RESEARCH REVIEW

Psychology

2017-2022

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Preface

Like several other disciplines, psychology developed as a science in the nineteenth century, especially the second half, and became a full empirical science in the first half of the twentieth century. In the Netherlands, Gerard Heymans, a philosopher at the University of Groningen around 1900, strongly interested in psychology and oriented towards knowledge development based on empirical research, is considered the founding father of Dutch scientific psychology. After a modest start, in the post-World War II years, psychology as initiated by Heymans and taken up by others gained momentum and was first established as an independent academic discipline in the early 1960s. While initially oriented at developing education for future psychologists active mostly in clinical and work and organisational settings, soon larger-scale research followed and by the end of the 1980s, the focus was directed at international research psychology. Looking back, it is fascinating how determined and unanimous Dutch psychologists of all universities took the turn to the international arena. Since then, Dutch academic research has taken giant steps forward and accomplished its goal arriving among the top players of international psychological research.

The Review Committee for psychological research 2017—2022 readily concluded that nowadays the research quality of Dutch psychological research is among the best psychology has to offer internationally. It could therefore focus on the other two assessment criteria the Strategy Evaluation Protocol defines, which are Societal Relevance and Viability. In addition, the Strategy Evaluation Protocol requires assessments of four auxiliary criteria, which are Open Science, PhD Policy and Training, Academic Culture, and Human Resources Policy. This report discusses the Committee's assessment of these criteria for each of the eight psychology research programmes participating in the research review but refrains from a mutual comparison and ranking of the programmes, as stipulated in the terms of reference the Committee received. The Committee also discusses the joint self-evaluation the eight programmes made available. The Committee notices that Dutch psychology is going through a period of massive transition in many areas that present interesting challenges but also can pose threats if not monitored with precision, care, and caution. To support Dutch psychological research and the various individual research groups critically, each chapter is concluded with a list of recommendations.

The Committee experienced the discussions with the four delegations of each of the eight research programmes—management, senior staff, early-career staff, and PhD candidates—as useful and pleasant, and appreciated the atmosphere of candidness and constructiveness aimed at further improving Dutch psychological research. The absence of a defensive attitude sometimes encountered in review procedures, here contributed to an open atmosphere in which several delegations chose to discuss their issues and worries with the Committee. The Committee wishes to emphasise that it considers this attitude essential for a useful research review and thanks all participants for making this possible.

Klaas Sijtsma, Chair of the Evaluation Committee

1. Introduction

1.1 Terms of reference for the assessment

The quality assessment of research in Psychology is carried out following the Strategy Evaluation Protocol for Public Research Organisations published by the Universities of the Netherlands (UNL), the Netherlands Organisation for Scientific Research (NWO), and the Royal Netherlands Academy of Arts and Sciences (KNAW).

The Committee was asked to assess the scientific quality, the relevance and utility to society, and the viability of the research conducted by research institutes of eight universities in the reference period 2017-2022, as well as the strategic targets the research institutes defined and the extent to which the institutes are equipped to achieve these targets.

The current assessment addresses the research domain psychology and spans eight of the twelve general universities in The Netherlands mentioned here in the order in which the Review Committee interviewed them:

- Vrije Universiteit Amsterdam (VU)
- University of Amsterdam (UvA)
- Open University (OU)
- Utrecht University (UU)
- University of Groningen (RUG)
- Leiden University (UL)
- Maastricht University (UM)
- Erasmus University Rotterdam (EUR)

Accordingly, three main criteria are considered in the assessment: research quality, relevance to society, and viability. During the evaluation of these criteria, the Committee was asked to incorporate four specific aspects: Open science, PhD policy and training, academic culture, and human resources policy.

This report describes the findings, conclusions, and recommendations of this external assessment of the research in Psychology.

1.2 The Review Committee

The Board of the participating universities appointed the following members of the Committee for the research review:

- Em. prof. dr. Klaas Sijtsma – Tilburg University, Netherlands (chair)
- Em. prof. dr. Antony Manstead – Cardiff University, Wales
- Prof. dr. Johan Wagemans – KU Leuven, Belgium
- Prof. dr. Terrie Moffitt – Duke University, Durham, North Carolina, USA
- Prof. dr. Áine Kelly – Trinity College Dublin, Ireland
- Prof. dr. Ulrich Ebner-Priemer – Karlsruhe Institute for Technology, Germany
- Charlotte M. de Blecourt MSc – Radboud Universiteit Nijmegen, The Netherlands (PhD member)

The Board of the participating universities appointed dr. Annemarie Venemans and drs. Esther Poort of De Onderzoekerij as the Committee secretaries. All members of the Committee signed a declaration and disclosure form to ensure that the Committee members made their judgements without bias, personal

preference, or personal interest, and that the judgment was made without undue influence from the institutes or stakeholders.

1.3 Procedures followed by the Committee

The Committee proceeded according to the Strategy Evaluation Protocol (SEP) 2021- 2027. The assessment was based on the documentation provided by the eight research programmes and the interviews with four groups of representatives from each programme: the programme's management, selections of senior researchers, selections of junior researchers, and PhD student representatives. The interviews took place from October 9 until October 13, 2023 (see Appendix A).

Prior to the site visit, the Committee reviewed detailed documentation comprising the self-evaluation reports of the eight research programmes including appendices. A distinct document, which was presented to the Committee, is titled 'Psychology Joint Self-Evaluation 2017-2022.' In this document, the eight participating universities present an overarching quality and impact analysis of the research foci including their societal impact and how they jointly contribute to the international positioning of Dutch psychology research. The aim is to identify collaborative and synergistic research across the participating research units but also collaborations with other universities, both within and beyond the Netherlands. Additionally, this document encompasses a benchmark study that identifies eight main research areas (also called concepts) in the field of psychology from seven Western countries, providing a basis for comparison with Dutch psychological research.

