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## Anticipating Accommodation

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# Anticipating Accommodation

Jennifer Bennett Shinal<sup>\*</sup>

*ABSTRACT: In theory, a reasonable accommodation mandate can remedy worker marginalization by requiring employers to make small adjustments in the workplace that have big payoffs for employees. But in reality, a reasonable accommodation mandate may be an empty promise. Reasonable accommodation is the hallmark feature of the Americans with Disabilities Act (“ADA”), yet decades of empirical studies indicate that wage and employment outcomes of disabled individuals have not improved—and may have even worsened—since the Act’s passage. Economists have been quick to blame the reasonable accommodation mandate for the ADA’s failure, but they have lacked sufficient data to discern both what aspect of the mandate is problematic and how to improve it.*

*This Article is the first to supply the missing data, using two experimental vignette studies that test decisionmakers’ willingness to accommodate job candidates and existing employees. The studies find that decisionmakers are more reluctant to accommodate job candidates than existing employees, and cost concerns drive much of this reluctance. Based on these findings, the Article argues that much of the ADA’s ineffectiveness stems from the ambiguity it creates with respect to the reasonable accommodations disabled workers may require. Employers have little information about job candidates, making it difficult to estimate the costs of accommodating a candidate with any accuracy; accommodating an existing employee is inherently less ambiguous because employers have prior experience with that worker. As a result, employers exhibit far more aversion towards accommodating disabled job candidates than disabled existing employees.*

*Because the current structure of the ADA only increases this ambiguity, particularly at the hiring stage, the Article proposes a twofold reform that*

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*promotes clarity in employers' obligations to accommodate: cost caps to limit what an employer must spend to accommodate a given employee and the extension of governmental disability benefits to cover accommodation costs that exceed those caps. These alterations to the ADA will help reasonable accommodation achieve its theoretical promise, not only for workers with disabilities, but also for others disadvantaged by traditionally inflexible working environments, to whom the reasonable accommodation model may one day be extended.*

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## I. INTRODUCTION

Reasonable accommodation is the panacea for what ails disadvantaged workers (or so legal scholars have suggested repeatedly over the past decade).<sup>1</sup> For workers who have historically fared poorly in the labor market—but for whom legal protections in the labor market have remained, at best, murky—multiple scholars have argued that requiring employers to provide such workers with reasonable accommodation is the ideal solution.<sup>2</sup> This idea is not novel; rather, it is based on the longstanding Americans with Disabilities Act (“ADA”)<sup>3</sup> requirement that employers provide reasonable accommodations for workers who are substantially limited in a major life activity, regarded as substantially limited, or who have a record of substantial limitation.<sup>4</sup> The ADA reasonable accommodation model has been in place for almost three decades in the private sector and even longer in the public sector, so it has, in theory, endured for ample time to be vetted. Thus, exporting this model as a solution for pregnant women, working parents, caregivers, and other disadvantaged workers<sup>5</sup> may seem obvious, tested, manageable—reasonable.

Yet even a brief familiarity with the economics literature on the ADA leaves reason to be concerned about exporting this legislative model. Labor

1. See, e.g., JESSICA L. ROBERTS & ELIZABETH WEEKS, HEALTHISM: HEALTH STATUS DISCRIMINATION AND THE LAW 177–208 (2019) (proposing reasonable accommodation for all workers with health conditions, regardless of whether these conditions rise to the level of disability); Joanna L. Grossman, *Expanding the Core: Pregnancy Discrimination Law as It Approaches Full Term*, 52 IDAHO L. REV. 825, 860 (2016) (arguing in favor of the Pregnant Workers Fairness Act (“PWFA”)); Joni Hersch & Jennifer Bennett Shinall, *Something to Talk About: Information Exchange Under Employment Law*, 165 U. PA. L. REV. 49, 54–58 (2016) (arguing for reasonable accommodation for working mothers and household caretakers); Jessica L. Roberts & Elizabeth Weeks Leonard, *What Is (and Isn’t) Healthism?*, 50 GA. L. REV. 833, 895–901 (2016) (making the initial argument for extending the reasonable accommodation mandate to workers with any health condition); Michael Ashley Stein et al., *Accommodating Every Body*, 81 U. CHI. L. REV. 689, 737–39 (2014) (arguing that any worker who could benefit from an employer-provided reasonable accommodation should be entitled to one); Deborah A. Widiss, *The Interaction of the Pregnancy Discrimination Act and the Americans with Disabilities Act After Young v. UPS*, 50 U.C. DAVIS L. REV. 1423, 1438 (2017) (arguing in favor of PWFA).

2. See sources cited *supra* note 1.

3. Note that here, and throughout this Article, I use the terms “ADA” and “reasonable accommodation model” to refer more generally to the workplace protections afforded to disabled individuals in the private sector under Title I of the ADA, 42 U.S.C. §§ 12101–12117 (2012), and disabled individuals in the public sector under the Rehabilitation Act, 29 U.S.C. §§ 701–794 (2012). See also 29 U.S.C. § 794(d) (2012) (“The standards used to determine whether . . . [the Rehabilitation Act] has been violated in a complaint alleging employment discrimination under this section shall be the standards applied under title I of the Americans with Disabilities Act of 1990 . . .”).

4. See 42 U.S.C. § 12102(1) (defining disability under the ADA as “a physical or mental impairment that substantially limits one or more major life activities[,] . . . a record of such an impairment[,] or . . . being regarded as having such an impairment”).

5. See sources cited *supra* note 1.

market outcomes for disabled individuals have not improved—and may have actually declined—since the passage of the ADA.<sup>6</sup> In study after study, economists have demonstrated that neither the employment rates nor wage rates of disabled individuals have improved since Title I of the ADA went into effect.<sup>7</sup> To the extent that legal scholars have recognized this line of empirical research and found fault with the ADA,<sup>8</sup> they have cast blame on definitional ambiguities (and courts' restrictive interpretation of them) within the original version of the Act.<sup>9</sup> Nonetheless, most of these ambiguities were clarified and expanded by Congress in the 2008 ADA Amendments Act ("ADAAA").<sup>10</sup> In the decade that has passed since the ADAAA, the available empirical evidence indicates that labor market outcomes for disabled individuals still have not improved.<sup>11</sup> In theory, more individuals with an activity limitation are covered

6. See, e.g., Daron Acemoglu & Joshua D. Angrist, *Consequences of Employment Protection? The Case of the Americans with Disabilities Act*, 109 J. POL. ECON. 915, 926–49 (2001) (finding that the ADA decreased employment rates of disabled workers); Thomas DeLeire, *The Wage and Employment Effects of the Americans with Disabilities Act*, 35 J. HUM. RESOURCES 693, 701 (2000) (finding a decline in employment and wages of disabled men following the passage of the ADA); Julie L. Hotchkiss, *A Closer Look at the Employment Impact of the Americans with Disabilities Act*, 39 J. HUM. RESOURCES 887, 888, 909 (2004) (finding no effect of the ADA on the labor market outcomes for disabled individuals in the labor market after accounting for changes in labor supply); Douglas Kruse & Lisa Schur, *Employment of People with Disabilities Following the ADA*, 42 INDUS. REL.: J. ECON. & SOC'Y 31, 61–62 (2003) (finding no "clear overall answer to the question of whether the ADA has helped or hurt the employment of people with disabilities, since both positives and negative signs can be found").

7. See sources cited *supra* note 6.

8. See, e.g., Ruth Colker, *Winning and Losing Under the Americans with Disabilities Act*, 62 OHIO ST. L.J. 239, 247–77 (2001) (finding that ADA cases result in more victories for defendants than any other type of federal antidiscrimination case); see also Ruth Colker, *The Americans with Disabilities Act: A Windfall for Defendants*, 34 HARV. C.R.-C.L.L. REV. 99, 100 (1999) ("[D]efendants prevail in more than ninety-three percent of reported ADA employment discrimination cases decided on the merits at the trial court level. Of those cases that are appealed, defendants prevail in eighty-four percent of reported cases. These results are worse than results found in comparable areas of the law; only prisoner rights cases fare as poorly." (footnotes omitted)).

9. See generally, e.g., Samuel R. Bagenstos, *Subordination, Stigma, and "Disability"*, 86 VA. L. REV. 397 (2000) (arguing for a subordination-focused approach to interpreting the ambiguous definition of "disability" in the 1990 version of the ADA); Mary Crossley, *The Disability Kaleidoscope*, 74 NOTRE DAME L. REV. 621 (1999) (using the social model of disability to criticize the restrictive definition of disability adopted by courts under the 1990 version of the ADA); Lisa Eichhorn, *Major Litigation Activities Regarding Major Life Activities: The Failure of the "Disability" Definition in the Americans with Disabilities Act of 1990*, 77 N.C. L. REV. 1405 (1999) (arguing that the ambiguous definition of "disability" in the 1990 Act, and courts' subsequent restrictive interpretations of it, should be amended legislatively).

10. See ADA Amendments Act of 2008, Pub. L. No. 110-325, 122 Stat. 3553 (2008).

11. See, e.g., Stephen F. Befort, *An Empirical Examination of Case Outcomes Under the ADA Amendments Act*, 70 WASH. & LEE L. REV. 2027, 2031–32 (2013) (finding evidence that courts merely shifted the manner in which they blocked ADA cases from moving forward after the passage of the ADAAA); Jennifer Bennett Shinall, *The Pregnancy Penalty*, 103 MINN. L. REV. 749, 802–03 (2018) [hereinafter Shinall, *The Pregnancy Penalty*] (finding that pregnant women with complications, who theoretically have access to the Act's protections since the ADAAA, have not seen their employment outcomes improve since the ADAAA); Jennifer Bennett Shinall, *What*

under the Act than ever before, but such individuals have not seen an improvement in their wage and employment rates.<sup>12</sup> These latest post-ADAAA findings raise a more troubling concern regarding whether the Act's remaining problems are more than just poor drafting. They suggest that the problem may be the ADA and the reasonable accommodation model itself.

Although in part based on Title VII of the 1964 Civil Rights Act, the ADA is unique among federal civil rights statutes. No other civil rights statute explicitly requires that employers provide (and finance) workplace accommodations.<sup>13</sup> The reasonable accommodation feature of the ADA enjoys a great deal of appeal from both a fairness and resource utilization perspective. In theory, enabling individuals to be productive, contributing members of the labor market through accommodation can decrease their dependency on public entitlement programs and reduce any social stigma attached to their condition.<sup>14</sup>

Nonetheless, given the failure of the ADA to meaningfully improve labor market outcomes for its targeted population, economists have questioned the practical realities of the reasonable accommodation model, developing many theories over the years regarding why it is unsound.<sup>15</sup> Yet lack of data has prevented economists from fully testing these theories. Although economists have sufficient data to demonstrate that disabled workers are less likely to be employed and earn less than their similarly situated, nondisabled counterparts, they lack sufficient data to explain *why* or *how*. More granularly, they lack sufficient data to discern whether the reasonable accommodation mandate is the problematic component of the ADA and, if so, when and why reasonable accommodation becomes problematic.

In the absence of real-world observational data on how the reasonable accommodation model works in practice, experimentally generated data can fill this void. This Article is the first to examine how reasonable accommodation works in practice by testing how experimental subjects—the majority of whom have prior experience making human resources decisions—respond to workers who require a workplace accommodation. The

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*Happens When the Definition of Disability Changes? The Case of Obesity*, 5 IZA J. LAB. ECON. 1, 1–3 (2016) [hereinafter Shinall, *The Case of Obesity*] (finding no evidence that obese individuals impacted by Congress's expansion of the disability definition in the ADAAA have improved employment outcomes).

12. See sources cited *supra* note 11.

13. *But see generally* Christine Jolls, *Accommodation Mandates*, 53 STAN. L. REV. 223 (2000) (discussing various state and federal laws that require employers to provide benefits to their workers that could, in theory, be construed as accommodation).

14. For arguments that the ADA is both efficient and cost-effective, see generally J.H. Verkerke, *Is the ADA Efficient?*, 50 UCLA L. REV. 903 (2003); Amy L. Wax, *Disability, Reciprocity, and "Real Efficiency": A Unified Approach*, 44 WM. & MARY L. REV. 1421 (2003).

15. See *infra* Section II.A.

experiment simulates how the interactive process<sup>16</sup> of negotiating for an accommodation works under the current ADA framework. The experiment then compares whether subjects' willingness to accommodate workers depends upon the nature of the proposed accommodation, the cost of the accommodation, the nature of the worker's underlying health condition, and the stage of employment at which accommodation is requested.<sup>17</sup>

The results indicate that workers who require an accommodation with a non-zero cost face a serious disadvantage at the hiring stage. Nonetheless, subjects exhibit a much greater willingness to provide costly accommodations to already existing employees; even subjects who avoid hiring a worker in need of accommodation demonstrate surprising generosity towards existing employees in need of accommodation.<sup>18</sup> These experimental results can be explained, I argue, by the unintended consequences that arise from restricting information flow and the behavioral economics theory of ambiguity aversion.<sup>19</sup> The risks and rewards associated with any job candidate are always somewhat ambiguous; these risks and rewards are even more ambiguous for job candidates who require accommodation. In theory, employers could reduce this ambiguity if they had more information about the job candidate's underlying health condition and need for accommodation: Employers could then better estimate how the condition was likely to affect a worker's productivity, and how accommodating the worker might affect the employer's bottom line. But, currently, the ADA prohibits employers from gathering this information at the hiring stage.<sup>20</sup> Moreover,

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16. The interactive process is a term coined by the Equal Employment Opportunity Commission ("EEOC") to describe the

information-gathering approach used by an employer with the employee to evaluate a request for accommodation [under the ADA and Rehabilitation Act]. It is intended to be a flexible approach that centers on the communication between an employer and the individual requesting reasonable accommodation, but may (and often does) involve obtaining relevant information from a supervisor and an individual's health care provider. . . . The person who will decide whether to grant or deny a reasonable accommodation . . . engages in a discussion with the requestor and other relevant individuals (e.g., a supervisor, a requestor's health care provider) to collect whatever information is necessary to make an informed decision about whether the requestor is covered as an individual with a disability and, if so, what reasonable accommodation(s) will effectively eliminate the barrier identified by the requestor and permit an equal opportunity to apply for a job, to perform a job or to gain access to the workplace, or to enjoy access to the benefits and privileges of employment.

U.S. EQUAL EMP'T OPPORTUNITY COMM'N, PROCEDURES FOR PROVIDING REASONABLE ACCOMMODATION FOR INDIVIDUALS WITH DISABILITIES, *available at* [https://www.eeoc.gov/eeoc/internal/reasonable\\_accommodation.cfm](https://www.eeoc.gov/eeoc/internal/reasonable_accommodation.cfm) [<https://perma.cc/gV73-9TNH>].

17. *See infra* Part III.

18. *See infra* Part IV.

19. For a discussion of the theory of ambiguity aversion (and prior experimental validations of the theory), *see infra* Section II.B.

20. *See infra* Section II.A.



even if the ADA were reformed to allow employers to gather such information pre-offer, the underlying heterogeneity of disability (and health conditions more generally) might not significantly clarify employers' estimates, particularly for job candidates.<sup>21</sup>

For these reasons, this Article instead recommends curbing employer hesitance towards workers in need of accommodation in a different manner: placing explicit limits on the amount an employer must spend to accommodate an employee. With a clear upper bound on the costs they can incur to accommodate a worker, employers can more accurately assess the risk associated with hiring a worker in need of accommodation. In fact, this Article uses the experimental results regarding decisionmakers' willingness to pay for accommodation to suggest a starting point for developing numerical upper bounds through which legislators can modify the reasonable accommodation model.<sup>22</sup> Of course, these numerical upper bounds on employer costs carry the risk of shutting some workers out of the labor market—some health conditions, after all, necessitate very expensive accommodations. To ensure that such individuals are able to participate in the labor market, this Article also recommends a governmental supplement scheme to cover the costs of accommodations beyond what employers must pay out of pocket. Federal and state disability programs already exist to support disabled individuals who are not working.<sup>23</sup> Broadening these programs to enable more disabled individuals to work by supplementing the cost of expensive accommodations would not only be optimal from a resource utilization perspective, but would also be consistent with the original purposes of the ADA to reduce the “dependency and nonproductivity” that result from disabled individuals' lack of labor market opportunities.<sup>24</sup>

In making these recommendations, this Article proceeds as follows. Part II briefly reviews both the law and economics literature on the disappointments of the ADA, before introducing the behavioral theories of choice under uncertainty—and the theory of ambiguity aversion more specifically—as a possible explanation behind these disappointments. Part III explains the experimental design used to generate data regarding how reasonable accommodation works in practice, and Part IV describes the experimental results. Based on these results, Part V considers reforms to the ADA to address the weaknesses identified through the experiment. Part VI concludes by detailing how the suggested reforms can improve labor market

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21. See *infra* Section II.A.

22. See *infra* Section V.B.

23. See *infra* Section V.C.

24. 42 U.S.C. § 12101(a)(8) (2012); see also Richard V. Burkhauser, *Post-ADA: Are People with Disabilities Expected to Work?*, 549 ANNALS AM. ACAD. POL. & SOC. SCI. 71, 71–72 (1997) (“The unprecedented growth in the younger disability-transfer population is counter to the goal of integrating working-age people with disabilities into mainstream employment.”).

outcomes for both disabled individuals and other individuals in need of workplace accommodations.

## II. THE STATE OF DISABILITY IN THE WORKPLACE

Before introducing the experiment to assess how reasonable accommodation under the ADA works in practice, I first step back to consider prior critiques of the Act from both the law and economics literatures in Section II.A. Section II.B then introduces the concept of ambiguity aversion as a potential (yet previously overlooked) reason why the ADA may have failed to improve disabled individuals' wage and employment outcomes since its passage.

### A. ASSESSING THE PERFORMANCE OF THE ADA

For nearly three decades, the ADA has promised "equality of opportunity, full participation, independent living, and economic self-sufficiency" for disabled Americans.<sup>25</sup> Yet labor market data indicate that even now, as a group, disabled individuals remain unequal, excluded, dependent, and devalued in the labor market.<sup>26</sup> The earliest empirical studies of the ADA's performance suggested that wage and employment outcomes of disabled individuals actually declined as a result of the Act.<sup>27</sup> Although some subsequent empirical studies have questioned the methodological approaches of the earliest studies,<sup>28</sup> even these subsequent studies have concluded that the ADA *has not helped* disabled individuals in the labor market.<sup>29</sup>

At best, the wage and employment outcomes of disabled individuals have remained unchanged.<sup>30</sup> Nor has the passage of the ADAAA altered these conclusions. Post-Amendment empirical studies exhibit no signs of

25. 42 U.S.C. § 12101(a)(7).

26. See Nancy R. Mudrick, *Employment Discrimination Laws for Disability: Utilization and Outcome*, 549 ANNALS AM. ACAD. POL. & SOC. SCI. 53, 70 (1997) ("[P]eople with disabilities have overestimated the ability of a civil rights act to significantly alter employment rates and circumstances.").

27. See, e.g., Acemoglu & Angrist, *supra* note 6, at 926–49 (finding lower employment rates of disabled workers after the ADA's passage); DeLeire, *supra* note 6, at 701 (finding lower employment rates and wages for disabled workers after the ADA's passage); see also Kathleen Beegle & Wendy A. Stock, *The Labor Market Effects of Disability Discrimination Laws*, 38 J. HUM. RESOURCES 806, 856–57 (2003) (finding that wage and employment outcomes of disabled individuals declined after the passage of state laws similar to the ADA).

28. See, e.g., Hotchkiss, *supra* note 6, at 887–88 (arguing that previous studies had failed to account for changes in the labor market supply of disabled individuals during the 1990s); Kruse & Schur, *supra* note 6, at 61–62 (arguing that previous studies had failed to account for how the definition of disability in the data could impact empirical results).

29. See Hotchkiss, *supra* note 6, at 909 (concluding that the ADA had no effect on disabled individuals' labor market outcomes); Kruse & Schur, *supra* note 6, at 61–62 (finding no effect of the ADA on labor market outcomes).

30. See *supra* note 29 and accompanying text.

improvement in the labor market outcomes of disabled individuals,<sup>31</sup> despite the ADA's stated purpose of "reinstating a broad scope of protection to be available under the ADA."<sup>32</sup>

Prior empirical studies have certainly indicated that something is wrong with the reasonable accommodation model, but they cannot pinpoint the problem. These studies have relied on market-level wage and employment data—the only data available for study—and, as such, cannot identify when, why, or how the ADA fails disabled individuals in the employment process.<sup>33</sup> Indeed, prior empirical studies cannot prove that the reasonable accommodation mandate is at fault for the ADA's disappointing labor market effects. Although the mandate is the signature feature of the ADA (leading many to suspect that the mandate is to blame),<sup>34</sup> another flaw in the Act could undermine its efficacy. Before the 2008 Amendments, for example, legal scholars often faulted the vague definition of disability for the Act's failures.<sup>35</sup> But the persistence of these failures in the decade since Congress clarified the definition of disability in the ADA<sup>36</sup> suggests that the ADA suffers from a more fundamental flaw.

