daily life, behaviors that we begin to acquire in childhood and that become embedded in our social and cultural life. Consequently, children must be considered when analyzing policies aimed at reducing obesity. Most notably, children are a central target of the sugar tax. They consume large amounts of SSBs, and this consumption has significant consequences for their health as children and the adults that they will become.

Over the course of the chapter, I considered three different approaches to assessing the permissibility of the sugar tax insofar as it impacts children. Thomas Scanlon's Value of Choice View argues that if a policy interferes with a choice that people generally have reason to value, then government should not interfere in that choice. Conversely, if a choice is highly valuable, then an individual must assume responsibility for being given that choice, and has no reason to complain if they come to harm as a result. This view does not discuss children. However, even when the values presented by a choice are modified so as to include children, the approach is inadequate because it is insensitive to variations in how a policy impacts different sub-populations, e.g. children as opposed to adults, and as a result, has difficulty assessing policies such as the sugar tax.

In contrast, Voorhoeve's Potential Value of Opportunities is sensitive to the impact that a policy has on different sub-populations. It argues that the value of an opportunity should not be determined by what people generally achieve when faced with the choice, but by what an individual could achieve when faced with a choice, with consideration given to how disposed they are to choose their better options and avoid their worse options. However, Voorhoeve assumes, for simplicity, that these

considerations come into play only when the individuals in question have sufficient information and rational capacities, which children are generally assumed not to have.

The Modified Potential Value of Opportunities View offered here builds off of Voorhoeve's general approach. It argues that we should consider a child's developmental stage as akin to an adult's disposition to choose wisely or poorly; a child's increasing abilities to deliberate and choose make it more appropriate to value that set by its opportunities rather than the resulting outcomes. In general, the younger a child is, the less capable she is of deliberating and making good choices, and so the more concerned we are with the outcomes, rather than the value of the opportunities presented to her. However, as the child ages, we become increasingly concerned with providing her with opportunities that will both allow her to develop good dispositions of choice and a sense of responsibility. In light of these considerations, the modified PVOV would argue in favor of a sugar tax as a way to encourage the development of healthy dispositions of choice in children, and to protect them from the harms of over consumption.

7. Benefit and Exploitation in Research: the Kennedy Krieger Lead-Abatement Study

In the spring of 1999, Viola Huges and Catina Higgens filed suit against the Kennedy Krieger Institute (KKI) of Johns Hopkins University on behalf of their children, Erica Grimes and Myron Higgens. In the early 90s, both of the children had been enrolled in a study at KKI to test lead abatement methods (the “Repair and Maintenance Study”). After their children tested positive for lead, they sued the KKI alleging that the institute “failed to inform and/or warn” them of lead paint hazards which had been discovered in the course of research and “failed to take any action to abate said hazards” (Hoffman and Rothenberg 2002, 122). As a result of KKI’s negligence, it was claimed that the children suffered lead poisoning, which caused “permanent disability, brain injury, and other physical, mental and emotional injuries” (Hoffman and Rothenberg 2002, 123).

The resulting court case, *Grimes v. KKI* is one of the first federal cases to speak to the ethics of medical research involving children. While the case is still being debated in the courts, the summary judgments that have been issued raise important concerns about the permissibility of research involving children. Here, I will focus on one set of issues raised by the case. In particular, it raises concerns about the permissibility of research into preventive interventions that pose some risk to the research participants. Because it aims to prospectively avoid or reduce future harms, preventive research involves groups of individuals who are healthy at the time of enrollment. However, in many studies, including the KKI study, participation poses risks of its own. The question raised by the courts, and the question we will

consider here, is given that the children were healthy at the outset of the study, can they directly benefit from participation in the research?

In this chapter, I will argue that preventive research involving children can, under certain circumstances, directly benefit the research participants and that these benefits can potentially offset the risks posed by participation. In the first section of the chapter, I will provide an overview of the case, highlighting the court's concerns about the possibility of benefit from the research. The key consideration when assessing the possibility of benefit is the baseline in relation to which benefit is judged. I will argue that it is permissible to adopt a relative risk standard that indexes the potential for benefit to the risks present in the child's actual situation when additional conditions are also met.

The Case of Grimes v. Kennedy Krieger Institute

The Problem of Lead Poisoning

The harms of lead exposure have been widely known in the US since the early 1900's. Moderate, and potentially low levels of lead exposure result in significant cognitive injury, including decreased IQ, behavioral problems and learning difficulties. At high levels, it can result in encephalitis and eventually death. At moderate levels of lead exposure (>20ul/Dl), removing the source of exposure cannot reverse the neurotoxic effects that have already occurred, such as decreased IQ and behavioral modifications. Abatement performed at this stage only prevents the poisoning from getting worse and protects other children from getting exposed by the

same source. As a result, primary prevention, that is preventing exposure in the first place, is the only way to avoid the harms of lead exposure.

Children living in poor-quality housing are significantly more likely to be exposed to lead hazards. Children face the risk of lead exposure because they live in environments that contain lead dust. Much of this dust comes from deteriorating paint that contains lead. However, lead dust can also come from dust produced by trucks burning lead-containing fuels that have settled into the soil. Both of these circumstances are significantly more likely in low-income neighborhoods.

The Repair and Maintenance Study was conducted in neighborhoods surrounding the KKI where lead poisoning has been a significant and persistent problem for decades. It is estimated that 95% of the low-income homes in Baltimore, such as those participating in the Repair and Maintenance study, contained lead hazards (Pollak 2002; Kopelman 2002). As a result, 40-60% of children in the neighborhood had at least some level of lead poisoning with blood lead levels above 10 μ l/dl, 30-45 times higher than the national rate (Pollak 2002).

At the time of the study, there were known and approved comprehensive lead-abatement methods. However, these methods were very expensive costing around \$20,000/ household. As a result, they were only used once a child had come down with moderate levels of lead poisoning to prevent further exposure to the toxin, and even then, they were not mandated (Needleman 1998; Barltrop 1974; Satcher 2000). They were rarely if ever used prospectively to prevent children from becoming poisoned with lead. Indeed, these costs often exceeded the market value of the older homes in these neighborhoods (Lead-based Paint Hazard Reduction and Findings Task Force 1995). Furthermore, even these comprehensive abatement methods do not

fully remove the lead hazards in children's homes (Farfel and Chisolm 1991). The best methods reduce levels of lead-contaminated dust by about 60% and cannot remove the risk that children will be exposed to lead-containing dust from the soil or other homes (President's Task Force on Environmental Health Risks and Safety Risks to Children, *Eliminating Childhood Lead Poisoning: a Federal Strategy Targeting Lead Paint Hazards* 2000).

