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Students with (suspicion of) IG+ASD

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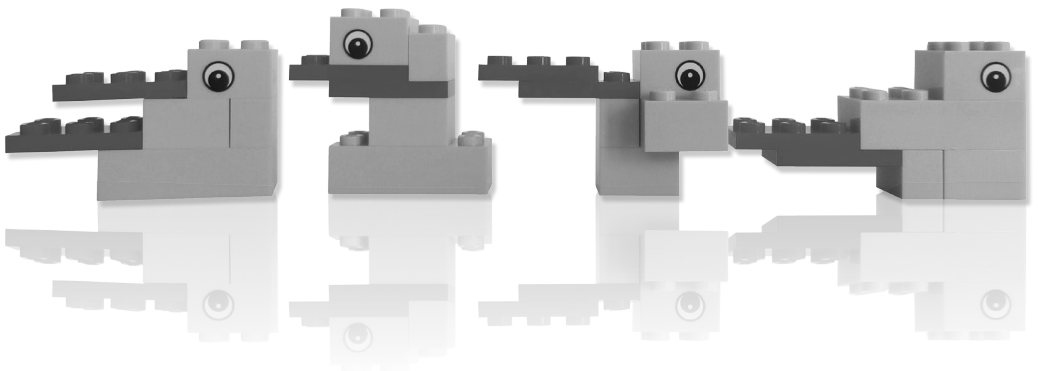
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CHAPTER 6

Conclusions and Discussion



Conclusions

Major findings

By means of a systematic literature review among dissertations and publications in peer-reviewed scientific journals, the state of the art regarding the phenomenon IG+ASD was explored in relation to its diagnostic and assessment issues (chapter 2). Relatively few empirically grounded references were found that explicitly and profoundly dealt with theoretical conceptualisations of the phenomenon IG+ASD. Moreover, the empirical and theoretical research methods turned out to be very diverse. This review unfolded a large variation of - sometimes inconsistently used - definitions and identification criteria. Besides, conceptualisations of IG+ASD turned out to be a mere summary of behavioural descriptions and identification criteria of IG next to those of ASD, without a description of IG+ASD as a prototypical entity. All of this made the comparison of data rather troublesome.

On the basis of the extensive analysis of IG+ASD characteristics, however, it can be concluded that there appears to be a slight tendency that personal characteristics out of the following clusters might rather regularly be present in individuals with IG+ASD: Uneven development, superior non-verbal abilities, social issues, verbal/language issues, issues regarding executive functions, memory issues and hypersensitivity. Furthermore, it appeared that the diagnostic and/or assessment suggestions could roughly be divided into two categories: i.e. *Classification-based* suggestions, aimed at differentiation between IG and ASD and/or identification of IG+ASD, and *Needs-based* suggestions, in which the assessment process is not primarily aimed at labelling, but rather at recommendations for educational and/or psychological interventions. The review revealed the lack of a profoundly developed conceptualisation of IG+ASD, and its diagnostic and assessment issues. The implication is that research regarding the core conceptualisation and/or identification criteria of IG+ASD is needed, for instance by means of an extensive cluster analysis with controls such as IG-students, ASD-students, and typically developing students. In this way, classification based assessment procedures could be addressed. Research like that can take a lifetime, however, and meanwhile professionals in psycho-educational practice would still face the problem of biased diagnoses and haphazardly indicated intervention indications and recommendations concerning students with (suspicion of) IG+ASD. Consequently, a design was searched for that might enhance both theory formation and practical applications. This implies the development and systematic and continuous evaluation of theoretically based systems, to determine the effectiveness in psycho-educational practice (see also Van den Akker et al. 2006; McKenney, & Nieveen, 2006; Walker, 2006).

