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Transportation to employment

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For decades, the employment of Norwegians with disabilities has been lower than for the rest of the population. One possible explanation is inaccessible transportation. To people with disabilities, transportation might pose a significant barrier to employment. Through interviews with people with disabilities who are currently or have been previously employed, this study identifies barriers to transportation experienced by people with disabilities, the presence of these barriers in their occupational lives and the potential consequences for employment. The study shows that transportation is an obvious obstruction to equal level of employment of people with disabilities in their early career, active career and late career.

Keywords: disability; employment; transportation

Introduction

The employment of Norwegians with disabilities has remained low for the past 20 years. In 2011, almost 74% of Norwegians between 15 and 66 years of age were employed, compared to 42% of people with disabilities (Bø and Håland 2011). Research suggests several explanations for this: an inadequate focus on systemic factors and labour market mechanisms (Anvik et al. 2007; Grue 2006; Vedeler and Mossige 2009), weak regulations of employers' responsibilities (Hvinden 2004), prejudice and discrimination (Gundersen 2008; Morrell 1990), educational inequality (Bliksvær and Hansen 2006) and inadequate accommodation (Hansen and Svalund 2007; Voorhees and Bloustein 2005). Additionally, we call attention to inadequate transport.

Transport policy

For the last couple of decades, people with disabilities' equal access to important societal arenas has been regulated by law. In the Anglo-American world, disability rights movements played a vital role in passing the first anti-discrimination acts in the 1990s. The 1990 American Disabilities Act prohibited discrimination in employment, public services, public housing and telecom (Voorhees and Bloustein 2005). A few years later, the Disability Discrimination Act was passed in Britain.

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However, equal access to transportation remained a remote issue in early disability policy (Krpata 2012; Rieser 2006).

Current Norwegian transport policies are built upon definitions of universal design in the Anti-Discrimination Act of 2009. The act defines universal design as the design or accommodation of the main solution so that it can be used by as many as possible. According to the Norwegian National Transport Plan, participation in employment and social activities heavily depends on simple, efficient and safe mobility: 'accessibility to transportation is a prerequisite for an active life and participation in community with others' (NOU 2001, 127). The transport system should be developed and accommodated in such a way that most people are ensured mobility and that the number of custom solutions remains low (Ministry of Transport and Communications 2008).

Still, in order to meet the transport needs of people with disabilities, Norwegian welfare policies include several public support schemes for transport. These include organised door-to-door transport by taxi, financial support for accommodated private cars, and economic reimbursement of extra expenses related to transport. Certain schemes have been criticised for uneven distribution depending on county of residence, but are of absolute importance to the many who are granted such support (for an overview of evaluations, see Bjerkan, Nordtømme, and Kummeneje 2011).

Transport and disability

A vast amount of literature provides theoretical, conceptual and discourse oriented inputs to the understanding of disability. Although many can be applied to the understanding of transport disability, most transport research fails to explicitly include such approaches. Certain attempts are identified, however, at uniting disability theory and transport research.

Transport and social approaches to disability

The debate over approaches to and models of disability is complex and intense. The benefits of the social model approach is that it shifts attention from individuals to the ways in which society includes or excludes them (Shakespeare 2006, 29). As such, it might be an appropriate perspective in investigating barriers in transport. Aldred and Woodcock (2008) attempted to extend the social model of disability by examining the role of transport. They argue that environments are continually reshaped by transport, and that transport becomes increasingly important as services and workplaces move further away from people's homes. In line with the social model, they portray transport systems as disabling large populations. Disabling mechanisms are located within the structural function and design of transport systems, producing patterns of impairment, disability and disadvantage.

Transport related social exclusion

Social exclusion is another significant field of research dedicated to transport-related constraints, and Kenyon (2011, 764) describes a 'growing awareness of the links between transport and social exclusion'. Although there is no agreement on a single definition of social exclusion, there is a general perception that 'exclusion is about (. . .) the mechanisms that detach people from the social mainstream' (Giddens 1998).

To some scholars, social exclusion is intrinsically linked with poverty (Walker 1995), but many approach social exclusion as a set of inter-related social processes (Hodgson and Turner 2003). Exclusion is as such a process of detachments that may lead to increasing isolation and alienation, thus reinforcing disadvantage (Shaw 2005). Church et al. (2000) ascribe seven dimensions to the conceptual framework of transport-related social exclusion: i) physical exclusion, ii) geographical exclusion, iii) exclusion from facilities, iv) economic exclusion, v) time-based exclusion, vi) fear-based exclusion and vii) space exclusion. Others place an explicit focus on participation in civil society. Preston and Rajé (2007) adapted the paradigm of social exclusion to Amartya Sen's theory of entitlement, and postulated that social exclusion is not a result of lacking opportunities but a lack of access to those opportunities. They conclude that policy makers should focus on ensuring basic levels of accessibility rather than mobility.