The Committee discussed its assessment of each research programme during several sessions of the site visit. The Committee chair had a coordinating role in the writing procedure and delegated the writing of sections to members of the Committee. The members of the Committee commented by email on the draft report. The draft version was then presented to the research programmes for factual corrections and comments. Subsequently, the text was finalised and presented to the Executive Boards of the eight universities.

2. General remarks

Introduction

The Committee's main conclusion is that Dutch academic psychological research is in excellent shape, excelling in both overall research quality and the societal significance of its findings. This upward trajectory in research quality has been ongoing for over three decades, commencing in the late 1980s and early 1990s when Dutch psychological research began presenting itself more prominently on the international stage than in the decades prior to the 1990s. Currently, Dutch research in psychology attains an international standard and is on par with or even surpassing the quality found in the top-performing nations. Given the high quality and the evident societal relevance of this research, the future of psychological research in the Netherlands appears to be bright.

Evaluating the sustainability of Dutch psychological research requires considering not just the past six years but also the context of various external influences and self-imposed transitions. Within this report, the Committee offers recommendations on how to navigate potential challenges that may arise. Recommendations are summarised at the end of each chapter, but the reader may sometimes encounter specific recommendations or advise throughout the text, especially in this chapter.

In the following section, the Committee delves into the findings of the document titled 'Psychology Joint Self-Evaluation 2017-2022' and the ongoing transitions in Dutch psychological research during these years. It identifies areas that require significant attention to ensure a consistent research trajectory aligned with the selected policy. The Committee emphasises that it does not intend to express an opinion on the specific policy choices, as they view these as the responsibility of the programmes themselves. However, the Committee believes that its role is to pinpoint potential strengths and weaknesses and offer recommendations that it hopes will benefit the programmes leading up to the next assessment, likely in 2029.

Psychology Joint Self-Evaluation 2017-2022

In their collaborative report titled 'Psychology Joint Self-Evaluation 2017-2022', the eight programmes use quantitative markers to concisely review the disseminated output against an international benchmark. Using quantitative evidence, the programmes provide a joint self-evaluation that particularly highlights their collaborative achievements, in addition to the narrative information in accordance with the Strategy Evaluation Protocol (SEP) 2021-2027. They view this joint endeavour as of utmost importance due to its connection to the Sector Plan SSH, a policy report published in 2023 concerning the social and behavioural sciences as well as the humanities and published on their initiative, which outlines a broad mission of maximising the utilisation of the diverse research units in the Netherlands through interdisciplinary collaboration that transcends specialised fields and disciplines. Moreover, the programmes regard the present evaluation as an excellent opportunity to pinpoint future aims that are shared on a national level.

The adopted bibliometric approach combined local current research information systems (CRISs) with two data sources. These sources are OpenAlex, an open-source and open-access data base of scholarly works and metadata enabling the calculation of academic publication counts and performance metrics, and Altmetric, a commercial database that tracks mentions of scholarly works in non-academic sources, allowing an assessment of societal impact.

The research team conducting the bibliometric analysis opted for the concept-weighted citation score (CWCS) based on raw citation counts that allows for comparison of performance within fields of research and between years of publication. For instance, a publication with a CWCS of 1.25 received 25% more citations than the average publication within the same concept (e.g., clinical psychology) and publication year. Societal impact was quantified by simple counts of the mentions of academic works in the different media outlets and policy documents as produced by Altmetric.

The Committee's assessment, based on these findings, confirms that Dutch psychology research has continued to uphold its very strong reputation in the assessment period.

Between 2017 and 2021, the programmes collectively published more than 13,000 academic works. The fields of clinical psychology, social psychology, cognitive psychology (including cognitive science), and developmental psychology demonstrated the highest levels of productivity. Research production slightly increased over the assessment period, especially for clinical psychology and social psychology.

The exceptionally high quality of the research of the eight participating programmes is also clear from the CWCS, which provides valuable insights into the quality and impact of these publications, complementing the raw publication counts. Across the assessment period, the mean CWCS across all eight programmes was 3.30 and the median was 3.06, with the smallest CWCS at programme level equal to 1.59 and the largest equal to 5.86. Collaborations between programmes and international partners/researchers were cited more frequently compared to collaborations between national programmes or publications from authors affiliated with the same programme. Within the Netherlands, geographical proximity appeared to influence collaborations between different programmes, although exceptions existed. For example, the UU and the RUG, despite their relatively large distance from each other, work together in several concept areas. International benchmarking shows the CWCS of the Netherlands ranked highly when compared to CWCS values in Belgium, Switzerland, Germany, Denmark, Great Britain, Sweden, and the United States.

Of special interest to the Committee were the results with respect to the five research themes of the Sector Plan SSH. The themes are 'youth resilience', 'mental disorders', 'the human factor in new technologies', 'social transition and behavioural change', and 'social inequality and diversity'. The Sector Plan SSH aims to unite researchers from various programmes to avoid fragmentation and redundancy of research, thereby facilitating improved coordination of (future) research lines. Each programme selected three SSH themes that aligned with its unique profile and future objectives. The report details the alignment of research activities during the 2017-2021 period with the three SSH themes chosen by each programme. The document warns that the findings concern past contributions (2017-2021), whereas the SSH themes were established more recently, so perfect alignment between the past and present research and the intended research themes may not be guaranteed.

The document concludes that inserting the (normalised) publication counts in a table based on three themes chosen by each programme does not reveal a pattern consistent with the envisioned future direction. In fact, the document states that the 'mere counting of works does not yet agree with the strategically chosen future foci outlined in the Sector Plan SSH.' Mental disorders had the largest output share, while 'the human factor in new technologies' and 'social inequality and diversity' were underrepresented. The Committee noticed that the Sector Plan SSH and its appendices do not specify precise Key Performance Indicators for evaluating success in addressing the three SSH themes within each programme. It recommends that the research programmes define Key Performance Indicators to quantitatively monitor the progress made in aligning their research focus with the three themes they chose and assess whether sufficient progress has been achieved. Furthermore, the Committee recommends that the programmes should also monitor the factors that facilitate or hamper such an alignment.

