B2 Research Internships 2020-2021
Psychology Honours Programma

Looking on the bright side of life: The role of anhedonia in depression

Eni Becker & Nessa Ikani

--- for Dutch speaking students only ---

Along with depressed mood, anhedonia is a core symptom of Major Depressive Disorder (MDD). Anhedonia is the lack of interest, affect, or pleasure in response to previously rewarding or enjoyable activities. In the DSM-5, it is considered a key diagnostic criterion for MDD and the depressive subtype melancholia (APA, 2013). Anhedonia is a particularly difficult symptom to treat, and the presence of anhedonic symptoms is a predictor of poor treatment response and relapse (Spijker et al., 2001).

Recently, increased research focused on the underlying mechanisms of anhedonia and how it specifically contributes to depression. In doing so, different validated subjective self-reports are used to measure the various aspects that compromise anhedonia, such as motivation, effort and pleasure. The goal of the current project is to delve further into this topic and to investigate the underlying mechanisms of anhedonia. Within the project group, we will together explore potential topics and ideas related to the expression and measurement of anhedonia in depression. Moreover, you will have the opportunity to gain experience in doing research in a clinical setting with patients (Pro Persona).

Please send an email to e.becker@psych.ru.nl if you are interested in this topic or need more information.

Pizzagalli, D. A. (2014). Depression, Stress, and Anhedonia: Toward a Synthesis and Integrated Model. *Annual Review of Clinical Psychology, 10*(1), 393–423. https://doi.org/10.1146/annurev-clinpsy-050212-185606

How to motivate students to study hard?

Harold Bekkering & Frank Leoné

Cognitive neuroscience attempts to understand the cognitive and neural underpinnings of human behavior, with increasing attention for the neurocognitive foundations of learning and education. Our group Social Educational Neuroscience (SENSe) & Artificial Intelligence (AI) focuses on how we interact with other human beings and exploit current and explore missing knowledge to foster educational learning. Neuroscience and Artificial Intelligence are integrated to understand, model, and foster learning. Our theoretical starting position is that our brain is a prediction machine. We investigate the way the brain exploits predictions based on an internal model to make sense of incoming signals and using them to guide perception, thought, learning, and action.

A recent challenge within this field is to understand the cognitive neuroscience of motivation. The key question is how differences motivation for learning are exhibited in brain activity patterns and grounded in cognitive mechanisms. We take on this challenge and search for parallels between neurocognitive mechanisms of motivation, learning theories, and game design principles. In doing so, we expect to get to a mechanistic understanding of motivation and its effects that are key to an integrated understanding of motivation. Our ultimate goal is to innovate life-long learning on the basis of current scientific knowledge about learning. For more information contact Harold Bekkering, h.bekkering@donders.ru.nl, or Frank Leoné, f.leone@donders.ru.nl.

How do soccer goalkeepers stop penalties?

Gijs Bijlstra & Philip Furley, Arne Nieuwenhuys

Athletes often use body language to gain advantage in competitive situations. For instance, in penalty shoot outs goalkeepers aim to influence penalty takers to affect their performance. Recent research in our lab (Bijlstra, Furley, & Nieuwenhuys, 2020; see also Furley et al., 2012) demonstrated that nonverbal cues of dominance and submissiveness affect expectancy of success and anticipation behavior of participants in the lab. In the present project we aim to test what process underlies such behavior in active goalkeepers and field players. Is it possible to influence opponents' behavior by manipulating body language? Does gaze behavior affect their performance on a computer-based penalty task? Answers to these questions will inform whether athletes' use of body language may indeed help to improve performance.

For more information, please contact Gijs Bijlstra: g.bijlstra@psych.ru.nl

Bijlstra, G., Furley, P., & Nieuwenhuys, A (2020). The power of nonverbal behavior: Penalty-takers' body language influences impression formation and anticipation performance in goalkeepers in a simulated soccer penalty task. *Psychology of Sport & Exercise, 46*

Children's Relationships with Peers and Teachers at School

Toon Cillessen

Children spend over 1300 hours at school each year, in close proximity to their peers and teacher. Children's interactions with their peers and teacher affect them in many ways. For example, peers can affect children's behavior and well-being. Teachers can be a source of social support. Therefore, it is important to understand the social dynamics of the classroom.

Classroom social dynamics refers to the way in which group processes and social structures in the classroom are organized and influence students' experiences at school. They are present at the group level (e.g., social status, popularity, peer acceptance) and the dyadic level (e.g., friendships, student-teacher interactions).