Even if the problem with the ADA is its reasonable accommodation mandate, lack of data has prevented empiricists from identifying whether the problem is the reasonability portion or the accommodation portion of the

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31. See generally Shinall, *The Pregnancy Penalty*, *supra* note 11 (finding that pregnant women with complications, who theoretically have access to the Act's protections since the ADA, have not seen their employment outcomes improve since the ADA); Shinall, *The Case of Obesity*, *supra* note 11 (finding no evidence that obese individuals impacted by Congress's expansion of the disability definition in the ADA have improved employment outcomes).

32. ADA Amendments Act of 2008, Pub. L. No. 110-325, § 2(b)(1), 122 Stat. 3553, 3553.

33. To identify when and why employers may avoid employing disabled individuals with precision using observational data would require detailed information on the motivations behind individual employers' human resources decisions. Many employers do not document the motivations behind human resources decisions in great detail, but even the ones who do understandably refuse to turn over such information to researchers for fear of legal and economic ramifications. For these reasons, discrimination is typically the residual hypothesis in a labor market study based on observational data. In other words, a researcher can only conclude that discrimination is likely responsible for observed inequities in the labor market after eliminating all other possible explanations.

34. For examples of scholars who have blamed the reasonable accommodation mandate for the ADA's failure to improve labor market outcomes of disabled individuals, see Acemoglu & Angrist, *supra* note 6, at 926–49; DeLeire, *supra* note 6, at 701; and Stewart J. Schwab & Steven L. Willborn, *Reasonable Accommodation of Workplace Disabilities*, 44 WM. & MARY L. REV. 1197, 1281–83 (2003).

35. See, e.g., Jill C. Anderson, *Just Semantics: The Lost Readings of the Americans with Disabilities Act*, 117 YALE L.J. 992, 997–98 (2008) (arguing that a rigorous linguistics analysis exposes the ambiguity of the definition of disability in the ADA, which the author identifies as the inherent weakness of the Act's original version); see also *supra* note 9 and accompanying text.

36. See *supra* note 11 and accompanying text.

policy (or both).<sup>37</sup> Economists have tended to blame the latter portion, arguing that employer-mandated accommodation policies necessarily raise the cost of employing workers in need of them. As a result, employers have been incentivized to shirk their legal responsibilities under the mandate whenever the additional cost of accommodating a worker in need exceeds the difference in profitability between that worker in need and the next best worker.<sup>38</sup> Yet even though the accommodation portion has been the primary target of most economists' critiques, the reasonability portion of reasonable accommodation mandate is just as likely problematic.

Under the ADA, what it means for an accommodation to be reasonable is far from clear. Congress has never explicitly defined the term; instead, the Act merely provides examples of what accommodations "may" be reasonable, including:

[M]aking existing facilities . . . readily accessible to and usable by individuals with disabilities[,] . . . job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment or modifications of examinations, training materials or policies, [and] the provision of qualified readers or interpreters . . . .<sup>39</sup>

Along these lines, the only limit that Congress has ever placed on the required efforts employers must undertake with respect to accommodating disabled workers is the concept of "undue hardship."<sup>40</sup> This term is one of the few that has been defined since the Act's inception as "significant difficulty or expense . . . in light of . . . the nature and cost of the accommodation, . . . the [employer's] overall financial resources, . . . [and] the type of operation[s]."<sup>41</sup> Perhaps this definition is better than nothing at all—still, it provides enormous discretion to courts and creates a great deal of uncertainty for employers trying to determine their responsibilities under the Act. No clear guideposts exist to help employers determine when a costly accommodation constitutes a significant difficulty or expense.<sup>42</sup>

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37. Because the only data to which economists (and other empiricists) have gained access is market-level observational data on wage and employment outcomes, see *supra* note 33, economists have been unable to identify when or why the reasonable accommodation mandate may backfire.

38. See Acemoglu & Angrist, *supra* note 6, at 926–49 (arguing that requiring employers to pay for any accommodation is problematic because it makes hiring disabled workers more costly); see *supra* sources cited note 27 and accompanying text (demonstrating through simple models why mandating that employers pay for accommodations may have unintended consequences).

39. 42 U.S.C. § 12111(9) (2012).

40. See *id.* § 12111(10).

41. *Id.*

42. See *id.* § 12111(9)–(10) (failing to provide a test or guidelines, such as cost-benefit analysis, by which courts should analyze reasonable accommodation and undue hardship); see also generally Nicole Buonocore Porter, *Martinizing Title I of the Americans with Disabilities Act*, 47

Without clear guideposts, employers will necessarily struggle in estimating how much they must spend in order to comply with the reasonable accommodation mandate. The examples of reasonable accommodations listed in the Act cannot satisfy the needs of every disabled worker (nor were they meant to do so, as Congress intended the list to be nonexhaustive).<sup>43</sup> Furthermore, even these listed examples of reasonable accommodations<sup>44</sup> may not always be reasonable for every worker who requests them, but the Act falls short of explaining at what point these examples will cease to be reasonable. A “modified work schedule,”<sup>45</sup> for example, may be a reasonable accommodation in the short-term, but not forever. In a similar manner, the ADA’s additional limitation that an accommodation not create an undue hardship for employers fails to add any precision regarding employers’ financial responsibility towards disabled workers.<sup>46</sup>

Two additional features of the ADA further encumber employers who attempt to estimate the financial limits of the reasonable accommodation mandate. First, the ADA arguably covers an unlimited number of physical and mental health conditions.<sup>47</sup> As such, successful accommodation of one worker may provide little to no insight regarding the successful accommodation of another worker, due to the high degree of heterogeneity in the covered population. Indeed, the population covered by the ADA is so diverse that what reasonable accommodation looks like in practice—from cost to duration to disruptiveness in the workplace—looks different for every covered worker.<sup>48</sup>

GA. L. REV. 527 (2013) (arguing that a clearer test is needed to determine whether an accommodation is reasonable); Mark C. Weber, *Unreasonable Accommodation and Due Hardship*, 62 FLA. L. REV. 1119 (2010) (arguing that the reasonable accommodation and undue hardship analyses cannot be separated).

43. 42 U.S.C. § 12111(g) (defining what reasonable accommodation “may include”).

44. *See id.*

45. *See id.* (giving part-time and modified work schedules as examples of possible reasonable accommodations).

46. *See id.* § 12111(10)(B) (failing to provide explicit limits on employers’ expenditures on employee accommodations).

47. *See id.* § 12102(1) (defining disability broadly as substantially limiting an individual in a major life activity instead of listing specific conditions covered by the Act).

48. *Cf.* Pamela S. Karlan & George Rutherglen, *Disabilities, Discrimination, and Reasonable Accommodation*, 46 DUKE L.J. 1, 13 (1996) (“Application of the ADA thus depends on the interaction of four factors: the individual’s particular disability; the essential functions of the job she seeks to perform; the possible accommodations that would enable her to do the job; and the burden that those accommodations would impose on the employer. The very complexity of the calculus means that ADA cases are likely to be intensely context-specific.”); Matthew A. Shapiro, *Labor Goals and Antidiscrimination Norms: Employer Discretion, Reasonable Accommodation, and the Costs of Individualized Treatment*, 32 YALE L. & POL’Y REV. 1, 28 (2013) (“The ADA . . . usually mandates a more individualized response. Rather than accommodate a disabled employee by revising a generally applicable workplace policy, an employer will typically craft an exemption that applies to the employee alone. Such an approach is explicitly contemplated by both the ADA itself and the EEOC’s enforcement guidelines . . . .” (footnotes omitted)).

The health conditions underlying the need for accommodation can be so varied that only the largest employers are likely to have prior experience accommodating a worker with the same condition. Moreover, for common disabling conditions, such as arthritis, an employer's prior experience with another employee may not be informative since these conditions can vary widely in terms of body part affected, frequency, duration, and response to medical treatment.<sup>49</sup> As a result, even the most sophisticated employers must typically rely on a worker's representations about what accommodation is needed—and for how long—during the interactive process used to determine the appropriate accommodation.<sup>50</sup> Even assuming that workers are always truthful in their representations about the extent to which they require accommodation during the process,<sup>51</sup> workers may not fully know (or even have a best guess) about their prognosis.<sup>52</sup>

Second, and relatedly, the ADA impedes employers' ability to collect what information workers *do* have regarding their prognosis, particularly at the hiring stage. In an effort to protect job candidates with a disability, the ADA severely constrains discussions about reasonable accommodation during the interview process.<sup>53</sup> Employers cannot “conduct a medical examination or make inquiries of a job applicant as to whether such applicant is an individual with a disability or as to the nature or severity of such disability”<sup>54</sup> before making an offer of employment. Instead, they are limited to inquiring about

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49. Well-known diseases can affect even the most successful individuals in vastly different manners. See, e.g., Madeline R. Vann, *14 Famous People with Parkinson's Disease*, EVERYDAY HEALTH (July 31, 2018), <https://www.everydayhealth.com/parkinsons-disease-pictures/famous-people-with-parkinsons-disease.aspx> [<https://perma.cc/JX66-QV8L>] (comparing celebrities such as Michael J. Fox, Janet Reno, Alan Alda, Neil Diamond, and Muhammed Ali, who all have Parkinson's Disease but have all had varying levels of symptom progression).

50. See U.S. EQUAL EMP. OPPORTUNITY COMM'N, THE AMERICANS WITH DISABILITIES ACT: APPLYING PERFORMANCE AND CONDUCT STANDARDS TO EMPLOYEES WITH DISABILITIES (2017), available at <https://www.eeoc.gov/facts/performance-conduct.html> [<https://perma.cc/8V6Z-4YMH>] (“When an employee requests a reasonable accommodation in response to the employer's discussion or evaluation of the person's performance, the employer may proceed with the discussion or evaluation but also should begin the ‘interactive reasonable accommodation process’ by discussing with the employee how the disability may be affecting performance and what accommodation the employee believes may help to improve it.”); see also *supra* note 16.

51. Individuals who seek formal career advice, however, are likely to be advised to conceal any need for accommodation at the hiring stage, even if the need is apparent. For a discussion of career advisors' common advice to conceal the need for flexibility and accommodation in the workplace (particularly related to family-related needs), see generally Hersch & Shinall, *supra* note 1 (demonstrating that women with a resume gap were better off revealing the reason for the gap in the hiring setting).

52. Diseases vary widely in symptoms, progression, and prognosis. See *infra* note 103 and accompanying text; see also *supra* note 49.

53. See U.S. EQUAL EMP'T OPPORTUNITY COMM'N, JOB APPLICANTS AND THE AMERICANS WITH DISABILITIES ACT (2017), available at <https://www.eeoc.gov/facts/jobapplicant.html> [<https://perma.cc/6VS5-HKF7>] (“The ADA prohibits employers from asking questions that are likely to reveal the existence of a disability before making a job offer . . .”).

54. 42 U.S.C. § 12112(d)(2)(A) (2012).

“the ability of an applicant to perform job-related functions.”<sup>55</sup> At baseline, employers have remarkably little information about job candidates (whether disabled or not), particularly compared to existing employees. Accurately projecting a candidate’s workplace productivity using a resume, references, and an interview is difficult enough; with only these tools in hand, employers must additionally attempt to project the feasibility of accommodating a disabled candidate under the ADA. With this provision, the Act attempts to take the issue of disability off the table during the hiring process.<sup>56</sup> But in reality, it may only increase an employer’s uncertainty towards job candidates with a visible disability or job candidates who volunteer their disability status.<sup>57</sup> In such cases, the employer will be on notice that a candidate may need accommodation if hired, yet cannot ask the candidate all the necessary questions to assess the feasibility of accommodating the candidate until after an offer of employment is made.

For these reasons, employers trying to abide by their legal obligations under the ADA may find themselves unable to estimate the risk (if any) associated with employing a disabled worker.<sup>58</sup> As currently structured, both the requirements and the limits of the reasonable accommodation mandate remain uncertain for employers—including employers with full information on the worker’s underlying condition. Even assuming the best case scenario, in which the employer has full information and understands the exact accommodation that a worker needs to function in the workplace, imprecise definitions of what it means for an accommodation to be reasonable or to create an undue hardship may leave the employer unable to determine whether he has a legal obligation to provide such accommodation to the worker. More realistic, however, is a scenario in which an employer has incomplete information about a worker’s underlying health condition due to the heterogeneity of conditions covered by the ADA. In this instance, the Act impedes, rather than facilitates, the flow of information to the employer necessary to estimate the cost of accommodation. This two-fold uncertainty propagated among employers by the ADA should give rise to concern, given

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55. *Id.* § 12112(d)(2)(B).

56. *See Griffin v. Steeltek, Inc.*, 160 F.3d 591, 594 (10th Cir. 1998) (“The legislative history of the ADA indicates that Congress wished to curtail all questioning that would serve to identify and exclude persons with disabilities from consideration for employment . . . .”); *see also Bates v. Dura Auto. Sys., Inc.*, 767 F.3d 566, 574 (6th Cir. 2014); *Harrison v. Benchmark Elecs. Huntsville*, 593 F.3d 1206, 1213–14 (11th Cir. 2010).

57. Indeed, the EEOC explicitly states in its guidance that “an employer cannot ask questions about an applicant’s disability either because it is visible or because the applicant has voluntarily disclosed a hidden disability.” U.S. EQUAL EMP’T OPPORTUNITY COMM’N, *supra* note 53.

58. Along these lines, sociologist Nancy R. Mudrick has previously attributed the disappointing labor market outcomes of the ADA to the fact that “[e]mployers have overestimated the costs and difficulties of complying with the law . . . .” *See Mudrick, supra* note 26, at 70.

the well-documented behavioral response most individuals exhibit under such conditions: avoidance.

### B. THE AMBIGUITY OF DISABILITY

As highlighted in Section II.A, employers trying to abide by their legal obligations under the ADA face a great deal of uncertainty when determining how best to respond to the Act's reasonable accommodation mandate. After explaining why such uncertainty is best classified as ambiguity, this Section examines why such ambiguity can be problematic in the employment decisionmaking context, in light of the well-established behavioral economics theory of ambiguity aversion (also known as ambiguity avoidance).<sup>59</sup>

#### 1. Ambiguity Aversion in Theory

The behavioral economics theory of ambiguity aversion posits that, for any given level of risk, individuals will prefer known risks over unknown risks. According to the theory, when the expected value of the two risks are identical, individuals will prefer the less ambiguous risk over the more ambiguous risk.<sup>60</sup> Ambiguity aversion is both irrational and inconsistent with neoclassical economics theory. To see why, an example used by the theory's pioneer, Daniel Ellsberg, is useful.<sup>61</sup> Ellsberg famously proposed the "two-color problem," in which an individual is asked to bet whether a ball drawn at random from an urn will be red or black in color. When the individual is given the choice of more than one urn on which to bet, Ellsberg proposed that individual would select the urn with the least ambiguous distribution of red and black balls. If one urn has a known 50/50 distribution, whereas the other urn has an unknown distribution, Ellsberg's theory predicts that individuals will choose to bet on the urn with the 50/50 distribution—despite the possibility that the other urn may entirely be filled with balls of one color.<sup>62</sup>

Ellsberg's theory of ambiguity aversion, which falls within the ambit of behavioral economics theories regarding individual choice under

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59. Compare Hillel J. Einhorn & Robin M. Hogarth, *Decision Making Under Ambiguity: A Note, in RISK, DECISION AND RATIONALITY* 327, 327–28 (Bertrand R. Munier ed., 1988) (describing the behavioral phenomenon as ambiguity avoidance), with Selwyn W. Becker & Fred O. Brownson, *What Price Ambiguity? Or the Role of Ambiguity in Decision-Making*, 72 J. POL. ECON. 62, 70 (1964) (describing the same phenomenon as ambiguity aversion).

60. See, e.g., Craig R. Fox & Amos Tversky, *Ambiguity Aversion and Comparative Ignorance*, 110 Q.J. ECON. 585, 585–86 (1995) (summarizing ambiguity aversion as the phenomenon in which "people prefer to bet on known rather than on unknown probabilities").

61. The theory of ambiguity aversion is also known as the Ellsberg Paradox. See generally Daniel Ellsberg, *Risk, Ambiguity, and the Savage Axioms*, 75 Q.J. ECON. 643 (1961) (proposing the theory of ambiguity aversion).

62. See also David Weisbach, *Introduction: Legal Decision Making Under Deep Uncertainty*, 44 J. LEGAL STUD. S319, S322 (2015) (discussing the theory of ambiguity aversion and noting that "individuals choosing a set of payoffs will demand a higher premium for ambiguous choices than for merely risky ones").



uncertainty, is sometimes confused with the theory of risk aversion. Like ambiguity aversion, risk aversion also theorizes how individuals behave under uncertainty, but the two theories are distinguishable. Risk aversion theorizes that, given the choice between two bets with the same expected value, an individual will choose the less risky bet.<sup>63</sup> Thus, risk aversion relies on an individual at least being able to proxy the underlying probabilities involved. Ambiguity aversion, on the other hand, arises when the individual cannot estimate the underlying probabilities well.<sup>64</sup> Returning to the two-color problem, the individual has no way of guessing what the distribution of balls in the ambiguous urn will be before betting on the color of the ball drawn. At worst, the color distribution will be 50/50 (the same as the urn with the known distribution). At best, the urn will contain balls of all one color. The individual cannot estimate the probability of selecting either a red or black ball from the ambiguous urn.

Along these lines, the situation faced by employers with a disabled employee or job candidate is more analogous to ambiguity aversion than risk aversion.<sup>65</sup> There exists some level of risk with employing *any* worker, whether disabled or not, and the ADA does not require employers to hire a disabled worker unless she is the most qualified candidate for the job. Therefore, the expected productivity of a disabled worker (with or without accommodation) should always be at least as great as the productivity of the next best worker for the job. Nonetheless, employers have little idea how risky (if at all) hiring and accommodating a highly qualified disabled worker will be. Because of the underlying heterogeneity of the population protected by the ADA, employers will necessarily have difficulty arriving at a reliable estimate of ADA compliance costs for any given disabled worker. As discussed in Section II.A, an employer's experience accommodating a prior disabled worker may not well inform the employer's experience accommodating a future disabled worker since the two workers may suffer from vastly different underlying health conditions. Even if the two workers suffer from the same health condition, the employer's experience with the former may not well inform the employer's experience with the latter because the same health condition can manifest differently in two individuals.

For instance, consider an employer who is contemplating hiring a job candidate with type 2 diabetes. Accommodating a previous employee with this

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63. For example, a risk-averse individual may prefer to receive \$100 with certainty than to have a 10 percent chance of receiving \$1,000 and a 90 percent chance of receiving \$0.

64. See Einhorn & Hogarth, *supra* note 59, at 327 ("Ellsberg's paradox shows that people's decisions are affected not only by the probabilities of events, but also by the degree of uncertainty—or ambiguity—surrounding their estimates of these probabilities."); Fox & Tversky, *supra* note 60, at 585 ("One of the fundamental problems of modern decision theory is the analysis of decisions under ignorance or ambiguity, where the probabilities of potential outcomes are neither specified in advance nor readily assessed on the basis of the available evidence.").

65. See also *infra* note 151 and accompanying text.

common condition<sup>66</sup> may have been extremely costly for the employer, as diabetes can have devastating complications when not well managed, including loss of limbs, blindness, and organ failure.<sup>67</sup> But the employer's bad experience with one prior employee may be totally uninformative for future employees with diabetes. Over half of patients diagnosed with diabetes nonetheless report being able to work without any limitations<sup>68</sup> and rate their health status as good to excellent.<sup>69</sup> The employer, as a result, will have difficulty predicting the onerousness of accommodating any one particular worker who has the health condition—even if the employer has prior experience with other workers who have the condition.

The difficulty employers face in accurately assessing the risk (or lack thereof) associated with employing a disabled worker is particularly acute for job candidates.<sup>70</sup> The lesser degree of familiarity that employers have with respect to job candidates, as opposed to existing employees, makes it even more difficult to predict with accuracy how costly and how feasible accommodating a worker will be. Similarly, workers with uncommon health conditions make it difficult for employers to evaluate whether a reasonable accommodation exists, and whether the cost will be prohibitive. Layered on top of this ambiguity regarding how much accommodation a worker will need is the additional ambiguity regarding how much accommodation for which an employer is legally responsible. As discussed in Section II.A, at what cost an accommodation becomes unreasonable or an undue hardship remains unclear under the ADA.

In short, under the current ADA framework, employers continue to face a number of ambiguities with respect to disabled workers—ambiguities regarding the feasibility of accommodation, the costliness of accommodation,

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66. According to a 2017 report by the Centers for Disease Control and Prevention, approximately 30.3 million Americans (9.4 percent of the population) have diabetes. Press Release, CDC, New CDC Report: More than 100 Million Americans Have Diabetes or Prediabetes (July 18, 2017), available at <https://www.cdc.gov/media/releases/2017/p0718-diabetes-report.html> [<https://perma.cc/JD75-NPGS>].

67. See *id.* (“People with diabetes are at increased risk of serious health complications including premature death, vision loss, heart disease, stroke, kidney failure, and amputation of toes, feet, or legs.”).

