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The Perils of Playing Blind: Problems with Blindness Simulation and a Better Way to Teach about Blindness

By Arielle Michal Silverman

Dr. Silverman is a postdoctoral Fellow in the Department of Rehabilitation Medicine at the University of Washington.

Abstract

People often blindfold themselves to try to understand what it is like to be blind. Though this "blindness simulation" can trigger empathy toward blind people, it can also mislead people about blindness, because it highlights the initial trauma of *becoming* blind rather than the realities of *being* blind. In this article, I review disability research and scholarship on the positive and negative effects of disability simulations, showing that such simulations promote empathy but can also promote discrimination. In order to accurately teach about blindness, teaching exercises should incorporate mastery of blindness skills and meaningful contact with other blind people. More research is needed to determine how blindfolded learning should be best incorporated into the curriculum for training teachers of the blind.

Keywords

Blindness, simulation, attitudes, discrimination, professional development

Introduction

In a banquet hall, the lights are turned out and attendees struggle to serve themselves a meal in the dark. Sponsored by a fund-raising organization, this dinner culminates in an appeal for donations to support medical research on the elimination of blindness. Meanwhile, at a Girl Scout camp, children are paired off and one child in each pair closes her eyes, while her partner leads her about. The exercise is intended to help the Girl Scouts build trust and learn how to depend on one another for help. Finally, in a classroom, blindness professional trainees wear low-vision simulator goggles. They are asked to walk from one side of the table to the other, a task they find daunting. All of these are examples of "blindness simulations" critiqued by blindness activists (French, 1992; Maurer, 2012; Willoughby & Duffy, 1989).

Disability simulations are active learning exercises in which people use props to temporarily adopt physical impairments—such as using a blindfold or low-vision goggles to temporarily obscure their sight. They are often used to educate schoolchildren about disabilities, to help train professionals who work with the disabled, and even to foster interdependence and teamwork (for a review, see Flower, Burns, & Bottsford-Miller, 2007). Blindness simulations often appeal to educators, because they involve and engage students, and they motivate students to empathize with blind people.

However, if not done carefully, blindness simulations can give a distorted impression of blindness, reinforcing misconceptions about the capacities of blind people. These problems can occur if the simulation is focused on the first moments of blindness rather than everyday life after adjustment to blindness. These risks have long been apparent to disability activists and, more recently, to experimental psychologists.

In this article, I review research and commentaries on the effects of disability simulations. I will argue that blindness simulation is beneficial only if it (a) includes hands-on training in the skills of blindness and (b) involves meaningful contact with blind people. More research is needed to investigate how existing simulations and other teaching exercises influence practitioners' attitudes toward blindness.

Simulation Promotes Empathy

Disability simulations are often intended to promote empathic concern and a desire to help and accommodate people with disabilities. There is evidence that simulating disability can indeed increase empathy and helping. In an early experiment (Clore & Jeffery, 1972), college students were randomly assigned (by a coin flip) to navigate their campus either on foot or in a wheelchair for 25 minutes. Afterward, the students who had used the wheelchair reported feeling more empathy toward people with physical impairments, reported liking the researcher (who visibly used a wheelchair) more, and indicated more interest in donating funds to accessibility-related groups than the students who had not used the wheelchair. Even four months later, students who had used the wheelchair were more likely to volunteer to assist a disabled person when asked. In another study (Wadlington, Elliot, & Kirylo,

2008), student teachers expressed more sympathy and desire to accommodate dyslexic students after they simulated dyslexia by attempting to read degraded print. Finally, rehabilitation professionals expressed more empathy in qualitative comments after participating in a multi-impairment simulation (Wilson et al., 2009). These simulations not only prompt a desire to help, but also promote student enjoyment and positive assessment of them, making them attractive to instructors.

More generally, when people simulate other people's experiences, they tend to judge those others more kindly. In one study, research participants watched a video of a man wolfing down cheeseburgers. They judged the man less harshly when they were themselves feeling hungry (Nordgren, Van Der Pligt, & Van Harreveld, 2007). Participants expressed stronger anti-torture views after receiving brief bursts of pain which simulated torture (Nordgren, Morris McDonnall, & Loewenstein, 2011). Psychologists have theorized that people base their judgments of others, at least in part, on how they think they would react themselves to the other person's situation (Van Boven, Loewenstein, Dunning, & Nordgren, 2013). Simulations can give people an evocative "taste" of what it is like to be in a particular physical or emotional state—such as a physical impairment. People can then use this information to help them relate to affected others.