Open Science, Research Integrity

The interviews clarified that the various faculties seem to have more rules and regulations, programmes, courses (primarily for PhD candidates and research master students), Committees (ethical, sometimes audits), and facilities (such as data stewards) in place than what was originally conveyed in the self-studies. The Committee found this information reassuring.

With respect to the preregistration of research plans, data storage facilities, and data publication, faculties claimed that these activities had already been broadly accepted and implemented. The Committee appreciates the growing attention to these topics, with a notable leadership role played by younger researchers. However, the Committee did not obtain a clear picture of the percentages of studies and researchers for which the various areas of open science, such as preregistration and data publication, were realised. Many of the open science activities are voluntary, and programmes differ in the level of support researchers receive (e.g., data stewards) and the legal hurdles they experience regarding sharing of datasets (e.g., privacy regulations, and legal guidance from the universities' legal departments). The Committee recommends monitoring progress in all areas. For instance, tracking the percentage of studies that are preregistered, the percentage of researchers engaged in preregistration, the percentage of data sets stored in accordance with regulations, and the percentage of data sets and code made publicly available. Results should preferably be published annually and made available on the programme websites.

The Committee observed that several researchers face challenges arising from the conflicting requirements between (a) the principles of open science and easy access to shared data, and (b) privacy legislation aimed at safeguarding the private personal data of research participants. Researchers are confronted with the dual responsibility of demonstrating their commitment to transparently sharing participants' data while also ensuring the rigorous protection of participants' privacy. This ongoing dilemma can pose a significant challenge for researchers. The Committee recommends management to pay attention to this issue.

HR Policy

Recognition & Rewards

In 2019, a coalition of all 14 Dutch universities launched the Recognition & Rewards programme. This programme was a response to the tenure and promotion policies that were predominantly based on an employee's research output (such as the number of articles, citation index, and success in grant applications) as practised by universities in the preceding period. The Recognition & Rewards programme explicitly included teaching achievements and management contributions as criteria for tenure and promotion decisions. It also suggested tailoring work profiles to accommodate the specific needs of each assistant, associate, and full professor, recognising that these roles may involve different proportions of educational, administrative, and research responsibilities. Each university is currently in the process of implementing the programme in its own way, and within universities, faculties may vary in their approaches to implementation.

The Committee has established that the psychology programmes have accepted the Recognition & Rewards programme, and, in several cases, it seems fair to say the programme is embraced at all levels of personnel. In their interviews, however, the Committee has noticed different interpretations of the Recognition & Rewards programme, both in its meaning and its possibilities, with the most distinct differences arising between management and senior staff on one hand and early-career staff on the

other hand. The Committee also noticed varying interpretations and expectations between early-career staff representatives of different programmes. Younger staff often hold high expectations of the Recognition & Rewards programme for promotion opportunities to associate and full professor. Some younger staff even perceived that most, if not all, can achieve such promotions, and not being promoted is seen as a failure in a scientific career. The Committee occasionally sensed that the focus on these aspects, while significant in a career, might overshadow job satisfaction or at least play a role that appears overly dominant.

In contrast, other early-career staff seemed quite realistic about the pyramid-like job-structure model that most faculties in The Netherlands adopt and some realised that their opportunities for promotion eventually might reside in other universities or even in other (research) organisations.

Given the combination of the enthusiasm with which the Recognition & Rewards programme has been met in all faculties as well as the great importance that especially early-career staff attach to the programme and the job opportunities they perceive, the Committee recommends the leadership of all eight faculties to establish an expectation management programme and monitor its progress on a regular basis. Being explicit about opportunities or lack thereof, about performance expectations, and about the need to accept some levels of uncertainty about career development, seems to be of the utmost importance.

Another feature of the Recognition & Rewards programme is the emphasis it places on team science. One reason for this emphasis is the expected greater output and impact of research when teams of researchers combine their efforts to produce results within larger projects. Another reason seems to be the wish to mitigate the competition between researchers in the same faculty that can negatively affect the academic climate. The Committee has observed that some researchers are uncertain about whether they can still pursue research in smaller groups or independently without negative implications for their career progression. Therefore, the Committee recommends that the various programmes explicitly clarify the options available for researchers who prefer to work in smaller groups or individually.

Diversity, Social Safety, Workload

The Committee noticed that in general, programmes and the faculties to which they belong assign great value to diversity, with a particular emphasis on gender diversity. While gender diversity is obvious in the PhD programmes and the assistant professors, for the higher ranks, equal representation of males and females is often not realised although progress is visible. During interviews, some management representatives mentioned the challenge of relatively slow staff turnover, which can impede progress, especially when the number of full professors and possibly associate professors is fixed, and development relies on the retirement of older personnel. With some exceptions, the Committee noticed that diversity criteria other than gender were often not put into place yet, but this also depended on the composition of the population in some areas. The interview duration was insufficient to discuss in more detail with management how the selection criteria for personnel selection were chosen and how selection procedures were designed and implemented. From personnel and selection psychology it is known that a tension exists between favouring certain subgroups and favouring individual talent. The Committee recommends being transparent about the principles on which the personnel selection policy is based.

Programmes devote attention to creating a safe environment for their employees, for example, by encouraging equal positions in scientific discussions without hierarchical barriers. All PhD programmes have implemented initiatives to reduce the dependency on a single promotor. For example, many early-career staff are part of a PhD's supervision team. The interviewed PhD candidates welcomed external

support to their well-being, such as independent PhD advisors. Greater diversity in the staff composition can also create a greater sense of equality among staff mutually and between staff and students. The Sector Plan SSH has enabled universities to hire more personnel in tenured positions, thereby reducing the high workload that had been a problem at Dutch universities, especially in the social and behavioural sciences and the humanities, for some time.