At the time of the Repair and Maintenance study, there were few laws applying to the rental of homes with lead paint. Abatement was not mandated even after a child had been poisoned with lead. The cost of abatement was not covered by home or health insurance and there were limited public funds available to cover the costs. The regulations that did exist did not require either landlords or renters to undertake any lead abatement for known hazards. However, they did mandate that if abatement were pursued, only the approved, comprehensive, and expensive, abatement methods could be used. As a result, at the time of the study, public education and screening were the only widely used interventions to prevent lead poisoning.

Study Design

Recognizing that these comprehensive methods of lead abatement were prohibitively expensive for landlords and were unlikely to be publicly funded in the foreseeable future, several federal agencies solicited research aimed at identifying alternative strategies for reducing lead hazards (US Department of Housing and Urban Development 1988, 1990). The Repair and Maintenance Study at the KKI was one such study. Specifically, the study was initiated in response to a work order from

the Environmental Protection Agency to identify “alternative practices” for abating lead in residential paint and dust (Pollack 2002)

Beginning around 1992, KKI began recruiting landlords into the Repair and Maintenance Study. The criteria to participate in the study included having a home that had been built before 1941, having documented lead-based paint in the unit *and* elevated levels of lead dust in at least two sites in the house greater than the clearance criteria standard in Maryland (Pollak 2002). If the landlords agreed, their housing units were randomly assigned to experimental groups 1-3, all which received some level of lead cleanup. The intensity and cost of the clean-up interventions increased from groups 1-3 with those in level 3 receiving the most expensive and involved protocols. All of the methods used in the study had previously been shown to safely reduce residential lead dust exposure and thereby to reduce the risk of lead poisoning (Farfel and Chisolm 1991; Farfel 1994). However, the precise combination of the methods used in the Repair and Maintenance Study was novel, as was the scale of their use (Pollack 2002). The abatement procedures were conducted by qualified, independent contractors and were funded through state-loan programs that provided funds for landlords interested in reducing lead-hazards in their properties.

Approximately 25 properties were assigned to each group. Two control groups were also included in the study, one having had comprehensive lead-based paint abatement sometime in the past, and the other having homes not expected to contain lead because they were built after 1977 when federal law limited the amount of lead in paint to less than 0.07 parts per million (Rabin 1989). Note that the study did not involve a control group receiving no abatement; all homes either received some clean-

up, or were not expected to contain any lead hazards. A total of 108 properties were enrolled in the study

After the landlord enrolled their properties, resident families were approached about participating in the study. All of the homes in experimental groups 1 & 2, i.e. the lowest levels of intervention, were occupied when the enrollment process began. These families were approached about participating in the study and participated in an informed consent process, which included providing a housing history. If they agreed to participate, they were asked to leave the home while abatement procedures were conducted to remove any risk of exposure during the cleanup process.

Homes in group-3 received the most extensive levels of clean up and repair, including the removal of old windows and installation of new ones. Given the degree of disruption, these methods were not deemed safe for occupied housing (Pollack 2002). Consequently, for this group, vacant properties received the abatement methods, and families were approached about participating in the study once they had rented the homes. This process was also used for a small number of group-2 properties.

Over the course of the study, blood lead levels and home dust lead levels were collected from children and homes in all groups. This data allowed researchers to monitor and assess the effectiveness of the various repair and maintenance procedures in reducing the children's exposure to lead (Board on Children, Youth and Families and Behavioral and Social Sciences and Education 2005).

The Case and the Court's Summary Judgment

Two children, Erica Grimes and Myron Higgens, developed elevated blood lead levels while in the study. Their parents sued the KKI, charging that the children suffered neuropsychological damage due to the failure of researchers to inform them of the elevated blood lead levels in a timely fashion, that the study placed the children at an inappropriate level of risk, and that the parents were not adequately informed of the risks in the informed consent process.

In 2001, the Maryland Court of Appeals issued a summary judgment on the case. They touched on a number of issues, including the nature of the research-subject relationship and the independence of IRB review. Central to our concerns, the Court considered at length the conditions under which parents can consent to their children's participation in research. Most notably, they argued that the KKI study posed no prospect of direct benefit, but did present significant risks of lead exposure to the participating children and as a result, parents had no justification for enrolling children in the research.

As they saw it, the purpose of the KKI case was to take otherwise healthy children and put them in an environment that increased their risk of dangerous lead exposure. They argued that the children in the study were being used simply as "canaries in the mine," measuring devices that were particularly sensitive to the presence of a poison and so could signal the success or failure of the researchers abatement methods. As they stated in the decision:

The purpose of the research was to determine how effective varying degrees of lead paint abatement procedures were. Success was to be determined by periodically, over a two-year period of time, measuring the extent to which lead dust remained in, or returned to, the premises

after the varying levels of abatement modifications, and, as most important to our decision, by measuring the extent to which the theretofore healthy children's blood became contaminated with lead, and comparing that contamination with levels of lead dust in the houses over the same periods of time (Grimes v. Kennedy Krieger Institute Inc, 2001).

They found this approach morally offensive, amounting to a deliberative exposure of a vulnerable population to known poisons. Under this description, they compared the case to other infamous research studies such as the Tuskegee Syphilis Study, the Jewish Hospital study, the use of "plague bombs" by the Japanese military in World War II, and perhaps most notorious, the deliberate infection of captives at concentration camps in order to study the degree of infection and the rapidity of the course of diseases.

In light of this analysis, the court concluded that there was no justification for exposing these healthy children to risk in research that presents no possibility of benefit to the child:

Otherwise healthy children, in our view, should not be enticed into living in, or remaining in, potentially lead-tainted housing and intentionally subjected to a research program, which contemplates the probability, or even the possibility, of lead poisoning or even the accumulation of lower levels of lead in blood, in order for the extent of the contamination of the children's blood to be used by scientific researchers to assess the success of lead paint or lead dust abatement measures (Grimes v. Kennedy Krieger Institute Inc, 2001).

And more generally, that:

It is, simply, and we hope, succinctly put, not in the best interest of any healthy child to be intentionally put in a non-therapeutic situation where his or her health is impaired, in order to test methods that may ultimately benefit all children (Grimes v. Kennedy Krieger Institute Inc, 2001).

And as such, the court argued that neither parents nor researchers had the authority or right to expose these children to the risks inherent in the research study:

Moreover, in our view, parents, whether improperly enticed by trinkets, food stamps, money or other items, have no more right to intentionally and unnecessarily place children in potentially hazardous non-therapeutic research surroundings, than do researchers. In such cases, parental consent, no matter how informed, is insufficient (Grimes v. Kennedy Krieger Institute Inc, 2001).

Consequently, the court argued that the children were healthy and because of this, they did not stand to directly benefit from their participation. Since this research put them at some risk of lead exposure, and there was no offsetting benefit, there was also no justification for enrolling them in the study.