68. 20.0 percent of individuals with diabetes ages 20–44, and 27.7 percent of individuals with diabetes ages 45–64, report a limitation in their ability to work resulting from their diabetes. Edward W. Gregg & Andy Menke, *Diabetes and Disability*, in NAT'L INSTS. OF HEALTH, DIABETES IN AMERICA 34–6 (3d ed. 2018).

69. Conversely, 48 percent of individuals with diabetes report being in fair or poor health. Andy Menke et. al., *Physical and Metabolic Characteristics of Persons with Diabetes and Prediabetes*, in NAT'L INSTS. OF HEALTH, DIABETES IN AMERICA 9–24 (3d ed. 2018).

70. For this reason, it is difficult for employers to statistically discriminate against disabled employees since, given the underlying heterogeneity of the disabled population, there is no average disabled employee (or, at the very least, the “average” disabled employee is not a helpful metric for future disabled employees). For a discussion of the concept of statistical discrimination, see *infra* note 128 and accompanying text.

the likelihood that the accommodation will be successful, and the employers' legal responsibility to accommodate in the first place. The behavioral economics theory of ambiguity aversion suggests that these multiple ambiguities may be cause for concern with respect to disabled workers in the labor market—despite the alleged protections available to these workers under the ADA—since the Act allows these ambiguities to persist from the employers' perspective. As such, the theory would predict that employers will continue to avoid the resulting situation, in which employers are unable to proxy the risks (if any) associated with employing a disabled worker, under the current version of the ADA. Although theory does not always bear out in practice, the theory of ambiguity aversion has been repeatedly documented in experimental settings, as reviewed in the next Section. This prior experimental evidence serves to heighten concerns regarding how ambiguity aversion may be interfering with the labor market success of disabled workers under the reasonable accommodation model.

## 2. Ambiguity Aversion in Practice

In the half-century since Ellsberg's proposal of ambiguity aversion, the theory has been well validated in the experimental economics literature. Experimentalists have verified not only Ellsberg's two-color problem prediction in the laboratory setting<sup>71</sup> but also the theory's applicability to other real-world policies.<sup>72</sup> Experiments have documented individuals' preferences to avoid ambiguity in contractual agreements,<sup>73</sup> financial decisions,<sup>74</sup> and legal compliance<sup>75</sup>—all of which have implications for how

71. See, e.g., Becker & Brownson, *supra* note 59, at 73 (finding “that some subjects, in violation of the Savage axioms, express an aversion to ambiguity, and under payoff conditions will pay to avoid it”); Paul Slovic & Amos Tversky, *Who Accepts Savage's Axiom?*, 19 BEHAV. SCI. 368, 368 (1974) (showing “subjects' initial choices often violate[ Savage's sure-thing principle]”).

72. For a review of the behavioral economics literature on ambiguity aversion, see Colin Camerer & Martin Weber, *Recent Developments in Modeling Preferences: Uncertainty and Ambiguity*, 5 J. RISK & UNCERTAINTY 325, 332–41 (1992) (examining in brief the extensive ambiguity aversion literature in behavioral economics).

73. See, e.g., Christian Kellner & Gerhard Riener, *The Effect of Ambiguity Aversion on Reward Scheme Choice*, 125 ECON. LETTERS 134, 135–37 (2014) (demonstrating experimentally the effect of ambiguity on preferences for contractual compensation schemes).

74. See, e.g., Aurélien Baillon & Han Bleichrodt, *Testing Ambiguity Models Through the Measurement of Probabilities for Gains and Losses*, 7 AM. ECON. J.: MICROECONOMICS 77, 85 (2015) (asking subjects to take bets on the movement of a familiar stock index and an unfamiliar stock index).

75. For example, prior research has demonstrated that increased ambiguity regarding tax auditing policy increases taxpayer compliance. See Arthur Snow & Ronald S. Warren, Jr., *Ambiguity About Audit Probability, Tax Compliance, and Taxpayer Welfare*, 43 ECON. INQUIRY 865, 870 (2005) (demonstrating through experimental evidence that increasing uncertainty regarding tax audit probability increases tax code compliance in “ambiguity-averse” individuals but has the opposite effect in “ambiguity loving” individuals). The implications of ambiguity aversion with respect to criminal conduct have also been well explored. For a thorough review of this literature, see Hannah Frank, Note, *Unambiguous Deterrence: Ambiguity Attitudes in the Juvenile Justice System and the Case for a Right to Counsel During Intake Proceedings*, 70 VAND. L. REV. 709, 714–20 (2017).

relevant laws should be structured. Yet less well understood is the role of ambiguity aversion in the workplace. In fact, the only existing study to consider ambiguity aversion in the labor market is a 2016 study examining how this behavioral phenomenon impacted women returning to work after a career break.<sup>76</sup>

There, like here, the authors of the 2016 study had reason to suspect that the legal regime meant to protect women may be backfiring on account of information flow restrictions. Because women continue to bear the majority of household caretaking responsibilities,<sup>77</sup> caretaking-related career breaks for women remain incredibly common among women in the United States—almost one-third of mothers stay at home with their children for some period of time.<sup>78</sup> Yet Equal Employment Opportunity Commission (“EEOC”) guidance discourages employers from discussing household caretaking responsibilities, particularly with female workers, out of concern that employers will use such discussions to discriminate against them in violation of Title VII.<sup>79</sup> Nevertheless, in an environment where honest conversations about caretaking responsibilities are stifled, women continue to be at a

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76. See Hersch & Shinall, *supra* note 1.

77. See, e.g., Joni Hersch, *Home Production and Wages: Evidence from the American Time Use Survey*, 7 REV. ECON. HOUSEHOLD 159, 166 (2009) (documenting that the average married woman spends 28.76 minutes on childcare every day, but the average married man spends only 15.67 minutes); see also Shinall, *The Pregnancy Penalty*, *supra* note 11, at 764 (“And yet, as much as the traditional norm of mothers staying at home with their children has eroded over the past half century, it remains prevalent. . . . An employer’s assumption that the primary caretaking burden of a new child will fall on the woman will, more often than not, have some validity.” (footnotes omitted)).

78. See D’vera Cohn et al., *After Decades of Decline, A Rise in Stay-at-Home Mothers*, PEW RES. CTR. (Apr. 8, 2014), <http://www.pewsocialtrends.org/2014/04/08/after-decades-of-decline-a-rise-in-stay-at-home-mothers> [<https://perma.cc/32VZ-PY7A>].

79. See U.S. EQUAL EMP’T OPPORTUNITY COMM’N, PRE-EMPLOYMENT INQUIRIES AND MARITAL STATUS OR NUMBER OF CHILDREN, *available at* [http://www.eeoc.gov/laws/practices/inquiries\\_marital\\_status.cfm](http://www.eeoc.gov/laws/practices/inquiries_marital_status.cfm) [<https://perma.cc/8YSA-E69E>] (“Questions about marital status and number and ages of children are frequently used to discriminate against women and may violate Title VII if used to deny or limit employment opportunities. It is clearly discriminatory to ask such questions only of women and not men (or vice-versa). Even if asked of both men and women, such questions may be seen as evidence of intent to discriminate against, for example, women with children.”).

disadvantage in the workplace,<sup>80</sup> particularly if they have taken a prior career break.<sup>81</sup>

Suspecting that the stifling of caretaking-related conversations may have unintended consequences, the authors of the 2016 study demonstrated experimentally that employers were overwhelmingly more likely to hire a female job candidate who volunteered why she had taken a career break over a female job candidate who did not openly discuss her break. The authors attributed this result to ambiguity aversion—employers could not reliably proxy the risk associated with hiring a female candidate returning from a career break when they did not know *why* she had taken the career break. Consequently, the authors advocated for modifications to the EEOC’s Title VII guidance that encouraged honest conversations at the interview stage between employers and job candidates.<sup>82</sup>

With the exception of the 2016 study, law and economics scholarship has largely ignored how current legal regimes may sustain, and may even promote, ambiguity in the workplace. The prior study identified these weaknesses within the Title VII enforcement regime, but Title VII may not be the only employment law that has such unintended consequences. As this Part has suggested, the ADA may also foster ambiguity—leading to employer ambiguity aversion. Economist Marjorie Baldwin, who has empirically documented the persistence of disabled workers’ poor labor market outcomes since the passage of the ADA, has raised similar concerns with respect to the uncertainty promoted by the reasonable accommodation

80. Although the gender gap is well documented, this gap is particularly wide between women who are mothers and men who are fathers. For empirical research documenting a robust “motherhood penalty” and “fatherhood premium,” see, for example, Deborah J. Anderson et al., *The Motherhood Wage Penalty Revisited: Experience, Heterogeneity, Work Effort, and Work-Schedule Flexibility*, 56 INDUS. & LAB. REL. REV. 273, 291 (2003) (finding a three to five percent wage penalty for mothers). See also Shelley J. Correll et al., *Getting a Job: Is There a Motherhood Penalty?*, 112 AM. J. SOC. 1297, 1332 (2007) (documenting employer discrimination against mothers, but not fathers); Rebecca Glauber, *Race and Gender in Families and at Work: The Fatherhood Wage Premium*, 22 GENDER & SOC’Y 8, 16–19 (2008) (exploring differences in wage premiums for fathers of diverse races and ethnicities).

81. Anecdotal evidence abounds on the difficulty of returning to the labor market after a child-related career break. See, e.g., Kelly Wallace, *Moms ‘Opting In’ to Work Find Doors Shut*, CNN (Aug. 13, 2013, 3:41 PM), <http://www.cnn.com/2013/08/13/living/parents-mothers-opt-to-work/index.html> [<https://perma.cc/T3S2-TJE2>] (reporting on a survey conducted by a small, local nonprofit that found “38.3% [of stay-at-home mothers] said they wanted to return [to work] but were having difficulty getting back in and an ‘overwhelming’ 53.7% cited resistance to hiring because of their stay-at-home status”); Tara Weiss, *How Stay-at-Home Moms Can Get Back to Work*, FORBES (May 19, 2009, 5:15 PM), <http://www.forbes.com/2009/05/19/relaunch-career-woman-leadership-careers-jobs.html> [<https://perma.cc/Q5Ng-F5EF>] (“Returning to work is a challenge even in a strong job market . . .”).

82. See Hersch & Shinall, *supra* note 1, at 87 (“Whether the subject of the information is family status, criminal history, or disability accommodation, underserved groups are best served when they can have open and honest conversations with their employers.” (footnote omitted)).

model.<sup>83</sup> Pointing to these concerns as an area for further research, Baldwin has previously remarked that ADA compliance remains rather opaque for employers, given the unclear legal bounds on their obligations combined with the heterogeneous accommodation needs of the disabled population.<sup>84</sup> The following Part explores whether the concerns raised by Baldwin, as well as the concerns raised throughout this Part, are warranted, using an experimental vignette study.

### III. EXPERIMENTAL METHODOLOGY

In the absence of instructive observational human resources data,<sup>85</sup> an alternative approach to assessing how the reasonable accommodation model works in practice is to generate experimental data. In particular, experimental vignette studies can provide insight into how decisionmakers react to plausible employment scenarios in which issues arise surrounding the need for a workplace accommodation. In these studies, subjects are randomly assigned to view a scenario and asked to make a decision regarding that scenario; while the scenarios are otherwise similar, some scenarios prime subjects with respect to the issue of interest—here, the need for a workplace accommodation due to a health condition. Researchers then test whether inter- and intra-subject responses meaningfully differ when scenarios involve the issue of interest.<sup>86</sup>

Experimental vignette studies have become increasingly common in the legal literature over the past two decades.<sup>87</sup> Scholars have principally used

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83. See Marjorie L. Baldwin, *Can the ADA Achieve Its Employment Goals?*, 549 ANNALS AM. ACAD. POL. & SOC. SCI. 37, 48–50 (1997).

84. See *id.* at 47.

Another reason that information problems may be an important source of discrimination against workers with disabilities is that the group is extremely heterogeneous in the characteristics that affect productivity. Employers are unlikely to be well informed regarding the functional limitations associated with every possible type of impairment. The problem is further complicated because experience and skills vary across workers with the same impairment. . . . This creates another source of uncertainty for employers as they attempt to predict the productivity of persons with disabilities.

*Id.*

85. See *supra* note 33 and accompanying text (discussing why observational data do not exist to test how reasonable accommodation works in practice).

86. For additional details on experimental vignette studies and the type of inferences that can be drawn from random assignment of subjects to view different scenarios, see Christiane Atzmüller & Peter M. Steiner, *Experimental Vignette Studies in Survey Research*, 6 METHODOLOGY 128, 129–30 (2010).

87. Very recent examples of experimental vignette studies in the legal literature include Hersch & Shinall, *supra* note 1 (demonstrating that women with a resume gap were better off revealing the reason for the gap in the hiring setting); Justin Sevier, *Popularizing Hearsay*, 104 GEO. L.J. 643, 665–67 (2016) (using such a study to assess juror reactions to hearsay); Tess Wilkinson-Ryan, *The Perverse Consequences of Disclosing Standard Terms*, 103 CORNELL L. REV. 117,

these studies to assess judge and juror decisionmaking,<sup>88</sup> consumer sensibilities towards principles of contract law,<sup>89</sup> and bias towards historically disadvantaged groups.<sup>90</sup> Experimental vignette studies have been used previously in the employment context, albeit in a more limited fashion, to assess how decisionmakers evaluate workers in scenarios that implicate existing employment discrimination laws. A 2013 study by Ian Ayres and Richard Luedeman, for example, demonstrated that knowledge of an individual's sexual preferences led subjects to stereotype that person in other contexts. In the employment context, such stereotyping could implicate Title VII of the 1964 Civil Rights Act, which prohibits sex stereotyping in the workplace.<sup>91</sup> Similarly, the 2016 study discussed in Section II.B.2 used an experimental vignette study to question the wisdom of EEOC guidance, which advises employers to avoid asking employees about household caretaking

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149–53 (2017) (using such a study to demonstrate consumer belief that boilerplate contract terms were legally enforceable and defensible if disclosed up front).

88. See, e.g., Susan D. Franck et al., *Inside the Arbitrator's Mind*, 66 EMORY L.J. 1115, 1166 (2017) (exploring the rationality of decisions made by arbitrators in the international arbitration context); Matthew R. Ginther et al., *The Language of Mens Rea*, 67 VAND. L. REV. 1327, 1349–58 (2014) (analyzing juror perceptions of mens rea culpability categories); Joni Hersch & Beverly Moran, *Coitus and Consequences in the Legal System: An Experimental Study*, 68 SMU L. REV. 927, 935–44 (2015) (investigating whether and how knowledge of a previous sexual relationship between legal adversaries influences subjects' perceptions of appropriate outcomes in civil actions); Justin Sevier, *Testing Tribe's Triangle: Juries, Hearsay, and Psychological Distance*, 103 GEO. L.J. 879, 903–22 (2015) (analyzing juror discernment of hearsay evidence in criminal cases); Francis X. Shen et al., *Sorting Guilty Minds*, 86 N.Y.U. L. REV. 1306, 1326–44 (2011) (examining subjects' ability to apply the legal definitions of mens rea in specific factual contexts).

89. See, e.g., Tess Wilkinson-Ryan & David A. Hoffman, *The Common Sense of Contract Formation*, 67 STAN. L. REV. 1269, 1281–95 (2015) (examining subjects' intuitions about contract formation); Tess Wilkinson-Ryan & David A. Hoffman, *The Psychology of Contract Precautions*, 80 U. CHI. L. REV. 395, 408–18 (2013) (examining parties' diverging approaches to self-protection before and after they perceive that they have reached final agreement); Tess Wilkinson-Ryan & David A. Hoffman, *Breach Is for Suckers*, 63 VAND. L. REV. 1003, 1022–32 (2010) (examining perceptions of contract breach).

90. See, e.g., Hadar Aviram & Annick Persinger, *Perceiving and Reporting Domestic Violence Incidents in Unconventional Settings: A Vignette Survey Study*, 23 HASTINGS WOMEN'S L.J. 159, 185 (2012) (finding “that the tendency to report domestic violence to the police declines as the incident diverges from the stereotypical male abuser/female victim scenario”); Jennifer Bennett Shinall, *Settling in the Shadow of Sex: Gender Bias in Marital Asset Division*, 40 CARDOZO L. REV. 1857, 1892–1901 (2019) (finding gender bias against divorcing female spouses in marital asset division scenarios). See generally Ian Ayres & Richard Luedeman, *Tops, Bottoms, and Versatiles: What Straight Views of Penetrative Preferences Could Mean for Sexuality Claims Under Price Waterhouse*, 123 YALE L.J. 714 (2013) (finding evidence that knowledge of gay men's sexual preferences influenced how subjects stereotyped them in other contexts).

91. See generally Ayres & Luedeman, *supra* note 90, at 750 (“[G]reater visibility of and openness about gay men's sexual practices might actually lead some heterosexual observers to hold less favorable attitudes towards the community.”).

responsibilities in order to comport with Title VII's prohibitions on sex discrimination in the workplace.<sup>92</sup>

Like the 2016 study, the present vignette study asked subjects to hire one of two finalist candidates, but here, one or more of the candidates could require a workplace accommodation. Subjects additionally answered follow-up questions about their willingness to accommodate existing workers and about the motivations behind their decisions. Also similar to prior employment studies, experimental subjects in this study were voluntary workers recruited via Amazon's Mechanical Turk ("mTurk") service.<sup>93</sup> All subjects were at least 18 years old, resided in the United States, and were paid \$1.50 for approximately 15 minutes of their time.<sup>94</sup>

Although at least two prior studies have recruited similar subject pools to gain insight into the mechanisms of employer decisionmaking in scenarios that implicate employment discrimination laws, this methodology has not escaped critique. Perhaps the most compelling concern relates to the external validity of the results derived from subjects who may or may not have hiring, supervisory, or other relevant human resources experience.<sup>95</sup> To answer this critique, prior studies have primarily relied on data validating the responses of the mTurk subject pool against responses of the U.S. population more generally.<sup>96</sup> These data provide reassurance that mTurk subjects' responses

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92. See U.S. EQUAL EMP'T OPPORTUNITY COMM'N, *supra* note 79 (advising employers to avoid asking questions about household caretaking responsibilities of either men or women).

93. The mTurk service is widely used by academics for experimental vignette studies testing legal decisionmaking. For an in-depth discussion of the representativeness and suitability of mTurk samples in legal decision-making studies, see David A. Hoffman, *From Promise to Form: How Contracting Online Changes Consumers*, 91 N.Y.U. L. REV. 1595, 1612 n.96 (2016).

94. The mTurk workers who signed up for the study were directed to the survey instrument, which was programmed using the survey software Qualtrics. The survey provided two scenarios involving employment decisionmaking and two scenarios involving juror decision-making. Here, I confine the discussion to the two employment scenarios of relevance to the present Article.

95. Here, the term external validity signifies whether a study's results can be extrapolated from the experimental setting into the real-world setting. For experiments in the laboratory setting, if subjects are not sufficiently similar to real-world decisionmakers, the results may be subject to external validity concerns. For a discussion of external and internal validity threats in observational data, field experiments, and laboratory experiments, see Justin Sevier, *Vicarious Windfalls*, 102 IOWA L. REV. 651, 705 (2017) (concluding that laboratory experiments "are riskier with respect to external validity, although several studies suggest that this concern may be overstated" (citing Mark Kelman et al., *Context-Dependence in Legal Decision Making*, 25 J. LEGAL STUD. 287, 301-03 (1996))).

96. See, e.g., Ilyana Kuziemko et al., *How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments*, 105 AM. ECON. REV. 1478, 1480-81 (2015) (validating the responses of mTurk workers against the responses of more established survey panels); Gabriele Paolacci et al., *Running Experiments on Amazon Mechanical Turk*, 5 JUDGMENT & DECISION MAKING 411, 412 (2010) ("Internet subject populations tend to be closer to the U.S. population as a whole than subjects recruited from traditional university subject pools."); see also Adam J. Berinsky et al., *Separating the Shirkers from the Workers? Making Sure Respondents Pay Attention on Self-Administered Surveys*, 58 AM. J. POL. SCI. 739, 745 & n.14 (2014) (finding that mTurk subjects paid more attention to screening questions than subjects recruited from other online pools).



are not aberrant or anomalous; still, they cannot directly answer the question of whether mTurk subjects' responses reflect the responses of individuals with prior human resources experience. This study is the first to address the concern directly and provide reassurance that the responses in this study (and the prior two employment studies) *are* indicative of how people making human resources decisions in the real world would respond.