In sum, disability simulations can pull on people's heart-strings, open their wallets, and encourage them to be lenient and kind toward people with disabilities. Sometimes this is a desirable outcome. However, I will argue that this comes at a price. Of the problems that blind and disabled people face, many can be traced to pity and paternalism rather than callousness (e.g., Ferguson, 2001; Fiske, Cuddy, Glick, & Xu, 2002; Nario-Redmond, 2010; Omvig, 2002; Wright, 1983). If not done carefully, simulations can mislead people about the realities of blindness, which can contribute to paternalistic discrimination.

Simulation Gives Misleading Information

People often believe that they are discovering what it is like to be blind when they are briefly blindfolded, but this is not entirely true. Being blindfolded parallels the experience of first becoming blind, not the experience of being blind for many years. Typically, disability simulations are quite brief, lasting mere minutes or hours (e.g., a 25-minute wheelchair simulation). Participants are thrust into blindness and immediately confront the challenge of attempting routine tasks nonvisually, often without effective guidance. While the onset of blindness can indeed be traumatic, it is very different from the reality of living with blindness after many years. People adapt to new disabilities over time by mastering alternative techniques, building support networks, and focusing their attention on areas of their lives that are unaffected by the disability (Ubel, Loewenstein, & Jepson, 2005). Furthermore, people who are congenitally disabled never experience the trauma of disability onset at all. Correspondingly, the simulation may barely have any connection to their experience. Simulations cannot capture these nuances and long-term effects. Consequently, simulations can give the mistaken impression that the entirety of being disabled is marked by loss, frustration, and incompetence.

Indeed, disability simulation participants often report experiencing frustration and distress, even while rating the activity positively overall. For example, in the wheelchair simulation described earlier (Clore & Jeffery, 1972), participants most often reported feeling "weak, bad, anxious, and empathic" while in the wheelchair (p. 110). In another study, after a blindness simulation, participants reported loneliness, fear, and helplessness as "new insights gained into the life of the disabled" (Wilson & Alcorn, 1969, p. 305-6). In contrast to this, however, people with long-term disabilities frequently report high happiness and quality of life (e.g., Albrecht & Devlieger, 1999; Bonanno, Kennedy, Galatzer-Levy, Lude, & Elfstom, 2012; Quale & Schanke, 2010). For example, in one recent survey of 500 blind adults, participants averaged well above the midpoint on a well-validated scale of life satisfaction (Silverman & Cohen, 2012). Thus, the negative tone of simulations differs markedly from the emotions that people with disabilities actually experience.

Disability simulations are also misleading because simulated impairments are escapable. A simulator can remove the blindfold or leave the wheelchair at any time whereas someone with a permanent impairment cannot. Furthermore, while simulations tend to over-emphasize the physical trauma of disability, they can also under-emphasize the impact of social discrimination and accessibility barriers, which become apparent only over time (French, 1992).

For this reason, disability scholars have cautioned that simulations could unwittingly mislead participants about the realities of living with a disability. Wright (1978) argues that simulation "can enhance, not only understanding of some problems, but also pervasive pity and devaluation" (p. 178), and that "the main danger of role-playing is that the essence of life of people with a disability will be perceived in negative terms" (p. 182). In her critique of disability simulations, French (1992) quotes disability activists who contend that simulations not only represent disability as tragic, but also as an individual defect rather than a consequence of social barriers. Instead of simulation, French recommends "disability equality training" workshops conducted by disabled people which emphasize strategies to ameliorate the social inequalities disabled people encounter.

The above analyses suggest that disability simulations tend to be "outsider-driven," favored by non-disabled people peeking in to the disability experience. However, disability activists, "insiders," express concern that such simulations capture their experience in a biased manner. These biased perceptions can promote discriminatory treatment toward disabled people, including the blind.

