

Erasmus School of  
Social and  
Behavioural Sciences

# Balancing Attachment

Replication, Translation,  
Academic Freedom

Prof. M.H. (Marinus) van IJzendoorn

# Balancing Attachment

Replication, Translation, Academic Freedom

## Prof. M.H. (Marinus) van IJzendoorn

Valedictory Lecture presented by  
M.H. (Marinus) van IJzendoorn - professor of Human Development  
at Erasmus School of Social and Behavioural Sciences,  
Erasmus University Rotterdam

on Friday 12 May 2023

## Colofon

**Balancing Attachment  
Replication, Translation, Academic Freedom**  
Prof. M.H. (Marinus) van IJzendoorn

**Vormgeving**  
PanArt communicatie en mediadesign

**Druk**  
OBT, Leiden

© Prof. M.H. (Marinus) van IJzendoorn, 2023

Alle rechten voorbehouden.  
Niets uit deze uitgave mag worden verveelvoudigd, opgeslagen in een geautomatiseerd gegevensbestand en/of openbaar gemaakt in enige vorm of op enige wijze, hetzij elektronisch, mechanisch, door fotokopieën, opnamen of op enige andere manier zonder voorafgaande schriftelijke toestemming van de uitgever.

# Table of contents

|   |           |
|---|-----------|
| <b>Introduction</b> .....                                       | <b>6</b>  |
| <b>Replication</b> .....  | <b>6</b>  |
| Invalid self-report questionnaires for complex constructs ..... | 8         |
| <b>Academic freedom</b> .....                                   | <b>10</b> |
| Social safety concerns .....                                    | 11        |
| Three causes of social unsafety.....                            | 11        |
| Academic freedom should be paramount .....                      | 13        |
| Power failure.....  | 14        |
| Unlimited power to the dean.....                                | 15        |
| <b>Translation</b> .....  | <b>16</b> |
| Developing the Video-feedback Intervention .....                | 16        |
| Empirical, ethical and economic considerations.....             | 17        |
| <b>Thank you</b> .....  | <b>19</b> |
| <b>References</b> .....   | <b>21</b> |

# Introduction

Dear rector magnificus,  
Dear audience in vivo and on livestream,

What can young parents do when their infant keeps crying, almost day and night? What can be done to deal with a disobedient and aggressive toddler? How can we help parents and other caregivers to restrain their impulses to punish a child too harshly or inconsistently? Is it possible at all for parents to raise their children when DNA, brains or hormones may determine anyway how they develop? Questions of great societal importance, but difficult to answer. Almost half a century ago, in 1975, I started doing my first serious research with the firm resolve to focus on societal relevance. I wanted to make lives of parents, caregivers and children better. Rest assured that the firm resolve remained. But what about the societal impact of my scientific work?

Two types of impact exist. The first is evidence-based critique of fake facts and false ideologies such as the mistaken idea that we are our brains, or genes, or hormones. The second is the development of evidence-based support of families in dire circumstances, for example dealing with a persistently crying infant or a terrible two with challenging behavior problems.

I learnt the hard way that both types of societal impact require replicated research results. Without replication no translation to policy or practice. Only slow, programmatic science can fulfill its societal promise. But the growing emphasis of university administrators and funding agencies on valorization curtails the academic freedom to pursue responsible translation. Quick fixes are bound to fail. It took me and a large team of collaborators some 35 years to develop and thoroughly test our evidence-based video-feedback intervention to promote positive parenting and sensitive discipline. More later in this lecture.

# Replication

Replicability has been one of my main interests from the outset and it led to quite some disappointments. The most striking example may be our non-replication of the famous longitudinal Baltimore study on infant crying. The topic had grabbed my attention when babysitting my 6-month-old niece Roos whose weeklong unstoppable crying still resounds in my ears.

Silvia Bell and Mary Ainsworth (1972) summarized their main result in the Baltimore study as follows: "...the single most important factor associated with a decrease in frequency and duration of crying ...is the promptness with which a mother responds to cries". The study on 26 families, intensively observed in their homes for a year, has been cited almost 2000 times, and had a great impact on the practice of childrearing and managing infant crying. The obituary of Ainsworth in the New York Times was telling: "Though much of Dr. Ainsworth's research was for an academic audience, it also had a practical side. She argued ... that picking up a crying baby does not spoil the child; rather, it reduces crying in the future." (New York Times April 7, 1999).

The Baltimore finding that children would cry less when receiving immediate response seemed also theoretically crucial in the competition between attachment theory and learning theories that emphasized conditioning and the power of reinforcement in shaping behavior (Bosmans et al., 2020), still a dominant strategy to socialize overactive puppies. At the start of the replication effort, some 40 years ago, we were still young, inexperienced, and ignorant of the opposition any falsification of a cherished proposition in a fledgling theory would trigger. With former PhD student Frans Hubbard, we designed a longitudinal replication study with better measures and analytic strategies, and a twice as large sample. What we found was totally unexpected. Parental prompt responding early in the infant's life did not reduce crying, but on the contrary increased the frequency of infant crying later in the first year, as conditioning theory would have predicted (Hubbard & Van IJzendoorn, 1991; 1994).

Our non-replication has been cited only about 50 times, mostly in pediatric journals but not in the attachment literature, and it has not been picked up in the popular parenting press. Surely one failed replication is insufficient to change the course of a scientific research program and should not lead to a change of policy or practice recommendations. Research programs rightly protect themselves against early falsifications (with a 'protective belt' as Imre Lakatos, 1980 called it) because alternative interpretations of the replication failure often make sense, like a false measurement theory or incompetent researcher.

Unfortunately, however, in the last three decades no independent replications of the Baltimore cry study have been conducted, despite –or maybe because-- it is testing a core hypothesis with high practical relevance. One of the tough personal lessons was that researchers who fail to replicate a foundational study run the risk of being blamed for their message. It might feel indeed a bit like being hit by a protective but painful belt.

At that point in time, 30 years ago, I doubted whether the choice to spend my academic career in a soft science like the study of child-rearing should be reconsidered. An irrational rumination for several reasons. Lack of replicability is part and parcel of research programs because anything goes (Feyerabend, 1975) at least in

the context of discovery, full of bold conjectures and multiple variations waiting for selective retention. And indeed, lack of replicability is also widely spread among the so-called 'hard' natural, biomedical and behavioral sciences. In 2005 John Ioannidis threw a heavy stone into water with his famous PLOS Medicine paper titled 'Why most published research findings are false', attracting more than a million readers and cited more than 7,000 times. It triggered growing awareness of a replication crisis in the biomedical sciences and pushed non-replicability also into the forefront of developmental sciences.