This finding by the court raised many concerns. As some critics pointed out, all research involves some risk, so their claim that there was no justification for exposing children to any risk in the course of research would effectively block nearly all research involving children. This absolute claim was also in direct contradiction with the existing national regulations, which permitted children to be enrolled in research that presents up to a minor increase over minimal risks under certain conditions even if the research poses no prospect of direct benefit (45 CFR46.404; 45CFR46.406, Department of Health and Human Services 2001; National Commission 1977). The court later clarified its finding to indicate that its statement should be interpreted in line with these national regulations.

Here, however, I would like to focus on a different concern raised by the decision, namely, the claim that this research presented no prospect of direct benefit to its participants. This finding is particularly troublesome. If interpreted strongly, it could block the majority of research involving children that investigates interventions and therapies aimed at preventing disease and disability. In response, I will argue that even if potential participants are healthy at the time of enrollment, under certain

conditions, they can still benefit from research into interventions aimed at monitoring and mitigating the health risks that they face.

At this point, the only decision reached by the court is a summary judgment focusing on a limited number of issues. As a summary judgment, the case also did not include a full-fact finding stage, and as a result, many details of the case remain unknown. Consequently, in this paper, I will be concerned with the limited question of whether or not the Repair and Maintenance Study presented any benefit to the children who participated. I will not consider other concerns raised by the court, such as the independence of the IRB review or the timeliness of informing the participants of lead screening results.

Benefiting from Research

The most basic account of benefiting is that A benefits B if A causes B's significant welfare interests to be improved or advanced relative to a particular baseline (Hawkins 2006). On this account, two conditions must be met for something to be considered a benefit for B. First, B's situation must be improved relative to some baseline. Second, if it is A that benefits B, A's actions must contribute to the improvement in B's situation. Given these conditions, the clearest cases of a benefit are those in which an individual's current situation is directly improved as clear result of another's action. For example, if I have an infection and a physician provides me with antibiotics that effectively combat the infection, the physician benefited me because I am better off as a result of his actions than I was before, and there is good

reasons to believe that it is his actions, e.g. providing the antibiotics, that brought about this change.

If medical research is justified in part by the benefits it offers to participants, this basic account raises a number of challenges. For one, benefit from participation in research is far from certain. Typically, the efficacy of the intervention is unknown. Depending on the research design, the participant could also be placed in a group that receives no intervention, i.e. a placebo.

Second, there are challenging questions about what constitutes evidence that it was the research intervention that in fact improved the participants and not some other element of the study, such as increased care and attention or simply the passage of time.

Third, if benefit is judged as some improvement relative to a baseline, what is the relevant baseline in relation to which benefit should be judged?

I will be focusing on the third challenge, i.e. that of setting an appropriate baseline in relation to which benefit should be evaluated. I will argue that answering this question is critically important in assessing the ethical permissibility of the Repair and Maintenance Study, and more broadly in assessing the permissibility of all preventive research involving children.

Setting a Baseline

The most straightforward approach to setting a baseline would be to take the individual's situation before receiving the research intervention as the relevant baseline. In the infection case above, the patient had an infection at time A, received a

treatment from the physician and was better at time B. Consequently, her significant welfare interest not to be ill was improved at time B relative to time A as a result of the physician's actions. Similarly, we might maintain that if it is reasonable to believe that the research participant's welfare interests will be better after receiving the research intervention than they were before they received the intervention, then the participant stands to benefit from their participation in the research.

The difficulty with this strategy is that our health state is not static. All treatments take time and over that same period of time, many maladies would have resolved on their own or progressed, regardless of whether the individual receives treatment. What we are concerned with, then, is what would have happened over the same period of time in the absence of research participation, not whether the individual's situation is better after enrolling in the study than before enrolling. Accordingly, the baseline should be set by determining where, in light of our best ex ante information about the risks faced and the standard response to those risks, we could reasonably expect the patient to be at a later time.

The Case of Clinical Research

In the case of clinical research, that is, research into the safety and efficacy of medications, devices, and treatment regimens, the baseline is taken to be our best knowledge as to how patients fare after receiving the "standard of care." For the most part, the standard of care is understood to be the treatment protocol for the disease or condition under study that is currently accepted and used amongst the expert community. It is assumed that this is the treatment that the participant would have received if they had not participated in the study, and so our understanding of

how patients respond to this treatment is used to base our judgment about what would have most likely happened to the participant if they had not participated in the study.

While there has been significant debate about precisely how to understand this standard, most of the controversy has been in response to cases in which there are widely divergent treatment protocols in response a particular disease in the community from which the researchers come and the community that is participating in the research study, as was the case in the clinical trials of AZT treatment regimens in Africa in the 1990's. Later, I will discuss these studies in greater detail, arguing that the complexities introduced by the AZT trials shed light on the case at hand.

The Case of Non-Clinical, Preventive Research

The Repair and Maintenance Study was not a clinical study. It was a study into non-clinical, public health interventions, which differ in important ways from the clinical case. For one, they do not involve treatments administered by health professionals in physicians' offices and hospitals, but rather alterations to people's lifestyles and living environments: changes in their behaviors, alterations in public spaces, commercial areas, and private homes. Second, as was the case in the Repair and Maintenance Study, this research is often focused on the prevention of future disease and disability by mitigating some of the risks to their health that participants face in their daily lives as opposed to treating or diagnosing an existing disease or disability.

Because of its focus on the health risks we face in our daily lives, it is difficult to translate the standard of care concept into the context of public health. On the above clinical understanding of a standard of care, the relevant question would be

what is the currently accepted response to the daily risks we face? Because these risks involve the way individuals lead their lives, and not how a particular professional group should respond to individuals seeking their expertise and care, it is far less obvious how to answer this question. Who should determine what is the best response? Who is responsible for carrying out this response?

If we take the case of lead poisoning, for example, families can mitigate this risk of known hazards by either moving or making repairs to their house. Or, they can choose to do nothing. But who should make this decision and who bears the responsibility for realizing it? For the most part, the affected families lack the resources to make these changes. These families are also usually renting their homes, and the landlords, too, lack the resources or the will to make the necessary improvements. Laws could mandate appropriate responses. But, at the time of the Repair and Maintenance Study there were no such mandates. The only laws that did exist mandated the methods to be used if clean up was pursued, and had the consequence of discouraging cleanup because the mandated methods were so expensive. Moreover, these interventions were not necessarily subsidized or paid for by either health insurance or public funds. As a result, even once a child had been poisoned, the availability and use of the intervention was dependent on the family's ability to pay and the existence of public grants to help fund the work. Consequently, responses to lead-hazards varied significantly across the country depending on the priorities of the local government and public authorities, the grants available to fund clean up, the kinds of housing available, and the income level of the homeowners.