Brief Simulation Prompts Discrimination

Recent research suggests that simulating blindness can reinforce stereotypes about blind people. Silverman, Gwinn, and Van Boven (2015) examined how a brief blindness simulation influences how sighted people judge blind people's capabilities. In two experiments, they randomly assigned some college students to complete a series of tasks while blindfolded for about 30 minutes. The tasks included pouring water from a pitcher to a glass without spilling, sorting coins, and navigating a complex path around the university's psychology building. Other control students were randomly assigned either to complete the tasks with their sight unimpaired, to view videos of the simulation, or to merely hear an explanation about what the simulation involved. Afterward, all the students were asked to estimate how well "the average blind person" could perform at a series of professions (e.g., chef, schoolteacher) compared with the average sighted person. They also rated how well blind people could live independently and walk around downtown, again relative to the sighted. In both experiments, blindfolded students rated blind people's capacities significantly lower than did students in any of the control groups (Experiment 1: t (98) = -2.72, p = .007, d = .55; Experiment 2: t

(147) = -2.33, p = .021, d = .38). For example, averaged across both experiments, 52% of the blindfolded students rated the average blind person as less able to "live independently in their own house or apartment" than the average sighted person, but only 32% of students in the other conditions made this judgment. This pattern is concerning, given pervasive employment discrimination and common doubts of blind people's capacity for independent living and travel (Ferguson, 2001; Omvig, 2002).

These results are not surprising once process variables are examined. In post-experimental comments, blindfolded students described their experience as being very difficult, frustrating, confusing, and frightening. In fact, a few students spontaneously uttered remarks such as "thank God I'm not blind" upon removing the blindfold. The students also projected their negative experience onto blind people. Compared with control students, blindfolded students estimated that blind people experience more fear, anger, confusion, and distress on a daily basis. Further, when asked to draw graphs showing how quickly they would be able to adjust to new blindness, the blindfolded students predicted a slower and less complete adjustment process than the control students (Silverman, Gwinn, & Van Boven, 2015; Silverman & Van Boven, 2012). It is evident that the blindness simulation gave students a sour impression of blindness, portraying it as an enormous physical and emotional burden. Thus, when the students considered how well someone could live on their own without sight, their recent struggles to pour water and navigate the halls while blindfolded colored their judgment.

A few other studies have uncovered unwanted consequences of disability simulation. Brown (2010) had participants listen to intrusive sounds for 15 minutes in order to simulate schizophrenia. Afterward, the participants expressed more distant attitudes toward people with schizophrenia, and more endorsement of forced treatment, than they did before. In another line of research, Nario-Redmond and Gospodinov (2015) had college students read driving directions while wearing low-vision goggles, listen to the spoken directions while wearing earplugs, and read the directions written backwards to simulate a learning disability. After the simulations, the students reported feeling more vulnerable to disability, less comfortable interacting with disabled people, and more pitying toward people with disabilities.

Collectively, these findings underscore the importance of personal experience in shaping people's beliefs about conditions like blindness. If people are given a blindness experience marked by fear, frustration, and incompetence, they will be apt to conclude that blind people's lives are similarly marked by fear, frustration, and incompetence. This could inspire low expectations of blind people, or inspire paternalistic actions to ease the blind person's fear or protect the blind person from his/her own helplessness.

If such beliefs are mistakenly taught to teachers of the blind, the consequences could be particularly dire for blind students. As an illustrative example, a preschool aide simulated wheelchair use to better understand the needs of her young student with cerebral palsy (Wright, 1978). Following the brief simulation, she began to assist him with tasks he had already demonstrated he could do without help (e.g., pushing him in his wheelchair). Unsolicited help can prevent children from developing skills and confidence, and it can also harm self-esteem (Gilbert & Silvera, 1996; Schneider, Major, Luhtanen, & Crocker, 1996). Furthermore, it is clear that low teacher expectations can directly restrict student performance. In classroom experiments, teachers who expected some students to perform less well in class paid less attention to them and gave them less challenging assignments, artificially limiting their learning and performance (Rosenthal, 2002).

Nevertheless, this theorizing also suggests the potential for positive blindness experiences. If people are given experiences with blindness marked by mastery, pride, and joy, they should form high expectations and a full understanding of the methods that blind people use to interact with their environment. In the following sections, I will propose two conditions that, according to disability scholarship, should characterize positive blindness training activities: mastery of blindness skills and cooperative contact with blind people. Research is urgently needed to evaluate how specific training modules affect people's attitudes and actions toward blind people, such as blindness immersion training.