For example, neurocognitive imaging studies using EEG or MRI have become tremendously popular with funding agencies, journals, and the media, maybe because of the attractively colored pictures of brains that seem to shed light on the darkest secrets of your inner mental life. And indeed, our former PhD student Sandra Thijssen showed that children in the scanner can easily be made to believe that the experimenter is able to read their minds and become afraid to tell a lie (Thijssen et al., 2017). Colorful pictures of the brain in action are almost as impressive as the colorful pictures of black holes in astronomy. Maybe Mick Jagger was right, though, to paint it black where no color can be seen. Rather depressive are the basic psychometrics of simple task-related neural imaging paradigms. With former PhD student and postdoc Rens Huffmeijer (Huffmeijer et al., 2014; Heckendorf et al., 2019) we found dramatically poor reliabilities for tests with EEG and MRI, later supported by simulations and meta-analytic evidence (Elliot et al., 2020).

Power failure is one of the major causes of the replication crisis, small sample sizes increasing the risk for false positives, that is, strong but untrue results (Button et al., 2013). In our meta-analyses on attachment and other developmental phenomena we detected power failure in almost every field of inquiry, with some notoriously outlying but very influential pioneering studies. Those are 'winner's curses' leading to uncritical embrace of impressive initial research results turning out to be lucky shots.

### **Invalid self-report questionnaires for complex constructs**

Besides power failure, the overuse of simplistic questionnaires for measuring complex psychological phenomena is another leading cause of the replication crisis. It promotes fishing expeditions in search of the white whale but leads to discover Paul Meehl's white noise, associations between measures because of their shared systematic error variance. The almost obsessive-compulsive fixation on the magic alpha level of .05 doesn't help either. Some 35 years ago, Rosnow and Rosenthal (1989) already speculated that: "...surely, God loves the .06 nearly as much as the .05."

Let's take the famous Strengths and Difficulties Questionnaire (SDQ) cited more than 10,000 times and measuring behavior problems and prosociality as an example. Several questions with ambiguous double content trigger response biases: "I try to be

nice to other people. I care about their feelings." But one can be nice without caring or caring without being nice. In a study with former PhD student Claudia Vrijhof we split each of the five ambiguous SDQ items into two separate questions. We found that the means of the two versions differed half a standard deviation, with only 20% overlap in variance between the two versions (Vrijhof et al., 2016).

Another example is the big gap between what people say or perceive and what they do or what is really the case. In one of our earliest studies on attachment with former PhD student Marion van Dam we found no overlap between parental reports of their infants' attachment security compared to observed attachment by trained raters (Van Dam & Van IJzendoorn, 1988). After a decade of hard labor with my Berkeley colleague Mary Main and former PhD student Erik Hesse on a self-report questionnaire assessing attachment in adults we had to give up. Promising results in the first round were non-replicable in next testing rounds (Hesse & Van IJzendoorn, 1991). A formative failure that cured me of attachment to self-report measures.

It is seriously alarming that respondents are willing to answer any question, even if asked to rate nonsense items such as "I have headaches that are so severe that my feet hurt". Our Vietnamese PhD student Nhu Tran was surprised to see that in her sample of more than 2000 Vietnamese adolescents some 25% responded affirmatively to this nonsensical item (Tran et al., 2017). In a study with PhD student Jana Runze on 8-year-old Dutch twin children and their parents in our L-CID study we found a similar bias to respond to Wildman-type quaint questions such as: "When I am stressed, I can feel it in my feet"). And we even found that the bias to support nonsensical content showed 44% twin heritability.

We also applied molecular genetic methods to uncover the heritability of this acquiescence response bias. In the same L-CID study, parents and children spat some saliva in a small tube from which DNA was extracted. Jana Runze with former PhD student, now postdoc Irene Pappa computed polygenic scores for educational attainment, IQ and income based on several large Genome Wide Association GWAS studies and applied it to our participants' DNA data. We found that higher polygenic scores for educational attainment and income but not IQ predicted lower scores on the nonsensical Wildman items (Runze et al., 2023). This suggests a genetic basis for the bias to give agreeable, socially desirable answers to ambiguous items.

Some 40 years ago I showed that well-educated subjects are inclined to respond in a systematically biased way even to answers without questions, with a preference for 'yes' instead of 'no', 'sometimes' instead of 'always' or 'never', or 'agree' instead of 'indifferent' or 'disagree'. Almost no student declined to answer this absurd questionnaire without questions (Van IJzendoorn, 1984). No questions needed for systematic answers.

In search for genomic variants that are statistically associated with a complex trait, often oversimplified questionnaires are used. Hundreds of thousands respondents are asked one or two multiple choice questions (for example: "do you feel happy") to measure happiness to detect the expected tiny genetic signals (Ward et al., 2022). GWAS research is truly exemplary for its emphasis on statistical power, correction for multiple testing and stringent replication criteria. But genotyping and phenotyping are totally out of balance in these cohort studies. Less quick and dirty questionnaires and more observational and unobtrusive ambulatory measures are urgently needed.

It is a truism that Friedrich Nietzsche more than a century ago quipped: "...we are personally ignorant about ourselves", which is of course the very reason why we need developmental sciences to make sense of our emerging selves in social context. It is time to stop using questionnaires in serious developmental research on complex phenotypes.

## Academic freedom

The topic of the middle part of the triptych in this lecture is academic freedom, the necessary condition for both replication –the first part -- and translation –the last part of this lecture. A couple of weeks ago I visited the London exhibition of the Wellcome Trust on milk. At the entrance I was warned that some of the objects might lead to uncomfortable feelings. Maybe the same warning is now in order because my topic is the tension between social safety and academic freedom. Discussing the tension might cause feelings of unsafety but academic freedom requires tolerance for unsettling debates. As an 'expert by experience' I want to share my thoughts on this increasingly urgent topic.