Societally Relevant Research

The Committee noted that every research programme performs well in outreach activities and presents many examples of research collaborations having significant societal relevance. All programmes emphasise in their mission and strategy statements the importance of research that has direct relevance for society and thus focuses on the application of theoretical insights to issues that citizens and organisations are concerned about or on a more direct approach of such issues. The self-studies, however, exhibit variation in the extent to which they aim to strike a balance between fundamental and socially relevant research, as well as how they address this balance. Some programme representatives let the Committee know that they consider fundamental research to be key. They stressed the importance that non-academics may not always understand that the road from theory to application may be long and paved with hurdles, and that academics must be clear about the difficulties to be expected. Representatives of other programmes were concerned whether they had enough room to do fundamental research without obvious, direct application and whether their choices would hamper their career opportunities. Nevertheless, the general focus seems to be on societally relevant research, and the Committee noticed that a one-sided preference for fundamental research was rare at the programme level.

The Committee noticed that the focus on societally relevant research is the result not only of intrinsic motivation but also of persistent requests, and at times, pressures exerted by Dutch politics, the public, and the media on Dutch science, particularly in the field of psychological research, over the past decades. The COVID-19 pandemic may also have influenced or amplified these developments.

In the Sector Plan SSH, each of the programmes identified three out of five key application areas. The joint Self-Evaluation 2017-2022 showed that, based on the research in the 2017-2021 period, the application foci the programmes realised in the assessment period either do not coincide or coincide only partly with the three foci they identified each when setting up the Sector Plan SSH.

As mentioned above, the Committee noticed that the Sector Plan SSH lacks Key Performance Indicators that explicitly measure the extent to which the chosen application profiles have been realised by each programme. The interviews did not reveal that the various programmes were concerned about the discrepancy between the recent-past profile and the profile-to-be-realised in the upcoming assessment period. When asked, they answered mostly that it would take time to make the transition with respect to the chosen profile and accompanying research content.

Based on their analysis, the Committee recommends the programmes to clarify in their institutions the relation between fundamental and applied research, and the possibility for researchers and programmes to engage in fundamental research even when it does not produce directly applicable results. The Committee also advises establishing a monitoring mechanism to track the contributions of research toward achieving and enhancing the selected programme profile. This systematic approach will enable programmes to effectively shift their focus toward applications and respond comprehensively to inquiries from non-academic stakeholders about the progress in realising the chosen profiles.

Financing Psychological Research

An increasing proportion of psychological research requires specialised instruments, such as MRI scanners, eye-trackers, and brain potential apparatus, as well as facilities meeting unique requirements, such as vibration-free building construction and soundproof cabins for psychophysiological measurements. Additionally, expert personnel are essential for conducting experiments, performing measurements, software programming, and equipment maintenance. For some programmes, their universities allocate some extra (but nevertheless insufficient) financial means, but other universities do not allocate any additional funding. Consequently, these programmes must seek alternative means of financing these facilities. In some instances, access to expensive scanners situated in university hospitals is facilitated, although researchers' access to these resources is often given low priority due to hospital needs, including patient care. The associated costs of utilising such equipment remain a financial challenge for psychology programmes. While the Committee understood that a national scanning facility is set to be established in Nijmegen, it remains uncertain whether this will alleviate the existing financial and logistical difficulties.

The Committee has noticed that the finances that go with the instrumentation of psychological research place an increasing burden on programme budgets that lack the financial advantages the natural sciences enjoy in comparable situations. The Committee has also noticed that the financial problems present a threat to the position of significant sectors of Dutch psychological research viewed in an international context when similar research receives better funding in other countries. The Committee agrees that the argument for improving the basic funding of psychology to align with that of the natural sciences is plausible, considering the expenses associated with lab-based experiments and other costly investigations. The Committee recommends the Executive Boards of the universities involved to consider aligning the funding for instrumentation, which includes facilities and specialised personnel, with the standards typically established for the natural sciences.

In addition to the cost of neuroimaging facilities and the need for specialised staff for experimental and computational work, some types of developmental and clinical psychology studies involve significant financial investments. This includes the cost (especially in terms of time and effort) of, for example, seeing individual patients, conducting in-depth interviews requiring qualitative analyses, testing children and adolescents from different age cohorts in longitudinal designs, etc. All these labour-intensive research activities differentiate psychology from research in the humanities and social sciences.

PhD Programmes

The Committee noticed that the international success of Dutch psychological research derives in large part from the extensive PhD programmes each of the faculties involved entertains. Many, if not all, programmes secure funding for PhD researchers and their research through external grants obtained from organisations such as the Netherlands Organisation for Scientific Research (NWO) and ZonMW, the European Research Council (ERC), as well as various other sources, including healthcare institutions, governmental organisations, and commercial organisations, including industries and the military.

It is important to distinguish among different categories of PhD candidates. The largest group comprises PhDs who are formally employed by the university. They receive a monthly salary and engage in research related to specific projects or programmes and engage in some teaching. Their employment contracts often include benefits like paid leave and access to university facilities. The second group consists of PhD candidates who secure scholarships or fellowships that cover their tuition fees and provide a stipend for living expenses. Examples include candidates with scholarships from the Indonesian or Chinese governments. Generally, they receive lower compensation than the first group.

The third category encompasses self-funded PhD candidates. They often work more independently and typically lack formal employment contracts with the university. The financial situations of external PhD candidates can vary widely.

The Committee noted that the experiences of PhD candidates can vary based on their funding source, employment status, and the specific regulations of the university or research institution where they pursue their PhD trajectory. The Committee noted some dissatisfaction among PhD candidates funded by scholarships regarding their unequal access to support for attending courses and conferences.

The PhD representatives the Committee interviewed were in general satisfied with their position as PhD researcher, including the supervision they received. There is a great sense of community among PhD candidates, and they seem well-organised within their universities. The Committee noticed that especially the PhD candidates (like the assistant professors) had internalised the requirements of open science and, in doing so, set an inspiring example for the senior researchers. On a more critical note, the Committee noticed a lack of clarity among some PhD candidates concerning the requirements for a dissertation. The Committee recommends the programmes to consider possible sources of discontent and find ways to mitigate them. Similar to the 2017 research review, the Committee also encourages supervisors and management to make sure that PhD candidates plan a trajectory that is feasible within the allotted contract time.

