Faculty of Behavioural and Movement Sciences

Vacancy PhD candidate with an occupational disability: projects

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##

## Disadvantages in the Workplace: A Person-Centered Study of Work Craving and Engagement in Individuals with Disabilities

Department of Experimental and Applied Psychology

**Introduction:** Due to recent worldwide changes caused by migration, cultural changes, and technological advancements, diversity and inclusion in the workplace have become important challenges for work and organizational psychology (Eichhorst, 2020). Although team diversity (mainly in terms of age and functions) has been found to be associated with positive outcomes (Bell et al., 2011), employees from underrepresented groups, such as people with disabilities, have been discriminated against at each career stage, for instance, during personnel recruitment and selection (Lippens et al., 2023), resulting in higher levels of stress-related physiological responses (Lawrance et al., 2022).

 The inclusion of individuals with disabilities in the workforce is a significant concern for public health and social welfare policies (Barr et al., 2020). The issue becomes more pronounced if one realizes, based on a meta-analysis by Lippens et al. (2023), that discrimination against people with physical disabilities has been understudied. The lack of adequate evidence for understanding the employability of individuals with disabilities pertains despite of the attempts to study this problem thoroughly (Bonaccio et al., 2020).

 Due to discrimination and employability concerns, individuals with disabilities may experience status anxiety as they compare themselves with others who are in better socio-economic positions. Such an upward comparison may trigger feeling inferior and may lead to a focus on the unprivileged group's social status. Therefore, individuals with a disability may consistently experience worry and anxiety around their relative status within a social hierarchy (cf. Buttrick et al., 2017); this, in turn, may lead to work-related concerns, overcommitment, and overworking, as disadvantaged individuals can attain meaningful resources and rectify their social status through hard work (Wojdylo et al., 2013).

**Research goals:** The proposed research will investigate the connections between work disadvantages (i.e., disabilities) and accompanying factors (e.g., discomfort, pain, anxiety) with work-related cognitions (e.g., work obsession), feelings and emotions (e.g., dissatisfaction, status concerns, shame, and work engagement), and behaviors (e.g., work compulsion, extra work hours). Moreover, we want to find, describe, and – if possible – modify situations (cues and affordances, cf. De Vries et al., 2016) critical in activating personality traits that can help predict work-related cognitions, emotions, and behaviors of individuals with disabilities. We predict that disabilities can be a source of within-person (person-centered) and situational triggers of personality traits that are linked to work-related concerns. We want to test whether person-centered micro-interventions can reduce the concerns and increase (positive) work engagement.

**Motivation:** Appointing a PhD candidate with a disability is critical for this project and will benefit everyone involved. (1) The planned research, at each stage, requires the inclusion of multiple stakeholders that understand the situation of people with disabilities in the workplace. (2) Our PhD candidate will have very good insight into the needs and capacities of employees with disabilities. (3) The call allows us to conduct studies that can last longer than a standard 4-year PhD trajectory; we plan to conduct longitudinal studies in vulnerable groups so that data collection can take even a few years. (4) We assume that a person with a disability would be the best person to collect data in vulnerable groups as s/he can gain trust and empathy. (5) The intrinsic motivation of candidates often drives successful PhD projects; we believe that our project offers a great fit for everyone interested in studying employees with disabilities, and having a disability may contribute to intrinsic motivation. (6) As we plan micro-interventions, we believe a candidate with a disability would be aware of the dos and don’ts critical for implementation. (7) We expect that during the dissemination of the project’s results, a person with a disability would make the message stronger and more convincing and, thus, increase the societal impact of the project.

**Feasibility of the project:** (1) The project is built upon a PhD project which started in 2023, and we have already set the theoretical and methodological foundations to support the proposed project. (2) We want to rely on a person-centered methodology; this implies that our focus is on within-person dynamics that are critical for understanding the potential consequences of disabilities in the workplace. (3) Our group has sufficient know-how and resources (e.g., software and analytical skills) to conduct person-centered studies. (4) The offered timeline is sufficient to finalize planned studies and conclude the project with a dissertation. (5) We do not expect the workload to be high, as planned studies will utilize a specific methodology; we also plan to involve master’s students in data collection, which will help balance the workload. (6) As indicated in the introduction, the situation of employees with disabilities is understudied, so scientific journals might be very interested in publishing person-centered studies, which decreases the risks in the project. (7) We want to pair our future candidate with the current candidate to increase social support and knowledge exchange, and as such, this should reduce the risk of the project.

At the time of application, candidates must hold a university (research) masters’ degree master’s in psychology or related field (communication science, education science, and the like).

**Supervisory team:** (1) Jacek Buczny is an Assistant Professor at the Vrije Universiteit Amsterdam. His main research interests: self-regulation, workaholism, and mental health. (2) Reinout E. de Vries is a Full Professor at the Vrije Universiteit Amsterdam. His main research interests: personality, communication styles, and leadership.

**Supervision mode:** We expect to conduct weekly meetings. We will share all relevant materials via open-source, user-friendly platforms. Our candidate will be encouraged to work in a team of PhD candidates with similar interests (personality, work, and health).

**Supervisor for PhD candidates with an occupational disability**: Evelien Wolf

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##

## Discovering the Bright Side of Sacrifices

**Supervisors: Francesca Righetti (VU Amsterdam), and Emily Impett (University of Toronto)**

**Supervisor for PhD candidates with an occupational disability: Evelien Wolf**

**Department of Experimental and Applied Psychology**

**Research Proposal**

Romantic relationships have a tremendous impact on people’s physical and mental health,

work productivity, and child development (e.g., Amato, 2000; Forthofer et al., 1996; Holt-

Lunstad et al., 2008). However, couples experience declines in satisfaction over time, and

around 30-50% of marriages in most Western countries end in divorce. One reason why

relationships are difficult to maintain is because all couples will encounter challenging

relationship interactions, which are difficult to navigate. A significant relationship challenge

occurs when partners have difference preferences and one of the partners needs to sacrifice

their own preference/goal because of the other. For example, Julia would like to spend

Christmas with their parents while Ruben would prefer to go the mountains with friends. If

they want to be together one of them needs to sacrifice their own preference. Sacrifices

(including minor sacrifices) occurs frequently—about twice a week on average —and can be

a significant source of stress (Visserman et al., 2018). In fact, previous research has found

that sacrificing one’s own needs for the partner or the relationship is negatively associated

with personal well-being and can also be detrimental for the relationship in the long-run (e.g.,

Righetti, Sakaluk, et al., 2020; Righetti, Schneider, et al., 2020). This is especially true to the

extent that the sacrifice is perceived as costly (Righetti, Sakaluk, et al., 2020). Given that

sacrifices are often necessary to maintain relationships, identifying the conditions under

which sacrifices *do not* harm people’s personal and relationship well-being is essential to

understand how couples can navigate challenging interpersonal situations and reduce the

costs of sacrifices.

Specifically, the PhD project could focus on:

1) Does how people communicate about their sacrifices influence the personal and

relationship well-being?

2) Does turn-taking in sacrifice benefit couples? Do couples in which each person

sacrifices equally benefit more from sacrifice than couples in which one partner

sacrifices more than the other?

3) For which individuals/couples (in terms of individual differences and relationship

processes) are sacrifices linked to beneficial outcomes for their personal and

relationship well-being?

**Suitability, feasibility, and supervision**

This is an ideal project for a PhD student with a disability because data have already been

collected as part of my previous grant-funded projects (VENI, ORA, & VIDI). These earlier

projects have produced three large, rich, longitudinal datasets on romantic couples (data from

both partners involved in a relationship) with variables necessary to test those proposed ideas.

Thus, the PhD student wouldn’t need to collect new data (though they naturally could if they

wanted) and they will be flexible to conceptualize the ideas and analyze the data without

specific time constraints. Working part-time will be absolutely feasible because there are no

specific deadlines to meet as all the practicalities of data collection have been already taken

care of. In terms of supervision, now is an optimal time for me to take on a new PhD student

as one of my current PhD students will finish her dissertation in December 2023 and the other

one will begin her final year in fall 2024 (and she will be able to provide some practical

support during the first year of the new PhD student). As such, I will have a considerable

amount of time available to devote to mentoring. I have been a dedicated supervisor to my

previous PhD students (each of whom has graduated *cum laude*, and each of whom has a

thriving academic career) and I would have sufficient time and resources to provide the type

of care and supervision that a student with special needs might require. Furthermore, a second

supervisor will be appointed, Emily Impett (https://www.emilyimpett.com/), who is a leading

expert on sacrifice and romantic relationships and an established collaborator of mine. Emily

will be an asset for the PhD project both for her expertise and because she also has multiple

datasets of romantic couples that contain the variables relevant to test the proposed ideas. As

such, the PhD student will have access to multiple datasets from two different labs to

replicate their findings. Finally, to ensure a successful PhD completion, we’ll compile a

training and development plan for the student at the beginning of the PhD that will take care

of the special needs of the students and we will monitor carefully the progress of such plan

while being ready to revise it if necessary.

