

On the Conceptualization and Assessment of Personality:
A Framework for the Disentanglement of Core Dispositions From Surface
Characteristics and Validation of the German HEXACO-60 Personality Inventory-
Revised and Big Five Inventory-2

Kumulative Dissertation

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List of Manuscripts

This cumulative dissertation is based on the following studies which are published or under review after a revision by recognized scientific journals which adhere to peer-review procedures.

- I. Wiechers, Y., Zapko-Willmes, A., Richter, J., & Kandler, C. (2023). The longitudinal and multimodal age groups study of personality architecture and dynamics (SPeADy). *Personality Science*, 4(1). <https://doi.org/10.5964/ps.6421>
- II. Wiechers, Y., & Kandler, C. (2024). Psychometric quality of the German HEXACO-60 Personality Inventory-Revised: Consistency, validity, and measurement invariance of self-report and observer-report forms. *European Journal of Psychological Assessment*. <https://doi.org/10.1027/1015-5759/a000812>
- III. Wiechers, Y., & Kandler, C. (in press). Validierung des Deutschen Big Five Inventar-2: Konsistenz, Validität und Messinvarianz der Selbst- und Fremdbertichtformen [Validation of the German Big Five Inventory-2: Consistency, Validity, and Measurement Invariance of Self-Report and Observer-Report Forms]. *Diagnostica*. <https://doi.org/10.1026/0012-1924/a000344>

Zusammenfassung

Die vorliegende Dissertation veranschaulicht wie Konzepte der Persönlichkeit differenziert, organisiert sowie integriert werden können und liefert Belege für die Validität zweier Messinstrumente zur Persönlichkeitsbeurteilung. Ein nützliches Persönlichkeitsmodell muss sowohl breit genug sein, um alle wichtigen Aspekte umfassend zu erfassen, als auch geradlinig genug, um in der Praxis anwendbar zu sein. Hierbei wird argumentiert, dass die Persönlichkeit durch tief verwurzelte Kerndispositionen (*core dispositions*) und ihre kontextuell variierenden Anpassungen, die als Oberflächenmerkmale (*surface characteristics*) gelten, zum Ausdruck kommt. Es wird eine Begründung für diese Unterscheidung gegeben und ein Framework angeboten, das die Identifizierung und Differenzierung von Kerndispositionen und Oberflächenmerkmalen ermöglicht. Das vorgestellte Framework besteht aus mehreren Kriterien, die alle von einer angenommenen Kerndisposition erfüllt werden müssen, um als solche anerkannt zu werden. Zwei prominente Ansätze für die Erfassung von Kerndispositionen sind das HEXACO und das Big Five Persönlichkeitsmodell, die Persönlichkeit in sechs beziehungsweise fünf breite Dimensionen unterteilen. Diese können wiederum in schmalere Facetten untergliedert werden. In diesem Zusammenhang ist es von wesentlicher Bedeutung, dass man sich darauf verlassen kann, dass die zur Messung von Persönlichkeit verwendeten Instrumente zuverlässig, valide und nützlich sind. Daher wurde die psychometrische Qualität des deutschen HEXACO-60 und Big Five Inventar 2 (BFI-2) geprüft. Hierbei wurden die Selbstberichtform und erstmalig auch die Fremdbberichtform evaluiert. Jede Form der beiden Fragebögen erwies sich als psychometrisch solide. Die Dissertation bescheinigt somit die solide Grundlage der Selbst- und Fremdbberichtformen des deutschen HEXACO-60 und BFI-2, auf der künftige Forschung bei der Untersuchung von Forschungsfragen innerhalb des Frameworks zur Identifizierung von Kerndispositionen und darüber hinaus bauen können.

Summary

The current dissertation illustrates how personality concepts can be differentiated, organized and integrated and provides evidence for the validity of personality assessment via two measurement instruments. A useful model of personality must be broad enough to comprehensively cover all important aspects yet be parsimonious enough to be applicable in practice. It is argued that personality is expressed by deeply rooted core dispositions and their contextually varying adaptations which are deemed to be surface characteristics. A justification for this distinction is given and a framework is offered that enables the identification of core dispositions by distinguishing them from surface characteristics. This presented framework is composed of several criteria which must all be met by a proposed core disposition in order to be approved as such. Two prominent approaches for comprehending core dispositions are the HEXACO and the Big Five model of personality that categorize personality into six or five broad dimensions, respectively. These in turn can be further subdivided into narrower facets. In this regard, it is essential that one can trust the tools being used for measuring personality to be reliable, valid and useful. Therefore, the psychometric quality of the German HEXACO-60 and Big Five Inventory-2 (BFI-2) was put under close scrutiny. Notably, the self-report forms and for the first time, the informant-report forms were evaluated. Each form of the two questionnaires was demonstrated to be a psychometrically sound measure. The dissertation attested the solid foundation of the German HEXACO-60 and BFI-2 self- and informant-report forms that future research can build upon in the pursuit of research questions within the framework for the identification of core dispositions and beyond.