On this basis, the following question was faced in chapter 3: How can clinical and psycho-educational theory and praxis, regarding assessments and intervention indications of students with (suspicion of) IG+ASD, be tuned to each other in such a way that biased assessments can be reduced, and that a grounded interconnection between assessment and intervention indications can be realised? This resulted in the construction of a prototype of the Strengths and Weaknesses Heuristic, the *S&W Heuristic*, which was built on the following three theoretical fundamentals: 1. The (clusters of) characteristics that stood out in the literature review (chapter 2) serve as dimensions that can be assessed comprehensively. As such, assessment departs from possible IG+ASD characteristics, instead of IG-characteristics apart from ASD-characteristics, as seemed customary until then. 2. Biased assessments can be reduced if assessments are primarily focused at the identification of S&W profiles within the aforementioned dimensions, and subsequently, if still necessary, at the identification of categorical labels such as IG, ASD or IG+ASD. This is opposite to common psycho-educational practice, in which the label merely precedes and determines the intervention indications. 3. Biased intervention indications can be reduced if the assessment outcomes, that is the individual identified S&Ws, are *translated* per dimension into Special Psycho-Educational Needs (SPENs). Special means here ‘adapted to the individual student’. The SPENs might be conflicting and lead to controversial intervention indications, because of possible large discrepancies between Ss and Ws of individual students. This should not be disregarded but creatively integrated into a psycho-educational individual plan.

In chapter 4, the objective of the study was the onset of the validation process of the *S&W Heuristic*. The purpose was to evaluate whether assessments in psycho-educational practice were consistent with the theoretical principles of the *S&W Heuristic* and whether there seemed to be any necessity of optimisation of assessments trajectories in psycho-educational practice. The concept ‘students with (suspicion of) IG+ASD’ could not literally be used as an inclusion criterion, however, because ‘suspicion of’ is multi-interpretable and the participating diagnosticians might select only the assessment dossiers of students of whom IG-characteristics and ASD-characteristics were detected or suspected before or in the intake stage of the assessment process. Therefore, the inclusion was restricted to the following unambiguous criterion: Assessment dossiers in which the WISC-III-NL Full-Scale IQ (FSIQ) was at least 130 (2sd’s above the mean), regardless of the initial reason for assessment request. On this ground, the leading question became: Do diagnosticians in various psycho-educational organisations, arrange assessment processes of IG students with(out) characteristics of ASD in a systematic unbiased dimensional needs-based way, in accordance with the basic principles of the *S&W Heuristic*? A total of 36 assessment dossiers were analysed in seven organisations, among 19 diagnosticians in varying psycho-educational practices. All assessments were

performed in the years 2009-2013 (86% in 2011 and 2012) and performed or supervised by qualified diagnosticians, with a post-master degree.

It turned out that in the intake stage and investigation stage, characteristics out of the ASD-cluster *Inadequate reciprocal social interactions* were present rather often and received conscious attention in almost all dossiers. This is according to the principle of unbiased assessment of the *S&W Heuristic*, especially since ‘social issues’ is one of its basic dimensions. The continuous line of this dimension was ignored, however, in a rather large amount of dossiers, which is not in accordance with the systematic dimensional principles of the *S&W Heuristic*. Furthermore, the disregard of characteristics of other ASD-clusters, in case of presence of the cluster *Inadequate reciprocal social interactions*, indicated the possibility of missed signals of ASD-characteristics among IG-students. Moreover, a rather large amount of the dossiers generally revealed the absence of systematic continuous translations of data from intake stage into investigation stage into indication stage, especially in dossiers with at least a needs-based purpose. All of this indicated a trend that a rather large number of the assessments of IG students with(out) characteristics of ASD might not be arranged in a systematic dimensional need-based way, according to the basic principles of the *S&W Heuristic*. The analysis did not particularize, however, what the possible *biased* performances and *unsystematic* dimensional nature looked like. In order to empirically explain what stayed rather unclear, the validation process had to be continued with in-depth case descriptions.