In the roaring seventies of the last century, a small band of vocal students led by young faculty members at the University of Amsterdam effectively hindered and heckled some professors in their teaching or research (Van Esterik, 2016). These professors would have unpopular, politically incorrect ideas. Mobbing was the name of the game. As an undergraduate I experienced the dismantling of some of the best (neurobiological and statistical) parts of the educational curriculum because the mob deemed them irrelevant for the study of child development. It took several decades for university administrators to rehabilitate Daudt, Buikhuisen and other victims of the mob.

## Social safety concerns

Currently, controversies that infringe on academic freedom are mostly related to social safety. Some months ago, law students at Stanford University interrupted an invited lecture by a conservative federal judge because they felt uncomfortable by the speaker's offensive so-called 'anti-woke' viewpoints. Increasingly, students and faculty alike complain about feeling unsafe because they feel high pressure to achieve, or feel their ideas are ignored by their superiors, or because they are confronted with unwelcome feedback.

Or they feel easy targets of such mostly anonymous complaints. In 2018, nearly 300 academics including senior professors and lab directors at top universities in the UK were accused of bullying students or colleagues. A culture of so-called 'micro-aggression' seemed uncovered.

One of the largest grant foundations worldwide, the Wellcome Trust in the UK, defined bullying as "any offensive, intimidating, malicious or insulting behaviour (which) *can make* the person being bullied *feel* vulnerable, upset, humiliated, undermined or threatened." (Wellcome Trust, n.d.). This definition shows that bullying is a mixed bag in which the feelings of the possible victims are crucial. If only feelings of the complainants are taken into account, no further rational or legal discussion is possible: feelings are always undeniable. Truth- or fact-finding needed for the protection of accuser and accused is impossible. Being accused of harassment becomes the same as being convicted.

Social safety is a 'meme' in the sense of Richard Dawkins' (1989) concept of cultural evolution. It spread rapidly through governmental agencies, hospitals, police forces, NGOs, art and sport institutions, the entertainment and hospitality industry, publishers, political parties, the parliament, and academia. In one of his columns Marcel Levi, current director of the Dutch Research Council and former head of the University College London Hospitals, complained that social safety had become a buzzword without precise content and with ever expanding borders (Het Parool, 12 -11-2022). He noted that employees sometimes invoke social safety issues when they receive negative but professional feedback on their functioning or when they felt that a colleague or supervisor was irritating or intellectually dominating. The damning responses in the regular and a-social media were immediate, and several individuals and even organizations rushed to demand his resignation. Which, luckily and wisely, he did not follow.

## Three causes of social unsafety

Let's take a closer look at what is at stake here. In academic institutes some structural features elicit social safety concerns that impinge on academic freedom. The first is the hierarchical structure of academic organizations with full professors, chairs,

deans and vice-chancellors, who supervise the tenured faculty and decide about their promotions, often on subjective, not quantified grounds. The current move towards a narrative system for evaluating and rewarding academic staff might tighten instead of leveling the academic hierarchies. Better make every tenured faculty *professor* like in Belgium or in the USA as I have been suggesting for two decades and now is proposed by the Young Academy in our country. In contrast to the narrative approach, a general professorial status would NOT lead to Alice's Dodo bird verdict but to more fine-grained assessment that makes birds of a feather under their gowns truly different.

Secondly, way down the ladder we find in many universities as much as 50% of the workforce with a fixed or flexible contract who have to finish their doctoral thesis or postdoc publications in a too short time period, always with an eye on the next temporary grant or job. This is the revolving door policy, damned in a recent report of the European Parliament on academic freedom. In academia we have strong employers' associations and weak labor unions.

Moreover, some large faculties at Erasmus University Rotterdam and VU Amsterdam, require PhD students to have 4 or more published papers included in their dissertation. This is simply curtailing the academic freedom of professors who lose their autonomy to decide what a defensible dissertation is. My policy as a PhD supervisor has always been to refrain from demanding a minimum number of published papers. Former PhD student Carlo Schuengel got one of my three highest distinctions ('cum laude') based on one paper in press and one unpublished paper. This paper later became a highly cited article (Schuengel et al., 1999). An organization with unrealistic demands is surely unsettling, intimidating and unsafe.

The permanently changing team composition is often not only a waste of human capital but also makes it impossible to evaluate and reward the team instead of individual researchers. That leads to my third structural feature of unsafe universities. Modern scientific research is genuine teamwork, it functions like a symphony orchestra in which each member of an excellently functioning team is indispensable for the operation and success of the collective.

Nevertheless, the reward structure is still focused on the alleged 'brilliant' front man or woman who is loaded with grants and awards. Most extreme example is the Nobel Prize for a maximum of three scientists working on the same topic, an archaic artefact. Dutch physicist Martinus Veltman complained that the Nobel Prize had thrown an awful shadow over his life and his relationships with colleagues. He suggested to abolish the prize –albeit after he had received one (Van Delft, 2023). Twenty years ago, I was the happy recipient of the wonderful Spinoza Prize incorrectly labeled the Dutch Nobel prize. Rich soil for professional jealousy which should be abolished. But I don't complain.

Universities are places of intense (team) competition with high stakes in terms of discoveries, publications and reputations. In such organizations everyone should, within broad boundaries of tolerance and true respect for real diversity, behave in accordance with non-abusive or exploitative interactions and relationships. Any misconduct violating the law should be brought to (fair) trial for safeguarding the rights of possible victims and accused perpetrators alike. There is no place in academia for sexual assault or coercion, nor for other criminal offenses. And in truly transparent and truth-finding academia there should be no place for non-verifiable anonymous accusations.

### **Academic freedom should be paramount**

But universities are NOT communities, not a group of people who share common personal goals, values, ideologies, rituals and warm relationships. In his Leiden anniversary lecture (Dies lecture) in 2018 Carel Stolker, former vice chancellor of Leiden University, advocated for academic freedom, but considered a safe workplace "essential" because "...the University (is) much more a community of people than an organization. Good mutual relations are essential for a community." (Stolker, 2018).

I wholeheartedly disagree with this prioritizing community values above academic freedom. I stipulate academic freedom as the right of scholars in their field of expertise to conduct research, publish their findings, criticize, and teach, without political, institutional, ideological interference, and the threat of cancelling, even if --or rather: especially if-- their theories or findings run counter to prevailing views. Academic freedom is not the cherry on top of the cake. To quote a much-cited Yale report (Committee on Freedom of Expression at Yale, 1974): "For if a university is a place for knowledge, ... it cannot make its primary ...value the fostering of friendship, solidarity, harmony, civility, or mutual respect. ... it provides a forum for the new, the provocative, the disturbing, and the unorthodox." An excellent university excels in being unsettling, was the answer of the dean of Stanford Law School, Jenny Martinez (letter on March 22, 2023), to her upset students and faculty.