Introduction

Personality lies at the core of human behavior, feeling, thinking and motivation. Through its study, one can strive to understand what makes us unique, how we connect with others, and predict how we act in a given situation. As a prerequisite, it must be recognized what personality is and what it entails. Establishing a sufficiently comprehensive definition has been historically difficult (Allport, 1937; Murray, 1938). Personality is commonly described as the set of characteristics encompassing rather enduring patterns of emotion, cognition, motivation and behavior in which individuals differ (Kandler et al., 2014). An important distinction in this regard is between personality's central constructs and its more peripheral aspects. The approach of identifying these core dispositions and surface characteristics creates an encompassing yet parsimonious model for the description and explanation of individual differences. It stands out against the common factor-analytically derived trait conceptualization which is a more restricted understanding of personality with limited predictive value (e.g., Hurtado Rúa et al., 2019; Parks-Leduc et al., 2015). From a comprehensive model, the operationalization of personality in a research context can be derived. This, together with a form of assessment that is accurate, reliable and valid is essential to the study of personality. The present dissertation illustrates a framework that enables the disentanglement of core dispositions and surface characteristics and provides verification of the adequacy of the tools necessary for assessing the theoretically proposed core dispositions in form of the HEXACO traits (Ashton & Lee, 2020) and the Big Five (DeYoung, 2015). Each of these three aspects are addressed with one of the studies of the dissertation project which are featured hereafter.

Conceptualization of Personality

Personality can be conceptualized within a system in which more basic tendencies or core dispositions predict the way in which characteristic adaptations or surface characteristics are expressed in environments (e.g., Kandler et al., 2014, 2017; McCrae & Costa, 1996, 2008). Individual differences arise based upon the interaction between personality characteristics, with core dispositions having a stronger influence on surface

characteristics than vice versa (Asendorpf & Motti-Stefanidi, 2017; Kandler et al., 2014, 2017). Core dispositions are distinct latent characteristics that are dispositional, biologically rooted, and universal (Kandler et al., 2014, 2017). In that, they have a strong genetic basis and are relatively resistant to contextual influences posed by e.g., culture or individual experiences (Asendorpf & Van Aken, 2003). Surface characteristics on the other hand are more contextually variable and “include a vast range of psychological mechanisms: habits, interests, values, skills, knowledge, beliefs, [and] attitudes [...]” (McCrae & Costa, 2008., p. 278). They arise from the leverage of core dispositions and their interactions with individual experiences (Kandler et al., 2014, 2017) as well as other external factors such as cultural norms (McCrae & Costa, 2008). The distinction between core dispositions and surface characteristics explains the persistence of universal basic features while considering culture-specific manifestations of individual differences unique to a particular culture (McCrae & Costa, 1996).

Two prominent models of core dispositions are the HEXACO and the Big Five model. Within the HEXACO framework, the six dimensions Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience are assumed to capture one’s personality and describe individual differences (Lee & Ashton, 2004). Each dimension can be further subdivided into facets for a more nuanced characterization with higher resolution. The Big Five model categorizes personality without the Honesty-Humility domain. Depending on the specific model, its domains are known under different labels. For the purpose of this dissertation, the terms Extraversion, Agreeableness, Conscientiousness, Negative Emotionality, and Openness are used. These domains are mostly congruent with their HEXACO counterparts except for Agreeableness and (Negative) Emotionality which have a slightly divergent conceptualization with a somewhat different organization and assignment of more specific facets (Ashton et al., 2014). The segmentation of domains into facets also occurs for the Big Five model. From the notion of personality as being organized into distinct categories follows how personality is being assessed.

Assessment of Personality

The accurate assessment of personality is integral not only to personality psychology, but in numerous research and application areas of psychology. For example, it matters for the examination of consumer behavior (Bosnjak et al., 2007), for violent risk assessment in a forensic context (Douglas & Skeem, 2005), for the prediction of athletic success (Allen et al., 2013), job performance (Hogan & Holland, 2003), and academic achievement (Richardson et al., 2012), as well as in research on well-being and health (Friedman & Kern, 2014). Therefore, a key issue in the assessment of personality is to utilize valid instruments that measure personality accurately, comprehensively and economically.

There are promising new tools for the assessment of personality and prediction of individual differences in personality traits via e.g., machine learning (Bleidorn & Hopwood, 2019; Stachl et al., 2020) that may utilize one's digital footprint for their assessments (Azucar et al., 2018; Marengo & Montag, 2019). However, questionnaires remain a common method to gauge personality traits be it via self-report, informant-report, or a combination of both. Relying on ratings produced by these instruments requires a verification of whether the ratings can be considered psychometrically useful to begin with. One aim of this dissertation was to repeat previous validation of the German self-report forms of the HEXACO-60 Personality Inventory and the Big Five Inventory-2 (BFI-2) to further consolidate findings regarding these questionnaires' psychometric qualities. Beyond that, previous research was expanded in that the psychometric properties of the respective informant-report forms were investigated. This is necessary due to several reasons.