Chapter 5 provides this further step in the empirical validation of the *S&W Heuristic* by means of in-depth descriptions of three assessment dossiers of IG-students who displayed signals of ASD-traits in the intake stage of their assessment procedure. The assessment dossiers were searched for the presence of: 1. *Bias*, that is one-sidedness in choices and translations regarding Ss and Ws; 2. *Systematicity*, that is the dimensional nature of thinking and justification from the intake stage till the advice stage. The in-depth analysis was specifically focused on the two translation moments in respectively the strategy stage and the indication stage, since these seemed to be crucial for potential bias and lack of systematicity.

It turned out that in two of the three dossiers, bias and unsystematicity seemed to commence at the very beginning of the assessment processes in the strategy stage. Because of this, the assessment process lacks a leading systematic. This seemed to have resulted in haphazardly selected assessment instruments, one-sided interpretations of investigation data and haphazardly recommended interventions. In the third dossier, however, the process of translation in the indication stage was done in a rather systematic and unbiased way, notwithstanding the rather unsystematic translation in the strategy stage.

General conclusion

The current thesis was aimed at understanding the phenomenon IG+ASD in relation to psycho-educational assessment praxis.

Hitherto we found no empirically grounded references that explicitly and profoundly dealt with definitions or theoretical conceptualisations of the phenomenon IG+ASD. Until about 2009, conceptions were restricted to a mere summary of characteristics or identification criteria of IG next to those of ASD. Hardly any systematic empirical studies with control groups were found that differentiated between individuals with IG, ASD and IG+ASD. From 2009 onwards, a few controlled empirical case studies gradually appeared (Assouline et al., 2009; Doobay, 2010, 2014; Foley Nicpon et al., 2011b). These were hardly embedded in a theoretical framework, however, and had a tendency of circularity in the inclusion criteria. Moreover, IG controls were sometimes absent, and ASD controls were not implemented at all.

So far, the state of the art in literature leads to the conclusion that there appears to be no empirically grounded theoretical conceptualisation of the phenomenon IG+ASD as a unified entity other than that it is a co-existence of behavioural characteristics of giftedness next to those of ASD. No hard evidence was found for the existence of the camouflaging effect of IG-characteristics and ASD-characteristics.

The characteristic-clusters of IG+ASD that stood out on in the extensive analysis in chapter 2, seemed to be the first attempt to unfold the essence of the phenomenon IG+ASD as an entity. Hence, these might be used as the basis of further theory development and empirical research.

Subsequently, during the development of the *S&W Heuristic* (chapter 3) the insight gradually appeared that the phenomenon IG+ASD might not need to have a unified definition, nor narrowly defined identification criteria, as long as assessments of students with (suspicion of) IG+ASD were not primarily aimed at dual and differential categorical diagnoses, but rather at Special Psycho-Educational Needs (SPENs). In that case, the essence of the phenomenon IG+ASD might be the subdivision in (neuro) cognitive, didactic and social-emotional dimensions, that might underlie and explain the (problematic) learning and social behaviours of individual students with (suspicion of) IG+ASD. As such, the level of conceptualisation is not defined abstractly in theoretical terms, but rather concretely in more or less measurable terms, and open to operationalisation and practical use. It comprises the construct '(suspicion of) IG+ASD', instead of the category 'IG+ASD', and implies the existence of a 'grey zone' between IG with and without ASD. In this way, it does not exclude (the possibility of) individuals with possible camouflaged characteristics. Moreover, it brings about a dimensional way of assessing students with (suspicion of) IG+ASD, which is open to systematicity, as implied in the *S&W Heuristic*.

In the chapters 4 and 5 it became obvious that a substantial number of assessment processes in the samples were inconsistent with the theoretical principles of the *S&W Heuristic*. The use of the systematicity of the *S&W Heuristic* might have prevented a substantial number of the diagnosticians from the rather unsystematic and biased translations in the strategy stage and the indication stage of the assessment processes. It may be concluded that optimisation of assessment trajectories in psycho-educational praxis in the Netherlands seems to be necessary and that the *S&W Heuristic* might pave the way for systematicity and less bias in assessment processes.

