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Evidence of Disability After *Daubert*

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Abstract. This article overviews the legal elements of the *prima facie* case of disability discrimination under the Americans with Disabilities Act (ADA) and examines the impact of expert evidence in ADA litigation. The article then presents a model for classifying and understanding admissibility determinations involving scientific knowledge and clinical observations in cases brought under ADA. The model may be used to help analyze admissibility outcomes regarding expert evidence presented in ADA litigation.

I. Introduction

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Although most commentary on the impact of the *Daubert*[3] decision has focused on the use of scientific evidence in toxic tort and criminal litigation,[4] increasingly the resolution of other areas of litigation are becoming dependant on science and technology. As Supreme Court Justice Stephen Breyer has commented, complex scientific issues underlie a number of important legal issues, including those related to the rights of individuals with disabilities.[5] It is not surprising that a parallel increase in the use of expert evidence and testimony has occurred in civil rights disability litigation since *Daubert.*[6]

[3] *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993).

[4] For one of the available overviews of the implications of the *Daubert* decision, see Kenneth R. Foster & Peter W. Huber, **Judging Science: Scientific Knowledge and the Federal Courts** (1997).

[5] Stephen Breyer, The Interdependence of Science and Law, Address at the American Association for the Advancement of Science Annual Meeting and Science Innovation Exposition, Philadelphia, Pa. (Feb. 16, 1998) **[hereinafter Breyer Speech]**. *Posted at* http://www.aaas.org/meetings/scope/breyer.htm (visited Feb. 26, 1998). This article was reprinted in 280 **Science** 537 (1998). *See also* Ellen Goodman, Learning How to Judge What's Not Scientific, Baltimore Sun, 19A (Feb. 24, 1998).

[6] Gordon J. Beggs, Novel Expert Evidence in Federal Civil Rights Litigation, **45 Am. U. L. R. 1 (1995)**. According to Beggs, one in every eight cases that cites *Daubert* to admit or exclude expert scientific testimony is a federal civil rights action.

This article focuses on the impact of the *Daubert* evidentiary formulation on litigation brought under the Americans with Disabilities Act (ADA). The ADA is a comprehensive federal civil rights law that prohibits discrimination against qualified persons with disabilities. To prove a *prima facie* case of discrimination under the ADA, a plaintiff must first demonstrate that he or she has a disability covered by the law. Since the ADA was passed in 1990 and its Title I employment provisions implemented in 1992, the case law has reflected a narrowing of the legal definition of disability.[7] This trend has made it increasingly difficult for individuals even with serious and life threatening impairments to be covered by the law.[8] As Professor Steven Locke suggests, "what was once touted as 'the most comprehensive civil rights legislation passed by Congress since the 1964 Civil Rights' Act has become increasingly narrowed to the point where it is in danger of becoming ineffective."[9]

Evidence of disability from medical and mental health clinicians and researchers has played an increasingly significant role in ADA litigation as the standards of proof for the *prima facie* case of discrimination have become more stringent for plaintiffs to meet. Plaintiffs

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[7] *See* Part II, *infra* notes 19-46

[8] *See* Peter David Blanck, **The Americans with Disabilities Act and the Emerging Workforce: Employment of People with Mental Retardation** (1998) **[hereinafter The ADA and the Emerging Workforce]**. *See, e.g.*, *EEOC v. R.J. Gallagher Co.*, 959 F. Supp. 405 (S.D. Tex. 1997) (holding that being critically ill with cancer is not necessarily an ADA "disability").

[9] Steven S. Locke, The Incredible Shrinking Protected Class: Redefining the Scope of Disability under the Americans with Disabilities Act, 68 **U. Colo. L. Rev.** 107-146, at 107 (1997) (quoting others).

bringing suit under the ADA and defendants resisting claims are relying with growing frequency on scientific (particularly medical) evidence of disability based on clinical observation. *Daubert* has been invoked by courts to bar such ADA claims. As a result, federal courts are attempting to develop, as Justice Breyer has said, "informed, though necessarily approximate, understanding of the relevant scientific art" involving ADA disability issues.[10]

[10] **Breyer Speech**, *supra* note 5.

Courts face this complex task as scientific models of disease and disability grow in sophistication and as medical diagnostic techniques reach higher levels of refinement.[11] Yet gaps between basic scientific knowledge and clinical observation continue to exist for many diseases and impairments.[12] Moreover, the quality and type of expert evidence employed by ADA litigants continues to expand: thus, with growing frequency, laboratory scientists as well as experts from non-scientific disciplines such as vocational rehabilitation, architecture, and accounting, proffer testimony on behalf of ADA plaintiffs and defendants. The view that scientific testimony differs from other subjects of expert witness testimony is sparking debate over the reach and applicability of *Daubert* in ADA litigation.

The article is divided into several parts. Part II provides an overview of relevant sections of the ADA. Part III examines the role scientific and non-scientific evidence plays in proving the ADA *prima facie* case. This part also proposes a preliminary model for classifying

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[11] For example, advances in mental health research from basic and clinical psychiatry, cognitive psychology, and neuroscience, are giving rise to complex models of mind-brain interaction in which mental illness appears to result from neural circuit dysfunction. *See* Nancy C. Andreasen, Linking Mind and Brain in the Study of Mental Illness: A Project for Scientific Psychopathology, 275 **Science** 1586-1592, at 1586 (1997) (summarizing methods of brain research on mental illnesses). Using magnetic resonance or other imaging techniques, it is possible to detect abnormal brain function in individuals with depression or schizophrenia. *See* Robert C. McKinstry & David A. Feinberg, Ultrafast Magnetic Resonance: A New Window on Brain Research, 279 **Science** 1965-1966 (1998) (describing detection techniques).

[12] For example, there is disagreement about the cause of the disorder known as Multiple Chemical Sensitivity (MCS). *See* Sophie L. Wilkinson, Breather Beware? Chemical Sensitivity May Result from Stress, Learned Behavior, or a New Disease Process, **Chemical & Engineering News**, Sept. 21, 1998, at 57 (discussing lack of consensus regarding the condition).

and assisting in the understanding of how courts employ *Daubert* to admit or exclude evidence of disability under the ADA. The potential usefulness of the model is explored through a series of actual case examples involving expert testimony of physicians, psychotherapists, researchers, and clinicians in behavioral and social science, as well as in other specialties. Finally, Part IV discusses the implications of the model in light of recent developments in *Daubert* case law and advances in scientific and non-scientific knowledge.

II. Disability-Based Discrimination under the ADA

The ADA prohibits entities covered by the law from discriminating against a qualified person with a disability in employment (Title I), governmental services (Title II), public accommodations (Title III), and telecommunications (Title IV). Title I of the law, the primary focus of this article, applies to all aspects of employment, including hiring, the provision of accommodations, advancement, medical testing, compensation, benefits, and training.[13] Title I covers employers with more than 15 employees.[14] Organizations covered by Title I include employment or temporary staffing agencies, labor organizations, and joint labor-management committees.[15]

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[13] 42 U.S.C. § 12111(2) (Supp. IV 1992). *See also* Peter David Blanck, **The Emerging Role of the Staffing Industry in the Employment of People with Disabilities: A Case Report on Manpower, Inc.** (1998).

[14] 42 U.S.C. § 12111(5)(A) & (B) (Supp. Feb. 1991).

[15] *See* Blanck, **The ADA and the Emerging Workforce**, *supra* note 8, at 13-27. 29

C.F.R. § 1630.2(m) (1991). 42 U.S.C. § 12111(2) (Supp. IV 1992).

Discrimination occurs under Title I when a covered entity makes an employment decision about an individual or a class of individuals because of the presence of a disability or fails to accommodate a qualified job applicant or worker with a disability. A successful *prima facie* ADA Title I case must establish that a qualified individual with a recognized disability suffered an adverse employment decision because of his or her disability on the basis of the employer's discriminatory fears, myths, or misconceptions.[16]

A. Elements of the Plaintiff's *Prima Facie* Case of Disability Discrimination under the ADA

To prove discrimination on the basis of a disability, a plaintiff must show that he or she is disabled for purposes of the law (step 1) and is a "qualified" individual who can perform essential job functions (step 2). The next element of the *prima facie* case is determined by the nature of the discrimination alleged by the plaintiff. A plaintiff may allege discrimination under the theory of "disparate treatment" (step 3a) or because of an employer's failure to provide reasonable accommodations (step 3b).[17]

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[16] *EEOC v. Amego*, 110 F.3d 135, 141 (1st Cir. 1997). At its core, ADA Title I is meant to prevent unjustified employment discrimination on the basis of "discriminatory animus," unfounded prejudice, and fear. *See* Blanck, **The ADA and the Emerging Workforce**, *supra* note 8, at 55.

[17] A third type of discrimination, not developed in this article, occurs when an individual's association or relationship with another individual who has a disability covered by the law is the reason for an adverse employment decision. A family relationship is the typical example used under the association provision of the ADA. *See Den Hartog v. Wasatch Academy*, 129 F.3d 1076 (10th Cir. 1997). For discussion of other forms of discrimination, see

1. Step 1 of the *Prima Facie* Case: Definition of Disability

As mentioned, an individual alleging discrimination under ADA Title I has the burden of proving that he or she has a disability covered by the law. There are three general, recognized categories of persons with disabilities. A person with a disability has: (1) a physical or mental impairment that substantially limits that person in a major life activity (referred to as the first prong of the definition of disability); (2) a record of a physical or mental impairment (the second prong of the definition); or (3) is regarded as having an impairment (the third prong of the definition).

Blanck, **The ADA and the Emerging Workforce**, *supra* note 8, at 14-15.

Physical characteristics, temporary conditions, and an individual's economic, environmental or cultural disadvantages are not covered disabilities. Negative but common personality traits such as poor judgment or short temper also are not ADA disabilities.[18] Unacceptable workplace behavior that is attributed to an underlying illness is not covered.[19] Expressly excluded from coverage are individuals who are pregnant, addicted to illegal drugs, or homosexual.[20]

[18] *See Mundo v. Sanus Health Plan of Greater New York*, 966 F. Supp. 171 (E.D. N.Y. 1997) (determining that ADA does not cover common personality traits).

