Compensating the Lead Poisoned Child: Proposals for Mitigating Discriminatory Damage Awards

Laura Greenberg
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Abstract: Traditional determinations of tort damages disadvantage plaintiffs in lead paint litigation. When courts rely heavily on race-based statistics and closely scrutinize the achievements of the plaintiff's family, low-income and minority plaintiffs suffer the immediate consequences. This method of compensation reinforces the notion that the tort system reflects the realities of current economics, complete with all its inequities. As this Note suggests, however, the tort system should strive to mitigate these discriminatory realities rather than remaining complacent and content with the status quo. Adopting race-neutral statistics and comprehending the psychological theory of resiliency will allow courts to begin the damage calculation from a more optimistic and less discriminatory perspective.

INTRODUCTION

Lead poisoning generally affects young children from low-income and minority families. It causes a variety of physical and psychological injuries, ranging from attention deficit disorder to mental retardation to kidney failure. Injured plaintiffs have successfully sued landlords and governmental agencies to recover for these injuries. Their compensation in such suits is measured, in large part, by the

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calculation of their loss of earning capacity. Typically, economists and rehabilitation experts rely on both race-based statistics and examinations of the vocational and educational achievements of the plaintiff's family to determine the loss of earning capacity.

Lead paint plaintiffs—young, poor and often African-American or Hispanic—are disadvantaged by the traditional determinations of loss of earning capacity. Using race-based statistics reinforces the current racial discrimination in the work force, ignoring the possibility and the social value of upward mobility. In addition, dependence on race-based statistics assumes that race is and should be the primary determinant of individual achievement. Focusing on the plaintiff's family is also problematic for poor minority plaintiffs because it assumes that racism and classism will exhaust their opportunities in the same way that it may have adversely affected their relatives. In short, traditional determinations of loss of earning capacity presuppose that the legal system's function is to reflect the disturbing status quo of discrimination.

This Note advocates two proposals for combating discriminatory damage awards for lead paint plaintiffs. First, courts should adopt race-neutral statistics to make economic predictions about a child-plaintiff's loss of earning capacity. Second, courts should become familiar with the psychological theory of resiliency. This theory identifies certain "protective" factors within children and in their en-

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4 See Martha Chamallas, Questioning the Use of Race-Specific and Gender-Specific Economic Data in Tort Litigation: A Constitutional Argument, 63 FORDHAM L. REV. 73, 75 (1994) [hereinafter Chamallas, Questioning].
7 See Chamallas, Questioning, supra note 4, at 97.
8 See Chamallas, Architecture of Bias, supra note 6, at 483.
9 See Wriggins, supra note 6, at 1028–31.
10 As Professor Martha Chamallas explains, "the past is uncritically accepted as a guide to the future, even though most people acknowledge that the past was hardly free of race ... bias." Chamallas, Architecture of Bias, supra note 6, at 488–89.
12 See generally RESILIENCE AND DEVELOPMENT: POSITIVE LIFE ADAPTATIONS 17 (Meyer D. Glantz and Jeannette L. Johnson eds., 1999).
vironment that increase the likelihood of overcoming adverse situations such as poverty or racial discrimination. On a practical level, resiliency theory encourages experts to broaden the sources for their predictions of future earning capacity. In addition, resiliency theory has two theoretical consequences for damage awards: it emphasizes the speculative nature of predictions about what or who a child could become, and it suggests that experts should start from the optimistic assumption that children are, in fact, able to overcome adverse obstacles that confront them.

Section I identifies the lead-poisoned population and clarifies the physical and psychological consequences of lead poisoning. Section II examines monetary damages in lead paint litigation, starting with the general method of calculation for adults and then focusing on the special case of the child-plaintiff. Section III emphasizes the problems that the traditional method of damage calculation poses for lead paint plaintiffs. Finally, Section IV advocates two proposals to help mitigate the discrimination in damage awards for lead paint plaintiffs: the adoption of race-neutral statistics and the integration of resiliency theory into damage determinations.

I. Effects of Lead Paint Poisoning

Lead paint poisoning, while dangerous for everyone, tends to manifest itself primarily in young children. Not only are young children more likely than adults to ingest lead paint, but children's bodies are particularly susceptible—biologically and developmentally—to the effects of lead paint. The poisoned population has other defining characteristics, namely that the young children are generally

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14 See id.
15 See E. James Anthony, Risk, Vulnerability, and Resilience: An Overview, in The Invulnerable Child, 3, 10–11 (E. James Anthony & Bertram J. Choler eds., 1987) (due to the enormous diversity of risks to which children are exposed, predictions of the "outcome" are extraordinarily complex).
19 See id.
members of minorities from low-income families. Such families often occupy the older, deteriorating urban housing where lead paint remains prevalent. Their children have high risks of exposure to lead paint, especially since the severity of the physical and psychological effects of lead paint depends on the amount of lead paint ingested.

A. The Poisoned Population

1. Young Children

According to the Center for Disease Control (CDC), a person’s blood lead level is at a dangerous level when it rises above ten micrograms per deciliter (10 mg/dL). This estimate applies to children and adults alike, although it is clear that children under five years of age tend to be especially susceptible to lead poisoning. Children’s bodies absorb and retain more lead than adults’ bodies, due in part to the likelihood of an iron deficiency which greatly increases the risk of absorption of lead into the gastrointestinal tract. Because children’s bodies and organs are in the developmental stage, even the slightest amount of lead can have a profoundly detrimental effect. For children under the age of three, the incomplete development of the blood-brain barrier increases the risk that lead will seep into the nervous system. Also, very young children are more likely than adults to ingest paint chips or paint dust because they are especially prone to hand-to-mouth contact.

2. Low-income and Minority Children

Housing conditions in the United States create another characteristic of the poisoned population: lead poisoned children tend to be

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20 See EPA, Lead and Lead Poisoning, supra note 1.
21 See USDHHS, Case Studies, supra note 2.
22 See Lidsky, supra note 18. It is possible that the CDC will adjust this estimate in the future as it has done in the past, lowering the figure to keep up with technological and medical developments. See Mahoney, supra note 2, at 51–52.
23 See Lidsky, supra note 18, at 34 n.3; EPA, LEAD, supra note 17.
24 See USDHHS, Case Studies, supra note 2 ("[t]he amount of lead absorbed from the [gastrointestinal] tract of adults is typically 10% to 15% of the ingested quantity; for pregnant women and children, the amount absorbed can increase to as much as 50.").
25 See Lidsky, supra note 18, at 32, 34 n.3.
26 See USDHHS, Case Studies, supra note 2.
members of minorities and low-income families.\textsuperscript{28} Since over 80% of houses built before 1978 contain lead-based paint, families who live in older, deteriorating housing have a higher risk of exposure than families in the newer communities.\textsuperscript{29} In addition, urban housing is more likely than suburban housing to contain lead paint.\textsuperscript{30} As low-income and minority families are more likely than white families to live in older, lower-income, inner city housing,\textsuperscript{31} it should come as no surprise that the majority of the poisoned population are poor African-American and Hispanic children.\textsuperscript{32}

The CDC's ranking of populations at risk for lead poisoning reflects this expectation, placing poor children and minority children at the top of the list.\textsuperscript{33} Other studies also acknowledge the identity of the poisoned population.\textsuperscript{34} For instance, a New York City study conducted in 1984 found that African-American children accounted for an estimated 60% of children living in standard metropolitan statistical areas with blood-lead levels greater than 25 mg/dL.\textsuperscript{35} A few years later, a similar study conducted by the Agency for Toxic Substances and Disease Registry (ATSDR) surveyed families throughout the United States who were significantly below the poverty line and found


\textsuperscript{30} Lively, \textit{supra} note 27, at 316.

\textsuperscript{31} USDHHS, \textit{Case Studies, supra} note 2 (African-American and other minority groups are over-represented in low-income groups as well as in the inner-cities).

\textsuperscript{32} See Lively, \textit{supra} note 27, at 316. Professor Lively emphasizes the impact of the "white flight" phenomenon on racial segregation and increased exposure risk for minorities within the past three or four decades: "white flight denotes the process of population redistribution in which whites leave a community, usually an older city, and settle in suburbs[,]" thereby creating "newer and predominantly white suburbs and older and largely black inner cities . . ." and creating the concentration of minority families in urban areas with high exposure risks. See \textit{id.} at 316 n.64, 317.