Discussion

Reflections

The methodological and practical limitations of each of the four publications are discussed in the respective chapters 2 to 5. The common limitation in this thesis is that the results and conclusions of both the theoretical as well as the empirical studies did not generate general truths, but rather revealed some trends and provisional probabilities and theorisations. This is due to the fact that, as far as we know, this thesis is the first exploration in the domain of (needs-based) assessments of students with (suspicion of) IG+ASD. Given the state-of-the-art review in this field of research, the small amount of relevant publications resulted in qualitative and somewhat unorthodox and laborious methodologies. Moreover, because of the rather small and select sample of case studies, the results of the two empirical studies in chapters 4 and 5 are not representative of the total population of assessment dossiers of IG students with or without ASD in the Netherlands. Hence, in the context of this thesis, the theoretical and empirical results, reached up to the status of an explorative point of departure in the future process of ongoing conceptual refinement and progressing practical experience. This means that the *S&W Heuristic* might serve as a fundamental for various types of future studies, as elaborated in the subsequent paragraph of Limitations.

Another reflection concerns that this thesis provides no hard evidence as to the existence of the camouflaging effect regarding IG-characteristics and ASD-characteristics. This is in contrast with the fact that in psycho-educational practice and case descriptions of IG+ASD, as well as Twice Exceptionalities in general, the existence of camouflage was amply documented (e.g. Burger-Veltmeijer, 2003; Cash, 1999; Gallagher & Gallagher, 2002; Huber, 2007; Kuss, 2007; Moon, 2002; Neihart, 2000; Reis & Renzulli, 2004). Hence, the phenomenon of ‘camouflage’ continues to fascinate and requires further exploration. Here, a start will be made by describing the concept ‘camouflage’ in relation to the framework of the *S&W Heuristic*. In the

context of students with (suspicion of) IG+ASD camouflage might mean that particular characteristics of IG, ASD or IG+ASD are obscured or concealed, and thus difficult to perceive. This might be related to or caused by three conditions: 1. The existence of similar characteristics between IG, ASD and IG+ASD, such as ‘absorbing interests’, ‘precocious language’ or ‘interaction problems with peers’. 2. Characteristics of IG and ASD might camouflage each other, that is, Weaknesses might conceal Strengths and vice versa. For instance, supreme (verbal) intellectual capacities might obscure ASD-traits such as a lack of reciprocal social communication, or the absence of imagination or fantasy in play. Or inflexibility might mask supreme cognitive intelligence. 3. One-sided training and experience of professionals, such as teachers or diagnosticians, might lead to biased interpretations of behaviours, because ‘one sees what one knows or beliefs’. Since camouflage can be defined as a form of obscuration or concealment, it is hard to detect by definition. Consequently, it would be rather difficult or even impossible in traditional research to include students with camouflaged characteristics in samples or control groups. Alternative study designs could be created, to particularise what camouflage looks like and how it could be assessed in psycho-educational praxis. The S&W Heuristic might help to explore camouflage in theoretical studies and detect and reduce camouflage in psycho-educational praxis, because it provides systematicity in case of the three aforementioned conditions, that is: 1. Similar characteristics of IG and ASD could be unravelled in two ways. First, by applying unbiased translations of intake data into (alternative) hypotheses and assessment questions in the strategy stage. Second, by using the differential S&W Profile, that is the lower part (see chapter 3, Table 2), to differentiate between IG-manifestations and ASD-manifestations of similar characteristics of IG+ASD. 2. Mutual camouflage of IG-characteristics and ASD-characteristics, could be unravelled by extensively and comprehensively assessing various dimensions, such as in the *S&W Heuristic*, and keeping an eye on possible and maybe unexpected large discrepancies in individual S&W Profiles. Such analyses of Ss and Ws might help to unfold the underlying pattern of masked behaviours and characteristics of individual students in psycho-educational praxis. In research, it might unfold patterns of discrepancies among large samples of IG-students. 3. Professionals with one-sided experience could be trained by means of the systematicity of the *S&W Heuristic*, to perform unbiased translations in the strategy stage and the indication stage, and use or at least discuss alternative hypotheses and indications in case of (needs-based) assessments. In this way, camouflage might be reduced.