Positive Blindness Learning Activities

Notably, the simulations I have described in this paper are a very specific type of experiential exercise. Sighted individuals are blindfolded briefly and asked to complete activities. Typically, they receive little instruction in nonvisual problem-solving techniques, and blind individuals are absent. However, experiential exercises need not be conducted this way. They can include opportunities for skill mastery, and they can incorporate contact with blind people.

Skill Mastery

Sighted students can be exposed to effective nonvisual methods. For example, an instructor can teach students to distinguish braille letters while blindfolded, to eat a simple snack, or to navigate a simple path using a cane and appropriate auditory cues during a brief session (Castellano, 2005; Willoughby & Duffy, 1989). Over an intensive course or two, sighted students can master braille reading, cooking, and cane travel under blindfold. The key is that blindfolded experiences lead to skill mastery and confidence rather than bumbling frustration. In order to achieve this goal, blindfolded experiences should be guided by knowledgeable instructors and allow enough time for repetition and practice.

Involvement of Blind People

Educational exercises about blindness will have a much more positive impact if they incorporate contact with blind people, "insiders," who intimately understand the complexities of blindness (Wright, 1975). Personal contact can go a long way toward the reduction of prejudiced attitudes (Allport, 1954; Pettigrew & Tropp, 2008). In order to effectively reduce prejudice, contact should be one-to-one, equal-status, and cooperative. Unfortunately, blindness professional trainees may only interact with blind people in a helping role, as their student teacher or camp counselor, for instance. In contrast, optimal contact is equal-status; that is, both the blind and sighted partners have equal standing in the relationship and neither has authority over the other (Allport, 1954).

Personal contact with blind people can be a useful teaching tool, either with or without a blindness simulation component. For example, in one exercise, students played goalball (a sport that has been adapted for the blind) alongside blind people, while all

players wore blindfolds. The exercise helped build cooperative relationships between blind and sighted people, and combined with similar exercises involving other disabilities (e.g., wheelchair racing), it improved attitudes toward people with disabilities more than did a simple lecture-based lesson (Krahe & Altwasser, 2006). In another exercise not involving simulation, blind and sighted college students were paired, and the sighted student was asked to suggest activities for the two of them to enjoy together. The blind student then provided guidance as to how he or she could participate and what, if any, accommodations needed to be made. The purpose of this exercise was to replace stereotypes and misconceptions about blindness with the blind person's expert understanding of blindness (Wright, 1975).

We can follow the above principles when training sighted students to become blindness professionals, such as teachers of blind students, orientation and mobility professionals, and daily living skills instructors. One example is the immersion component of training for the master's degree accompanying National Orientation and Mobility Certification (NOMC). Students must receive at least 400 hours of blindness immersion training before beginning coursework for the NOMC, and typically complete 500-750 hours of travel training under blindfold by the time they are certified (Aditya, 2004). During immersion training, students receive intensive instruction in cane travel and other skills while under blindfold. In most cases, they receive this training alongside blind students at a rehabilitation center for the blind. Thus they are "immersed" both in the skills of blindness and the blindness community. They not only master the skills of blindness by completing rigorous assignments, but they also learn these skills on an equal level with the blind students at the center.

Research and Evaluation Priorities

In the above sections, I have presented a critique of traditional blindness simulations and proposed some positive alternatives. While these alternatives hold theoretical promise, their impact has not been assessed empirically. Research is needed to identify the best educational interventions for promoting positive beliefs and attitudes about blindness among blindness professionals and in the general public.

Sound evaluation begins with valid and relevant outcome measures. For classroom activities, it makes sense to assess change in students' knowledge or new competencies gained. In the past, disability awareness activities were often deemed "effective" if participants enjoyed them or if they triggered empathy for people with disabilities. However, as I have discussed, common negative attitudes about disability tend to reflect pity and presumed incompetence more than callousness and avoidance. In my view, an attitude-change intervention can reasonably be considered "effective" if it moves attitudes away from the prevailing biases held by the public. The Social Responsibility about Blindness Scale (SRBS) is one good example of a measure of common misconceptions about blindness (Bell & Silverman, 2011; Rowland & Bell, 2012). Both quantitative and qualitative data should be gathered to assess how an intervention influences people's beliefs, feelings, and expectations about blindness.