[19] *See Palmer v. Circuit Court of Cook County Illinois*, 117 F.3d 351 (7th Cir. 1998) (affirming lower court's holding that a personality conflict with a supervisor or coworker does not establish a disability within the meaning of the law); *cert denied*, 118 S. Ct. 893 (1998), *rehearing denied*, 118 S. Ct. 1344 (1998).

[20] *See* Robert Burgdorf, Jr., **Disability Discrimination in Employment Law**, at 145-46 (1995) (discussing other exceptions).

Courts are split as to whether the "voluntariness" of a condition or impairment is relevant to the determination of a disability under the ADA.[21] This issue may be raised in cases examining the relation of smoking to the development of lung cancer, of riding a motorcycle without a helmet to brain damage from a motorcycle accident, or of sexual promiscuity to subsequent HIV disease.[22] In these types of cases, federal judges are required to evaluate the admissibility of scientific evidence of addiction, traumatic head injury, and the risk of HIV disease transmission.

[21] *See* Blanck, **The ADA and the Emerging Workforce**, *supra* note 8, at 18.

[22] *See* **Equal Employment Opportunity Commission, ADA Compliance Manual**, Section 902.2(e), at 14 (Mar. 14, 1995) (describing definition of disability under ADA).

Plaintiff-employees attempting to satisfy the first step of the *prima facie* case must present more than subjective personal statements to establish the existence of a recognized disability.[23] Attending physicians, clinical psychologists, or other specialists such as vocational rehabilitation counselors, often testify as to the nature of alleged impairments based on their professional knowledge or opinions.[24] If professionals are retained to render expert scientific testimony, they are required under the Federal Rules of Evidence to produce reports that are discoverable and subject to examination by opposing counsel prior to trial.[25]

a. The First Prong of the Definition of Disability

Experts frequently are called to testify to assess the severity or extent of a plaintiff's condition under the first prong of the disability definition -- a physical or mental impairment that substantially limits a major life activity. For example, in *Bartlett v. New York State Board of*

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[23] *See Calhoun v. Liberty Northwest Insurance Group*, 789 F. Supp. 1540 (W.D. Wash. 1992) (dismissing plaintiff's disability discrimination claim because unsupported statements about her condition could not overcome summary judgement).

[24] *See* Fed. R. Civ. P. 26. *See also Richardson v. Consolidated Rail Corp.,* 17 F.3d 213, 218 (7th Cir. 1994) (doctor not an expert if testimony is based on observations acquired during course of treatment, and not in anticipation of litigation).

[25] *See* Fed. R. Civ. P. 26 Advisory Committee's Note, 1993 Amendments (anyone expected to testify at trial under Fed. R. Evid. 702 should be identified as an expert, except those who were not retained specifically for the purposes of litigation). *See Garza v. Abbott*, 1996 WL 494266 (mem.), 940 F. Supp. 1227 (N.D. Ill. 1996) (defendant unsuccessfully tried to strike portions of plaintiff's treating physician based on argument that physician was not clearly disclosed as an expert); *Musselman v. Phillips*, 176 F.R.D. 194 (D. Md. 1997) (work product furnished by attorney to treating physicians also called as witnesses in ADA trial is discoverable).

Law Examiners, the plaintiff, Ms. Bartlett, asked for extra time to take the New York Bar examination because she had a learning disability.[26] Ms. Bartlett brought suit under the ADA after her accommodation request was refused by the Board of Law Examiners. At trial, Ms. Bartlett offered extensive evidence from psychologists regarding the nature of her condition and the extent to which it was disabling.[27]

[26] 156 F.3d 321 (2nd Cir. 1998). Ms. Bartlett brought suit under Title III of the ADA.

[27] *Id.*.

Although the first prong of the disability definition employs a functional definition of disability that is determined on a case-by-case basis, there has been debate over the types of impairments covered by the first prong of the disability definition, and whether some impairments should be considered presumptively disabling or *per se* disabilities.[28] This question was addressed by the U.S. Supreme Court during its 1997-1998 term in a case involving an individual with HIV disease. In *Bragdon v. Abbott*,[29] the plaintiff, Sidney Abbott, had HIV disease but exhibited no outward symptoms of the disease. When Ms. Abbott went to a dentist, Dr. Bragdon, to have a cavity filled, she disclosed her condition. Fearing exposure to HIV, Bragdon refused to fill the cavity in his office but offered to perform the service in a nearby hospital at additional cost to Ms. Abbott.

[28] *See* Blanck, **The ADA and the Emerging Workforce**, *supra* note 8, at 13-27 (1998). *See also* Darryl Van Duch, *Carpal Tunnel is an ADA Disability: The Decision Creates a Split Among the Appellate Courts*, Nat'l. L. J. A6 (Apr. 13, 1998) (discussing split among circuits).

[29] 524 U.S. 624 (1998).

Abbott brought suit against Bragdon under Title III of the ADA. The First Circuit Court of Appeals affirmed the trial court's ruling that Abbott's HIV infection met the ADA's definition of disability under the first prong analysis. In its subsequent review of the case, the U.S. Supreme Court relied on extensive scientific study in holding that presently asymptomatic HIV infection is a physical impairment within the meaning of the first prong. The Court reasoned that HIV disease differs from other viral infections and some genetic disorders because it does not have a latency stage. During each stage, the AIDS virus continues to attack and destroy white blood cells. As a result, the Court concluded that from the moment of its onset, HIV disease is an impairment covered by the ADA.[30]

The *Bragdon* decision impacts future ADA employment case law in several respects. First, it remains to be determined whether lower courts will adopt the Supreme Court's distinction between asymptomatic HIV disease, viral infections, or genetic disorders that may exist in dormant stages for years with respect to the definition of disability for purposes of the ADA.[31] Second, it is unclear whether courts will apply *Bragdon* to cases in which the effects of disabling conditions, such as diabetes or depression, are mitigated through the use of medication.

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[30] The Court also considered the other elements of the first prong definition in finding that asymptomatic HIV disease is a disability for the purposes of the ADA. *Id.* at 2201-2204 (*e.g.*, that reproduction is a major life activity that is substantially limited by HIV disease).

[31] Michael Starr, High Court in Bragdon Gives Hint How ADA Is Likely to Be Applied, Corp. Counselor 1 (July 1, 1998). *See also* George J.Annas, Protecting Plaintiffs from Discrimination – The Americans with Disabilities Act and HIV Infection, 339 **New England J. Med.** 1255 (1998).

There has been a split of opinion among the federal circuit courts regarding the issue of "mitigating measures" as it pertains to the first prong's substantial limitation determination.[32] The First Circuit, in *Arnold v. United Parcel Service*, for instance, concluded that an insulin dependant plaintiff who displayed no outward signs of disease, was still disabled for the purposes of the ADA.[33] That court concluded that Congressional intent supported the conclusion that the substantial limitation determination be made on the basis of the underlying condition, without considering the effects of mitigating measures such as drugs or prosthetic devices.[34]

In contrast, the Tenth Circuit, in *Murphy v. United Parcel Service*, considered the beneficial effect of mitigating measures in finding that a plaintiff with high blood pressure that was controlled by medication was not substantially limited in a major life activity.[35] The plaintiff in *Murphy* functioned normally when medicated, according to the testimony of the plaintiff's expert physician.[36] In yet another case, the Iowa Supreme Court, in *Fuller v. Iowa*

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[32] *See Testerman v. Chrysler Corp., Inc.*, 1998 WL 71827 (D. Del.) (citing cases).

[33] 136 F.3d 854 (1st Cir. 1998).

[34] *Id. See also Sherback v. Wright Automotive Group*, 987 F.Supp. 433 (W.D. Pa. 1997) (holding that plaintiff's psychiatric disability should be considered without regard to mitigating measures such as anti-depression medication and noting that the Third Circuit has traditionally given great deference to EEOC guidelines and regulations).

[35] *Murphy v. United Parcel Service*, 141 F.3d 1185 (10th Cir. 1998), *cert. granted* 119 S. Ct. 790 (Jan. 8, 1999) (No. 97-1943).

[36] *Id.* The mitigating measures controversy underscores the need for experts who are

Department of Human Services, concluded that while it is improper to consider the mitigating effects of medication or other assistive devices in determining whether an impairment exists, it is proper to consider mitigating effects in determining whether an impairment substantially limits a major life activity.[37]

called to testify on whether a plaintiff is disabled under the ADA to examine the effects of medication in controlling disabling conditions.

[37] *Fuller v. Iowa Dept. Human Services*, 576 N.W.2d 324 (Iowa 1998).

During its 1998-1999 term, the Supreme Court reviewed three cases to address the issue of mitigating measures. In *Murphy v. United Parcel Service*, the Court reviewed whether a plaintiff's hypertension must be evaluated in its unmedicated state in making the disability determination.[38] In a second case, *Sutton v. United Airlines*,[39] the Court considered whether airline pilots with poor vision may be excluded from protection under the ADA if their vision is corrected by glasses.[40] In the third case, *Albertson's v. Kirkingburg*,[41] the Court addressed whether an individual with monocular vision is disabled *per se* under the ADA. In each case, the Court also will decide the degree to which lower courts must defer to EEOC interpretive guidelines in analyzing disabilities in their uncorrected states.[42]

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[38] 119 S. Ct. 790 (the court also will consider if there was a genuine dispute as to whether UPS regarded plaintiff as disabled and fired him because of his hypertension).

[39] 130 F.3d 893 (10th Cir.1997), *cert. granted* 119 S. Ct. 790 (Jan. 8, 1999) (No. 97-1943).

[40] *Id.*

[41] 143 F.3d 1228 (9th Cir. 1998), *cert. granted* 119 S. Ct. 791 (Jan. 8, 1999) (No. 98-591) (the court also will consider whether a commercial motor vehicle driver with monocular vision who failed to meet the Department of Transportation's minimum vision requirements was a qualified individual under the ADA, and whether an employer must participate in a governmentally-sponsored vision waiver program as a means of reasonable accommodation).

