The Effect of Paralympic Athlete Status on Public Perceptions of Competence and Capability in Persons With Blindness

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Abstract

Adaptive sports, including Paralympic sports, have been positioned as antidotes to disability stigma. We examined the impact of athlete status on general public perceptions of a person with visual impairment faced with subtle and hostile discrimination. An online survey asked 206 American adults to respond to a vignette where a woman with blindness labeled either as a secretary or a Paralympian asks for bystander assistance. The perceived appropriateness of the bystander's reaction, as well as the protagonist's reaction to bystander hostility, did not differ based on athlete status. Though the Paralympic and similar sports movements envision transforming ableist attitudes through sport, athlete statuswhich is a signal of participation-may not be enough to shift perceptions in the general public. Significant expansion, integration, and multi-scale mainstreaming of adaptive sports is needed to more reliably reduce disability stigma through sport.

Keywords: Adaptive athletes, paralympic sports, blind sports, disability stigma, patronizing help

Introduction

Background

Persons with disabilities constitute 15% of the world's population (WHO, 2020). Commonly regarded as warm but incompetent, people living with disability often receive unsolicited, inappropriate, and patronizing offers of help from nondisabled people (Fiske et al., 2007). This subtle form of ableism¹ may manifest as a nondisabled person suggesting that an everyday activity is too difficult or dangerous. Offers may elevate to the level of insisting on providing support beyond that requested, or even making nonconsensual physical contact under the guise of assistance (Deelstra et al., 2003; Schneider et al., 1996).

Patronizing treatment may be viewed as innocuous or even charitable by nondisabled people, but it has deleterious psychological impacts on all disadvantaged groups, including persons with disabilities (Wang et al., 2019). For example, benevolently sexist behaviors, such as carrying a woman's bags or paying for a woman's meal at a restaurant, can impair women's cognitive performance by triggering self-doubt and intrusive thought (Dardenne et al., 2007).

Benevolent racism in the form of unsolicited test help can encourage Black American and other racialized students to view themselves as less competent than White American peers on an intelligence test (Schneider et al., 1996). Similarly, benevolently ableist acts directed toward disabled people can have similar impacts. People with disabilities find these behaviors disturbing and inappropriate, because accepting patronizing help implies an inability to manage independently without intervention from nondisabled persons (Dunn, 2019; Wang et al., 2015).

Given the psychological cost of accepting unsolicited assistance, one might assume that it is easy to politely decline the helper without repercussion. Unfortunately, both helpers and nonparticipant observers consider this refusal of aid to be offensive and aggressive (Wang et al., 2015; Wang et al., 2019). This effect is more pronounced when the disability is vision impairment (Dardenne et al., 2007; Dunn, 2019; Wang et al., 2015; Wang et al., 2019) or when declination involves direct confrontation (Kaiser & Miller, 2001, 2003; Rosen et al., 1987). This reality is particularly salient for people with blindness, who regularly face a major social challenge: how to balance the need for autonomy,

¹ Ableism refers to attitudes and beliefs in society in which nondisabled people are 'normal', thereby devaluing and limiting the potential of people with disabilities. Ableism typically underpins disability stigma and results in the disregard of people with disabilities in society. Ableism can be unconscious and frequently manifests in the creation of inaccessible physical environments and social conventions that are designed with a nondisabled person in mind (Smith B, Mallick K, Monforte J, et al. (2021). Disability, the communication of physical activity and sedentary behaviour, and ableism: a call for inclusive messages. *British Journal of Sports Medicine*, 55, 1121–2)

while maintaining harmonious relationships with the nondisabled public who may want to offer aid, patronizing or not (Braithwaite & Eckstein, 2003). People with disabilities must continually weigh the personal costs of accepting unsolicited help, against the interpersonal costs of denial, when considering discriminatory assistance.

