

Article

Access to Justice for Persons with Disabilities: An Emerging Strategy

David Allen Larson

School of Law, Hamline University, MS-D2080, 1536 Hewitt Avenue, Saint Paul, MN 55104, USA; E-Mail: dlarson@hamline.edu

Received: 4 May 2014; in revised form: 19 May 2014 / Accepted: 20 May 2014 /

Published: 27 May 2014

Abstract: Persons with disabilities often find themselves marginalized by society and by our justice systems. We can improve access to justice by training better advocates. Advocates not only must be knowledgeable concerning relevant laws and regulations, but also must be able to interact effectively on a personal, professional level with persons who have disabilities. We also want to make certain that persons with disabilities have the opportunity to learn to advocate for themselves and for other persons with disabilities. Technologies are available that can help us accomplish these goals. This article provides a brief survey of legal protections (and gaps in such protection) for persons with disabilities. Successful advocate training programs from around the world are identified and described. The article provides examples of how technology is being used to support these efforts and provides suggestions regarding additional ways in which technology could be employed. Law schools around the world have begun to embrace the goal of better advocacy, but improving access will require well-prepared advocates to answer the call. Training advocates to provide services to a population that may have significantly different needs even within that population may be a more efficient and effective way to improve access to justice than by attempting to draft laws and regulations that somehow address all possible circumstances.

Keywords: disability; ADA; discrimination; accessibility; justice; law schools; CRPD; human rights; technology

1. Introduction

Working to ensure that persons with disabilities have access to justice—that they are not excluded or marginalized by our justice systems—can be both fulfilling and frustrating. Even if one takes a global perspective, the author feels confident declaring that no nation has met the challenge of ensuring persons with disabilities participate fully in justice systems. The inability to participate fully is, sadly, not limited to persons with disabilities. Other minority populations have been excluded because of race, religion, or gender, for example. Given the tremendous variation in the types and degree of physical and mental impairments that are possible, however, ensuring that all persons with disabilities have access to justice does present unique challenges.

We can improve access to justice by removing physical and architectural barriers. We also can carefully examine whether we have created unnecessary cognitive barriers through oversight or simply by habit.

As our daily lives become increasingly dependent on technology, we also can improve access to justice (which, arguably, includes not merely access to justice systems, but equal access to the quality of life that others enjoy—a "just life") by ensuring that information and activities that can be accessed only via technology are available to persons with disabilities. Persons with visual impairments or persons with motor impairments who cannot quickly double-click a mouse, for instance, may not be able to access significant amounts of online information and entertainment. They may not even be able to access the home page of a court system's website, much less submit or retrieve information. We must ensure that the technologies we design and implement take into account the abilities of all individuals. Otherwise we will construct the online equivalent of the long, stately steps to the courthouse, for example, which make the courtroom inaccessible to anyone with a mobility disability.

And we can improve access to justice for persons with disabilities by training advocates who are not only knowledgeable concerning relevant laws and regulations, but who also can interact effectively on a personal, professional level with persons who have disabilities. In addition to training persons without disabilities to advocate for those with disabilities, we also want to make certain that persons with disabilities have the opportunity to learn to advocate for themselves and for other persons with disabilities.

Greater attention needs to be paid to this final strategy for improving access to justice. Training advocates to provide services to a population that may have significantly different needs even within that population may be a more efficient and effective way to improve access to justice than by attempting to draft laws and regulations that somehow address all possible circumstances. And, importantly, there still is much work to be done when it comes to designing educational programs that train persons with disabilities to access and navigate justice systems independently.

This article first provides a few examples of the existing legislation and treaties that protect persons with disabilities and provide access to justice. That discussion will not be a detailed, comprehensive examination of those protections. Rather, it is intended to orient the reader to the types of protections that are available, to provide a few samples, and to prepare us to begin to think critically about how we can train advocates to represent persons with disabilities within this type of regulatory context. The article next describes some of the specific challenges faced by persons with disabilities, including technology accessibility and significant employment issues. This part of the article offers practical reasons why we should be concerned about access to justice systems, and access to a just life, for persons with disabilities. It also identifies the types of problems that advocates need to be prepared to address.

And finally, the article explores one of the strategies for improving access to justice for persons with disabilities. The author is a legal educator who is idealistic enough to believe that we can teach our students not only about relevant rules and regulations and the specific challenges faced by persons with disabilities, but also to be better informed about, and interact more effectively with, persons with disabilities. For proponents of interdisciplinary education, this goal offers an excellent collaborative opportunity for legal educators, social service teachers and providers, and health care professionals. This article will describe education and training programs offered by law schools. It is important to recognize, however, that several of the law school programs not only permit non-legal professionals to participate, they encourage participation from individuals with non-legal training.

Thus the article first offers examples of the regulatory protections and guidance that are available. It then describes specific problems faced by persons with disabilities. In order to encourage educators and trainers to consider what is possible, the third and final part of the article examines law school educational and training programs from around the world. The hope is that by learning about what others are doing, we will be inspired to emulate their programs or even move beyond those programs.

Programs can be designed and technologies adopted to prepare persons without disabilities to advocate on behalf of persons with disabilities, and to educate persons with disabilities to advocate for themselves and other individuals. Technologies also can be designed to make existing justice systems more accessible, or to provide alternatives that are inherently more accessible.

2. The Regulatory Environment

Recognizing that countries around the world have different views regarding the need to protect individual rights, it is not surprising to see varying levels of protection for persons with disabilities as one moves around the globe. In the United States, for example, the primary source of protection for persons with disabilities is the Americans with Disabilities Act (ADA) [1]. When we undertake the task of training individuals to advocate for themselves and for others, this is the easier and more familiar first part of that challenge: we know how to teach substantive rules and regulations.

The ADA was enacted in 1990 and significantly amended in 2008 [2]. It addresses a wide range of accessibility concerns for persons with disabilities, including employment (Title I), services provided by state and local entities (Title II), public accommodations and commercial facilities (Title III), and telecommunications (Title IV). A final section of the law, Title V, contains miscellaneous provisions related to the interpretation and enforcement of the ADA [3].

Four federal agencies enforce most of the provisions of the ADA. The Equal Employment Opportunity Commission (EEOC) enforces Title I, including the ADA's most well-known provision—reasonable workplace accommodations [4]. Titles II and III fall under the jurisdiction of the Civil Rights Division of the Department of Justice [4]. The Federal Communications Commission (FCC) enforces Title IV and other regulations related to telecommunications [4].