A Period of Transition

The Committee has observed that Dutch psychological research is currently thriving but is undergoing a period of multiple concurrent transitions. Some of these transitions are of a cultural nature, such as changes in the academic climate and human resource policies, while others are rooted in research policy, particularly the increasing emphasis on societally relevant research. And of course, coping with transition is a constant demand in psychological science because it is growing, maturing, and embracing new technologies. The most striking characteristic of the current transition period is that so many transitions occur simultaneously. The multitude of highly varying transitions may have the effect of obscuring what precisely is going on at what time. This uncertainty makes it difficult to recognise whether the outcomes align with the intended objectives and hinders the ability to intervene when necessary and guide the processes in the desired direction.

Despite the general impression the self-studies expressed, and the interviews confirmed, as well as the positive if not enthusiastic signals the Committee received, the Committee was not always convinced that the programmes are in control of the processes the programmes and their management set in motion. While the Committee acknowledges the uncertainty that significant changes may cause at their onset, it also wishes to emphasise the necessity to be in control as much as possible to avoid undesirable effects that, once effective, may prove hard to correct or to mitigate.

Given the transitions through which Dutch psychology must find its way, the Committee recommends monitoring the execution of these changes in relation to their realisation and workload issues. Monitoring needs to be done at the programme level but perhaps also at the overarching level of all programmes, including the programmes not included in this assessment. In addition, the Committee recommends the programmes to profit from the scientific knowledge available in the faculties concerning change processes in organisations and principles of personnel selection, assessment, and promotion, as well as knowledge about coaching expectations of work conditions, performance assessment, and career planning. Finally, the Terms of Reference state: 'The SEP assessments help to monitor and improve the quality of the research conducted by the research unit.' Given the ongoing period of transition in which the programmes are situated, the Committee recommends that

programmes closely monitor the quality of their research, find a way to assess the quality that is consistent with the SEP requirements and design an assessment procedure that enables the international benchmarking at any given moment.

All programmes worried about the plans the Government has restricting the number of bachelor programmes in the English language. If these plans become effective, English-language bachelors may have to be terminated. Because financing of universities primarily depends on the number of first-year bachelor students and the number of master diplomas, both including a research supplement, any reduction of the number of international students would also have serious consequences for the research programmes' resources, possibly involving staff reduction, a decreased attractiveness of Dutch universities for international staff, and negative consequences for research quality. The Committee has no other option other than to notice and acknowledge this worry.

Recommendations

The Committee holds great esteem for the quality and depth of Psychology in the Netherlands. Nonetheless, from an external perspective, we have identified several potential avenues for further advancement and enhancement in Dutch Psychology. Therefore, we provide several recommendations. We hope these recommendations will aid Dutch Psychology research in elevating their excellence to new heights and solidifying their status as leading institutions, both nationally and internationally, in the years ahead.

The Committee recommends:

- To quantitatively monitor the progress in aligning the programme research focus with the three chosen SSH themes, assess whether sufficient progress has been made, and monitor the influences that facilitate or hamper this alignment.
- To quantitively monitor and report the progress of open science activities, including preregistration of research plans, data storage compliance, and data publication and publish these results annually on programme websites.
- To implement a career-expectation management programme across all eight faculties and regularly evaluate its effectiveness. This programme should encompass providing clarity regarding career opportunities, performance expectations, and the necessity of acknowledging a certain level of uncertainty in career development.
- To provide researchers who prefer to work in smaller groups or alone the possibility to do so, to make clear that their preference does not damage their career prospects, and to address any concerns and uncertainties in this regard.
- To be transparent about the principles on which the personnel selection policy is grounded, considering the acknowledged tension in personnel and selection psychology between prioritising specific subgroups and emphasising individual talent.
- To clarify within institutions the interplay between fundamental and applied research and to allow researchers to engage in fundamental research even when it does not produce directly applicable results.
- (Directed at Executive Boards) To consider aligning the funding for instrumentation, which includes facilities and specialised personnel, with the standards typically established for the natural sciences.
- To address the lack of clarity among some PhD candidates regarding dissertation requirements.
- To implement a monitoring process to oversee the execution of the ongoing transitions in Dutch psychology. It is advisable to conduct monitoring at the programme level and possibly

extend it to encompass all psychology research programmes, including those not covered in this assessment.

- To develop a consistent assessment method in accordance with the SEP requirements to monitor the quality of the research and establish an assessment procedure that enables international benchmarking at any given moment.

4. University of Amsterdam

4.1 Organisation, strategy and targets

The Psychology Research Institute (PsyRes) of the University of Amsterdam investigates the cognitive, affective, and behavioural aspects of the human mind and its functioning. It hosts six research groups that broadly correspond to the classic subfields of psychology: Brain and Cognition, Clinical Psychology, Developmental Psychology, Psychological Methods, Social Psychology, and Work and Organisational Psychology. PsyRes is the largest psychological research institute in mainland Europe and as a result its research portfolio is both broad and deep. In the assessment period PsyRes had seven strategic aims:

1. Continue orientation towards fundamental, quantitative, and experimental research and maintain the high quality of research.
2. Increase opportunities to strengthen societal impact.
3. Sustain success rate in the acquisition of external grants.
4. Stimulate interdisciplinary research endeavours, both within and outside the institute.
5. Increase external visibility of the institute.
6. Increase diversity amongst staff members.
7. Remain at the forefront of promoting good research practices.

4.2 Research quality

There is no doubt about the outstanding quality of the research conducted in PsyRes. This is evidenced by the high number of publications in prestigious journals, by the substantial grant income, by awards made to individual members of staff, and by the citation data reported both in the self-evaluation and in the national self-evaluation documents.