Sports participation has been shown to elevate an individuals' social status, and reduce the perception of insubordinacy (Danes-Staples et al., 2013; Pensgaard & Sorensen, 2002). Sport is commonly used as a means to limit negative stereotypes, reduce frequency of interpersonal violence, level the social playing field, and potentially shift societal perceptions of a specific social group (Tintori et al., 2021). For persons with disabilities, sports participation ideally reduces disability stigma by transforming "community attitudes about persons with disabilities by highlighting their skills and reducing the tendency to see the disability instead of the person (UN)," according to the United Nations' Disability and Sports online resource. Through sport, nondisabled individuals might also interact with peers who have disabilities in a "positive context forcing them to reshape assumptions" about personal capacity (UN). Paralympic sports in particular, have been used to reduce disability stigma through education-based programs (McKay et al., 2015; McKay et al., 2018; McKay et al., 2019; McKay & Park, 2019). Thus, the question arises: Does Paralympic athlete status impact public perceptions of people with blindness, and therefore shape perceptions of patronizing help toward them? Does Paralympic athlete status impact perceptions of reactions towards patronizing help?

Grounded in realist inquiry, this study tested the impact of Paralympic athlete status on perceptions of both benevolent discrimination and overt hostility (Boaz & Pawson, 2005; Cruickshank, 2012; Pawson, 2006; Pawson et al., 2010; Wong et al., 2013). In Study 1, we aimed to determine whether athlete/non-athlete status would influence respondents' view of patronizing/hostile treatment of the disabled person. In Study 2, by expanding the original scenario to include the protagonist's response to patronizing/hostile treatment by either accepting or refusing the help, we sought to determine if respondents' view of the protagonist's response was influenced by athlete/nonathlete status.

Hypothesis

Based on prior published work, we hypothesized that the general public would:

- 1. view patronizing help as more appropriate than hostile treatment when the target is a non-athlete.
- 2. view patronizing help and hostile treatment as similarly inappropriate when the target is a Paralympic athlete.
- 3. view assertive confrontation as less appropriate than non-confrontation when the target is a non-athlete.

4. view assertive confrontation as more appropriate when the target is a Paralympic athlete.

Methods

Recruitment and Participants

Using the G*Power software (Faul et al., 2007) and assuming a medium effect size ($\eta_p^2 = 0.06$), we estimated a minimum requirement of 128 participants (32 per condition) to achieve 80% statistical power at alpha = 0.05. In anticipation of participant attrition due to missing/incomplete data, we recruited 200 participants (50 per condition). We successfully recruited 201 adults living in the United States for Study 1, and 206 adults living in the United States for Study 2 via Amazon's Mechanical Turk (mTurk) and CloudResearch, which provides a valid source of data for social and behavioral science researchers (Buhrmester et al., 2016; Mason & Suri, 2012). mTurk is an Internet-based platform that allows members of the general public to complete simple tasks anonymously in exchange for monetary compensation. Compared to other online surveys, mTurk surveys are more representative of the population at large and produces reliable results (Mortensen & Hughes, 2018). The survey was distributed from11/16/2019-12/12/2019. In line with the suggested mTurk payment structure, each participant was paid \$1.00 and the study took approximately 10-15 minutes (Buhrmester et al., 2018). The study was deemed exempt by the Yale School of Public Health Institutional Review Board.

The final sample in Study 1 included 201 participants (N=116, 57.7% male and N=85, 42.3% female), the majority of whom identified as White (N=156, 77.6%). Approximately 10% identified as ethnically Latino. Most had a bachelor's degree (N= 80, 39.8%), were employed for wages (N= 140, 69.7%), and not legally blind (N= 196, 97.5%). Five participants were legally blind (2.5%), and six described having a physical disability other than blindness (3.0%). Free text responses included trigeminal neuralgia, injured hand and nerve loss, Ehlers Danlos Type 3, Postural orthostatic tachycardia syndrome, and chronic fatigue. See Table 1 for additional details.

The final sample in Study 2 included 206 participants. (N=126, 61.46% male, N=78, 38.95% female, and N=1, 0.49% other), the majority of whom identified as White (N = 162, 79.02%). Approximately 12% identified as Hispanic or Latino. Most had a bachelor's degree (N=89, 43.41%), were employed for wages (N=157, 76.59%), and were not legally blind (N=188, 94.95%). Ten participants were legally blind, and 10 described having a physical disability other than blindness (5.05%). Free text responses included low back pain, constant post-surgical pain, deafness, and pulsatile tinnitus. See Table 1 for additional details.