\textsuperscript{33} See EPA, \textit{Lead and Lead Poisoning, supra} note 1. Although children with lead poisoning span all socio-economic and racial divisions, the "prevalence of elevated levels, nevertheless, remain highest among inner-city, underprivileged children[.]" See USDHHS, \textit{Case Studies, supra} note 2; see also Lively, \textit{supra} note 27, at 316–17.


\textsuperscript{35} See \textit{id.} Unfortunately for analysis purposes, these statistics vary widely: the CDC estimated that in 1984, African-American children accounted for 46% of the children at risk. See USDHHS, \textit{Case Studies, supra} note 2.
that, of that group, 68% of children with blood-lead levels above 15 mg/dL were black and only 36% of the children were white.\textsuperscript{36} The 1988 ATSDR study also showed that 26.6% of African-American children in the United States had blood-lead levels above fifteen mg/dL, whereas only 7.1% of white children had such elevated levels.\textsuperscript{37} Then, in 1997, a press release from the CDC noted that despite a dramatic decrease in blood-lead levels for all Americans, children from low-income families still exhibited higher levels than other children.\textsuperscript{38}

The correlation between race, income, and lead poisoning might become even more pronounced in the near future.\textsuperscript{39} Until recently, the general public was exposed to lead through the use of leaded gasoline. Now, with increasing restrictions on leaded gasoline, lead exposure comes primarily from lead paint.\textsuperscript{40} Given the fact that low-income and minority families are more likely to occupy older houses with lead-based paint,\textsuperscript{41} "race and income will become better indicators of the likelihood of exposure to lead paint, and, consequently, elevated blood lead levels."\textsuperscript{42}

B. Physical and Psychological Consequences of Lead Poisoning

Lead poisoning affects children in a myriad of ways depending on the extent of the exposure.\textsuperscript{43} Typically, upon entering the body, lead concentrates primarily in the blood, soft tissue (such as the kidneys, bone marrow, liver, and brain), and mineralizing tissue (such as the bones and the teeth).\textsuperscript{44} High levels of exposure can cause kidney failure and brain swelling that can lead to coma or death.\textsuperscript{45} High exposure can also result in neurological damage, mental retardation,

\begin{itemize}
\item[\textsuperscript{37}] See id.
\item[\textsuperscript{38}] See USDHHS, 1997 \textit{News Release}, \textit{supra} note 29. The CDC press release cites to the findings of a National Health and Nutrition Examination Survey. See id.
\item[\textsuperscript{39}] See USDHHS, \textit{Case Studies}, \textit{supra} note 2.
\item[\textsuperscript{40}] See id.; Lively, \textit{supra} note 27, at 315 (noting that old water pipes and soil near streets and highways pose contamination risks, but stating that primary source of lead poisoning is lead-based paint).
\item[\textsuperscript{41}] See \textit{supra} notes 29–33 and accompanying text.
\item[\textsuperscript{42}] USDHHS, \textit{Case Studies}, \textit{supra} note 2.
\item[\textsuperscript{43}] See id.
\item[\textsuperscript{44}] See id.
\item[\textsuperscript{45}] See id. Lead poisoning can damage the endocrine system as well, interfering with the metabolism of Vitamin D and calcium, and affecting cell maturation and skeletal growth. See id.
\end{itemize}
cerebral palsy, seizures, and behavioral problems.⁴⁶ Lower levels of exposure can cause reduced IQ, cognitive difficulties, deficits in speech and language processing, attention deficit disorder, and full or partial hearing loss.⁴⁷

Although science and legislation have made significant strides towards managing the causes and effects of lead poisoning in recent decades, there has been an explosion of lead paint cases brought against landlords or governmental housing agencies.⁴⁸ This article focuses on the last stage of this complicated litigation process: the determination of damages.

II. DAMAGES IN LEAD PAINT LITIGATION

The determination that a defendant is liable, which is often considered the final chapter of the litigation, is merely the beginning of the story for lead paint plaintiffs.⁴⁹ Upon issuing a finding of liability, the court must quantify and redress the damages caused by the defendant's conduct.⁵⁰ For the purposes of the damages analysis below, the reader should assume that the plaintiff has successfully sued the defendant either in negligence or under a state or federal statute.⁵¹

A. Possible Types of Damages and the Negative Results for Minority Plaintiffs

The successful plaintiff is entitled to all the typical types of tort damages, including medical costs, pain and suffering, interruption of ordinary daily life, and loss of future earning capacity.⁵² As the number of toxic tort cases have increased in both complexity and number over the past few decades,⁵³ tort attorneys have also begun to suggest non-traditional damages, such as recovery for future medical testing to detect diseases related to the exposure, for increased risk of related

⁴⁶ See Mahoney, supra note 2, at 50.
⁴⁷ See USDHHS, Case Studies, supra note 2.
⁴⁸ See infra note 54 and accompanying text.
⁴⁹ See generally Chamallas, Architecture of Bias, supra note 6; Chamallas, Questioning, supra note 4.
⁵⁰ See generally 8 PAUL M. DEUTSCH & FREDERICK A. RAFFA, DAMAGES IN TORT ACTIONS §§ 108–110 (1982).
⁵¹ See infra note 3.
⁵² See Harry L. Miles, Damages for Personal Injury, in DAMAGES IN MASSACHUSETTS LITIGATION, § 8, § 8–16 (1993).
⁵³ See Parker & Waichman, Lead Poisoning and Its Effects on Children (visited Jan. 23, 2000) http://uslawinfo.com/lead/cfm. One estimate reported that there were over 1500 lead-related cases in Boston and Baltimore alone in 1993. See id. (also reporting cities all over the country encountering comparable increases); see also Wriggins, supra note 6, at 1026–28 (despite federal laws regulating use of lead paint, plaintiffs have instituted a "substantial" number of tort cases against landlords).
diseases, for fear of future related diseases, and for a variety of other emotional damages. In addition, courts often allow punitive damages. The goal of these damages is to put the plaintiff "in the same . . . position [economic or non-economic] as he or she would have occupied had he or she not been injured."

Not surprisingly, juries and judges treat minority plaintiffs differently from white plaintiffs when awarding any type of damages. The Rand Corporation and the Institute for Civil Justice studied jury trials from 1960 to 1979 in Cook County, Illinois, and concluded that compensation for white plaintiffs was 25% greater than compensation for black plaintiffs in the same situations. Thirty-eight percent of civil litigators surveyed in a 1991 New York study noted that white plaintiffs received more relief than minority plaintiffs on a regular basis. Similarly, 45% of respondents in an Oregon study (and 60% of minority respondents) concluded that juries are likely to award less compensation to minority litigants than to white litigants.

According to Professor Martha Chamallas, one of the explanations behind lower damage awards is that the tort system consistently devalues the potential of minority plaintiffs. Basic legal categories, such as damages, are infused with racial biases. This devaluation is particularly harmful in calculations of loss of earning capacity, where experts rely heavily on race-based statistics to determine the plaintiff's value.

57 See Chamallas, Architecture of Bias, supra note 6, at 464 ("[m]ost empirical studies indicate that women of all races and minority men continue to receive significantly lower damage awards than white men in personal injury . . . suits"); see also Chamallas, Questioning, supra note 4, at 84–85.
59 See McClellan, supra note 59, at 774.
60 See id.
61 See Chamallas, Architecture of Bias, supra note 6, at 480.
62 See id. at 467; infra section II(B)(2).
63 See id.
B. Loss of Earning Potential

1. Significance and Definition

Tort plaintiffs frequently focus on loss of earning capacity as the heart of their request for damages. For many tort cases, and particularly for lead paint cases, loss of earning potential is the "big ticket" item of damages, which can make the difference between a modest and sizable award. In Floyd v. Fruit Industries, for example, the Connecticut Supreme Court noted that for a plaintiff who had an appreciable income before the accident or who was steadily employed, "the destruction of earning capacity may well be the principal element of recovery. . ." Loss of earning capacity also has a conceptual significance: as a measure of human potential, it reflects societal judgments about the worth of the plaintiff as well as the groups to which the plaintiff belongs.