On an application-oriented level, the formation of accurate assessment of others people's personality substantially influences social interaction and reputation (Funder, 1995). Whom we trust, hire, date, or marry all depends at least in part on personality judgments (Funder, 2012) which, to this extent, fundamentally impact major life outcomes. In this regard, appraising someone's personality carries significant consequences for the one judging and the one being judged (Funder, 2012). Better decisions can be expected the more valid and accurate these judgements are (Letzring, 2008; Letzring & Human, 2014).

Accuracy and validity are also of importance from a methodological viewpoint. Ratings made by others are used in numerous research areas (Funder 1995; Watson et al., 2000) and are rightfully integrated as another insightful source, for example, in the prediction of traits (Human & Biesanz, 2013) as they can cover aspects of a construct not captured by self-reports alone (Vazire & Mehl, 2008). This does not mean that information gained by informant-reports are universally beneficial in a sense that one can fully rely on their accuracy and completeness. For example, some aspects in the assessment may be more accessible to a self-rater as they cover inner mechanisms such as thoughts and feelings which are not readily perceivable by outside observers (Vazire, 2010). A concept that has been coined by Vazire (2010) as the self-other knowledge asymmetry. Also, informants might render a rosier picture of a well-liked person by giving inflated ratings especially on socially desirable constructs (Leising et al., 2010). In this sense, it is best to combine self-ratings with one or more informant-ratings to strive for comprehensive assessments.

Additionally, the integration of both self- and informant-ratings can lead to more reliable measures (Little et al., 2002). However, credible conclusions based on informant data can only be drawn as long as its assessment is valid and accurate (Funder, 1993). The importance of psychometrically sound methods for assessing personality via informants also becomes noticeable within the criteria framework for specifying core dispositions. A more detailed illustration of this is provided in the section summarizing Study I. Within the framework, the cross-rater consensus criterion proposes that cross-informant correlations are expected to be higher for rather stable and consistent core dispositions than for contextually varying surface characteristics. The reason being that characteristics stable across time and contexts are more visible and perceivable to outside observers and can thus be judged more accurately (Human & Biesanz, 2013). Additionally, informant reports are important in this regard, as they contribute to identifying core characteristics as systematic and random measurement error can lead to either artificially high or low estimates of a characteristic's stability and consistency (Geiser & Lockhart, 2012). That is to say, personality ratings are susceptible to stereotypes, rater biases, and method-specific artifacts leading to

an attenuated relation between latent traits and their expression as scores on a questionnaire (Cronbach, 1955; Cronbach & Gleser, 1953). This can be remedied at least in part by the inclusion of reliable and valid informant-ratings which allows accounting for valid rater-specific perspectives (Kandler et al., 2010; McCrae, 1994).

The necessity for psychometrically sound informant-report measures is also of concern when considering what actually represents an accurate judgment of personality and how accuracy can be operationalized. From a realist perspective, ratings regarding one's own personality made by both oneself and others would inevitably agree if both judgments are completely accurate (Funder & West, 1993). However, agreement among self- and informant-ratings alone is no comprehensive indicator of accuracy. Two judges can have perfect agreement but could still be both wrong (Funder & West, 1993). Therefore, it is considered best practice to apply other criteria for accuracy as well (Funder, 2012). Prominent criteria are the agreement of two or more judgments made by others (consensus) and behavioral prediction (predictive validity). The latter being the degree to which a personality judgment can predict behavior or its related life outcomes (Funder, 2012). Using various criteria ensures a more thorough operationalization of accuracy. Nevertheless, the congruence of self- and informant-ratings also known as self-other agreement (SOA) can be considered a viable accuracy criterion for practical purposes even by itself and self-other correlation is the most commonly used accuracy index in personality research (Back & Nestler, 2016; Funder, 2012).

In the following sections, it is summarized how the need for valid and reliable measures of personality was addressed via the validation of the German HEXACO-60 and BFI-2 self- and informant-report forms, the latter of which have heretofore never been validated. The respective findings are briefly summarized and discussed. First, however, the framework for the identification of core dispositions is presented from which the need for psychometrically sound personality measures also arises.