Table 1 presents selected demographics of the 8,070 unique mTurk subjects who participated in this study; the table also includes the demographics from the 2015 Census Bureau estimates for comparison to the U.S. population. In many ways, the mTurk subjects closely mirror the U.S. population, particularly in terms of household income. Similar to other mTurk experiments, the subjects who participated in this experiment are younger, more educated, and much more likely to be employed than the average person in the United States.<sup>97</sup> The race/ethnicity distribution of the subject pool largely mirrors that of the U.S. population, with subjects identifying as Asian slightly overrepresented, subjects identifying as black or African-American slightly underrepresented, and subjects identifying as Hispanic/Latino more underrepresented (although still comprising more than 8 percent of the sample).<sup>98</sup>

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97. See also Jill E. Fisch & Tess Wilkinson-Ryan, *Why Do Retail Investors Make Costly Mistakes? An Experiment on Mutual Fund Choice*, 162 U. PA. L. REV. 605, 632 n.141 (2014) ("not[ing] that the self-reported education level of [m]Turk subjects is higher than that of the general population"); cf. Gargi Bhattacharya & Margaret S. Stockdale, *Perceptions of Sexual Harassment by Evidence Quality, Perceiver Gender, Feminism, and Right Wing Authoritarianism: Debunking Popular Myths*, 40 L. & HUM. BEHAV. 594, 596 (2016) ("Research shows that data obtained from [m]Turk samples are as reliable as traditional samples and that the samples are reflective of Internet-users: slightly younger, more liberal, less religious, and more educated than the population as a whole." (citations omitted)); Hersch & Shinall, *supra* note 1, at 75 & n.120 (finding highly similar demographics for a sample of 3022 mTurk subjects). See generally Gabriele Paolacci & Jesse Chandler, *Inside the Turk: Understanding Mechanical Turk as a Participant Pool*, 23 CURRENT DIRECTIONS IN PSYCHOL. SCI. 184 (2014) (concluding that the ways in which mTurk subjects depart from the U.S. population resemble typical U.S. internet users).

98. See *supra* note 97 (reporting similar race and ethnicity makeups in other mTurk samples).

Table 1. Mechanical Turk Subject Demographics

Characteristic	mTurk Sample	U.S. Population (2015)
Female	55.3%	50.8%
Median Age	33.0	42.4
Married	41.1%	48.8%
Hispanic/Latino	8.1%	17.4%
White	81.5%	77.4%
Black/African-American	10.0%	13.2%
Asian	7.2%	5.4%
B.A. or Higher (If 25+)	57.7%	28.8%
Employed	82.3%	59.5%
Median Household Income (\$2015)	\$51,049	\$53,545
Previously Participated in a Hiring Process	60.5%	—

Notes: Mechanical Turk sample includes 8,070 unique subjects. Mean values are calculated from the 2015 U.S. Census Bureau data. Age is calculated for employed persons only; U.S. population numbers calculated for individuals who report only a single race.

Prior mTurk studies of employment decisions have argued that because the vast majority of mTurk workers have another job besides taking surveys (typically more than three-quarters of any given sample are otherwise employed) and are highly educated, many are likely to have prior real-world experience with human resources decisionmaking, making their responses to employment vignette studies more credible.<sup>99</sup> This study is the first to test the validity of this argument and finds substantial evidence that its intuition is correct. As reported in Table 1, more than 60 percent of subjects in this study reported having previously participated in a hiring process (including screening applications, interviewing applicants, and providing feedback on applicants).<sup>100</sup> Consequently, for most subjects in this study, participating in human resources decisions is a familiar process. Moreover, robustness checks of the results presented in Sections III.A–C demonstrated that responses did not meaningfully differ between subjects based on their previous participation in a hiring decision.<sup>101</sup>

The 8,070 mTurk subjects who participated in this experiment viewed two different hiring scenarios that asked them to choose one of two finalist candidates. Each of the two scenarios had 25 different variations, and subjects were randomly assigned to view one variation of each. In all variations of the scenarios, the two finalist candidates always had similar qualifications, but two sources of variation could distinguish them. First, a finalist candidate might

99. See, e.g., Hersch & Shinall, *supra* note 1, at 75–76 n.120 (finding similar demographics in their mTurk survey population and concluding that when the mTurk “sample differed from the population, the direction favored the characteristics associated with decisionmakers in the employment setting”).

100. See *supra* Table 1.

101. As a result, the Tables in Part IV present the responses of all subjects who participated in the experiment.

be male or female. Second, a finalist candidate might have an underlying health condition that necessitated a workplace accommodation. The principal difference between the two scenarios was the cost of the needed accommodation: The required accommodation was costly for the employer in scenario one, but costless in scenario two. Before turning to the details of each scenario, however, an explanation is warranted regarding the selection of accommodations and underlying health conditions chosen for study.

#### A. VIGNETTE STUDY DESIGN

The paucity of observational human resources data regarding how reasonable accommodation works in practice renders it an obvious candidate for an experimental vignette study. Less obvious, however, is the population on which such a study should focus. As many prior scholars have noted, reasonable accommodation in the workplace may be useful to a wide range of workers with diverse health conditions.<sup>102</sup> The heterogeneity of these conditions, which fall on a spectrum of severity, is multidimensional. Health conditions may be congenital or acquired after birth, and those acquired after birth may be voluntary (i.e., self-inflicted) or involuntary (i.e., acquired through no action or fault of the individual). Along these lines, health conditions may be genetically derived, environmentally derived, or some combination of both. They may afflict an individual physically or mentally, and their effects may be temporary or permanent. In addition, health conditions may be immediately visible, visible over time, or invisible to third-party observers.<sup>103</sup>

Given the heterogeneity of health conditions that may afflict workers, determining where to begin studying the one-size-fits-all solution of reasonable accommodation is difficult. Complicating this determination is the fact that some, but not all, health conditions are already covered by the reasonable accommodation provisions of the ADA, yet the bounds of these legislative protections remain far from clear.<sup>104</sup> Gathering data on how reasonable accommodation works for a wide range of health conditions should remain a priority for researchers and will continue to be an issue with which I grapple in future work. As a first step towards understanding reasonable accommodation in practice, however, I choose to focus on acquired, physical health conditions that are uncertain in terms of redressability, voluntariness, and coverage under the ADA.

The choice to focus this initial study on such conditions is deliberate, motivated by three overarching purposes. First, the principal concern raised

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102. See, e.g., ROBERTS & WEEKS, *supra* note 1, at 23–53; Roberts & Leonard, *supra* note 1, at 838–44; Stein et al., *supra* note 1, at 693–94.

103. For a rich discussion of the multidimensionality of health conditions, see generally ROBERTS & WEEKS, *supra* note 1.

104. See *supra* Section II.A.

with the reasonable accommodation model in the prior Part was ambiguity. The uncertainty associated with what conditions must be accommodated, how they can be accommodated, as well as the time and monetary cost of accommodation may be driving the model's apparent, but unintended, labor market consequences because they incite ambiguity aversion in affected employers. The scenarios that follow in the next two Sections center on job-seekers whose weight, pregnancy, and joint problems lead them to request an accommodation from a potential employer. By choosing study conditions that are uncertain in many relevant aspects—duration, redressability, voluntariness, onerousness of accommodating, and current coverage under the ADA<sup>105</sup>—the scenarios are meant to test how decisionmakers react when they are unable to estimate multidimensional risk.

Second, conditions like weight, pregnancy, and joint problems afflict millions of Americans and, as such, requiring reasonable accommodation for such conditions has the potential to affect a dramatic percentage of the workforce. Almost 40 percent of Americans aged 20 and over are classified as obese, based on having a body mass index (“BMI”) of 30 or greater.<sup>106</sup> While obesity on the low end of the BMI range<sup>107</sup> may not necessitate an accommodation in the workplace, the likelihood of needing workplace accommodation increases with obesity in higher BMI ranges. Between six and eight percent of Americans have a BMI of greater than or equal to forty, which classifies them as morbidly obese (also known as Class III or extremely obese).<sup>108</sup> Individuals in this BMI range have significantly higher rates of developing other health problems, such as type 2 diabetes, cardiovascular disease, and musculoskeletal conditions—which could translate to a greater

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105. Another potential benefit of focusing on conditions for which current ADA coverage is uncertain is to reduce concerns regarding the prior knowledge brought into the experiment by subjects. If some subjects had strong background knowledge of the ADA from prior work experience, that knowledge might color those subjects' answers to this experiment. Choosing conditions for which background knowledge is arguably unhelpful (because coverage of these conditions is unclear under current ADA caselaw) mitigates these concerns. (These concerns are further mitigated by the fact that subjects with prior hiring experience, who should be the most likely to have background knowledge of the ADA, respond in a similar manner to the two scenarios as subjects without such experience).

106. *Obesity and Overweight*, CTRS. FOR DISEASE CONTROL & PREVENTION (2016), <https://www.cdc.gov/nchs/fastats/obesity-overweight.htm> [<https://perma.cc/9YVS-6TFY>] (showing 39.8 percent of American adults aged twenty and over are considered obese).

107. A five-foot, nine-inches tall individual would be classified as obese at a weight of 203 pounds or more. See *Defining Adult Overweight and Obesity*, CTRS. FOR DISEASE CONTROL & PREVENTION (2017), <https://www.cdc.gov/obesity/adult/defining.html> [<https://perma.cc/JAK2-EBKN>].

108. See U.S. DEP'T OF HEALTH & HUMAN SERVS., *MANAGING OVERWEIGHT AND OBESITY IN ADULTS: SYSTEMATIC EVIDENCE REVIEW FROM THE OBESITY EXPERT PANEL 4* (2013), available at <https://www.nhlbi.nih.gov/sites/default/files/media/docs/obesity-evidence-review.pdf> [<https://perma.cc/ZEW2-QMUY>]. A five-foot, nine-inches tall individual would be classified as morbidly obese at a weight of 271 pounds or more. See CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 107.

need for special equipment, increased absenteeism, or impaired physical capabilities at work.<sup>109</sup>

Similarly, pregnancy is an incredibly common condition: At any given time, approximately three percent of American women are pregnant,<sup>110</sup> and 86 percent of American women have given birth at some point in their lives.<sup>111</sup> Of course, not all women will need a workplace accommodation because of their pregnancy, but a substantial number will. Half of pregnant women, for example, develop lower back pain<sup>112</sup> and may require assistance (or be entirely prohibited from) completing certain physical tasks as a result.<sup>113</sup>

Likewise, joint problems represent one of the most common health problems faced by American workers. Approximately 35 percent of men and women with a self-reported activity limitation attributed it to arthritis or rheumatism; another 32 percent attributed it to back or spine problems.<sup>114</sup> Accordingly, surgeries to restore afflicted individuals' mobility are increasing exponentially. In 2009, for instance, orthopedic surgeons performed approximately 600,000 knee replacements (most of which were largely attributable to patients' advanced osteoarthritis), but they expect to perform over 3 million knee replacements annually by 2030.<sup>115</sup>

Third, common conditions like weight, pregnancy, and joint problems have been recently targeted by advocates and legal academics as the ones in need of additional safeguards in the workplace. In the past decade, multiple scholars have highlighted the failure of current antidiscrimination laws to

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109. See U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 108, at 95 ("Patients with extreme obesity have a high prevalence not only of complications such as CVD and type 2 diabetes but also of nonalcoholic fatty liver disease, joint disease, sleep apnea, and thromboembolic disease.")

110. This figure is calculated from the Centers for Disease Control and Prevention ("CDC") and U.S. Census Bureau numbers, which record 6.155 million pregnancies and 157.0 million women in 2010, respectively. *Age Groups and Sex: 2010*, U.S. CENSUS BUREAU (2010), [https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_10\\_SF1\\_QT P1&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_QT P1&prodType=table) [<https://perma.cc/EJ3U-CJB8>]; see also *2010 Pregnancy Rates Among U.S. Women*, CTRS. FOR DISEASE CONTROL & PREVENTION (2015), [https://www.cdc.gov/nchs/data/hestat/pregnancy/2010\\_pregnancy\\_rates.htm#table1](https://www.cdc.gov/nchs/data/hestat/pregnancy/2010_pregnancy_rates.htm#table1) [<https://perma.cc/5SMQ-PJZ7>]. The number of pregnant women is divided by the total number of women, and then multiplied by 40/52 since women observed in a given year were only pregnant for 40 out of 52 weeks.

111. See Belinda Luscombe, *No, All Those Strollers Aren't Your Imagination. More Women Are Having Children*, TIME (Jan. 19, 2018), <http://time.com/5107704/more-women-mothers> [<https://perma.cc/J38Q-CYKP>].

112. See P. Katonis et al., *Pregnancy-Related Low Back Pain*, 15 HIPPOKRATIA 205, 209 (2011) (discussing lower back problems as "one of the most common musculoskeletal complaints of pregnant women").

113. For more discussion of common comorbidities of pregnancy, see Shinall, *The Pregnancy Penalty*, *supra* note 11, at 760.

114. See MATTHEW W. BRAULT, U.S. CENSUS BUREAU, AMERICANS WITH DISABILITIES: 2010, at tbl.A-2 (July 2012), available at <https://www.census.gov/library/publications/2012/demo/p70-131.html> [<https://perma.cc/C4LX-KZ4D>] (relying on Survey of Income Program Participation data).

115. See David Ruiz, Jr. et al., *The Direct and Indirect Costs to Society of Treatment for End-Stage Knee Osteoarthritis*, 95 J. BONE & JOINT SURGERY 1473, 1473 (2013).

protect obese individuals,<sup>116</sup> pregnant women,<sup>117</sup> and workers with “health-related conduct, activities, or habits”<sup>118</sup> more generally and, more often than not, their proposed legal solution is reasonable accommodation.<sup>119</sup> The growing belief that vast numbers of workers with familiar, widespread health conditions could benefit from a reasonable accommodation mandate renders such conditions prime candidates for empirical study.<sup>120</sup> The next Section turns to the details of such a study, describing each scenario presented to experimental subjects in turn.

### B. SCENARIO ONE

In scenario one, all subjects saw the following information (with variations noted in brackets and boldface type):

Assume you work at a medium-sized wealth management firm, which manages investment and insurance portfolios for private clients. Your firm has a vacancy for the position of Research Analyst, and you have been asked to rank applicants. After reviewing many applications, you narrow the field down to two candidates, [**Amanda/Christopher**] Jones and [**Jennifer/Michael**] Davis, and interview both of them.

In many ways, the resumes for [**Amanda/Christopher**] Jones and [**Jennifer/Michael**] Davis show similar educational background and work histories. Both candidates received their college degrees ten years ago from large, public universities.

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116. See Jennifer Bennett Shinall, *Distaste or Disability? Evaluating the Legal Framework for Protecting Obese Workers*, 37 BERKELEY J. EMP. & LAB. L. 101, 105–06 (2016).

117. See Grossman, *supra* note 1, at 826–27; Deborah A. Widiss, Gilbert *Redux: The Interaction of the Pregnancy Discrimination Act and the Amended Americans with Disabilities Act*, 46 U.C. DAVIS L. REV. 961, 1015–17 (2013) [hereinafter Widiss, Gilbert *Redux*]; Widiss, *supra* note 1; see also Shinall, *The Pregnancy Penalty*, *supra* note 11, at 760.

118. Roberts & Leonard, *supra* note 1, at 858.

119. See generally, e.g., Grossman, *supra* note 1 (advocating for a reasonable accommodation to protect employment status for pregnant women); Hersch & Shinall, *supra* note 1 (proposing reasonable accommodation as a solution for existing mothers); Widiss, *supra* note 1 (praising new state statutes broadening the definition of reasonable accommodation in the context of pregnant employees); Widiss, Gilbert *Redux*, *supra* note 117 (advocating reasonable accommodation as a right for pregnant employees). *Bul see* Bradley A. Areheart, *Accommodating Pregnancy*, 67 ALA. L. REV. 1125, 1164–66 (2016) (arguing that the expressive harms that would stem from pregnancy accommodation would increase rather than decrease discrimination against pregnant women); Shinall, *The Pregnancy Penalty*, *supra* note 11, at 754–68 (questioning the value of reasonable accommodation solutions to pregnancy discrimination, particularly on grounds that the ADA has been systematically ineffective for the disabled population).

120. Stein et al., *supra* note 1, at 737–54 (arguing for accommodation for all in the workplace, regardless of what drives the need for accommodation).

[Amanda/Christopher] has a bachelor's degree in economics. Since college, [Amanda/Christopher] has worked as an Assistant Researcher in a small investment firm.

[Jennifer/Michael] has a bachelor's degree in business. Since college, [Jennifer/Michael] has worked as an Assistant Analyst in a small insurance firm.

Both candidates have strong references, and after the interviews, you believe that you could easily work with either candidate.

Which candidate will you hire for the position of Research Analyst?

Additionally, some subjects were randomly assigned to view the following information about one or more of the two finalist candidates:

During the interview, [Amanda/Christopher/Jennifer/Michael] volunteers that [she/he] is [scheduled to have hip surgery in six months/scheduled to have knee surgery in six months/three months pregnant and, since she must have a cesarean section] will need to take two weeks of unpaid leave. [She/He] would prefer to take less time off work, but [her/his] doctor has insisted that two weeks of recovery is medically necessary. In addition, [she/he] may need to take occasional leave over the months that follow [for physical therapy or follow-up doctor's appointments/when the baby is ill or has follow-up doctor's appointments], but [she/he] assures you of [her/his] commitment to make up for any lost time by working from home.

The 25 variations of scenario one are summarized in Appendix Table 1. In this scenario, candidates with an underlying health condition (whether that condition was joint problems or pregnancy) requested a workplace accommodation with a non-zero cost. Even though the candidates expressed the need for *unpaid* leave, leave of any kind inevitably has some costs for an employer. For instance, an employer may have to hire someone to cover for an employee on leave. Even in the absence of this extra expense, leave may also be costly for the morale of coworkers, who may resent and have to cover for the employee on leave.

Nonetheless, scenario one tries to minimize the cost of the requested accommodation by limiting the continuous leave portion to two weeks, making it unpaid, and providing reassurance that the candidate is willing to make up at least some of the employer cost by working from home. The scenario is intended to test whether a request for a low-cost accommodation is an impediment to workers at the hiring stage—and whether the answer to this question depends upon either the gender of the candidate or the underlying health condition behind the requested accommodation. Note that the underlying health conditions, while different in nature, were deliberately

designed to impose expected future costs to the employer that were as similar as possible.<sup>121</sup>

After selecting one finalist candidate to hire, subjects answered a series of questions about their motivations in reaching their decisions, intended to probe why (if at all) subjects were hesitant to hire a worker who required a low-cost accommodation in the workplace. Specifically, subjects rated on a five-point Likert scale how important the selected candidate's undergraduate major, previous employment, likelihood of remaining with the firm, likelihood of advancing within the firm, ability to be present in the office, and costliness of employing were to their hiring decision. Subjects also reported how important the preferences of firm customers and other firm employees were to their decision.

Finally, using two follow-up questions, scenario one tested whether and how subjects' willingness to provide a costly accommodation might have changed once a candidate had already been hired. All subjects saw the following two questions asking them to report their willingness to pay in order to accommodate an existing worker.

Question 1: Regardless of your answers to the prior questions, now suppose that your firm has hired **[Amanda/Christopher/Jennifer/Michael]**. Shortly after starting the job, **[Amanda/Christopher/Jennifer/Michael]** asks how many weeks of medical leave **[she/he]** can take in connection with **[her/his] [knee surgery/hip surgery/cesarean section]**. What is the maximum amount of medical leave you are willing to grant **[Amanda/Christopher/Jennifer/Michael]**? Please select a number between 0 and 16 weeks.

Question 2: During **[Amanda/Christopher/Jennifer/Michael]**'s medical leave, what percent of **[her/his]** regular salary are you willing to pay **[her/him]**? Please select a number between 0 and 100 percent.

For each question, subjects reported their answers using a continuous slider bounded by the two extreme values. Taken together, subject responses to the questions in scenario one can provide insight into what (if any) barrier the need for a costly accommodation imposes on a worker at the hiring stage, as well as what (if any) barrier the need for a costly accommodation imposes on a worker who is already on the job. These questions can help to illuminate not only how the reasonable accommodation model is working for currently

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121. One concern with making pregnancy an underlying health condition in this scenario is that, in addition to signaling the need for immediate time off, it also signals the need for future, intermittent time off to care for the child that results. In order to mitigate this concern, candidates who needed knee or hip surgery volunteered that they too would need intermittent time off after their continuous two-week leave in order to attend follow-up doctors' appointments and physical therapy.



protected workers (i.e., disabled individuals) but also how it might work in the future for groups of workers for whom the reasonable accommodation model is proposed as a solution (i.e., all pregnant women and individuals with nondisabling health conditions).<sup>122</sup> Scenario two seeks to answer the same set of questions with respect to a *costless* workplace accommodation.

### C. SCENARIO TWO

Although workplace accommodations often come with costs, many are costless to the employer. According to a 2013 employer interview study by the Job Accommodation Network (“JAN”), 58 percent of disability accommodations cost the employer nothing. Of the 42 percent of accommodations that are costly, the median employer expenditure is 500 dollars.<sup>123</sup> Of course, which accommodations will be costless may be difficult for an employer to predict *ex ante*. Still, given the number of costless accommodations, it is important to test subjects’ reactions to workplace accommodations that are both low cost (as in scenario one) and costless. In scenario two, in which one or more candidates may have required a costless accommodation, all subjects saw the following information (with variations again noted in brackets and boldface type):

Assume you work at a medium-sized book publishing firm. Your firm has a vacancy for the position of Copy Editor, and you have been asked to rank applicants. A Copy Editor is responsible for proofreading book manuscripts prior to publication. After reviewing many applications, you narrow the field down to two candidates, **[Melissa/Daniel]** Smith and **[Sarah/David]** Johnson, and interview both of them.