Academic freedom is a basic right, essential for independent, open, transparent science, only to be limited by the law. In some countries (including the Netherlands) academic freedom is a fragile and undocumented right because it is not anchored in the constitution or in the law. We must treat academic freedom with care because it has become increasingly under siege. On the Academic Freedom Index, The Netherlands is ranking a deplorable 24th among the European Union states, and it has been declining in the past few years (Kinzelbach et al., 2023).

## Power failure

Sloppy research should be freely discussed in the academic forum without sanctions or retaliations, regardless of the status, position, or sensitivities of the scientists involved. Everyone agrees with such a truism, in theory that is. But what about the harsh reality? Some years ago, the vice chancellor of Leiden University presented me with an agreement for signature, with the following obligation: “Prof. Van IJzendoorn will refrain from commenting, in any form, on the research performance and results of employees of the University of Leiden.”. The names of Carel Stolker and me were listed under the contract, and signing it would permanently curtail my academic freedom. A ridiculous contract because it concerned past, present and future publications of anyone working in whatever Leiden department –even the astronomy department was not excepted from this cancelling. The lecture today demonstrates that I refused to sign. No academic should ever be pressed to agree with any nondisclosure contract violating their academic freedom.

Bone of contention was a paper titled ‘Implicit Racial Bias in Black Pete Study’, my critical review of a flawed study on “Black Pete through the eyes of Dutch children” by Judi Mesman, former chair of my department and later dean of Leiden University College. Black Pete is historically rooted in the Black Face tradition. He acts as the simple-minded blackened helper of Saint Nicholas who brings presents to the children. Mesman decided “to examine children’s views on Black Pete” and concluded that children “evaluate Black Pete very positively” (Mesman et al., 2016). In my re-analysis of the dataset I found that the “convenience sampling” had resulted in an overwhelming majority of white children from higher socio-economic backgrounds living in predominantly white neighbourhoods (Van IJzendoorn, 2016). No wonder they were very enthusiastic about Black Pete as the “donor of presents.”

The authors agreed immediately that a more diverse sample was needed: “The authors are happy to report that the second part of this study is well under way, and that this part includes exclusively children with dark skin.” Of course, an excellent response, although unfortunately even after seven years no report has been published.

Higher up in the hierarchy, my critique, however, led to the attempt to curb my academic freedom. In a tweet Carel Stolker explained that this action had nothing to do with academic freedom, but only with social safety requiring that colleagues should interact with each other harmoniously. And that is exactly where the shoe pinches. If no laws are broken, academic freedom should not be curbed in favour of harmony at the workplace. Ironically, Stolker now is chairing a committee at the University of Amsterdam to evaluate another case of social safety versus academic freedom, and I predict the latter will end up on the losing side.

## Unlimited power to the dean

The recent case of Rosalind Franklin Fellow and Associate Professor of Organizational Behavior Susanne Täuber shows why. Täuber published a critique of the University of Groningen’s failed equal opportunity policy (Täuber, 2020). The dean of her faculty demanded the author and the scientific journal to retract the paper, which of course was denied. In the aftermath of this conflict the dean dismissed her from the university (Upton, 2023). The absolute worst was that a judge supported the dismissal because “even if Article 10 of the European Convention on Human Rights (freedom of speech) would have been violated still the employment relationship remains disrupted and the present working conditions untenable” <https://uitspraken.rechtspraak.nl/#!/details?id=ECLI:NL:RBNNE:2023:854>; my translation]. Although Tauber explicitly appealed to her fundamental right of academic freedom to publish a scientific article, in the final judgment only freedom of speech was mentioned and found insufficient. Social unsafety feelings were legally allowed to supersede academic freedom. In the Netherlands, the power of a dean to terminate any employee, including tenured professors, has become almost unlimited. Power corrupts, and absolute power corrupts absolutely. Tenure has become an empty shell. A simple, even one-sided feeling of “Incompatibilité des humeurs” is sufficient to get rid of someone.

Royal Netherlands Academy colleague Naomi Ellemers is right that much earlier in any conflict about social safety, universities should invest in prevention and mediation to avoid escalation. In escalating disputes everyone loses, and as I showed academic freedom is the first to go. The Royal Netherlands Academy report titled ‘Social Safety in Dutch Academia. From Paper to Practice’ (2022) offers several useful guidelines on how to intervene early. But when escalation is unstoppable, formal safeguards for cases where claims about social safety threaten academic freedom are urgently needed. Justifiable rights of both the accused and accuser should be guaranteed, and academic freedom should be anchored in national constitutions. An independent foundation much like the Dutch national committee for scientific integrity LOWI, might help solving social safety issues, while protecting academic freedom. Social safety concerns should never trump academic freedom. We would run the risk of a new kind of McCarthyism (Reichman, 2022).

Karl Popper (1959), philosopher of science, argued that we can only approach truth by undermining cherished but untrue assumptions. Donald Campbell (1960; Hofhuis, 2022) argues that the basic mechanism of science is the evolutionary dynamic of “variation and selective retention”, that is the promotion of wild ideas, bold hypotheses and daring theories, and subsequent rigorous selection in sometimes fierce adversarial clashes.



In almost half a century in academia, I received about 2000 pages of critical reviews of my work, and still counting. At first sight these criticisms trigger my primitive response to blame the messengers, these stupid reviewers. And the peer review system indeed sometimes does not work well. But mostly it does, and this life-long learning experience has been unparalleled. It should remain one of the major privileges in any academic career.

## Translation

Back to a brighter side of our work for the third and last part of the triptych. I propose that only scientific results that have been successfully replicated multiple times and for which meta-analytic evidence is available should be translated into recommendations for policy or practice. Paraphrasing John Ioannidis' provocative statement: most translations of developmental and family science to policy or practice are false. The replication crisis seems to be lost in translation.

But even multiple replications are not sufficient. At least two other necessary conditions should be met to bridge the gap between replication and translation. The first is that we need a bridge between what 'is' the case and what 'ought' to be done. The second is that interventions should have a favorable cost-benefit balance. I illustrate these conditions with one of the highlights of my translational career.