[42] *Id.*

In sum, the first prong of the disability definition is based not only on the diagnostic evidence of the impairment, but also on the effect of the impairment on an individual's life.[43] Thus, even an apparent or underlying genetic predisposition to illness or disease is not necessarily a disability covered by the law.[44] Individuals with actual and substantial impairments or conditions (for instance, mental retardation, visual or hearing impairments, cancer, mental illness, physical paralysis, or HIV disease) that affect major life activities still must prove discrimination based on a recognized disability under the first prong of the definition.[45]

b. The Second and Third Prongs of the Definition of Disability

[43] 29 C.F.R. 403 (app. to pt. 1630) (providing commentary on § 1630.2(j)(1993). *Cf. Murphy v. United Parcel Service*, 119 S. Ct. 790 (Jan. 8, 1999) (No. 97-1992). *See also Cleveland v. Policy Management Systems Corp.*, 120 F.3d 513 (5th Cir. 1997), *cert granted* 119 S. Ct. 39 (Oct. 5, 1998) (No. 97-1008) (involving the determination of whether application for social security benefits creates a rebuttable presumption that recipient is judicially estopped from asserting qualified individual with disability status under ADA).

[44] *See* Peter David Blanck & Mollie Weighner Marti, Genetic Discrimination and the Employment Provisions of the Americans with Disabilities Act: Emerging Legal, Empirical, and Policy Implications, 14 **Behav. Sci & L.** 411 (1996) (discussion of genetic discrimination under the ADA).

[45] *E.g.*, in *Bragdon*, the Court held that the plaintiff was substantially limited in the major life activity of reproduction. 524 U.S. 624, at 634.

Scientific expert evidence plays a less direct role in proving a case of employment discrimination under the second or third prong of the disability definition (i.e., an individual with a "record of" or "regarded as having"[46] an impairment). The second and third prongs are meant to prevent employment discrimination on the basis of biased and unjustified attitudes toward individuals with perceived, but not necessarily "substantially limiting" conditions. Many times, an applicant's or employee's actual or perceived impairment is substantially limiting only as a result of the biased attitudes of others.[47] This may be the case in instances of genetic discrimination, where an adverse employment decision is made on the basis of an individual's genotype and potential for future disease.[48]

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[46] In "regarded as" cases, an individual's underlying impairment does not have to be "substantially limiting" to be covered by the ADA. This is because the "regarded as" prong is meant to protect individuals from unjustified prejudice and stereotypes about disability, particularly in cases where the individual does not have an impairment or has an impairment that does not substantially limit a major life activity. EEOC Compliance Manual, § 902.8(e), at 49-50. *See also* Arlene B. Mayerson, Restoring Regard for the "Regarded As" Prong: Giving Effect to Congressional Intent, 42 **Vill. L. Rev.** 587-612 (1997) (arguing that the "regarded as" prong of the definition of disability should be analyzed differently than the first prong of the definition to give Congressional intent to the law).

[47] Title I imposes liability for discrimination whenever the prohibited motivation based on disability affects the employer's decision, that is, "when it is a 'but-for' cause." *See McNely v. Ocala*, 99 F.3d 1068 (11th Cir. 1996), *cert. denied* 117 S. Ct. 1819 (May 19, 1997) (No. 96-1318) (concluding a literal reliance on the phrase "solely" by reason of disability leads to results inconsistent with Congressional intent).

[48] Blanck & Marti, *supra* note 44.

To prove the necessary elements of the *prima facie* case under the "regarded as" prong, a plaintiff must present evidence of a perception of disability. Thus, in *Robinson v. Global Marine Drilling*, the plaintiff had a documented history of asbestosis.[49] Yet the Fifth Circuit dismissed Robinson's "regarded as" claim because it found that the employer had neither considered his asbestosis as a substantial limitation nor had done so through biased attitudes. The court concluded that the plaintiff had presented evidence of a record of an impairment and not a disability.[50]

2. Step 2 of the *Prima Facie* Case: Qualified Individual with a Disability Who Can Perform Essential Job Functions

An individual alleging discrimination next must prove that he or she is a qualified individual with a recognized disability who can perform essential job functions. The determination of whether an individual with a disability is qualified for a job is made in two steps. The initial step is to determine if the person *currently* satisfies the prerequisites for the job, such as educational background or employment experience.[51] One of the first cases brought by the Equal Employment Opportunity Commission (EEOC) under ADA Title I involved a

[49] 101 F.3d 35, 36 (5th Cir. 1996).

[50] *Id.* *See also* 29 C.F.R. § 1630.2(1)(1)-(3).

[51] 29 C.F.R. § 1630.2(m). This is analogous to the determination of whether an individual is "otherwise qualified" for the job under the Rehabilitation Act (*citing* S. Rep. at 33; H. Rep. at 64-65).

business executive with brain cancer who was fired, not because the company feared that he was currently unqualified for his job, but because the company feared that he may become disabled in the future.[52]

[52] *See EEOC v. AIC Security*, 55 F.3d 1276 (7th Cir. 1995), 520 U.S. 1228 (May 19, 1997) (No. 96-1328) .

Title I requires that decisions about the qualifications of an applicant or employee be made at the time of hiring. The initial step enables employers to consider jobs appropriate to the applicant's experience and skill level.[53] The next step is to determine if the individual can perform the "essential functions" of that job with or without reasonable accommodation. Essential job functions are those that the employee must perform unaided or with the assistance of an accommodation.[54]

The second step ensures that persons with disabilities are not denied employment because they cannot perform nonessential or marginal job functions. In the absence of systematic analysis, essential and marginal functions of a job are difficult to assess. Title I provides that consideration is to be given to the employer's judgment as to what functions are essential.[55]

3. Step 3 of the *Prima Facie* Case: Proof of Employment Discrimination

a. Discrimination under the Disparate Treatment Theory

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[53] *See* Disability Rights Education Defense Fund, **Comments on the EEOC's Proposed Regulations for Title I**, at 4 (Apr. 1991) (employment decisions should not based on anticipated health coverage, insurance) (*citing* ADA Judiciary Report at 34; House Education & Labor Rep. at 136).

[54] 29 C.F.R. § 1630.2(n) (1991) (providing the example that typing may be an essential function of a job if, in fact, the employer requires any employee in that particular position to type).

[55] *Id.* However, persons with disabilities may challenge an employer's contention that a job function is essential. The factors relevant for the assessment of essential job functions vary among persons with different disabilities.

Discrimination by an employer against a qualified job applicant or employee with a disability because of that disability may be set forth in a claim of "disparate treatment."[56] Under this theory of discrimination, a plaintiff will claim the occurrence of unjustified employment discrimination on the basis of a recognized disability, as compared to the favorable treatment of a similarly qualified employee without a disability.[57] Disparate treatment occurs when an employer excludes an employee, for instance, an individual with a severe facial disfigurement or Down Syndrome, from staff meetings because the employer does not like to look at the employee. The employee is treated differently because of the employer's attitude towards his or her perceived disability.[58]

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[56] *See* Pamela S. Karlan & George Rutherglen, Disabilities, Discrimination, and Reasonable Accommodation, 46 **Duke L. J.** 1, 14 (1996) (discussing theories of discrimination under ADA Title I).

[57] *See Johnson v. Boardman Petroleum, Inc.*, 923 F. Supp. 1563 (S.D. Ga. 1996); 42 U.S.C. § 12112. In contrast, discrimination under a disparate impact theory focuses on "discriminatory animus" in employment situations experienced by classes of people with similar racial or gender characteristics. Thus, the scope of inquiry covers the status characteristics of people. Statistical studies frequently are used to show a disparate impact of the employment practice. *See* William F. Highberger, Current Evidentiary Issues in Employment Litigation, SBO7 **ALI-ABA** 137, 157 (1996) (discussing use of statistical evidence in disparate treatment and disparate impact discrimination cases).

[58] 29 C.F.R. pt. 1630, app. § 1630.15(a). *See Monette v. Electronic Data Systems Corp.*, 90 F.3d 1173 (6th Cir. 1996) (discussing the burden-shifting framework in a disparate treatment claim in the disability context).

A plaintiff claiming disparate treatment may present direct or indirect proof of employment discrimination. Claims of disparate treatment based on circumstantial evidence have been analyzed under the burden shifting formulation developed under Title VII of the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1991.[59] According to the burden shifting framework devised by the Supreme Court in *McDonnell Douglas Corp. v. Green*, the plaintiff in a Title VII disparate treatment action bears the burden of establishing the elements of the *prima facie* case.[60] Once the plaintiff clears this hurdle, the evidentiary burden shifts to the defendant to articulate a legitimate and nondiscriminatory reason to explain the conduct.[61] If the defendant succeeds in making this showing, the burden shifts back to the plaintiff to show that the defendant's reason for the conduct was pretextual. If the plaintiff cannot meet this test, the claim fails as a matter of law.[62]

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[59] 42 U.S.C. § 2000e et. seq.

[60] 411 U.S. 792 (1973).

[61] *See McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 802 (1973).

[62] *Id.* For cases clarifying the application of the *McDonnell Douglas* burden shifting framework, *see Texas Department of Community Affairs v. Burdine*, 450 U.S. 284 (1981) (holding that plaintiff's *prima facie* cases creates a rebuttable presumption that the employer discriminated and clarifying the employer's burden); *St Mary's Honor Center v. Hicks*, 509 U.S. 502 (1993) (clarifying the meaning of the employer's burden of production). For a discussion of the burden shifting framework in the context of the ADA *prima facie* case. *See AKA v. Washington Hospital Center*, 157 F.3d 758 (D.C. Cir. 1998) *petition for cert. filed*, 67 U.S.L.W. 3505 (Feb. 4, 1999)(No. 98-1270); *Smith v. Chrysler Corp.*, 1998 U.S. App. 22396 (6th Cir. 1998). For a discussion of the evolving nature of the framework and a proposal that simplifies evidentiary assessments, see Denny Chin & Jodi Golinsky, Moving Beyond McDonnell Douglas: A Simplified Method for Assessing Evidence in Discrimination Cases, 64 **Brook L. Rev.** 659

(1998).