The quality of PsyRes research is reflected by its top 20 position in all major rankings for the Psychology domain. In 2022, PsyRes ranked 9th in the QS ranking, 10th with USNews, 14th on the Shanghai Index, and 17th on the Times Higher Education ranking, which corresponds to a top position in mainland Europe. PsyRes research tends to be published in high-impact outlets. An international bibliometric benchmark shows that among institutions in the core areas studied within PsyRes, the UvA ranks second globally both in terms of paper count and total citation count, and first on Field Weighted Citation Index (FWCI).

The academic stature of PsyRes researchers is further demonstrated by their participation in the international process of publication and research evaluation: they serve as journal editors or associate editors, contribute to editorial and review boards, review grant applications, organise and participate in conferences, and deliver lectures in research schools. Furthermore, they are frequently invited as speakers to international conferences, and organise such conferences.

In the last five years, PsyRes has acquired €45M in grant funding, with the percentage of second stream income rising from 10,7% in 2017 to 22,3% in 2022. It is also evident that the high quality of PsyRes research is evenly distributed across the six programme groups, all of which are performing at a high international level.

In short, there is strong evidence that PsyRes has been successful in achieving aims 1 (high quality research) and 3 (acquisition of external research grants) of the seven strategic aims described above.

4.3 Societal relevance

PsyRes recognises the importance of its research for society and seeks to achieve this through collaborations with partners, developing tools and interventions, training the next generation of academics and professionals, and engaging with professionals, stakeholders, and the public. Good examples of societally relevant research are to be found in each of the six programme groups. Noteworthy examples are the externally funded nationwide research infrastructure to investigate poorly understood conditions such as ME/CVS, long COVID, Lyme disease, and Q-fever, which is led by members of the Clinical Psychology group; and the platform 'Data versus Corona', supported by a COVID-19 Urgent Grant, set up by members of the Psychological Methods group with the aim of using their skills as data scientists in helping society to combat the virus.

Evidence of the success of PsyRes efforts to produce societally relevant research can be found in the fact that contract research represents a healthy percentage of the total research income, ranging between 14% and 20% during the assessment period.

At the same time, PsyRes recognises that more needs to be done to increase the societal relevance of its research portfolio, which has in the past tended to focus on high quality fundamental research. To encourage its staff to address societally relevant research problems, it has introduced seed funding (Impact Grants, worth up to €25k) to help researchers develop collaborative research projects with external partners. PsyRes currently has 3 endowed chairs and plans to increase this number in the future to strengthen the links with external organisations.

4.4 Viability

PsyRes has developed the following strategic aims for the coming six-year period:

1. Stimulate collaboration and interdisciplinary research endeavours, both within and outside the institute.
2. Increase the institute's visibility and raise its profile, while preserving the freedom of individual researchers to pursue their interests.
3. Facilitate differentiation within teams of researchers, aiming for more synergy between fundamental and applied research.
4. Pave the way for differentiated career paths that do not only favour fundamental, but also applied research involving societal stakeholders.
5. Create a sustainable funding situation in accordance with its strategic aims.
6. Strike a balance between maintaining the breadth of its research and providing incentives for developing particularly promising foci.
7. Promote diversity, inclusivity, and equity.
8. Remain leading in developing and promoting good research practices, such as research integrity.

In the Committee's view, these aims are ambitious but appropriate, aiming to strike the right balance between maintaining PsyRes' established strengths in fundamental research and enhancing its ability to deliver research that is societally relevant. The PsyRes management group appreciates the importance of applied research and seeks to encourage and facilitate it, but at the same time recognises that such work typically depends on high-quality fundamental research, and that those members of staff who are better suited to fundamental research should also be enabled and encouraged to pursue it (hence the aims of facilitating differentiation within teams of researchers, and of paving the way to differentiated career paths).

PsyRes encountered a very challenging financial scenario during the previous six years but through collaborative and cooperative efforts at all levels of the institute found an effective way to address and overcome this problem. The Committee's impression is that the unit emerged stronger as a result of this experience. Committee members were impressed by the open and collaborative spirit that was evident in discussions with groups at all levels of seniority, which reflects well on the quality of the management team. This suggests that PsyRes is well equipped to meet the challenges that it will face in the next six years.

4.5 PhD policy and programme

The Graduate School of Psychology is responsible for the training of PhD candidates. The interviewed PhD candidates were positive about the opportunities offered and valued the flexibility to tailor their PhD trajectory to their wishes. A downside of this policy is the lack of clear-cut expectations about activities and research output. The Committee advises that PhD candidates' ideas about what is expected should be actively managed and expectations subsequently formalised, for example, during the annual review of the Training and Supervision plan. The variety of opportunities for PhDs is also reflected in the recruitment of PhD candidates for cross-disciplinary projects. In these cases, supervisory teams consist of (co)promotors from various disciplines. Interviews with senior staff show that they are aware of the risks that may be entailed in such projects.

Employed PhD candidates carry out teaching activities for 5-10% of their contract hours. Interviews with PhD candidates revealed mixed feelings about this requirement: teaching may be experienced as a distraction from or a welcome addition to their research training. This suggests a need to communicate clearly about the load of non-research activities, as well as the reasons why employed PhD candidates are expected to perform these activities. The Graduate School has initiated a pilot with 5.5-year contracts with a higher teaching load of 29% of the contracted hours. The self-evaluation report describes the potential benefits for both the PhD candidate and PsyRes. The Committee advises that the outcomes of the pilot should be monitored, particularly with respect to completion and subsequent employment, with adjustments made if needed.

In their report, the 2017 Committee suggested that the sense of community among PhD candidates should be enhanced. This has clearly been picked up: the 2023 self-evaluation report mentions initiatives designed to increase community and well-being among PhD candidates. The interviews with PhD candidates reflected the positive effects of these efforts. Indeed, one PhD project studies the well-being of PhD candidates, which is an excellent example of how in-house research can lead to improvements in practice.