Study I: The Longitudinal and Multimodal Age Groups Study of Personality

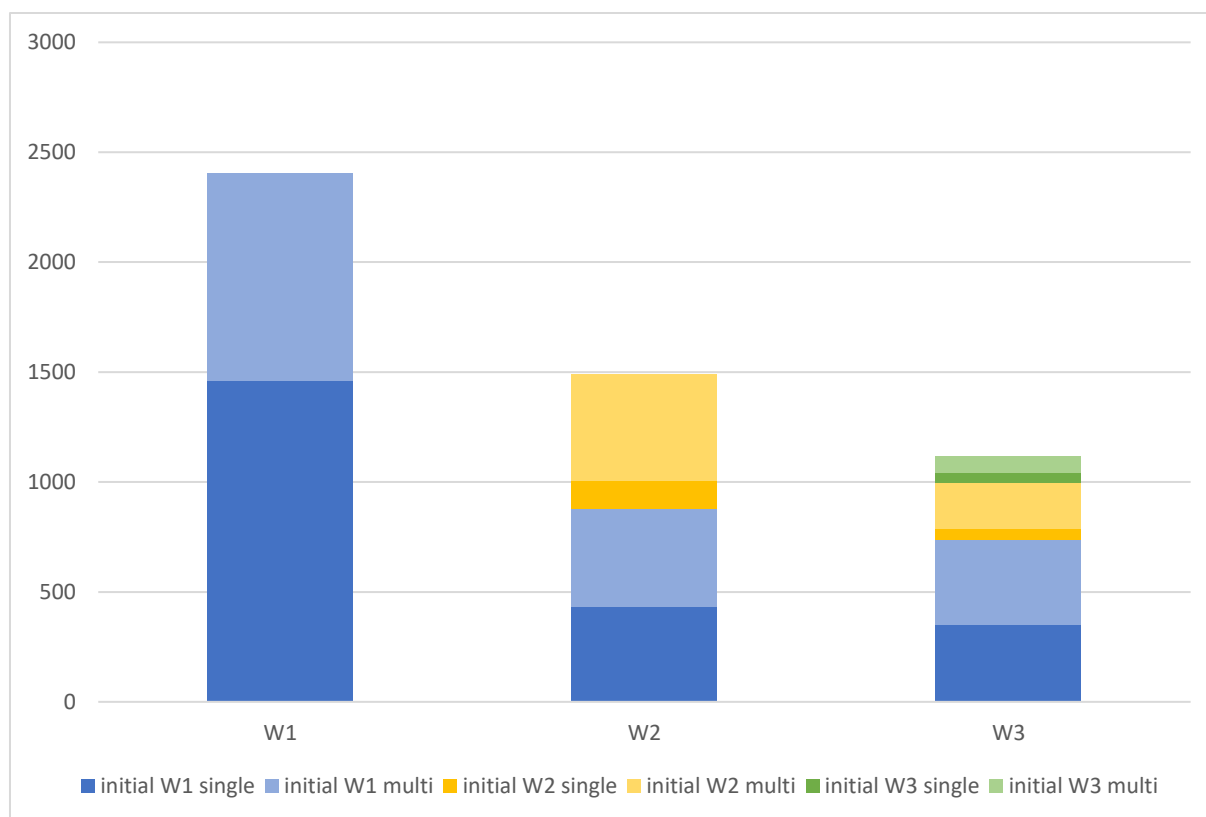
Architecture and Dynamics (SPeADy)

The first paper's purpose is twofold. On the one hand, it provides a framework within which proposed core dispositions can be evaluated. On the other hand, it serves as an overview of the "Study of Personality Architecture and Dynamics" (SPeADy) research project by highlighting its distinct qualities and presenting it to the research community. SPeADy is a large-scale longitudinal research project containing a heterogeneous sample of the German population. SPeADy consists of two substudies: an extended twin family study (Kandler et al., 2019) and a multirater age groups study. The latter being the focus of the first dissertation paper. Here, the composition of the sample was elaborated, showing its heterogeneity with regards to age, sex, family status, and education. Further, an overview of the numerous measurement instruments was provided that assess constructs such as HEXACO and Big Five personality traits, self-related concepts such as well-being and self-esteem, motives and interests, morality, values, and religiosity but also environmental characteristics such as employment and relationship status as well as major life events. One special feature of SPeADy is that in addition to participants' self-ratings, reports of informants who knew the self-raters well were collected. The informants assessed the self-raters on the very same constructs and in doing so indicated how they perceive the self-raters. The availability of one to two informant-raters per self-rater paves the way for multirater investigations while the integration of all raters' information can lead to more reliable measurements.

Data collection occurred in three waves (W1-W3), each two years apart meaning the acquisition spanned for six years in total. Since W3 was still ongoing at the time of writing of the first paper, the full longitudinal sample size could not be presented. Therefore, the updated sample size and sample attrition including the last data acquisition wave is shown here. Figure 1 depicts the number of single- and multi-ratings for each wave. Single-ratings are self-ratings without informant-ratings and multi-ratings are self-ratings with at least one informant-rating. In total, there are 611 self-raters that participated throughout all waves.

Figure 1.