At the time of application, candidates must hold a university (research) masters’ degree in Psychology and good knowledge of methods and statistics.

## Growing Up Together in Society

**Promotor: Nienke van Atteveldt**

**Co-promotor: Mariët van Buuren**

**Supervisor for PhD candidates with an occupational disability: Evelien Wolf**

**Department of Clinical, Neuro- and Developmental Psychology**

**Project description**

The proposed PhD project will be embedded in the ongoing project ‘Growing Up Together in Society” GUTS (2023-2032). GUTS is a collaboration among seven Dutch universities funded by the Gravitation program to study developmental trajectories of young people from diverse social economic backgrounds. This PhD project is part of the Amsterdam team. The supervisory team consists of Nienke van Atteveldt and Mariët van Buuren.

***Introduction***

Not all children and adolescents have access to educational resources or parental support with schoolwork and there is vast variation in their socio-economic outcomes (e.g. stress about financial consequences or job opportunities). A key challenge is to understand how young people with diverse opportunities in education, peer networks and backgrounds, achieve their optimal potential, experience well-being and are provided with tools to participate in and contribute to society. An important process that may influence how individuals develop their potential and functioning in society is self-regulation, the process that involves balancing immediate with delayed gratification on the one hand, and balancing self-oriented with other-oriented goals on the other hand. During adolescence, self-regulation and societal contributions develop greatly, as this is the period in time that children develop into adults, establishing their own social network, responsibilities and identities.

The aim of the GUTS project is to identify how social and societal opportunities affect individual, academic, and social outcomes in adolescence, with a specific focus on diversity in socio-economic status. The project will investigate how self-regulation and its development affect these processes, by using both structural and functional neuroimaging along with self-report measures and ecological momentary sampling methods.

***Methods***

In the GUTS project, 800 adolescents between the ages of 10 and 20 years will be included. Functional Magnetic Resonance Imaging (fMRI) in 600 adolescents will be used to measure neural activation during a task eliciting self-regulation (a delayed gratification task), a task requiring self-evaluation and social comparison and a task measuring reward sensitivity. Also, brain activity will be measuring during resting-state to gain insights into the intrinsic functional architecture of the brain, and structural MRI will be used to measure anatomical structures in the brain. Self-report questionnaires will be administered measuring background characteristics, self-regulation, mental health, social media use, individual outcomes, educational achievement and social outcomes. When interested, participants will also take part in an Experience Sampling Method (ESM)-study part lasting 14 days. This study will take the form of a daily diary study on experienced emotions and academic pressure (participants aged 10-14) or on experienced emotions, social interactions and risk taking behavior (participants aged 15-20).

**Fit of the project for a PhD student with a disability**

The PhD student will be embedded in this ongoing large scale project (GUTS project; www.gutsproject.com/). Currently, a team of 6 PhD students (4 at the VU, 2 at the UvA) and one postdoctoral researcher (at the VU) is jointly working on the project in Amsterdam, and they will all participate in data collection. The currently proposed PhD project is feasible as the infrastructure is already in place and the preparations of the data collection are already ongoing. Importantly, because the project is a joint effort of various PhD students, a postdoc and supervisors, the research activities of the PhD candidate can be adjusted to their needs. For example, in case of physical or mental disabilities that hinder the candidate to participate in data collection, the PhD candidate can join in recruiting the participants or in data management responsibilities that are equally important to the project but may be less burdensome to the PhD candidate. The vast amount of data that will be collected during the project in combination with access to large existing data sets allow the PhD candidate to form their own research proposal within the broad scope of the GUTS project. Finally, we think that the aims and topic of the GUTS project may also be of interest to potential PhD candidates with a disability, as they may have high affinity with research to improve equal chances to reach one’s full potential and societal participation. Their perspective will be a valuable addition to the project and we would be really happy to be able to include a PhD student with a disability in our GUTS-VU-team.

At the time of application, candidates must hold a university (research) masters’ degree in psychology, cognitive neuroscience or a related field.

**Supervision**

The PhD candidate will be supervised by prof. Nienke van Atteveldt (promotor) and dr. Mariët van Buuren (co-promotor). Nienke van Atteveldt has ample experience with supervising PhD students and Mariët van Buuren is currently supervisor of two PhD students and has supervised three completed PhD theses. Both Nienke van Atteveldt and Mariët van Buuren have experience with successfully supervising neuro-divergent PhD students as well as PhD students with mental health disorders. More personally, the supervisors have experienced that coaching a PhD candidate with special needs, for whom an academic career might not be straightforward, is a fulfilling journey with lots of learning opportunities. Weekly or biweekly meetings will be scheduled with both supervisors, and Mariët van Buuren will have daily contact with the PhD student as daily supervisor, adjusted to the phase of the project and the needs of the PhD student. Based on our previous experience with the supervision of PhD students with special needs, we very much welcome the additional support by Evelien Wolf. This may be especially useful for the translation of the strengths and weaknesses of the PhD student into specific job adaptations (including supervision style and structure).

## Innovatief observeren van de ouder-kind interactie

Begeleiders: Agnes Willemen (UHD), Anne Tharner (UD) en Lianne Bakkum (UD)

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

Adviseurs: Karen van Meeteren, Franca Leeuwis.

Afdeling Pedagogische en Onderwijswetenschappen. Met ondersteuning van de staf Sectie Ontwikkelingspedagogiek

**Korte beschrijving van het project**

De interacties die kinderen hebben met hun sociale omgeving, zoals hun vaders en moeders, dragen bij aan hun psychisch welbevinden (Steenhoff et al., 2021), zelfregulatie (Karreman et al, 2006) en affectregulatie (Willemen et al., 2009). In wetenschappelijk onderzoek worden observaties van deze ouder-kind interacties beschouwd als de gouden standaard (bijv. Hawes & Dadds, 2006). Observaties geven onderzoekers de mogelijkheid om de patronen van interacties die ze observeren te vertalen naar specifiek gedefinieerd gedrag, waarbij onderzocht kan worden of deze codes consistent en betrouwbaar zijn. Dit is belangrijk omdat de informatie die ouders en individuen over zichzelf verstrekken in vragenlijsten gebaseerd is op persoonlijke definities, die kunnen verschillen per persoon en beïnvloed kunnen worden door stemming, of verwachtingen en ook een genetische bias kennen (Runze & van IJzendoorn, 2023) .

Binnen het onderzoek van onze sectie ontwikkelingspedagogiek (POW) maken we in meerdere onderzoeksprojecten gebruik van observaties van de ouder-kind interactie. Voorbeelden zijn het onderzoeksproject Generaties2, een langlopend onderzoek dat gezinnen volgt vanaf de eerste zwangerschap en nu al bijna 15 jaar loopt. Observaties leveren waardevolle inzichten op die helpen om te begrijpen hoe ouders en kinderen elkaar wederzijds beïnvloeden. Deze inzichten kunnen bijdragen aan een verbeterde, op het systeem gerichte zorg voor ouders en kinderen (Cyr & Alink, 2017)).

Observatie onderzoek is niet eenvoudig: huisbezoeken en video-opnames zijn belastend voor gezinnen, en niet altijd betrouwbaar wanneer er sprake is van bijvoorbeeld autisme of een visuele beperking (Grumi et al., 2021). Hierdoor wordt observatie onderzoek in deze gezinnen maar beperkt uitgevoerd, en als het er is, vaak met kleine samples (Pinquart, 2013). Daarnaast is het coderen van beeldmateriaal tijdsintensief. Bovendien is het coderen van video materiaal niet mogelijk voor onderzoekers met bijvoorbeeld een auditieve of zintuigelijke beperking. Hierdoor wordt uiteindelijk toch vaak gekozen voor vragenlijst onderzoek, terwijl dat niet alle relevante aspecten van de ouder-kind interactie in kaart brengt.