This honours project will be embedded in a larger research project on children's implicit attitudes about victimized peers and the position of victimized children in the classroom. The goal is to examine how the peer relationships and teacher interactions of victimized children impact their functioning at school. There is freedom in the honours project to focus on other aspects of the project, for example, on children who are not victimized. You will be encouraged to pursue your own interests and formulate your own research questions within the broad topic of children's relationships with their peers and teacher at school.

We will collect data with children and teachers in group 6-8 of Dutch elementary schools. Children will complete questionnaires in the classroom about social status, peer and teacher interactions, victimization, internalizing problems, and attributions. In an individual session, they will complete games such as an implicit association task and they will record a video message to measure non-verbal behaviour. Teachers will complete questionnaires about classroom management and academic expectations and they will also complete an implicit association task about their students.

You will be supervised by prof. Toon Cillessen together with the other members of the research team (PhD candidates Hannah Peetz and Nathalie Hoekstra; project leaders dr. Tessa Lansu and dr. Yvonne van den Berg).

The student team should have at least one member able to communicate in Dutch.

Literature for inspiration:

Bukowski, W. M. (2001). Friendship and the worlds of childhood. New Directions for Child and Adolescent Development, 91, 93-105. doi:10.1002/cd.7

Flaspohler, P. D., Elfstrom, J. L., Vanderzee, K. L., & Sink, H. E. (2009). Stand by me: The effects of peer and teacher support in mitigating the impact of bullying on quality of life. Psychology in the Schools, 46(7), 636-649. doi:10.1002/pits.20404

Hamre, B., & Pianta R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. Child Development, 72(2), 625-638. doi:10.111/1467-8624.00301

Lansu, T. A. M., Cillessen, A. H. N., & Karremans, J. C. (2012). Implicit associations with popularity in early adolescence: An approach-avoidance analysis. Developmental Psychology, 48(1), 65-75. doi:10.1037/a0025681

Neal, J. W., Neal, Z. P., & Cappella, E. (2014). I know who my friends are, but do you? Predictors of self-reported and peer-inferred relationships. Child Development, 85(4), 1366-1372. doi:10.1111/cdev.12194

Schacter, H. L., White, S. J., Chang, V. Y., & Juvonen, J. (2015). "Why me?": Characterological self-blame and continued victimization in the first year of middle school. Journal of Clinical Child & Adolescent Psychology, 44(3), 446-455. doi: 10.1080/15374416.2013.865194

van den Berg, Y. H. M. & Cillessen, A. H. N. (2015). Peer status and classroom seating arrangements: A social relations analysis. Journal of Experimental Child Psychology, 130, 19-34. doi:10.1016/j.jecp.2014.09.007.

The smell of fear unravelled

Jasper de Groot

Humans have a much better sense of smell than traditionally thought (McGann, 2017, Science): we can distinguish more odors than the number of seconds in a lifetime, and like super-smeller species (dogs, mice), we can follow scent-trails and detect certain molecules as three drops in an Olympic size swimming pool. Through smells, humans can even pick up social information, like identity, gender, sickness, and transient emotions like fear, usually without being aware of it.

In my research, I focus on the human capacity to communicate fear from a sender to a receiver by means of their smell. This is a question that can be answered from different angles. Actually, the question of whether human body odor can shape social communication has been considered among the 125 most compelling multi-disciplinary scientific challenges of this century (Kennedy & Norman, 2005a, 2005b, Science). In my work, I try to integrate approaches from psychology (measures of affect, perception, behavior, cognition, psychophysiology) to neuroscience (fMRI), genotyping, and – most recently - chemical analysis (as smells consist of molecules). Depending on your interest, we can focus more on psychological paradigms and perhaps get your feet wet with other types of methods that go beyond psychology (e.g., chemical analysis methods). The ultimate goal is to unravel whether there exists a species-wide human capacity to produce and perceive the smell of fear. This requires examining novel samples to assess (for the first time) the scale and degree of the chemical communication of fear. What we also often see is that "social smells" can exert their functions beneath our conscious awareness, underlining the stealth influence smells may have on our lives.

I am very much looking forward to your input, and depending on your interest, we can focus more on particular psychological tasks/paradigms, psychophysiology (e.g., skin conductance), the role of certain genes in fear smell production, ways to collect and present smells using a computer-controlled device, and/or chemical analysis.