In general, damages for loss of earning potential (also called loss of earning capacity) represent the difference between the plaintiff’s potential to earn before and after the accident, which, in a simple case, is equal to the actual earned wages before the accident plus a calculation that takes into account the possibility of upward mobility. As with all calculations of future damages, loss of earning potential must be reduced to net present value to establish a level of compensation which recognizes that an individual could invest a present amount today in an interest-earning asset and use the interest generated . . . together with a gradual withdrawal of the principal to compensate

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64 See Chamallas, Architecture of Bias, supra note 6, at 480.
65 Id.
66 136 A.2d 918, 924 (Conn. 1957); Chamallas, Questioning, supra note 4, at 75.
67 Chamallas, Architecture of Bias, supra note 6, at 480.
68 See Deutch & Raffa, supra note 50, §§ 109.00–.01; see also Anderson v. Litzenberg, 694 A.2d 150, 161 (Md. Ct. Spec. App. 1997) (award of damages for impairment of earning capacity seeks to compensate plaintiff for reduction in ability to earn through personal services). When measuring loss of earning capacity, a court must determine the value of the plaintiff’s "capacity to earn money by [her] labor, physical or intellectual. . . . [T]he court is only indirectly concerned with whether the [plaintiff] would in fact have utilized her earning power at any given time so as to produce actual income." Feldman v. Allegheny Airlines, Inc., 382 F. Supp. 1271, 1282 (D. Conn. 1974), aff’d in part, rev’d in part, 524 F.2d 384 (2d Cir. 1975).
fully for the damages sustained as a result of the loss of future earning capacity. . . \(^69\)

2. Calculating Loss of Earning Capacity for an Adult

Predicting future damages is, by its very nature, speculative.\(^70\) Particularly in the case of lost earning capacity, the fact-finder may exercise broad discretion in calculating the exact figure.\(^71\) The most successful plaintiffs, however, rely on economists and rehabilitation experts who assess productivity, average earnings for the pre-accident vocation, growth trends in wages, work-life expectancy, and wages lost before the return to the labor market.\(^72\)

A rehabilitation expert determines the plaintiff's wage earning capacity—both before and after the accident—by analyzing the plaintiff's work history and career goals.\(^73\) The post-accident earning capacity is relatively easy to determine: the rehabilitation expert evaluates the skills of the plaintiff and identifies the highest paying jobs in which the plaintiff could function effectively.\(^74\) It is more difficult, however, to determine the plaintiff's pre-accident earning capacity.\(^75\) Where the plaintiff has an established work identity, such as remain-

\(^69\) Deutch & Raffa, supra note 50, § 108.00, at 108–2.


\(^71\) See Petrus v. Bain, 742 So.2d 759, 744–45 (La. Ct. App. 1999); Meshell, 732 So.2d at 87 ("[a]n award for loss of earning capacity is inherently speculative and not always calculable with mathematical certainty"); Wal-Mart, 991 S.W.2d at 522–26 (court unwilling to find jury's damage award excessive since evidence was sufficient and jury can rely on own sound judgment); Pipgras v. Hart, 832 S.W.2d 360, 365 (Tex. App. 1992); Tri-State Motor Transit Co. v. Nicar, 765 S.W.2d 486, 492 (Tex. App. 1989) (examining particular facts of each case to determine loss of earning capacity because loss of future earning capacity "is always uncertain and is left largely to the jury's sound judgment and discretion"); see also Questioning, supra note 4, at 84 (although experts can provide foundation for damage award determinations, juries are not restricted to expert evidence when calculating loss of future earning capacity).

\(^72\) See Deutch & Raffa, supra note 50, § 109.80, at 109–27. According to Professor Chamallas, the most significant factors in the determination of loss of earning potential are the plaintiff's work-life expectancy and the prediction of the plaintiff’s average wages. See Chamallas, Architecture of Bias, supra note 6, at 481; see also Larry R. Rogers & Kelly N. Warnick, Impaired Earning Capacity: Plaintiff's Perspective in Proving and Disproving Damages in Personal Injury Cases, in P & DD IL-CLE, § 5.2 (1993) (factors include plaintiff's chosen livelihood, plaintiff's alternative employment paths, any efforts plaintiff could make to improve her condition or lessen detrimental effects that the injury has on ability to pursue desired career).

\(^73\) See generally Deutch & Raffa, supra note 50, § 109.

\(^74\) See generally id. §§ 109.10–80.

\(^75\) See generally id. § 110.
ing in the same job for twenty years, the rehabilitation expert must consider the plaintiff’s actual earnings as well as “the ability of that individual to receive, hold or absorb additional skills of a vocational nature which would in effect increase his potential to earn.”

Where the plaintiff does not have an established and consistent work identity, the rehabilitation expert must evaluate the plaintiff’s expressed and implied career goals, as well as the likelihood that the plaintiff would actually achieve those goals. Some courts have attempted to narrow this prediction: in one wrongful death action, for instance, the Illinois Court of Appeals held that evidence of the plaintiff’s career goals was inadmissible unless the plaintiff could show that those goals would have been “reasonably certain” to occur. The issue on appeal was whether the trial court had erred in admitting testimony from the decedent’s colleague that, had the decedent lived, he would have become dean of Southern Illinois University. The Court of Appeals found that because “becoming dean of the University was not merely an ‘ambition’ of decedent’s, but rather a goal which decedent had the ability to attain,” it was reasonably certain to occur and therefore the testimony was admissible.

Even with legal limits on the breadth of these predictions, they remain speculative. The rehabilitation expert must evaluate the plaintiff’s skills, intelligence, and adaptability, and translate this hard data into a vocational category based primarily on “relevant” statistics about the career paths of similarly situated people. Because this translation becomes the major determinant of the damages for plaintiffs with little or no earnings record, it is imperative that the rehabilitation expert select a vocational category that reflects the plaintiff’s “maximum capacity for developing vocational potential and earning potential both pre and post accident.” If the rehabilitation expert predicts a low-paying vocation, the plaintiff’s earning capacity will be correspondingly low, but if the rehabilitation expert makes optimistic predictions, the plaintiff’s chances improve for a higher damage award.

76 See id. § 109.01 at 109–2.
77 See id. § 109.10 at 109–5.
79 See id.
80 See id.
82 See id.
83 See id.
After the rehabilitation expert has identified the plaintiff's pre-earning and post-earning capacity in terms of vocational categories, it falls to the economist to assign a value to the gathered data and compare the pre-accident earning capacity to the post-accident earning capacity.\textsuperscript{84} The economist must consult a variety of statistics to determine worker productivity, appropriate growth trends, work-life expectancy, and average earnings for workers in the vocations identified by the rehabilitation expert.\textsuperscript{85} At least until recently, courts and experts relied on statistics that were organized according to age, race, and gender.\textsuperscript{86} For example, a United States Department of Commerce table on average earnings reports that in 1987, for full-time workers between the ages of twenty and twenty-four, the mean earnings of black men were approximately 16\% less than the mean earnings of white men.\textsuperscript{87} Similarly, work-life expectancy—a factor that helps calculate loss of earning capacity by predicting how long certain individuals will remain in the labor force—is also arranged by gender and race.\textsuperscript{88} Data from the 1979 to 1980 United States Bureau of Labor Statistics show that the work-life expectancy of a thirty year-old white man was 4.7 years longer than that of a minority man, 8.7 years longer than that of a white woman, and 9.2 years longer than that of a minority woman.\textsuperscript{89}

\section*{C. The Special Case of the Child-Plaintiff}

Lead paint plaintiffs are ordinarily young children from poor, minority families.\textsuperscript{90} Determining loss of earning capacity for these plaintiffs is especially speculative, since child-plaintiffs lack an established record of earnings, well-developed skills, and expressed career goals.\textsuperscript{91} When confronted with a young lead paint plaintiff, experts

\textsuperscript{84} See id. § 110.02 at 110–4 (economist's role is "to quantify the impact of the injury in question on the future remaining lifetime earning capacity of the plaintiff").

\textsuperscript{85} An in-depth analysis of the economics of determining loss of earning capacity is beyond the scope of this Note. For background information and a suggestion of useful statistical data, see generally id. §§ 109, 110.

\textsuperscript{86} See Chamallas, Questioning, supra note 4, at 75. Where the plaintiff has a clearly established earnings history, economists do not rely on race- and gender-based statistics to determine earnings; for other calculations, however, such as work-life expectancy, the categorized statistics are deemed crucial. See id. at 80.