Normative and Relative Baselines

In the absence of any clear standard of care, there are two approaches that could be used to set the baseline in relation to which benefit is evaluated. We could adopt a normative standard that would articulate some conception of what should happen given a particular situation or the existence of particular risks. Alternatively, we could use what is likely to happen given the existing situation and risks faced by the study's likely participants. This approach would index the baseline to the profile of the study population and would permit studies that posed different levels of potential risk and benefit to study populations depending on their background risks. As a result, I will refer to this option as advocating for a "relative standard."

In the Grimes case, the court adopted a normative reading. They argued that the relevant standard for judging potential benefits and risks was that of the "average" American child, which they understood as a child living in a middle-class home in a safe neighborhood. The average child in American does not live in a home that contains lead paint hazards. In contrast, the partial lead-abatement groups in the Repair and Maintenance Study would have children living in homes that were known to contain some level of lead paint, and could contain lead hazards. As a result, the court concluded that the study could not present any possibility of benefit to the child, and indeed posed significant risks to their health (Wendler 2005).

A normative standard is also advocated by the National Commission in setting their guidelines for appropriate levels of risk involving children (National Commission 1977). These regulations specify that children can be involved in research that poses minimal or no more than a minor increase over minimal risk even when it poses no prospect of direct benefit to the child. Like the concept of benefit,

“minimal risk” and “no more than a minor increase over minimal risk” both allow of relative and normative interpretations. While the regulations are ambiguous on this point, the National Commission has adopted a normative standard in their reviews of research. In particular, they have adopted the standard of normal, healthy children living in safe environments, and indexed to the child’s age (Fisher 2007)¹¹.

In contrast, a relative baseline would take the child’s actual situation and the risks inherent in it as setting the baseline from which benefit should be evaluated. A child living in a middle-class neighborhood faces only a minimal risk of lead exposure and if lead hazards were discovered, many of these families would find the funds to pay for the comprehensive abatement methods. However, the children participating in the Repair and Maintenance Study faced significant background risks of lead exposure. According to the housing history provided by parents at enrollment into the study, these children had spent all or most of their lives living in existing low-income rental homes in Baltimore City, 95% of which contained significant lead hazards (Pollak 2002; Kopelman 2002). Moreover, because of the expense of cleaning up these hazards given existing methods and regulations, nothing was being done about those hazards nor was this situation likely to change in the foreseeable future. A relative risk standard would, then, allow for children living in this environment to be exposed to higher levels of risk in research aimed at mitigating the risks of lead-exposure than children who faced a lower level of risk in the course of their daily lives.

¹¹ Notably, the National Commission has not been consistent on this issue. In 1977 the National Commission concluded that a uniform standard was preferable, arguing that minimal risk should be indexed to the experience of healthy children (National Commission 1977). However, the preamble to the Final Rule articulates a relative standard, describing minimal risks as “those risks encountered in the daily lives of the subjects of the research.” The final regulatory definitions offered in the Common Rule specify neither approach. In practice a normative standard tends to be used. However, this issue continues to be a matter of debate.

The normative standard has been preferred by the courts and the National Commission because it is thought that adopting this approach will protect already vulnerable children, e.g. children who face a high level of risk in their daily lives, from being further disadvantaged by being exposed to relatively higher levels of risk in research (see, for example, Fisher 2007). That said, using the “average child” as the normative standard presents significant problems of its own (Wendler 2005). Sometimes, what we should do on a normative reading is either more or less demanding than what the average American child experiences. For example, the statistically average American child was still being exposed to secondhand smoke in the home far after the risks of this exposure were known; the average American child also faces high risks of obesity because their families watch too much television and eat a poor quality diet, despite the fact that these risks are well known.

I will argue, however, that adopting a normative standard is problematic for another reason. Namely, these standards prevent critical research into preventive interventions, and block research that has the potential to address the health needs and potentially improve the lives of the very children it aims to protect.

Disease is prevented through the mitigation and management of health risks. Many of these risks are risks we face in the course of living our daily lives. By their very nature, however, these are risks that vary depending on the circumstances of our daily life. Research into these risks cannot be accommodated by a normative standard that judges what risks we should face in our daily life, and in so doing “averages out” the very differences at stake. Consequently, to recognize the benefits that prevention offers to individuals, we will have to adopt a relative risk standard.

Prevention and a Relative Risk Standard

Prevention and the Risks of Daily Life

As mentioned in chapter 3, I understand health as the proper, integrated functioning of our bodies and minds (Borse 1977, 1975; Daniels 1985). On this understanding of health, good health is not achieved simply by treating expressed diseases and protecting the individual from infectious agents, but is a state that can be ensured by managing and mitigating the health risks that we face (National Research Council and Institute of Medicine 2000). Similarly, the key risks to health are not necessarily infectious agents, but aspects of the environment and our daily lives that influence development: the physical environment, social relationships, behaviors and habits.

Because childhood development is so critical for the development of lifelong health, children's health is more concerned with the promotion of development and the prevention of future disease and disability than with the treatment of existing pathology. However, children's exposure to these risks can vary significantly depending on their circumstances, and in many cases, these risks cluster among children with poor socio-economic circumstances. These variations are precisely what we are interested in when designing and targeting preventive interventions, and as a result, regulations that thwart research into prevention have a particularly amplified effect on children's health.

Prevention as a Direct Benefit of Research Participation

Research aimed at managing and mitigating these risks offers significant benefits to individual children. Disease and disability cause harm and discomfort.

They isolate the individual and reduce their opportunity to pursue important projects and activities. Disease can also disable the individual, constricting her functioning. In the case of lead poisoning, it reduces her IQ and can cause additional mental disability. In many cases, these disabilities are long term, and cannot be restored by the available treatments. In these cases, prevention is the only option to avoid the suffering. However, even when fully effective, treatments cannot erase the harm and suffering caused by having or treating a disease or disability. As a result, it is not only beneficial, but also morally preferable to prevent disease and disability rather than treat it, and as a result, it often makes sense for an individual to run some risks in order to realize these benefits.

It is also important to recognize that being at risk can, in and of itself, harm an individual, even if they never experience the unwanted outcome. In so far as prevention reduces the risks that an individual faces, it directly benefits the individual. An awareness of being at risk can generate fear, a feeling of insecurity or a general sense of distress. Knowledge of the risk may cause the child or their parent to alter their behavior in order to avoid the risk. As Jonathan Wolff has argued, the mere exposure to risk can harm the individual by having “a constant dampening effect on one’s spirit” (Wolff 2006, 416). These alterations may have other, harmful consequences. For example, parents may not let their children play outside or walk to school because they are afraid that their children will be harmed by the violence in the neighborhood. While keeping the children indoors reduces the risks that they will be shot by a stray bullet, or involved in a fight, confining them indoors has other harmful consequences, reducing the children’s physical activity, and potentially limiting their interaction with other children.