In cases brought subsequent to *McDonnell Douglas*, the Supreme Court reinterpreted the burden shifting framework in ways inconsistent with prior disparate treatment analysis.[63] Thus, in *Wards Cove Packing Co. v. Atonio*[64] the Supreme Court held that the plaintiff must prove that the employment practices alleged led to the discrimination.[65] The Court concluded that the burden of proof remains with the plaintiff and did not shift as set forth in the earlier *McDonnell Douglas* formulation.[66] The Civil Rights Act of 1991 was passed, in part, to overturn the changes in the burden shifting analysis set forth by the Supreme Court in *Wards Cove*.[67] The 1991 Act overturned the conclusion in *Wards Cove* that the burden of proof always remains with the plaintiff.[68]

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[63] *See* David A. Cathcart, & Mark Snyderman, The Civil Rights Act of 1991, SB36 **ALI-ABA** 277, 308 (1997).

[64] 490 U.S. 642 (1989).

[65] *Id.* *See also* Cathcart, & Snyderman, *supra* note 63, at 306 (1997).

[66] In a case heard the same term, *Price Waterhouse v. Hopkins*, 109 S. Ct, 1775 (1989), the Court concluded that Title VII required plaintiffs to prove that an employer relied on an impermissible factor in reaching an employment decision. As indicated by Cathcart and Snyderman, *supra* note 63, once the plaintiff establishes the elements of the *prima facie* case, the employer carries only the burden of production (not the burden of persuasion) in presenting a business justification for the challenged practice.

[67] 42 U.S.C. § 2000e et. seq.

[68] Under the 1991 Act, ADA plaintiffs also are eligible for jury trials and punitive damages for claims of intentional discrimination, including attorney's fees and experts' fees. *See* Cathcart & Snyderman, *supra* note 63, at 308.

b. Discrimination under the Reasonable Accommodation Theory

Discrimination under Title I also may be found where an employer fails to provide "reasonable" workplace accommodations, such as job training, coaching supports, or flexible scheduling to a qualified person with a disability.[69] Discrimination may be found where an employer forces a qualified worker with a disability to accept an "unreasonable" accommodation, such as to transfer to a new work site location or to work alone. In *Duda v. Board of Education of Franklin Park Public School District No. 84*, for instance, the Seventh Circuit Court of Appeals held that the forced reassignment of a qualified worker with bipolar disorder was an unreasonable workplace accommodation in violation of the ADA that resulted in the segregation of the employee.[70] Again, interpretation of concepts such as unjustified discrimination and reasonable accommodation are made on a case-by-case analysis.[71]

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[69] 42 U.S.C. § 12112(a) (Supp. IV 1992) (defining discrimination as "not making reasonable accommodations to the known physical or mental limitations of an otherwise qualified individual with a disability").

[70] *See Duda v. Board of Education of Franklin Park Public School District No. 84*, 133 F.3d 1054 (7th Cir. 1998) (*citing* 42 U.S.C. § 12112(b)(1), that the ADA includes "segregating" a job applicant or worker among its definitions of discrimination).

[71] *See* Kristin Bumiller, Victims in the Shadow of the Law: A Critique of Legal Protection, 12 **Signs: J. Women Culture & Soc'y** 421, 433 (1987) (discussing the need for individuals who suffer discrimination to assume the role of victim before filing a claim); Patricia DeMichele & Vicki Gottlich, Using Titles II and III of the Americans with Disabilities Act as Part of a Legal Services Practice, 27 **Clearinghouse Rev.** 1099-2000 (1996) (stating that the definition of discrimination depends on adequate description of comparison groups).

There is a split of opinion among the federal circuit courts as to which party bears the evidentiary burden of demonstrating whether an accommodation is reasonable. Under the more common approach, the Second Circuit in *Borkowski v. Valley Central School District*[72] found that the plaintiff bears the initial burden of demonstrating that an accommodation is reasonable. Under this formulation, a plaintiff must show that he can perform essential job functions with accommodation, identify potential accommodations, and prove that the employer is capable of making the accommodation.[73] Plaintiffs typically use expert medical or vocational rehabilitation specialists to testify that the requested accommodation was necessary, reasonable, and effective.[74] Once the plaintiff has made a *prima facie* showing that a reasonable accommodation is available, the burden of proof shifts to the defendant-employer.

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[72] 63 F.3d 131 (2nd Cir. 1995). *See also* William D. Frumkin & Louis G. Santangelo, Burdens of Proof Under ADA and Rehabilitation Act, 68 **OCT N.Y. St. B. J.** 38 (1996). According to Frumkin & Santangelo, "other circuits have struggled to give content to the terms "reasonable accommodation" and "undue hardship." The D.C. Circuit, for example, places the burden of both production and persuasion on the plaintiff. In contrast, the Fifth and Ninth Circuits have placed the burden on the issues of reasonable accommodation and undue hardship on the employer." *Id.*

[73] *See also Andress v. National Pizza Company*, 984 F. Supp. 475 (S.D. Miss. 1997) (citing cases); *Willis v. Conopco*, 108 F.3d 282 (11th Cir. 1997) (holding that to meet his *prima facie* burden, employee was required to identify an accommodation that would allow him to perform his duties, and that such an accommodation was reasonable); *Barnett v. U.S. Air, Inc*., 157 F.3d 744, 748 (9th Cir. 1998) (same)

[74] *Ballard v. State*, 1996 WL 316761 (S.D. Ala., 1996).

Under the failure to provide a reasonable accommodation theory of employment discrimination, there is no need for indirect proof or the legal burden shifting under the theory of discrimination based on disparate treatment.[75] An exception is when a plaintiff who has not explicitly requested an accommodation alleges discrimination because of an employee's failure to accommodate. This type of claim would be analyzed under the Title VII (i.e., *McDonnell Douglas*) burden shifting framework discussed earlier.[76]

B. Defendant's Affirmative Defenses to Plaintiff's *Prima Facie* Case

If an employee-plaintiff satisfies the elements of proof required by the *prima facie* case, the evidentiary burden shifts to the employer-defendant to rebut the claim of employment discrimination.[77] An employer may use expert and scientific testimony to prove that the plaintiff is not a person with a disability, is not qualified for the job in question, did not request a reasonable workplace accommodation, or that any accommodation would not be possible because it would present an undue hardship to the employer or a direct threat to the employee or

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[75] *See Riel v. Electronic Data Systems*, 99 F.3d 678, 681 (3rd Cir. 1996).

[76] *See supra* notes 56-62.

[77] *See Katz v. City Metal Co., Inc.*, 87 F.3d 26, 30 (1st Cir. 1996) (discussing essential elements of *prima facie* ADA Title I case); *Sherback v. Wright Automotive Group*, 987 F. Supp. 433 (W.D. Pa. 1997) (concluding that the Supreme Court may have modified the traditional formulation of a plaintiff's prima facie case in employment discrimination cases to a case-by-case determination -- *citing O'Connor v. Consolidated Coin Caterers Corp.*, 116 S. Ct. 1307, 1308-09 (1996)).

others.

1. Undue Hardship Defense

Through the concept of undue hardship, Title I limits an employer's obligation to provide workplace accommodations.[78] Undue hardship occurs when the employer would undergo significant difficulty or expense in providing an accommodation.[79] The defendant's burden of proof that an accommodation would be unreasonable parallels the burden of proving that the proposed accommodation would cause undue economic hardship.[80]

[78] 29 C.F.R. § 1630.2(p) (1991). *See* Jeffrey O. Cooper, Overcoming Barriers to Employment: The Meaning of Reasonable Accommodation and Undue Hardship in the Americans with Disabilities Act, 139 **U. Pa. L. Rev.** 1423, 1430 (1991).

[79] *See* 42 U.S.C. § 12111(10); 29 C.F.R. § 1630.2(p) (1991) (referring to accommodation that would be unduly costly, extensive, disruptive or fundamentally alter the nature of the business); Robert .H. Gardner & Charles. J. Campanella, The Undue Hardship Defense to the Reasonable Accommodation Requirement of the Americans with Disabilities Act of 1990, 7 **Lab. Law.** 37 (Winter 1991).

[80] *See* Frumkin & Santangelo, *supra* note 72, at 38 (1996).

The undue hardship defense primarily focuses on the economic impact of an accommodation on covered firms.[81] In *Borkowski v. Valley Central School District*,[82] the Second Circuit concluded that the plaintiff had made out a *prima facie* case that the proposed accommodation (a teacher's aide) was reasonable.[83] The plaintiff, a teacher who sustained neurological damage due to an automobile accident, had memory and concentration problems. Plaintiff presented evidence that a teacher's aide would help her to perform the required essential job functions.[84] The defendant school district failed to present evidence that the accommodation would create an undue economic hardship.[85]

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[81] *See* Blanck, **The ADA & the Emerging Workforce**, *supra* note 8, at 51 (listing economic factors including nature and cost of accommodation, financial resources and workforce of facility and of the parent entity; composition of the workforce, and relation between facility and parent entity).

[82] 63 F.3d 131 (1995).

[83] *Id.*

[84] According to the *Borkowski* Court, the plaintiff need only identify a reasonable accommodation, the costs of which do not exceed the benefits. 63 F.3d 133-135. *See also* Frumkin & Santangelo, *supra* note 72, at 42.

[85] Even if an employer shows that the cost of an accommodation would impose an undue hardship, the employer may be required to provide the accommodation if it may be effective and its funding is available from another source. Where the individual or state agency provides the accommodation or pays for that portion of the costs that constitute the undue hardship on the business, the employer is obligated to provide the accommodation. 29 C.F.R. § 1630.2(p) (1991). *See also* **The ADA and the Emerging Workforce**, *supra* note 8, at 57-58 (discussing *EEOC v. Hertz*) (case involving the reasonableness of a job coach).