**Onderzoeksvragen**

Een relevante vraag is daarom welke andere manieren er zijn om de ouder-kind interactie betrouwbaar in kaart te brengen in gezinnen waarin sprake is van neurodivergentie. Specifiek kan gekeken worden in hoeverre digitale tools en automatisering de afname en codering van videobeelden kunnen ondersteunen, zodat de toepassing minder intrusief en tijdsintensief wordt. Recente technologische doorbraken bieden hier meer mogelijkheden toe (zie bijv. Van Heerden et al., 2020; Wass et al., 2022). Deze vragen zijn niet alleen relevant voor wetenschappelijk onderzoek, maar juist ook voor gebruik van deze instrumenten in de klinische praktijk. De precieze onderzoeksvragen van dit project zijn open, en kunnen door de promovendus zelf worden ingevuld. Het doel van dit project is om de inzet van observatiemethodes toegankelijk te maken voor participanten en onderzoekers met een functiebeperking.

Hieronder schetsen we twee mogelijkheden, maar er is zeker ook ruimte voor een eigen invulling.

**Optie 1. Alternatieve (observatie)methoden**

Het participantenregister In Kaart verzamelt informatie van mensen (0-99 jaar) met neurodivergentie en/of een beperking. Deelnemers hebben een (vermoeden van) ADHD, autisme, DCD, dyslexie, een verstandelijke en/of visuele beperking. In Kaart wil bijdragen aan oplossingen en ondersteuning in de zorg, op school, werk of in het gezin. Deelnemers vullen nu alleen vragenlijsten in via de computer, maar het toevoegen van observaties van de ouder-kind interactie via alternatieve methoden, die voor deze gezinnen minder belastend zijn, is zeer wenselijk voor verschillende projecten die gebruik maken van de data uit In Kaart. Uit eerder onderzoek blijkt dat die andere manieren mogelijkheden bieden voor verdere toepassing (Aarsand, 2012; Given et al., 2016; Supski & Maher, 2023). Video-opnames kunnen bijvoorbeeld ook door ouders of kinderen zelf gemaakt worden met hun smartphone of met sensoren die automatisch data tracken (zie ook van Heerden et al., 2020).

**Optie 2. Alternatieve methoden voor het coderen van observatiedata**

Observatiedata worden doorgaans door onderzoekers zelf gecodeerd. Een interessante vraag is of interactiedata ook meer automatisch verwerkt kunnen worden. Binnen onze eigen sectie zetten we momenteel de eerste stappen in samenwerking met het Behavioural AI lab van de University of Glasgow, waarin we gebruik maken van onze eigen set van reeds gecodeerde observatie data (400 gecodeerde Strange Situation Procedures). Maar ook andere groepen houden zich hiermee bezig (Jebeli et al., 2023; Nikbakhtbideh, 2023). Artificiële intelligentie kan micro-expressies van gedragingen observeren (Alvari et al., 2021), die door mensen niet te onderscheiden zijn, maar wel inzicht kunnen bieden in de kwaliteit van interacties. Echter, of deze methoden betrouwbaar en valide zijn, is nog niet bekend.

Beide projecten worden onderverdeeld in 3 fases: literatuuronderzoek (systematic review), ontwikkelonderzoek (participatief, mixed-methods) en validatie onderzoek (experimenteel of comparative). De resultaten van dit onderzoek hebben meerwaarde voor andere onderzoekers die met behulp van deze inzichten nieuwe variabelen kunnen toevoegen aan hun project, en daarmee meer inzicht krijgen in de interactie tussen ouders en kinderen binnen het gezin als systeem. Een concreet voorbeeld is de mogelijkheid om vergelijkend onderzoek te doen naar de interactie tussen ouders met en zonder ADHD en autisme en hun kinderen door data uit Generaties2 en In Kaart te vergelijken.

**Waarom is dit project geschikt voor een promovendus met een arbeidsbeperking?**

Dit project is opgezet vanuit het idee dat een divers team tot beter onderzoek leidt.. Omdat onderzoekers zich soms aangetrokken voelen tot projecten die dicht bij henzelf liggen, hebben we de link gelegd met het thema neurodivergentie, maar het is ook mogelijk om dat juist niet te doen en het breder in te steken. De kandidaat sluit aan bij lopend onderzoek, waarbij de werkzaamheden kunnen worden afgestemd op de expertise, wensen en mogelijkheden van de kandidaat.

Het project is ingebed in een sectie waar onderzoek wordt gedaan naar en onderwijs wordt gegeven over mensen met een beperking en medewerkers en studenten een positieve attitude hebben en graag met en van mensen met een beperking willen leren. Daarnaast zijn er ook veel andere mogelijkheden om iets te brengen en iets te leren, zoals binnen de onderzoeksschool LEARN (PhD network), het onderwijs aan studenten Pedagogische Wetenschappen, en de Academische Werkplaatsen Viveon en Sociale relaties en gehechtheid. We faciliteren voorzieningen die nodig zijn (bv. software, mogelijkheid om thuis te werken) en een eventuele hulphond is welkom.

**De beoogde wijze van begeleiding en haalbaarheid**

Onze focus in de begeleiding is: 1) open staan voor de individuele behoeften van de medewerker en taken aanpassen als dat nodig is 2) realistisch en duidelijk zijn 3) goed contact opbouwen en onderhouden met de medewerker 4) uitgaan van de talenten en ondersteunen van behoeften. Ons team bestaat uit mensen die goede communicatievaardigheden hebben, gewend zijn om samen te werken met mensen met een beperking als ervaringsdeskundige in onderzoek, en ervaring hebben met het begeleiden van promovendi.

Duur: 4 jaar fulltime, of maximaal 5 jaar en 8 maanden bij minimaal 0.7 fte.

Je wordt in eerste instantie aangenomen voor een jaar. Bij een positieve beoordeling en wederzijdse tevredenheid wordt een contract aangegaan voor de volledige periode. Je wordt aangesteld conform CAO eisen.

**Functie-eisen**

* Je hebt een afgeronde masterstudie in de sociale of gedragswetenschappen, of in de informatie- of computerwetenschappen of kunstmatige intelligentie, bij voorkeur een research master
* Je hebt ervaring of affiniteit met het onderzoeksthema ouder-kind interacties of sociale relaties
* Je kunt je goed uitdrukken in het Engels, zowel mondeling als schriftelijk
* Je kunt zelfstandig werken, neemt initiatief, bent resultaatgericht, hebt doorzettingsvermogen en werkt planmatig

Neem voor meer informatie contact op met Agnes Willemen: A.M.Willemen@VU.nl

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##

## Interactions between navigation and attention in normal and impaired vision

Department of Experimental and Applied psychology and Department of Human Movement Sciences (learning & performance)

Spatial navigation is our ability to ascertain our current position relative to our surroundings, and to find our way to a relevant target location. Navigation tasks have been mainly used to study the neurological basis of *memory*, most specifically hippocampal functioning, which has proven very responsive to navigation tasks. A typical behavioral outcome measure is *path integration*, which reflects the extent to which navigators can effectively and efficiently extrapolate from earlier navigation experiences.

Attention is our ability to select *sensory* information that is relevant to our goals, and to ignore information that is not. For example, when searching for the tomatoes in the fruit and vegetables section of the supermarket, we select red stuff for further inspection, while we ignore green and yellow stuff. This flexibly changes when our perceptual goals change, for example when we next wish to find the bananas. Such *visual search* tasks have been the bread and butter of attention research, and researchers have looked at eye movement behavior as well as overall task performance to determine what visual properties become relevant to observers and when, and how efficient these selection processes are.

Both navigation and attention are central to effective and efficient human functioning, but little is known about how the two interact. So far both have been studied largely separately, in different literatures. This is primarily because navigational and attentional behavior are regarded as sprouting from different cognitive functions (memory versus sensory processes). But until recently there have also been practical obstacles. Navigation, by its very nature, is about *movement*. Methods typically involve putting cognitive agents in 3D mazes (rats) or in 3D virtual reality environments (VR; humans). However, in attention research, tasks typically involve simple 2D arrays placed on a screen in front of the observer, and movement is only seen as a nuisance factor. The only movement that attention researchers care about is eye movements – i.e. where people look. People are even literally being fixed in a chin rest for example.