Number of SPeADy participants throughout the data waves



Note. Colors represent initial participation of self-raters for each wave. Single: self-ratings without informant-ratings. Multi: self-ratings with at least one informant-rating.

Besides showcasing the SPeADy age-groups research project, the first paper outlined six theory-based criteria that allow the specification of core dispositions by disentangling them from surface characteristics. By distinguishing them from surface characteristics, which do not fulfill the complete set of the following criteria, we can constitute the core of personality. Briefly summarized, the six criteria are: (1) cross-time stability (core dispositions should be considerably stable across time), (2) cross-contextual consistency (core dispositions should be consistent across contexts and less environmentally malleable than surface characteristics), (3) cross-rater consensus (different raters should considerably agree in their ratings within and across contexts), (4) direction of causation (core dispositions should influence surface characteristics to a larger degree than vice versa), (5) mediation of causation (the association between core dispositions and environments should be mediated

by surface characteristics), and (6) system distinctiveness (in a set or system of potential core dispositions, actual core dispositions should emerge as distinct characteristics and central nodes in a cluster of linked traits). Further, core dispositions should emerge as universal across cultures, societies, and languages (Kandler & Rauthman, 2022) and should completely account for the genetic variance in surface characteristics (Kandler et al. 2019). As these two criteria cannot be evaluated on the basis of the age-groups SPeADy data, a more detailed discussion was not provided in the first paper. The application and examination of the six criteria is enabled by the longitudinal and multirater design of the SPeADy age-group study. Moreover, with the combination of a longitudinal and a multirater design, common shortcomings of longitudinal mono-method and cross-sectional multimethod designs can be overcome. In this respect, however, it must be ensured that the employed measures and their ratings can be considered valid. Study II and III were dedicated to this endeavor.

Study II: Psychometric Quality of the German HEXACO-60 Personality Inventory-Revised: Consistency, Validity, and Measurement Invariance of Self-Report and Observer-Report Forms

Study II assessed the psychometric properties of the revised German HEXACO-60 Personality Inventory and gave an overview on its development. To this end, self- and informant-ratings were used in order to examine the validity of both, the self- and informant-report forms. The focus here was on the internal consistency, 2-year and 4-year rank-order stability, convergent and discriminant validity, and also the factor structure of the instrument. For the latter, the fit of a multitrait-multirater model was examined via confirmatory factor analysis (CFA). The model contained the latent HEXACO domains which were indicated by manifest self and informant domain ratings. Method factors specific to the rating method (self vs. informant) were incorporated to examine rater specificity. Moreover, the extent to which self- and informant-ratings agreed was assessed (SOA). More than one informant-report was available for some self-reports. Therefore, it was also possible to examine to what degree

informants' ratings of the same target coincided (consensus). SOA and consensus served as indicators of convergent validity. Lastly, an examination of the level of measurement invariance (MI) between the self- and informant-report forms assessed whether (1) both, self- and informant-ratings fit in the proposed factor structure (configural MI), (2) change in a latent HEXACO domain bears a similar meaning for self- and informant-scores (metric MI), (3) manifest differences between self- and informant-scores are completely accounted for by differences on the latent trait (scalar MI), and (4) residual errors are equal across the rating methods (strict MI).

The internal consistency of the self- and informant-rated HEXACO domains was found to be satisfying. The rank-order of self- and informant-ratings remained relatively unchanged over the examined time periods. Further, self-ratings largely coincided with their respective informant-ratings and informants tended to agree in their ratings of the same self-rater suggesting high convergent validity of trait scores. Regarding the factor structure, a good fit of the data in the proposed model was found. Substantial trait consistency was indicated as self- and informant-scores loaded highly on their respective latent domains. In comparison, consistently lower loadings on the self and informant method factors were observed, indicating low method specificity. Low intercorrelations of the latent traits in relation to the estimates for the convergent validity demonstrated the discriminant validity of the traits across the rater perspectives. The MI examination showed that the self- and observer-report form of the German HEXACO-60 largely measure the same construct. Partial strict MI was ascertained with the exception of Openness to Experience on the scalar level, where self-scores were higher on average than informant-scores, and Conscientiousness and Agreeableness on the strict level, as residual-variances of self-reports tended to be comparatively higher. Beyond that, the inventory was invariant across rater perspectives.

The results were in line with previous meta-analytic findings regarding internal consistency, SOA, and dimension intercorrelations of the HEXACO Personality Inventory (Moshagen et al., 2019). With the findings of Study II, previous conclusions about the psychometric qualities of the German HEXACO-60 self-report form were replicated and

solidified (Moshagen et al., 2014). In addition to that, the informant-report form was demonstrated to be a valid and reliable assessment instrument which also yields incremental value for measuring personality traits within the HEXACO framework.