Individual decision-making

As opposed to theories emphasising structural and societal barriers towards accessible transport, certain branches of travel research focus on the decision-making processes of the individual. The theory of negotiation, as put forth by Jackson et al. (1993), holds that participation is not dependent on the absence of constraints, but rather the negotiation through constraints. Such negotiation may modify participation rather than foreclosing it: when confronted with barriers, people seek out solutions which enable them to overcome any constraint they may be experiencing (Jackson 1993).

Others relate decision-making to the theory of learned helplessness. Although people with disabilities might face constraints which influence their transport-related decision-making process, the impact of these barriers on their final decision depends on personal characteristics (Smith 1987). Lee et al. (2012) criticise the assumption of a direct relation between travel constraints and intentions to travel, and argue that the relation is mediated by factors such as helplessness. The theory of learned helplessness suggests that individuals who cannot control their environment come to view negative outcomes as inevitable, and consequently cease efforts to engage in further participation. Thus, previously difficult experiences with transport might lead to expectations of future difficulties.

Porter's model of transport disability

By reference to a study of the travel experiences of people with disabilities in Swansea, Porter (2002) aimed at filling the research gap between empirical and theoretical approaches to transport disability. Leaning on Priestley's (1998) four approaches to disability theory, she identified five perspectives on transport disability.

For one, transport disability could be considered an aspect of the human body, in line with understandings of disability as an individual, physical product of biology. Second, transport disability comes into being in the interaction with others, and that affects and modifies personal relationships. For instance, disability arises from humiliations, looks and mutterings from strangers, as well as the reliance upon help from friends and family (Porter 2002, 12).

Thirdly, transport disability can be considered an aspect of social and material barriers experienced by an individual. Porter describes transport disability as a social creation, and asserts that disabling barriers could be experienced differently by different people. Fourth, transport disability could be perceived as a relative disadvantage. Empirically speaking, this entails the differences in travel habits between two otherwise similar groups.

Finally, transport disability can be an administrative category of label which the transport disabled person wears. Here, Porter refers to the *disabled role*: disability is socially constructed, and the bearer wears the label to secure entitlements to transport related benefits or services (Porter 2000). The label might vary between situations, depending on the authority responsible for producing it.

Research questions

Above perspectives show the complexity and multifaceted representations of disability in transport. They also suggest that apparent trivial challenges can involve inherently systemic, societal and unrecognisable structures. The purpose of this article is to present expressions of transport disability in relation to employment, and the potential consequences for the occupational lives of people with disabilities. More specifically, this article asks:

What barriers to transportation do people with disabilities experience? How are these barriers present in different stages of the occupational career? What are the potential consequences for employment?

Previous research on barriers in transportation

Lodden (2001) defines barriers as obstacles, problems or difficulties experienced in transportation that can be cultural, informative, physical, psychological or practical. She refers not only to barriers that are insuperable and excludes people from the transportation system, but also barriers faced *in* the transportation system. Lodden's definition can be converted into a general classification of barriers in transport which lies at the core of understanding ways in which transportation might influence the employment of people with disabilities. This study is limited to informative, physical, psychological and practical barriers.

Informative barriers

Informative barriers refer to inadequate or incorrect knowledge about transportation. Informative barriers cause transportation alternatives to appear complex and incomprehensible, and cause problems when navigating in the transport system. Insufficient knowledge about a transport mode might keep people from using it.

Perhaps the most prominent informative challenge is related to finding information about routes and schedules, departure times, departure locations, accessibility information, delays, route changes and estimated time of arrival (Bjerkan 2009; Nordbakke 2011; Voorhees and Bloustein 2005). Understanding announcements on board vehicles or on airports, train stations etc. can also be challenging (Risser, Iwarsson, and Ståhl 2012).

Informative barriers are also related to inadequate knowledge about the accessibility of the destination. Participants in Porter's study (2002, 13) developed complex and multi-layered mental maps, describing so-called *friendly places*: accessible destinations and routes. Similarly, travellers with disabilities must identify, access and verify information about the accessibility of places they are going in advance (Yau, McKercher, and Pakcer 2004).