The resumes for **[Melissa/Daniel]** Smith and **[Sarah/David]** Johnson are similar in terms of educational background and work histories. Both candidates received their college degrees eight years ago from small, private universities.

**[Melissa/Daniel]** has a bachelor’s degree in literature. Since college, **[Melissa/Daniel]** has worked as an Assistant Design Editor at a small magazine.

**[Sarah/David]** has a bachelor’s degree in English. Since college, **[Sarah/David]** has worked as an Assistant Layout Editor at a small newspaper.

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122. See *supra* Section III.A.

123. See BETH LOY, JOB ACCOMMODATION NETWORK, WORKPLACE ACCOMMODATIONS: LOW COST, HIGH IMPACT 3 (2015), available at <https://www.shrm.org/hr-today/news/hr-magazine/Documents/LowCostHighImpact.pdf> [<https://perma.cc/GWX7-84MX>].

Both candidates have strong references, and after the interviews, you believe that you could easily work with either candidate.

Which candidate will you hire for the position of Copy Editor?

In addition, subjects were randomly assigned to view one of the three following options about each of the finalist candidates:

During the interview, you ask if [Melissa/Daniel/Sarah/David] has any questions about the logistics of the job.

Option 1: [Melissa/Daniel/Sarah/David] does not have any questions about logistics.

Option 2: [Melissa/Daniel/Sarah/David] asks if large desk chairs are available for firm employees. Due to [her/his] weight, [she/he] is concerned about the ability of a standard-size desk chair to support [her/him]. In fact, your firm already owns several large desk chairs, and you inform [her/him] that it will not be a problem.

Option 3 (female candidates only): [Melissa/Sarah] asks if large desk chairs are available for firm employees. [Melissa/Sarah] had a baby last year and, since she never lost her pregnancy weight, she is concerned about the ability of a standard-size desk chair to support her. In fact, your firm already owns several large desk chairs, and you inform her that it will not be a problem.

The 25 variations of scenario two are summarized in Appendix Table 2. In this scenario, candidates' need for an accommodation was again derived from their health status (i.e., their weight), although some candidates offered an explanation for their weight (pregnancy), while others did not. Since the accommodation of a larger chair was costless to the employer, it might be tempting to predict a priori that any resistance expressed by subjects towards hiring a worker in need of a costly accommodation in scenario one will decrease or even disappear in scenario two. On the other hand, weight was intentionally chosen as the underlying health condition in scenario two because a long line of psychology research<sup>124</sup> indicates that individuals who

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124. See, e.g., Tanya Berry & John C. Spence, *Automatic Activation of Exercise and Sedentary Stereotypes*, 80 RES. Q. EXERCISE & SPORT 633, 640 app. A (2009) (documenting subject characterizations of obese individuals as “unmotivated, lethargic, unfit, lazy, inactive, sluggish, idle, weak, sickly, [and] loaf”); see also Tatiana Andreyeva et al., *Changes in Perceived Weight Discrimination Among Americans, 1995–1996 Through 2004–2006*, 16 OBESITY 1129, 1131 (2008) (documenting that discrimination based on weight and height is just as common as discrimination based on race or age); Rebecca M. Puhl & Kelly D. Brownell, *Confronting and Coping with Weight Stigma: An Investigation of Overweight and Obese Adults*, 14 OBESITY 1802, 1810 (2006) (finding that as BMI increases, so do reported instances of weight stigma and weight discrimination); Rebecca M. Puhl & Kelly D. Brownell, *Bias, Discrimination, and Obesity*, 9 OBESITY RES. 788, 801 (2001) (concluding that “discrimination against obese individuals is very real. It occurs in key areas affecting health and well-being”); Mark V. Roehling, *Weight-Based Discrimination in Employment: Psychological and Legal Aspects*, 52 PERSONNEL PSYCHOL. 969, 983–85 (1999)

are overweight or obese may be blamed for their condition in a way that individuals who are pregnant or must have surgery may not be blamed.<sup>125</sup>

After selecting one finalist candidate to hire, subjects again answered a series of questions about their motivations in reaching their decisions. For scenario two, subjects rated on a five-point Likert scale how important the selected candidate's undergraduate major, previous employment, likelihood of remaining with the firm, likelihood of advancing within the firm, logistics of employing, and costliness of employing were to their hiring decision. Subjects also reported how important the preferences of firm customers and other firm employees were to their decision.

Like scenario one, scenario two concluded by testing how subjects' willingness to provide an accommodation might have changed once a candidate had already been hired. All subjects saw the following question asking them to report their willingness to pay in order to accommodate an existing worker:

Regardless of your answers to the prior questions, now suppose your firm has hired [Melissa/Daniel/Sarah/David]. Shortly after starting the job, [Melissa/Daniel/Sarah/David] approaches you about needing a large desk chair due to [her/his] weight. Although your firm used to have spare large desk chairs in storage, you discover that the firm has given them all away. What is the maximum amount you are willing to spend on a large desk chair for [Melissa/Daniel/Sarah/David]? Please select a number between \$0 and \$1,000.

Subjects reported their answer to this follow-up question using a continuous slider between \$0 and \$1,000. In sum, although scenarios one and two are highly similar, scenario two can help provide additional insight into subjects' willingness to accommodate workers when the accommodation is costless and when the underlying reason for needing accommodation may be potentially more stigmatizing. The two scenarios can also provide insight

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(concluding after a review of the psychology literature that stereotypes of obese individuals as lacking self-discipline, lazy, less conscientious, less competent, sloppy, and more likely to have a personal problem were common).

125. This blame effect has real consequences in the workplace, particularly for overweight and obese females. See, e.g., Shinall, *supra* note 116, at 131–34 (2016) (finding that overweight and obese women earn less than similarly situated normal-weight women, particularly in jobs that require interaction with the public); see also Susan Averett & Sanders Korenman, *The Economic Reality of the Beauty Myth*, 31 J. HUM. RESOURCES 304, 306–09 (1996) (finding that obese women ages 23 to 31 have lower family incomes than similar, normal weight women); John Cawley, *The Impact of Obesity on Wages*, 39 J. HUM. RESOURCES 451, 451–74 (2004) (reviewing and confirming a long line of economics research finding that obese women earn less than normal-weight women); Steven L. Gortmaker et al., *Social and Economic Consequences of Overweight in Adolescence and Young Adulthood*, 329 NEW ENG. J. MED. 1008, 1009–11 (1993) (finding that overweight adolescents and young adults have lower household incomes in early adult life than normal weight comparators); José A. Pagán & Alberto Dávila, *Obesity, Occupational Attainment, and Earnings*, 78 SOC. SCI. Q. 756, 757–68 (1997) (finding that obese women suffer a wage penalty).

into how subjects' answers change, if at all, between the hiring stage and the existing employment stage. The results from both scenarios are reported in the next Part.

#### IV. EXPERIMENTAL RESULTS

The two experimental vignette studies outlined in Part III do not directly ask subjects about the role of ambiguity in making accommodation decisions, yet they can provide insight into the considerations that weigh heavily on subjects' minds in making such decisions (including ambiguity).<sup>126</sup> To assess how the reasonable accommodation model works in practice, the experimental studies tested subjects' relative willingness to accommodate at two critical points in the employer-employee relationship: job application and existing employment. The experiments simulated the underlying heterogeneity of the population protected by the ADA as well as the uncertainty of employers' legal obligations by testing willingness to accommodate several different health conditions that may or may not be protected under the ADA. The experiments further used motivation questions to assess whether productivity, costs, or some other consideration drove subjects who were unwilling to accommodate. Most importantly, the experiments allowed for comparison of subjects' attitudes towards accommodation when the risks associated with a given worker are more difficult to estimate (at the hiring stage) to when the risks are easier to estimate (the existing employment stage). Because employers have much more information about an existing employee—in terms of productivity, disability (if any), and onerousness of accommodation—than a job applicant, the risks associated with a disabled job applicant are necessarily more ambiguous to employers than the risks associated with an existing employee.

Tables 2 through 9 present the results from the two experimental vignette studies outlined in Part III. The results did not depend upon whether the job candidates viewed by subjects were male or female, nor did they depend upon whether the subjects themselves were male or female. As a result, the results presented in the tables below do not separate out the gender of the job candidates or of the subjects themselves. Similarly, because the results did not meaningfully differ between subjects who had previous hiring experience and those who did not, the results presented below include the responses of all subjects. The principal findings, which indicate that uncertainty surrounding the costs of accommodation weigh heavily on decisionmakers' minds, particularly at the job application stage, are highlighted below.

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<sup>126</sup> Researchers conducting experimental vignette studies typically avoid asking subjects directly about issues of interest because of concerns about priming subjects. For an example of an ambiguity aversion experiment that also did not directly ask subjects about ambiguity (but could nonetheless detect it), see Hersch & Shinall, *supra* note 1, at 54.

A. *COSTLY ACCOMMODATIONS IMPOSE A GREATER BARRIER FOR  
JOB APPLICANTS*

Economists have developed two principal theories to explain why discrimination—whether based on disability or on some other characteristic—exists in the labor market. First, disability discrimination may be driven by taste-based discrimination—that is, customers', coworkers', or employers' own distaste regarding the appearance of or association with a disabled individual.<sup>127</sup> Second, disability discrimination may be driven by statistical discrimination, or employers using observable characteristics like disability to proxy for a worker's productivity in the absence of complete information.<sup>128</sup> Note that economic theories of taste-based discrimination and statistical discrimination are not mutually exclusive. The former theory posits that discrimination is driven by personal preferences unrelated to workplace productivity or cost, while the latter theory posits that discrimination is driven by employers' imperfect attempts to estimate productivity or cost.<sup>129</sup>

Along these lines, to the extent that employers prefer not to employ disabled workers, this preference may be based on employers' distaste for disability, the higher costs of employing disabled workers, or some combination of both. Considered together, the results from the two experimental studies can provide insight into how heavily the cost component weighs on decisionmakers' minds. Comparing the results from scenario one (the costly leave accommodation) to scenario two (the costless chair accommodation) makes clear that requiring a costly accommodation serves as a much greater impediment at the hiring stage than requiring a costless

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127. The terms "taste-based discrimination" and "distaste for discrimination" are used here in the same manner used by Gary Becker (and now commonly used by economists) to describe discrimination against African-Americans in his classic 1957 work. GARY BECKER, *THE ECONOMICS OF DISCRIMINATION* 14 (2d ed. 1971).

128. According to the economic theory of statistical discrimination, employers use observable traits (including protected class status) as proxies for productivity-related characteristics—in other words, employers resort to stereotypes. For the seminal works developing this important theory in the economics literature, see Edmund S. Phelps, *The Statistical Theory of Racism and Sexism*, 62 *AM. ECON. REV.* 659, 659–61 (1972) (using examples of racism and sexism to develop the theory); and Kenneth J. Arrow, *Models of Job Discrimination & Some Mathematical Models of Race in the Labor Market*, in *RACIAL DISCRIMINATION IN ECONOMIC LIFE* 83–102, 187–204 (Anthony H. Pascal ed., 1972) (developing the theory in the context of racial discrimination). See also Dennis J. Aigner & Glen G. Cain, *Statistical Theories of Discrimination in Labor Markets*, 30 *INDUS. & LAB. REL. REV.* 175, 175–87 (1977) (further developing early economic models of statistical discrimination).

129. Although statistical discrimination remains the most popular explanation for the continuing plight of historically disadvantaged groups in the workplace, economists (and empiricists more generally) frequently consider both theories. See generally Hersch & Shinall, *supra* note 1, at 75 (acknowledging that both taste-based and statistical discrimination may be at work when evaluating historically disadvantaged groups, and attempting to hold these concerns constant in the context of an experimental study); Shinall, *The Pregnancy Penalty*, *supra* note 11, at 754–68 (considering both cost-based and taste-based explanations for pregnant workers' disadvantage in the workplace).

one. Table 2 presents the hiring results for applicants with non-pregnancy-related health conditions (i.e., the applicants who needed surgery in scenario one and needed a large chair for their weight in scenario two); Table 3 presents the hiring results for the applicants with pregnancy-related health conditions (i.e., the applicants who needed a cesarean section in scenario one and needed a large chair for their post-pregnancy weight in scenario two).

Table 2. Probability of Hiring an Applicant with a Non-Pregnancy Health Condition

Scenario	Requested Accommodation	When One Applicant Has a Non-Pregnancy Health Condition	When One Applicant Has a Non-Pregnancy Health Condition, the Other Applicant Has a Pregnancy Health Condition	When One Applicant Has a Non-Pregnancy Health Condition, the Other Applicant Does Not Need Accommodation
1	Needs Leave for Hip/Knee Surgery	37.86%*	51.34%	31.43%*
2	Needs Large Chair for Weight	45.00%*	40.68%*	47.16%*

\* Statistically significant difference from 50/50 split at the 5% level

Table 3. Probability of Hiring an Applicant with a Pregnancy Health Condition

Scenario	Requested Accommodation	When One Applicant Has a Pregnancy Health Condition	When One Applicant Has a Pregnancy Health Condition, the Other Applicant Has a Non-Pregnancy Health Condition	When One Applicant Has a Pregnancy Health Condition, the Other Applicant Does Not Need Accommodation
1	Needs Leave for Cesarean Section	43.72%*	48.66%	39.25%*
2	Needs Large Chair for Post-Pregnancy Weight	54.02%*	59.32%*	48.57%

\*Statistically significant difference from 50/50 split at the 5% level

Subjects were far more hesitant to hire any applicant who needed an accommodation in scenario one (when it was costly) than in scenario two—regardless of the applicant’s underlying health condition. Looking at the final columns of Tables 2 and 3, less than 40 percent of subjects were willing to hire a candidate who needed a two-week, unpaid leave in six months, whether that leave was for pregnancy- or non-pregnancy-related surgery, if the alternative candidate did not need leave.

On the other hand, subjects exhibited far less reluctance to hire a candidate who required the costless accommodation in scenario two. Looking again at the final columns of Tables 2 and 3, subjects only slightly preferred (by 5.68 percentage points) candidates who did not need an accommodation to those who needed a chair for their non-pregnancy-related weight. Moreover, subjects were completely indifferent between candidates who did not need an accommodation and those who needed a chair for their pregnancy-related weight.

The results in Tables 2 and 3 suggest that anticipated cost, more than distaste for disability, may be principally responsible for any aversion towards employing disabled workers. Furthermore, the results indicate job applicants who reveal the need for an accommodation at the hiring stage may never be given a chance by employers. Unless the applicant assures the employer that the applicant’s required accommodation will be costless, as in scenario two, the employer may be significantly deterred from hiring the applicant when the cost of accommodation is uncertain, but likely to be more than zero. In scenario one, the cost associated with a brief, unpaid leave many months in the future is uncertain, albeit probably low. Yet even this low-cost accommodation can pose a serious barrier to job applicants. Moreover, subjects admitted the important role of costs—both monetary and nonmonetary—in reaching their hiring decisions, as seen in the next Section.

*B. ACCOMMODATION COSTS GIVE RISE TO GREATER CONCERN THAN  
DISTASTE FOR DISABILITY*

After making their hiring decisions, subjects answered a series of questions about their motivations for candidate selection, described previously in Part III. These follow-up questions probed candidates regarding their motivations in terms of perceived candidate qualifications (college major, previous job, likelihood of advancing, and likelihood of remaining), candidate fit (customer and coworker preferences), and candidate expenditures. With respect to expenditures, subjects considered the importance both of monetary costs and nonmonetary costs (logistics and presence in workplace) associated with the job candidates. The results in Tables 4 through 7 reaffirm the conclusions of the prior Section: Subjects admitted their concerns over the costs, both monetary and nonmonetary, of

accommodating a job candidate, but expressed less concern over how employing a disabled worker might look, or their distaste for disability.<sup>130</sup>

Table 4 reports the percent of subjects who ranked a motivation for selection as important or very important on a five-point Likert scale for scenario one; Table 5 reports the same figures for scenario two. Both tables report these percentages for all subjects, subjects who hired a worker with a non-pregnancy-related health condition, and subjects who hired a worker with a pregnancy-related health condition. A strong majority of all subjects rated the candidate qualification motivations as important. Yet because almost everyone selected qualification motivations as important, this selection seemed to have little influence on which candidate was ultimately selected.<sup>131</sup> Note in Tables 4 and 5 that the percentages selecting college major, previous job, and likelihood of remaining and advancing are consistent across columns, regardless of whom the subject eventually decided to hire.

Concerns about customers' and coworkers' tastes for disability were significantly less important to the subjects than candidate qualifications, with less than 40 percent of subjects rating these motivations as important in the two scenarios. Moreover, as with the qualification motivations, little relationship seems to exist between rating customer or coworker preferences as important and the candidate hired. Notice again that the percent of subjects selecting coworker and customer preferences as important are relatively consistent across columns, whether or not the subject decided to hire a candidate who needed an accommodation. These observations from Tables 4 and 5 hold in the analyses presented in Tables 6 and 7, which regress a subject's decision to hire a worker in need of accommodation on the subject's important motivations. The relative lack of importance subjects assigned to customer and coworker preferences casts doubt on theories that subjects avoid hiring workers in need of accommodation primarily because they do not like how disability looks or are worried about their own or others' distaste for disability.

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130. See *supra* Section IV.A and Tables 2, 3.

131. In all likelihood, the lack of candidate qualifications' explanatory power is due to the fact that the finalist candidates were intentionally designed to be highly similar and interchangeable.



Table 4. Percent of Subjects Who Reported Motivation as Important or Very Important to Hiring Decision in Leave Scenario (Question 1)

	All Subjects	Subjects Who Hired a Worker Needing Surgery	Subjects Who Hired a Pregnant Worker
College Major	71.86%	72.28%	73.76%
Previous Job	83.48%	81.84%	85.09%
Likelihood of Remaining	73.54%	72.72%	75.72%
Likelihood of Advancing	62.38%	60.97%	61.51%
Presence in Workplace	63.74%	54.63%	50.94%
Cost	46.98%	42.59%	39.96%
Customer Preferences	39.73%	38.56%	39.96%
Coworker Preferences	32.02%	31.49%	30.16%
N	8,070	2,731	1,429

Table 5. Percent of Subjects Who Reported Motivation as Important or Very Important to Hiring Decision in Chair Accommodation Scenario (Question 2)

	All Subjects	Subjects Who Hired a Worker with an Unspecified Weight Condition	Subjects Who Hired a Worker with Pregnancy Weight
College Major	78.65%	79.85%	78.42%
Previous Job	83.52%	84.27%	83.93%
Likelihood of Remaining	68.00%	67.71%	69.09%
Likelihood of Advancing	58.43%	56.42%	58.94%
Logistics	49.60%	44.97%	49.33%
Cost	44.88%	39.60%	41.88%
Customer Preferences	39.42%	37.37%	38.77%
Coworker Preferences	34.35%	32.66%	35.48%
N	8,070	3,013	1,705

Table 6. Effect of Important/Very Important Subject Motivations in Willingness to Hire a Worker Needing Surgery or Pregnant Worker in Question 1 (Leave Scenario)

	(1)	(2)
	Change in Probability of Hiring a Candidate Needing Surgery	Change in Probability of Hiring a Pregnant Candidate
College Major	2.55	2.22
Previous Job	-1.06	7.98***
Likelihood of Remaining	5.69**	7.29***
Likelihood of Advancing	3.28*	-1.09
Presence in Workplace	-23.84***	-28.52***
Cost	-7.63***	-7.92***
Customer Preferences	0.40	9.09***
Coworker Preferences	0.75	-0.17
N	3,806	2,587
*p<0.1 **p<0.05 ***p<0.01		
Notes: Reported results report percentage point change estimates from a linear probability regression of hiring decision on important/very important subject motivations. Regressions in column (1) include subjects who only saw one candidate who needed surgery (where the other candidate was pregnant or had no underlying health condition). Regressions in column (2) include subjects who only saw one pregnant candidate (where the other candidate needed surgery or had no underlying health condition).		

Table 7. Effect of Important/Very Important Subject Motivations in Willingness to Hire a Worker with a Weight Condition in Question 2 (Chair Accommodation Scenario)

	(1)	(2)
	Change in Probability of Hiring a Worker with an Unspecified Weight Condition	Change in Probability of Hiring a Pregnancy Weight Worker
College Major	3.30	3.16
Previous Job	6.94***	-1.66
Likelihood of Remaining	6.43***	-0.66
Likelihood of Advancing	-3.12	0.38
Logistics	-4.69**	0.11
Cost	-13.44***	-10.56***
Customer Preferences	-0.64	2.12
Coworker Preferences	0.04	1.25
N	3,880	2,551
*p<0.1 **p<0.05 ***p<0.01		
Notes: Reported results report percentage point change estimates from a linear probability regression of hiring decision on important/very important subject motivations. Regressions in column (1) include subjects who only saw one candidate who had an unspecified weight condition (where the other candidate had not lost her pregnancy weight or had no underlying health condition). Regressions in column (2) include subjects who only saw one pregnancy weight candidate (where the other candidate needed had an unspecified weight condition or had no underlying health condition).		