Yet there is reason to believe that navigational and attentional behavior will intimately interact. At a process level, both are about *orienting* and, in natural settings, *would make use of the same motion machinery*. Navigation involves turning one’s body, head, and eyes in different directions, and while there is good reason to believe that observers would attend to visual information supporting the navigation process, such as salient landmarks, little is known about this. Likewise, visual attention is about turning one’s eyes, head, and body (if not fixed) to relevant visual information . Yet in daily situations, that information is not necessarily already in view, and hence one would first need to navigate to the relevant spot before one can start searching for the object needed. The aim of the proposed project is therefore to study the commonalities and interactions between navigation and attention, and specifically how these drive motor behavior (i.e. head, eyes, and torso movements).

Our research goal requires a highly dynamic, complex, and realistic environment that taps into both navigational and attentional processes, and allows observers to move more or less freely. At the same time we also need experimental control over navigational and attentional goals, as well as visual aspects such as lighting, saliency, and clutter. We have recently created such an environment, namely a virtual supermarket (based on earlier work by Nynke van der Laan, Tilburg). Participants will be required to navigate this virtual supermarket in search for certain target products (e.g. find the tomatoes). Both the products and supermarket lay-out can be manipulated, as can overall visual conditions. This environment provides a unique opportunity to study both navigational and attentional behavior in dynamic, real-life situations. Tracking and analyzing eye, head, and torso movements in this environment allows us to generate answers to questions like:

* How are eye, head, and torso movements interact in attention-navigation interactions?
* Can we see navigational processes reflected in measures of attention? For example, will participants orient the eyes in the direction of the navigational goal, even if that goal is not in sight (i.e. a route needs to be followed). When and how will participants attend to landmarks that inform the route?
* How are navigational and attentional goals being chained in sequences of behavior? For example, finding the tomatoes first involves navigating to the fruit and vegetable section, and only then look for the tomatoes. Looking for the tomatoes too early would be maladaptive. How and when do people switch from navigation mode to search mode, and how will this affect orienting movements?
* What are optimal features of environments to maximise ease of navigation and search? And what can be done to make search harder?
* To what extent can peripheral vision serve these processes, so that we can move through, and attend to environments while minimizing body movements?
* How does visual impairment affect the interaction between navigation and attention? We have recently started a project using the same environment in order to map out visual functioning in several impaired populations. In the proposed project we seek to systematically simulate such impairments in normally seeing populations and compare the data to those from affected populations, to assess if such simulations provide a representative model of reality.

There are ample topics and ideas available to tailor the project to the skills, interests, and abilities of the successful candidate.

**Suitability, feasibility, and supervision**

This multidisciplinary project will be led by Prof Chris Olivers (experimental and applied psychology) and Dr. David Mann (human movement science: learning & performance), and both will be promotors. David and Chris are currently collaborating on a related project involving visual impairment, and bring complementary expertise to the project, in respectively movement science and cognitive psychology. For both, supervision means combining structure and support where necessary, and freedom and challenge where possible. This means clear communication, commitment, and frequent availability. In addition, we currently have a postdoc working on a directly related project. She has both the technical and personal skills to help supervise the PhD student and kick start the project. She will be available for 1.5 years from starting date. Naturally, a training and development plan will be drawn up at the beginning together with the candidate.

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

Data collection will occur at the VU, in one of the VR labs. Combined the ETP and BW departments have two fully equipped VR labs. These labs are inherently spacious, and therefore suitable for e.g. wheelchairs. The project is flexible, and there is no specific deadline for the project to finish, and hence the project is suitable for a part-time position. Technical and methodological support is in place, and training in VR-specific methods can be provided. Nevertheless, the project will require a few things from the candidate:

* A sufficient level of mobility to be able to operate within the lab itself: Move between computer and research participant; carry and apply VR goggles.
* Technical and analytical skills: programming, advanced data processing (e.g. R, Matlab)
* A Research Master degree in cognitive or movement sciences, or closely related.

## In the mind’s eye

Department of Experimental and Applied Psychology

**Brief project description**

Spatial attention, the process of prioritizing information at a particular location in space, is of crucial importance for our proper functioning in many everyday life situations, from navigating city streets to spotting a friend in a busy shopping mall. Its importance becomes evident from its central role in eye movements: spatial attention typically precedes an eye movement and determines as such what we will look at and which part of the visual environment will be brought into high-resolution foveal vision (van Heusden, Olivers, and Donk, 2023). Interestingly, spatial attention does not only serve as an anchor point for eye movements, it also allows us to perceive peripheral objects more clearly, even in the absence of any subsequent eye movement. Indeed, it is well established that covert spatial attention can enhance spatial resolution and contrast sensitivity at an attended relative to an unattended peripheral location (Carrasco & Barbot, 2019). Such performance benefits are typically related to enhanced processing of information in those brain regions that represent the attended peripheral location (Sprague & Serences, 2013). Strikingly, findings from various studies suggest that this may not be the complete story. These studies show that visual stimuli presented in peripheral parts of the visual field may result in activation in central (foveal) regions of retinotopic cortex (Fan, et al., 2016). To explain these challenging findings, it has been suggested that the foveal retinotopic cortex operates as a temporary high-resolution buffer for task-relevant peripheral information. According to this view the foveal processing of task-relevant peripheral information contributes to the enhancement of its representation by recruiting additional (foveal) processing capacity. This raises the intriguing possibility, not included in any major theory of attention, that spatial attention may involve a similar mechanism, implying that its perceptual benefits may be derived from the recruitment of additional (foveal) processing capacity.

In the present project we aim to investigate the role of foveal processing in spatial attention by combining clever psychophysical and behavioral techniques with eye-tracking. To this end, we will examine how the perception of a central stimulus is affected by a peripheral stimulus and vice versa, relying on well-established spatial effects such as the repulsion and attraction effects observed in the tilt illusion. We will manipulate spatial attention by exogenous (peripheral) or endogenous (central) cues, while controlling for eye movements. The present project consists of three subprojects: Subproject (1) explores the boundary conditions under which the processing of peripheral and central stimuli relies on the same (foveal) processing capacity by examining how the perception of a central stimulus (e.g., a tilted Gabor grating) is affected by a peripheral stimulus (e.g., another Gabor grating) and vice versa; Subproject (2) aims to outline how the allocation of attention to a peripheral stimulus affects performance with regard to a central stimulus; and Subproject (3) examines how exogenous and endogenous attention to a peripheral stimulus differentially affect central perception.

Results promise to revise major current theories of spatial attention that do not include foveal mechanisms by providing a more complete picture of how spatial attentional enhancements are realized in the brain. Our findings may also have clinical implications for patients with neurological or visual disorders, such as visual neglect and macular degeneration.

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**Training and supervision plan**

1st promotor & supervisor: Dr. Mieke Donk; 2nd promotor & supervisor: Prof. Dr. Heleen Slagter

Both supervisors are fully committed to advising and guiding the candidate, which implies amongst others that in the supervision the restrictions as imposed by the disability will be fully taken into account. The 1st supervisor will serve as the primary project leader (PI) implying that she will be the first access point, and will have regular meetings (at least once a week) with the candidate. The 2nd supervisor is also actively involved in the project and will meet once every two weeks. The standard university regulations for PhD degrees apply.

Supervisor for PhD candidates with an occupational disability: Evelien Wolf.

**Suitability of the project for a PhD with an occupational disability**

The present project can be characterized by three key features that makes it particularly well-suited for individuals with occupational disabilities.

(1) The project is self-paced, offering significant flexibility. This adaptability allows the candidate to remain focused on physical or mental needs while being involved in the project. Additionally, the candidate can choose a part-time arrangement or schedule work hours as preferred so as to ensure that the project can be accomplished without being a burden in conjunction with the disability.

(2) The project is mostly not tied to a specific location. The project work primarily includes the design and programming of the experiments, data analyses, and writing. These tasks, which can actually be performed from behind any PC, guarantees that the project can be completed without posing an additional challenge in association with the disability.

(3) The project is integrated into a robust research-oriented section (CP) specializing in visual attention neuroscience, and eye tracking. This affiliation provides the candidate access to a substantial team of experts who can offer both substantive and practical support. The CP group has designated a Research Assistant who can assist with empirical work, such as running experiments and recruiting participants.

Together, these key features render the current project to be optimally suited for people with disabilities across a wide range of physical conditions and mental disorders.

At the time of application, candidates must hold a university (research) masters’ degree in cognitive psychology, cognitive neuroscience, AI, or a related discipline.