Finally, informative barriers occur in the encounter with public authorities. People with disabilities experience great need for information about rights and many are unaware of where to get information about public support schemes (Nordbakke and Hansson 2009, 30–34).

Physical barriers

Physical barriers refer to inadequacies in the design of transportation systems. Examples are long distances to bus stops, train stations, and cab stands, or unlevelled streets, cross walks, etc. Norwegian research suggests that embarking and disembarking are the most prominent barriers in public transportation, and cause infrequent use for 55% of people with mobility impairments (Nordbakke and Hansson 2009, 50). Similar findings are documented internationally (Imrie 2000; Risser, Iwarsson, and Ståhl 2012; Voorhees and Bloustein 2005). Furthermore, a study showed that a high bus stop density correlates positively with public transport use among disabled (Schmöcker et al. 2008). Finally, the interior design of the vehicle, such as space limitations, air quality and toilet facilities, poses a significant challenge for people with different kinds of impairments (Molden, Wendelborg, and Tøssebro 2009).

Psychological barriers

Insecurity or fear in the transportation system can be described as psychological barriers. Insecurity often stems from inability to master the transportation system, often linked to available information and knowledge. Psychological barriers also arise from misperceptions about the design and operation of the transportation system, as well as anticipation and unpredictability. Expectations of facing difficulty cause scepticism towards familiar and unfamiliar surroundings, and shapes perceptions about the quality of transportation (Nordbakke and Hansson 2009).

Psychological barriers are ultimately related to perceptions of self, as well as insecurities related to meeting strangers. Yau et al. (2004) found that people with mobility and visual impairments who had not come to terms with their disability tend to avoid public places and rarely travel. Similarly, a Swedish study found that stroke survivors tend to stay at home because they do not wish to disgrace themselves by not doing things well enough or quickly enough in front of others (Risser, Iwarsson, and Ståhl 2012).

Practical barriers

Practical barriers include factors related to people's preferences in terms of costs, time use, transfer, flexibility, comfort, etc. Practical barriers are met by improving the quality of the transport system. Accessible parking is one of the most important practical barriers. A recent survey showed that 42% of people with mobility

impairments depend on individual transport to work, underlining the importance of owning a car and accessible parking (NAD 2011). Even with a parking permit, finding a vacant spot close to the destination is difficult when the number of spaces is limited (Grut and Kvam 2001; Voorhees and Bloustein 2005).

As the car dominates work journeys (Engebretsen 2006; Nordbakke and Hansson 2009; Voorhees and Bloustein 2005), a limited or inaccessible public transport system immobilises people who cannot drive (Anvik 2006, 77). Further, public transport services are often perceived as unpredictable and difficult to plan for, restraining independent mobility among their users. Disabled employees relying on public transport service schemes risk working overtime to compensate delays in transport services (Grut and Kvam 2001). During the work day, preplanning is essential for getting around and participating at different localities (Anvik 2006; Voorhees and Bloustein 2005).

Finally, practical barrier are economic. Accommodated cars are expensive purchases and entail expensive maintenance and high fuel costs (Nordbakke and Hansson 2009). People in need of a large accommodated car do not have the luxury of choosing a small, low maintenance car with high fuel efficiency (Bjerkan, Nordtømme, and Kummeneje 2011). Studies have shown that people with disabilities pay more than their colleagues on work travels (Prescott-Clarke 1990), and that economic restraints might lead people with disabilities to reduce their own transportation needs (Oxley and Richards 1995).

As seen above, several studies have investigated the travel and transport of people with disabilities. Additionally, a significant amount of research has been carried out on the labour market participation of people with disabilities. However, little research has endeavoured to explore the explicit influence of transport disability on the occupational lives people with disabilities. This article is a contribution in that direction. Although many would recognise existing assumptions regarding the transport experiences of this group, such assumptions are to a varying degree systematised and documented. This article also contributes to demonstrate the comprehensive nature and consequences of transport disability.

Methods

The research questions in this study are answered through qualitative interviews with adult Norwegians with disabilities. Transportation barriers as an exclusion factor in the labour market is little explored and qualitative interviews allow for examining this phenomenon in depth. Qualitative method is particularly suited for understanding research questions from the informant's perspective, as it allows the informant to give thorough descriptions of her experiences with transportation in different stages of her career.

A total of 7 individual interviews were conducted. Informants were recruited through strategic selection: 3 men and 4 women with mobility and/or visual impairments, currently or previously employed.

The interest in informants with mobility and/or visual impairments stems from their particular transportation challenges. People with mobility impairments face particular barriers in lack of universal design (NAD 2011). People with visual impairments are included because they cannot independently use the most important mode of transport on work journeys, namely the car. Recruiting informants who

Table 1.   Informant profiles.