In spite of the fact that the ADA appears to provide almost revolutionary comprehensive protection for persons with disabilities, once the law was passed courts frequently interpreted the language narrowly and many individuals with disabilities were excluded from protection. For example, in *Toyota Manufacturing, Kentucky, Inc. v. Williams*, 534 U.S. 184 (1987), the United States Supreme Court interpreted the ADA's requirement that an individual be "substantially limited in performing

manual tasks" to mean that the individual must have an impairment that prevents performance of or severely restricts the ability to perform tasks of central importance to the everyday lives of most people, not merely those tasks that he or she is required to perform at the job [5]. Because repetitive work with one's hands and arms at or above shoulder level for extended periods was not an important part of most peoples' lives, unlike teeth brushing and bathing, the court held that the plaintiff was not disabled in the major life activity of manual tasks.

In *Sutton v. United Airlines, Inc.*, which involved commercial airline pilot applicants who needed corrective eyeglasses, the Court held that when determining whether a person is disabled for purposes of the ADA, mitigating and corrective measures must first be taken into account [6]. The result of this holding was that a person whose diabetes was being controlled by insulin injections, for example, was not protected by the ADA, in spite of the fact that her life literally might depend on adhering to a rigid regimen.

Although drafting this complex legislation and shepherding it through to enactment gave hope to persons with disabilities, the ADA experience illustrates how attempts to provide access to justice for persons with disabilities can be frustrating. Congress determined that the Act was not providing the opportunities and protections that had been intended and, accordingly, passed the Americans with Disabilities Act Amendments Act of 2008 (ADAAA) [7]. In fact, Congress went so far as to expressly reject the decisions of the United States Supreme Court in *Sutton* and *Williams*—by name—as inappropriately limiting the intended coverage of the ADA.

Congress decided that the first step for providing protection, the recognition that an individual actually is a person with a disability, was being interpreted overly restrictively [8]. In order to be protected by the ADA, individuals must prove that they actually have a physical or mental impairment (or a record of, or are regarded as having a physical impairment) that substantially limits a major life activity [9]. The ADAAA adds a list of "major life activities", among other changes, not only to help employers, businesses, government entities, the courts, and the Equal Employment Opportunity Commission determine which individuals satisfy this essential element of the "individual with a disability" definition, but to ensure that the definition is given a more expansive interpretation [10].

The ADA with amendments is a detailed statute and it deserves more attention than this article will provide. It is offered only as an example of how one country is attempting to provide access to justice for persons with disabilities; that being, through detailed legislation and interpretive regulations. Readers are strongly encouraged to look more closely not only at this statute, but at other national legislative approaches as well [11].

The ADAAA has improved the lives of persons with disabilities in the United States. But any optimism should be tempered. In June 2013, for example, the United States Department of Labor Bureau of Labor Statistics reported that although the employment–population ratio in 2012 for persons without a disability was 63.9%, only 17.8% of persons with a disability were employed [12]. A critical question quickly becomes apparent: why do we continue to see such disturbing disparities?

The United States has adopted a civil and political rights approach to the problem that relies on anti-discrimination legislation, often referred to as negative or first-generation rights [13,14]. One simply can look at employment statistics, for instance, for an answer to the question of whether this approach truly is working.

It is possible to take a more comprehensive, inclusive positive-rights approach. Efforts can focus on not only ensuring that all programs are inclusive and accessible, but also that each individual's strengths and capacities are improved. One can take a comprehensive and disability human rights-based approach [15].

It is important for everyone, not only advocates in training, to become informed regarding what is happening at the international level. Although there is an immediate need for advocates to represent persons with disabilities regarding their day to day challenges, there also is a need to advocate for change at the national level.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) and its accompanying Optional Protocol [16] represent an extremely important effort to provide consistent, fundamental protections for persons with disabilities. The CRPD consists of 50 articles relating to the rights and treatment of persons with disabilities, and the Optional Protocol contains an additional 18 articles that allow persons with disabilities to vindicate their rights through the UN Committee on the Rights of Persons with Disabilities.

The CRPD and the Optional Protocol truly are human rights documents. In its very first Article the Convention declares that, "the purpose of the present Convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity [16]. The Convention is quite ambitious, attempting to address most aspects of civilized life, including, among other topics, accessibility, awareness raising, discrimination, liberty and security of person, independent living, personal mobility, education, employment, and recreation [16]. Article 13, titled "Access to justice" states:

- (1) States Parties shall ensure effective access to justice for persons with disabilities on an equal basis with others, including through the provision of procedural and age-appropriate accommodations, in order to facilitate their effective role as direct and indirect participants, including as witnesses, in all legal proceedings, including at investigative and other preliminary stages.
- (2) In order to help to ensure effective access to justice for persons with disabilities, States Parties shall promote appropriate training for those working in the field of administration of justice, including police and prison staff [16].

Given the nature of any international Convention, much of the language is general and aspirational. But there are significant reporting and monitoring requirements that attempt to ensure that the Convention moves beyond aspirational language into implementation at the national and local level. In essence, the CRPD attempts to address the gaps in other human rights agreements that do not directly consider the rights of persons with disabilities [17].

Although the CRPD has substantial support around the world, not all nations have embraced it in its entirety. The United States, for example, has signed, but not ratified the CRPD; thereby agreeing with the instrument's purpose if not its specific provisions [18]. Hesitancy to ratify the agreement likely has many explanations. Legal literature on the subject, for example, predicts a litany of potential changes to how the United States runs everything from its schools to its prisons [19]. For the most part, the laws in the United States match the rigor required by the Convention, but there are gaps between the protections offered by the United States and the CRPD [20]. Differences can be observed regarding the

degree of positive equality measures in areas such as vocational education; the existence of affirmative policies or requirements aimed at addressing social stigmas surrounding disability; limitations on the right to live in a community based on services that do not require fundamental alterations to serve persons with disabilities; and difficulties concerning access to justice [20].