Table 1Demographics of Survey Responders for Study 1 and Study 2

	Study 1	Study 2
Number of Participants	201	206
Gender		
Male	116 (57.7%)	126 (61.46%)
Female	85 (42.3%)	78 (38.95%)
Other	0 (0.0%)	1 (0.49%)
Race		
White	156 (77.6%)	162 (79.02%)
Black or African American	13 (6.47%)	23 (11.22%)
Asian	23 (11.44%)	9 (4.39%)
American Indian/Alaskan Native	1 (0.5%)	2 (0.98%)
Multiracial	7 (3.5%)	4 (1.95%)
Other	1 (0.5%)	4 (1.95%)
Ethnicity		
Latino	19 (9.5%)	24 (11.71%)
Non-Latino	182 (90.5%)	181 (88.29%)
Level of Education		
Less than High School Degree	1 (0.5%)	1 (0.49%)
High School Diploma or Equivalent	53 (25.9%)	53 (25.85%)
Associate's Degree	34 (16.92%)	27 (13.17%)
Batchelor's Degree	80 (39.8%)	89 (43.41%)
Master's Degree	22 (11.0%)	17 (8.29%)
Doctorate Degree	3 (1.49%)	3 (1.46%)
Trade/Technical/Vocational Training	8 (4.0%)	15 (7.32%)
Other	1 (0.5%)	0 (0.0%)
Employment		
Employed for Wages	140 (69.7%)	157 (76.59%)
Self-Employed	38 (18.9%)	30 (14.63%)
Homemakers	5 (2.5%)	3 (1.46%)
Unemployed – Not Seeking Employment	3 (1.5%)	2 (0.98%)
Unemployed – Seeking Employment	7 (3.5%)	9 (3.90%)
Students	3 (1.5%)	1 (0.49%)
Retired	4 (2.0%)	3 (1.49%)
Unable to Work	1 (0.5%)	1 (0.49%)
Disability		
Not Legally Blind	196 (97.5%)	188 (94.95%)
Legally Blind	5 (2.5%)	10 (5.05%)
Non-Visual Disability	6 (3.0%)	10 (5.05%

Design and Procedure

In Study 1, based on prior published work (Wang et al., 2015; Wang et al., 2019), participants were presented with one of four possible scenarios, each featuring an interaction between a nondisabled pedestrian and a 22-year-old woman with blindness named Mary. Mary was described as either a Paralympic athlete or non-athlete (secretary), detoured off her usual route to her bus stop, thus seeking directions from an unfamiliar passerby. Pedestrian behavior is defined such that over-help/patronizing treatment (stating that it was not safe for Mary to walk alone, grabbing onto her arm without her consent and insisting on taking her to her destination) or under-help/hostile treatment (stating that it is too dangerous, blocking Mary's path and insisting that she turn around and go home) is provided.

Participants were asked to indicate the extent to which they found the pedestrian's behavior to be appropriate, helpful, condescending (reverse-scored), and overbearing (reverse-scored) using 7-point scales anchored at 1 ("Not at all") and 7 ("Very much"). Responses to these items were averaged for each participant to obtain an overall measure of the perceived appropriateness of the pedestrian's behavior, used as the primary dependent variable. A full script, seen by participants, can be found in the Appendix.

In Study 2, based on prior published work (Wang et al., 2015; Wang et al., 2019), participants were presented with one of four possible scenarios, each featuring an interaction between a nondisabled pedestrian and a 22-year-old woman with blindness named Mary. Mary is described as either a Paralympic athlete or non-athlete (secretary). Mary was detoured off her usual route to her bus stop and is seeking directions from an unfamiliar passerby. Mary receives overhelp/patronizing treatment (stating that it was not safe for Mary to walk alone, grabbing onto her arm without consent and insisting on taking her to her destination) and may either accept or refuse the patronizing help provided.

Among other considerations, participants were asked to evaluate Mary using four labels: warm, good-natured, rude (reverse-scored), and arrogant (reverse-scored). They also indicated their general feelings toward Mary using a scale ranging from "very negatively" to "very positively." The scores from all five questions were combined to form a single dependent variable representing Mary's perceived likeability ($\alpha = 0.88$). In addition to these items measuring likeability, which constitutes our primary dependent variable of interest, we assess perceptions of Mary's competence, intelligence, and independence. All response scales contained 7 points. A full script, as seen by participants, can be found in the Appendix.