	Impairment	**Employment status**	**Main mode of transport**	**Transport options**	**Lives**	**Work location**
Albert	Mobility	Employed	Drives car	Car, bus	Small town	City
Beth	Mobility	Disability pension	Chauffeur, drives car	Car, bus	Countryside	–
Camilla	Mobility, visual	Unemployed	Chauffeur, drives car	Car	Countryside	–
Dora	Visual	Employed	Bus	Bus	Small town	City centre
Ellie	Mobility	Employed	Drives car	Car, bus	City	City
Fredric	Mobility	Unemployed	Drives car	Car, bus	City	–
George	Mobility	Employed	Drives car	Car, bus, electric scooter	City centre	City centre

could not drive provides a broader and more complete picture of existing barriers to transportation.

To understand barriers in the entire occupational career, informants were selected based on their experiences in several phases of their occupational careers. All informants were therefore in the middle or late years of their occupational lives, and between 40 and 65 years of age.

The interviews were based on a semi-structured interview guide. Themes were defined in advance, but the interviewer could herself determine in what order different themes should be introduced. The interview guide was divided into 3 sections, related to barriers in different phases of the occupational career.

Informants were encouraged to give free accounts of episodes and experiences associated with different activities and their assessments of transportation barriers related to each activity. In order to understand their current assessment of transportation, it was important to include their experiences in earlier phases. Experiences from college and early occupational careers are given in retrospect and are not necessarily relevant today. However, recent Norwegian studies show that transportation is a prominent challenge also to contemporary students (Magnus 2009).

Each interview lasted between 30 and 60 minutes and was conducted at a location selected by the informants. It was considered important that the informants chose the location to ensure that transportation would not pose a barrier in this particular setting and to produce a natural and safe environment. All interviews were recorded, and conducted by the same researcher. The Norwegian Social Science Data Service recommended the project be carried through.

The analysis of qualitative data is an extensive process present throughout the entire research project. Most analysis, however, takes place after transcribing interviews. The analysis of interviews was based on a theme-centred approach. This involves explicit focus on included themes and comparison of information from all informants on each theme. After transcribing the interviews, the material was coded and divided into categories according to themes discussed, and sorted into a matrix. Finally, information from all informants was gathered for each subsequent theme.

Table 2. Subtopics and areas covered in interview guide.

Section	Areas covered
1. Early career	Educational background
1.1 Education	Getting to and from university/college
	Assessment of transportation alternatives
	Transportation
	Public support during education
	The role of transportation in completing/not completing education
1.2 Job seeking	Desired jobs
	Assessment of transportation alternatives
	Transportation requirements for relevant jobs/job application
	Getting to and from job interviews
	Discussions of transportation with employer
1.3 Considering offers	Prerequisites for accepting job offers
	Refusals/acceptance of job offers because of transportation
2. Active career	Transport arrangements to and from work place
	Experiences with and assessment of transportation alternatives
	Work-related travel outside the work place
	Experiences with transportation affecting performance of job tasks
	Relations with employer/colleagues
	Experiences with transportation on work-related social events
3. Late career	Transportation involved in decision to leave employment

Results

Early career

Education

The informants have, to varying degrees, experienced transportation as a barrier in their early careers. A lack of accommodation schemes during their student years caused the informants to depend heavily on others for getting back and forth. Mastering transportation challenges involves significant strain that drains students of time and energy that ideally should have been put into their studies. The worst case scenario is students being forced to terminate their education. Camilla was one year from finishing her professional degree when she, in spite of good academic results, had to terminate her studies because she had no way of getting to her lectures. Even days when she got to the university the strain of travelling was so exhausting that she gained little from showing up.

Camilla: There is a reason [why] I didn't finish the last year. I couldn't get to school. They told me clearly that I had no right to aids or transportation (. . .), and this is not that *long ago. And that's kind of peculiar, I think, when you're in* that *program and have* very *good grades. So I had to quit, because I didn't get to school.*

Similar empirical evidence is reported in Magnus' (2009) recent study on everyday-life for students with disabilities. Her informants had rights to accommodated transportation, and two were transported to campus by taxi. This compensated for the students' inability to use public transportation, and represents as such a possibility that Camilla did not have. Still, Magnus concludes that even this taxi service composed a barrier for her informants as it entailed very little flexibility.