The access to justice provision in the Convention, Article 13, both reminds us and confirms that persons with disabilities face problems with legal representation and protection. Some of the challenges involve access to resources and thus are similar to those faced by individuals who are economically disadvantaged. Disability stereotyping and the multiple identities of persons with disabilities, however, can exacerbate these disadvantages. For example, women with disabilities may fail to fit comfortably into society's expectations and perceptions regarding women's roles generally, leading to invisibility and exclusion from meaningful participation in society [21]. Persons with disabilities often must rely on increasingly scarce free or low-cost legal services and therefore have less choice in who represents them, and generally have less understanding and access to the legal system [22]. It is critically important to recognize the problems involving cost and availability of competent legal services. The programs discussed in the final part of this article are designed to address, at least in part, some of these concerns.

3. Specific Issues for Persons with Disabilities

Although legal protections and the social status of persons with disabilities have both improved, there still are many areas where services and accessibility fall short. The following sections will address the fact that persons with disabilities still face wide gaps in at least three major areas: achievement, access, and services. Evidence of the different circumstances experienced by persons with disabilities can be found when one examines technology use, access to physical spaces, employment and earnings, and the general services available.

3.1. Technology

As is the case in many areas of the law, disability law and accommodations have not consistently kept pace with technological advances. But there are exceptions. The Federal Communications Commission oversees the services that allow persons with speech and hearing disabilities to use telephones, for example, such as the 711 service and video relay services. These services allow persons with disabilities to contact people with or without disabilities. The telecommunications relay service, 711, permits persons with hearing or speech impairments to use a text telephone to call other people [23]. All telephone companies, including voice providers over the internet, are required to provide 711 access dialing [23]. Similarly, video relay services (VRS) allow those with hearing disabilities to communicate by sign language rather than via text input [24]. VRS allows for much faster communication, and thus is a very popular form of relay service [24]. The accessibility provided by these services is an example of what can be accomplished, and these accommodations have been widely embraced.

But not all forms of technology are similarly accessible. In the United States, for example, it remains unclear whether websites are subject to Title III of the ADA ("Public Accommodations and Services Operated by Private Entities") [25]. When the ADA was enacted in 1990, the Internet was not

as central to our lives as it is today. Consequently, the ADA did not include a section dealing with websites. Most courts have concluded that websites were not intended to be included within the "places of public accommodation" language of the ADA. Instead, courts have determined there is no ADA coverage unless the website was created by an entity that has a physical location [26]. In the words of the court, there must be a "nexus" between the website and a physical place of public accommodation [26].

In July 2013, however, the United States Department of Justice issued an Advance Notice of Proposed Rulemaking titled "Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entitles and Public Accommodations" that states the Department is considering revising ADA Title III regulations to establish website accessibility requirements for persons with disabilities [27]. Neither the ADA nor the ADAAA addresses the problem directly [28]. Although courts have been reluctant to accept the idea that a website can be a place, the existing framework under the ADA would allow for a rational, judicially-applicable set of standards [28]. As one observer reminds us, digital and internet technologies present a unique opportunity to include and equalize—but only if those who control the gates find the will to throw them wide [29].

It must be noted, however, that United States federal agencies are committed to making their services accessible (although information may be provided by alternative means if website accessibility would impose an undue burden) [30]. In 1998, Congress amended Section 508 of the Rehabilitation Act of 1973 and required Federal agencies to make their electronic and information technology (EIT) accessible to persons with disabilities [31]. The basic accessibility rules for websites were developed by the Architectural and Transportation Barriers Compliance Board (Access Board) and are located in Section 22 of the regulations which implement Section 508 [32]. The requirements were designed to be consistent with the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (5 May 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium [32]. The World Wide Web Consortium (W3C) Web Accessibility Initiative publishes "guidelines widely regarded as the international standard for Web accessibility" [33].

Given the speed with which our lives are moving online, one cannot be integrated into modern society without the ability to access websites and perform tasks in that environment. Because private businesses are not subject to the same requirements as federal agencies, one cannot help but conclude that the United States is moving too slowly to ensure that persons with disabilities have access to all technology based or facilitated services.

Online Dispute Resolution (ODR) holds great promise for increasing access to justice for persons with disabilities. Alternative Dispute Resolution (ADR) is a term used to describe dispute resolution processes that can be used to settle disputes instead of relying on litigation, such as negotiation, mediation, and arbitration. ODR is a technology facilitated form of ADR [34]. Although the term ODR did not even come into existence until the mid-1990s, there now are numerous online dispute resolution platforms that include Modria [35], SmartSettle [36], TheMediationRoom [37], and Cybersettle [38]. ODR providers promise to resolve disputes quickly and inexpensively. It may be possible to participate asynchronously, which would allow persons with motor or cognitive impairments the time they may need to participate effectively. But at this early stage in the evolution of ODR, it is not apparent that disability access is a priority.

3.2. Physical Spaces

The historical preservation of buildings does not only remind us of where our society and culture have been. The choices we make regarding these buildings also shapes where we will be able to go. When considering physical space accessibility, it is important to carefully examine older buildings and spaces as well as proposals for new construction.

As noted above, the ADA requires public accommodation of persons with disabilities in the provision of goods and services [39]. Even though a structure may have been built before the ADA came into effect, the Act still requires, among other modifications, the installation of ramps where necessary, railing height adjustments, accessible parking spaces, visual and auditory alarm systems, and Braille or raised letters for permanent signage [40]. In an effort to achieve a balance, changes to older structures are limited to those that are "readily achievable"—in other words, easily accomplished and able to be carried out without much difficulty or expense [41]. New structures and many redesigns or alterations, however, must comply fully with the ADA standards with no feasibility standard of exception [42].

Thus physical access legislation like the ADA may conflict with other valued policies. When historical buildings protected by the National Historic Preservation Act (NHPA) [43] need to be remodeled in order to become ADA compliant, courts have not applied the ADA "reasonably achievable" standard consistently [44]. Although the United States Department of Justice has issued both Standards and Guidance [45] in an effort to assist in balancing these two interests, confusion persists.

Individuals who will be advocating on behalf of persons with disabilities must be trained to identify conflicts between important interests and prepared to offer solutions. Compromises appear inevitable, at least at the present time. Given the uncertainty about how conflicts such as the one described above should be handled, there is room for maneuvering. Advocates therefore should be encouraged to think as creatively as possible.