Statistical Analysis

Data from both studies were analyzed using Stata Statistical Software: Version 16.1 (College Station, TX). In Stata, we conducted two-way analysis of variance assessments (2x2 factorial analysis) looking at the intersection of athlete identity (athlete versus secretary) and the confrontational nature of the pedestrian's assistance (confrontational versus non-confrontational) on the perceived appropriateness of the pedestrian's behavior to a general population observer. Study 2 secondary analyses used similar analyses to consider differences in [social distance] as measured by q17_1, q17_2, q18_1, q18_2; [general liking] as measured by q19_1; and [perceived competence] as measured by q22_4, q22_5, q22_6, q22_7

Results

ue=0.486).

ness of the pedestrian's behavior (the primary outcome) significantly differed based on the type of treatment that Mary received (hostile versus patronizing, p<0.001), increasing by an average of 1.65 units when comparing patronizing over-help versus hostile under-help. Differences based on athlete identity (athlete versus nonathlete) were marginally significant with a corresponding p-value of 0.147, suggesting that perceived appropriateness of the pedestrian's behavior increased by an average of 0.30 units when comparing athletes versus nonathletes.

Differences based on athlete identity did not differ based on

the type of treatment that Mary received (interaction *p*-val-

In Study 1, the overall perceived appropriate-

Overall, in Study 2, no significant differences based on athlete identity were found (two-sided *p*-values for "differences based on athlete identity" were each >0.05; Table 1). Whether respondents were presented with confrontational or non-confrontational help, no differences in Mary's perceived social distance, general likability, or competence (or any of their constituent sub-scales) were able to be discerned from the results. This finding did not differ in the two-way portion of the analysis (*p*-values for interactions were each >0.05).

Among the results that tended toward marginal significance at an allowable alpha of 0.10 (90% confidence in not making a false positive claim) to 0.30 (70% confidence in not making a false positive claim), we see potential evidence of a difference based on athlete identity in q17_1 (p=0.285), q17_2 (p=0.265), q18_2 (p=0.300), and q22_6 (p=0.112) that did not meaningfully differ based on the confrontational nature of the pedestrian's help.

Respondents generally described Mary as warm, good natured, intelligent, resilient and competent, and did not agree

Table 2Two-Sided p-values from the Two-Way Analysis of Variance from Study 2

	Difference based on athlete identity	Difference based on conditional help	Interaction
Social Distance			
q17_1	0.285	0.793	0.633
q17_2	0.265	0.327	0.433
q18_1	0.606	0.305	0.418
q18_2	0.300	0.161	0.664
General Liking			
q19_1	0.994	0.032	0.688
Perceived Competence			
q22_5	0.788	0.311	0.642
q22_6	0.753	0.288	0.513
q22_7	0.122	0.485	0.375
q22_8	0.506	0.913	0.791

with statements suggesting she was unfriendly, rude, or arrogant.

Discussion

Study 1 results indicate that participants generally perceive hostile treatment (e.g., the pedestrian telling Mary to go home) as significantly less appropriate than patronizing treatment (e.g., the pedestrian grabbing Mary's arm and insisting on helping her to the bus stop). These findings are consistent with prior research. However, whether Mary was depicted as a Paralympic athlete or a secretary did not influence how the pedestrian's behavior is perceived which rejects our hypothesis that Paralympic athlete status would change participants' perception of patronizing help and hostile treatment towards the protagonist. This may be due to the fact that disability tends to overshadow one's other social identities (e.g., gender, race, occupation) when it comes to interpersonal perceptions. In other words, while Paralympic athletes who are visually impaired may indeed receive more respect and social status than non-athletes who are visually impaired in certain settings, such differences are likely to be subtle and thus difficult to detect in an experimental design.

This may also be attributed to the type of previous interactions our general public respondents have had with Paralympic athletes. Contact theory posits that meaningful, collaborative, equal status contact is required to measurably change interpersonal perceptions. One casual and nonmeaningful interaction may not provide sufficient exposure to result in changed perceptions. For Paralympic athlete status to serve as an equalizer and elevate the social standing of people with disabilities, long-term, sustained interactions (e.g., among people within the same school, recreation, or work

environment) instead of brief interactions between strangers, may be required.