Through the eyes of an infant: How babies get to understand the world

Sabine Hunnius

--- This internship is most interesting for you if at least one student member speaks Dutch ---

Babies and their rapid development are one of the biggest miracles of life: Although a newborn seems to be completely helpless, within little more than a year, the baby transforms into a totally different creature. The vivacious toddler who is waddling around, pointing out exciting things she sees, playing peek-a-boo, learning new words at a breathtaking rate, who is giggling and laughing, but also shrieking in frustration when she doesn't get what she wants – she does not at all resemble the newborn she was just a little time ago who fell asleep exhausted after a couple of minutes of inspecting her nearby environment with long gazes and sluggish eye movements.

How can this be? How do babies learn about the world around them? And how do they develop the ability to understand others, their actions, thoughts, and feelings? In the BabyBRAIN group, we study exactly these questions. Using behavioral experiments and advanced experimental methods, we investigate social-cognitive development in babies and toddlers.

In this project, students will have the opportunity to get acquainted with the exciting, innovative research field of Developmental Cognitive Neuroscience. They will contribute to setting up and carrying out a research project with babies and/or young children and learn about the different research techniques we use, such as eye-tracking, motion registration, or EEG. To directly work with young children and their parents, it is advantageous if the students can communicate in Dutch.

After COVID-19 restrictions were loosened, the Baby & Child Research Center began testing infants and young children again. We thus anticipate that it should be possible to work with families in this internship.

For more information, please visit www.babyandchild.nl (follow us on Instagram or Facebook!), www.dcc.ru.nl/babybrain, or send an email to s.hunnius@donders.ru.nl.

Hunnius, S. (2018). Achtung Baby! Exciting times for infant research. https://repository.ubn.ru.nl/bitstream/handle/2066/198609/198609.pdf

Meyer, M., Endedijk, H. M., Van Ede, F., & Hunnius, S. (2019). Theta oscillations in 4-year-olds are sensitive to task engagement and task demands. *Scientific Reports, 9*(1), 1-11

Addabbo, M., Vacaru, S. V., Meyer, M., & Hunnius, S. (2020). 'Something in the way you move': Infants are sensitive to emotions conveyed in action kinematics. *Developmental Science, 23*(1), e12873

It's all in your mind – Applying EEG-ERP methodology to study covert behaviour

Marijtje Jongsma

The ERP methodology is a widely used method to study covert behaviors. Within this project, you'll get the opportunity to use the ERP methodology to study the processing of either painful stimuli, aspects of motor planning and/or motor imagery or response inhibition. In addition, apart from the cortical EEG electrodes we can study signals recorded from a newly developed ear-channel electrode. Extracting event-related potentials (ERPs) from the ongoing electroencephalogram (EEG) provides an excellent means to study the neural responses accompanying information processing. ERP paradigms become even more interesting when ERP responses can be compared with behavioral data like Reaction Time data, erroneous responses or numeric rating scales. Apart from extracting average ERPs from up to 64 scalp electrodes and signals recorded from a newly developed ear-channel electrode, source localization of several ERP components can be determined by means of both BESA and LORETA. Finally, wavelet denoising procedures to extract the single-trial ERPs can be used for analyses.

What you will be doing:

- Design an ERP experiment
- EEG recordings combined with behavioral data
- EEG and behavioral data analyses

Optional:

- Programming in Presentation/PychoPy (Python)
- Specialized EEG analyses: source localization and single trial analyses

This year, the emphasis will be more on programming and data analysis, while making actual EEG recordings is minimized due to Covid-19 restrictions.

Luck, S. J. (2014) *An Introduction to the Event-Related Potential Technique*, MIT Press, http://sites.bu.edu/reinhartlab/files/2017/06/ERPbook.pdf.

Woodman, G. F. (2010). A brief introduction to the use of event-related potentials in studies of perception and attention. *Attention, Perception & Psychophysics, 72*(8), 2031–2046. doi:10.3758/APP.72.8.2031.

Light, G. A., Williams, L.E., Minow, F., Sprock, J., Rissling, A., Sharp, R., Swerdlow, N. R., & Braff, D.L. (2010). Electroencephalography (EEG) and event-related potentials (ERPs) with human participants. *Curr. Protoc Neurosci. Unit–6.2524*. doi:10.1002/0471142301.ns0625s52.NIH-PA Autho http://www.ncbi.nlm.nih.gov/pubmed/20578033.

Clayson, P.E. & Miller, G.A. (2017). Psychometric considerations in the measurement of event-related brain potentials: Guidelines for measurement and reporting, *International Journal of Psychophysiology, 111*, 57-67. https://doi.org/10.1016/j.ijpsycho.2016.09.005.