**Motivation of applicants**

As scientists and teachers, we frequently highlight the impact of variations in our genes, experiences, and environments, emphasizing how these factors interact to shape our individual outcomes and influence our prospects in society. The combination of these factors gives rise to inequalities, which can magnify in the absence of regulations. We find this unfair because the influencing factors are inherently mostly beyond individual control. Breaking down barriers and fostering equal opportunities for all is a significant personal goal for both of us. Contributing to the inclusion of individuals with occupational disabilities aligns with this, and also enhances diverse perspectives. In recent years, progress has been made towards equality across boundaries of gender, race and sexual orientation, towards which the applicants have also contributed, e.g., Slagter as Chair of the Diversity and Inclusion committee of the Dutch Society for Brain and Cognition and as Chair of Femme, a network of female researchers within UvA-Psychology. Yet, disability is one aspect of Diversity & Inclusion that is too often neglected, although it lies at the heart of human experience and as such, can critically contribute to diverse perspectives in our field. We would like to contribute to creating an environment where a place for scientists with a work disability does not require special funding schemes.

**Feasibility**

Both supervisors have longstanding track records in investigating visual attention. Both will bring their unique expertise to the project to make it feasible. Importantly, both supervisors already have ample experience working in research teams similar to the one anticipated in the present proposal. Both Donk and Slagter are highly experienced PhD supervisors. Donk has successfully (co)supervised 6 PhD students (3 ongoing), and Slagter 6 PhD students (5 ongoing). These PhD students are now successfully employed outside of academia or continued in academia (e.g., as a postdoc at MIT; as Assistant Professor at the University of Birmingham, UK). Of note, two of the PhD students of whom Slagter was the primary supervisor fell ill during their PhD project and could not or only partially work for almost a year. Slagter closely supervised them during their re-integration and both successfully finished their PhD, one even subsequently obtaining a prestigious Rubicon postdoc grant.

## The Impostor Phenomenon among Individuals with an Occupational Disability

*Dr. Sanne Feenstra and Prof. dr. Reinout de Vries from the faculty of Behavioural and Movement Sciences, Department of Experimental and Applied Psychology, Section Organizational Psychology*

Despite attempts to increase diversity in the workforce, certain social groups, such as women and ethnic minorities, remain underrepresented, especially in higher positions in organizations (OECD, 2023). An important, yet understudied, group of individuals are those who are hindered in the labor market due to illness or a disability. In fact, in the Netherlands, only half of individuals with an occupational disability has a job (Van Echtelt et al., 2019). The Dutch government has therefore made an effort to create job positions for members of this vulnerable group in an attempt to increase their participation and success at work (Rijksoverheid, 2023). In this research project, we identify major psychological challenges that people with a disability may encounter at work and offer insights into how organizations can combat these challenges.

In particular, this research project will focus on the struggles of individuals with an occupational disability with the *impostor phenomenon*. This phenomenon refers to an experience whereby people feel that they have ended up in esteemed roles or positions, not because of their own merits, but because of some oversight or luck (Clance & Imes, 1978). Therefore, these individuals feel inadequate, and worry that they will be found out as intellectual frauds or impostors (Bravata et al., 2019). The impostor phenomenon is a common experience, especially among minorities (e.g., women and members of ethnic minorities) and has been linked to the unique challenges members of these groups face at work (e.g., Cokley et al., 2015; Feenstra et al., 2022; Peteet et al., 2015). To date, however, no research has examined this phenomenon among individuals with an occupational disability. Given the unique and profound challenges that this group encounters at work we expect that employees with an occupational disability suffer from the impostor phenomenon.

Moreover, we expect that these feelings of impostorism, in turn, hurt career advancement of employees with an occupational disability. Previous research has shown that the impostor phenomenon has many detrimental consequences, for instance, leading to anxiety, depression, and burnout (McGregor et al., 2008; Sonnak & Towell, 2001). Moreover, the impostor phenomenon can hinder diversity as people who feel like impostors are less likely to take on leadership roles, and more likely to drop-out once they reach prestigious positions (Chrousos & Mentis, 2020; Kets de Vries, 2005).

In this project, we aim to identify key organizational predictors of the impostor phenomenon, and in turn, develop organizational interventions to reduce impostor feelings among individuals with an occupational disability. For example, we will focus on the role of identity leadership in reducing impostor feelings. Identity leaders create and enhance a sense of “togetherness” with, and among, members of workgroups (Hogg, 2001; Steffens et al., 2014). We argue that by creating such a shared identity, employees with an occupational disability will experience a sense of belonging at work, despite their challenges, thereby likely mitigating their impostor feelings.

Overall, our aim is to identify the extent to which the impostor phenomenon occurs among employees with an occupational disability and how to reduce this experience. We will take on a mixed-method approach and adopt experimental, longitudinal-survey, and intervention studies. In doing so, this project will be part of a larger program attempting to contextualize the impostor phenomenon (see also Feenstra et al., 2020) and contribute to a workplace where minorities, including employees with an occupational disability, thrive, and feel like they rightly belong.

**Supervision of the project**

The project will be supervised by dr. Sanne Feenstra and prof. dr. Reinout de Vries. Sanne Feenstra is an assistant professor and her research focuses on power, leadership, the impostor phenomenon, and diversity and inclusion. She has substantial experience with conducting (field)experiments. Reinout de Vries is a full professor and his research focuses on personality at work. He has substantial experience with the development and implementation of numerous assessment tools and interventions. The supervision team has extensive experience in supervising PhD candidates. Overall, we are confident that with our combined expertise and experience, we can successfully supervise and complete this project.

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

At the time of application, candidates must hold a university (research) masters’ degree in psychology, business administration, personnel sciences, and/or social sciences with focus on organizations and/or methodological/statistical knowledge.

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PhD project proposal occupational disability (mensen met een arbeidsbeperking)

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## Participating in the HandbikeBattle: “It’s not the mountain we conquer, but ourselves”

Department of Human Movement Sciences

**Brief description of the project**

Wheelchair users are known to have the lowest levels of physical activity compared with other groups with a physical disability and the general population. This is a problem, because this might result in a higher risk of secondary complications, cardiovascular disease and lower levels of participation and quality of life. Handcycling is a good way to become more physically active for wheelchair users because it is physiologically more efficient and causes less shoulder load compared to handrim wheelchair propulsion. To encourage wheelchair users to become active, the HandbikeBattle was first organised in 2013. The HandbikeBattle is a yearly race in which wheelchair users, with e.g. a spinal cord injury or amputation, climb the Kaunertaler Gletscherstrasse (Austria) (21 km, 863 m elevation) in a handbike. The event was designed to promote handcycling among Dutch patients with a history of rehabilitation, and to create a goal to train for and to become physically and mentally fit. Guidance during the approximately 5-month training period is provided by therapists from 12 Dutch rehabilitation centers.

Since 2013 longitudinal data of physical tests and questionnaires have been systematically collected before, during, and after the training period and during the HandbikeBattle event. The aim of this multi-center prospective cohort study is to monitor all participants during the training period and to measure short-term and long-term effects on cardiorespiratory fitness, general health, mental health and quality of life. This study has led to several scientific publications and a PhD thesis on the physical and mental effects of participating in the HandbikeBattle training period, as well as to exposure in the press. The fact that this study has been running since 2013 and has a multi-center character has resulted in a unique and (for this population) large dataset (N=±400). Results of the study are being used to advise in testing protocols and feasible (rehabilitation) training programmes and are implemented in the rehabilitation field in the Netherlands and beyond, showing the societal impact of the HandbikeBattle study.

Within this PhD project many more research questions can be answered with the HandbikeBattle dataset. These research questions can focus on testing and training people with a disability. For example: Can the peak power output be predicted based on outcomes like the 6-min wheelchair push test, hand grip strength or transfer ability?; What is the association between different training load characteristics such as central and peripheral rating of perceived exertion and heart rate in this group?; How do the two ventilatory thresholds change due to handcycling training and what is their relationship with activities of daily living?; How do social support, motivation, pleasure and enjoyment influence the training period / change in fitness level? However, depending on the expertise and interest of the PhD candidate the topic of the PhD thesis can also be directed more towards the effect of training on psychological outcomes, such as purpose in life, disability management, self-efficacy and mental health and how these factors might be mediators between the change in fitness and quality of life.

**Motivation why this project is suitable for a PhD student with a disability**

This project is suitable for a PhD student with a disability since a large dataset is available to answer multiple research questions. The PhD candidate can, therefore, analyze the data and write the papers in his/her own pace. Since the HandbikeBattle is an ongoing event and will be organized the next years, the PhD candidate can still interact with participants and rehabilitation professionals who are involved in this event (testing, training, the event itself) without having to coordinate and perform all measurements at specific times. Bachelor or master students can help with new (cross-sectional) data collection for the project if necessary. Since the HandbikeBattle study has collected data from 2013 onwards (to 2025), a large set of physiological and psychological data are available to match the expertise and interest of the PhD candidate. Persons with a MSc in Human Movement Sciences or a related field, such as Health Sciences, Psychology or Medicine can apply for this PhD position.