For example, one of her informants struggled to get to class in time, because the transport service did not show up as scheduled. To cope with this she needed to plan for delays every day, and spent a lot of time waiting for the taxi.

Kenyon (2011) also cites a number of international studies stating that inadequate transport limits access to education. She found that inadequate transport affected access not only to formal teaching, but also to informal teaching and extracurricular activities that are important parts of student life.

These findings underline that even gifted students with the best premises for succeeding in the labour market depend on accessible, predictable and resource saving mobility in order to compete in arenas that provide others with competitive strength in the labour market.

Applying for jobs

Transportation influences what jobs people with disabilities apply to, and what job offers they consider feasible to accept. A very clear tendency among the informants is the deliberate reflection upon transportation options associated with available jobs, and active investigation of transportation options in order to assess what jobs to apply to. Work decisions need to be carefully considered with regards to accessibility.

Dora is an informant who considered transportation in the job seeking process. Dora is visually impaired and rides the bus to work. She preferred jobs that were close enough to avoid bus transfer in the city centre.

Dora: Bus transfer would have been exhausting and time consuming. A friend of mine had to change buses in order to get to work and he used twice as much time as I do, getting to work. Because of the bus transfer downtown. It is extremely exhausting.

A survey conducted by the Norwegian Association of the Disabled in 2010 pointed out that depending on public transportation to and from work in rural Norway can be difficult, if not impossible. Many bus schedules are adapted to school hours, and are not operative during school vacations. Dora lives in an urban environment and enjoys a more frequent bus service. Despite experiencing little difficulty travelling during her work day, she considers where she should or should not work. Hence, Dora applied for jobs that met certain transportation related criteria. As such, an accessible travel chain poses an extra criterion in the job seeking process. This is also documented by Burkitt (2000), who found that locations considered feasible to work in were determined by the understanding of the transport network.

The accessibility criterion might cause people with disabilities to refrain from applying for jobs which they otherwise would have applied for, and which they are qualified for. Albert is one example.

Albert: I might have applied for another position within the agency, but I know what it is like with parking and stuff, so I haven't. I don't think it will work.

This demonstrates how Albert's job options are reduced because of difficulties with getting to work. The lack of available and accessible parking causes him to miss out on a position that might allow Albert to enhance his abilities and provide him with greater influence within his own working environment.

   To abate upcoming concerns regarding transportation, some informants discussed transportation issues with their potential employer in the job interview. The job interview poses an important arena for people with disabilities to learn more about transportation alternatives that are involved with the job, transportation requirements in performing work tasks, and to negotiate transportation options with the employer. This might involve a certain psychological strain, in that they might disfavour themselves in the competition for the job by focusing on their limitations. Therefore, few informants discussed transportation issues at the interview unless they already knew the employer well. Some deliberately avoided the topic during the job interview, anticipating to be treated on equal terms. Others experienced negotiations with the potential employer as rewarding. Beth experienced her job interview as very positive. Not only did it result in a transportation scheme according to her own needs, her employer was also the one who initiated the topic

Beth: I discussed parking with the employer when I was there for an interview (. . .). I made an agreement with the janitor, so that I got a permanent parking space in the basement (. . .) So they accommodated me in that.

Active career

Getting to work

Transportation needs to be handled every day. Organising the work day is time consuming and depends on predetermined plans for transport. Even though people with disabilities do most things other people do during the work day, it might take more time and effort to do them.

Dora: It follows you through everything. There are others with the same type of job as me, who work a full week. I think that it is too much (. . .). It takes a lot of time and energy [and] I don't want to exhaust myself completely.

Several informants compose mental plans for how they will get to work and other activities. Dora underlines the importance of having a strategy, and that strategies for handling unexpected situations provide good premises for mastering transportation.

Dora: You always have to have a plan B. That is what living with a disability is all about.

   To many informants strategies are based on access to their own, accommodated car. The informants that drive consider this the only option, and have to a certain degree developed a plan B for days when the car is not available. This is heavily related to the informants' negative perception of other transportation modes.

Ellie: [The car] is really important, because I can't get anywhere without a car. Without a car, I would be sitting at home. It's that simple!

Camilla: It would have been more exhausting to work if I had to take the bus. It is more bothersome when you have to plan your own days. And it is more exhausting. And then you will have to use the transport service [for the disabled] and taxi more often, so it's just an extra strain (. . .) which causes you to restrain your own needs. You don't go even though you want to, you just stay at home more.

Ellie and Camilla's stories show that the car is a premise for their mobility, and that without it they become less active and stay at home more. This will not only affect their possibility for employment altogether, but might also limit their participation at informal and social events related to their work.