I Keep Cycling

Eric Maris

Cycling, in particular for senior citizens, is an excellent means to improve quality-of-life (physical health, mental well-being, social activities), but is also a risky activity, as is clear from the steady increase in fatal accidents with senior cyclists. *I Keep Cycling* has both a scientific and a societal goal. The scientific goal is to establish and disseminate scientific knowledge that is relevant for cycling, and the societal goal is to help cyclists to cycle safely for longer.

This project has multiple subgoals and corresponding opportunities for Honours students. Here are some example research questions:

- A bicycle's lean angle can be controlled both by its front frame (via forces applied to the handlebars) and its rear frame (via forces applied to the saddle). This creates a coordination problem for the rider, for which several hypotheses exist (steering into the fall, compensatory steering, …), but which not have been empirically evaluated. In addition, it is unknown whether senior cyclists and young adults use different coordination strategies.
- The forces applied to the handlebars serve a double purpose: turning (by pushing more on side than the other) and preventing external perturbations from affecting the bicycle (by stiffening and damping the front frame using the upper body). These two purposes have different biomechanical requirements, and it is unclear how the rider jointly realizes them. In addition, it is unclear how senior cyclists and young adults differ in this respect.
- Studies of motor skill acquisition have shown that, in the course of this acquisition, not only accuracy improves, but also that the applied forces decrease. This raises the question whether less-skilled cyclists (e.g., senior cyclists) also apply more force, and if so, what are these forces (to the handlebars and/or the saddle, in which direction, …).
- Applying the forces need to control a bicycle requires a particular posture on the bicycle. Informal observations suggest that senior cyclists have different postures. However, this has not been quantified and neither has the relation with the applied bicycle control forces been investigated.

Data are collected at three different locations: (1) in a lab on bicycle simulator equipped with force and position sensors, (2) in one of the sports halls of the Radboud Sports Center, and (3) on the public road.

The bicycle simulator is suited for (1) evaluating the effect of a dedicated motor skill training, (2) diagnosing a rider's cycling skills (using the force and position sensors), (3) practicing cycling skills in an individualized training program, and (4) providing online quantitative feedback about the parameters that define a particular cycling skill.

Why is listening to speech so complicated and yet so easy?

James McQueen & Giulio Severijnen

In our daily life, we communicate with many different people who all have their unique way of talking. For example, consider talking to a woman from Noord-Brabant. She will sound completely different than a male talker from the Randstad (for example, a different way of pronouncing the /g/, the /r/ and different intonation patterns). Yet, you would be able to understand both of them with hardly any effort. Sounds like an amazing skill, don't you think? But how do listeners do this? That is, how do we go from this extremely variable signal (i.e., speech) to perceiving the correct letters and words?

Previous research has found that listeners use several cognitive mechanisms in speech perception to deal with variability. First, listeners use learning mechanisms to adapt to each talker they encounter. For example, when listening to the woman from Noord-Brabant, a listener can learn and tune into the way she would produce the soft /g/. Second, listeners use prediction to facilitate perception of those predicted words. Going back to the same talker, if you know how she is going to produce a /g/, you can predict exactly what it will sound like the next time you expect her to say a word with a /g/.

In addition to these differences in segments of speech (i.e., consonant and vowels), talkers can also differ in how they produce suprasegmental information (i.e., 'above' the segments; lexical stress patterns, speech rate). For example, the words CAnon and kaNON (capitalization indicates lexical stress) are identical in segmental information but differ in suprasegmental information, which leads to perception of a different word. Talkers also seem to differ in how these structures are produced, which adds even more variability to the speech signal.

In our research, we are currently trying to extend previous studies on segmental variability to find out whether listeners also learn and predict how different talkers produce suprasegmental information. But several questions are still to be answered to find out exactly how this works. How long does it take for listeners to learn this information and how stable is that memory? Maybe you already learn about someone's speaking style in a matter of minutes or perhaps you need days to learn this. What is the nature of this memory? Is it tied to only the words you encounter, or do listeners learn more general information which can be applied to other words? How does similarity between talkers help to deal with individual differences? Imagine encountering two talkers from the same region, does hearing one talker facilitate perception of the other talker compared to someone from a different region?

These are some of the questions we are trying to answer using various techniques such as behavioral, eye-tracking and EEG methods. As an honours student, you will be involved in a research project from beginning to end and are encouraged to think of related topics you would like to study in this project. Knowledge of Dutch may be beneficial for preparing the materials for the experiment but is not a requirement.