Implications

Future studies could be aimed at the differentiation of various types of gifted students, which could be systematically identified by studying S&W profiles among large groups

of IG students with and without co-existing exceptionalities, such as ASD traits. This might shed light on possible subgroups of IG-students or the relation between emotional / motivational causes versus neurocognitive causes of underachievement (Burger-Veltmeijer, 2008, see Appendix A), or maybe even camouflaged characteristics of either IG or ASD or both. Studies of S&W Profiles might also unfold particular SPENs of IG students.

Secondly, studies could be aimed at the exploration of actual interventions and recommendations in psycho-educational assessment practices. It could for instance be questioned, whether these are systematically connected to SPENs, and/or which connections between particular SPENs and intervention indications or recommendations seem to be effective.

Thirdly, the *S&W Heuristic* might be used for studies regarding Twice Exceptionalities in general. In that case, it should be extended with relevant dimensions in the domain of learning, development and giftedness. For instance levels of Reading, Orthography, Rapid Naming and Phonological Skills, in order to study (assessments of) students with (suspicion of) IG + dyslexia. Or dimensions such as Attention regulation, Hyperactivity and Impulsivity, in order to study (assessments of) students with (suspicion of) IG + ADHD. Future studies might also focus on dimensions that are related to giftedness, such as creative abilities (see Sternberg, 2000).

Last but not least, future research should focus on further validation of the *S&W Heuristic* itself and question whether it has the right to exist as such and whether adjustments are needed in theory and/or in practice. Various categories of questions can be relevant:

For instance, questions regarding the principle of systematic dimensionality among the assessment stages, such as: Which initial questions of parents, teachers and referrers can be identified and how often? How are these connected to investigation questions in the strategy stage? What is the quality of translations of investigation data into intervention indications? Are these based on Special Psycho-Educational Needs (SPEN's), as described in the *S&W Heuristic*, or are general interventions recommended by the diagnosticians? Which Strengths and Weaknesses are interpreted, which are ignored, is any bias present? What does all of this imply regarding the validity of the *S&W Heuristic*?

Furthermore, questions regarding student characteristics, such as: Which behavioural characteristics from the ASD-cluster *Inadequate reciprocal social interactions* are mentioned in the dossiers? Which characteristics of IG, IG+ASD or other categories, such as ADHD or dyslexia, are present in the dossiers? Might the systematicity of the *S&W Heuristic* have any value to the assessment of Twice-Exceptionalities in general?

Moreover, the questions mentioned above could be related to possible differences between organisations with different expertise. It could be studied, for instance, whether or not organisations with 'gifted' expertise tend to one-sided interpretation of behaviours toward giftedness, and vice versa whether or not organisations with 'general' or 'psychiatric' expertise tend to one-sidedness towards ASD or other developmental disorders.

Finally, The validation process of the *S&W Heuristic* might be continued by means of problem-based learning situations, as was suggested in chapter 4. For instance by means of post-master courses for diagnosticians, in which they start to discuss their own casuistry. Subsequently, they learn the systematicity of the *S&W Heuristics*, and thereafter practice new casuistry according to these principles. The experiences could be evaluated in the group, and documented by the trainer. Afterwards the trainer might use the new insights to improve the *S&W Heuristic*. Before starting courses like that, the *S&W Heuristic*, has to be transformed in a practice-friendly format. A format like that should emphasise the translation moment in the strategy stage (see for example Appendix B), since this seemed to be rather crucial regarding possible bias and unsystematicity at the beginning of the assessment process, as revealed in chapters 4 and 5. Moreover, the Practice version should be dynamic, that is open to change. For instance in case of (suspicion of) other Twice Exceptionalities, relevant dimensions should be added. All in all, this can be stimulated by implementing curriculum programs for professionals.