2. Direct Threat

A second affirmative defense that may be asserted by employers to a charge of ADA employment discrimination involves persons with disabilities who are alleged to be "unqualified" for a job in circumstances in which they are believed to pose a direct safety or health threat to themselves or others in the workplace.[86] Direct threat means a significant and objective risk to the health or safety of others that cannot be eliminated by reasonable accommodation.[87] Sometimes the alleged direct threat implicates underlying attitudinal biases not based on objective scientific evidence about hidden or perceived impairments such as genetic, mental, addictive, and contagious conditions as derived from medical testing.[88] Thus,

[86] 42 U.S.C. § 12113(a); 29 C.F.R. § 1630.2(r) (1991) (defining direct threat as a "significant risk of substantial harm to the health or safety of the individual or others that cannot be eliminated or reduced by reasonable accommodation"); 28 C.F.R § 36.208 (Title I may require accommodations that eliminate or sufficiently reduce a direct threat); 29 C.F.R. § 1630.2 (r) (1991) (where a mental or emotional disability is involved, employer must identify the behavior on the part of the individual that would pose a direct threat). For a review, *see* Laura F. Rothstein, The Employer's Duty to Accommodate Performance and Conduct Deficiencies of Individuals with Mental Impairments under Disability Discrimination Laws, 47 **Syracuse L. Rev.** 931-86 (1997).

[87] 42 U.S.C. § 12111(3). *See also* 29 C.F.R. § 1630.2(r) (1996) (EEOC supplementing statutory definition by adding the following words in its ADA regulations: "a significant harm to the health or safety of the individual or others that cannot be eliminated or reduced by reasonable accommodation.").

[88] *See Estate of Mauro v, Borgess Medical Center*, 137 F.3d 398 (6th Cir. 1998) *cert. denied* 119 S. Ct. 51 (Oct. 5, 1998) (No. 97-1870) (finding that hospital did not violate ADA by transferring HIV positive operating room technician to other position); *Judice v. Hospital Serv. Dist. No. 1*, 919 F. Supp. 978 (E.D. La. March 13, 1996) (finding hospital did not violate ADA

the dentist-defendant in *Bragdon* contended that he faced a significant risk of exposure to HIV by filling the plaintiff's cavity.[89] Bragdon believed that this risk could be avoided by treating the plaintiff in a hospital equipped with air filtration devices and other safety features.[90]

The *Bragdon* Court concluded, however, that the existence of a direct threat must be made from the perspective of the person charged not to discriminate, based on objective (i.e., scientifically valid and reliable) credible evidence. The Court followed its earlier decision in *School Board of Nassau City v. Arline*[91] in drawing a critical distinction between "objective or other medical evidence" of risk and the assessment of risk based on clinical or experiential judgment. According to the Court, Bragdon had a duty to assess the risk based on objective scientific evidence, but "receive[d] no special deference because of his status as a health care

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by requesting recovering alcoholic surgeon to undergo second medical evaluation before reinstatement of staff privileges); *Doe v. University of Maryland Medical System Corp.*, 50 F.3d 1261 (4th Cir. 1995) (finding hospital did not violate ADA when it suspended HIV-positive surgical resident because of threat to patients); *Scoles v. Mercy Health Corp.*, 887 F. Supp. 765 (E.D. Pa. 1994) (ruling for defendant hospital and against surgeon with HIV disease in suit involving non-staff hospital privileges because of safety threat to patients). *See* Phillip L. McIntosh, When the Surgeon Has HIV: What to Tell Patients About the Risk of Exposure and the Risk of Transmission, 44 **U. Kansas L. Rev.** 315-64 (1996); Pope L. Moseley, Peter David Blanck, & Randy Merrit, Hospital Privileges and the Americans With Disabilities Act, 21 **Spine** 2288-93 (1996); McDonald et al., Mental Disabilities under the ADA: A Management Rights Approach, 20 **Empl. Rel. L.J.** 541-569, 557-58 (Spring 1995); Mary E. Sharp, The Hidden Disability That Finds Protection Under the Americans With Disabilities Act: Employing the Mentally Impaired, 12 **Ga. St. U. L. Rev.** 889, 921-926 (1996).

89 524 U.S. 624 638-640.

90 *Id.*

91 480 U.S. 273, 287 (1987).

professional."[92] Other evidentiary factors considered by courts in determining whether a direct threat exists include the duration of the risk, the nature of potential harm, and the likelihood that the harm will occur.[93]

[92] *Id.*

[93] 29 C.F.R. § 1630.2(r) (1996).

Bragdon suggests that an employer must make employment decisions based on existing scientific evidence in determining whether a person with a disability poses a direct threat.[94] Blanket exclusions by employers of applicants or employees on the basis of a perceived direct threat from a disability is prohibited under the ADA.[95] Under the ADA's direct threat analysis, a court must balance the admissibility of scientific evidence related to the protection of employers and others from exposure to unacceptable health and safety risks against the ADA civil rights of qualified individuals with disabilities from discrimination often "that is rooted in prejudice or baseless fear."[96]

III. Evidence of Disability and the *Daubert* Admissibility Standard

[94] *See* Starr, *supra* note 31.

[95] *See Mendez v. Gearan*, 956 F. Supp. 1520 (N.D. Cal. 1997) (employer must perform individualized medical screening to assess nature of direct threat possibility). In some cases, the issue of direct threat is not related directly to the employee's performance of essential job functions. In those cases, the employer has the legal burden of proving that the employee is a threat to others in the workplace. The direct threat defense has been raised also in circumstances where the threat came from relatives of the qualified worker. In such a case, the Tenth Circuit in *Den Hartog v. Wasatch Academy*, 129 F.3d 1076 (10th Cir. 1997) concluded that the ADA permits an employer to discharge a non-disabled employee whose son with a mental disability posed a direct threat in the workplace.

[96] *Abbott v. Bragdon*, 524 U.S. 624, at 640. *See also* Annas, *supra* note 31 (discussing critical need to balance plaintiff's ADA civil rights against objective evidence of threat of harm to community); David M. Studdert & Troyen A. Brennan, HIV Infection and the Americans with Disabilities Act: An Evolving Interaction, 549 **Annals Am. Acad. Pol. & Soc. Sci.** 84 (1997) (discussing use of ADA to review the public health powers of the state).

Within the context of the ADA, disputes in pretrial motions and discovery proceedings about the admissibility of scientific evidence have arisen as battles among adverse experts.[97] ADA plaintiffs employ experts with increasing frequency to testify as to the nature of the impairment claimed, whether it rises to the level of a disability covered by the law, and the plaintiff's physical and mental capabilities.[98] Plaintiffs use vocational experts, physicians, and clinical psychologists, for instance, to testify as to how a physical or mental condition affects an individual's ability to work and about the efficacy of potential workplace accommodations. Plaintiffs also employ economists as expert witnesses to testify as to monetary damages resulting from alleged discrimination, such as lost wages or backpay.

Defendants often use scientific experts to present evidence in support of affirmative defenses to a charge of employment discrimination -- for instance, to rebut an assertion that an impairment rises to the level of an ADA disability, that the plaintiff can perform essential job functions without risk of harm to others, or that a proposed workplace accommodation is effective and reasonable.[99]

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[97] Margaret A. Berger, Procedural Paradigms for Applying the Daubert Test, **78 Minn. L. Rev.** 1345 (1994).

[98] Attorneys Should Choose Experts Carefully, Speakers Say, Advising Reliance on Vocational Experts, Treating Doctors, 7 **BNA's Americans with Disabilities Act Manual** 17 (Feb. 12, 1998).

[99] *Id.*

As in other areas of the law, the admissibility of expert evidence that is related to the elements of an ADA claim is a legal question for a trial judge to decide under the Federal Rules of Evidence. Federal Rule 702 provides that a witness qualified as an expert may testify as to his or her "scientific, technical, or specialized knowledge" if it will assist the trier of fact to understand the evidence or to determine a fact at issue. The conflict between the Federal Rules and the prior *Frye* "General Acceptance" test has been discussed elsewhere in detail.[100]

In *Daubert*, the Supreme Court attempted to establish an admissibility formulation to relieve the friction between *Frye* and Federal Rule 702.[101] Simply put, the *Daubert* decision was meant to keep "junk science" out of court by requiring judges to function as gatekeepers who admit scientific evidence found to be valid, relevant, and reliable.[102] Yet the decision left many issues unresolved, including the extent to which appellate courts would defer to trial courts with respect to gatekeeping functions, and whether *Daubert* standards applied to non-scientific expert testimony.

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[100] *See Frye v. United States*, 54 App. D.C., 293 F. 1013, 1014 (1923) ("the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs"). *See also* Foster & Huber, *supra* note 4.

[101] In *Daubert*, the Court emphasized that the Frye test had been displaced by the Federal Rules. *Daubert*, at 509 U.S. 579.

[102] *Id*. The decision establishes a two-step inquiry as a guide for admissibility determinations: i) courts must determine whether an expert's scientific testimony pertains to scientific knowledge; and ii) they must subsequently determine whether the proposed testimony will assist the trier of fact.

The Supreme Court addressed the first of these issues during its 1997 term, when it refined its *Daubert* formulation in *General Electric v. Joiner*.[103] In *Joiner*, the plaintiff sued transformer and chemical manufacturers, alleging that his on the job exposure to PCBs, dioxin, and furans caused him to develop lung cancer. The trial court granted summary judgment for the defendants, in part because plaintiff's experts failed to demonstrate the scientific link between chemical exposure and his cancer. Plaintiff's experts failed to proffer empirical evidence in support of a causation theory. In reversing the lower court, the Eleventh Circuit held that the Federal Rules displayed a preference for the admissibility of expert testimony, supporting a more liberal approach to *Daubert* gatekeeping.[104]

In reviewing the Eleventh Circuit decision, the U.S. Supreme Court held that a trial court's decision to admit or exclude expert scientific testimony should be reviewed under an "abuse of discretion" standard.[105] According to the Court, neither *Daubert* nor the Federal Rules of Evidence required the admission of evidence that is connected to purported scientific

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[103] *General Electric v. Joiner*, 522 U.S. 136 (1997).

[104] *Id.* The appellate court held that the trial court's exclusion of the evidence had an outcome determinative effect on the proceedings, and thus required a particularly stringent standard of review.

[105] *Id*. According to the Court, the abuse of discretion standard should apply, regardless of whether it will be used to admit or exclude testimony--in opposition to the Eleventh Circuit's outcome determinative analysis. The appellate court applied an overly stringent standard of review, thus failing to give the lower court the deference that is that hallmark of abuse of discretion review.

findings articulated by an expert witness.[106] Thus, in some cases, a court's gatekeeping function properly would include a review of the *quality* of the scientific conclusions that are drawn from proffeered research studies.[107]

[106] *Id.*

[107] *See* 522 U.S. 136 (1997) ("Conclusions and methodology are not entirely distinct from one another...when the analytical gap between the data and the opinion proffered is simply too great, [the evidence may be rejected]").