Study III: Validation of the German Big Five Inventory-2: Consistency, Validity, and Measurement Invariance of Self-Report and Observer-Report Forms

In the third study of this dissertation, the psychometric properties of the German Big Five Inventory-2 were investigated. This again was done by using self- and informant-ratings to evaluate both forms. The analytical approach was closely based on the second study. As before, internal consistency, SOA and consensus as proxies for convergent validity, discriminant validity, and the structural validity as well as the invariance of the German BFI-2 across rater perspectives were assessed. Unlike in Study II, temporal stability could not be determined, as BFI-2 data were only available for the first wave of SPeADy. However, in the third study the criterion validity of both the self- and informant-report form were assessed and the incremental validity of the latter in addition to the former was tested. In this regard, the associations of the BFI-2 domains and facets with four criteria variables were registered. The addition of informant-reports to self-reports for the prediction of the criteria variables was used to test whether this led to an increase of explained variance. The four criteria variables highest obtained educational degree, life satisfaction, affective well-being, and subjective social status were chosen due to prior research on relevant associations with the Big Five.

Reliability as indicated by the internal consistency was high on the domain level as well as on the facet level. SOA and consensus were satisfying indicating significant convergent validity. The trait intercorrelations across self- and informant-scores were found to be lower in comparison displaying the discriminant validity of the domains across raters. Furthermore, the five-factor structure was confirmed across rater perspectives via CFA and the items were found to load highly on their assigned domains. The structural validity of the German BFI-2 could therefore be demonstrated across self- and informant-raters. Regarding

the criterion validity, it was found that the associations of the Big Five domains with the criteria variables were mostly in line with prior research.

The additional benefit of the facet level was observed for the prediction of life satisfaction and affective well-being. On the facet level, a more differentiated picture emerged regarding the prediction of the criteria compared to the domain level. For some domains, the predictive power was attenuated, e.g. because two facets of the same domain showed no significant associations to the criteria while the third one was rather strongly associated. This also occurred because some facets showed opposite directions of associations with the criteria meaning they canceled each other out on the domain level, resulting in weaker associations. This in turn highlighted the benefit of the implementation of the facets as they can provide a more nuanced view. Adding the informant rated domains to the self-rated domains for the prediction of the four criteria variables did not lead to an increase of explained variance. However, a final conclusion regarding the incremental validity of the informant-rater form in this regard cannot be drawn based on this finding. Since the criteria variables were assessed by self-report alone, the actual association between the criteria and informant-report predictors might be artificially lowered by method artefacts (Orth, 2013). Using multirater data to measure the criteria variables could remedy the influence of method specific variance. Generally speaking, informant-ratings on personality were shown to possess predictive validity and distinguishable additional value in relation to self-ratings (Connelly & Ones, 2010; Jackson et al., 2015).

To continue, the results of the MI analyses indicated partial strict MI across rater perspectives. This means that the structure of the inventory and the meaning of the items are similar for self- and informant-raters. Additionally, this indicates that differences among self- and informant-raters are due to differences on the latent construct and not group affiliation. The exception to this were the Conscientiousness and Extraversion domains where informant-ratings tended to be higher than self-ratings. Lastly, the MI analysis showed residual errors being similar across groups meaning the constructs are being measured with the same precision across self- and informant-raters.

Previous results regarding the reliability, validity, and overall usefulness of the German BFI-2 self-report form that were demonstrated with its introduction were thus substantiated (Danner et al., 2019). These findings were here expanded onto the informant-report form by highlighting its distinct psychometric soundness.

Current Investigations

To give an impression of how SPeADy data can be utilized and research within the criteria framework can be conducted, Study I presented current findings of an examination set out to investigate the links between values and morality as well as the manifestation of motives across the life span. Here, common dimensions between both concepts were expected and supposed to be uncovered with the utilization of multirater data (Zapko-Willmes et al., 2021). Under the consideration of the cross-rater consensus and the system distinctiveness criteria, value priorities and moral concerns were demonstrated to be related, but still distinct and possibly different expressions of the same underlying core disposition.

Naturally, research with SPeADy data can move outside the framework for the identification of core dispositions. The second showcased study in the first paper went beyond SPeADy's major aim and examined age trends in motives via self- and informant-reports (Richter, 2020). Here, shifts in motives across the lifespan were demonstrated and the importance of gender as a significant predictor in this regard was identified.

Study II already addressed the cross-time stability of the HEXACO traits. However, this examination focused on stability from a more psychometric viewpoint. Since the completion of the SPeADy data sampling and validation of the German HEXACO-60 more lines of research opened up that can make use of the now available longitudinal data. For instance, this allows examining the stability of proposed core dispositions and the direction of causation between core dispositions and surface characteristics across time. In this regard, Instinske and Kandler (2024) evaluated if Emotional Stability can be considered a core disposition with self-esteem, self-efficacy, and locus of control as its expressions of surface characteristics or whether all four aspects are subordinate to a common core construct.