4.6 Open science

It is evident that PsyRes values the principles of open science. Indeed, members of the Psychological Methods group have played a prominent role in advocating for open science and in making it practically possible. This has borne fruit. For example, the percentage of PsyRes publications that are openly accessible rose from 55% in 2018 to 92% in 2022.

PsyRes requires its researchers to practise good research data management throughout the research cycle, from the moment of planning data collection until the final publication of research results. The previous six years have seen a rapid succession of developments, including the appointment of three data stewards who help researchers with research data management following FAIR principles. Staff are generally happy with these developments, although there are some issues relating to General Data

Protection Regulation (GDPR) and to inconsistencies between PsyRes procedures and systems used in the wider university.

4.7 Working environment and personnel policies

4.7.1 Academic Culture

The Committee gained the strong impression that the academic culture in PsyRes is characterised by openness and inclusivity. Issues of social safety were explicitly discussed with PhD candidates and early-career researchers, and all present said that they feel safe working in PsyRes and that they value the attention paid to their personal wellbeing.

4.7.2 Human Resources Policy

PsyRes has greatly improved its profile with respect to gender diversity and is on track to achieving a more equal balance between male and female staff. At the same time, it recognises that there are other facets of diversity, such as ethnicity, where it is less successful. It is addressing the broader diversity issue in a number of ways, advised by a Diversity Advisory Committee led by a senior member of staff, focusing especially on recruitment. There is increasing cultural diversity among students taking the Research Masters courses, which will hopefully percolate up to PhD level and beyond.

The Committee noted that the current mentoring system for early-career researchers is ad hoc and voluntary.

The Committee discussed the issue of career progression with senior staff and with early-career researchers. All parties acknowledged the restrictions posed by the formation model, which limits the prospects for promotion. Given that PsyRes seeks to appoint early-career researchers who are already successful and ambitious, it is no surprise to find that Assistant Professors who see the limited prospects for future promotion feel frustrated. They value the open way in which the situation is discussed with senior colleagues but nevertheless experience the situation as potentially demotivating. The Committee noticed that their emphasis on career perspectives, admittedly of great importance to the individual, tends to cloud their appreciation of the positive aspects of the job and advises management to pay attention to this circumstance.

4.8 Conclusions and recommendations

4.8.1 Conclusion

The quality of PsyRes research is admirable, as reflected in its publications, impressive grant acquisition, and the strong international profile of many of its staff. PsyRes is taking good initiatives to ensure that its research portfolio as a whole achieves a good balance between fundamental research and societally relevant research. The strategic aims for the next six years are detailed and appropriately ambitious, and the Committee therefore assesses the viability of the research unit to be high.

4.8.2 Recommendations

The Committee makes the following recommendations for further improvements in the coming years:

- Ensure that moves to encourage more societally relevant research are not made at the expense of what PsyRes has traditionally done very well, namely high-quality fundamental research.
- Identify additional ways in which the bottom-up and programme-group-based research culture in PsyRes could be complemented by attractive incentives to collaborate across programme groups and with other disciplines.
- Consider implementing a systematic and obligatory mentoring scheme for early-career researchers.
- Address the knotty issue of career progression for early- and mid-career staff by ensuring that realistic perspectives for progression are discussed openly and transparently at all stages, from recruitment onwards. This could include discussing ways in which staff who feel frustrated by the limited opportunities for promotion could identify alternative means of achieving job fulfilment.
- More actively manage PhD candidates' ideas about what is expected in a good thesis, especially with respect to the volume of empirical work. The Committee recognises that there will be variation from subfield to subfield and from one candidate to another but having greater clarity on this variation would help candidate wellbeing and might also result in speedier completion, without sacrificing the quality of the work.

Appendix A - Programme of the site visit

Monday October 9

Time	Part
09:00 - 11:30	Preparatory meeting committee
11.30 - 12:30	Presentation Dashboard: overarching research output analysis
12.30 - 13.30	lunch
	Vrije Universiteit Amsterdam
13:30 - 14:00	committee preparation programme 1
14.00 - 14.45	management
14:45 - 15.00	evaluation
15.00 - 15.30	PhD candidates
15.30 - 15.45	evaluation
15.45 - 16.30	senior staff
16.30 - 16:45	evaluation
16:45 - 17:30	Early-career staff
17.30 - 18:00	reflecting programme 1

Tuesday October 10

Time	Part
	University of Amsterdam
08.30 - 09.00	committee preparation programme 2
09.00 - 09.45	management
09.45 - 10.00	evaluation
10.00 - 10.30	PhD candidates
10:30 - 10:45	evaluation
10.45 - 11.30	senior staff
11.30 - 11.45	evaluation
11.45 - 12.30	Early-career staff
12.30 - 13.00	Reflecting programme 2
13:00 - 13.30	lunch
	Open Universiteit
13.30 - 14.00	committee preparation programme 3
14.00 - 14.45	management
14:45 - 15.00	evaluation
15.00 - 15.30	PhD candidates
15.30 - 15.45	evaluation
15.45 - 16.30	senior staff
16.30 - 16:45	evaluation
16:45 - 17:30	Early-career staff
17.30 - 18:00	reflecting programme 3

Wednesday October 11

Time	Part
	Utrecht University
08.30 - 09.00	committee preparation programme 4
09.00 - 09.45	management
09.45 - 10.00	evaluation
10.00 - 10.30	PhD candidates
10:30 - 10:45	evaluation
10.45 - 11.30	senior staff
11.30 - 11.45	evaluation
11.45 - 12.30	Early-career staff
12.30 - 13.00	Reflecting programme 4
13:00 - 13.30	lunch
	University of Groningen
13.30 - 14.00	committee preparation programme 5
14.00 - 14.45	management
14:45 - 15.00	evaluation
15.00 - 15.30	PhD candidates
15.30 - 15.45	evaluation
15.45 - 16.30	senior staff
16.30 - 16:45	evaluation
16:45 - 17:30	Early-career staff
17.30 - 18:00	reflecting programme 5