\textsuperscript{88} See Chamallas, Architecture of Bias, supra note 6, at 481.

\textsuperscript{89} See id.

\textsuperscript{90} See supra, section I(A).

\textsuperscript{91} See, e.g., D'Ambra v. United States, 481 F.2d 14, 18 (1st Cir. 1973).
often rely on a combination of objective and subjective data to predict loss of earning capacity. As with an adult plaintiff, objective statistics predict work-life expectancy and average wages based, to a large extent, on the child's race. Subjective data focuses on the child-plaintiff's intelligence and education, as well as the education and career paths of her parents and siblings. The fact-finder's final calculation commonly involves a combination of both objective and subjective factors.

1. Speculation and Jury Discretion

The speculative nature of calculating lost earning potential and the amount of discretion bestowed upon the fact-finder is compounded when, as in lead paint litigation, the plaintiff is a young child. Ordinarily, as discussed above, the rehabilitation expert and the economist rely heavily on a pattern of earnings to establish pre-accident and post-accident earning capacity. Where there is no pattern of earnings, experts look to the plaintiff's skills, intelligence, adaptability, and career goals. Child-plaintiffs lack not only an established earnings history, but also clearly defined skills and measurable career aspirations. As the First Circuit Court of Appeals noted, monetary damages are relatively easy to establish accurately when the plaintiff has lived "long enough to show characteristics from which his earnings may be anticipated. . . . A small child, however, presents a special problem—absent some extraordinary demonstrations, there is nothing individual to go on."

Child-plaintiffs, however, are not precluded from recovering for loss of earning capacity. To the contrary, courts have proven to be quite lenient in allowing at least some damages even where there is no

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92 See Bulala v. Boyd, 389 S.E.2d 670, 677-78 (Va. 1990). The terms "objective" and "subjective" are not terms of art or law; rather, I have assigned them based on the types of data that they represent.
93 See supra section II(C)[2].
95 See id.; see also Bulala, 389 S.E.2d at 677-78 (noting need for "facts and circumstances personal to the plaintiff as an individual" because damage estimates calculated solely from statistics are too remote and speculative).
96 See DEUTSCH & RAFFA, supra note 50, § 110.11[2], at 110-8.
97 See supra text accompanying notes 78-90.
98 See D'Ambra, 481 F.2d at 18.
99 Id.
evidence on which to base an award.\textsuperscript{101} For instance, in \textit{Murray v. Sanford}, the teenage plaintiff was seriously injured in a car accident.\textsuperscript{102} Although she had no earnings history and she presented no evidence quantifying the monetary loss, the court allowed an award for loss of future earnings.\textsuperscript{103} In cases where the plaintiff is too young to have an established earnings record, the court explained, "the amount of damages awardable for permanent injury rests in the sound discretion of the jury . . . [to be exercised] in light of the jury's own common observation and experience."\textsuperscript{104}

The Texas Court of Appeals exhibited the same liberalism in \textit{Pipgras v. Hart}, where a falling brick column had severely injured a four year-old.\textsuperscript{105} Despite a complete lack of direct testimony about the impact of the injury to the child's ability to function and his capacity to earn, the court allowed the jury to determine lost earning capacity simply from their "common knowledge and sense of justice."\textsuperscript{106}

Juries and judges are afforded broad discretion in determining damage awards for child-plaintiffs.\textsuperscript{107} However, cases like \textit{Murray} and \textit{Pipgras}—where the parties present no quantifying evidence of the loss of earning capacity—are rare; experts generally present extensive interpretations of statistical and personal data to make their predictions less speculative.\textsuperscript{108} Typically, then, judges and juries base their discretionary decisions on a combination of objective and subjective data.\textsuperscript{109}

2. Objective Statistics

For child-plaintiffs who have no established earnings records, both statistical averages (objective statistics) and personal data (subjective data) are the determinants in a fact-finder's discretionary decision.\textsuperscript{110} Objective statistics, which are the traditional method of de-

\textsuperscript{101} See id.
\textsuperscript{102} See id.
\textsuperscript{103} See id. at 136–37.
\textsuperscript{105} See 832 S.W.2d 360, 363 (Tex. App. 1992).
\textsuperscript{106} Id. at 366.
\textsuperscript{107} See, e.g., Murray, 487 S.E.2d at 136; Pipgras, 832 S.W.2d at 366.
\textsuperscript{108} See id.; Chamallas, \textit{Questioning}, supra note 4, at 82–84.
\textsuperscript{110} See id.; see also Chamallas, \textit{Questioning}, supra note 4, at 82–83 (despite theoretical underpinnings for loss of future earning capacity, experts rely on race-based statistics when plaintiff has limited or non-existent earnings record); \textsc{Deutsch} & \textsc{Raffa}, \textit{supra} note 50,
termining loss of earning capacity for adults, project future income and work-life expectancy. These statistics are arranged primarily around race, gender, and age.

The economic analysis of the objective statistics for a child-plaintiff is the same as the analysis for an adult. In both instances, the economist consults gender, age, and race-based tables to predict the number of years that the plaintiff would have remained in the labor force and to determine his or her expected average wages. With a child, however, the prediction is especially speculative because the averages could change drastically over an entire lifetime. Although judges and juries are afforded a large degree of discretion regarding child-plaintiffs, the ultimate damage award tends to bear a close relation to the objective predictions.

In Drayton, for instance, the Sixth Circuit Court of Appeals overruled the District Court's damage award, noting that the trial judge had gotten emotionally involved in the outcome of the case and thus accepted the "astronomical projections and assumptions made by plaintiffs' expert..." The plaintiff was a seven year-old African-American girl who had been severely disfigured from a liquid drain cleaner chemical burn. Her economist ignored her age, race, and gender in his calculations of loss of future income, relying instead on the average income standards for male college graduates. In response, the Sixth Circuit emphasized that despite the broad discrep-

§ 110.11[2], at 110–8. Deutsch and Raffa point out that the economist is confronted with two methods of establishing the earning capacity of a child-plaintiff. See Deutsch & Raffa, supra note 50, § 110.11[2], at 110–8. On the one hand, the economist could rely on data from the United States Department of Commerce to "establish average educational levels by the sex and race of the plaintiff." See id. Having established an education level, the economist then turns towards other data from the Department of Commerce to determine a base annual earning capacity. See id. § 110.11[2], at 110–8 to 110–9. On the other hand, there are many cases where the economist relies on subjective data in order to calculate loss of earning capacity. See id. This Note is concerned with the cases in the latter category.

111 See supra section II(B)(2).
112 See Chamallas, Architecture of Bias, supra note 6, at 483.
115 See, e.g., Drayton, 591 F.2d at 362.
116 Id. at 364.
117 See id. at 355.
118 See id. at 362.
tion, the fact-finder must "keep such extrapolations within reasonable bounds and insure that they conform to the evidence."\textsuperscript{119}

Until recently, the use of race-based tables and statistics went virtually unchallenged.\textsuperscript{120} In \textit{O'Connor v. United States}, a wrongful death suit, the Second Circuit Court of Appeals rejected the trial judge's decision to use a statistic which measured the mortality of the "general populace."\textsuperscript{121} Instead, the Second Circuit held that the calculation should be based on a race-specific statistic—that is, a figure that measured the life expectancy of white males only.\textsuperscript{122} The Supreme Court of Alaska maintained a similar focus on race and gender in determining the lost earning capacity of a child-plaintiff injured in a car accident.\textsuperscript{123} The only figures that the court cited related to white Alaskan females.\textsuperscript{124} In addition, in \textit{Johnson v. Misericordia Community Hospital}, the Wisconsin Court of Appeals complacently accepted the usage of race-based tables.\textsuperscript{125} The court upheld the jury's determination of the partial loss of earning capacity, noting specifically that it was based on United States Department of Commerce records arranged according to race, gender, and age.\textsuperscript{126}

\textsuperscript{119} \textit{Id.} at 362 ("no reasonable person would, in the ordinary affairs of life, act upon the astronomical projections and assumptions made by plaintiff's expert and accepted by the District Court.").

\textsuperscript{120} \textit{See} Chamallas, \textit{Questioning}, \textit{supra} note 4, at 96; \textit{see also} Lamb, \textit{supra} note 114, at 316–18.

\textsuperscript{121} \textit{See} 269 F.2d 578, 584 (2d Cir. 1959).