Joiner clarifies *Daubert* and extends substantial deference to trial judges on questions of the admissibility of scientific evidence involving disability issues.[108] As an unintended consequence, however, *Joiner* may have emboldened trial judges to probe the scientific conclusions that experts draw from their proffered research.[109] *Joiner* establishes that, to be admissible, expert testimony must adequately explain scientific conclusions to trial judges. As one commentator noted, the decision "punctuate[s] even more clearly [that] the expert admissibility question is a veritable life and death litigation crossroads."[110]

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[108] Bert Black, Post-Daubert and Joiner Case Law: The Good, the Bad, and the Ugly, SC33 **ALI-ABA** 145 (1998).

[109] *See* Michael Hoenig, A Review Standard for Admission of Scientific Evidence, **N.Y.L.J.** 3 (Jan. 12, 1998) (discussing implications of the *Joiner* decision and noting that the decision is a wake up call for judges and advocates with respect to *Daubert's* vitality). *See also* Lori Tripoli, Get Your Experts in Order after Joiner, 16 **NO. & Prod. Liab. L. & Strategy** 1 (1998) (noting that the decision suggests that expert witnesses will need to better explain the underlying rationales for their opinions); Edward Brodsky, Expert testimony and Daubert: Beyond Science, **N.Y.L.J.** 3 (Feb. 11, 1998) (discussing implications of *Joiner* and *Daubert* for economic testimony).

[110] *Joiner* requires that litigants "maximize the quality of their *Daubert* advocacy at trial." *Id*.

During its 1999 term, the Supreme Court examined the issue of whether *Daubert* applies to admissibility determinations involving non-scientific expert testimony. In *Kumho v. Carmichael*, the Court considered whether an engineer's non-scientific expert testimony, that a defective tire caused an automobile accident, must meet the *Daubert* test.[111] The question raised by *Kumho* is related to the admissibility of non-peer-reviewed expert opinion based on "clinical" experience and observation outside the domain of traditional laboratory science; that is, to the relative merits of practical as opposed to scientific knowledge.[112]

The Court held that the admissibility rules outlined in *Daubert* may apply to testimony based on clinical or technical knowledge as well as to testimony based on scientific knowledge.[113] This means that a trial court may exercise its discretion in applying the *Daubert* factors to non-scientific testimony from clinicians and others. In the remainder of this part, we present a model that may be useful in evaluating admissibility determinations regarding scientific and non-scientific expert evidence proffered in ADA cases.

A. A Model for Assessing the Law of *Daubert* in ADA Litigation

As instructed by *Daubert*, the decision to admit or exclude scientific evidence of

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[111] *Kumho Tire Co. v. Carmichael*,1999 WL 152455 (U.S.).

[112] *See* Theodore M. Porter, **Trust in Numbers: The Pursuit of Objectivity in Science and Public Life** 193-199 (1995) (discussing the role of science in the court system).

[113] 1999 WL 152455.

disability will depend on the objectivity and quality of the proffered testimony.[114] If relevance is assumed, this inquiry is simplified to two general considerations related to the scientific validity and reliability of the proffered expert evidence.

Figure 1 below depicts four possible outcomes regarding the admissibility of proffered evidence in ADA cases.

Insert Figure 1

[114] The decision will depend on the relevance of the proffered testimony as well as the review of the methods and principles that characterize the expert's professional community and his or her individual clinical observations. *Daubert*, 509 U.S. 579. For a discussion of the reliability requirement in the context of employment litigation, *see* John V. Jansonius & Andrew M. Gould, Expert Witnesses in Employment Litigation: The Role of Reliability in Assessing Admissibility, 50 **Baylor L. R.** 267 (1998).

Figure 1 illustrates that an expert may present evidence in "traditional" areas of science, such as physics or immunology, with established experimental methods or procedures (*e.g.*, with high institutional validity), or in less traditional areas, such as clinical ecology (*e.g.*, with low institutional validity).[115] Likewise, an expert's clinical observations may reflect adherence to established standards of practice and be based on training and experience, for instance, as in clinical psychology (*e.g.*, with high individual reliability), or in disciplines with minimal adherence to or with the absence of scientific standards (*e.g.*, with low individual reliability).[116]

[115] *See* Sheila Jasanoff, **Science at the Bar: Law, Science, and Technology in America**, 42-68, 131-134 (1995) (discussing how expertise is perceived by the legal system).

[116] The distinction between knowledge derived through research and through experiential or clinical observation is explored in detail within the context of evidentiary considerations in Daniel B. Shuman & Bruce E. Sales, The Admissibility of Expert Testimony Based upon Clinical Judgment and Scientific Research, **XX Phil. Pub. Pol'y. & L. XXXX** (1998).

The model in **Figure 1** allows for a range of questions to be addressed with regard to the admissibility of ADA expert evidence. The model addresses the potential quality, rather than the type or the disciplinary origin of the evidence in question, and may apply equally well to evidence from scientists and non-scientists. Thus, when institutional validity and individual reliability are high (of course, assuming such a rating is objectively possible), as in *Cell A* of **Figure 1**, the expert evidence typically will be admitted. In fact, this is the outcome for the majority of ADA cases in which clinical and research data are presented by scientists and non-scientists. Typically, such experts are licensed or credentialed practitioners in a mainstream health-related fields, drawing on their training and experience to evaluate the plaintiff's mental or physical capabilities. ADA cases discussed earlier in this article that fall into this category include *Bragdon* (medical expert testimony regarding HIV disease)[117] and *Bartlett* (psychological expert testimony regarding learning disability).[118]

The fewer ADA cases in which proffered scientific evidence has been excluded may be characterized by low institutional validity and reliability, (*e.g.*, reflected in *Cell D* of the model). The admissibility outcomes may be less predictable for *Cell B* and *Cell C* experts. Thus, it seems that if expert evidence is considered institutionally valid, as in *Cell B*, often it will be admitted with only a limited showing of the individual practitioner's clinical reliability. Conversely, if an expert practices in a "less traditional" area of expertise, as in *Cell C*, the

[117] 524 U.S. 624

[118] 156 F.3d 321.

evidence may face a higher likelihood of exclusion, depending on the reliability of the individual practitioner's clinical observations. Although placement in the cells of **Figure 1** is capable of empirical verification in future research studies, the three cells in which evidence has a greater likelihood of being excluded are discussed next with reference to illustrative ADA case law outcomes.

1. Evidence from a "Non-Traditional" Scientific Expertise: The Example of Multiple Chemical Sensitivity (Cell D)

As indicated, plaintiffs who bring ADA claims under the first prong of the definition of disability must prove that they have an impairment that rises to the level of an ADA disability. Cases where alleged impairments are "hidden" or not obvious require plaintiffs to produce supporting medical or psychological records. Evidentiary disputes arise when the alleged impairments lack formal diagnostic recognition in the scientific and medical community, as has been illustrated in ADA cases involving the impairment of Multiple Chemical Sensitivity (MCS).

MCS is an apparent disorder that causes individuals to become hypersensitive to certain chemicals.[119] Individuals with MCS exhibit an open-ended list of physical and psychological

[119] *See* Steven H. Winterbauer, Multiple Chemical Sensitivity and the ADA: Taking a Clear Picture of a Blurry Object, 23 **Emp. Rel. L. J.** 69 (1997). *See also* Howard M. Sandler, Symptoms: The Workplace Dilemma, **Occupational Hazards** 53 (July 1, 1997) (potential irritants include perfumes, cigarette smoke, car exhaust, and other chemicals emitted from workplace fixtures such as office furniture, copy machines, and rugs and carpeting).

symptoms.[120] Whether MCS may be traced to irritation caused by discrete environmental antigens or to a loose bundle of complex psychosocial factors remains undetermined.[121] As a result, MCS is distinguishable from "sick building syndrome" and other disorders that may be traced to irritants such as environmental tobacco smoke, airborne mold, or latex.[122]

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[120] *Id.*

[121] *Id.*

[122] *See* Robert E. Geisler, The Fungusamongus: Sick Building Survival Guide, 8 **St. Thomas L. Rev.** 511 (1996); Barbara A. Muller, Victoria M. Steeler, Patrick G. Hartley & Thomas B. Casale, An Approach to Managing Latex Allergy in the Health Care Worker, **J. Envtl. Health**, 1998 WL 14133468 (July 1, 1998) (describing allergy to latex). *See also* Arnold W. Reitze & Sheryl-Lynn Carof, The Legal Control of Indoor Air Pollution, 25 **B.C. Envtl. Aff. L. Rev.** 247, 353 (1998) (noting that the United States Department of Housing and Urban Development and the Social Security Administration recognize MCS as an impairment for which benefits may be disbursed).

Although the etiology of the condition remains empirically unresolved,[123] a number of practitioners in the relatively new fields of environmental medicine and clinical ecology specialize in diagnosing MCS.[124] Clinical ecologists theorize that accumulated stresses caused by chemicals provoke nonclassical allergic reactions that damage cell membranes and tissues.[125] Some critics of the field have characterized the study of MCS as an example of "junk science."[126] Skeptics charge that MCS is an unfounded condition,[127] while those who claim to suffer from it are portrayed as overlooked by an unresponsive medical community.[128]

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[123] *See* Geisler, *id.*

[124] Andrew K. Kelley, Sensitivity Training: Multiple Chemical Sensitivity and the ADA, 25 **B.C. Envtl. Aff. L. R.** 485, 487 (1998).

[125] *Id.*

[126] *Id.*

[127] *See* Stephen Barrett, Exposing Multiple Chemical Sensitivity: Why the Diagnosis is Spurious— and Why it Persists, **Nutrition & Health F.** 9 (Mar. 13, 1997) (questioning existence of MCS disorder); Eric Laskey, Multiple Chemical Sensitivity – Part II, **Grounds Maintenance**, 1998 WL 9303069 (Mar. 30, 1998) (same).