3.3. Employment and Earnings

Persons with disabilities around the world clearly have difficulty in the job market. According to United Nations Enable, the official website of the Secretariat for the Convention on the Rights of Persons with Disabilities, in developing countries a stunning 80 to 90% of persons with disabilities of working age are unemployed and in industrialized countries the percentage is between 50% and 70% [46]. Problems exist despite protective provisions in legislation like the ADA and the enforcement efforts of agencies such as the EEOC. While the general population (people over the age of 16 with no disabilities) in the United States is employed at a rate of about 63%, people with disabilities are employed at a rate of only 15%–18% [47]. In response to low employment numbers, businesses and governments have attempted to create employment "alternatives"—but it is not clear that these programs actually improve the likelihood that persons with disabilities can find employment that can support anyone long term [48]. In sheltered workshops, for example, persons with disabilities are often prescribed a lower minimum wage or none at all [48].

Thus even when persons with disabilities are employed long term, they often must accept significant differences in income compared to employees without disabilities. It is startling to realize

how little employers may be required to pay persons with disabilities. When the Fair Labor Standards Act [49] was enacted in 1938, employers were required to pay workers in sheltered workshops at least 75% of the minimum wage; in 1966, 50%; and in 1986, the minimum wage requirement for workers with disabilities was removed entirely [50,51]. The workers who take part in the programs subject to these "subminimum wages" are supposed to be trained to transition to long-term, regular employment—but less than 5% of such workers ever leave the programs [50]. And it gets worse. Employees of sheltered workshops are not only deprived of minimum wage guarantees, they also do not have workers' compensation, unemployment compensation, collective bargaining privileges, or Old Age Survivors and Disability Insurance [52].

Governments are attempting to alleviate these discrepancies. For example, the U.S. Department of Labor recently finalized a rule making changes to the affirmative action requirements for federal contractors and subcontractors [53]. Among other changes, the new rule establishes a target rate of employment of individuals with disabilities by contractors and subcontractors [53]. The new rate is 7% of each job group, or 7% of the contractor's entire workforce if it has 100 or fewer employees [53].

While this is encouraging news, it barely begins to resolve the problem of low and subminimum employment of persons with disabilities. Advocates for persons with disabilities need to be informed in very specific terms regarding the employment situation for persons with disabilities. Creating a critical mass of educated advocates may provide the impetus for revising programs that are proving at best to be questionable, and at worst counterproductive.

3.4. Services

Despite the fact that facilities and services generally are becoming more accessible to persons with disabilities, significant challenges remain. Competent staff and professionals are needed to provide services for persons with disabilities. Sometimes those services will never be available without a strong advocate. And sometimes governments can serve as those advocates.

For example, students with disabilities, especially those in special education or juvenile offender programs, may depend heavily on support services. Recent Statements of Interest filed by the Civil Rights Division of the Department of Justice reflect these concerns. In *R.K. v. Board of Education of Scott County*, *KY*, for example, the Civil Rights Division filed a Statement of Interest in support of the plaintiff, a child with diabetes who was forced to attend an out-of-zone school due to a lack of caretakers at his zoned school [54]. In another very recent case in California, the Civil Rights Division expressly addressed the absence of services and the high rate at which juvenile offenders with disabilities are subject to solitary confinement-type punishment [55].

The need for support and accommodations obviously is not limited to students. In a case that specifically addresses accommodations in the context of access to justice, the Department of Justice filed a Statement of Interest asserting the ADA requires that assistive technology or other services be provided for persons with disabilities who attend court proceedings as spectators [56].

These cases reveal an obvious problem. A student with diabetes recently was denied attendance at the most convenient school because that school lacked trained support staff. Juveniles in California were denied services required by law, despite the fact that the relevant law had been in existence for nearly a quarter of a century. It certainly is true that individuals with disabilities may not be

accommodated because of societal attitudes or simple ignorance regarding what is possible. But individuals with disabilities may also be excluded, or denied support, even when an accommodation is obvious and available if no one is advocating on their behalf.

Government agencies with the authority to enforce disability legislation can be formidable advocates. But no government budget is large enough to provide and finance advocacy for the millions of situations that require assistance. Consequently, if we truly want to improve circumstances for persons with disabilities, it is essential for us to train advocates who understand the regulatory environment and the personal needs of persons with disabilities. With that purpose in mind, it can be very helpful to examine and learn from what some schools already are doing.

4. Bridging the Gaps: Training Advocates

Many law schools offer opportunities related to disability law that provide representation and resources to persons with disabilities, advocate for policy change, and train advocates to represent persons with disabilities. These offerings range from degree or certification programs to clinical experiences dedicated to serving clients with disabilities. Some schools are notable for their accessibility programs or partnerships and affiliations with disability advocacy groups. Schools with exceptional disability accommodation programs and major advocacy organizations tend also to include clinical and classroom experiences related to disability law. It is important to note that some of these programs offer material online, which improves access for those persons who do not have the physical capacity to attend classes in a brick and mortar classroom.

4.1. Law Schools with a Center or Comprehensive Program on Disability Law

Several law schools train advocates for persons with disabilities with a specific program of study related to disability law, or support centers for disability advocacy and policy. Some of these programs can be highlighted to demonstrate the range of advocacy education that goes beyond traditional classrooms and clinical legal experience.

The National University of Ireland, Galway has an LL.M program in International and Comparative Disability Law and Policy. The LL.M program aims to provide students with knowledge of the "core foundational themes" of disability law [57]. To that end, students examine topics such as legal capacity, the CRPD, and the history and evolution of disability law [57]. The University also hosts the Centre for Disability Law and Policy, which tracks changes in disability law and policy and also contributes research to further disability law development [57]. In addition to research, the Centre hosts the International Disability Summer School, which trains participants to "translate the generalities of the UN Convention on the Rights of Persons with Disabilities into tangible reform" [57].

In accordance with the school's disability focused advocacy training, its accommodations for persons with disabilities also are notable. The University provides a handbook, published by the Disability Advisors Working Network (DAWN), to educate staff about the most commonly encountered student disabilities and suggest strategies for making learning accessible [58]. The University also maintains an accessible campus by, among other accommodations, providing lifts, automatic doors, and accessible toilets [59]. Disability Support Services provides students with information and necessary accommodations, including extra time or equipment for exams [59].