In contrast, Tables 6 and 7 make clear that cost-related motivations were strongly associated with a subjects' ultimate hiring decision. Monetary costs

were undoubtedly influential in subjects' selection of a candidate to hire: Subjects who rated costs as important in scenario one (in which the requested accommodation was costly) were about eight percentage points less likely to hire a worker with any type of health condition. Even though they did not have to purchase the requested accommodation in the hiring portion of scenario two (since the employer already owned a large chair), subjects who selected costs as an important motivation in this scenario were 13.44 percentage points less likely to hire a worker with a non-pregnancy-related weight condition and 10.56 percentage points less likely to hire a worker with a pregnancy-related weight condition.

Along these lines, the results from subjects' identified motivations suggest that concerns about nonmonetary costs deterred subjects from hiring workers in need of accommodation at least as much as monetary costs. In scenario two, subjects worried about logistics were 4.69 percentage points less likely to hire a non-pregnant worker in need of accommodation. More strikingly, in scenario one, subjects who valued presence in the workplace were 23.84 percentage points less likely to hire a non-pregnant worker in need of an accommodation and 28.52 percentage points less likely to hire a pregnant worker in need of an accommodation. Indeed, subject concerns about a worker's ability to be present had, by far, the greatest predictive value in whether that subject avoided hiring a candidate in need of an accommodation.

Taken together, the results in Tables 4 through 7 indicate that the nonmonetary—and arguably, more uncertain—costs associated with accommodating a worker weigh at least as heavily on employers' minds as more directly quantifiable monetary costs associated with purchasing an accommodation. Although such concerns may constrain the opportunities of all workers who request an accommodation at the hiring stage, they impose a greater constraint on workers with particular types of health conditions, which is discussed in the next Section.

### C. *THE UNDERLYING CONDITION CAN AFFECT WILLINGNESS TO ACCOMMODATE*

As discussed in Section II.A, the ADA covers a limitless range of health conditions and, as a result, targets a population far more heterogeneous than do other antidiscrimination statutes. Along these lines, the ADA does not differentiate between the vastly different underlying health conditions that it covers: As long as a worker can demonstrate that she is substantially limited in a major life activity, she is entitled to accommodation under the Act.<sup>132</sup> It should not matter whether she is limited in all or only some of her major life

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132. See 42 U.S.C. § 12112(b)(5)(A) (2012) (defining disability discrimination as “not making reasonable accommodations to the known physical or mental limitations of an otherwise qualified individual with a disability”).

activities; in theory, a worker with carpal tunnel syndrome can be just as entitled to the ADA's protections as a worker in a wheelchair.<sup>133</sup> It also should not matter whether her limitation arises from a self-inflicted health condition or one over which she has no control; in theory, a worker in a wheelchair due to her own reckless driving is just as entitled to the ADA's protections as a worker in a wheelchair due to a congenital condition.<sup>134</sup>

Nonetheless, from an employer's perspective, different health conditions may give rise to different attitudes and present vastly different challenges. Not only may the accommodation for some health conditions be costlier than others, but, more fundamentally, determining how to accommodate some health conditions may be costlier than others. Employers may also have strong preconceived notions about certain health conditions and believe that they signal underlying qualities about workers afflicted by them.<sup>135</sup> Moreover, as discussed in Section II.A, some conditions are more familiar to employers than others, and some conditions may be more uniformly symptomatic than others. In other words, employers may not only view certain health conditions as *riskier* than others, they may also view certain health conditions as more *ambiguous* than others.

The resulting difference in willingness to accommodate workers depending upon the underlying health condition is reflected in the results from the experimental vignette studies. In scenario one, the requested accommodation was the same—two weeks of unpaid leave and intermittent leave thereafter—regardless of whether the worker needed joint surgery or a cesarean section. Similarly, in scenario two, the requested accommodation, a large chair, should have arguably been the same from an employer's perspective since the employer already owned the chair. But Tables 2 and 3 indicate that subjects were somewhat more willing to provide pregnancy-related accommodations than non-pregnancy-related accommodations.

This greater willingness to accommodate a pregnancy-related condition is more obvious in the results from scenario two. As seen in Table 3, subjects given the choice between a candidate who needed a large chair because of

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133. In other words, severity of the underlying condition should not matter for accommodation once an individual meets the substantially limited threshold. Although individuals in wheelchairs may have been more along the lines of whom Congress had in mind to protect with the passage of the ADA, carpal tunnel syndrome has been the subject of several ADA suits involving workers who had to type in their jobs—most notably, *Toyota Motor Manufacturing, Kentucky, Inc. v. Williams*, 534 U.S. 184 (2002), *superseded by statute*, ADA Amendments Act of 2008, Pub. L. No. 110-325, 122 Stat. 3553.

134. In other words, voluntariness of the underlying condition should not matter for accommodation once an individual meets the substantially limited threshold. For a discussion of the voluntariness doctrine in employment discrimination law, see Sandi Farrell, *Toward Getting Beyond the Blame Game: A Critique of the Ideology of Voluntarism in Title VII Jurisprudence*, 92 Ky. L.J. 483, 515 (2003).

135. A classic association is obesity and laziness. See, e.g., Roehling, *supra* note 124 (documenting subjects' associations of obesity with laziness in the experimental setting).

pregnancy weight and one who needed a large chair because of an unspecified weight condition preferred the pregnancy weight candidate approximately 60 percent of the time. Subjects were also indifferent between hiring candidates who needed a chair accommodation because of pregnancy weight and candidates who needed no accommodation at all. Contrast the results in Table 2, which indicate that subjects still slightly preferred candidates who needed no accommodation to candidates who needed a chair accommodation because of an unspecified weight condition.

The preference for accommodating workers with a pregnancy-related condition is visible in scenario one as well, albeit less apparent. When given the choice between a candidate in need of surgery and a candidate without a need, 39.25 percent of subjects hired the candidate in need of pregnancy-related surgery, but only 31.43 percent of subjects hired the candidate in need of non-pregnancy-related surgery. Still, subjects presented with a pregnancy-related surgery candidate and a non-pregnancy-related surgery candidate expressed no statistically significant preference between them.

Several factors may explain why subjects preferred accommodating pregnancy over other types of health conditions. Subjects may hold more positive priors, or less stigma, towards pregnancy than towards other health conditions.<sup>136</sup> Pregnancy is the precursor to bringing a child into the world (which for many, is a joyous event), and as noted in Section III.B, remains an incredibly common experience.<sup>137</sup> On the other hand, pregnancy may not be a uniformly positive signal, particularly for employers, since many women will take leave from their job, require more flexibility from their job, or drop out of the labor market altogether because of pregnancy and childbirth.<sup>138</sup>

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136. Economist Marjorie Baldwin has conducted pioneering research demonstrating the different levels of stigma attached to different health conditions. Perhaps unsurprisingly, wage and employment gaps are similarly heterogeneous (with the most stigmatized workers experiencing the largest wage and employment gaps). See generally MARJORIE L. BALDWIN, *BEYOND SCHIZOPHRENIA: LIVING AND WORKING WITH A SERIOUS MENTAL ILLNESS* (2016) (demonstrating that mentally ill individuals fare worse than other disabled individuals in the labor market); Marjorie L. Baldwin & Chung Choe, *Wage Discrimination Against Workers with Sensory Disabilities*, 53 *INDUS. REL.* 101 (2014) (documenting different disability penalties for workers with sensory disabilities than for workers with physical disabilities); Marjorie L. Baldwin & Steven C. Marcus, *The Impact of Mental and Substance-Use Disorders on Employment Transitions*, 23 *HEALTH ECON.* 332 (2014) [hereinafter Baldwin & Marcus, *The Impact of Mental and Substance-Use Disorders on Employment Transitions*] (providing evidence that individuals with substance-use disorders are more likely to transition out of unemployment, but individuals with mental illness are less likely to transition out of unemployment); Marjorie L. Baldwin & Steven C. Marcus, *Perceived and Measured Stigma Among Workers with Serious Mental Illness*, 57 *PSYCHIATRIC SERVS.* 388 (2006) (finding evidence of high levels of perceived and actual stigma against workers with mood, anxiety, and psychotic disorders).

137. Almost nine out of every ten women have given birth. See Luscombe, *supra* note 111.

138. For a discussion of the short-term and long-term effects of pregnancy, and the resulting signals to employers, see Shinall, *The Pregnancy Penalty*, *supra* note 11, at 754–68.

Along these lines, subjects' preference for accommodating pregnant workers may simply be the result of greater familiarity with pregnancy—especially when compared to the relative unfamiliarity of the other health conditions in the vignette studies. Fifty-eight percent of female subjects in the mTurk sample report ever having been pregnant, and 53 percent of the entire sample have children living in their household—suggesting that at least half of subjects are well acquainted with pregnancy and childbirth.<sup>139</sup> As a result, the costs associated with accommodating a currently or recently pregnant worker may have seemed less uncertain than the costs associated with accommodating a worker with another health condition.<sup>140</sup>

More critically, recall from Part III that, except in the case of pregnancy, subjects did not know what the underlying health condition was for the other workers in need of accommodation. Subjects knew the worker would need joint surgery or a larger chair because of weight, but unless the worker was pregnant, subjects did not know *what caused* the need for joint surgery or the weight gain. Nor is this lack of information on the decisionmaker's part unrealistic at the hiring stage; as discussed in Section II.A, the ADA strictly prohibits employers from making “inquiries of a job applicant as to whether such applicant is an individual with a disability or as to the nature or severity of such disability” before making an employment offer.<sup>141</sup> The Act limits employer's questions to inquiries regarding “the ability of an applicant to perform job-related functions” at the interview stage so that an employer will not know the precise nature of an applicant's health condition (unless the applicant volunteers this information).<sup>142</sup>

Consequently, in its current form, the ADA may perpetuate, and even heighten, ambiguity with respect to job applicants. If an employer discovers at the interview stage that a job applicant will require an accommodation—either through the visibility of the applicant's condition or the applicant volunteering the information—the Act severely constrains the type of follow-

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139. Here, I cautiously estimate that at least half the sample is very familiar with pregnancy since not all women who have been pregnant were able to carry to term (or for more than a few weeks), and subjects may have nonbiological children living in their household as the result of marriage or adoption. On the other hand, this estimate may understate the number of subjects highly familiar with pregnancy since subjects may have experience with close friends' or family members' pregnancies.

140. Interestingly, however, subjects who had previously been pregnant or had children were not more generous in their willingness to pay for accommodations for existing workers. *See infra* Appendix Table 3.

141. 42 U.S.C. § 12112(d)(2)(A) (2012); *see also Pre-Employment Inquiries and Medical Questions & Examinations*, U.S. EQUAL EMP'T OPPORTUNITY COMM'N, [https://www.eeoc.gov/laws/practices/inquiries\\_medical.cfm](https://www.eeoc.gov/laws/practices/inquiries_medical.cfm) [<https://perma.cc/LE3C-Q6GU>] (“An employer may not ask a job applicant, for example, if he or she has a disability (or about the nature of an obvious disability). An employer also may not ask a job applicant to answer medical questions or take a medical exam before making a job offer. An employer may ask a job applicant whether they can perform the job and how they would perform the job.”).

142. 42 U.S.C. § 12112(d)(2)(B).

up questions the employer may ask about the condition. Arguably, the Act does not even permit an employer to ask the name of the employee's diagnosis.<sup>143</sup> Although intended to protect disabled workers, these constraints prevent employers from proxying the risk associated with hiring such workers and leave employers in a state of ambiguity with respect to them.

In sum, currently and recently pregnant workers who needed accommodation in these experiments may have had better outcomes than other workers who needed accommodation—not because they were pregnant, but because subjects knew the underlying health condition driving their need for accommodation. As a result, subjects were better able to assess the underlying risk associated with hiring a worker disabled by pregnancy than a worker disabled by an unknown health condition. The results presented in the next Section, which examines subjects' willingness to accommodate workers post-offer, strengthen the conclusion that ambiguity may be responsible for much of the aversion exhibited towards disabled workers (particularly, disabled workers with unknown health conditions) at the pre-offer stage.

*D. ACCOMMODATION IMPOSES A GREATER BARRIER FOR JOB APPLICANTS  
THAN EXISTING EMPLOYEES*

Even though job applicants who needed accommodation because of pregnancy may have fared better than other applicants who needed accommodation, subjects overall preferred applicants who did not volunteer the need for accommodation before hiring. This result, combined with subjects' expressed concerns about the nonmonetary and monetary costs of accommodation, may at first suggest subjects' total opposition to the ADA employer-funded reasonable accommodation model. Yet subjects' answers to questions about willingness to accommodate workers *after hiring* indicates that the idea of employer-funded accommodation need not be completely scrapped. As seen below in Tables 8 and 9, subjects expressed far more willingness to accommodate existing workers than job candidates.

Tables 8 and 9 present subjects' willingness to pay for an accommodation after a worker had been hired in scenarios one and two, respectively. Turning first to Table 8, subjects' reported willingness to accommodate hired workers with leave was surprisingly generous—much more generous than any leave asked for by job candidates prior to being hired. On average, subjects were willing to grant about four weeks of leave to existing workers in need of non-pregnancy-related surgery and about six weeks of leave to existing workers in

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143. Cf. U.S. EQUAL EMP'T OPPORTUNITY COMM'N, QUESTIONS AND ANSWERS: ENFORCEMENT GUIDANCE ON DISABILITY-RELATED INQUIRIES AND MEDICAL EXAMINATIONS UNDER THE AMERICANS WITH DISABILITIES ACT (ADA), *available at* <https://www.eeoc.gov/policy/docs/qanda-inquiries.html> [<https://perma.cc/3UBZ-DQ2U>] (“[P]rior to an offer of employment[], an employer may not ask any disability-related questions or require any medical examinations, even if they are related to the job.”).

need of pregnancy-related surgery. More remarkably, subjects expressed a willingness to pay existing workers over half of their salary while out on leave. Subjects' willingness to pay was again more generous for pregnant workers (62.74 percent of salary) than for nonpregnant workers (56.72 percent of salary). Table 9 demonstrates a similar generosity towards existing workers not seen in the prior questions about job candidates at the hiring stage. Regardless of the reason why the worker needed a large chair in scenario two, subjects expressed willingness to pay about \$300 for the accommodation. The generosity exhibited towards existing workers does not appear to be driven by subjects' prior experience or empathy effects: Appendix Table 3 demonstrates that subjects who had prior experience with pregnancy, disability, or weight gain were typically no more generous in their willingness to accommodate existing workers than their less experienced peers.

Table 8. Average Willingness to Provide Accommodation in Question 1 (Leave Scenario)

	Willingness to Provide Accommodation for a Worker Needing Surgery			Willingness to Provide Accommodation for a Pregnant Worker		
	Subjects Who Viewed a Surgery Candidate	Subjects Who Hired a Surgery Candidate	Subjects Who Rejected a Surgery Candidate	Subjects Who Viewed a Pregnant Candidate	Subjects Who Hired a Pregnant Candidate	Subjects Who Rejected a Pregnant Candidate
Number of Weeks of Leave	4.44	4.56	4.37	6.44	7.05	5.97
Percentage of Pay During Leave	56.72%	57.93%	55.98%	62.74%	68.00%	58.65%
N	3,806	1,441	2,365	2,587	1,131	1,456
Notes: Surgery candidate estimates include subjects who only saw one candidate who needed surgery (where the other candidate was pregnant or had no underlying health condition). Pregnant candidate estimates include subjects who only saw one pregnant candidate (where the other candidate needed surgery or had no underlying health condition).						



Table 9. Average Willingness to Provide Accommodation in Question 2  
(Chair Accommodation Scenario)

	Willingness to Provide Accommodation Because of Unspecified Weight Condition			Willingness to Provide Accommodation for Pregnancy Weight		
	Subjects Who Viewed an Unspecified Weight Candidate	Subjects Who Hired an Unspecified Weight Candidate	Subjects Who Rejected an Unspecified Weight Candidate	Subjects Who Viewed a Pregnancy Weight Candidate	Subjects Who Hired a Pregnancy Weight Candidate	Subjects Who Rejected a Pregnancy Weight Candidate
Price of Desk Chair	\$315.27	\$344.61	\$291.26	\$305.32	\$316.45	\$292.25
N	3,880	1,746	2,134	2,551	1,378	1,173
Notes: Unspecified weight candidate estimates include subjects who only saw one candidate who had an unspecified weight condition (where the other candidate had not lost her pregnancy weight or had no underlying health condition). Pregnancy weight candidate estimates include subjects who only saw one pregnancy weight candidate (where the other candidate had an unspecified weight condition or had no underlying health condition).						

Still, perhaps the most surprising result from Tables 8 and 9 is the small variation in responses between the subjects who had previously hired and those who had previously rejected a job candidate in need of accommodation. Subjects who had rejected a job candidate in need of a non-pregnancy-related leave were nonetheless willing to grant an existing worker 4.37 weeks of leave at 55.98 percent of normal pay (compared to subjects who had previously hired such candidates, who were willing to grant an existing worker 4.56 weeks of leave at 57.93 percent of normal pay). The difference between the two groups of subjects was bigger for pregnancy-related conditions—subjects who had previously hired pregnant workers were about one week and ten percent of pay more generous with existing pregnant workers. Yet subjects who had rejected a pregnant worker in the prior question were still willing to grant an existing pregnant worker 5.97 weeks of leave at 58.65 percent of normal pay.

The differences between subjects who had previously hired and those who had previously rejected a job candidate in need of accommodation were even smaller for scenario two. Subjects who had previously rejected a job candidate who needed a chair for an unspecified weight condition were willing to pay up to \$291.26 for a chair once that candidate had been hired (compared to subjects who had previously hired the candidate, who were willing to pay up to \$344.61). Moreover, subjects who had previously rejected a job candidate who needed a chair for post-pregnancy weight were willing to pay up to \$292.25 for a chair once that candidate had been hired (compared to subjects who had previously hired the candidate, who were willing to pay up to \$316.45).

Taken together, the results presented in this Section provide what is arguably the most important and novel insight of this experiment: The ADA's failure to improve wage and employment outcomes of disabled individuals over the past three decades may be principally due to barriers to entry at the hiring stage. Even the subjects who avoided workers in need of an accommodation at the hiring stage expressed ample willingness to accommodate these same workers once they had been hired. Questions then arise regarding what creates these barriers to entry, and how accommodation legislation can be constructed to reduce such barriers.

Beginning to answer such questions requires stepping back to consider what distinguishes job candidates from existing employees. As discussed in Section II.A, job candidates present a great deal more uncertainty to employers than do existing employees. At the hiring stage, employers can only guess how productive a worker will be based on her credentials and information revealed during an interview. Job candidates who reveal the need for accommodation during an interview (whether voluntarily or involuntarily) risk adding to this uncertainty, particularly if employers remain in the dark about their underlying health condition, as the ADA currently both allows and encourages. Employers who have incomplete information about a job candidate's health condition will have difficulty estimating how needed the requested accommodation is, how helpful it will be, how sufficient a solution it will be, and, at bottom, how much additional cost (if any) hiring a disabled candidate will introduce as a result of accommodation.

Once a worker has been hired, however, the employer should be better able to estimate the answer to all these questions. For both disabled and nondisabled workers, the employer has more accurate information regarding their expected productivity from personal experience. For disabled workers, the employer also has more accurate information regarding the expected cost of accommodating the worker from personal experience. Moreover, the current reasonable accommodation model allows employers to sharpen their accommodation cost estimates at the post-offer stage by permitting employers to collect additional information regarding the worker's medical condition.<sup>144</sup> That allowance is notably absent, however, at the pre-offer stage—when employers could arguably benefit most from additional information.<sup>145</sup>

In sum, the costs and benefits associated with hiring a job candidate are inherently uncertain. The costs become even more uncertain when an employer knows that a job candidate has a health condition that necessitates an accommodation, but the employer lacks full information on that health condition. Because the ADA restricts information flow regarding a worker's underlying health condition at the hiring stage, it may undermine, instead of

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144. See 42 U.S.C. § 12112(d)(4)(A) (permitting post-offer medical examinations that are “job-related and consistent with business necessity”).

145. See *id.* (prohibiting pre-offer medical examinations).

encourage, employers from taking a chance on disabled workers. As a result, reforms to the ADA must focus on making any risks associated with hiring a disabled worker easier for employers to estimate and, in turn, less ambiguous. Such reforms are considered in Part V.