The dependence on the car causes informants to stress the importance of parking. Informants that are employed and drive often have reserved parking spaces. Some have a roofed parking space or their own space in a parking basement, while others have made a particular agreement with their employer. Most, however, have at one point or another experienced parking as a prominent challenge in their employment. For instance, Ellie was periodically forced to park illegally.

Ellie: If it was difficult [to find an accessible space], I just parked illegally. There was no alternative!

Parking far away from their workplace is an extra load that burdens the informants throughout the day. This has also been found in a Norwegian in-depth study of disabled people's working life (Anvik 2006): informants who had a car, experienced great difficulties with parking and getting from the parking space to work, especially during winter. Parking is not only a matter of physical proximity, lack of parking opportunities also causes worry and psychological strain. Accessible and available parking, especially in the city centre, is considered unpredictable, random and scarce. George says strenuous experiences with parking and getting around have caused him to give up tasks and positions, simply because they became too time consuming. He used a lot of mental capacity to plan and worry about where he was going to park.

George: I almost dreaded going to work every day, because I had no place to park and would have to walk far.

Informants describe a personal, indoor, permanent parking space as the ideal solution. This would provide predictability concerning where to park, and security in knowing there will be an available space close to the work place. Additionally, when parking indoors, the informants avoid impractical and energy consuming, and for some impossible, efforts to rid the car of ice and snow during winter time.

Work tasks and social participation

Transportation can also be a premise for carrying out work tasks, as positions often contain a certain amount of travel to meetings, consultations, conferences, etc. The informants consider work tasks that require long journeys as particularly challenging. This is mostly because long journeys often require other transportation modes than everyday work journeys. To Beth, other transportation modes than her own car are considered impossible.

Beth: Travelling (…) by train, for example, was immensely troublesome. For one, it was difficult getting to the railway station (…), and on board the train, the wheel chair was improperly fastened, and the toilets weren't great either. It was very risky…

Fredric: It was so difficult embarking and disembarking the train. If you have a suitcase, and a crutch, and have to climb four steps. It was so difficult. So when we got

[to the place I was getting off], I told the conductor 'I need help'. It was so difficult. They had to carry me down (...) One man brought my suitcase and two others took my hands to lift me down. It was so far down. I didn't like it.

This exemplifies how the informants experience work journeys as fatiguing and sometimes humiliating, and they explain that good planning and investigations prior to the journey are essential for being able to travel and perform their own work tasks. Although the informants prepare carefully for work related travel, many experience that difficulty with transportation prevents them from participating in meetings or social activities through their work, and as such may limit their career possibilities.

Participation is also very much affected by insecurity. In the same way uncertainties about parking and travel options cause distress and worry, they may also stop employees from participating in social events with their colleagues. Previous experiences cause some of the informants to avoid social gatherings. George once visited a small mining town with his work and found it a very exhausting experience because the area was not accessible for wheel chairs. This causes anxiety about a forthcoming trip with his work, to a small island in a Norwegian fjord.

George: And now we are going to this island, and I'm not so sure that I'll be coming along. It will probably be exhausting there as well. Hilly and sandy. No, it's not accessible there. I have never been there, though, it might be okay.

Hence, accessibility and transportation might also represent a psychological barrier in the employment of people with disabilities. Despite his unfamiliarity with the island, George's previous experiences cause him to assume that conditions are difficult and that it will yet again be an exhausting experience.

Late career

For most informants, employment is very important. Several express concerns about the life they imagine they would have led without work and without participation in other social arenas.

Dora: Activity compensates for disability. Visual impairment or mobility impairment is the least of your concerns if you're not allowed to participate in any arenas. Everybody needs to be significant, and everybody is part of a social context.

Fredric: Without a car I could say: just die. You will only stay at home. The two or three years when I was out of work were very difficult for me. If you are disabled, there is no life without transportation.

Transportation issues can ultimately lead people with disabilities to leave their jobs. Several informants in this study have left previous jobs because they became too demanding. Their stories show that transportation can directly influence whether or not they remain employed.

George: That was one of the reasons [why] I quit. I couldn't bear showing up at the meetings, because I didn't know how to get there. Because it was so far away.

The reliance on a certain mode of transportation has prevented some informants from applying for jobs other than the one they have because changing jobs involves uncertainty about how they will get to work. This could ultimately lead the informants to remain in a job that is not necessarily fulfilling because they do not experience other jobs as real alternatives. In the long run, this might affect both their motivation and the possibilities for employment.