Emotional Stability did not fully account for the associations between self-esteem, self-efficacy, and locus of control keeping the possibility of another underlying core open.

However, Emotional Stability was shown to be more stable across time and predicted the three other characteristics to a larger degree than vice versa. Against the background of the examined criteria for the disentanglement of core dispositions from surface characteristics, Emotional Stability emerged as more distinct meaning it appears to be more of an underlying construct in comparison.

With the consolidation of the validity of the German HEXACO-60 and BFI-2 self-report forms and the validation of the respective informant-report forms, future research can now take several paths either within the framework for identifying core dispositions or beyond.

Future Directions

Due to the outlined significance of SOA, further investigation is warranted that examines under which circumstances self-appraisal and judgments by others regarding one's own personality tend to align or disagree. To this end, potential moderators of the relationship between self-ratings and informant-ratings can and should be identified. This would also indicate in which situations personality assessments made by others are more useful and in which situation they should be evaluated more critically. Research areas that use personality measures would greatly benefit from such an insight (Vazire, 2010).

Several factors for the prediction of SOA have been identified. For instance, lower SOA is observed when target and informant are unacquainted (Kim et al., 2019). Concordantly, stronger SOA can be expected as closeness and length of informants' and targets' relationship increases (Connelly & Ones, 2010; Funder, 1995; John & Robins, 1993). The agreement of self- and informant-ratings of personality also depends on which trait domain within its respective personality model is being considered. With their meta-analyses, Connelly and Ones (2010) found that the Big Five Domains Extraversion and Conscientiousness show particularly high SOA compared to Openness and Emotionality. Agreeableness, on the other hand, exhibits the lowest SOA.

The relatively strong SOA among certain trait domains has previously been attributed to the visibility of these traits (Lee & Ashton, 2017; Vazire, 2010). It is argued that Extraversion ratings, for instance, show particularly high SOA as this trait's overt behavioral manifestations are considered to be highly observable (Kim et al., 2019; de Vries, Realo, & Allik, 2016). On the other hand, target and informant tend to disagree more in their ratings of Big Five Emotionality items due to the comparatively infrequent occurrence and, therefore, low observability of neurotic behavior (Kim et al., 2019; de Vries, Realo, & Allik, 2016). It is important to note that absolute statements regarding a domain's visibility do not consider that different latent trait levels of the same domain might be associated with distinct observability. Evidence for more variable observability levels of trait domains can be found when considering the expression of traits within a common accuracy paradigm. According to the Realistic Accuracy Model (Funder, 1995; 2012), the formation of accurate personality judgments postulates the expression of *relevant* trait cues by the target that are *available* to the perceiver. Further, the perceiver must actually *detect* the cues and then *utilize* them for the judgment. As each stage in this model depends on the prior stages, observing trait cues at the detection stage depends on the expression of cues at the availability stage. In other words, trait cues must be expressed by the target to be observed by the perceiver. The expression of relevant trait cues in turn is situationally dependent (de Vries, Tybur et al., 2016; Rauthmann, 2012; Tett & Burnett, 2003). Due to the sequential nature of the model, it follows that the observability of traits is not static either.

In this sense, it was suggested that the HEXACO trait manifestations of low Honesty-Humility, low Agreeableness and high Emotionality are especially less observable (de Vries, Realo, & Allik, 2016). The underlying rationale being that situations allowing the expression of these latent trait levels occur comparatively rarely. Not only does this mean that the observability of certain traits seems to be situationally dependent. It also shows that in a certain situation, SOA may depend on the level of the latent trait. That is, a highly agreeable individual, for instance, is more likely to be judged accurately than a disagreeable person in most situations or contexts. From this, higher SOA in