The University clearly recognizes that improving access to justice for persons with disabilities requires a multi-pronged approach. It is important not only to teach advocates about the regulatory context and unique problems that may be faced by persons with disabilities, it also is important to provide guidance concerning how to interact effectively with persons with disabilities. In the best of worlds, material such as the handbook described above is shared not only with the staff, but also with the individuals preparing to be advocates. Importantly, the University is taking concrete steps to ensure that persons with disabilities are included in its advocacy training programs.

In the United States, a few American Bar Association accredited law schools offer special certification or programs on disability law. At Syracuse University School of Law, law students may pursue a joint degree in law with a master's degree in education focused on disability studies, or they can earn a certificate in Disability Law and Public Policy [60]. The Disability Law and Policy program is part of the university-wide Center on Human Policy, Law, and Disability Studies (CHPLDS) [60]. The CHPLDS mission is to provide research, teaching and advocacy; to promote the rights of persons with disabilities; and to critically examine disability as a matter of diversity [61]. To this end, law students seeking a certificate in Disability Law and Policy take courses in disability law and are required to fulfill their legal writing requirement on a topic related to disability law [62,63]. Syracuse University offers one of the most comprehensive disability-focused programs in the United States and provides an example of an interdisciplinary approach to preparing students for advocacy on behalf of persons with disabilities.

Similarly, the University Of Iowa College Of Law hosts the Law, Health Policy, and Disability Center, which has offices in Washington, D.C. and other locations [64]. Law students working in the Center focus on policy research and may receive writing credit by participating in the center's course offerings [64]. Aside from working directly with the Center, law students can participate in advocacy projects through the law school's Disability Rights and Policy clinic. With the support of the Iowa Program for Assistive Technology, students represent persons with disabilities seeking equipment for education, employment, and/or housing [65]. Students in this clinic engage in awareness and research activities as well [65].

The schools identified above, among others, offer substantial support for students with disabilities. As we consider how we can train advocates to represent persons with disabilities, we always want to keep in mind that persons with disabilities must be included in this training. Stockholm University in Sweden provides an example of the type of support available generally [66].

4.2. Law Schools with Specific Disability Law Programs

Some law schools provide disability-related programs of study that focus on particular types of disabilities. In India, the Indian Law Society Law College has a mental health law program that offers an International Diploma in Mental Health Law and Human Rights [67]. The school offers a technology facilitated distance learning program that focuses on human rights issues regarding mental health topics, including disability and the CRPD [67]. The program invites interdisciplinary interactions and professionals from different fields have taken the diploma course [67]. Projects by course participants cover a wide range of subjects that include, for example, evaluating and making recommendations for improving legal guardianship in Lithuania in compliance with the UNCRPD, and

assessing the quality of services and human rights conditions in an Ethiopian mental hospital using WHO tools [68].

In the United States, several law schools offer disability-specific programs or certificates. At New York Law School, attorneys and other professionals can enroll in the Mental Disability Law Studies program [69]. The program (which is partly online) focuses on legal and medical challenges faced by persons with disabilities and explores how attorneys, psychologists, and social workers can better serve and advocate for persons with disabilities [69]. For instance, the Advocacy Skills in Cases Involving Persons with Mental Disabilities course examines civil commitment standards, forensic and advocacy issues, and the right to certain community services [70]. Because the course also is open to individuals who are not law students, it presents a valuable interdisciplinary learning opportunity for those advocates in training [70].

The University of Pittsburgh offers a disability focused program that includes students who are not enrolled in the Juris Doctor (J.D.) program. Students pursuing a Master of Studies in Law degree (MSL), which does not train them to be attorneys, have the option of earning a certificate in disability law [71]. To earn the certificate, students take classes relating to the legal issues that commonly arise for persons with disabilities, such as disability discrimination, mental health law, and tort law [71]. Electives include employment law courses and clinical experience in elder or health law [71].

Canadian law schools also offer specializations or other opportunities related to disability law. The Dalhousie University Schulich School of Law offers a certificate in Health Law and Policy, which includes disability law electives [72]. The International Centre for Criminal Law Reform and Criminal Justice Policy, tied to the University of British Columbia's law faculty, focuses some of its efforts on access to justice for persons with mental disabilities and illnesses [73]. All of Canada's law schools also provide opportunities for students to work with persons with disabilities, and others require pro bono services through Pro Bono Students Canada [74].

4.3. Additional Disability Law Educational Opportunities

Many law schools provide opportunities for students to access resources about disability law on their own initiative. Georgetown University Law School, for instance, provides a helpful research guide for students focusing on disability law [75]. This guide lists relevant materials on the subject of disability law, including ADA practice and compliance resources, information on relevant statutes and regulations, the legislative history of landmark disability legislation, and current awareness materials.

The Yale Law School website provides information about legal careers that focus on disability issues [76]. It includes information about the ABA Mentor Program for law students who have disabilities, links to the National Association of Blind Lawyers, and provides information about Disability and Technical Assistance Centers. Like other law schools, Yale also provides students with advocacy opportunities through a low income legal service clinic, the New Haven Legal Assistance Clinic [77]. This clinic provides general representation to indigent populations, including persons with disabilities, for a variety of legal matters that include housing and employment issues.

At Australian National University, students have access to a Disability Resource Guide that is available online [78]. This guide contains information about organizations that "supply help, advice or information about people with disability and approaches to supporting them in the workplace" [78].

The University also provides extensive information for staff regarding students with disabilities [79], and a Student Equity division dedicated to breaking down achievement barriers [80]. Additionally, the University provides substantial information about how staff members can manage their own disabilities in the workplace, which is valuable instructive material for anyone preparing to advocate on behalf of a person with a disability [81].

At Loyola Law School, Los Angeles, the Disability Rights Legal Center provides representation in high-impact discrimination cases involving the civil rights of persons with disabilities [82]. The Disability Legal Rights Center has its own dedicated website where it describes itself and its services in greater detail [83]. The Center's focuses include the elimination of poverty and unemployment of people with disabilities, access to government services, reducing cancer survivorship disparities, legal clinical teaching and continuing education of lawyers, amicus briefs, and international disability rights [83]. The Center offers a wide range of hands-on experiences for students and provides an important example of the types of training opportunities that are possible.