Thursday October 12

Time	Part
	Leiden University
08.30 - 09.00	committee preparation programme 6
09.00 - 09.45	management
09.45 - 10.00	evaluation
10.00 - 10.30	PhD candidates
10:30 - 10:45	evaluation
10.45 - 11.30	senior staff
11.30 - 11.45	evaluation
11.45 - 12.30	Early-career staff
12.30 - 13.00	Reflecting programme 6
13:00 - 13.30	lunch
	Maastricht University
13.30 - 14.00	committee preparation programme 7
14.00 - 14.45	management
14:45 - 15.00	evaluation

15.00 - 15.30	PhD candidates
15.30 - 15.45	evaluation
15.45 - 16.30	senior staff
16.30 - 16:45	evaluation
16:45 - 17:30	Early-career staff
17.30 - 18:00	reflecting programme 7

Friday January 28

Time	Part
	Erasmus University Rotterdam
08.30 - 09.00	committee preparation programme 8
09.00 - 09.45	management
09.45 - 10.00	evaluation
10.00 - 10.30	PhD candidates
10:30 - 10:45	evaluation
10.45 - 11.30	senior staff
11.30 - 11.45	evaluation
11.45 - 12.30	Early-career staff
12.30 - 13.00	Reflecting programme 8
13:00 - 14.00	lunch
14.00 - 16:30	preliminary reflection programmes by committee
16:30 - 18:00	Joint preliminary feedback and conclusion

Appendix B- Quantitative data

Table 1 Research staff in # and FTE – University of Amsterdam

	2017		2018		2019		2020		2021		2022	
	#	FTE	#	FTE	#	FTE	#	FTE	#	FTE	#	FTE
Full prof[1]	18	10	19	9.6	19	10.1	20	10	20	9.8	20	9.8
Associate prof	18	7	18	8.9	16	8.6	16	7.6	17	7.5	18	8
Assistant prof	58	26.7	56	26.6	49	26.4	51	23.2	64	24.6	67	26.3
Postdocs	34	23.1	31	22	35	25.6	36	27.4	31	27.7	31	22.7
PhD candidates[2]	61	48.8	70	56	78	62.4	78	62.4	85	68	91	72.8
Total scientific staff	189	115.6	194	123.1	197	133.1	201	130.6	217	137.6	227	139.6

[1] Only researchers with an appointment between 1-1-2017 and 1-1-2023 are included. Not included: research appointments of < 0.1, student-assistants, retired researchers, guest researchers.

[2] PhD students employed by the UvA or on a scholarship. All PhDs count for .80 FTE.

Table 2 Funding – University of Amsterdam

	2017		2018		2019		2020		2021		2022	
Funding in M€/%	M€	%	M€	%	M€	%	M€	%	M€	%	M€	%
Direct funding[1]	11.092	66.9	9.351	60.2	10.866	57.7	11.388	61.1	11.271	57.8	11.956	61.8
Research grants[2]	1.774	10.7	2.396	15.4	3.181	16.9	2.727	14.6	3.277	16.8	4.313	22.3
Contract research[3]	2.559	15.4	2.954	19.0	3.708	19.7	3.932	21.1	4.350	22.3	2.682	13.9
Other[4]	1.152	7.0	821	5.3	1.082	5.7	588	3.2	600	3.1	390	2.0
Total funding	16.578		15.524		18.839		18.637		19.500		19.343	
Expenditure in M€/%												
Personnel costs	10.614	58.8	10.760	62.3	11.241	58.9	10.976	60.8	12.407	66.9	12.336	66.1
Material costs	3.142	17.4	2.131	12.3	3.309	17.3	2.091	11.6	1.270	6.9	1.443	7.7
Other costs	4.284	23.7	4.376	25.3	4.533	23.8	4.988	27.6	4.860	26.2	4.881	26.2
Total expenditure	18.040		17.268		19.085		18.057		18.538		18.661	

[1] The 1st flow of funds income is equivalent to Direct Funding. This includes:
- Performance budget: Promotions (K€ x number) and budget based on a surcharge on OWI performance (25%) *) Transferred State contribution: SEO funds.
- Matching budget: Based on need (derived from budgets 2nd and 3rd flow of funds) up to a maximum of the available faculty budget. **) Target budgets: Research Priority Areas, theme budgets.

  *) This is distributed within the UvA on the basis of credits and degrees.

  **) Faculty receive budget based on percentage of turnover:

  Matching 1st flow of funds competition   15%

  Matching now   60%

  Matching EU   35%

  Matching 3rd flow of funds   15%

[2] Research grants obtained in national scientific competition (e.g. grants from NWO and KNAW).

[3] Research contracts for specific research projects obtained from external organisations, such as industry, government ministries, European organisations and charitable organisations.

[4] Funds that do not fit into the other categories.

Table 3 PhD completion – University of Amsterdam (employed and scholarship)

Enrolment				Cumulative success rates[1]															
Starting year				≤ 4 yr		≤ 5 yr		≤6 yr		≤7 yr		≤8 yr		Not yet finished		Discontinued			
	M	F	M+F	#	%	#	%	#	%	#	%	#	%	#	%	#	%		
2013	4	9	13	0	0	6	46	12	92	13	100	13	100	0	0	0	0		
2014	6	3	9	0	0	6	67	6	67	7	78	8	89	1	11	0	0		
2015	9	16	25	3	12	8	32	13	52	15	60	15	60	5	20	5	20		
2016	3	9	12	1	8	4	33	8	67	9	75	9	75	0	0	3	25		
2017	8	6	14	0	0	2	14	3	21	3	21	3	21	10	72	1	7		
2018	8	16	24	1	4	2	8	2	8	2	8	2	8	20	84	2	8		
2019	4	11	15	1	7	1	7	1	7	1	7	1	7	14	93	0	0		
Total	42	70	112	6	5	29	26	45	40	50	45	51	47	50	45	11	10		

[1] The public defence counts as the end of the graduation period (not the acceptance by the committee).