Another prominent barrier towards remaining employed is the extra strain that transportation poses, leaving many disabled employees with insufficient energy to perform their work tasks.

Albert: Transportation is very important for getting to work, and staying employed. (...) A lot of people that stay at home today could have contributed somehow. And it doesn't take that much accommodation. To many, [transportation] is so fatiguing that they'd rather stay at home.

The informants emphasise flexibility as a premise for employment, while their stories simultaneously show that their actual flexibility is limited. Most informants stress the importance of the car for their flexibility and independence, and that their lives depend heavily on the car. However, this expresses the *in*flexibility this dependence represents. With a lack of alternatives, dependence on one mode of transportation produces unreal choices even though the chosen mode of transportation is in itself perceived as flexible. Thus, it will not merely be the accessibility to a preferred mode of transportation that produces flexibility, but also the possibility of choosing between alternative, accessible modes of transportation.

Concluding discussion

Transport disability as excluding barriers

The results of this study show that people with disabilities are faced with transport-related constraints in all phases of their occupational careers, largely described as *material and social barriers*. These are above all related to aspects of social exclusion. For one, the informants' reliance upon certain modes of transport is an indication of *physical exclusion*. As public transport or any other transport than their own cars are perceived as real alternatives, informants are excluded from parts of the transport system. Physical exclusion is typically the result of physical barriers.

Physical barriers experienced by the informants relate to both driving and public transport. Above all, informants experience difficulties with inaccessible parking and spaces that are too small and too far away from the destination. They rely heavily upon their car and experience other transport alternatives as too demanding. Informants stress difficulties with embarking and disembarking public transport, getting to the stop or station, as well as navigating on board the vehicle. To informants who drive, this causes particular challenges when attending meetings or other work-related events that require other transportation modes. However, faced with physical barriers, some informants make innovative efforts to reduce the impact of an inaccessible transport system. For instance, parking illegally might represent a strategy of *negotiation* applied to inadequate parking

schemes. Other negotiations are car pooling, particular parking accommodations and the generation of a plan B.

In early as well as active careers, the informants' stories reveal various degrees of *exclusion from facilities*: that is, lack of access to, for instance, education, conference locations or meeting rooms. This is mainly related to physical barriers and lack of transport alternatives, but is also a matter of practical barriers. Practical barriers can be the result of experiences with other barriers. For instance, information about accessibility levels or public funding schemes might influence practicalities related to planning and organising transport. Always having a plan B is an essential part of mastering disability. Informants describe organising transport as exhausting and time-consuming, and demanding attention which might have been directed more productively elsewhere. As such, the informants' exclusion from facilities is further related to *time-based exclusion*, suggesting that inadequate time for performing tasks and travel lead to a reduction in productive activity. Common for all informants, however, is that the strain involved in dealing with transportation reduces the energy which should be directed at performing work tasks.

Physical barriers can also be a cause of *economic exclusion*, as they might constrain the individual's access to the labour market. Church et al. (2000) also relate economic exclusion to *information* about the labour market. To the informants of this study, informative barriers are particularly evident in early careers. As students, the informants sought information about public transportation schemes. In the job seeking process, information about transport alternatives, accessible parking and parking arrangements was important in the critical assessment of jobs. Inadequate information about possible transport arrangements related to jobs caused some informants to rule out relevant career opportunities.

In day-to-day work, informative barriers arise both in regular work travel and in work-related social events. For informants with visual impairments who travel by bus, finding route information and information about approaching lines represents a habitual challenge. Informants with mobility impairments sometimes experience inadequate information about the accessibility of approaching buses, and particularly whether the bus has a low entrance. In cases where informants travel beyond regular workday routes to unfamiliar destinations, several underline lacking information about the destination.

In this study, lack of accessible information was also the most prominent cause of psychological barriers. Inadequate information about accessibility levels of infrastructure, transport modes and destinations caused insecurity before, during and after the end of the work day. This is also related to *fear-based social exclusion*. To the informants, this fear was induced by inadequate knowledge and information about transport alternatives and parking. Some informants spend a lot of time worrying about environments they will encounter, and express concerns about participating at particular work related events.

Furthermore, insecurity causes the informant to make negative assumptions about the transport system and particular modes of transportation. More than one informant gave unfavourable characteristics of public transportation without having much experience of using it. This suggests that the low commitment to alternative modes of transport could be a result of *helplessness* influencing the individual decision-making process.

Table 3.   Identified barriers in different phases of the occupational career.