### Developing the Video-feedback Intervention

About thirty years ago, Femmie Juffer, Marian Bakermans-Kranenburg and I discussed the development of an early parenting intervention designed to promote positive parent-child interactions, Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (Juffer et al., 2017). I had been lucky to be able to recruit Femmie as an assistant professor who in her PhD research had conducted an impressive intervention supporting adoptive parents. At that time I was disappointed about the effects of a parenting intervention conducted with my former PhD Mirjam Lambermon, using pre-fab videoclips to model sensitive parent-child interactions (Lambermon & Van IJzendoorn, 1989). Marian just had her first infant, providing firsthand parent-child material for a try-out. She also was lead author on a meta-analysis artfully titled 'Less is more' (Bakermans-Kranenburg et al., 2003), showing that shorter, interaction focused interventions with real-life video-feedback yielded the strongest effects compared to a multitude of other, mostly broadband approaches.

We developed the VIPP-SD intervention based on attachment theory, with a focus on caregiver sensitivity, and on social learning theory, in particular learning how to avoid coercive cycles. A coercive cycle is a trap that children set for their parents in

the supermarket crying ever louder that they really want to get this candy (Bosmans et al., 2022). Until desperate parents finally give in. Families with children at risk for externalizing behavior problems might profit most from VIPP-SD (O'Farrelly et al., 2021; Van IJzendoorn et al., 2022).

The VIPP-SD method consists of six intervention sessions each lasting 60 to 90 minutes. In the first two sessions, the focus is on building a working alliance. The video feedback concentrates on child communicative signals, and on the parent's strengths. How does the child signal it wants to play without interference? And what does a parent do when a normally aggressive terrible two shows compliant behavior? Many parents know how to be warm to their children. But they find themselves incapable to deal with aggressive behavior and to set clear and consistent limits. In sessions 3 and 4, the focus is more on improving parenting behaviors. Moments of ineffective parenting are now discussed, suggesting alternatives while showing empathy for the parent. Video-recordings are mirrors for the parent to reflect upon. The final sessions 5 and 6 are boosters. In all sessions, the interveners do not play the role of expert, in contrast, the parents are explicitly seen as the real experts on their own child. This is essential for building rapport and empowering the caregiver's feelings of competence (Bakermans-Kranenburg et al., 2019).

### Empirical, ethical and economic considerations

The video-feedback intervention has been experimentally tested in 25 randomized controlled trials (RCTs) comprising more than 2,000 parents and caregivers from eight countries (Van IJzendoorn et al., 2022). Parent-child interaction was always rated by observers unaware of whether a parent and child had received the intervention or not. Last year we published a meta-analysis showing that the VIPP-SD intervention is effective in enhancing parental sensitive responsiveness and sensitive limit setting. The intervention also promoted a secure child – parent attachment relationship, suggesting that sensitive parenting *causes* attachment security, a huge theoretical bonus of applied work (Van IJzendoorn et al., 2022).

This year our VIPP-SD program was formally approved by HomVEE, the federal evaluator of home-visiting programs in the USA (Sama- Miller et al., 2020). Our parent coaching program was evaluated as evidence-based. This confirmed an earlier approval by the Netherlands Youth Institute (NJI).

However, even with this empirical evidence-base, still two important conditions for a firm bridge between science and practice are missing. First, the bridge between the effectiveness of VIPP-SD ('is') and the desirability of promoting secure attachments in families ('ought') cannot be taken for granted (Van IJzendoorn & Bakermans-Kranenburg, 2021). It must be constructed, for example by assessing this desirability from the perspective of the parents.

This is what we studied with the so-called Q-sort method in several countries and cultures, showing that a large majority of parents consider both sensitive parenting and secure attachment as highly desirable. A Q-sort is a large set of behavioral descriptions that have to be sorted in 9 categories from not at all applicable to perfectly applicable to the behavior of the child or the parent. The Q-sort methodology, with the same number of items in each of the 9 categories, protects against social desirability biases of questionnaires.

In one of our studies including 26 different cultural groups, more than 750 mothers sorted the Maternal Behavior Q-Sort according to their ideal image of how a parent should interact with their children. The parents strongly supported a type of parent converging with the concept of sensitive parenting we want to promote with our video-feedback intervention (Mesman et al., 2016). A similar study with the Attachment Q-Sort showed high convergence between attachment experts and mothers in six different countries on the desirability of secure attachment behavior, another goal of our intervention (Posada, 2013).

A second condition before disseminating an intervention in a large population, is a favorable cost-benefit balance (Van IJzendoorn & Bakermans-Kranenburg, 2020). The costs of implementing the VIPP-SD intervention have been estimated in our pragmatic randomized trial in the United Kingdom. Paul Ramchandani and Christine O'Farrelly now at the University of Cambridge led this pre-registered trial. 300 families with a toddler at risk for conduct problems were randomly assigned to the video-feedback or control group. Video-feedback reduced the level of conduct problems in the toddlers substantially (O'Farrelly et al., 2021a). The all-in cost per family compared to usual care amounted to £1,450 (per financial year 2017-2018; O'Farrelly et al., 2021b). My colleague in Manchester, Jonathan Green, and his collaborators showed that every dollar invested in a variant of our program (iBASIS-VIPP) for children at risk for autism would return three dollars in savings in childhood, with increasing returns in adulthood (Segal et al., 2023). A Virtual VIPP developed with Eloise Stevens of the Anna Freud Centre in London might help to bring costs down if effective (Van IJzendoorn et al., 2023).

From a comparative perspective it is intriguing that the Dutch Preventive Intervention Team or PIT project of Hanna Swaab (2012) and colleagues costs 18,000.- Euro per family. It ranked highest on costs per unit in Spanjaard's (2019) list of interventions focusing on prevention of externalizing behavior. More importantly, Spanjaard mentioned in 2019 that randomized effectiveness studies on PIT were missing. Nevertheless, the PIT intervention was rolled out some 10 years ago in Amsterdam and in Leiden. April 2023 I still could not find any scientific evidence that this expensive PIT program would have a positive effect on the families involved. By the way, this shows that it is crucial for scientific progress to have the academic freedom for critical but well-documented debate, even vis-a-vis a (former) Leiden dean.