A researcher can most rigorously evaluate an intervention by comparing outcomes between randomized groups of people who do vs. do not receive the intervention. In classroom and field settings, however, this can be impractical. One alternative is to randomly assign half the students to an intervention and the other half to no intervention, take measures, and then give the intervention to the other half of the students, a "waitlist control" design. If this is also impractical, a simple pretest-posttest assessment may be most reasonable; that is, comparing students' knowledge, attitudes, or competencies before vs. after the activity. By following students longitudinally, researchers can also assess the long-term effects of interventions. These data are relatively inexpensive to gather and can be analyzed with only basic statistical expertise.

There is a great need to empirically evaluate the existing blindness training modules that are based on simulations. A 2007 meta-analysis revealed that only a modicum of rigorous studies exist, and most of those reveal null effects of disability simulation (Flower, Burns, & Bottsford-Miller, 2007). More alarmingly, simulations could have unexpected negative effects that could be missed if they are not rigorously evaluated. On the other hand, practices like immersion training could have unanticipated positive effects persisting over time. Through rigorous evaluation, educators can identify the teaching approaches that lead to the most positive training outcomes. The field would be enhanced by convening dialogue between educators, research and evaluation experts, and blind people—groups which each offer a unique perspective on these issues.

A final research question concerns the effects of "low-vision" simulations in which participants use goggles to simulate partial vision loss. On one hand, low-vision simulations could help sighted people to better understand the limitations of low vision and the need to supplement low vision with nonvisual techniques such as braille and the long white cane. On the other hand, like blindfolding, low-vision goggles could give an exaggerated impression of the hardships posed by partial vision loss. Like blindfolding, low-vision simulations could be improved by incorporating skill mastery experiences and involving people with low vision in their execution.

Implications for Practitioners and Families

The research reviewed here has important implications for the training of incoming teachers of the blind. First and foremost, it suggests that any blindfolded or low-vision training experience needs to be constructed and managed carefully so as to give trainees a balanced, accurate impression of blindness. This is best achieved when the trainees master the blindness skills they will be teaching. For example, future braille teachers should receive enough braille instruction and practice time so that they can not only teach braille competently to their students, but also have positive feelings toward braille and high expectations of their students. The same can be said for the nonvisual travel skills of O&M instructors and the nonvisual daily living skills of rehabilitation teachers. Additionally, blindfolded exercises should be supplemented with opportunities for trainees to interact one-to-one with blind people as equal partners.

Additionally, teachers of blind children should be cautious about using blindness simulations to educate a blind student's classroom teachers or sighted classmates about blindness. Instead, they can teach about blindness by demonstrating assistive technology, inviting blind guest speakers to address the class, or guiding the students and classroom teacher through basic braille exercises. Blind students can also participate in educating their peers about blindness without relying on blindness simulation.

The same principles apply to teaching parents of blind children about blindness and low vision. Traditional blindness simulations could give parents a distorted perspective on blindness that could foster pity and low expectations for their children, placing artificial limits on their children's potential independence. For parents of congenitally blind infants, simulations can be especially misleading because it is virtually impossible for a fully sighted adult to accurately simulate the experience of someone who has never had sight, particularly a young infant. Instead, it would be more helpful for parents to observe how blind adults perform tasks.

Above all, any exercise that teaches about blindness should incorporate the lived experiences of blind people. As stated by Carrie Ann Lucas, a disability rights blogger who uses a wheelchair:

> Placing a person who has not adapted to wheelchair use in a wheelchair is an exercise in frustration. It is far better to pair the non-disabled person with an actual disabled person who can teach about our culture, the fun parts of disability, and, yes, even frustrations at societal barriers. We can show how we can pop wheelies, how our kids can ride on the back of our chairs, and how we can keep up with our kids riding skateboards and bikes. (2015, para. 11).

Imagine what a prospective teacher of the blind could learn from a blind child talking about reading her favorite braille books in the dark, or a blind adult celebrating his first successful bus trip using a cane, or a blind couple bringing their kids to the playground. Such observations can truly show blindness professionals what is possible for blind people to accomplish and how they can become part of changing what it means to be blind.

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