Conditions for Adopting a Relative Risk Standard

I have articulated reasons for adopting a risk standard that is indexed to the actual circumstances of participants when doing research into prevention. There are, however, two important concerns about research into prevention, and specifically about relative risks standards. For one, prevention is over-corrective; more individuals receive the preventive intervention than would have experienced the harm in its absence. Second, relative risk standards increase the threat of exploitation by escalating the level of risk that some children can be exposed to in the course of research. I will argue that these concerns can be allayed if we adopt a risk standard indexed to the actual circumstances of children's lives together with other conditions, viz. the risks faced by the children and the potential benefit of the research are *demonstrable*; the risks faced in research are *proportional* to those faced in the children's daily lives; and the risks faced by the children in their daily lives are *persistent*.

The Over-Corrective Nature of Prevention

Prevention targets populations that do not yet have an expressed disease, but rather are at risk for certain conditions. Not all children who face a risk and receive preventive interventions would have suffered the harm that they were at risk for. Moreover, children exposed to a risk may experience no adverse consequences from that exposure at the time of enrolling in a study targeting the risk. Nevertheless, all the children face the risks posed by the intervention. Most likely, some children will experience the potential harm even after receiving the preventive intervention, and these children are not necessarily those who would have been harmed in the absence

of the intervention. For example, the children who suffer from Guillain-Barre syndrome after receiving an immunization for meningitis are not necessarily the children who would have suffered from meningitis in the absence of immunizations. Consequently, prevention raises a distinctive distributive concern.

In light of these concerns, it is also common to introduce tighter risk standards for preventive interventions. For example, the allowable level of side effects from immunizations is significantly lower than for medicines and protocols that treat existing diseases and disabilities. Similar caution should be exercised in the context of research into prevention. Most centrally, the risks posed by the research must be proportional to risk under study. However, because of the need for stricter standards, the likelihood and magnitude of the harm faced in research should be significantly less than that faced independently of participation. I will discuss both of these concerns in greater detail below under the criterion of “proportionality”

Concerns About Exploitation

A significant concern about relative risk standards such as the one proposed here is that they would exploit children by allowing them to be exposed to excessive levels of risk in research simply because they face significant risks in their daily lives. As Celia Fisher argues, a relative risk standard “unjustly permits children to be exposed to higher levels of risk [in the context of research] simply because their daily lives are filled with greater risk than healthy children or those living in safe environments” (Fisher 2007, 6). The concern here cannot simply be that the participating children are exposed to a higher level of risk in research than other children. We do not see risky research into an experimental treatment for a child’s cancer as exploitative simply because it exposes that child to a higher level of risk

than would be acceptable in research involving a healthy child. Rather, this risk is permissible because it is the side effect of some intervention that offers the prospect of significant benefit to the child. Nevertheless, it would be perverse to allow children to face increased risk in research aimed at preventing cancer simply because they lived in a neighborhood with a high crime rate, and so faced an increased risk of dying anyway (i.e. by gunshot). The concerns about exploitation, then, arise because of the particular relationship between the risk faced in research and the risk faced by the children in the course of their lives.

The fundamental intuition behind claims of exploitation is that one person, the exploiter, has taken unfair advantage of another, the exploited, in some transaction. Accordingly, a full account of exploitation will make reference to some understanding of what “persons owe to each other by way of fair treatment” (Arneson 1992, 350). I will not offer a full account here, but rather present what I take to be necessary features of exploitative transactions. Specifically, transactions are exploitative when the one doing the exploitation (the *exploiter*) receives disproportionate benefit from the transaction compared to the one being exploited (the *exploited*), and the exploiter was able to elicit that benefit because the transaction was involuntary in some way, e.g. there was coercion or a lack of consent (Moore 1973, 53; Levine 1988, 66-67; Feinberg 1988, 176-79; Benn 1988, 138). In many cases, the benefits are disproportionate because the exploited is harmed as a result of the transaction. However, this account allows that the exploited can gain from the transaction. In these cases, the transaction can still be an exploitative one if what was gained by the exploited was greatly disproportionate to what they had to sacrifice. Furthermore, on this understanding, there may be more than one party classified as an exploiter, and these individuals or groups may or may not have directly participated in the actions

that brought about the harm experienced by the exploited parties. For example, in medical research, the primary beneficiaries of research may be the drug companies, or populations in the developed world. These groups have different, and often indirect, relationships with the actions of the study that are potentially exploitative. What is critical, and what makes the relationship a potentially exploitative one, is that the benefit is for people other than those who run the risk of the study.

In addition to disproportionate benefits, exploitative transactions must also be involuntary in some way (Moore 1973, 53; Feinberg 1988, 176-79; Levine 1988, 66-67; Hill 1994, 637). If through her own inattention, an individual pays \$30 for a shirt when there were vivid signs that she could have bought the same shirt in the store next door for \$15 we would not think that she had been exploited, only foolish or careless with her money. An interaction is exploitative only when there was also unfairness in how the transaction came about. In the context of research ethics, concerns of voluntariness focus largely on the consent process. However, even when research is properly consented, concerns of exploitation may still remain if some aspect of the research design was coercive to the participants, e.g. the research participants were in a weak or vulnerable position, or were offered excessive inducements to participations. Note however, that on its own, involuntariness is not sufficient for a transaction to be exploitative. We enter into many transactions because we are in a weak or vulnerable position, but would not judge those transactions to be exploitative. For example, a person in need of a life-saving surgery is in a position of extreme vulnerability, and yet we would not judge a surgeon's offer to provide them with that surgery as exploitative simply because the patient would not be entering into the transaction except for their vulnerability. Rather we think that the transaction is

fair because the patient gains significantly from the transaction. Indeed he likely gains more than the physician, e.g. his life.

Consequently, I understand an exploitative transaction to be one in which the exploiter gains disproportionately from the transaction compared to the exploited individual and is able to elicit this disproportionate benefit because the transaction was involuntary in some way.

Concerns of the voluntary nature of research participation are largely addressed through the currently accepted practices for obtaining consent from research participants. While there are concerns about the consent process in the Repair and Maintenance Study, these concerns do not address the permissibility of a relative risk standard. Consequently, I will put these concerns to the side and assume, for the purposes of the paper, that the Repair and Maintenance Study did conform to these standards. The conditions argued for below are offered as sufficient conditions for adopting a relative risk standard, assuming that standard practices for obtaining consent have also been followed.