What about the benefits of the VIPP-SD program? Benefits might be expressed in standardized effect sizes. According to conventional criteria, VIPP-SD shows medium effects of half a standard deviation on parenting and child attachment security. Societal benefits of secure compared to insecure attachments in adolescents with conduct problems was recently estimated to be almost £3,500 per individual and these benefits may accumulate across the lifespan (Bachmann et al., 2022). Compared to the VIPP-SD investment of £1,450 per family this early intervention has substantial financial returns.

Most importantly however is its revenue in more secure relationships between children and their parents. Secure children have a greater chance to become socially skilled adults who will thrive as sensitive parents and as confident workers even in challenging, competitive or unsettling environments.

You will find more about issues addressed in this lecture in the forthcoming book *Building Bridges Between Replication, Translation and Academic Freedom*, London: UCL Press.

## Thank you

Thanks to Erasmus University Rotterdam for extending my employment for five years after the obligatory retirement age of 66 when I became emeritus at Leiden University.

Thank you support staff, students, doctoral candidates (almost 90 by now), postdocs, colleagues, countless scientific adversaries and reviewers, who all taught me more than you can imagine.

I want to highlight my special gratitude to some of them:

Saskia Euser and Bianca Langhout-van den Bulk, admirable postdocs in the Leiden Consortium for Individual Development in stormy weather;  
Femmie Juffer, dependable colleague for 30 years who brought adoption research to our team;  
Gea van Dam en Esther Rapmund-Peelen, for their indispensable secretarial support during my Leiden years;  
Yvonne van Iperen, my left and right hand, and right-brain and left-brain during my stints as department chair and faculty dean;  
Vincent Jaddoe, Henning Tiemeier, and Pauline Jansen for their generous hospitality in Generation R;

Robbie Duschinsky for hosting me at Cambridge University when I was looking for Bob Dylan's 'shelter from the storm';  
Zhengyan Wang and Xi Liang for introducing me to developmental psychology in China with its specific family system;  
Chantal Kemner, Eveline Crone and Marian Bakermans-Kranenburg for keeping CID and L-CID going even during COVID;  
Megan Galbally and Andrew Lewis for involving me in their unique longitudinal study at Monash University in Melbourne;  
Pasco Fearon and Peter Fonagy for being my brilliant hosts at University College London;  
Marian Bakermans-Kranenburg, closest collaborator for more than three decades, for better and for worse, for years to come;  
Mieke, Henk and Mariet, sibs in arms, safe havens, always available;  
David and Anne-Marlijn, a most wonderful couple, brightest lights of my life;  
Last but not least: Adriana (Jeanet) Bus, my courageous work and life partner for more than half a century.

*This lecture is presented in fond memory of Joke Scholtens for her legacy to the Lolle Nauta Foundation and for showing how to live and how to die.*

## References

- Bachmann, C. J., Beecham, J., O'Connor, T. G., Briskman, J., & Scott, S. (2022). A good investment: longer-term cost savings of sensitive parenting in childhood. *Journal of child psychology and psychiatry, and allied disciplines*, 63(1), 78–87. <https://doi.org/10.1111/jcpp.13461>
- Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., & Juffer, F. (2003). Less is more: Meta-Analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin*, 129, 195–215. <https://doi.org/10.1037/0033-2909.129.2.195>
- Bakermans-Kranenburg, M.J., Juffer, F., & Van IJzendoorn, M.H. (2019). Reflections on the mirror: On video-feedback to promote positive parenting and infant mental health. In Ch.H. Zeanah (Ed.), *Handbook of Infant Mental Health* (4th edition), pp. 527-542. New York: Guilford Press.
- Bell, S. M., & Ainsworth, M. D. S. (1972). Infant crying and maternal responsiveness. *Child Development*, 43(4), 1171–1190. <https://doi.org/10.2307/1127506>
- Bosmans, G., Bakermans-Kranenburg, M.J., Vervliet, B., Verhees, M.W.F.T., & van IJzendoorn, M.H. (2020). Learning theory of attachment: Unraveling the black box of attachment development. *Neuroscience and Biobehavioral Reviews*, 113, 287-298.
- Bosmans, G., Van Vlierberghe, L., Bakermans-Kranenburg, M.J. Kobak, R., Hermans, D. & Van IJzendoorn, M.H. (2022). A learning theory approach to attachment theory: exploring clinical applications. *Clinical Child Family Psychology Review*. <https://doi.org/10.1007/s10567-021-00377-x>
- Button, K., Ioannidis, J., Mokrysz, C., et al. (2013). Power failure: why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, 14, 365-376. <https://doi.org/10.1038/nrn3475>
- Campbell, D. T. (1960). Blind variation and selective retentions in creative thought as in other knowledge processes. *Psychological Review*, 67(6), 380–400. <https://doi.org/10.1037/h0040373>
- Committee on Freedom of Expression at Yale. (1974). Report of the Committee on Freedom of Expression at Yale. Yale University. (December 1974) <https://yalecollege.yale.edu/get-know-yale-college/office-dean/reports/report-committee-freedom-expression-yale>
- Dawkins, R. (1989). *The Selfish Gene* (2nd ed.), Oxford: Oxford University Press, ISBN 978-0-19-217773-5
- Elliott, M. L., Knodt, A. R., Ireland, D., Morris, M. L., Poulton, R., Ramrakha, S., Sison, M. L., Moffitt, T. E., Caspi, A., & Hariri, A. R. (2020). What is the test-retest reliability of common task-functional mri measures? New empirical evidence and a meta-analysis. *Psychological Science*, 31(7), 792–806. <https://doi.org/10.1177/0956797620916786>
- Feyerabend P. (1975). *Against method: Outline of an anarchistic theory of knowledge*. New Left Books.