5. Conclusions

The progress that has been made concerning access to justice for persons with disabilities is encouraging, but much work remains to be done. Broad policy based reform can improve the quality of life for millions of people, but those reforms still need to be implemented on an individual basis. We certainly want to continue to improve relevant legislation and treaties. And we would like everyone to be more aware of the sometimes difficult realities faced by persons with disabilities. But there is an almost limitless variation in the types and degrees of disability that individuals can experience Consequently, it is essential for us to train advocates who not only understand the regulatory environment, but who also can interact effectively and comfortably with persons with disabilities. Law schools around the world have begun to embrace this goal. We also need to train and empower persons with disabilities to act on their own behalf whenever possible.

Technology can assist in this effort to make justice more accessible. Technology facilitated communications allow us to include individuals who cannot attend traditional classes in brick and mortar buildings. Technology also can make justice accessible by offering alternative ways to access judicial processes that typically are delivered in physical court rooms. But we have to ensure that the technologies employed are usable by persons with disabilities, which to date is not happening consistently.

If we truly want to improve access to justice for individuals with disabilities, then we need to focus on the individual. And that will require a legion of well-prepared advocates.

Acknowledgments

The author thanks Hamline University School of Law students Lorien Downing for her assistance in preparing the final draft of this article and Denise Martineau for her research assistance.

Abbreviations

ABA: American Bar Association; ADA: Americans with Disabilities Act; ADAAA: Americans with Disabilities Act Amendments Act; CHLPDS: Center on Human Policy, Law, and Disability

Studies; CRPD: Convention on the Rights of Persons with Disabilities; DAWN: Disability Advisors Working Network; EEOC: Equal Employment Opportunity Commission; FCC: Federal Communications Commission; NHPA: National Historic Preservation Act; VRS: Video Relay Service.

Conflicts of Interest

The author declares no conflict of interest.

References and Notes

- 1. 42 U.S.C. § 12101. This section describes Congressional findings and the purpose of the ADA.
- 2. Department of Justice. "The Americans With Disabilities Act of 1990 and Revised ADA Regulations Implementing Title II and III." Available online: http://www.ada.gov/2010_regs.htm (accessed on 22 May 2014).
- 3. National Center for Learning Disabilities. "Americans with Disabilities Act as amended." Available online: www.ncld.org/disability-advocacy/learn-ld-laws/adaaa-section-504/americans-disabilities-act-amendments-act-adaaa (accessed on 22 May 2014).
- 4. U.S. Department of Labor. "Disability Resources: Americans with Disabilities Act." Available online: http://www.dol.gov/dol/topic/disability/ada.htm (accessed on 22 May 2014).
- 5. Toyota Manufacturing, Kentucky, Inc. v. Williams, 534 U.S. 184 (1999).
- 6. Sutton v. United Airlines, Inc., 527 U.S. 471 (1999).
- 7. "U.S. Public Law 110–325 (25 September 2008)." Available online: http://www.gpo.gov/fdsys/pkg/PLAW-110publ325/html/PLAW-110publ325.htm (accessed on 22 May 2014).
- 8. The public law which became codified as the ADAAA states that laws and regulations at the time of its passage had been interpreted "to require a greater degree of limitation (as used in determining if a person has a disability) than was intended by Congress". See: U.S. Public Law 110–325 [7].
- 9. Americans with Disabilities Act. 42 U.S.C. § 12102(1).
- 10. Americans with Disabilities Act. 42 U.S.C. § 12102(2). This section defines "major life activities" and was added by the ADAAA.
- 11. See, for example, the Canadian Human Rights Act, Revised Statutes of Canada (1985, c. H-6); Australia's Disability Discrimination Act, No. 135 (1992); and the U.K.'s Disability Discrimination Act (1995 c. 50).
- 12. United States Department of Labor Bureau of Labor Statistics. "Persons with a Disability: Labor Force Characteristic—2012." Available online: http://www.bls.gov/news.release/pdf/disabl.pdf (accessed on 22 May 2014).
- 13. Jason Scott Palmer. "The Convention on the Rights of Persons with Disabilities: Will Ratification Lead to a Holistic Approach to Postsecondary Education for Persons with Disabilities." *Seton Hall Law Review* 43 (2013): 551–94.
- 14. Michael Ashley Stein, and Penelope J.S. Stein. "Beyond Disability Civil Rights." *Hastings Law Journal* 58 (2007): 1203–40.

15. Michael Ashley Stein, and Penelope J.S. Stein. "Disability, Development, and Human Rights: A Mandate and Framework for International Financial Institutions." *University of California Davis Law Review* 47 (2014): 1259–79.

- 16. United Nations. "Convention on the Rights of Persons with Disabilities and Optional Protocol." Available online: http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf (accessed on 22 May 2014).
- 17. Previous human rights Conventions had the potential to promote the rights enshrined in the CRPD, but persons with disabilities continued to be marginalized and to have their human rights denied. See: United Nations. "Convention in Brief." Available online: www.un.org/disabilities/documents/ppt/crpdbasics.ppt (accessed on 22 May 2014).
- 18. United Nations. "Convention and Optional Protocol Signatures and Ratifications." Available online: http://www.un.org/disabilities/countries.asp?id=166 (accessed on 22 May 2014).
- 19. Katherine D. DeMarco. "Disabled by Solitude: The Convention on the Rights of Persons with Disabilities and Its Impact on the Use of Supermax Solitary Confinement." *University of Miami Law Review* 66 (2012): 523–65.
- 20. Michael Stein, and Michael Waterstone. "Finding the Gaps: A Comparative Analysis of Disability Laws in the U.S. to the U.N Convention on the Rights of Persons with Disabilities." National Council on Disability, 12 May 2008. Available online: http://www.ncd.gov/publications/2008/May122008 (accessed on 22 May 2014).
- 21. Michelle Fine, and Adrienne Asch. "Disabled Women: Sexism without the Pedestal." *Journal of Sociology and Social Welfare* 8 (1981): 233–48.
- 22. Chris Jennings. "Family Violence & Sexual Assault: A Criminal Justice Response for Women with Disabilities." Available online: http://www.wwda.org.au/wp-content/uploads/2013/12//jennings4.pdf (accessed on 22 May 2014).
- 23. U.S. Federal Communications Commission. "711 for Telecommunications Relay Service." Available online: http://www.fcc.gov/guides/711-telecommunications-relay-service (accessed on 22 May 2014).
- 24. U.S. Federal Communications Commission. "Video Relay Services." Available online: http://www.fcc.gov/guides/video-relay-services (accessed on 22 May 2014).
- 25. Courtney L. Burks. "Improving Access to Commercial Websites under the Americans with Disabilities Act and the Twenty-First Century Communications and Video Accessibility Act." *Iowa Law Review* 99 (2013): 363–92.
- 26. Casey D. Marshall. "Disability & Accessibility: Applying ADA Title III to the Internet." *Bench & Bar of Minnesota*, 11 March 2014. Available online: http://mnbenchbar.com/2014/03/disability-accessibility/ (accessed on 22 May 2014). This note cites *Ford v Schering-Plough Corp.*, 145 F.3d 601 (3d Cir. 1998); *Parker v. Metro Life Ins. Co.*, 121 F.3d 1006 (6th Cir. 1997); *Weyer v. Twentieth Cen. Fox Film Corp.*, 198 F.3d 1104 (9th Cir. 1999); *Rendon v. Valley Crest Prod. Ltd.*, 294 F.3d 1279 (11th Cir. 2002). But for cases holding that no physical location is required See, *Carparts Dist. Ctr., Inc. v. Automotive Wholesaler's Ass'n of New England, Inc.*, 37 F.3d 12 (1st Cir. 1994); *Doe v. Mutual of Omaha Ins. Co.*, 179 F.3d 557 (7th Cir. 1999).
- 27. United States Department of Justice. "Advance Notice of Proposed Rulemaking." Available online: http://www.ada.gov/anprm2010/web%20anprm_2010.htm (accessed on 22 May 2014).