\textsuperscript{122} \textit{See id.; see also} Powell v. Parker, 303 S.E.2d 225, 228 (N.C. Ct. App. 1983), \textit{review denied} by 307 S.E.2d 166 (N.C. 1983) (not questioning the use of race to project future net income).


\textsuperscript{124} \textit{See id.}

\textsuperscript{125} \textit{See} 294 N.W.2d 501, 527 (Wis. Ct. App. 1980), \textit{aff'd}, 301 N.W.2d 156 (Wis. 1981).

\textsuperscript{126} \textit{See id.; see also} Chamallas, \textit{Questioning}, \textit{supra} note 4, at 95–97 & 140 n.155 (noting that scholars, too, rely on race as a primary determinant in measuring loss of earning capacity for child-plaintiffs). Until recently, courts also tended to rely heavily on gender-based statistics to determine loss of earning capacity. \textit{See} Lamb, \textit{supra} note 115, at 316–18. Although gender-based statistics generally do not have a negative impact on lead paint plaintiffs—and therefore are somewhat outside the scope of this Note—there are a wide range of interesting cases. \textit{See} Caron v. United States, 410 F. Supp. 378, 398 (D.R.I. 1976), \textit{aff'd}, 548 F.2d 366 (1st Cir. 1976) (paying lip-service to the theoretical notion of equality but holding that the determination of prospective earnings must be based on "female wages" as defendant suggested, to reflect realistic inequality between sexes); Frankel v. United States, 321 F. Supp. 1331, 1333, 1337–38 (E.D. Pa. 1970), \textit{aff'd sub nom.}, Frankel v. Heym, 466 F.2d 1226 (3d Cir. 1972) (considering probabilities of marriage, child-bearing, child-raising, and traditionally low wages for women to determine loss of earning capacity for a female plaintiff).
3. Subjective Data

When appraising a child-plaintiff, the economist ordinarily does not make objective predictions for a child-plaintiff unless a rehabilitation expert has produced some subjective data. That is, the economist cannot calculate the plaintiff's work-life expectancy or average earnings without some indication as to what type of career path the child would have followed had the accident not occurred. Subjective data reflect an examination of the particular plaintiff and the members of his or her family.

The rehabilitation expert gathers the subjective data. He or she evaluates the plaintiff on educational capacity through IQ and aptitude tests, examines the socio-economic status of the plaintiff's family, including the education and work history of the plaintiff's parents and siblings, and analyzes the family's economic ability to provide higher education. This subjective analysis is crucial, according to one study, because the major determinants of a child's occupation are: the father's occupation, education, and income; the child's IQ; the number of siblings; the stability of family life; and the birth order of the individual relative to his or her siblings. The basic assumption of these factors is that, but for the accident, the child-plaintiff

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127 See Deutsch & Raffa, supra note 50, §110.11[2], at 110–8. The subjective data is important in all cases where the plaintiff does not have an established work history or earnings record. See id. §109.01, at 109–2. Usually the plaintiff in such a situation is a child; it is possible, however, to have an adult plaintiff who lacks an earnings record or a work history, thus requiring a rehabilitation expert to synthesize relevant subjective data. See Lorenz v. Air Illinois, Inc., 522 N.E.2d 1352, 1355 (Ill. App. Ct. 1988) (rehabilitation expert evaluated plaintiff's intelligence and adaptability to determine whether it was reasonably certain that plaintiff would have become dean of the University where he worked because plaintiff lacked work history specific to that job).

128 Deutsch & Raffa, supra note 50, §110.11[2], at 110–8.

129 See id.

130 See id. One study of the methods of analysis advises rehabilitation/vocational experts to conduct a document review, a client interview, a number of tests and evaluations, and then review and analyze the data collected. See Edmond Provder, Using Vocational Experts in Cases Involving Injured Children, 29 TRIAL 39, 39–40 (1993). In conducting the document review, the expert should examine medical records, educational records, and psychological records to determine the intellectual ability. See id. The client interview should be geared towards determining the extent of the injury, the level of comprehension, any remaining memory or knowledge, and the effect of the diminished ability on day-to-day activities. See id. A history of the parents and siblings should be included in the interview in order to get a baseline on occupational levels, educational levels, earnings, and psychological functioning. See id. The tests and evaluations should be “designed to measure a specific child’s education level and disabling condition.” Id.

would have followed in the socio-economic footsteps of those around him or her. 132

In the 1947 case of Armentrout v. Virginian Railway Co., where the defendant's train struck and injured the four year-old plaintiff, the court used subjective data to determine loss of earning capacity. 133 The court found that the jury had discretion to assume that the plaintiff would have participated in some recognized trade because he was "above average in intelligence, and ... his parents, as shown both by evidence and by their appearance and demeanor, [were] respectable and moderately well educated people, who would likely give to their children good educational opportunities." 134 More recently, in Athridge v. Iglesias, a fifteen year-old plaintiff suffered numerous physical injuries and permanent brain damage as a result of a car accident with the defendant. 135 To determine the loss of the plaintiff's earning capacity, the court looked at a number of factors, including the likelihood that he would graduate from high school, college, or graduate school (based on information from the plaintiff's college-prep high school), the education of his parents and siblings, and his expressed interest in becoming a lawyer. 136

Thus, where the plaintiff is a child, the fact-finder frequently ascertains the damage award from a combination of objective and subjective data. 137 The Drayton court emphasized the importance of the objective statistics (based on race, age, and gender) in determining damages for a child-plaintiff. 138 The Armentrout and Athridge courts relied heavily on subjective information to make their discretionary decision—examining not only the plaintiff but also her family, their socio-economic status, and their education levels. 139 For lead paint

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132 See Wriggins, supra note 6, at 1055-70.
133 72 F. Supp. at 999.
134 Id. at 1001.
135 Athridge, 950 F. Supp. at 1188-90, 1192.
136 Id. at 1192-93. A Canadian case also illustrates the use of the subjective analysis. See Bruce, supra note 132, at 291. The court calculated the expected loss of income for an eight year-old boy whose arm had been amputated by considering the child's IQ, his speech and grammar problems as an infant, his inadequate performance in school since the accident, and that he was fourth in a family of seven. See id. In addition, the court noted that the father left home when the child was three and the father worked as a skilled tradesman. See id. The court concluded that, but for the accident, the child would have become an unskilled or semi-skilled laborer. See id.
137 See Drayton, 591 F.2d at 362-64; Athridge, 950 F. Supp. at 1192-93; Armentrout, 72 F. Supp. at 1001.
138 See 591 F.2d at 362-64.
139 See Athridge, 950 F. Supp. at 1192-93; Armentrout, 72 F. Supp. at 1001.
plaintiffs, however, this method of calculating damages is detrimental and results in inferior damage awards.\textsuperscript{140}

III. IDENTIFYING THE PROBLEM: DAMAGE DETERMINATIONS ARE DISCRIMINATORY FOR LEAD PAINT PLAINTIFFS

For lead paint plaintiffs, reliance on objective and subjective data is harmful.\textsuperscript{141} Lead paint plaintiffs are almost always young children who lack past earnings, vocational experience, well-developed skills, and expressed career aspirations.\textsuperscript{142} Consequently, experts predicting loss of earning capacity for lead paint plaintiffs adhere closely to the statistics and personal data.\textsuperscript{143} But these plaintiffs also tend to be members of minorities—and the objective and subjective data that is so crucial for child-plaintiffs discriminates against minority plaintiffs.\textsuperscript{144} Lead paint plaintiffs are seriously disadvantaged by this damage award system.\textsuperscript{145}

A. Problems with Objective Statistics

Experts and courts who rely on objective statistics reason that, despite modern efforts to eradicate disadvantages for minorities, race does reflect how these groups fare in the workforce.\textsuperscript{146} However, these statistics have two significant problems. First, they reinforce the status quo of racial disparities, ignoring both the upward mobility of the individual and the upward mobility of certain groups in society.\textsuperscript{147} Second, organizing the statistics around race propels race to the forefront of predictions about individual achievement and fails to recognize that many other factors influence an individual’s ability to fulfill his or her potential.\textsuperscript{148}

As Professor Chamallas has pointed out, the “traditional acceptance of the use of race-based ... economic data creates a pattern of