This theory seems plausible when considering the trends we detected. Though these data did not rise to the level of statistical significance, we did observe that patronizing behavior was viewed as *increasingly* less appropriate when Mary is identified as a Paralympic athlete, as compared to when Mary is identified as a secretary. This trend reinforces prior research that athlete identity positively influences social status. It thus may reduce but not eliminate discriminatory perceptions. Expansion, integration, and increased visibility of Paralympic and recreational Para sport opportunities may help more significantly reduce disability stigma. While the integration of Paralympic athletes into everyday scenarios is insufficient to bridge the gap, this, in combination with additional efforts, including increased media coverage, may help (Goggin & Newell, 2000; Kamberidou et al., 2019).

Study 2 results reveal that Paralympic athlete status and the type of associated response did not have a statistically significant impact on social distancing measures, general likeability and competence measures. This further suggests that more is necessary to change disability perceptions—a casual interaction may not be sufficient to have impact.

Beyond increasing the visibility of Paralympic and recreational adaptive sports, further effort must be made to increase meaningful, collaborative, equal status exposure between individuals with and without disabilities, over time. These types of interactions are required to shift the paradigm of disability stigma. Integrating Paralympic and Para sport opportunities into mainstream public education curricula at all levels of learning, in addition to increasing media attention to this sector of sports, can enhance social inclusion of individuals with disabilities. Similar efforts have been successful in the workplace, where people of diverse racial, ethnic, gender, and neurobiological backgrounds have found mutual empathy and common ground (Pisano & Austin, 2016). A multidimensional and cross-sector approach, leveraging Paralympic and adaptive sport may successfully drive disability discrimination down.

Limitations

This study had several limitations. Sample size may have been too small to detect adequate effect. Effect may not have been possible to detect due to respondents' limited interactions and thus lack of familiarity with disabled individuals. Similarly, respondents' exposure to and awareness of sport (e.g., Paralympic, recreational adaptive or nondisabled sport), was unknown. A small proportion of respondents had a visual or non-visual disability, but, differential perceptions among this cohort of respondents was not assessed. Participants' disability status could bias response, which should be tested in the future. Future analyses using this experimental design should also assess respondents' personal familiarity

and lived experience with disability, sport, Paralympic sport, and what is means to have attained Paralympic status.

While grounded in realist theory, our analysis was not grounded in qualitative interviews with Paralympic athletes with low-vision and blindness regarding their experiences of patronizing help (and other forms of ableism, more generally) in the context of their general lives, and in the context of training and competing. Differences in perception of patronizing help may be different for this cohort, thus, difficult to detect in a general experimental design such as the one we utilized. It would be interesting to see these scenarios played out in real life. And finally, it may also be possible that perceptions of patronizing treatment is not a good indicator of perceived social status of people with disabilities, though this seems less likely given prior research.

Conclusion

The vision of the Paralympic and similar movements, is to transform attitudes toward persons with disabilities and drive social inclusion, using sport as a catalyst to create a better world for persons with impairment. While it is possible that sport can shift ableist perceptions, however subtle, brief encounters with athletes who are fully integrated into everyday scenarios may not be enough to reliably do so. As part of a larger strategy, adaptive sports can contribute to the reduction of disability stigma. However, positioning people with disabilities' mere participation in sport as a protective factor obscures the complexity of ableism. A significant global increase in the frequency, duration, mode, and context of contact with adaptive sports and athletes is required for sport to help shift perceptions in a way that creates a better world for all people with disabilities.

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Appendix

Note: The items are shown in the same order as they were presented in the online survey. A blank line indicates where one web page ends and the next begins. Text marked with brackets will not be included in the actual survey and is only presented here for review purposes.

Survey Text: Study 1

We are interested in how people perceive and relate to others who ask for information and assistance. Please read the following scenario involving Mary, a young woman training [or working] at an Olympic gym. Later, we will ask your thoughts about Mary and some other aspects of the scenario.

Mary is a 22-year-old blind athlete [or secretary]. She lives on her own and has been training full-time with the Olympic team [or working full-time as a secretary] for the past few months. Mary is traveling to the Olympic gym, where she trains [or works]. To get there, she has to walk about five blocks to the bus stop from home, but the route is pretty familiar and routine by now. One day, however, Mary has to take a detour to the bus stop as her usual route is blocked by construction. As she approaches an unfamiliar street corner, she stops to confirm with a passerby that her bearings are correct and that the bus stop is located just one block from where she is standing.

Mary: Excuse me, can you see the bus stop for the 22? I think it's over that way (points).