28. Shani Elise. "Courts Must Welcome the Reality of the Modern World: Cyberspace is a Place under Title III of the Americans with Disabilities Act." *Washington & Lee Law Review* 65 (2008): 1121–58. The author argues that websites are subject to the ADA. The author urges this despite a lack of clear provisions in the act itself and a sharp U.S. circuit split on the issue [26].

- 29. Paul Harpur. "From Universal Exclusion to Universal Equality: Regulating Ableism in a Digital Age." *Northern Kentucky Law Review* 40 (2013): 529–65. The author notes the significant barriers to equal internet access, but also the potential of the internet as a force of equalization.
- 30. Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794(d)), as amended by the Workforce Investment Act of 1998 (Pub. L. 105–220 (7 August 1998)).
- 31. Section 508.gov. "Section508 Laws: Opening Doors to IT." Available online: http://www.section 508.gov/section508-laws (accessed on 23 May 2014).
- 32. United States Department of Commerce. "Standards for Website Accessibility." Available online: http://www.osec.doc.gov/webresources/accessibility/Policy6_WebSiteRules.htm (accessed on 23 May 2014).
- 33. World Wide Web Consortium (W3C). "Web Accessibility Initiative (WAI)." Available online: http://www.w3.org/WAI/ (accessed on 23 May 2014).
- 34. Ethan Katsh. "ODR: A Look at History." In *Online Dispute Resolution: Theory and Practice*. Edited by Mohamed S. Abdel Wahab, Ethan Katsh and Daniel Rainey. The Hague: Eleven International Publishing, 2012, pp. 9–21.
- 35. Modria. Available online: http://www.modria.com (accessed on 22 May 2014).
- 36. Smartsettle. Available online: http://www.smartsettle.com (accessed on 22 May 2014).
- 37. The Mediation Room. Available online: http://www.themediationroom.com (accessed on 22 May 2014).
- 38. Cybersettle Online Settlement and Payment Solutions. Available online: http://www.cybersettle.com (accessed on 22 May 2014).
- 39. Americans with Disabilities Act. 42 U.S.C. § 12182. This section prohibits discrimination against persons with disabilities in places of public accommodation.
- 40. ADA.gov. "Checklist for Existing Facilities (1995)." Available online: http://www.ada.gov/racheck.pdf (accessed on 22 May 2014). This resource lists many other ways that places of public accommodation can make their buildings and facilities ADA-compliant.
- 41. Alterations: Historic Preservation. 28 C.F.R. §36.405 (15 September 2010). NRHP-eligible buildings, or buildings designated as historic under state or local law, "shall comply to the maximum extent feasible. If providing physical access will threaten or destroy historic significance, alternative access methods shall be provided." 2010 ADA Standards for Accessible Design" [45].
- 42. Department of Justice Civil Rights Division. "ADA Update: A Primer for Small Business." Available online: http://www.ada.gov/regs2010/smallbusiness/smallbusprimer2010.htm (accessed on 22 May 2014).
- 43. National Historic Preservation Act. 16 U.S.C. § 470, et. seq. (15 October 1996).
- 44. Robert M. Engel. "Note: The Americans with Disabilities Act and Its Effect on Historical Preservation and Public Transportation." *Journal of Health and Biomedical Law* 9 (2013): 297–333.

45. United States Department of Justice. "Guidance on the 2010 ADA Standards for Accessible Design." Available online: http://www.ada.gov/regs2010/2010ADAStandards/Guidance_2010ADAStandards.pdf (accessed on 22 May 2014).