## V. IMPROVING THE ADA

The results from the experiment discussed in the prior Part indicate that the shortfalls of the ADA may be most severe at the hiring stage and substantially driven by the ambiguity it perpetuates regarding the costs of accommodating a disabled worker. As a result, this Part considers how the ADA can best be reformed to reduce, instead of promote, employer uncertainty at the hiring stage with respect to protected workers. The ADA has disappointed its targeted population—workers substantially limited in a major life activity<sup>146</sup>—long enough, and the reasonable accommodation model certainly must be reformed before being exported to other legislation aimed at protecting other disadvantaged groups, such as pregnant workers, caretakers, and workers with nondisabling health conditions.<sup>147</sup>

### A. AGAINST RESTRICTING CONVERSATIONS AT HIRING

Because subjects expressed much more reluctance towards workers needing accommodation at the hiring stage than at the employment stage, one potential remedy to the current version of the ADA may be to completely bar pre-employment discussions about disability. Yet, as previously discussed, the ADA already has some protections built into the statute to limit the scope of pre-employment conversations. 42 U.S.C. § 12112(d)(2) states:

[A] covered entity shall not conduct a medical examination or make inquiries of a job applicant as to whether such applicant is an individual with a disability or as to the nature or severity of such disability. . . . A covered entity may make pre-employment inquiries into the ability of an applicant to perform job-related functions.<sup>148</sup>

As currently written, this section prevents employers from asking job applicants if they are disabled, inquiring about their health conditions, or requiring a medical examination of job applicants before making an offer of employment. But this section does *not* prohibit discussions about a disability or other health conditions that are volunteered by the applicant.<sup>149</sup> Recall that

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146. See *supra* note 4 and accompanying text.

147. See *supra* notes 115–19 and accompanying text.

148. 42 U.S.C. § 12112(d)(2).

149. Note that courts evaluating this section of the Act have made clear that information *unnecessarily* volunteered by workers with respect to their health status does not enjoy the protections of 42 U.S.C. § 12112. See, e.g., *Equal Emp't Opportunity Comm'n v. Thrivent Fin. for Lutherans*, 700 F.3d 1044, 1052 (7th Cir. 2012) (finding that a worker who unnecessarily

in both of the experimental scenarios presented in the last Part, the job applicants revealed information (albeit incomplete information) about their health statuses during the interview without solicitation from the employer.

Because the experimental results indicate that pre-offer discussions about both the need for an accommodation and the nature of the required accommodation substantially reduce an applicant's chances of receiving a job offer, it may be tempting to conclude that the best solution is barring such pre-offer discussions altogether. Yet there are reasons to be skeptical about the efficacy of this potential fix to the ADA. Even if pre-offer conversations about disability were totally barred at the interview stage, this bar would not help workers with visible disabilities. In order to take considerations about disability completely off the table at an in-person interview, job applicants with visible disabilities would need to hide their condition. Not only would a policy that encouraged hiding disability pre-offer be unworkable (if not impossible) for many applicants, it would also raise serious ethical concerns about deception. Not to mention that encouraging applicants to hide information from potential employers could undermine the foundation of the employer-employee relationship from the outset.

Intentionally hiding a disability from an employer is fraught with problems, yet *not* hiding a disability in the presence of a pre-offer conversation bar would place workers with visible disabilities in a particularly precarious position. An employer interviewing an applicant with a visible disability may worry about her ability to perform essential job functions, but not be able to ask any questions that would quell these worries. Along these lines, a worker with a visible disability may be fully capable of performing essential job functions—with or without an accommodation—but a complete conversation bar would prevent the worker from even volunteering such information to the employer.

Because disability conversation bars during in-person interviews are unworkable for applicants with visible disabilities, another possible solution that emerges is curtailing or restricting the use of in-person interviews. One potential model for restricting interviews in order to reduce bias is the blind orchestra audition. Two decades ago, Claudia Goldin and Cecilia Rouse famously demonstrated that using a screen to blind judges to musicians' appearance during auditions narrowed the gender disparity in callbacks.<sup>150</sup> In a similar manner, the law could require employers to use a screen during interviews to blind themselves to the appearance of job applicants, which may not only reduce bias experienced by individuals with visible disabilities but also bias experienced by members of other historically disadvantaged groups.

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volunteered information about his migraine condition to an employer had not responded to a medical inquiry and thus did not enjoy the protections of 42 U.S.C. § 12112).

150. See Claudia Goldin & Cecilia Rouse, *Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians*, 90 AM. ECON. REV. 715, 716 (2000).

Yet again, this solution is not a complete one. An applicant with a hearing impairment, for example, would not be aided by the use of a screen that blocked her appearance. Still a more restrictive law might ban the use of in-person interviews altogether, but this solution would certainly be opposed by employers, particularly (and rightfully) for public-facing jobs that require strong communication and interpersonal skills.

For all the above reasons, any policy attempt to totally prohibit employers from finding out about a job applicant's disability—whether in the form of screens, conversation bars, or interview bans—cannot be a complete solution for every disabled worker. The workers who would necessarily slip through the cracks (and could not successfully hide their disability from the employer at the interview phase) would arguably find themselves at a greater disadvantage than they already face. Indeed, these job candidates might find themselves the ultimate victims of ambiguity aversion. An employer who knew that a job applicant was disabled based on appearances—but was neither able to ask any clarifying questions about it, nor able to consider volunteered information from the applicant about it—would necessarily view that applicant's condition as uncertain. The precise nature of the disabled applicant's condition, the severity of the applicant's condition, the applicant's need for an accommodation, the applicant's ability to perform essential job functions, and whether any of the foregoing concerns rendered a visibly disabled job candidate riskier than other job candidates would all remain ambiguous to the employer.<sup>151</sup> As a result, the theory of ambiguity aversion, a theory borne out in the disability context by the experiment presented in the prior Part, predicts that the employer would avoid that applicant in favor of a less ambiguous one.

A further, and more fundamental, reason exists to be concerned about policies that attempt to shut off information flow between employers and employees at the interview stage: job matching. Here, I use the term job matching in the same way commonly used by economists to signify the fit

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151. Critics of the above characterization of employers' avoidance in hiring workers with known disabilities may dispute whether such avoidance is more accurately described as *risk*, rather than ambiguity, aversion. For the reasons already explained in Section II.B.1, I argue that ambiguity aversion provides the more accurate characterization of employers' treatment of job candidates with known disabilities. Job candidates are inherently risky, regardless of their disability status. Moreover, because many health conditions have no bearing on an individual's ability to do her job and require no accommodation on the part of the employer, a job candidate's known health condition may present no more risk to the employer than any other known characteristic about the candidate. The fundamental problem here is the inability of employers to estimate the risk (if any) associated with hiring a disabled job candidate with any accuracy, which the current structure of the ADA exacerbates at the pre-offer stage by reducing information flow. Finally, regardless of how employers' avoidance of hiring disabled job candidates is properly described, the solution suggested in the next two Sections, which is based on the experimental vignette study results, will hold.

between an applicant's skills and a job's requirements.<sup>152</sup> Economists have repeatedly documented that employment relationships end more quickly when employer and employee expectations are misaligned—that is, when there is job mismatch.<sup>153</sup> Policies that restrict information flow necessarily impede the ability of employers and employees to determine whether their expectations are indeed aligned and, consequently, promote job mismatch.<sup>154</sup> Job mismatch is highly costly for both employers and employees. For employers, job mismatch increases turnover costs, which include the costs of searching for and retraining a new worker.<sup>155</sup> For lower-skill positions, turnover costs average between 10 and 30 percent of the cost of the worker's annual salary,<sup>156</sup> but may be as much as double the worker's annual salary for

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152. For examples of the broad economics literature on job matching, see generally, Jim Allen & Rolf van der Velden, *Educational Mismatches Versus Skill Mismatches: Effects on Wages, Job Satisfaction, and On-the-Job Search*, 53 OXFORD ECON. PAPERS 434 (2001) (examining educational and skill mismatches); Greg J. Duncan & Saul D. Hoffman, *The Incidence and Wage Effects of Overeducation*, 1 ECON. EDUC. REV. 75 (1981) (discussing job matching in the context of excess education); Joni Hersch, *Optimal 'Mismatch' and Promotions*, 33 ECON. INQUIRY 611 (1995) (considering the value of overqualified employees); Boyan Jovanovic, *Job Matching and the Theory of Turnover*, J. POL. ECON. 972 (1979) (highlighting the relationship between employee turnover and educational and skill mismatches); Nachum Sicherman, "Overeducation" in the Labor Market, 9 J. LAB. ECON. 101 (1991) (highlighting the reasons for employee educational and skill mismatches); Richard R. Verdugo & Naomi Turner Verdugo, *The Impact of Surplus Schooling on Earnings*, 24 J. HUM. RESOURCES 629, 629 (1989) (examining job matching in the context of surplus education).

153. For a discussion of the job mismatch literature, see Hersch, *supra* note 152 (noting that a "substantial proportion of workers are employed in jobs for which they appear to be either overqualified or underqualified," and these mismatched workers are more likely to part ways with the employer).

154. See generally W. Kip Viscusi, *Employment Relationships with Joint Employer and Worker Experimentation*, 24 INT'L ECON. REV. 313 (1983) (analyzing how the job matching process involves uncertainties on behalf of the worker and the employer that only get resolved over time, leading to turnover for unsuccessful matches); W. Kip Viscusi, *Job Hazards and Worker Quit Rates: An Analysis of Adaptive Worker Behavior*, 20 INT'L ECON. REV. 29 (1979) (showing that workers who learn their job is riskier than expected are more likely to quit).

155. *Managing for Employee Retention*, SOC'Y FOR HUMAN RES. MGMT., <https://www.shrm.org/resourcesandtools/tools-and-samples/toolkits/pages/managingforemployeeretention.aspx> ("Turnover costs can have a significant negative impact on a company's performance."); see also Mike Kappel, *5 Ways to Reduce Employee Turnover*, FORBES (Aug. 9, 2017, 9:09 AM), <https://www.forbes.com/sites/mikekappel/2017/08/09/5-ways-to-reduce-employee-turnover> [<https://perma.cc/HGX9-NE84>] ("When employees leave, it's costly for your business. It takes time and money to find and train a replacement. That's why it's best for businesses to reduce their turnover as much as possible.").

156. See Heather Boushey & Sarah Jane Glynn, *There Are Significant Business Costs to Replacing Employees*, CTR. FOR AM. PROGRESS (Nov. 16, 2012, 3:44 AM), <https://www.americanprogress.org/issues/economy/reports/2012/11/16/44464/there-are-significant-business-costs-to-replacing-employees> [<https://perma.cc/L4RM-8B9S>] ("Looking only at estimates of the cost of turnover for workers earning, on average, \$75,000 per year or less, 17 case studies find a cost of turnover in the range of 10 percent to 30 percent.").

higher-skill positions.<sup>157</sup> For employees, job mismatch increases job displacement costs, which include the costs associated with searching for a new job, surviving an uncertain period of income instability, and coping with lifetime earnings losses.<sup>158</sup> Indeed, job mismatch may be particularly devastating for individuals with a disability, who, as a result of being substantially limited in a major life activity, are likely to face higher search costs when looking for new employment.<sup>159</sup>

In sum, although eliminating all discussions related to disability and accommodation may initially emerge as an obvious fix for the ADA, this fix is likely to backfire and have unintended consequences. Shutting down information flow between employers and employees about disability and accommodation pre-offer would only serve to increase the uncertainty surrounding whether a job candidate is a suitable match for a job. It may further encourage employees to attempt to hide their disabilities pre-offer, which could be viewed as deceptive behavior by their future employers and undermine the employment relationship from the beginning. Finally, banning conversations about disability and accommodation would be particularly devastating for workers with visible disabilities, incapable of being concealed, if they were unable to convey the nature and severity of their limitations at the interview stage. For these reasons, a better fix to the ADA will promote an increase in clarity of expectations. It will make explicit the limits of the liability that an employer must incur, thus reducing the ambiguity surrounding the costs of employing a disabled worker.<sup>160</sup> Such a solution, intended to reduce employer ambiguity and promote better job matching, is proposed in the following two Sections.

#### B. BOUNDING ACCOMMODATION COSTS FOR EMPLOYERS

The results in Part IV indicate that employers are principally concerned with the costs—both monetary and nonmonetary—of hiring and accommodating a disabled worker. Yet as currently structured, the ADA makes it quite difficult, if not impossible, for employers to estimate the costs associated with employing a disabled worker.<sup>161</sup> Consequently, an optimal fix

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157. See *id.* (“Very highly paid jobs and those at the senior or executive levels tend to have disproportionately high turnover costs as a percentage of salary (up to 213 percent) . . .”).

158. See Steven J. Davis & Till von Wachter, *Recessions and the Costs of Job Loss*, BROOKINGS PAPERS ECON. ACTIVITY 1, 12–34 (2011) (demonstrating that job displacement is associated with substantial lifetime earnings losses, anxiety, and search costs).

159. Cf. Baldwin & Marcus, *The Impact of Mental and Substance-Use Disorders on Employment Transitions*, *supra* note 136, at 336–40 (finding relatively high rates of transition between unemployment, part-time work, and full-time work for individuals with mental illness and substance use disorders).

160. Again, explicit bounds on employer costs will go far in reducing the uncertainty associated with employing a disabled worker, regardless of how this uncertainty is characterized. See *supra* note 65 and accompanying text.

161. See *supra* Section II.A.

to the ADA will decrease the uncertainty surrounding the financial responsibility to which employers are committing whenever they hire and retain a worker with a disability. One way to reduce this cost ambiguity might be to expand information flow, particularly at the hiring stage; a possible approach might be to take the opposite stance of the one considered in the last Section and allow employers to ask any and all questions they desire regarding job applicants' disabilities. This approach is not ideal for two reasons. First, to the extent that distaste for disability motivates employers, legitimate concerns might arise regarding the reintroduction of unnecessary bias into hiring decisions.<sup>162</sup> Second, and more importantly, for the reasons discussed in Section II.A, allowing employers to ask more questions about the health condition of a job applicant might still result in employers' inability to estimate the cost of accommodating that applicant with any accuracy. Disabilities (and their underlying causes) vary tremendously in affected parts of the body, duration, symptoms, and severity; even a note from an applicant's physician may not always be able to predict how a disability will affect the applicant in the long run.

Instead, a more straightforward, and likely more effective, way to reduce the ambiguity surrounding workplace accommodation costs—and one that avoids concerns about reintroducing opportunities for employer bias based on distaste—is to place explicit limits on these costs. If employers knew the maximum amount they would be required to spend to accommodate any given worker, then the financial undertaking associated with employing a disabled worker would be necessarily less ambiguous. With less ambiguity should come less ambiguity aversion and, in turn, more willingness to hire disabled workers on the part of employers.

An immediate question arises as to what these explicit bounds should be. Courts have suggested under the current form of the ADA that the amount an employer is required to spend should be determined at least in part by the employer's size and financial resources.<sup>163</sup> As long as employers are expected

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162. Although the experimental results presented in the prior Part suggest that the costs of disability weigh more heavily on the minds of decisionmakers than distaste for disability, legitimate concerns may still exist about the endurance of distaste for any historically disadvantaged group, even if such distaste is less prevalent in the contemporary context. For example, recall that experimental evidence suggests in the gender context, blinding employers to the protected characteristic of gender results in better outcomes for disadvantaged women when suspected bias based on distaste is at work. See Goldin & Rouse, *supra* note 150, at 736–37. Jessica Clarke has also recently documented the persistence of explicitly biased statements—indicative more of distaste than of statistical discrimination—being made against members of historically disadvantaged groups. See Jessica A. Clarke, *Explicit Bias*, 113 NW. U. L. REV. 505, 523–47 (2018).

163. Courts have reached this conclusion when assessing the meaning of both reasonability and undue hardship under the ADA (even though these issues are only mentioned in the statute with respect to undue hardship in 42 U.S.C. § 12111(10)(B) (2012)). See, e.g., *Vande Zande v. Wis. Dep't of Admin.*, 44 F.3d 538, 542–43 (7th Cir. 1995).



to bear accommodation costs without contribution from the employee, employers' ability to support these costs remain a legitimate consideration. One way to recognize that different size employers have different abilities to finance accommodations, while keeping costs explicitly bounded, is to tier employers' maximum accommodation expenditures by the number of workers they employ. Already, compensatory and punitive damages are capped under Title VII and the ADA in this manner.<sup>164</sup>

Drawing on the experimental evidence presented in scenario two of Part IV, subjects indicated that it was reasonable for a medium-size firm to pay approximately \$300 for an accommodation and to provide at least four weeks of medical leave at half-pay. These figures provide a starting point for legislators to define higher caps for larger employers and lower caps for smaller employers. Nonetheless, future research must consider additional issues—such as whether caps should vary based on underlying health condition and employee tenure—in order to develop more precise and workable accommodation cost caps.<sup>165</sup> Nonetheless, even cost caps of a few hundred dollars could go far in accommodating a substantial number of disabled workers: JAN data suggest that accommodation cost caps reaching \$500 for the largest firms would be sufficient to finance the accommodations of over three-fourths of workers in need of one.<sup>166</sup>

Alternatively, legislators might define accommodation cost caps in terms of the employee's value to the employer, as signified by the employee's salary. Since an expensive accommodation may be a more worthwhile expenditure on a high-value employee than on a low-value employee, defining the cost cap as a percentage of the salary of the employee at issue could be sensible, if less straightforward, than a cost cap defined by employer size. Yet since the goal of reforming the reasonable accommodation model is to make it easier for employers to determine their maximum financial responsibility associated with employing a disabled worker, cost caps defined by employer size, rather than employee value, may be more aligned with achieving the goals of clarity and simplicity.<sup>167</sup>

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164. See 42 U.S.C. § 1981a(b)(3).

165. I plan to pursue such questions related to developing workable and effective accommodation cost caps for employers in future experimental research.

166. A 2015 Job Accommodation Network interview study of employers demonstrated that 58 percent of disability accommodations cost the employer nothing. Of the 42 percent of accommodations that are costly, the median employer expenditure is \$500. See Loy, *supra* note 123.

167. Prior scholars have echoed this call to reform the ADA in a way that is more straightforward to apply. See, e.g., Steven B. Epstein, *In Search of a Bright Line: Determining When an Employer's Financial Hardship Becomes "Undue" Under the Americans with Disabilities Act*, 48 VAND. L. REV. 391, 453 (1995) (advocating for reforms to the undue hardship analysis that are "mathematically precise so that every covered employer and every employee will know the extent of their obligations and entitlements in monetary terms"); Stewart J. Schwab & Steven L. Willborn, *supra* note 34, at 1281 (criticizing the inability of employers and employees to determine "the precise extent of the employer's responsibility" under the current ADA). I also

If legislators introduce explicit accommodation cost caps into the ADA, the question arises of how that cap will interact with the reasonability and undue hardship analyses that have been so central to the reasonable accommodation model, particularly in the long run. Determining whether an accommodation is reasonable should still depend upon cost-benefit analysis (as many prior courts have concluded).<sup>168</sup> Reasonable accommodations are ones that maximize benefits while minimizing costs, and the benefits must always outweigh the costs in order for an accommodation to be reasonable.<sup>169</sup> Rather, cost caps can best be conceptualized as modifying the undue hardship analysis with respect to employers. A cost cap establishes a bright line rule that any accommodation expenditure above a certain amount creates an undue hardship for the employer.

This idea of explicitly capping how much employers must spend on accommodation was circulated in the early years of the ADA,<sup>170</sup> even if it has been largely forgotten by scholars in recent years.<sup>171</sup> Indeed, the legislative history of the Act reveals that two employer cost-cap amendments were proposed during House committee debates,<sup>172</sup> and another similar amendment was proposed by Representative James Olin during the House floor debate.<sup>173</sup> In fact, during the floor debate, Representative Olin prophetically pled with his colleagues, “[W]e need something tangible. We should not be passing laws that affect almost all businessmen in this country where the proprietor of that business does not know what he needs to do to abide by the law. It is a big mistake.”<sup>174</sup> Despite this plea, all three amendments ultimately failed.<sup>175</sup> The reason that the cost-cap amendments failed—and the

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plan to explore this issue of factoring employee value into accommodation cost caps in future experimental research.

168. See, e.g., *Vande Zande*, 44 F.3d at 543 (holding that “[t]he employee must show that the accommodation is reasonable in the sense both of efficacious and of proportional to costs”); *Borkowski v. Valley Cent. Sch. Dist.*, 63 F.3d 131, 139 (2d Cir. 1995) (requiring that, to be reasonable, “an accommodation[] [must have] costs . . . which, facially, do not clearly exceed its benefits”); see also *Reed v. LePage Bakeries, Inc.*, 244 F.3d 254, 259–60 (1st Cir. 2001) (suggesting that courts must weight costs and benefits for both the reasonable accommodation and undue hardship analyses).

169. See sources cited *supra* note 168.

170. See, e.g., Olin Amendment to the 1990 Americans with Disabilities Act, 136 Cong. Rec. at H2475 (daily ed. May 17, 1990).

171. In fact, despite the multiple scholarly proposals in recent years to extend the reasonable accommodation model beyond workers with a disability, these scholars have not considered how this model may need to first be reformed. For a discussion of these recent scholarly proposals, see *supra* notes 117–20 and accompanying text.

172. See 136 Cong. Rec. H2317 (daily ed. May 15, 1990) (recording the failure of a cost-cap amendment “by a wide margin” in the House Education and Labor Committee); House Judiciary Committee Vote No. 477 (May 1, 1990) (recording a failure of a cost-cap amendment by 14 votes).