For more information or questions, feel free to contact Giulio Severijnen (g.severijnen@donders.ru.nl).

Brunellière, A., & Soto-Faraco, S. (2013). The speakers' accent shapes the listeners' phonological predictions during speech perception. *Brain and Language, 125*(1), 82–93. https://doi.org/10.1016/j.bandl.2013.01.007

Eisner, F., & McQueen, J. M. (2005). The specificity of perceptual learning in speech processing. *Perception & Psychophysics, 67*(2), 224–238. https://doi.org/10.3758/BF03206487

Perception and action in naturalistic environments

Leonie Oostwoud Wijdenes & Pieter Medendorp

Over the past 50 years, important discoveries have been made on how the brain creates and shapes our perception and controls our movements. Yet most discoveries have been made in conventional lab environments, using straightforward experimental tasks and well-controlled paradigms. But the processes and mechanisms borne out in laboratory studies are not necessarily the same processes that humans call upon during their everyday lives. At home, at sports fields, or in traffic, we are confronted with continuously changing environments in which people and objects are moving in complex, unpredictable ways. A person often has to decide and respond immediately in these dynamic and complex situations, thereby flexibly combining multisensory information sources, and recruiting and coordinating different body parts.

Hence, one of the major challenges for the understanding of the human perception and motor control is to reconcile the laboratory results with the real-world demands imposed on the brain. Fortunately, recent technological advances in virtual reality and in wearable technology facilitate a more naturalistic approach. In this project, we will capitalize on these innovative methods in an integrated, interdisciplinary approach to study the unexplored boundaries of the perception-action coupling in real-world environments. The main objective is to reveal the nature of cognition in real-world environments. Question to be addressed are: How do humans navigate in real-world environments? How do they orient themselves? How do they manipulate objects or work with tools? Using several techniques, you will record and analyze large volumes of real-world data with the goal to test known and possibly discover novel mechanisms that drive real-world perception and action. Students will, under supervision, conduct literature review, develop and perform a behavioral experiment, analyze the data, and report about the results.

For more information, see www.sensorimotorlab.nl.

Medendorp WP, Heed T. State estimation in posterior parietal cortex: Distinct poles of environmental and bodily states. *Prog Neurobiol*. 2019 Dec;183:101691

Medendorp WP, Selen LJP. Vestibular contributions to high-level sensorimotor functions. *Neuropsychologia*. 2017 Oct;105:144-152

How do tools extend the sensing body?

Luke Miller & Pieter Medendorp

Our body is fundamental for almost every interaction we have with the environment. From manipulating a tool to reaching towards a bug that has landed on your arm, our senses of touch and proprioception keep us embodied in the world. Given its constant movement, how the brain's tactile system keeps 'in contact' with the body is unknown. The situation is even more complex when touching the world with tools, such as when a blind person navigates with a cane. Our research investigates this profound mystery. We examine how the brain tracks the positions of its body parts, how this aids in quickly localizing a touch in 3D space, and how it adapts to similar situations when touch is applied to a tool. Using several techniques, you will record and analyze large volumes of real-world data with the goal to test known and possibly discover novel mechanisms that drive body perception and tool use. Students will, under supervision, conduct literature review, develop and perform a behavioral experiment, analyze the data, and report about the results.
For more information, see www.sensorimotorlab.nl.

Miller LE, Montroni L, Koun E, Salemme R, Hayward V, Farnè A. Sensing with tools extends somatosensory processing beyond the body. *Nature*. 2018 Sep;561(7722):239-242

Recognizing objects in scenes

Marius Peelen

Our daily-life visual environments, such as city streets and living rooms, contain a multitude of objects. Out of this overwhelming amount of sensory information, we must quickly recognize those objects that are relevant for current goals, such as cars when crossing a street. The visual system has developed and evolved to optimally perform tasks like these, as reflected in the remarkable efficiency of naturalistic vision. What are the factors that contribute to this efficiency?

Behavioural studies have provided evidence for several factors that work together to facilitate naturalistic vision. First, the semantic and syntactic congruency of scenes and objects influences object detection and recognition performance: it is easier to recognize a car when it is present on a road than on a field. Second, scene context guides attention and eye movements to the likely locations of task-relevant objects: we start searching for our coffee cup on tables and desks, not on floors or ceilings. Finally, objects in real-world scenes occupy regular and predictable locations relative to other objects. For example, a bathroom sink is typically seen together with a mirror in a highly regular spatial arrangement. The visual system can make use of such spatial regularities to perceptually group (or 'chunk') objects we encounter in our everyday environments.