Phase	Barrier	Consequences
Early career	Inadequate support schemes for students Depend on assistance from others Organizing own transport is energy consuming Inadequate accessibility throughout the travel activity chain Insecurity regarding accessibility in transport	Do not complete education Do not apply to relevant jobs Do not accept relevant jobs
Active career	Lack of flexibility in own transport Experiences with alterntiave modes of transportation Time consuming planning of own transportation Lack of accessible parking Inaccessible design of public transportation and the transportation system Employer's poor comprehension of transportation needs Dependence on others	Vulnerability if primary choice of transportation discontinues Scepticism towards alternative transportation Limits social participation Reduced participation Limits relevant work tasks Extra strain in work day Demanding to participate in meetings, etc. Psychological strain to ask for help
Late career	Primary transportation choice discontinues Lack of flexibility in own transportation Inadequate accommodation of own transportation Negotiations about transportation with employer	Continues unfulfilling work Reduced motivation and zeal Extra strain Sick leave Early retirement Discontinuation of employment

Consequences for employment

Excluding particular groups from the transport system might have dramatic consequences in increasingly mobility-oriented societies. Transport proves an essential dimension of social approaches to disability, and this study has proved that transport does represent an important social structure in disabling large populations. Transport disability might have direct and indirect consequences for employment, and this study shows that transportation constitutes a barrier to people with disabilities in several phases of the occupational career. Table 3 presents consequences of the barriers that people with disabilities meet.

In early phases of the occupational career, transportation might keep people with disabilities from acquiring higher education, applying for jobs they are qualified for and accepting job offers. In the active career, employees with disabilities are vulnerable and depend on the continuation of their chosen transportation arrangements. The time and strain related to organising transport contribute to limiting relevant work tasks and social participation. Transport-related barriers might lead employees with disabilities to continue in unfulfilling positions, which could reduce motivation and zeal for employment altogether. The extra strain involved with the

planning and operation of transportation could also compel sick leave, early retirement or in the discontinuation of employment.

One purpose of this study has been to investigate the potential consequences of transportation barriers. Although the nature of barriers experienced might vary between people with different impairments, the consequences are similar. For instance, students with different impairments might experience different barriers, but as they influence educational achievement and job opportunities, impairment is less relevant in the consequences of barriers. Hence, group variations are not necessarily impairment specific.

Resourcefulness is one characteristic of informants in this study. The informants are active and dedicated individuals relying on their own efforts, and, one can assume, have particular advantages in facing transportation-related challenges in their occupational careers. Considering the significant impact of inaccessible transportation even for resourceful persons, one can assume that transportation will influence the employment opportunities of people with less motivation and go-ahead spirit even more.

Thus, future studies should put greater emphasis on the role of transportation for the employment of less resourceful groups. Inaccessible transportation might have divergent effects for resourceful and less resourceful people. Whereas inaccessibility might exclude less resourceful people from employment altogether, it might hinder the employment of more resourceful groups in other ways.

Informants in this study have developed compensating strategies which allow them to be employed, but inaccessible transportation might still leave them with fewer opportunities than other employees. Inaccessible transportation might obstruct occupational advancement and, as such, one can differentiate between transportation as a barrier towards employment and a barrier towards a career. If accessible transportation is considered incompatible with a professional career, consequential damages will inevitably fall on the occupational lives of people with disabilities. Thus, transportation might be a prerequisite for both equal employment and equal career opportunities.

Policy makers play a vital role in promoting the equal participation of people with disabilities in the labour market. They are faced with a large variety of challenges, ranging from educational attainment and employer prejudice to inaccessible transport. In hard-pressed economic times, accessible transportation may not be prioritised in competition with other labour market measures. Thus, recommendations to policy makers based on the findings of this study are simple and manageable in nature.

Improved parking conditions represent a simple and effective measure for increasing transport accessibility. A greater amount of large, roofed, accommodated parking spaces is highly stressed by the informants. Further, independent mobility could easily be improved by providing more information about the accessibility levels of public transport, hotels, restaurants and other localities which cause insecurity and worry. Making information about public transport schemes available is also crucial for securing access to financial and practical support. Additionally, Norwegian policy makers should consider adapting identical criteria for public support entitlements and, as such, securing equal access to transportation within a national perspective.

Finally, promoting accessible transportation and equal participation in important societal arenas requires continued investigation of the actual barriers that people

with disabilities face. Assessments of the transportation system and systematic analyses of the transport needs of people with disabilities are foundational premises for advancement. Thus, one can only hope that policy makers and decision makers eventually have the desire and opportunity to prioritise equal access to transportation.

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