\textsuperscript{140} See generally, Chamallas, Architecture of Bias, supra note 6; Wriggins, supra note 6.
\textsuperscript{141} Id.
\textsuperscript{142} See D’Ambra v. United States, 481 F.2d 14, 18 (1st Cir. 1973); EPA, Lead and Lead Poisoning, supra note 1.
\textsuperscript{143} See, e.g., Bulala v. Boyd, 389 S.E.2d 670, 677–78 (Va. 1990); Chamallas, Questioning, supra note 4, at 820–83; Deutsch & Raffa, supra note 50, §110.11[2], at 110–8.
\textsuperscript{144} See Chamallas, Questioning, supra note 4, at 97; Wriggins, supra note 6, at 1055–70.
\textsuperscript{145} See id.
\textsuperscript{146} See Chamallas, Architecture of Bias, supra note 6, at 483. Professor Chamallas explains: “In our society ... race ... matter[s]: being ... an African-American does dampen one’s earning prospects.” Id.
\textsuperscript{147} See Chamallas, Questioning, supra note 4, at 97.
\textsuperscript{148} See Glantz & Sloboda, supra note 13, at 109, 114–15.
awards that replicates the status quo by reinforcing the race privilege of whites."149 Relying upon the objective statistics recognizes that minorities, on average, make less money than white people and assumes that this discrepancy will continue.150 The statistics embody inherent stereotypes and historical discrimination. Tables of average earnings, for instance, reflect traditional wage discrimination and vocational segregation.151 Similarly, tables of work-life expectancy reflect the traditional displacement of minorities into irregular employment with few opportunities for upward mobility, as well as higher risks of incarceration for minority men.152 As long as the statistics are organized along racial lines, the ensuing damage awards for lead paint plaintiffs “assume that the current . . . racial pay gap will continue in the future, despite ongoing legal and institutional efforts to make the workplace more diverse and less discriminatory.”153 Calculations based on these statistics exclude the possibility that an individual or a group could make great advances over a lifetime.154

Race-based statistics exclude consideration of religion, ethnicity, or marital status.155 Moreover, the racial focus suggests that race has a greater impact on the achievements of a person than other factors correlated with success, such as a good-natured personality, a strong adult role model during childhood, and well-developed social skills.156 It is this concentration on race that allows devaluation to negatively affect lead paint plaintiffs.157 That is, the

willingness to believe that race . . . [is a] reliable indicator of future earning capacity relates to causal attribution. . . . [T]he use of race to predict future earnings signals a willingness to ascribe the low incomes of African-Americans to internal factors, such as lack of motivation, lack of initiative, and lack of intelligence. Such a focus on dispositional factors

149 Chamallas, Questioning, supra note 4, at 97.
150 See id. at 75.
151 See Chamallas, Architecture of Bias, supra note 6, at 481.
152 See id.
153 See Chamallas, Questioning, supra note 4, at 75.
154 See Chamallas, Architecture of Bias, supra note 6, at 481; Chamallas, Questioning, supra note 4, at 75, 84 (“[r]eliance on . . . race-specific data to calculate loss of future earning capacity assures that predictions about the future are tied to present disparities, disparities which are sizable and reinforce the dominant economic position of white men in the American economy.”).
155 Chamallas, Architecture of Bias, supra note 6, at 483.
156 See Glantz & Sloboda, supra note 13, at 114–15.
157 See Chamallas, Architecture of Bias, supra note 6, at 483.
can conveniently explain why the racial income gap will persist in the future, in spite of the formal legal commitment to equal opportunity. If this is the case, then negative stereotypes can become self-fulfilling prophecies as predictions about future potential translate into lower damage awards.\textsuperscript{158}

Indeed, lead paint plaintiffs are seriously injured by this devaluation—their youth induces speculative reliance on the objective statistics, and the color of their skin induces the fact-finder to accept (perhaps unconsciously) stereotypes and historical discrimination.\textsuperscript{159}

**B. Problems with Subjective Data**

Reliance on the subjective data assumes that child-plaintiffs are restricted by the socio-economic, educational, and vocational status of their families.\textsuperscript{160} For instance, to predict what level of educational achievement an injured child would have attained if the accident had not happened, experts often focus on the educational level of the parents and siblings.\textsuperscript{161} A lead paint plaintiff is doubly constrained by subjective data. As a child, she is constrained by the possible shortcomings of her family; as a member of a minority, she is constrained by historical racial discrimination.\textsuperscript{162} Indeed, “because of the high correlation between minority race and lower socio-economic status, assessment of the future educational attainment of minority children [and therefore the predictions of their earning capacity] will likely be negatively affected by the socio-economic situation of their families.”\textsuperscript{163}

The disadvantages of subjective data are also illustrated in the discovery phase of lead paint litigation cases.\textsuperscript{164} Traditional tort cases focus on the individual, assuming that a personal injury plaintiff has willingly put her physical and even mental fitness in the spotlight for discovery.\textsuperscript{165} According to Professor Jennifer Wriggins, however, lead paint cases have seen a shift from plaintiff-centered discovery to dis-

\textsuperscript{158} Id. at 487.

\textsuperscript{159} See id. In fact, Professor Chamallas asserts that it is unconstitutional for a court to rely on the race-based statistics. See Chamallas, Questioning, supra note 4, at 75–76. She argues that the classifications based on race fail to further a compelling state interest. See id.

\textsuperscript{160} See Wriggins, supra note 6, at 1028–30.

\textsuperscript{161} See Chamallas, Questioning, supra note 4, at 82.

\textsuperscript{162} See id. at n.53.

\textsuperscript{163} Id.

\textsuperscript{164} See generally Wriggins, supra note 6.

\textsuperscript{165} See Wriggins, supra note 6, at 1055.
covery regarding the plaintiff’s family.166 Lead paint defendants rou-
tinely ask for production of medical, psychological, educational, and
employment records for relatives and non-parties in order to prove
that the child’s injuries were caused by genetic deficiencies or poor
parenting rather than by lead poisoning.167

In both the discovery context and the damages analysis,168 this
shifting focus from the individual to the family is discriminatory
against poor and minority families.169 This new focus on the plaintiff’s
social environment “takes place against a powerful historical back-
drop . . . of racist, sexist, anti-Semitic, classist intelligence research.”170
This subjective data relies on the assumption that an individual’s
achievement is limited by her genetic inheritance.171 Historically, “sci-
entific” studies of genetic inheritance were driven by the belief that
African-Americans were genetically intellectually inferior and thus
passed their inferiority down to their children.172 This restrictive vi-
sion of minority children correlates with lower damage awards: be-
cause these children could not have overcome the genes they inher-
ited from their parents, the argument goes, their capacity to earn is
constrained by their race and their parentage.173

IV. PROPOSALS FOR CHANGING TRADITIONAL DISCRIMINATORY
DETERMINATION OF LEAD PAINT DAMAGES

The problems with both objective and subjective data should not
be ignored. This Note advocates two proposals for addressing the dis-
criminatory effects of using this data to determine lead paint dam-
ages. First, courts should substitute race-neutral statistics to calculate

166 See id. at 1028, 1057–58. “Not surprisingly, in view of the race, gender, and class
characteristics of many plaintiffs and their families, lead exposure litigation constitutes the
first area in which litigants systematically seek this type of discovery.” Id. at 1088.

167 See id. at 1058–59. Many courts grant such requests from defendants: “while New
Jersey and Massachusetts courts have denied defendants’ requests seeking examinations of
plaintiffs’ mothers, a District of Columbia court allowed the IQ testing and psychological
examination of a plaintiff’s mother and sibling, New York courts ordered IQ testing of a
plaintiff’s mother in two cases, and a Louisiana court ordered the neuropsychological
testing of a plaintiff’s siblings.” Id. at 1058–59.

168 Professor Wriggins predicted that this broader focus of discovery would soon ex-
tend beyond the lead paint context; certainly, at least, it has extended beyond the discov-
ery realm and into the determination of damages. See id. at 1088.