In this project, students will design and perform behavioural experiments that investigate one or multiple of these factors, with the goal to advance our understanding of naturalistic vision. Healthy adult volunteers will participate in the experiments.

For more information, visit our lab website (https://sites.google.com/site/peelenlab/) or contact Marius Peelen (m.peelen@donders.ru.nl).

Fiser, J., Berkes, P., Orban, G., & Lengyel, M. (2010). Statistically optimal perception and learning: from behavior to neural representations. Trends in Cognitive Sciences 14: 119-130.

Oliva, A., & Torralba, A. (2007). The role of context in object recognition. Trends in Cognitive Sciences 11: 520-527.

Measuring shared decision making in mental health care

Jacobien van Peer

In recent years there has been an increasing focus in mental health care on shared decision making: "An interactive process in which clients and practitioners work together to make health care decisions" (Adams & Drake, 2006). Although research has shown positive effects of shared decision making on the treatment process and outcome, the shared decision-making process itself has not yet been unraveled. For example: What do clinicians do differently in shared decision making? When do clients experience the process as shared decision making? What are the 'active ingredients' of shared decision making (e.g., expectations or sense of control of the client)? In order to answer these questions, we need instruments to measure the interaction between the client and the clinician, and the subjective experience thereof. The aim of this project is to develop and test such instruments. Examples are the coding of 'speech acts' (e.g., questions, propositions, speaking time, interruptions) and nonverbal behavior (e.g., facial expressions and body language) in videos of interactions between clients and clinicians. In addition, questionnaires can be used to measure the subjective experience of the interaction. The identification of the active components of the shared decision-making process with these instruments may help to improve shared decision-making in clinical practice in the future.

For more information contact Jacobien van Peer: j.vanpeer@psych.ru.nl.

Adams, J. R., & Drake, R. E. (2006). Shared decision-making and evidence-based practice. *Community mental health journal, 42*(1), 87-105. https://doi.org/10.1007/s10597-005-9005-8

Het meten van cognitief functioneren in het dagelijks leven met een experience sampling app

Vitória Piai & Giesje Nefs

--- for Dutch speaking students only ---

Binnen de neuropsychologie bestaan diverse taken om het cognitief functioneren van mensen in kaart te brengen onder optimale omstandigheden (rustige onderzoeksruimte, geen afleiding, aanwezigheid testleider). Het is de vraag hoe representatief deze resultaten zijn voor het cognitief functioneren buiten de onderzoeksetting. Op dit moment ontbreekt een methode om het cognitief functioneren in het dagelijks leven te meten.

Op basis van bestaand materiaal hebben we daarom twee nieuwe taken ontwikkeld die in de vorm van een experience sampling app aangeboden kunnen worden. Mensen krijgen hierbij meerdere keren per dag een uitnodiging op hun mobiele telefoon om een werkgeheugen- of lange termijn geheugentaak uit te voeren.

Nu willen we de bruikbaarheid van de app onderzoeken en het cognitief functioneren in het dagelijks leven in kaart brengen. Onder supervisie van beide docenten zullen de studenten het onderzoek vormgeven dat deze vragen beantwoordt, deelnemers werven, de dataverzameling uitvoeren, en een verslag van de resultaten schrijven.

Voor meer informatie:

Vitória Piai (v.piai@donders.ru.nl), Giesje Nefs (giesje.nefs@radboudumc.nl)

A Boosting Approach to Behaviour Change and Brain Training

Harm Veling

Many people struggle with changing their behaviour to improve their health and well-being. For instance, people may want to change their diet for health or environmental reasons, or reduce their smartphone use. One difficulty with changing such behaviours, however, is that old behaviours have often been strongly reinforced in the past to the degree that people are strongly drawn toward the old behaviour even when they have intentions to change. In our lab we conduct fundamental research to examine new ways of changing people's behaviour by breaking old unwanted habits and creating new desired habits. This may be accomplished in different ways. For instance, we may inform people about evidence-based ways to break habits based on the psychological literature, and test whether people can use these ways to actually change their behaviour. We also examine whether and how automatic reactions to objects (e.g., foods, smartphone apps, alcoholic beverages) can best be changed by go/no-go training (a kind of brain training that works), and how this can be helpful to establish new habits that people want to form.

Do you want to know more about these and other cognitive training and behaviour change projects, please contact Harm Veling: h.veling@psych.ru.nl (Social and Cultural Psychology).