Below I argue that these concerns can be allayed on a relative risk standard indexed to the actual circumstances of children's lives when three other conditions are met, namely, that the research intervention is likely to mitigate a risk that has a *demonstrable* relationship with some adverse health condition; that participants face risks in the course of research that are *proportional* to and a side-effect of interventions aimed at reducing the risk in their daily lives; and that the risk faced by children in their daily lives is *persistent*.

Demonstrable

The research intervention should be likely to mitigate a risk that has a demonstrable relationship with adverse health outcomes

A risk is demonstrable when there is an established body of scientific evidence (1) arguing for a relationship between the risk and health consequence such that intervening on the particular risk will in fact lessen the likelihood of suffering the associated harm, and (2) arguing that the children targeted by the study in fact experience the risk in question.

This condition would be met by most scientific research proposals, as it is the presence of this kind of evidence that motivates research proposals in the first place. Importantly, however, this condition requires not just evidence of an association between a risk and outcome in a population but evidence that a particular intervention is likely to reduce or remove the risk. Such evidence is necessary to ensure that there is a reasonable likelihood that participants could benefit from participation in the study.

The Repair and Maintenance Study met this condition. As discussed earlier, the harms of lead exposure have been widely known in the US since the early 1900's, and the routes for and consequences of exposure have been widely established by the scientific literature. The children involved in the study were known to face a substantial risk of lead exposure as the vast majority (~95%) of the housing in their neighborhood, and indeed throughout comparably affordable neighborhoods in Baltimore, contained significant lead hazards (Pollack 2002). Moreover, many children (40-60%) in those neighborhoods had already been exposed to dangerous levels of lead (blood lead levels above 10 μ l/Dl) (Pollack 2002). In addition, previous

research indicated that all of the interventions investigated in the study effectively reduced the amount of lead-containing dust in homes, and so there was reason to believe that these particular combinations of interventions could reduce lead-containing dust and thereby reduce the rate of lead poisoning amongst the children (Farfel and Chisolm 1991; Farfel 1994).

Consequently, the criterion of demonstrability responds to concerns of exploitation by ensuring that the research presents a genuine possibility of benefit to the participants.

Proportional

Each individual must have his risk reduced by the experimental intervention. The intervention must aim at reducing a risk that the children face independently of their participation in the study so that any harm experienced by the participants is an unintended side-effect of actions aimed at reducing the risk under study.

In all medical research, it is standard to require that the risks posed in the context of research be offset by the potential benefits of participation in the research project. Indexing the acceptable level of risk to participants existing risk-level does not remove the need for this positive risk/benefit ratio; on balance, participation in research should benefit participants. While in the case of adults, we can allow some degree of discretion for the individual to determine when the risks and benefits are proportional, in the case of children it is necessary to provide stricter guidance as they must rely on proxies to evaluate potential risks and benefits for them. Below I present two criteria that are necessary for benefits to outweigh risks in research into preventive intervention.

Research into preventive interventions pose unique challenges for evaluating risks and benefits because at the time of enrollment, not all children are being harmed

as a result of the risk they face, and not all of the children who enroll would have been harmed by the risk being addressed in the absence of any intervention. Yet, they all face the same risks as a result of their participation. For example, not all of the children participating in the Repair and Maintenance Study would have been poisoned by lead in the absence of their participation, but they all face the risks posed by participation. Moreover, children who were exposed to lead during the study may not have been exposed in the absence of participating. This is the case for a number of reasons. First, not all children who live in contaminated homes are exposed to lead. Second, participation in the study could alter the children's behavior or the behavior of their parents in ways that could increase their risk of exposure, and finally, the clean-up methods themselves may temporarily increase the risk of lead exposure. Consequently, in the context of preventive research it is reasonable to require a higher standard of potential benefit. In particular, all children should stand to benefit from their participation in the research.

In the context of research into preventive interventions, the potential benefit of participation is a reduced risk of experiencing some harm. For example, in the Repair and Maintenance Study, a child benefits in so far as their risk of lead exposure is reduced. In this context, I would suggest that we understand risk as the (magnitude of a harm) X (probability of that harm). Accordingly, an intervention could reduce a child's risk in at least two ways. First, the probability of the harm under study can be reduced. For example, in the absence of the abatement methods 60% of children could be expected to get lead poisoning whereas with an abatement procedure, only 20% are expected to become poisoned. Second, the magnitude of the harm experienced could be reduced. For example, in the absence of any intervention 40% of a population

came down with the flu. After the intervention, 40% still got the flu, but it lasted on average 2 days as opposed to 2 weeks without the intervention.

In the Repair and Maintenance Study, the risk faced as a result of participation in the research and the risk faced independent of participation in research were one and the same risk, i.e. lead poisoning, and so the possibility of benefit was simply a matter of comparing how likely the harm was as a result of and independent of participation. However, this is not always going to be the case. When the risks posed by the preventive intervention and the background risks are not the same, there is often disagreement about whether an intervention offers the possibility of a net benefit.

Consider, for example, debates over immunizations. Some parents reject immunizations because they do not believe that the immunizations sufficiently reduce the likelihood that their child will suffer the disease to justify accepting risks in the course of immunizations. The diseases are very unlikely in the first place, and so further reducing those risks is of little value. Alternatively, other parents will reject immunizations because they do not believe that the magnitude of harm faced in the absence of immunizations justifies increasing the risk that their child may suffer some other harm as a result of the treatment. For example, in the case of influenza, parents will often contend that their children are in fact likely to get the flu, but this illness is not so bad, causing just a few days in bed. As a result, the severity of the illness does not justify exposing them to less likely but far graver risks faced through immunization, such as Guillain-Barre Syndrome.

The first consideration in the criterion of proportionality holds that the benefits of risk reduction must be significant enough to offset any potential harm experienced

as a result of participation. However, it is not enough that overall the potential benefits of participation outweigh the potential harm. Any harm faced through participation should also be an unintended side effect of the intervention aimed at reducing the child's risk for a particular disease or disability. In the context of preventive research, this means that the child must already be exposed to the risk under study, and that any harm faced through participation in the research is consequence of some action aimed at mitigating that particular risk.

For example, it would not be justified to experiment on children from a developing country for one disease in exchange for proper food and treatment for other diseases even if their overall mortality risk has gone down as a result of participation in the research study. In this case, the benefit – improved nutrition and medical care – could be delivered without imposing the additional risks associated with the experimental treatment. Moreover, the experimental treatment poses no potential benefit to those individuals who bear the risks of testing it. The lack of benefits raises the question of who, then, is benefiting from this research. While in each case the answer is likely to differ, in all such cases, the potential benefits of the research will be for those other than the individuals and populations participating and facing the risks of research. This situation raises concerns of exploitation as one population is benefiting from the risks imposed on another population, who does not stand to sufficiently benefit from those risks. Consequently, we must consider whether the potential participants disadvantage is being taken advantage of as something that can inflate the value of the benefits offered, and so can more readily offset the risks posed by the research.