**Intended mode of supervision**

Supervision can take place online or physically at the VU or rehabilitation center Reade, where the main supervisor works. When extra measurements are needed, bachelor or master students can perform these measurements within their research project. These students will be supervised by the main supervisor together with the PhD student. The supervisors will have at least a 1-hour weekly meeting with the PhD student for the total duration of the project. Form, frequency and duration of the meetings will be determined in close consultation with the PhD student and Evelien Wolf, who is the specially appointed supervisor of PhD students with an occupational disability. Intended supervisors:

Dr. Sonja de Groot will be the daily supervisor during the PhD project. Dr. De Groot is associate professor at the department of Human Movement Sciences, Faculty of Behavioural and Movement Sciences, Vrije Universiteit and senior researcher at rehabilitation center Reade. She was the PI on the HandbikeBattle PhD project and the HandbikeBattle Fit2Fit post-doc project (financed by the Department of Defense (DoD), USA).

Dr. Rachel Cowan is associate professor at the Department of Physical Medicine and Rehabilitation, University of Alabama at Birmingham, USA. She is, among others, PI of the larger DoD grant. Dr. Cowan has a disability (cervical spinal cord injury) and can, therefore, also provide unique guidance/mentorship from that perspective.

Dr. Ingrid Kouwijzer was PhD student on the HandbikeBattle project and is currently the post-doc on the HandbikeBattle Fit2Fit project. Dr. Kouwijzer has coordinated the multi-center HandbikeBattle study, has tested the HandbikeBattle participants from 2017 onwards and has developed the HandbikeBattle dataset.

All supervisors are experienced with working with people with a physical disability. Depending on the specific content of the project, i.e., exercise physiology or a combination with psychological factors, a co-supervisor from the department of Human Movement Sciences or Psychology will be added.

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

**Feasibility of the project**

Since a large dataset has already been collected, the PhD candidate can analyze the data and write the scientific publications on his/her own pace. When possible, the PhD candidate can be involved in testing and training of the HandbikeBattle participants in the next years to get in touch with the handcyclists and the rehabilitation professionals and with the questions that they have.

Dr. Ingrid Kouwijzer, post-doc on the HandbikeBattle Fit2Fit project, can help the PhD candidate to start up with his/her project regarding transferring knowledge about the tests, questionnaires and database. The PhD candidate can, when feasible, be present at some of the post-training tests in May/June 2024 and the pre- and post-training tests in 2025 that Dr. Kouwijzer will perform. To experience what the HandbikeBattle is all about, the PhD candidate could join the participants, rehabilitation professionals, researchers and organisation during the HandbikeBattle week in Austria and attend the HandbikeBattle 2024 and/or 2025 event during that week.

## Sensory consequences of altered muscle mechanical properties

Department of Human Movement Sciences

Project team: Dr. Huub Maas and Dr. Friedl De Groote (KU Leuven), and lab technician Wendy Noort

Proposal: We can walk with seemingly little thought, because our muscles provide feedback about the position of our legs to the brain. This reliance on sensory inputs is most obvious in the severely affected movements of persons that have fully lost feedback from muscle spindles and Golgi tendon organs [1], but even the loss of sensory feedback from one or two muscles can result in abnormal movement coordination [2]. *What if our muscle properties are changed due to musculoskeletal (e.g. Duchenne muscular dystrophy, osteoarthritis, haemophilic arthropathy), or neuromuscular diseases (e.g. stroke, cerebral palsy, spinal cord injury)?* *How does this affect sensory feedback?* Despite a century of research in movement science, these questions have not yet been answered. A few studies have reported effects of aging [3], unloading [4, 5] and immobilization [6, 7] on muscle spindle firing, but whether these effects were brought about by changes in the spindles themselves, the properties of muscle fibers, the connective tissue network, and/or the tendon was not assessed.

*Main goal: to elucidate the sensory consequences of altered muscle mechanical properties.*

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| **Figure 1.** Schematic drawing of the experimental setup. Tendons of various muscles are attached to servomotors (Δ). Within dorsal roots, action potentials will be recorded intra-axonally using sharp glass micropipettes. |

In this project, muscle spindle and tendon organ signalling as well as the mechanical and morphological muscle properties will be assessed using a rat model (Fig. 1). We will record firing of single muscle spindle and tendon organ afferents of different muscles. Simultaneously, 3D muscle deformations will be tracked and tendon forces will be measured [8, 9]. To obtain a comprehensive map of sensory responses, a large variety of changes in musculoskeletal mechanics will be studied. For this purpose, rat models with a joint contracture (i.e. reduced joint range of motion), with spasticity [10], and changes in the connectivity between muscles [11, 12] will be used. Whether the firing behavior of muscle receptors reflects the new musculoskeletal mechanics depends on adaptations within the sensory organs. Hence, changes in the structure of the sensory organs (e.g. the thickness of surrounding connective tissue; number sarcomeres in series) will also be assessed.

Knowledge utilization: The fundamental knowledge obtained in this project is a requisite to progress in the many areas of the life sciences in which the neuro-musculo-skeletal system plays a critical role, such as neuromuscular diseases involving impairments in motor control, as well as for the development of biomimetic neuroprosthetic systems and for brain-computer interfaces to restore movement. Via my collaborator and co-supervisor on this project Dr. Friedl De Groote, the knowledge on sensory feedback in joint contracture and spasticity will be directly applied in neuromechanical models aimed at the mechanistic understanding of joint hyper-resistance to muscle stretch [13], a common symptom in neurological disorders.

Accessibility: This project is very accessible for a person with a disability, because the amount and type of work can be tailored to the specific capabilities. This applies to the frequency of experiments, but also to the specific sub-tasks of each experiment. It is common practice in my group to train PhD students by our lab technicians such that they become independent. If for this person, specific tasks do not fit the individual physical abilities then these tasks can be performed by our lab technician who has ample experience with the proposed experimental procedures. We already have experience with wheelchair bound students. Besides the required tasks, the work environment (i.e. the O|2 building) is accessible for people with for example a physical disability. Nevertheless, a more careful inspection on accessibility revealed that there is certainly room for improvement, such as installing electric door openers.

Requirements of the PhD candidate: A completed MSc degree in the field of Human Movement Sciences, or related areas such as Neuroscience, Biomedical Sciences, Bioengineering.

Supervision: The PhD candidate will be supervised by promotors (Huub Maas and Friedl De Groote) and lab technician (Wendy Noort). This will involve weekly meetings, but that can vary adjusted to the actual needs. In addition, one visit a year to and from Friedl De Groote in Leuven (Belgium) is anticipated.

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

All necessary expertise and equipment for the proposed project is available. For part of the experiments, ethical approval by the Central Authority for Animal Experiments has been granted. A new proposal for ethical approval will be written quickly after receiving the confirmation for the grant.

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## Social Life Transitions Unpacked (SOLITUDE**)**

**Promotor: Lydia Krabbendam**

**Co-promotors: Els van der Ven, Mariët van Buuren**

**Supervisor for PhD candidates with an occupational disability: Evelien Wolf**

**Department of Clinical, Neuro- and Developmental Psychology**

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**Description of the project**

*Relevance*

Loneliness - defined as a distressing subjective experience caused by a discrepancy between someone's desired and perceived level of social connectedness - has a major impact on individual health and societal expenditure. In the Netherlands, the largest increase over the past decade has been among young adults with almost two thirds reporting feelings of loneliness. Certain subgroups of young adults may be particularly vulnerable to experience loneliness, for instance, individuals with a lower income, LGBTQI groups and those with a chronic physical or mental illness. Young adulthood is characterised by a period of important transitions, for example in terms of housing and financial security, social relationships, education, employment and regarding the development of a personal social identity. However, in what way these transitions are associated with feelings of loneliness is largely unknown.