- Heckendorf, E., Bakermans-Kranenburg, M.J., Van IJzendoorn, M.H., & Huffmeijer, R. (2019). Neural responses to children's faces: test-retest reliability of structural and functional MRI. *Brain and Behavior*, e01192. DOI: 10.1002/brb3.1192.
- Hesse, E.H. & Van IJzendoorn, M.H. (1991). Developing the Berkeley-Leiden Adult Attachment Questionnaire (BLAAQ). Poster presented at the Biennial Meeting of the Society for Research in Child Development, Seattle (Washington).
- Hofhuis, S. (2022). Qualitative Darwinism: An evolutionary history of witch-hunting. [Doctoral thesis Universiteit Utrecht]. Utrecht University. <https://doi.org/10.33540/1460>
- Hubbard, F. O., & Van IJzendoorn, M. H. (1991). Maternal unresponsiveness and infant crying across the first nine months: A naturalistic longitudinal study. *Infant Behavior and Development*, 14(3), 299–312. [https://doi.org/10.1016/0163-6383\(91\)90024-M](https://doi.org/10.1016/0163-6383(91)90024-M)
- Hubbard, F.O.A., & Van IJzendoorn, M.H. (1994). Does maternal unresponsiveness increase infant crying? A critical replication of the 1972 Bell and Ainsworth study. In R. van der Veer, Van IJzendoorn, M.H., & J. Valsiner (Eds.), *On reconstructing the mind. Replicability in research on human development* (pp.255-270). Norwood, NJ: Ablex.
- Huffmeijer, R., Bakermans-Kranenburg, M.J., Alink, L.R.A., & Van IJzendoorn, M.H. (2014). Reliability of event-related potentials: the influence of number of trials and electrodes. *Physiology & Behavior*, 130, 13-22. doi: 10.1016/j.physbeh.2014.03.008
- Ioannidis, J. P. A. (2005). Why most published research findings are false. *PLOS Medicine*, 2(8), e124. <https://doi.org/10.1371/journal.pmed.0020124>
- Juffer, F., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2017). Pairing attachment theory and social learning theory in video-feedback intervention to promote positive parenting. *Current Opinion in Psychology*, 15, 189–194.
- Kinzelbach, K., Lindberg, S. I., Pelke, L., & Spannagel, J. (2023). Academic Freedom Index 2023 Update. FAU Erlangen-Nürnberg and V-Dem Institute. <https://doi.org/10.25593/opus4-fau-21630>
- Lakatos, I. (1980). *The methodology of scientific research programmes*. Philosophical papers. Volume I. Cambridge University Press.
- Lambermon, M.W.E., & Van IJzendoorn, M.H. (1989). Influencing mother-baby interaction through videotaped or written instruction: Evaluation of a parent education program. *Early Childhood Research Quarterly*, 4, 449-459.
- Mesman J, Janssen S, van Rosmalen L (2016) Black Pete through the Eyes of Dutch Children. *PLoS ONE* 11(6): e0157511. <https://doi.org/10.1371/journal.pone.0157511>
- Mesman, J., van IJzendoorn, M., Behrens, K., Alicia Carbonell, O., Carcamo, R., Cohen-Paraira, I., de la Harpe, C., Ekmekci, H., Emmen, R., Heidar, J., Kondo-Ikemura, K., Mels, C., Mooya, H., Murtisari, S., Noblega, M., Ortiz, J. A., Sagi-Schwartz, A., Sichimba, F., Soares, I., Steele, H., Steele, M., Pape, M., van Ginkel, J., van der Veer, R., Wang, L., Selcuk, B., Yavuz, M. & Zreik, G. (2016). Is the ideal mother a sensitive mother? Beliefs about early childhood parenting in mothers across the globe. *International Journal of Behavioral Development* 40(5), 385-97.

- O'Farrelly, C, Watt, H., Babalis, D., Bakermans-Kranenburg, M.J., Barker, B., Byford, S., Ganguli, P., Grimás, E., Iles, J., Mattock, H., McGinley, J., Phillips, C., Ryan, R., Scott, S., Smith, J., Stein, A., Stevens, E., Van IJzendoorn, M.H., Warwick, J., & Ramchandani, P.G (2021). A brief home-based parenting intervention (VIPP-SD) to prevent enduring behaviour problems in young children: A pragmatic randomised clinical trial. *JAMA Pediatrics JAMA Pediatr*. 2021;175(6):567–576. doi:10.1001/jamapediatrics.2020.6834
- O'Farrelly, C., Barker, B., Watt, H., Babalis, D., Bakermans-Kranenburg, M., Byford, S., Ganguli, P., Grimás, E., Iles, J., Mattock, H., McGinley, J., Phillips, C., Ryan, R., Scott, S., Smith, J., Stein, A., Stevens, E., van IJzendoorn, M., Warwick, J., & Ramchandani, P. (2021). A video-feedback parenting intervention to prevent enduring behaviour problems in at-risk children aged 12-36 months: the Healthy Start, Happy Start RCT. *Health Technology Assessment*, 25(29).
- Popper, K. (1959). *The logic of scientific discovery*. First English edition. London, New York: Routledge.
- Reichman, H. (2022). *Understanding academic freedom*. University of Chicago Press.
- Posada, G. (2013). Is the secure base phenomenon evident here, there, and anywhere? A cross-cultural study of child behavior and experts' definitions. *Child Development*, 84(6), 1896-1905. <https://doi.org/10.1111/cdev.12108>
- Rosnow, R. L., & Rosenthal, R. (1989). Statistical procedures and the justification of knowledge in psychological science. *American Psychologist*, 44(10), 1276–1284. <https://doi.org/10.1037/0003-066X.44.10.1276>
- Royal Netherlands Academy of Arts and Sciences (2022). *Social Safety in Dutch Academia. From Paper to Practice*. Amsterdam. Royal Netherlands Academy of Arts and Sciences.
- Runze, J. & Van IJzendoorn, M.H. (2023). Response bias is genetically biased: Another argument for Kagan's philippic against questionnaires in developmental psychology. *PsyArXiv* DOI: 10.31234/osf.io/gmuvy.
- Sama-Miller, E., Lugo-Gil, J., Harding, J., Akers, L., & Coughlin, R. (2020). *Home Visiting Evidence of Effectiveness (HomVEE) Systematic Review: Handbook of Procedures and Evidence Standards, Version 2*. OPRE Report # 2020-151. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Schuengel, C., Bakermans-Kranenburg, M.J. & Van IJzendoorn, M.H. (1999). Frightening maternal behavior linking unresolved loss and disorganized infant attachment. *Journal of Consulting and Clinical Psychology*, 67, 54-63. doi:10.1037/0022-006X.67.1.54
- Segal, L., Green, J., Twizeyemariya, A., Hudry, K., Wan, M. W., Barbaro, J., Iacono, T., Varcin, K. J., Pillar, S., Cooper, M. N., Billingham, W., Upson, G., & Whitehouse, A. J. O. (2023). Estimated Therapy Costs and Downstream Cost Consequences of iBASIS-Video Interaction to Promote Positive Parenting Intervention vs Usual Care Among Children Displaying Early Behavioral Signs of Autism in Australia. *JAMA network open*, 6(4), e235847. <https://doi.org/10.1001/jamanetworkopen.2023.5847>
- Spanjaard, H. (2019). *Interventies voor vroegtijdige voorkoming van ernstige criminaliteit*. Amsterdam: Spanjaard Development & Training.