169 See id. at 1044.

170 Wriggins, supra note 6, at 1044.

171 See id. at 1044–48.

172 See id. at 1045.

173 See id. at 1044–48; see also Bruce, supra note 132, at 291.
loss of earning capacity for lead paint plaintiffs—following the lead of pioneer courts such as the District of Columbia District Court and the Supreme Court of Virginia.\textsuperscript{174} In addition, courts should begin to examine the psychological theory of "resiliency," which examines children who flourish despite adverse conditions of poverty or racial discrimination.\textsuperscript{175} This theory suggests factors other than race contribute to achievement. Making use of these factors in calculating loss of earning capacity could mitigate current racial discrepancies.\textsuperscript{176}

A. Using Race-Neutral Statistics to Determine Damages

Objective data reinforces the status quo and assumes that race is the primary determinant in measuring who and what a child-plaintiff would have become.\textsuperscript{177} To combat the discrimination for young minority plaintiffs, commentators and lawyers have suggested that courts reject the race-based statistics and opt instead for race-neutral statistics.\textsuperscript{178} As scholar Sherri Lamb asserts, "the most desirable nondiscriminatory option is to consider each person as equivalent to the average, unless evidence is produced which removes the plaintiff from the normal range."\textsuperscript{179}

Within the past ten years, some courts have rejected race-based statistics to measure loss of earning capacity.\textsuperscript{180} In 1990, for example, the Virginia Supreme Court held that statistics organized solely around race, age, and sex were insufficient to calculate loss of earning capacity.\textsuperscript{181} The plaintiffs in that case had sued their obstetrician-gynecologist to recover for birth defects caused by the failure to pro-

\textsuperscript{175} See generally Resilience and Development, supra note 12.
\textsuperscript{176} See, e.g., Glantz & Sloboda, supra note 13, at 109, 114-15.
\textsuperscript{177} See supra section III (A).
\textsuperscript{178} See generally Chamallas, Questioning, supra note 4.
\textsuperscript{179} Lamb, supra note 115, at 338. Lamb focuses on the discrimination that stems from gender-based statistics. See id. Gender, like race, affects the calculation of work-life expectancy and average earnings. See id. at 308-15. Courts are likely to assume that a woman's work-life expectancy will be affected by marriage, pregnancy, and raising children. See id. at 316. Also, "because the participation rate [the probability that the plaintiff will be participating in the work force] for women has been dramatically rising over the past few decades toward the male participation rate, the current tables underestimate future work life durations for women." See id. at 310.
\textsuperscript{180} See, e.g., Wheeler, 771 F. Supp. at 454-56; Bulala, 389 S.E.2d at 677-78.
\textsuperscript{181} See Bulala, 389 S.E.2d at 677.
vide medical care during labor and delivery.182 Ruling that the plaintiffs had not proved damages with "reasonable certainty," the court commented that "such evidence [of loss of earning capacity] must relate to facts and circumstances personal to the plaintiff as an individual, not merely to his membership in a statistical class."183 In other words, the court required more than averages based (in large part) on race; on their own, such statistics were too speculative to have accurate predictive value.184

Then, in the 1991 Wheeler case, the District of Columbia District Court adopted race-neutral statistics in favor of race-based statistics to determine loss of earning capacity.185 The plaintiff was an overseas employee of the United States at the time of the injury who sued the State Department for failure to provide appropriate medical care to her son.186 The defendants appealed the lower court damage award, arguing that the award should be reduced to conform to race-based statistics.187 The court, however, held that "it would be inappropriate to incorporate current discrimination resulting in wage differences between the . . . races or the potential for any future such discrimination into a calculation for damages resulting from lost wages."188 Instead, the court employed a measurement of average earnings of all American college graduates without regard to race.189 The court con-

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182 See id. at 672.
183 Id. at 678.
184 See id. The initial shift away from race-based statistics is mirrored by a minority of courts in the gender realm. See Reilly v. United States, 665 F. Supp. 976, 997 (D.R.I. 1987), aff'd in part and remanded, 863 F.2d 149 (1st Cir. 1988); Caron v. United States, 410 F. Supp. 378, 398 (D.R.I. 1976), aff'd, 548 F.2d 366 (1st Cir. 1976). Judge Pettine of the District Court of Rhode Island presents a good example of this shift. In 1976, he rejected plaintiffs' request for a damage award based on gender-neutral data in Caron. See 410 F. Supp. at 398. Despite the court's sympathy towards equality in employment, Judge Pettine explained, the court would base its determination on the reality of the inequality in the average earnings of the sexes. Id. But then, eleven years later, Judge Pettine changed his mind and adopted gender-neutral data. See Reilly, 665 F. Supp. at 997. He wrote:

As a factual matter, I seriously doubt the probative value of [a gender-based] statistic with respect to twenty-first century women's employment patterns, particularly in light of current, ongoing changes in women's labor force participation rates. . . . [In fact,] both federal and state authorities within the jurisdiction counsel against such disparate treatment.

Id.

186 See id. at 429–30. The child-plaintiff was half-black and half-white. See id. at 455.
187 See id.
188 See id.
189 See id.
cluded that using race-neutral data was the best method of maintaining accuracy while eliminating discrimination.190

Interestingly, the Wheeler court’s decision to forego the use of data based on either race or gender resulted in a damage award for the plaintiff that was even lower than the defendant had suggested.191 That is, the average wages for all persons turned out to be lower than the average black male wages.192 The court made a corresponding award for this plaintiff.193

Widespread adoption of race-neutral statistics for lead paint plaintiffs could help mitigate the current racial discrimination in damage awards.194 Rejecting race as a determinant will help courts break free from the status quo of discrimination within the workforce.195 In theory, using race-neutral statistics allows for the possibility that the current racial discrepancies will be relieved.196 In practice, however, when courts use statistics which are both race- and gender-neutral, they might actually reduce damage awards for all plaintiffs, as in the Wheeler case.197 But decreasing the focus on race does, at least, encourage courts to look to other factors to predict an individual’s potential.198 The psychological theory of resiliency suggests factors beyond race that impact a child’s potential.199 These factors may work to overcome the practical effects of using race-neutral statistics by increasing the recovery for lead paint plaintiffs.200

B. Introducing Resiliency Theory into Damage Determinations

Adopting race-neutral statistics is only one of the ways in which courts can mitigate the disappointing and discriminatory damages for lead for lead paint plaintiffs. A second proposal comes from the psychological/developmental theory of resiliency.201 Resiliency theory is

191 See id. at 455–56.
192 See id. Apparently, incorporating female wages into the calculation of average wages reduced the award significantly. See id. at 456; Chamallas, Questioning, supra note 4, at 97.
194 See id.
195 See Chamallas, Questioning, supra note 4, at 97.
196 See id. at 75.
197 See Wheeler, 771 F. Supp. at 455–56; Chamallas, Questioning, supra note 4, at 97 (noting that African-American men are disadvantaged by race-based data but tend to benefit from gender-based data).
198 See Glantz & Sloboda, supra note 13, at 114–15.
199 See id.
200 See id.
201 See generally Resilience and Development, supra note 12.
useful on three levels. First, it identifies concrete factors—other than race—that indicate a likelihood of success despite adverse conditions. Second, the multitude of resiliency literature confirms that predictions about what a child is likely to become are enormously speculative. And third, resiliency theory provides a theoretical alternative to the devaluation of racial minorities by starting with the optimistic assumption that children are very much capable of succeeding beyond the averages and against the odds.

Traditionally, child psychology and development research has focused on why children fail. This pessimism is the same pessimism that infiltrates the measurement of damages in lead paint cases: it is grounded in a basic assumption that children in adverse situations will be constrained by those situations and will fall victim to adversity. Resiliency theory, on the other hand, is unique because it starts from the proposition and expectation that "there are kids in families from very adverse situations who really do beautifully, and seem to rise to the top of their potential, even with everything else working against them."