[The rest of this dialogue varies across conditions. Each condition includes one of the two "Type of treatment" components shown below.]

Type of treatment

- Over-helping pedestrian: Oh, this is a really busy street! It's not safe for you to walk by yourself. Let me take you to the bus stop! (Grabs onto Mary's arm and tries to steer her across the crosswalk.)
- Under-helping pedestrian: Oh, this is a really busy street! It's not safe for you to walk by yourself. You need to turn around and go home. (Blocks Mary's path to the crosswalk)

Unless otherwise stated, each of the following items will be rated on a 7-point Likert scale, with 1 = "not at all" or "strongly disagree" and 7 = "very much" or "strongly agree".] To what extent does each of the following describe the pedestrian Mary encounters at the street corner?

- 1. Helpful
- 2. Warm
- 3. Compassionate
- 4. Good-natured
- 5. Trustworthy
- 6. Overbearing

- 7. Unfriendly
- 8. Condescending
- 9. Appropriate

Survey Text: Study 2

Mary is a 22-year-old blind athlete [or blind secretary]. She lives on her own and has been training full-time with the Olympic team [or working full-time as a secretary] for the past few months. Mary is traveling to the Olympic gym, where she trains [or works]. To get there, she has to walk about 5 blocks to the bus stop from home, but the route is pretty familiar and routine by now. One day, however, Mary has to take a detour to the bus stop as her usual route is blocked by construction. As she approaches an unfamiliar street corner, she stops to confirm with a passerby that her bearings are correct and that the bus stop is located just one block from where she is standing.

Mary: Excuse me, can you see the bus stop for the 22? I think it's over that way (points).

The rest of this dialogue varies across conditions. Each condition includes treatment, and one of the two "Type of response" components shown below.]

Treatment

• Over-helping pedestrian: Oh, this is a really busy street! It's not safe for you to walk by yourself. Let me take you to the bus stop! (i.e., stating that it was too dangerous for Mary to be walking on her own, grabbing Mary's arm or chair without her consent, and insisting on taking her to her destination.)

Type of response from Mary

- Confrontation: Ma'am, I can handle myself just fine and was only trying to get some simple directions. Can you Please just answer my question?!
- Non-confrontation: (sigh) All right, fine. (Reluctantly accepts the pedestrian's help or walks away dejectedly).

In general, how do you feel about the way the pedestrian behaved toward Mary? [She acted very inappropriately...She acted very appropriately]

Based on the impression you have of Mary so far, please indicate the extent to which you think each of the following describes her personality.

- 1. Warm
- 2. Good-natured
- 3. Unfriendly
- 4. Competent
- 5. Intelligent
- 6. Incapable
- 7. Independent

8. Resilient	What is your age? (fill in answer box)
9. Gracious	
10.Rude	What is your gender?
11.Arrogant	Male
	Female
Please answer the following questions about Mary.	Other (please specify)
1. How comfortable would you be working for the same	
company as Mary? [Very uncomfortable Very com-	What is your ethnicity?
fortable]	White
2. How comfortable would you be working together on a	Hispanic or Latino
project with Mary? [Very uncomfortable Very com-	Black or African American
fortable]	Native American or American Indian
3. How much would you like to socialize with Mary for one evening? [Not at all Very much]	Asian/Pacific Islander
4. How much would you like to be friends with Mary?	What is the highest level of school you have completed?
[Not at all Very much]	Less than a high school diploma
5. In general, how do you feel about Mary? [sliding scale:	High school diploma or equivalent
Very negatively Very positively]	Trade/technical/vocational training
6. In general, how do you feel about the way Mary react-	Associate degree
ed to the pedestrian? [She under-reactedShe reacted	Bachelor's degree (e.g. BA, BS)
appropriatelyShe over-reacted]	Master's degree (e.g. MA, MS, MEd)
m 1 1	Doctorate (e.g. PhD, MD, EdD)
To what extent do you agree with each of the following state-	Other
ments about Mary?	What is your employment status?
	vv nat is voiir employment statils?
Mary is self-accepting about her blindness. Mary is a yield adjusted blind negroup.	
2. Mary is a well-adjusted blind person.	Employed for wages
 Mary is a well-adjusted blind person. Mary's blindness is an important part of who she is. 	Employed for wages Self-employed
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