***Aim***

**The overarching objectives of this project, SOLITUDE, are to (a) investigate the longitudinal relation between transitions in young adulthood and loneliness, and (b) to optimise existing loneliness interventions for young adults.**

*Methods*

In SOLITUDE, we will use existing data from three epidemiological cohorts that span different age groups across young adulthood. The iBerry (Investigating Behavioral and Emotional Risk in Rotterdam Youth) cohort recruited 1,022 participants in the Rotterdam area at age 13 and followed them up at ages 15, 17 and 21 (currently ongoing). Lifelines is a large cohort study with over 167,000 participants of all ages from the North of the Netherlands. The INVEST cohort represents 4,700 young adults between 20 and 30 years tracked in Finland. Within these cohorts, longitudinal data were collected on loneliness, social connectedness and social activities. There is also information on a wide range of factors related to school/work, living situation, lifestyle, and (mental) health, which will allow the study of causes and consequences of loneliness among young adults, and the role of life transitions in this developmental phase. A second part of the SOLITUDE project concerns the adaptation of three existing, distinctive mental health interventions (of UP!, @ease and Caring Universities) for young adults in order to create inclusive approaches suitable to address loneliness among a diverse group of young adults. This adaptation process will take place in co-creation with young adults and professionals, organized by the PhD candidate and their supervisors, and using the outcomes of the analyses on the existing cohort data sets. Adapted interventions will be evaluated in small-scale mixed-methods studies.

**Fit for a PhD candidate with a disability**

This project is an excellent fit for a PhD candidate with a disability for various reasons. First, SOLITUDE would benefit from a PhD candidate at the core of the project who understands the challenges with feeling socially connected in young adulthood. In SOLITUDE, we aim to include the perspectives of groups that are more likely to be confronted with social exclusion, such as individuals with a physical or mental disability, so we welcome a PhD who may bring this personal experience. Second, there is a considerable amount of flexibility in the execution of the project where certain activities may be adjusted based on the abilities, skills and qualities of the PhD candidate. For instance, the PhD project may contain a recruitment component or it may be primarily based on the analyses of existing data. There is also an option of adding a qualitative component or an experience sampling method study. Together, the supervision team and the PhD candidate will agree on the content of the project and decide on which elements to include based on the needs and abilities of the candidate. Third, SOLITUDE is imbedded in a consortium that includes various universities, organizations and societal partners, such as @ease and JongPIT, that aim to empower young adults with mental and physical disabilities. The PhD candidate has the opportunity to learn and find support from a wide range of people. The connections already made will help to get the study off the ground and to translate research findings to scientific and societal impact.

**Supervision**

The supervision team consists of Prof. Lydia Krabbendam (promotor), dr. Mariët van Buuren (co-promotor) and dr. Els van der Ven (co-promotor). Lydia Krabbendam has extensive experience supervising PhD candidates. Mariët van Buuren is currently supervisor of two PhD candidates and has supervised three completed PhD theses. Els van der Ven is currently supervising three PhD candidates and she is PhD candidate advisor within the department. All supervisors have experience working with and supervising individuals with mental and/or physical disabilities. We very much welcome the additional supervision by Evelien Wolf and look forward to learn from her expertise. As a supervision team, we are eager to learn and improve our sensitivity towards issues such as ableism and social exclusion, and we aim to facilitate a working environment in which a PhD candidate with a disability can thrive. Practically, Els van der Ven and Mariët van Buuren will be contact points for daily supervision and will arrange weekly meetings with the PhD candidate. We will hold monthly meetings with the entire supervision team. The nature of the supervision may vary depending of the phase of the PhD trajectory and we will tailor the frequency and content to the needs of the candidate.

**Feasibility**

The project includes existing datasets that are easily accessible through the SOLITUDE consortium partners. This project is part of a partnership between academic and societal partners that will facilitate access to different fields of expertise (e.g. sociology, epidemiology, psychology) and potential participants (through societal partners) adding to the feasibility of the project.

**Requirements of the PhD**

PhD candidates with any type of disability may be eligible for this position. The required time investment is between 0.7 and 1.0 FTE. There is an option for the PhD candidate to be involved in teaching.

At the time of application, candidates must hold a university (research) masters’ degree in psychology or a related field.

## Using Virtual Reality to study Cognition in Action and Sport

Freek van Ede1 & David Mann2

*1 Experiment and Applied Psychology, 2 Human Movement Sciences*

Brief description of the project

Cognitive functions such as “paying attention” and “keeping things in memory” are foundational to human behaviour. Yet, in the laboratory, these functions are often studied in static settings with little “behaviour” (i.e., in static participants passively sitting in front of static 2D displays). Virtual Reality (VR) – combined with body- and eye-tracking – enables us to break out from such conventional settings, and to bring the study of cognition “into action”. Furthermore, VR has the benefit of enabling the researcher to simulate and experimentally control realistic environments that may be challenging to access and control in real life.

At its core, we will capitalise on the promise of VR for situating and understanding foundational cognitive functions in the context of moving participants – bringing cognitive psychology to the domain of sports, and vice versa. This will uniquely bring together two active lines of VR research at our faculty: those of the labs of Freek van Ede (Cognitive Psychology) and David Mann (Human Movement Sciences). Freek has started to use VR combined with eye-tracking to study attention and memory in moving participants (e.g., Draschkow, Nobre, & van Ede, Nature Human Behaviour, 2022), while David has been using VR as a means to study interception and to assess players in e.g., tennis and baseball (e.g., Mann et al., Journal of Vision, 2019). Bringing together these lines of research has ample potential to become a “win-win” situation with new insights and applications in both domains. Moreover, the necessary equipment and expertise to support the project are already in place.

Marrying cognitive psychology with movement science will thus enable us to situate cognitive processes in more realistic settings (while retaining experimental control) and to further our understanding of foundational cognitive contributions to sport. More importantly, even, it holds promise to *open* new questions and new application in both domains. This is best illustrated with a concrete example. The aforementioned study by Draschkow et al. used VR to study how participants use space to remember visual information after moving around. Unlike in the typical laboratory tasks in psychology in which participants remain seated, movement of the participant uniquely brings about multiple spatial frames that may support memory (where things are relative to each other, or relative to one’s current position). Precisely this aspect led to new insight: that the mind does not remember visual information with regard to just one spatial frame, but with regard to multiple spatial frames at once (as read-out from fixational gaze patterns; a powerful approach developed by Freek and his team). This example highlights how new approaches – studying cognition in moving participants using VR and eye-tracking – open new questions, with ample potential for uncovering new insights into foundational questions at the core of both psychology and movement sciences. In our first collaboration, we are for example examining whether the visual attention of a football goalkeeper saving penalties in VR is altered when an analyst evokes memory of an opponent’s kicking tendencies.

Inspired by such work, the project aims to bring together cognitive psychology and movement/sport sciences by studying core cognitive processes in moving and sporting agents. This will translate cognitive psychology to more realistic scenarios with potential application in sport sciences, while at the same time utilising sport as a novel territory for uncovering the fundamental building blocks of a “cognition in action”.

Why the project is suitable and enabling for a PhD candidate with a disability

First, as alluded to above, VR empowers inclusivity because it enables us to simulate and experimentally control realistic environments that may be challenging and/or uncomfortable to access and control in real life. Second, the candidate would be joining two flourishing research teams that already host a diverse set of researchers from various backgrounds and therefore provide a stimulating and supportive environment. These laboratories each have regular lab meetings, journal clubs, and colloquia that will provide a stimulating experience. These meetings usually are in hybrid form, increasing inclusivity potential. We also use Slack as a medium of lab communication, with ample opportunity for group discussion and short lines of (remote) communication. Moreover, the existing links via one of the proposed supervisors (David) with the International Paralympic Committee, NOC\*NSF Para Sport staff, and organisations for people with impairment in the Netherlands (e.g., CASA, Visio, Bartimeus) ensures that the group is accustomed to working with people with a broad range of disabilities. This also offers the opportunity for the successful candidate to readily test individuals with impairment and to establish themselves as a key researcher in this community, should this appeal to the candidate. The existing research on Paralympic classification ensures that cognitive and motor function in individuals with impairment is a common topic in journal clubs, and that other PhDs and postdocs in the group would be working on these topics.

Prior educational requirements: A Master degree or equivalent.

Intended mode of supervision

The candidate is foreseen to become a regular member of the research teams of both Freek van Ede and David Mann, who are each willing to take on the formal role of promotor, depending on the candidate’s preferred focus within the overall project direction. Freek and his team are likely to take responsibility for training in experimental skills (task design, eye-tracking data analysis, etc.) while David and his team will help translate this to the movement-science/sports setting. Depending on how the project develops, David’s unique connections may also help reach relevant networks, such as of skilled paralympic athletes, in whom we may wish to test specific cognitive operations, such as attention and memory operations, using the tasks that we will uniquely develop in the project. We will schedule regular weekly or biweekly meetings with both supervisors, but will also be responsive on a daily basis via casual meetings as well as online media platforms such as Slack.