In its simplest and least technical form, the study of resilience examines how people respond to stress and adversity. In other words, a resilient child is one who has delayed or defended against the developmental problems that were expected and predicted in light of the child's biological or psychological status, or the child's

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203 See Anthony, supra note 15, at 10–11.
204 See generally Gelman, supra note 16.
205 See id. at 44.
206 See id.
207 Id. (quoting Dr. W. Thomas Boyce, Director of Behavioral and Developmental Pediatrics at the University of California, San Francisco).
208 See Michael Rutter, Psychosocial Resilience and Protective Mechanisms, in Risk and Protective Factors in the Development of Psychopathology 97, 97 (Jon Rolf et al. eds., 1990). Howard B. Kaplan, a sociologist at Texas A&M University, emphasizes the difficulties in defining, applying, and manipulating resiliency theory. See Howard B. Kaplan, Toward an Understanding of Resiliency: A Critical Review of Definitions and Models, in Resilience and Development, supra note 12. He first queries whether resilience is an outcome or a factor that influences the outcome: is resilience the good outcome stemming from an at-risk situation, or does it represent the qualities that enable an individual to effect a good outcome? See id. at 19–23. As other experts have noted, such "[d]efinitional diversity results in sometimes disparate profiles of competent adaptation as well as in different estimates of rates of resilience among similar groups." See id. at 23. Kaplan also warns that resiliency theory necessarily encompasses normative judgments regarding what constitutes risk factors, desirable outcomes, and developmental milestones. See id. at 30–31.
surrounding environment. As one scholar noted, “[r]esilience is a quintessentially U.S. concept. It has roots in the U.S. hero myth commemorated in [“rags-to-riches”] books and stories by Horatio Alger. . . .”

Despite methodological variances, resiliency studies identify certain “risk” factors, which create adverse conditions for children, and “protective” factors, which help children cope with stress. “A risk factor is an individual attribute, individual characteristic, situational condition, or environmental context that increases the probability” of an undesirable outcome. Extreme poverty is one of the most widely identified risk factors. Protective factors, which can neutralize and sometimes overcome the risk factors, include both individual characteristics as well as environmental characteristics: intelligence, social skills, easy disposition, good-natured personality, strong attachment to parents, and association with a good school and other pro-social institutions.

In 1982, social psychologists Emmy E. Werner and Ruth S. Smith published a study of 698 people on the Hawaiian island of Kauai. One third of those surveyed had been born into families affected by

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209 See Kaplan, supra note 208, at 23.
210 Id. at 30 (quoting L.C. Rigsby, The Americanization of Resilience: Deconstructing Research Practice, in EDUCATIONAL RESILIENCE IN INNER-CITY AMERICA 85, 85 (Margaret C. Wang & Edmund W. Gordon eds., 1994)).
211 See Kaplan, supra note 208, at 23.
212 See, e.g., Emmy E. Werner & Ruth S. Smith, VULNERABLE BUT INVINCIBLE: A LONGITUDINAL STUDY OF RESILIENT CHILDREN AND YOUTH 154–55 (1982); Glantz & Sloboda, supra note 13, at 109, 114–15. According to Kaplan, “risk” has been used to refer to likely negative outcomes, to specific early predictors of later unfavorable outcomes, and as a descriptive term for negative life conditions. See Kaplan, supra note 208, at 36. Kaplan notes that there are two ways to define protective factors: “as individual or environmental characteristics that reflect the absence of risk factors or the presence of ameliorative factors, and, as variables that mitigate the effects of risk factors or strengthen ameliorative effects.” Id. at 46. The latter definition is the more widely accepted definition. See id.
213 Kaplan, supra note 208, at 37.
214 See Glantz & Sloboda, supra note 13, at 115.
215 Although resiliency theory can be used for social justice, as in this Note, there is also a controversial political risk in recognizing “built-in defenses” in children. See Gelman, supra note 16, at 44, 46–47. Politically conservative groups, advocating fewer federal social services, have seized the notion of resiliency to demonstrate that people can overcome poverty without federal aid. See id. Lisbeth Schorr, a lecturer in social medicine at the Harvard Medical School, explains that “[t]he conservative argument against interventions like Operation Head Start and family-support programs is that if these inner-city kids and families just showed a little grit they would pull themselves up by their own bootstraps.” See id. at 47.
216 See Glantz & Sloboda, supra note 13, at 114–15.
217 See generally Werner & Smith, supra note 212.
poverty, divorce, alcoholism, mental illness, and physical abuse.\textsuperscript{218} Despite these conditions, however, 25% of this subset matured to lead stable, satisfying lives.\textsuperscript{219} The authors of the study found that certain characteristics allowed these individuals to overcome the risks that confronted them from birth:

the age of the opposite-sex parent (younger mothers for resilient males, older fathers for resilient females); the number of children in the family (four or fewer); the spacing between the index child and the next-born sibling (more than [two] years); ... the amount of attention given to the child by the primary caretaker(s) in infancy; ... the presence of an informal multigenerational network of kin and friends in adolescence; and [a low] cumulative number of chronic stressful life events experienced in childhood and adolescence.\textsuperscript{220}

At the core of resiliency theory is the realization that children living under extreme conditions (such as poverty) can rise far beyond what is expected of them.\textsuperscript{221}

For lead paint plaintiffs, this notion can have a significant impact. Practically speaking, resiliency theory argues against full reliance on the objective and subjective data.\textsuperscript{222} In identifying specific protective factors, resiliency theory encourages experts to broaden the sources for their predictions of future earning capacity, no longer relying on race and gender as the sole determinants.\textsuperscript{223} Although it remains to be seen how exactly an expert could measure the protective factor and its precise impact, resiliency theory offers the possibility of mitigating the current overwhelming discrimination against lead paint plaintiffs.\textsuperscript{224}

Using resiliency theory to determine loss of earning capacity also has two theoretical consequences. First, a review of the resiliency literature confirms that loss of earning capacity is a speculative and inexact prediction.\textsuperscript{225} Psychologists have spent enormous amounts of


\textsuperscript{219} See \textit{id.}

\textsuperscript{220} WERNER & SMITH, \textit{supra} note 212, at 155.

\textsuperscript{221} See Gelman, \textit{supra} note 16, at 44, 47.

\textsuperscript{222} See Glantz & Sloboda, \textit{supra} note 13, at 114–15; \textit{supra} Section III.

\textsuperscript{223} See Glantz & Sloboda, \textit{supra} note 13, at 114–15.

\textsuperscript{224} See WERNER & SMITH, \textit{supra} note 212, at 155; Glantz & Sloboda, \textit{supra} note 13, at 114–15.

\textsuperscript{225} See, e.g., Anthony, \textit{supra} note 15, at 10–11.
time and energy trying to discern exactly how children manage to function well when confronted with poverty or racial discrimination.\textsuperscript{226} Courts have consistently recognized the speculative nature of predictions of what a child would have become.\textsuperscript{227} Although experts have tried to ground their predictions in subjective and objective data,\textsuperscript{228} resiliency theory suggests that courts should be open to other sources of data in calculating damage awards.\textsuperscript{229}

Finally, resiliency theory challenges the often fatalistic vision that economists and rehabilitation experts develop in relation to at-risk children.\textsuperscript{230} Statistical averages and examinations of the plaintiff's family assume that the child will not succeed beyond the predicted averages for education, socio-economic status, and vocational opportunities.\textsuperscript{231} Resiliency theory, on the other hand, begins with the assumption that children \textit{do} succeed.\textsuperscript{232} As psychologist Ann Matsen explains, although "extreme adversity can have devastating effects on development . . . our species has an enormous capacity for recovery."\textsuperscript{233} Recognizing and rewarding lead paint plaintiffs for their capacity to recover, rather than punishing them with low damage awards based on the color of their skin, is a simple step towards eradicating racial discrimination in the tort system and in the legal system.

CONCLUSION

Lead poisoned children have been inadequately compensated for their injuries. Their age—and the absence of any earnings history or defined career path—encourages courts to rely heavily on statistics and to judge the children within the context of the achievements of their family members. For children from low-income and minority families, however, this reliance reinforces historical discrimination and results in damage awards that reflect subtle but pervasive racism and classism.

\textsuperscript{226} See generally Werner \& Smith, supra note 212.
\textsuperscript{229} See Glantz \& Sloboda, supra note 13, at 114–15.
\textsuperscript{230} See supra Section III(A).
\textsuperscript{231} See Chamallas, Architecture of Bias, supra note 6, at 487. See generally Gelman, supra note 16.
\textsuperscript{232} See Gelman, supra note 16, at 44, 46–47.
\textsuperscript{233} See id. at 47.
There is no magic formula to calculate a child's worth. Tort law requires a mathematical figure in order to compensate the victim. Consequently, courts should begin with the assumption that every child has the potential to surpass the conservative predictions of an economist or a rehabilitation expert. To implement this assumption, courts must expand the focus of damage awards for lead paint plaintiffs beyond race and socio-economic status. Adopting race-neutral statistics and integrating resiliency theory into damage awards are steps towards a less discriminatory theory of compensation and a more optimistic and accurate determination of a child's potential.