[128] *See* Karin Winegar, Environmental Illness Still has its Doubters, but a North Dakota Woman's Eight Years on the Inside Have Made an Impact, **Minneapolis Star-Tribune**, 22A (Dec. 4, 1997); Richard Jerome & Margaret Nelson, Crusader: Toxic Avenger Poisoned by Pesticides, A Prisoner in Her Own Home (Cindy Duehring Wages Global War on Chemicals), **People** (Feb. 9, 1998).

Surrounded by scientific disagreement, courts have excluded evidence of MCS at trial, ostensibly because of the low institutional validity and reliability of MCS experts from the field of clinical ecology (*e.g., Cell D* of **Figure 1**).[129] Although courts that have reviewed MCS cases brought under the ADA uniformly have held that plaintiffs have failed to meet the evidentiary burdens of the *prima facie* case,[130] the basis for the review of MCS evidence varies. The few

[129] *See, e.g., Moore v. Ashland Chemical,* Inc., 151 F.3d 269 (5th Cir. 1998) (excluding evidence of chemical sensitivity proffered by clinical medical expert); *Summers v. Missouri Pacific Railroad System*, 132 F.3d 599 (10th Cir. 1997); *Hundley v. Norfolk & Western Railway* Co., 1996 WL 41512 (N.D. Ill. 1996); *Sanderson v. International Flavors and Fragrances, Inc.*, 950 F. Supp. 981 (C.D. Cal. 1996); *Carlin v. RFE Industries, Inc.*, 1995 WL 760739 (N.D.N.Y. 1995); *Cavallo v. Star Enterprise*, 892 F. Supp. 756 (E.D. Va. 1995); *Bradley v. Brown*, 852 F. Supp. 690 (N.D. Ind) *aff'd*, 42 F.3d 434 (7th Cir. 1994); *Summers v. Missouri Pacific Railroad System*, 132 F.3d 599 (10th Cir. 1997); *Hundley v. Norfolk & Western Railway* Co., 1996 WL 41512 (N.D. Ill. 1996); *Sanderson v. International Flavors and Fragrances, Inc.*, 950 F. Supp. 981 (C.D. Cal. 1996); *Carlin v. RFE Industries, Inc.*, 1995 WL 760739 (N.D.N.Y. 1995); *Cavallo v. Star Enterprise*, 892 F. Supp. 756 (E.D. Va. 1995); *Bradley v. Brown*, 852 F. Supp. 690 (N.D. Ind) *aff'd*, 42 F.3d 434 (7th Cir. 1994).

[130] *See Bloom v. Bexar County, Texas*, 130 F.3d 722 (5th Cir. 1997) (plaintiff claiming MCS disability could not proceed against county, because county was not plaintiff's employer); *Boren v. Wolverine Tube, Inc.*, 966 F. Supp. 457 (N. D. Miss. 1997) (plaintiff failed to establish that he was substantially limited in major life activities because of her MCS condition, as required under the first prong of the disability definition); *Homeyer v. Stanley Tulchin Associates, Inc.*, 91 F.3d 959 (7th Cir. 1996) (same); *Patrick v. Southern Co. Serv*, 910 F. Supp. 566 (N.D. Ala 1996), *aff'd*, 103 F.3d 149 (11th Cir. 1996) (same); *Willis v. Conopco, Inc.*, 108 F.3d 282 (11th Cir. 1997) (plaintiff's accommodation found to pose undue hardship to defendant); *Cassidy v. Detroit Edision, Inc.*, 138 F.3d 629 (6th Cir. 1998) (same); *Whillock v. Delta Airlines*, 926 F. Supp. 1555 (N.D. Ga. 1995), *aff'd*, 86 F.3d 1171 (11th Cir. 1996) (plaintiff's MCS disability claim failed because she failed to meet her burden in establishing that the accommodation she requested--to work at home--was reasonable). Courts have been equally unpersuaded by MCS claims brought under the Rehabilitation Act and other legislation. *See Bradley v. Brown*, 852 F. Supp. 690 (N.D. Ind) *aff'd*, 42 F.3d 434 (7th Cir. 1994); *Summers v. Missouri Pacific Railroad System*, 132 F.3d 599 (10th Cir. 1997); *Carlin v. RFE Industries*, 1995 WL 760739 (N.D.N.Y. 1995); *Keck v. Ney York State Office of Alcoholism and Substance Abuse*

federal courts that have applied the *Daubert* formulation to expert testimony relating to MCS have found clinical ecology evidence inadmissible (*e.g.*, using analysis of *Cell D* of **Figure 1**).[131]

Services, 10 F. Supp.2d 194 (N.D.N.Y. 1998).

[131] *See Treadwell v. Dow-United Technologies*, 970 F. Supp. 974, 981-982 (M.D. Ala. 1997); *Frank v. State of New York*, 972 F. Supp. 130 (N.D.N.Y. 1997).

Thus, in *Treadwell v. Dow United Technologies*,[132] the plaintiff claimed to suffer an allergic reaction to chemical exposure to while working on a chemical production line. Plaintiff's physician contended that Treadwell suffered from repetitive chemical exposures that caused her to develop multiple sensitivities to other antigens in her work environment. After invoking *Daubert*, Federal Rule of Evidence 702, the Federal Judicial Center's Manual on Scientific Evidence, and relevant case law, the trial court excluded the testimony of the plaintiff's expert regarding MCS, finding it was not scientifically reliable nor relevant.[133]

Similarly, in *Frank v. State of New York*, the plaintiffs were employees of the New York Tax Commission who alleged that they were exposed to pesticides that made them "hypersensitive to normal, everyday levels of airborne chemicals and pollutants."[134] The plaintiffs alleged that the Tax Commission's refusal to accommodate their disabilities violated the ADA. Physicians and psychologists prepared to testify that the physical and mental impairments suffered by the plaintiffs were caused by their exposure to a range of chemicals.[135] Acting on Defendant's Motion to Strike, the trial court applied the *Daubert* formulation in excluding the proposed scientific evidence relating to chemical sensitivity. The trial court concluded that the controversy surround MCS must be settled by the scientific method rather

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[132] 970 F. Supp. 974, 978 (M.D. Ala. 1997).

[133] *Id*. *Quoting Bradley v. Brown*, 42 F.3d. 434 (7th Cir. 1994).

[134] 972 F. Supp. 130 (N.D.N.Y. 1997).

[135] *Id.*

than by litigation.[136]

2. Evidence of Disability from Qualified Experts Without Specialized Training **(Cell B)**

ADA plaintiffs and defendants have countered assertions that an impairment does or does not rise to the level of an ADA disability by attacking the content and quality of an opposing expert's testimony and by questioning the expert's credentials. A more subtle version of this strategy involves an attack on the legitimacy of an expert who practices in a institutionally valid field, but who may lack reliable clinical or practical experience or specialized training (*e.g.*, *Cell B* of **Figure 1**).

[136] *Id.* In a related case, the trial court excluded MCS evidence because it failed to meet the *Daubert* criteria. *See Coffey v. County of Hennepin*, 23 F. Supp. 1081 (D. Minn. 1998).

Two ADA cases illustrate how *Daubert* may be used either to admit or exclude expert testimony when an expert's degree of specialized training or practice in a sub-specialty is at issue. Thus, in *Lanni v. State of New Jersey*, the court cited *Daubert* in rejecting plaintiff's motion to strike the testimony of the defendant's expert.[137] The plaintiff was a radio dispatcher who claimed to suffer from a number of learning disabilities and neurological disorders. Plaintiff alleged the impairments impeded his memory, ability to understand spoken language, and adversely affected his job performance. Lanni brought suit under the ADA, claiming that the defendant failed to accommodate his disability. The defendant's expert forensic psychiatrist concluded that the plaintiff was not learning or neurologically impaired, but instead suffered from depression and narcissistic personality disorder. At the pretrial hearing, Lanni moved to preclude defendant's expert testimony because the expert lacked specialized scientific training in learning disorders.

[137] *See Lanni v. State of New Jersey*, 177 F.R.D. 295 (D. N.J. 1998).

The *Lanni* court cited *Daubert and Joiner* in support of admitting the expert's testimony. In reaching its conclusion, the trial court also relied on the Third Circuit's decision in *Holbrook v. Lykes Bros, S.S. Co*.[138] In that case, the Third Circuit had held that an expert need not be the "best qualified" expert to proffer an opinion.[139] The decision in *Lanni* suggests that some courts will admit scientific evidence from an expert who lacks specialized training but who may be otherwise qualified (*e.g.*, illustrated in *Cell B* of **Figure 1**).

[138] *Holbrook v. Lykes Bros. S.S. Co., Inc.*, 80 F.3d 777 (3d Cir. 1996).

[139] *Id.* The plaintiff in *Holbrook* alleged that he developed cancer after he was exposed to asbestos. The *Holbrook* trial court excluded two of plaintiff's expert doctors because they did not specialize in oncology. Citing *Joiner*, the Third Circuit reversed the District Court's *Holbrook* decision, finding that it was an abuse of discretion to exclude expert testimony on the grounds that the trial court did not deem the expert to be the best qualified and because the expert did not have specialized training in the area.

A different outcome may arise, however, when the expert is found to lack clinical reliability. Thus, in *James v. James River Paper Co*., the defendant employer sought to strike the evidence of the plaintiff's expert for failing to establish a link between the plaintiff's disability and his workplace behavior.[140] Plaintiff, a worker at a packaging plant, was violent and confrontational and was terminated after an altercation with a coworker. Plaintiff brought suit under ADA Title I, alleging that he was fired because of his conditions of epilepsy, anxiety disorder, insomnia, and other behavioral abnormalities, exacerbated by his shift assignment and a failure to take medication. Plaintiff claimed a causal link between his night shift assignment and his disrupted medication cycle and alleged that James River discriminated against him in violation of the ADA because it failed to assign him to a different shift. According to plaintiff, the fact that James River failed to accommodate him caused him to attack another worker. Plaintiff's expert was hired to establish this causal connection. At his deposition, the expert was unwilling to blame plaintiff's violent outbursts on a disruption in his medication cycle,[141] but suggested that the behavioral problems may have been caused by multiple factors.[142]

James River moved to exclude plaintiff's expert testimony, arguing that it was

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[140] 101 F.3d 705 (9th Cir. 1997).