173. See 136 Cong. Rec. at H2475 (daily ed. May 17, 1990).

174. *Id.*

175. See *id.* (recording that the House floor amendment failed by 26 votes); *supra* note 172.

reason that scholars have largely shied away from resurrecting them<sup>176</sup>—has always stemmed from the concern that they would shut a large number of disabled workers out of the labor market.<sup>177</sup>

Imagine, for example, a worker with a hearing impairment. Equipping that worker with a hearing-impaired telephone and computer software could easily exceed \$1,000—more than three times the amount that subjects were willing to spend on an accommodation in scenario two of the experiment in Part IV. If Congress modified the ADA to impose a bright-line accommodation cost cap of a few hundred dollars, then paying for this worker's accommodation would always, by definition, constitute an undue hardship for employers.<sup>178</sup> Without more, the end result of such an amendment would be the complete exclusion of this worker from the labor market—even if the worker were a highly skilled employee who could generate hundreds of thousands of dollars in annual revenue. Not only would this end result be inefficient from an economic perspective, it would also be inconsistent with the underlying goal of the ADA to end the “dependency and nonproductivity” that results from shutting disabled workers out of the labor market.<sup>179</sup> Thus, avoiding this end result for workers in need of expensive accommodations requires a supplement to employer cost caps; such a supplement is proposed in the next Section.

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176. One notable exception is Steven B. Epstein, who recognized the need for a bright-line standard early in the Act's history and advocated for a reconsideration of the Olin Amendment. See Epstein, *supra* note 167, at 478 (arguing that “a highly transparent and highly accessible standard” is needed to remedy “[t]he fundamental shortcomings of the currently vague undue hardship standard”).

177. See, e.g., Schwab & Willborn, *supra* note 34, at 1276–83 (raising the concern that disabled workers may be forced to take less productive jobs that merely require a cheap accommodation, when they could be doing a more productive job that requires expensive accommodations); Verkerke, *supra* note 14, at 943–44, 947 (giving an example of an attorney with dyslexia who requires an expensive accommodation but would be very productive with such an accommodation).

178. One concern that might emerge from the solution proposed in this Section is the ability of Congress to amend the ADA, given current partisan tensions and recent record-breaking government shutdown. This concern may be overstated in the context of disability legislation, which has historically enjoyed support from both Republicans and Democrats (both the 1990 ADA and the 2008 ADAAA, for instance, were passed during Republican presidencies). Nonetheless, an alternative—and easier to implement—reform might be for the EEOC to instead issue guidance establishing assumptions that employer expenditures on accommodation in excess of the cost caps were undue (unless the plaintiff could prove otherwise). A legislative solution would be strongly preferable, however, since such guidance would arguably exceed the EEOC's rulemaking authority under the ADA and, thus, not be entitled to deference under *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984). A legislative solution is also necessary to implement the second part of this proposal, outlined in Section V.C.

179. 42 U.S.C. § 12101(a)(8) (2012); accord Epstein, *supra* note 167, at 478 (“Unnecessary acrimony and potential litigation would be avoided, and a well-qualified person with a disability would be put to work. This result is exactly what Title I was intended to achieve.”).

C. SUPPLEMENTING ACCOMMODATION COSTS FOR EMPLOYEES

An explicit bound on accommodation costs should reduce the ambiguity associated with employing a disabled worker under the ADA and, in turn, reduce employers' aversion toward this ambiguity. And with less aversion towards employing disabled workers should at last come better labor market outcomes for them. Although this Article is the first to pinpoint the underlying ambiguity perpetuated by the ADA (and resulting employer aversion) as the Act's fatal flaw, it is not the first to argue that the seemingly boundless accommodation costs faced by employers may result in unintended consequences. In 1996, for example, the members of the Harvard Law Review asserted that the ADA "would be easier for employers to follow if the standards, particularly 'reasonable accommodation' and 'undue hardship,' were defined more precisely."<sup>180</sup>

Still, scholars have been largely reluctant to propose a bright-line cost limit for employers out of concern that such limits would foreclose labor market opportunities for individuals who require expensive accommodations. Instead, scholars like Stewart Schwab, Steven Willborn,<sup>181</sup> and J.H. Verkerke<sup>182</sup> have advocated for alternative models like cost-sharing, in which both employers and employees bear the cost of workplace accommodation (instead of employers bearing the entire expense). Under the cost-sharing model, legal scholars have argued, employers will no longer need to be so nervous about undertaking the highly uncertain, and potentially enormous, costs associated with employing a disabled worker; the cost-sharing model will consequently unlock additional labor-market opportunities, particularly for workers in need of significant accommodations.<sup>183</sup> This cost-sharing model may work for highly skilled employees in need of an expensive accommodation. J.H. Verkerke, for example, offers the example of a dyslexic attorney who requires an accommodation that is so expensive, it would necessarily create an undue hardship for any law firm.<sup>184</sup> In this instance, both the attorney and society may be better off if she were allowed to share the accommodation cost with her law firm so that (1) the cost would not create an undue hardship for the firm, and (2) the attorney would not be forced to work in a lower-skill job or, worse yet, be foreclosed from working altogether.<sup>185</sup>

The problem with the cost-sharing model is that it would likely prove infeasible for low-skill workers. A disabled attorney may be able to contribute money toward an expensive workplace accommodation, but a disabled worker

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180. *Employment Discrimination*, 109 HARV. L. REV. 1568, 1615 (1996).

181. Schwab & Willborn, *supra* note 34, at 1201.

182. Verkerke, *supra* note 14, at 955.

183. See Schwab & Willborn, *supra* note 34, at 1276-83; Verkerke, *supra* note 14, at 945-48.

184. See Verkerke, *supra* note 14, at 943-44, 947 (discussing this example).

185. See *id.*

living paycheck to paycheck will not. Return to the example from the last Section of a worker with a hearing impairment who requires \$1,000 worth of special computer and telephone equipment. If that worker is a computer programmer earning \$100,000 per year, then the worker could easily share the cost of the necessary equipment with her employer. On the other hand, if that worker is a receptionist making \$20,000 per year, then such equipment could cost her weeks' worth of paychecks.

Prior scholarly proposals have ignored or dismissed this concern,<sup>186</sup> principally on the grounds that high-cost accommodations may only make sense for high-value employees.<sup>187</sup> Yet there is reason to be concerned that cost-sharing is not a workable solution for a significant number of disabled individuals. Individuals with a disability have lower educational attainments<sup>188</sup> and are more likely to live in poverty<sup>189</sup> than individuals without a disability. Thus, even if allowed to cost-share with their employers, many disabled individuals may still not be able to afford such an option. Moreover, empirical evidence suggests that, even under the current ADA, higher-skilled disabled workers already face fewer barriers in the labor market than lower-skilled disabled workers because of higher-skilled workers' ability to self-finance coping technologies.<sup>190</sup>

For these reasons, the better proposal is for the government, not workers, to supplement high-cost accommodations. This idea of using government money to fund workplace accommodations is not entirely novel; at least one

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186. Schwab and Willborn, for example, seem to suggest that the only reason a disabled worker may choose not to cost share is if she did not believe the financial risk of contributing to a workplace accommodation was worth the financial reward of the job itself. See Schwab & Willborn, *supra* note 34, at 1279–80 (“Assume, for example, an individual with a disability who is presented with two jobs, one quite desirable, but requiring an expensive accommodation, and another less desirable, but requiring an inexpensive and clearly reasonable accommodation. . . . The option of paying for the portion of the accommodation costs above the reasonable level would allow the individual to pursue the desirable job at lower risk. She could agree to pay the potentially extra-reasonable portion of the accommodation costs and thus ensure access to the better job. At a cost that the individual with a disability determines to be reasonable (otherwise she would not pay it and opt instead for the less desirable job), the rule permits her to apply for a more desirable job that maximizes the reasonable accommodation the employer must make.” (citation omitted)).

187. See, e.g., Verkerke, *supra* note 14, at 947 (“An arrangement to share accommodation costs would be especially appropriate when a person’s disability creates significant obstacles to becoming highly productive in her chosen occupation.”).

188. See DANIELLE M. TAYLOR, U.S. CENSUS BUREAU, AMERICANS WITH DISABILITIES: 2014, at 13 (2018), available at <https://www.census.gov/content/dam/Census/library/publications/2018/demo/p70-152.pdf> [<https://perma.cc/5RAJ-XJSR>] (“In general, adults with a disability had a lower level of educational attainment than adults without a disability.”).

189. See BRAULT, *supra* note 114, at tbl.D-8; see also TAYLOR, *supra* note 188, at 14 (referring to tbl.5).

190. See David M. Cutler et. al., *How Do the Better Educated Do It? Socioeconomic Status and Ability to Cope with Underlying Impairment*, in DEVELOPMENTS IN THE ECONOMICS OF AGING 203, 237–38 (David A. Wise ed., 2009).

article has previously proposed creating a federal grant program to fund workplace accommodations.<sup>191</sup> What is novel about the present proposal, however, is the idea of expanding current disability entitlement programs to fund expensive accommodations in the workplace. On both the state and federal levels, disability entitlement programs already exist, but they are focused entirely on supporting disabled individuals while they are unable to work. The federal program focuses on individuals who are unable to work in the long-term,<sup>192</sup> and state programs focus on individuals who are unable to work in the short-term.<sup>193</sup> Such programs could be expanded to support disabled individuals who are able to work, but who require accommodations that cost more than the employer accommodation caps proposed in the prior Section.

Expanding the scope of disability entitlement programs to fund workplace accommodations may or may not make these programs more expensive for a government in the long run. On the one hand, this proposal involves a new form of entitlement—providing workplace accommodations—which is not free. On the other hand, funding workplace accommodations may allow some individuals who have been previously shut out of the labor market to go back to work and to cease relying on disability entitlements for their living expenses. Along these lines, this proposal is consistent with the original purposes of the ADA, which include empowering a group of individuals long disenfranchised from the labor market because of their health status, as well as reducing this group's dependence on the social security rolls.<sup>194</sup>

Funding for high-cost accommodation supplements could derive from the same source of existing federal and state disability entitlement programs: a payroll tax.<sup>195</sup> Current payroll taxes may need to increase somewhat to fund

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191. See Scott A. Moss & Daniel A. Malin, Note, *Public Funding for Disability Accommodations: A Rational Solution to Rational Discrimination and the Disabilities of the ADA*, 33 HARV. C.R.-C.L. L. REV. 197, 199 (1998).

192. See *Disability Benefits*, U.S. SOC. SEC. ADMIN., <https://www.ssa.gov/benefits/disability> [<https://perma.cc/HC7T-K63S>] (“Social Security pays disability benefits to people who can’t work because they have a medical condition that’s expected to last at least one year or result in death.”).

193. For an in-depth exploration of state disability programs, see Shinall, *The Pregnancy Penalty*, *supra* note 11, at 809–12. See also *State Family and Medical Leave Laws*, NAT’L CONF. ST. LEGISLATURES (July 19, 2016), <http://www.ncsl.org/research/labor-and-employment/state-family-and-medical-leave-laws.aspx> [<https://perma.cc/26HJ-UVRX>].

194. See, e.g., Samuel R. Bagenstos, *The Future of Disability Law*, 114 YALE L.J. 1, 5 (2004) (noting that the ADA and Rehabilitation Acts were initially motivated by the social welfare model, which advocated helping the disabled); Samuel Issacharoff & Justin Nelson, *Discrimination with a Difference: Can Employment Discrimination Law Accommodate the Americans with Disabilities Act?*, 79 N.C. L. REV. 307, 309–11 (2001) (arguing that the redistributive norm is inherent in the ADA); Wax, *supra* note 14, at 1425–26 (arguing that part of the ADA’s purpose was to reduce the burden on the public rolls).

195. Federal and state programs differ in how much of the disability program payroll tax burden they levy on employers versus employees. Compare the federal Social Security payroll tax

the new government accommodation supplement program, but at least some of the additional supplement program cost would be offset by the fact that more disabled individuals could reenter the labor market and contribute payroll taxes themselves. Furthermore, governmental programs to supplement the cost of high-cost accommodations come with an additional benefit: A third-party to the employment relationship (the government) makes the determination as to whether the employee's desired accommodation is reasonable and worth funding. Currently, the reasonable accommodation model leaves this determination in the hands of employers, even though employers have incentives to minimize costs in a way that may cloud their ability to make a fair judgment. Requiring disabled individuals to apply to the government for an accommodation supplement—much in the way that disabled individuals already apply for disability entitlement programs—ensures that a more disinterested party outside the employer-employee relationship will determine whether the proposed accommodation maximizes benefits while minimizing costs.

One final potential model to consider when structuring a disability accommodation supplement program is workers' compensation insurance, which is required for employers to carry in virtually all states and covers the cost of workplace injuries.<sup>196</sup> Similarly, a requirement that employers carry disability accommodation insurance might serve to cover excess accommodation costs in the workplace. In my future research, I intend to consider all of the above models in greater depth with the goal of developing a more precise vision of a disability accommodation supplement program—one which relies on all available evidence from existing governmental benefit programs to identify best practices regarding who should fund the program, how the program should be funded, who should administer the program, and how the program should be administered.

## VI. CONCLUSION

Extending the reasonable accommodation model beyond disabled individuals has served as a popular proposal for legal scholars in recent years,<sup>197</sup> in spite of multiple empirical studies suggesting that the model is flawed.<sup>198</sup> Still, it is hard to blame legal scholars for wanting to export this

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burden (equally shared by employers and employees) with the Rhode Island and California disability payroll tax burden (borne entirely by employees). See Shinall, *The Pregnancy Penalty*, *supra* note 11, at 811–12.

196. Texas is the well-known exception here, allowing employers to opt-out of buying workers' compensation insurance. For empirical evidence regarding the employers who opt out (and the consequences of opting out), see generally Alison Morantz, *Opting Out of Workers' Compensation in Texas: A Survey of Large, Multistate Nonsubscribers*, in REGULATION VERSUS LITIGATION: PERSPECTIVES FROM ECONOMICS AND LAW 197 (Daniel P. Kessler ed., 2011).

197. See *supra* Part I.

198. See *supra* Section II.A.

model to assist other populations. The need for greater accommodations in the workplace is clear for pregnant women, parents, caretakers, and people with nondisabling health conditions, among others;<sup>199</sup> such individuals continue to have persistently poor labor market outcomes at least in part because traditional, inflexible workplaces are not appropriately built for them.<sup>200</sup> Because the reasonable accommodation model has remained the dominant paradigm for accommodating workers over the last few decades, it is hardly surprising that scholars would turn to this paradigm as a solution for other workers in need of accommodation.

Yet exporting a flawed model to other populations is likely to result in the same disappointing outcomes already seen with the disabled population: a lack of labor market progress. As a result, this Article argues that the ADA must be reformed, not just for disabled individuals, but for anyone who may benefit from legislatively mandated accommodation in the future.<sup>201</sup> This part of the argument is not new, particularly for economists, who have insisted for years that the reasonable accommodation model is inherently problematic.<sup>202</sup> What is new within this Article is the two-part, data-driven scheme outlining *how* the ADA should be reformed.<sup>203</sup>

Insufficient data have previously left empiricists unable to suggest empirically grounded reforms to the ADA. With the help of two experimental vignette studies, this Article generates these missing data in order to pinpoint when, how, and why the ADA is not serving disabled individuals. Principally, the studies indicate that decisionmakers' concerns about the costs associated with accommodating a disabled worker may be difficult for such workers to overcome at the hiring stage, but *not* after they are already employed.<sup>204</sup> The disparate results between job candidates and existing employees may be reconciled by the greater level of ambiguity associated with workers (and their disabilities) at the hiring stage—ambiguity which the current ADA only serves to increase.

Consequently, reforms to the reasonable accommodation model must begin in ways that reassure employers that they will not be subject to seemingly

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199. See *supra* notes 117–20 and accompanying text.

200. Jessica L. Roberts, *Accommodating the Female Body: A Disability Paradigm of Sex Discrimination*, 79 U. COLO. L. REV. 1297, 1314–15 (2008) (discussing how work environments have been traditionally built for men); see also Claudia Goldin, *A Grand Gender Convergence: Its Last Chapter*, 104 AM. ECON. REV. 1091, 1118 (2014) (“[R]apidly growing sectors of the economy and newer industries and occupations, such as those in health and information technologies, appear to be moving in the direction of more flexibility and greater linearity of earnings with respect to time worked. The last chapter needs other sectors to follow their lead.”).

201. For example, pregnant women are already being accommodated under the ADA reasonable accommodation model in several states. See Widiss, *supra* note 1, at 1452–53 (making note of these laws).

202. See *supra* Section II.A.

203. See *supra* Sections V.B, V.C.

204. See *supra* Part IV.



unbounded costs if they hire a disabled worker. Moreover, these reforms must focus on decisionmaking points when employers need such reassurances most—as suggested here, the hiring stage—so that employers can henceforth anticipate accommodation with greater certainty. Without such ambiguity-reducing reforms, the reasonable accommodation model will remain incapable of improving labor market outcomes of disabled individuals, or of anyone else, in the labor market.

## APPENDIX

Appendix Table 1. Variations of Scenario One (Leave Scenario)

<b>Variation</b>	<b>Candidate One Name</b>	<b>Candidate Two Name</b>	<b>Candidate One Health Condition</b>	<b>Candidate Two Health Condition</b>
1	Amanda	Jennifer	None	None
2	Amanda	Jennifer	Pregnant	None
3	Amanda	Jennifer	None	Pregnant
4	Amanda	Jennifer	Pregnant	Pregnant
5	Amanda	Jennifer	Hip surgery	None
6	Amanda	Jennifer	Hip surgery	Pregnant
7	Amanda	Jennifer	Hip surgery	Knee surgery
8	Amanda	Jennifer	Pregnant	Knee surgery
9	Amanda	Jennifer	None	Knee surgery
10	Amanda	Michael	None	None
11	Amanda	Michael	Pregnant	None
12	Amanda	Michael	Hip surgery	None
13	Amanda	Michael	Hip surgery	Knee surgery
14	Amanda	Michael	Pregnant	Knee surgery
15	Amanda	Michael	None	Knee surgery
16	Christopher	Jennifer	None	None
17	Christopher	Jennifer	Hip surgery	None
18	Christopher	Jennifer	Hip surgery	Pregnant
19	Christopher	Jennifer	Hip surgery	Knee surgery
20	Christopher	Jennifer	None	Knee surgery
21	Christopher	Jennifer	None	Pregnant
22	Christopher	Michael	None	None
23	Christopher	Michael	Hip surgery	None
24	Christopher	Michael	None	Knee surgery
25	Christopher	Michael	Hip surgery	Knee surgery

Appendix Table 2. Variations of Scenario Two (Chair Accommodation Scenario)

Variation	Candidate One Name	Candidate Two Name	Candidate One Health Condition	Candidate Two Health Condition
1	Melissa	Sarah	None	None
2	Melissa	Sarah	Pregnancy weight	None
3	Melissa	Sarah	None	Pregnancy weight
4	Melissa	Sarah	Pregnancy weight	Pregnancy weight
5	Melissa	Sarah	Weight	None
6	Melissa	Sarah	Weight	Pregnancy weight
7	Melissa	Sarah	Weight	Weight
8	Melissa	Sarah	Pregnancy weight	Weight
9	Melissa	Sarah	None	Weight
10	Melissa	David	None	None
11	Melissa	David	Pregnancy weight	None
12	Melissa	David	Weight	None
13	Melissa	David	Weight	Weight
14	Melissa	David	Pregnancy weight	Weight
15	Melissa	David	None	Weight
16	Daniel	Sarah	None	None
17	Daniel	Sarah	Weight	None
18	Daniel	Sarah	Weight	Pregnancy weight
19	Daniel	Sarah	Weight	Weight
20	Daniel	Sarah	None	Weight
21	Daniel	Sarah	None	Pregnancy weight
22	Daniel	David	None	None
23	Daniel	David	Weight	None
24	Daniel	David	None	Weight
25	Daniel	David	Weight	Weight

Appendix Table 3. Average Willingness to Provide Accommodation, by  
Subjects' Demographic Characteristics

	Question 1				Question 2	
	Surgery Candidate		Pregnant Candidate		Unspecified Weight Candidate	Pregnancy Weight Candidate
Subject Pool	Number of Weeks of Leave	Percentage of Pay During Leave	Number of Weeks of Leave	Percentage of Pay During Leave	Price of Desk Chair	Price of Desk Chair
All Subjects	4.44	56.72%	6.44	62.74%	\$315.27	\$305.32
Hiring Experience	4.52	56.53%	6.65	63.09%	\$321.72	\$307.65
Ever Been Disabled	4.49	58.07%	6.56	62.24%	\$325.51	\$313.26
Ever Been Pregnant	4.53	52.68%	7.13	59.85%	\$310.75	\$283.08
Has Children	4.48	53.73%	6.84	61.80%	\$312.34	\$295.68
Obese (BMI $\geq$ 30)	4.49	55.11%	6.24	62.67%	\$326.42	\$305.02