The Repair and Maintenance Study did offer the participating children a favorable risk/benefit ratio. First, all children who participated in the study received some level of lead abatement and so stood to potentially benefit from their participation in the project. Moreover, independent of their participation in the study, the risks faced by children in the study were significant. As discussed earlier, the harms range from decreased IQ and behavioral problems to death, and once exposed, treatment cannot reverse the harms, but only prevent them from getting worse. As a result, primary prevention, as was pursued in the Repair and Maintenance Study, is the only way to avoid the harms of lead exposure. Furthermore, there was good reason to believe that the interventions studied in the Repair and Maintenance Study would be effective in preventing these harms as the methods not only reduced the amount of lead containing dust, but were inexpensive enough to be used preventively across a wider population than the existing protocols.

While the judgment of whether a study presents proportional benefits must be made before the initiation of the research project, the outcome of the Repair and Maintenance Study provides further evidence that the interventions did in fact reduce the children's risk of lead exposure. While 40-60% of children in the neighborhood had some level of lead poisoning, less than 2% of participants in the Repair and Maintenance Study experienced any lead poisoning.

Persistent

The criterion of persistence aims to capture the intuition that we should not expose children to risk in research examining new methods of prevention when there are superior, i.e. more effective or less risky, alternatives available. The argument would be that if potential participants can easily avoid the risk without participating in

the study, or if researchers can easily alleviate the risks faced by participants, then there is no justification for exposing children to the higher levels of risk faced in the research. It is challenging to determine when alternatives exist or when a participant could easily avoid being exposed to the risk as answering that question requires to us to take a stand about what aspects of the participants' current situation we are going to take as fixed. In other words, we have to answer the question, "available under what circumstances?"

I argue that we should adopt the following criterion when evaluating the persistence of a risk:

A health risk is persistent when there is no superior method of risk reduction with net clinical relevance for the population participating in the research.

The criterion builds on the standards introduced in the clinical context by van der Graaf and London in response to concerns over the use of placebo controlled trials for AZT in Africa (van der Graaf and van Delden 2009; London 2000, 2001). This debate has important parallels to the Repair and Maintenance Study as it raised questions about what determines when alternative treatments present superior alternatives to the population under study. This standard attempts to balance the need for context sensitivity in evaluating the effectiveness of treatment protocols while avoiding the exploitation of vulnerable populations that can occur by using their disadvantage to justify denying them needed care (van der Graaf and van Delden 2009; London 2000, 2001).

This approach to determining when a risk is persistent is grounded in the concept of clinical equipoise. Clinical equipoise refers not to risks but to our knowledge about the relative effectiveness of alternative treatments. Research is

justified in part by a genuine uncertainty within the expert community about which treatment or intervention is most effective, in this case to reduce a particular health risk.

The concept of equipoise admits of a broad and narrow reading. On the narrow reading, equipoise refers to uncertainty about the physiological equivalency of treatments. In the case of the Repair and Maintenance Study, the relevant uncertainty on this narrow reading would be which protocol leads to the least amount of lead buildup in children's blood. The difficulty with this understanding, however is that the physiological response elicited by a treatment depends on the context in which the intervention is realized, as the effectiveness of a treatment depends on many practical considerations.

The broad reading of equipoise takes these contextual considerations into account and argues that uncertainty about the impact of these practical considerations is relevant to determining when equipoise exists. Such practical considerations include differences in the mode of delivery, the structure of the health care system and the availability of local resources (van der Graaf and van Delden 2009; Freedman 1990; London 2000, 2001). London articulates this criterion as requiring that interventions be "practically attainable and sustainable" in that community, whereas van der Graaf refers to it the "net clinical relevance" of the intervention (Levine 2000; van der Graaf and van Delden 2009; London 2000, 2001). I will use the latter term as it better captures what we are interested in, e.g. the clinical effectiveness of a treatment, which as I argue below encompasses the practical attainability and sustainability of an intervention in a community.

To determine the effectiveness of an intervention, we have to take into account a number of practical considerations about the context of delivery. Critically, these

kinds of practical considerations apply to the evaluation of all treatments and preventive interventions. For example, an antibiotic that is desirable because of its antimicrobial properties may have a lower net clinical relevance for the treatment of a common infection because it requires intravenous delivery and constant medical monitoring (Freeman 1990, 5). Indeed, a central problem of any experimental result is ensuring the conditions under which a response is elicited can be replicated outside of the experimental context. Because of this sensitivity, clinical research regularly examines alternative modes of delivery that would overcome the practical obstacles that prevent patients from realizing the benefit of the treatments they receive.

However, such contextual considerations are particularly critical in non-clinical research as this research often involves alterations to the participants behaviors and living environments. As a result, the feasibility of integrating these changes into participants lives and their acceptability and manageability are particularly critical.

I would also like to highlight that this broad notion of equipoise is needed to avoid the exploitation of participants that can occur when the results of a trial are more relevant to the researcher than the researched community (London 2000, 2001; Levine 2000). To ensure a positive risk/benefit ratio, the results of a study should provide useful information about the diagnosis, pathology and/or treatment of a condition to the population that is involved in the study, and not just information that is relevant to the researcher and/or her community of origin. However, if a treatment is not practically attainable and sustainable in the participating community, meaning that there is little potential for the results of the research to be translated into refined practices within the community in which it was conducted, then the results of the

study are ultimately of little to no relevance to them and have little prospect for ultimately benefiting them.

Consider the case of the trials looking at the use of AZT treatment protocols to reduce mother-to-child transmission of HIV. The concern about this research was that participants were being exploited because the studies offered participants treatment protocols that were known to be less effective in the countries from which the researchers came. For example, some studies involved placebos when placebos would not be used in developed countries because there were known, effective standards of care to block mother-child transmission of the virus. Under a broad conception of clinical equipoise, however, the superiority of the long-course AZT trials could still be called into question if there were aspects of the context of delivery in the developed world that could compromise the net-clinical effectiveness of these protocols. For example, these longer-course AZT trials necessitate that the child is fed with formula as opposed to breast milk. While this constraint may not pose difficulties in areas with safe drinking water, in areas that do not have safe water, it exposes the infant to a significant risk of water-borne disease, which could lead to greater morbidity and mortality than in the absence of treatment, rendering the treatment ineffective in the balance (Levine 2000; London 2001). While this observation does not necessarily justify the use of a placebo, it does justify researching the efficacy of the long-course AZT treatments and not offering all participants that particular treatment protocol.