[141] *Id.* The expert was asked whether the plaintiff's confrontational behavior was the result of sleep deprivation and a failure to take his medication, or was simply due to his basic personality. The expert answered: "Oh, crimoney, who knows....[The altercation] could be due to the other person. It could be due to what happened...Who can solve the riddle of this sort of stuff?"

[142] *Id.*

unsupported by scientifically valid or reliable explanatory testimony. The trial court cited *Daubert* and drew a distinction between the expert's general discussion of a theory concerning the possible "multifactual" sources of the plaintiffs' symptoms and a definitive expert opinion on causation. The court found that his testimony was not admissible because the expert did not endorse the plaintiff's theory of unlawful discrimination based on disability.[143]

3. Non-Scientific Experts Proffering Testimony of ADA Compliance (Cell C)

[143] *Id*. The Ninth Circuit did not address plaintiff's contention that the lower court erred in disregarding the expert's testimony regarding the causal link between his disability, the alleged misconduct, and his termination. The Ninth Circuit concluded that the under the ADA employers may terminate an employee for misconduct, regardless of whether the misconduct is linked to the employee's alleged disability. Even if plaintiff could have established the link, it would not have been sufficient to overcome summary judgement because negative personality traits or violent behavior are not protected by the ADA.

Implementation of the accessibility and accommodation requirements of the ADA have given rise to scores of experts in new practice areas. As indicated in Part II, the ADA requires covered employers to reasonably accommodate qualified employees and job applicants. In addition, places of public accommodations, governmental entities, and telecommunication services must become accessible to individuals with disabilities. To enforce the law's mandate, the Department of Justice has created the Manual of ADA Accessibility Guidelines (ADAAG), which standardizes architectural and related specifications.[144]

[144] Likewise, the Telecommunications Act of 1996 reinforces the goal of standardizing on a national level telecommunications services for individuals with visual and hearing impairments. *See also* Heidi M. Berven & Peter David Blanck, The Economics of the Americans with Disabilities Act: Part II -- Patents and Innovations in Assistive Technology, 12 **Notre Dame J. L. Pub. Pol'y & Ethics** 9 (1998) (discussing the role assistive technology plays in improving accessibility for persons with disabilities).

Such expert evidence from "non-scientific" practice areas regarding disability issues may occupy *Cell C* in **Figure 1**. Here, admissibility determinations appear to turn, almost exclusively, on an assessment of the individual expert's clinical reliability. For instance, in *Small v. Dellis*, plaintiffs were wheelchair users who brought suit under the ADA against a restaurant with inaccessible restrooms.[145] Plaintiffs retained an architect who specialized in ADA compliance assessments to substantiate their claim that the design and construction of the restroom facilities did not conform to ADAAG specifications. The architect prepared a report documenting various design flaws. Relying on *Daubert*, defendant challenged the admissibility of the testimony of plaintiff's expert, arguing that the testimony was inadmissible because it involved a non-scientific question -- the interpretation of the ADAAG. The trial court rejected defendant's claim of inadmissibility, finding that plaintiff's expert testimony was limited to specific measurements and related factual matters. Based in part on the expert's analysis and testimony, summary judgment was awarded to plaintiffs.

In another case, *Burkhart v. Washington Metropolitan Transit Authority*, a bus passenger who was deaf brought an ADA suit against a municipal transit authority.[146] Plaintiff paid insufficient fare as he boarded a bus and claimed that he did not hear or understand the bus driver's request for correct fare. An altercation between the two ensued, culminating in the plaintiff's arrest by transit authority police for assault and battery. Plaintiff contended that his

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[145] *Small v. Dellis*, 1997 WL 853515 (D. Md. 1997) (suit brought under ADA Title III).

[146] 112 F.3d 1207 (D.C. Cir. 1997) (suit brought under ADA Title III).

request to the police for an interpreter were denied. He brought suit under the ADA, alleging the transit authority failed to take appropriate steps to ensure the accommodation of an interpreter. At the jury trial, plaintiff's expert, a police instructor, testified as to the affect of the ADA on police practices regarding the failure to provide the plaintiff with an interpreter. The jury found in favor of the plaintiff.

On appeal to the District of Columbia Circuit Court of Appeals, the defendant argued that the trial judge erred in admitting plaintiff's expert because he lacked prior work experience involving the ADA and his testimony involved an issue of law and was thus otherwise inadmissible. The appellate court discounted the expert's statements of the law on what constituted effective communication with individuals with hearing impairments under the ADA. It concluded that the trial court had abused its discretion in permitting the expert to testify.

Finally, in *Garza v. Abbott Laboratories*,[147] the plaintiff was a computer keyboard operator who developed a chronic inflammation of the nerves in her hands. Plaintiff brought suit under the ADA, alleging that Abbott failed to accommodate her disability. Plaintiff relied on the testimony of a computer technology expert to assess the reasonableness of the requested accommodation of a voice activated computer. Plaintiff's expert concluded that adoption of voice recognition software was technologically and economically feasible. Abbott moved to strike this testimony, arguing that plaintiff's expert was unqualified to testify because he lacked first-hand knowledge of the Abbott computer operating system. In contrast to the *Burkhart*

[147] 940 F. Supp. 1227 (N.D. Ill. 1996).

decision, the court rejected the motion, citing *Daubert* for the proposition that experts are permitted wide latitude to offer opinions, including ones that are not based on first-hand knowledge or scientific observation.[148]

IV. Conclusion: Evolving Science, Evolving Law

Courts relying on scientific evidence in ADA cases face the difficult task of trying to ensure the civil rights of ADA plaintiffs while maintaining adherence to procedural standards of admissibility.[149] Often, expert evidence of disability is either controversial or inconclusive. One of the underlying assumptions of the model presented in Part III of this article is that as understanding of certain impairments, diseases, and human capabilities change, and as existing standards of practice (in clinical and research science, as well as other specialties) are replaced with new ones, admissibility standards will shift. Thus, while *Daubert* does not require judges to become "amateur scientists," as Chief Justice Rehnquist has suggested, it does require them to become familiar with the "state of the scientific art."[150] For ADA litigation, this means that courts must evaluate the testimony of experts from a number of disciplines and that the "state of the scientific art" as it pertains to disability will vary among cases.

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148 *Id.*

149 *See* Porter, *supra* note 112, at 196.

150 *Daubert*, 509 U.S. 579.

Claims that involve scientifically controversial conditions, such as MCS, require courts to assess the validity of emerging disciplines and the reliability of new practice standards. In a similar way, claims that involve allegations of discrimination based on a genetic predisposition to certain disease states will require courts to evaluate the error rates of genetic testing protocols and related studies indicating that carrying specific genes result in disabling conditions.[151] Many of these cases will include allegations that an individual with a disability poses a direct health threat, as was argued by the defendant in *Bragdon*. When courts are required to balance objective health risk standards against the subjective clinical judgment of individual practitioners, they are essentially being asked to decide what we have characterized as *Cell B* admissibility determinations in **Figure 1**.[152]

[151] *See* Blanck & Marti, *supra* note 44 (discussion of genetic discrimination under the ADA). In other situations, aggregating data through meta-analysis may be necessary to inform judges of the impact of discrimination against classes of individuals with disabilities. *Id.*

[152] For a discussion of the social dimension in risk evaluation, see Stephen Breyer, **Breaking the Vicious Cycle** (1993); Mary Douglas, **Risk Acceptability According to the Social Sciences** (1985); Porter, *supra* note 112; Studdert & Brennan, *supra* note 93; Annas, *supra* note 32.

Daubert and its progeny seek to balance the goals of science with the needs of law.[153] In hearing *Daubert* on remand, the Ninth Circuit considered the extent to which society benefits when controversies are resolved with the input of sound scientific information.[154] Other courts have gone even further, concluding that the Rule 702 should make law a "prisoner to science"--to the iterative process of testing, rejecting, and refining hypotheses. Of course, plaintiffs who lack sound scientific evidence of causation of disability must be cautious in proceeding to litigation in advance of the relevant science. The *Daubert* Court conceded that keeping "junk science" out of law occasionally will prevent plaintiffs with meritorious claims from prevailing.[155] This may be true now for ADA actions involving impairments that have not achieved a sound basis in science. Yet excluding evidence of disability for which researchers and scientific communities have not achieved consensus may prove to be appropriate in certain actions, particularly where plaintiffs are required to demonstrate the causal link between an impairment and exposure to workplace or environmental chemicals.[156]

Regardless of the mandate of *Daubert, Joiner* and *Kumho,* experts and attorneys will continue to proffer scientific studies and clinical observations as evidence. The use of poor

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[153] *Daubert*, 509 U.S. at 597. *See also Daubert*, 43 F.3d 1315-16 (on remand) (discussing the difficulties of resolving scientific controversies in legal settings).

[154] *Id.* 43 F.3d 1315-16 (discussing the difficulties of resolving scientific controversies in legal settings).

[155] *Id.*

[156] *Id.*

quality scientific studies and unreliable clinical observations likely will be excluded with frequency as the federal bench becomes scientifically sophisticated. Low quality research design, data analysis and reporting, and failure to adhere to practice standards lessen the ethical justification and legal relevance of research in the context of *Daubert* determinations and beyond.[157]

[157] *See* Robert Rosenthal & Peter David Blanck, Science and Ethics in Conducting, Analyzing, and Reporting Social Science Research: Implications for Social Scientists, Judges, and Lawyers, 68 **Indiana L. J.** 1209 (1993).

At its 1998 annual meeting, Justice Stephen Breyer addressed the American Association for the Advancement of Science (AAAS) on the complex issues federal judges face in evaluating the quality of expert scientific evidence presented at trial.[158] Justice Breyer suggested that answers to the scientific questions posed in seminal cases such as *Bragdon v. Abbott* alone will not determine conclusive answers to legal issues. Rather, federal judges must develop informed, though necessarily approximate, understanding of the state of scientific and other specialized fields.

[158] **Breyer Speech**, *supra* note 5.