- Stolker, C. (2018). Diversity of views: the university as a safe haven. Dies lecture on 8 February 2018, on the occasion of the 443rd Dies Natalis of Leiden University. Leiden: Leiden University, The Netherlands.
- Swaab, H. (2012). Preventief Interventie Team (PIT). Sociale leerbaarheid [Preventive Intervention Team. Social learnability]. Amsterdam: Gemeente Amsterdam.
- Täuber, S. (2020). Undoing Gender in Academia: Personal Reflections on Equal Opportunity Schemes. *Journal of Management Studies*, 57(8), 1718-1724. <https://doi.org/10.1111/joms.12516>
- Thijssen, S., Wildeboer, A., van IJzendoorn, M. H., Muetzel, R. L., Langeslag, S. J. E., Jaddoe, V. W. V., Verhulst, F. C., Tiemeier, H., Bakermans-Kranenburg, M. J. & White, T. (2017). The honest truth about deception: Demographic, cognitive, and neural correlates of child repeated deceptive behavior. *Journal of Experimental Child Psychology* 162, 225-41.
- Tran, N. K., Van Berkel, S. R., van IJzendoorn, M. H. & Alink, L. R. A. (2017). The association between child maltreatment and emotional, cognitive, and physical health functioning in Vietnam. *BMC Public Health* 17.
- Upton, B. (2023). Dutch sacking raises concern on academic scrutiny of universities. Susanne Täuber accuses Groningen of 'making a farce out of the academic way of working'. *Times Higher Education*, April 11, 2023.
- Van Delft, D. (2023). Verrek, dat is 't. Het strijdbare leven van Nobelprijswinnaar Martinus Veltman. [Damn, that's it! The combative life of Nobelprize winning Martinus Veltman]. Amsterdam: Prometheus.
- Van Dam, M., & Van IJzendoorn, M.H. (1988). Measuring attachment security: Concurrent and predictive validity of the parental attachment Q-set. *Journal of Genetic Psychology*, 149, 447-457.
- Van Esterik, C. (2016). Jongens waren we. Totalitaire verleiding in de jaren zeventig. Balans.
- Van IJzendoorn, M.H. (1984). Answers without questions. A note on response style in questionnaires. *Perceptual and Motor Skills*, 59, 827-831.
- Van IJzendoorn, M.H. (2016). Implicit racial bias in Black Pete study. *PLOSOne* September 14, and December 17, 2016
- Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2020). Problematic cost–utility analysis of interventions for behavior problems in children and adolescents. *New Directions for Child and Adolescent Development*, 89–102. <https://doi.org/10.1002/cad.20360>
- Van IJzendoorn, M.H. & Bakermans-Kranenburg, M.J. (2021). Replication crisis lost in translation? On translational caution and premature applications of attachment theory. *Attachment & Human Development*. 23, 422-437. <https://doi.org/10.1080/14616734.2021.1918453>
- Van IJzendoorn, M.H. & Bakermans-Kranenburg, M.J. (in press). *Building Bridges Between Replication, Translation and Academic Freedom*, London: UCL Press.

- Van IJzendoorn, M.H., Schuengel, C., Wang, Q. & Bakermans-Kranenburg, M.J. (2022). Improving parenting, child attachment and externalizing behaviors: Meta-analysis of the first 25 randomized controlled trials on the effects of Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline. *Development & Psychopathology*, 1–16. doi:10.1017/S0954579421001462
- Van IJzendoorn, M. H., Stevens, E., & Bakermans-Kranenburg, M. J. (2023). Development of the virtual-VIPP and a systematic review of online support for families during the COVID-19 pandemic. *Attachment & human development*, 25(2), 223–239. <https://doi.org/10.1080/14616734.2023.2179575>
- Vrijhof, C. I., van den Bulk, B. G., Overgaauw, S., Lelieveld, G.-J., Engels, R. C. M. E. & van IJzendoorn, M. H. (2016). The Prosocial Cyberball Game: Compensating for social exclusion and its associations with empathic concern and bullying in adolescents. *Journal of Adolescence* 52, 27-36.
- Ward, J., Lyall, L., Cullen, B., Strawbridge, R. J., Zhu, X., Stanciu, I., Aman, A., Niedzwiedz, C. L., Anderson, J., Bailey, M. E. S., Lyall, D. M., & Pell, J. (2022). A Genome-Wide Association Analysis of Happiness: Consistent Genetic Effects Across the Lifespan and Across Genetic Ancestries in Multiple Cohorts [Preprint]. *bioRxiv*. <https://doi.org/10.1101/2022.04.05.487098>
- Wellcome Trust (n.d.). Policy on bullying and harassment. <https://wellcome.ac.uk/funding/guidance/policy-bullying-and-harassment>





Marinus H. van IJzendoorn studies the social, psychological and neurobiological determinants of parenting and child development, with special emphasis on attachment, emotion regulation, differential susceptibility, and child maltreatment. Central question is whether and how parents and other caregivers shape children's development in the current era of the genome and the brain, and how parents can be supported in raising their children. He also studies the methodology of applied developmental science.

He is emeritus professor at Leiden University and Erasmus University Rotterdam, and is currently visiting professor at UCL University College London and adjunct professor at Monash University. The valedictory lecture is part of a forthcoming book on *Building Bridges between Replication, Translation and Academic Freedom*. London: UCL Press. His personal website is [www.marinusvanijzendoorn.nl](http://www.marinusvanijzendoorn.nl)

Erasmus University Rotterdam  
Erasmus School of Social and Behavioural Sciences  
Department of Psychology, Education and Child Studies  
Burgemeester Oudlaan 50  
3062 PA Rotterdam  
T 010 408 2135  
W [www.eur.nl/essb](http://www.eur.nl/essb)