Similar comments apply to the Repair and Maintenance Study. While there was a known intervention for removing lead-hazards from homes, the treatment was not practically attainable in the community under question. Constraints of the housing situation, i.e. a lack of lead-free homes in the neighborhood, combined with budgetary

constraints both at the individual and governmental level, precluded the widespread use of the comprehensive abatement methods for prevention. They were so expensive that they were not commonly used anywhere in the United States as a preventive intervention. Indeed, at the time there were no scientifically established protocols for the prevention of lead poisoning in children. Accordingly, it is reasonable to say that at the time of the study, there was genuine uncertainty about what kinds of measures could effectively prevent lead poisoning in children living in homes with known hazards. Indeed, it was this uncertainty that led the government to fund the research in the first place.

Using the standard of net clinical relevance does justify testing less expensive and potentially less effective treatments in communities in which the known interventions potentially have less net clinical relevance. It is also admittedly vague. The net clinical relevance of an intervention is influenced by a host of considerations, some inherent in the nature of the disease, others internal to the health care delivery system and public health infrastructure, and others having to do with broader characteristics of the society in question. Which of these constraints should we take as fixed when determining what is practically attainable and sustainable in a community?

I would argue that unless these constraints can be reasonably changed, or there is a strong indication that they are going to change in the near future, we should take them as fixed. Public health research must adopt this pragmatic stance, as it is these very constraints that it is most concerned with. Moreover, not adopting this kind of stance significantly limits the good that the public health community can do to address health needs of its population, and disregards the suffering that individuals do

or will experience as a result of these persistent risks faced in the communities in which they live. It argues that because in a more ideal state of affairs, the children would not need a particular intervention, or the health professionals could offer them a more expensive intervention, they should not do anything for to address those individual's needs now. Rather than protecting populations, and specifically, children, from exploitation, this approach only exacerbates their vulnerability. In the case of the Repair and Maintenance Study, it argues that researchers should not pursue less-expensive methods of lead abatement that could be used preventively because in a more ideal state of affairs, children would not live in unsafe housing or there would be ample resources available to do all the necessary repairs on children's homes.

That said, the criterion of persistence would not be met if the Kennedy Krieger Institute or the researchers directing the study had caused the problem of lead poisoning in the community or the difficulties behind addressing it, and then, after creating and the risk, offered participants the opportunity to participate in the study. This would be an example of entrapment, and at least *prima facie*, an example of an unfair transaction and so exploitative. For example, it would be exploitative if I reduce you to abject poverty and then get you to sell your body for my benefit. Nevertheless, KKI had no role in creating or sustaining the risks faced by these children. Indeed, it had been at the vanguard of ameliorating those risks. Moreover, the children were already living in unimproved homes with lead hazards, and without their participation and the participation of their landlord, they were likely to continue to live in the non-improved homes (Pollack 2002).

Consequently, the criterion of persistence aims to address concerns of exploitation in two ways. First, if there are alternative treatments with net clinical relevance to the population, then the experimental interventions pose no additional benefit. Accordingly, research into such alternatives is potentially exploitative. Second, if the researching party are responsible for the persistence of the risk in the participants' lives, then the transaction would be unfair, as their needs were being created and manipulated by the researching party, who also stand to benefit from the research. Ultimately, determining when a risk is persistent and when alternative methods of risk reduction are available is a pragmatic judgment. There is no set formula to determine when constraints are likely to change, altering when alternative methods of risk reduction would be practically attainable and sustainable. Rather I have argued that we should adopt a pragmatic approach. Structural, social, cultural, political and economic constraints limiting the treatments and interventions that are available to a population should be taken seriously, we should not disregard them when setting a baseline in relation to which benefit is judged merely because under a more ideal state of affairs, they would not exist.

That said, adopting this pragmatic stance towards children's actual circumstances does not endorse those circumstances or make a normative judgment that they are good or just. These situations may very well be deeply unjust or unfair. Rather, it argues that in their role as medical researchers, they have a primary obligation to generate information that can address the needs and alleviate the suffering that exists.

Benefits of Prevention Versus Public Health Benefits

It is important to distinguish the conditions for benefit under a relative risk standard for research into preventive interventions from the concept of “public health benefit” that has also been proposed in response to public health research generally, and more specifically, in response to the Repair and Maintenance Study.

Buchanan and Miller argue that a public health perspective on research ethics is associated with “broadening the conceptualization of risks and benefits deemed ethically relevant” (2006, 730). It requires us to take into consideration the benefits and burdens of the research for the population, not just the individual research participant. For example, a public health perspective would argue against stopping clinical trials as soon as the evidence suggested that the experimental treatment was or was not beneficial, but for seeing the research through to its conclusion to gather as much information about the treatment protocols as possible. By maximizing the knowledge gained from the trial, this approach would reduce the need for future trials, and so reduce the number of individuals that ultimately were exposed to the risks of research participation. Similarly, Buchanan and Miller argue that a public health perspective counts among the benefits of a study knowledge about the feasibility of less-expensive treatments to provide population-wide protection.

I would agree with Buchanan and others who point out that public health does adopt a distinctive, population-wide perspective, and that these societal considerations should be taken into account when evaluating the ethics of public health research. However, the arguments above make a distinct point. Namely, that in managing and reducing risks to an *individual's* health, preventive research offers the *individual* a potential benefit that should be recognized when evaluating the research protocol.

Recognizing these benefits does not require a separate idea of “public health benefit.”

Research into preventive interventions will have other benefits for the community, and so offer public health benefits, but these benefits should not obscure the potential benefit to the individual.

Conclusion

Risk reduction and management is a potential benefit of research for adults as well as children. To recognize these benefits, however, it is often necessary to index the baseline from which risk and benefit is evaluated to risks actually present in the participant’s life, or adopt what I have referred to as a relative risk standard.

These standards raise concerns about exploitation as the potential risks and benefits posed by the research project will vary depending on the risks already faced by the study population. Some have argued that this situation is unfair as it condones research that offers inadequate benefits to some simply because they are worse off to begin with. Over this paper, however, I have argued that concerns about exploitation on a relative risk standard can be allayed. A relative risk standard in research into preventive interventions is permissible when three conditions are met in addition to those normally required in medical research, e.g. informed consent: the risk being addressed by the research intervention is likely to mitigate a risk that has a demonstrable relationship with some adverse health condition; the risks faced in the course of research are an unintended side-effect of an action which aims to diminish a risk of harm that the children face independent of their participation in the research project, and are offset by the potential benefits of participation; and when there is no

superior method of risk reduction with net clinical relevance to the participating population. These criteria address both aspects of exploitation, ensuring that the project presents sufficient value to the participant, and that the use of a relative risk standard does not compromise the voluntary nature of research participation.

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