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

Time scale

We have the flexibility to adapt the timescale of the PhD to the needs of the candidate (e.g., part-time work in mental and physical fatigue) given that both of us are mid-career researchers with fixed positions and time on our side. Regarding the intended start date, we are also fully flexible to start whenever the prospective candidate is available.

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Mann DL, Nakamoto H, Logt N, Sikkink L, Brenner E. (2019). Predictive eye movements when hitting a bouncing ball. Journal of vision, 19, 28. [[link](https://doi.org/10.1167/19.14.28)]

**Other useful resources**

[www.proactivebrainlab.com](http://www.proactivebrainlab.com)

<https://research.vu.nl/en/persons/freek-van-ede>

<https://research.vu.nl/en/persons/david-mann>

## Vergroten participatie van mensen met ADHD

**Team**

Projectleider en promotor Marjolein Luman, KNOP FGB, VU
Co-promotor dr. Siri Noordermeer, KNOP FGB VU
Co-promotor dr. Ruth Peters, Athena Instituut, Faculty of Science, VU

Overig teamlid Marlies Visser Athena Instituut, VU

Supervisor for PhD candidates with an occupational disability: Evelien Wolf

Afdeling Klinische, Neuro-, en ontwikkelingspsychologie

**Projectbeschrijving**

ADHD krijgt vaak negatieve media-aandacht, waarbij mensen met ADHD vaak worden gezien als onbeleefd, onvolwassen en ongemotiveerd (Baeyens e.a. 2017; Baeyens, Luman in voorbereiding). Een dergelijk publiek stigma roept op zijn beurt zelfstigma op bij mannen en vrouwen met ADHD, waarbij sprake is van een laag zelfbeeld en maskering (o.a. Visser, Peters & Luman, in voorbereiding; Mueller e.a. 2012). Voorlichting, waarin stigmatisering en manieren om dit te voorkomen aan bod komen is van cruciaal belang bij het doorbreken van deze negatieve spiraal. Tot nu toe is er echter weinig onderzoek gedaan naar interventies om het publieke stigma om te buigen. Onderzoek laat zien dat het verspreiden van kennis, verhalen vertellen door ervaringsdeskundigen en positieve rolmodellen goede voorbeelden zijn van hoe de participatie van mensen met een psychische stoornis of een andere gestigmatiseerde ziekte vergroot kan worden (Hartog, Peters e.a. 2023; Peters e.a. 2016).

Met dit promotietraject beogen we daarom (1) meer inzicht te krijgen in enerzijds ervaren stigma en anderzijds de positieve kanten vanuit mensen met ADHD, (2) meer zicht te krijgen op het perspectief van mensen met ADHD ten aanzien van hun maatschappelijke participatie, eventuele beperkingen daarin en mogelijkheden om deze te vergroten, (3) zicht te krijgen op de effectiviteit van verschillende interventies om stigma om te buigen en daarmee mensen met ADHD en hun families in hun kracht te zetten. Dit zullen we doen samen met verschillende mensen met ADHD (mannen, vrouwen, jongens en meisjes met verschillende achtergronden) het grotere publiek én hulpverleners.

 We zullen dit onderzoek uitvoeren met behulp van (a) bestaande data van een groot cohort van mensen met ADHD die al 15 jaar worden gevolgd (neuroImage, *n* = 500 volwassenen, waarvan 250 volwassenen die een diagnose ADHD hebben gekregen in de kindertijd) waarin data is verzameld over sterke kanten en ervaring van stigma, naast informatie over maatschappelijke participatie (paper 1), (b) te ontwikkelen strategieën om verhalen mee te kunnen vertellen en positieve rolmodellen een stem te geven (paper 2 en 3), en (c) het stimuleren van maatschappelijke dialogen, met als doel het grotere publiek te informeren en stigma te verminderen (paper 4). We zullen hiervoor gebruik maken van ‘participatory video’s’ (echte, persoonlijke verhalen) gemaakt door mensen met ADHD (zie werk Peters). De video’s en verhalen zullen divers zijn qua leeftijd, geslacht en culturele achtergrond (*n* = 8-12 mensen), en deze interventie heeft als doel mensen met ADHD in hun kracht te zetten, hun maatschappelijke participatie vergroten, verhalen te delen met anderen om kennis te delen, en stigma te verminderen. We zullen de effectiviteit van de video’s op expliciete en impliciete attitudes en kennis rondom ADHD monitoren met gevalideerde schalen. Tijdens het maakproces zullen we in kaart brengen wat het perspectief is van mensen met ADHD ten aanzien van hun maatschappelijke participatie en hoe ze dit kunnen vergroten. Daarnaast beogen we de video’s in te zetten als methode om een maatschappelijke dialoog aan te gaan, met zowel hulpverleners, onderwijsprofessionals, als de bredere samenleving (mogelijke samenwerking Rathenau instituut). Ook bij de dialogen zullen we voorafgaand en na afloop kennis en attitudes rondom ADHD monitoren.

**Waarom geschikt voor mensen met een arbeidsbeperking /haalbaarheid**

We vinden het heel belangrijk dat de faculteit diversiteit op de academische werkvloer stimuleert. Het voorgestelde project gaat over stigma en het in hun kracht zetten van mensen met een beperking, wat mogelijk aansluit bij ervaringen en interesses van de kandidaten. We denken dat het waardevol voor de PhD kandidaat en de deelnemers van het onderzoek kan zijn als er gedeelde ervaringen zijn. Dit kan helpen met het bouwen van een goede verstandhouding en vertrouwen, beide belangrijk bij participatief actie onderzoek. We zijn op zoek naar iemand met een master in relatie tot (mentale) gezondheid: bv. psychologie, pedagogiek, gezondheidswetenschappen, geneeskunde, of (medische) sociologie, of andere relevante master waarin tevens ervaring is opgedaan met kwantitatieve en/of kwalitatieve metingen.

Deel van het project betreft bestaande data, hierdoor kan de kandidaat meteen starten zonder externe druk. Daarnaast is het project flexibel qua timing en indeling. Veel werk kan indien gewenst vanuit huis worden gedaan, waarbij reizen kan worden beperkt. Het ontwikkelen van de video’s en de dialogen en metingen zullen op de VU plaats kunnen vinden. Ook zouden we substudie 4 (de dialogen) kunnen vervangen door een literatuurreview als dit voor de kandidaat wenselijk is.

Er is qua inhoud maar ook op het gebied van begeleiding van mensen met een beperking relatief veel ervaring in het team: Peters heeft veel ervaring met participatief actie onderzoek, het maken van video’s door en voor mensen met een beperking en stigma en stigma reductie in het algemeen, Luman en Noordermeer hebben veel ervaring met onderzoek naar ADHD en met het maken van educatiemateriaal. Het betreft actieonderzoek, mensen met ADHD gaan zelf aan de slag met de video’s, met begeleiding vanuit het team.

**De beoogde wijze van begeleiding**

Met name in het begin van het traject zal er tweewekelijkse 1 uur begeleiding zijn vanuit het hele team, de copromotoren ziet de promovendus wekelijks. Op de agenda zal altijd een check-in moment staan, om te horen hoe het gaat met de promovendus (Luman en Noordermeer doen dit bij al hun promovendi en hebben hier zeer goede ervaringen mee). Daarnaast zal er een kort lijntje zijn met Evelien Wolf, mochten er toch hobbels zijn. Aan het begin van het traject zal overlegd worden met de kandidaat wat diegene prettig vindt in de eerste fase: dat wij vooral voorstellen doen, of dat de promovendus meer het voortouw neemt.

Peters heeft veel ervaring met de begeleiding van mensen met een beperking, geeft ook onderwijs op dat gebied, zoals het vak Disability and Development. Luman heeft veel ervaring met het begeleiden van promovendi, en werkt als psycholoog met veel (jonge) mensen met psychische klachten, maar ook met een fysieke beperking (bijv. cerebrale parese). Naast de kandidaat is tevens Visser bezig met focusgroep onderzoek naar ADHD en stigma (o.l.v. Peters en Luman), we zijn nu bezig met het zoeken naar financiering om hier vervolg aan te geven; de beoogde kandidaat kan haar onderzoek in nauwe samenwerking uitvoeren.

**Literatuur**

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