- 46. United Nations Enable. "Employment of Persons with Disabilities: Fact Sheet 1." Available online: www.un.org/disabilities/documents/toolaction/employmentfs.pdf (accessed on 22 May 2014).
- 47. Bureau of Labor Statistics. "Employment status of civilian population by sex, age, and disability status, not seasonally adjusted." Available online: http://www.bls.gov/webapps/legacy/cpsatab6.htm (accessed on 22 May 2014). The Bureau of Labor Statistics' definition of "disability" is somewhat narrower than that of the ADA, but the discrepancy in employment rates speaks for itself.
- 48. Laura C. Hoffman. "An Employment Opportunity or a Discrimination Dilemma?: Sheltered Workshops and the Employment of the Disabled." *University of Pennsylvania Journal of Law and Social Change* 16 (2013): 151–79. The author notes that sheltered workshops are a common attempt to provide employment for adults with disabilities. In such programs, workers perform "simple work activities" and may participate in "customized educational programs" in order to help them secure long-term employment—an often-unfulfilled promise.
- 49. Fair Labor Standards Act. 29 U.S.C. § 201, et. seq. (25 June 1938).
- 50. Fair Labor Standards Act. 29 U.S.C. §214(c).
- 51. Claire Zillman. "Disabled workers left in the cold on minimum wage." *Fortune*, 12 February 2014. Available online: http://management.fortune.cnn.com/2014/02/12/disabled-workers-left-in-the-cold-on-minimum-wage/ (accessed on 22 May 2014).
- 52. Thomas C. Weiss. "Wage and Labor Conditions in Sheltered Workshops." *Disabled World*, 2 March 2014. Available online: http://www.disabled-world.com/editorials/conditions.php (accessed on 22 May 2014).
- 53. Department of Labor Office of Federal Contract Compliance Programs. "Final Rule: Section 503 of the Rehabilitation Act." Available online: http://www.dol.gov/ofccp/regs/compliance/section503.htm (accessed on 22 May 2014). The changes to the Act are effective as of 24 March 2014.
- 54. Statement of Interest of the United States of America at 1, *R.K. v. Board of Education of Scott County*, *KY*, Case No. 5:09-CV-344-JMH (E.D. Ky. filed 22 January 2014).
- 55. Statement of Interest of the United States of America at 1, *G.F.*, *W.B.*, *and Q.G. v. Contra Costa County*, Case No. 3:13-CV-03667-MEJ (N.D. Cal. Filed 13 February 2014).
- 56. Statement of Interest of the United States of America at 1, *Prakel v. Indiana*, Case No. 4: 12-CV-45-SEB-WGH (S.D. Indiana filed 7 January 2014).
- 57. National University of Ireland, Galway. Available online: http://www.nuigalway.ie/cdlp/llm/about.html (accessed on 22 May 2014).
- 58. Disability Advisors Working Network (DAWN). "Teaching Students with Disabilities: Guidelines for Academic Staff." Available online: http://www.ucd.ie/t4cms/Dawn%20handbook. pdf (accessed on 22 May 2014).
- 59. National University of Ireland, Galway. "Disability Support Service (DSS)." Available online: http://www.nuigalway.ie/student-life/students-with-disabilities/ (accessed on 22 May 2014).

60. Syracuse University School of Law. "Disability Law & Public Policy Program." Available online: http://law.syr.edu/academics/center-and-institutes/disability-law--and-policy-program/ (accessed on 22 May 2014).

- 61. The Center on Human Policy, Law, and Disability Studies at Syracuse University. Available online: http://disabilitystudies.syr.edu/default.aspx (accessed on 22 May 2014).
- 62. Syracuse University School of Law. "Disability Law and Policy Certificate for Class of 2013." Available online: http://law.syr.edu/academics/center-and-institutes/disability-law--and-policy-program/disability-law-and-policy-certificate-2013.aspx (accessed on 22 May 2014).
- 63. Syracuse University School of Law. "Disability Law and Policy Certificate for Class of 2014." Available online: http://law.syr.edu/academics/center-and-institutes/disability-law--and-policy-program/disability-law-and-policy-certificate-2014.aspx (accessed on 22 May 2014). The 2014 certificate program reinstates the clinic/externship requirement.
- 64. University of Iowa Law, Health Policy and Disability Center (LHPDC). Available online: http://disability.law.uiowa.edu/ (accessed on 22 May 2014).
- 65. University of Iowa College of Law Clinics. "Practice Areas." Available online: http://www.law.uiowa.edu/clinic/practice-areas.php (accessed on 22 May 2014).
- 66. Stockholm University. "Support for students with disabilities." Available online: http://www.su. se/english/study/student-services/studying-with-a-disability (accessed on 22 May 2014).
- 67. Indian Law School Centre for Mental Health Law and Policy. Available online: http://cmhlp.org/diploma (accessed on 22 May 2014).
- 68. Indian Law School. "Project Examples." Available online: http://cmhlp.org/learning-experience/project-examples (accessed on 22 May 2014).
- 69. New York Law School. Available online: http://www.nyls.edu/ (accessed on 22 May 2014).
- 70. New York Law School. "Advocacy Skills in Cases Involving Persons with Mental Disabilities: The Role of Lawyers and Expert Witnesses." Available online: http://www.nyls.edu/academics/jdcourse of study/curriculum/course-detail/?course=625 (accessed on 22 May 2014).
- 71. University of Pittsburgh School of Law. "Master of Studies in Law Degree (MSL)—Concentrations: Disability Law." Available online: http://www.law.pitt.edu/ (accessed on 22 May 2014).
- 72. Schulich School of Law. "Certificates & Concentrations—Focus your studies on an area of interest." Available online: http://www.dal.ca/faculty/law/programs/jd-admissions/certificates-concentrations.html (accessed on 22 May 2014).
- 73. International Centre for Criminal Law Reform and Criminal Justice Policy. "Mental Illness and the Criminal Justice System: A Review of Global Perspectives and Promising Practices." 5 February 2014. Available online: http://icclr.law.ubc.ca/topics/mental-illness-and-criminal-justice-system-review-global-perspectives-and-promising-practices (accessed on 22 May 2014).
- 74. Pro Bono Students Canada. Available online: http://www.probonostudents.ca/about-pbsc (accessed on 22 May 2014). PBSC is the only national pro bono legal service center in the world.
- 75. Georgetown Law. "Disability Law Research Guide." Available online: http://www.law. georgetown.edu/library/research/guides/disabilitylaw.cfm (accessed on 22 May 2014).
- 76. Yale Law School. Available online: http://www.law.yale.edu/ (accessed on 22 May 2014).

77. New Haven Legal Assistance Clinic. Available online: http://www.law.yale.edu/academics/1216.htm (accessed on 22 May 2014).

- 78. Australian National University. "Disability Resource Guide." Available online: http://hr.anu. edu.au/staff-health-and-wellbeing/disability-support/resource-guide (accessed 22 May 2014).
- 79. Australian National University. "Information for staff." Available online: http://disability.anu. edu.au/information-staff (accessed on 22 May 2014).
- 80. Australian National University. "Student Equity." Available online: http://drss.anu.edu.au/student equity/index.php (accessed on 22 May 2014).
- 81. Australian National University. "Staff disABILITY Support." Available online: http://hr.anu. edu.au/staff-health-and-wellbeing/disability-support (accessed on 22 May 2014).
- 82. Loyola Law School Disability Legal Rights Center. Available online: https://disabilityrights legalcenter.org// (accessed 22 May 2014).
- 83. Loyola Law School Disability Legal Rights Center. "Our Work." Available online: http://www.disabilityrightslegalcenter.org/our-work (accessed on 22 May 2014).
- © 2014 by the author; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/3.0/).