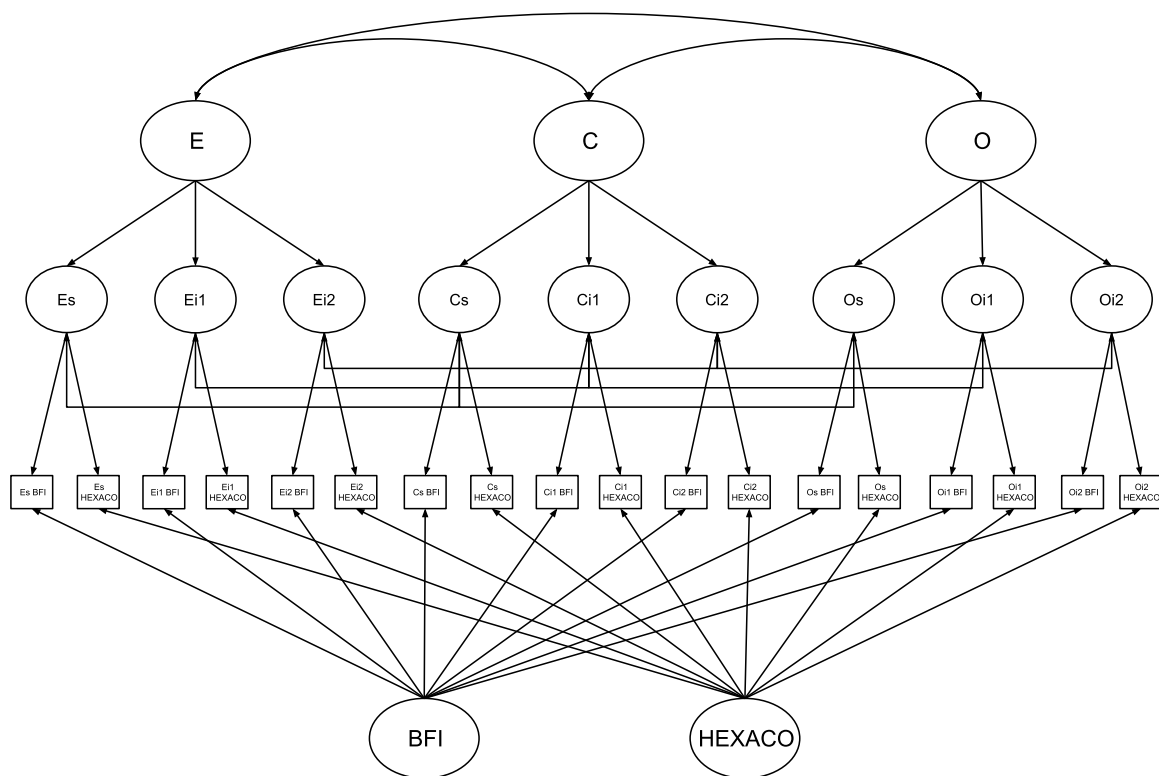
Agreeableness ratings would be expected for targets with a high level of the trait compared to less agreeable targets. Likewise, assuming that dishonest traits are seldom expressed, informants' ratings of Honesty-Humility can be expected to be based on inconclusive or incomplete information. Therefore, their ratings would not reflect targets' "actual" personality trait level and, as a consequence, do not coincide with self-ratings, assuming self-ratings to be accurate. A similar pattern can be expected to emerge when considering a highly emotional target as this trait level rarely becomes apparent to others (de Vries, Realo, & Allik, 2016). These three effects should be mitigated by acquaintanceship level as observers of well-known targets are more likely to possess information of less occurring situations. This knowledge, not accessible to uninformed others, can subsequently be incorporated in the ratings regarding Agreeableness, Honesty-Humility, and Emotionality.

Another future research direction can now build on the established support for the validity of the German HEXACO-60 and BFI-2, making it possible to incorporate the information of both questionnaires and different rater perspectives into one model. Earlier, the importance and benefits of relying on multirater data was discussed. However, many arguments also apply to the use of multimethod data in the form of different assessment tools when measuring personality. For instance, as rater-specific measurement error can be addressed by employing different raters, so can method specific measurement error be accounted for via the use of multiple measurement methods in the form of different questionnaires. This in turn can control for method-specific biases. Additionally, the integration of several forms of assessments leads to more reliable measures that might capture personality more comprehensively. By assessing the construct validity of a model that includes multiple rater perspectives and assessment methods, it can be tested whether a particular latent domain or domains become recognizable not only across raters but also across methods (i.e., questionnaires) solidifying the plausibility of a common latent trait (system distinctiveness criterion). Such an examination is also important, since different instruments that are supposed to measure the same construct may in fact measure deviating constructs (Mõttus et al., 2019). Figure 2 shows an example of how such a model could be

specified via structural equation modelling. The model includes the latent domains Extraversion, Conscientiousness, and Openness (to Experience) being assessed via three rating perspectives (one self-rating and two informant-ratings) and two methods (HEXACO-60 and BFI-2). The model therefore addresses rater- and method-specific variance. The three domains were chosen for the example, as the questionnaires conceptualize the domains Agreeableness and Emotional Stability / Emotionality differently (Ashton et al., 2014) meaning strong convergence would not be as expectable (Ashton et al., 2019; Thielmann et al., 2022).

Figure 2

Example of a Multitrait-Multirater-Multimethod Model



Note. The model depicts the latent domains Extraversion, Conscientiousness, and Openness (to Experience) with rating perspective as lower order factors and personality instruments as method factors. Manifest variables are self-ratings (s), and ratings of the first (i1) and second (i2) informant captured either via the BFI-2 or HEXACO-60. Residuals are omitted for simplicity.

Conclusion

The major aims of the current dissertation were the presentation of a framework for the identification of core dispositions and their disentanglement from surface characteristics along with the introduction of the SPeADy age-groups study. Simultaneously, the tools in the form of two personality questionnaires that can be used to tackle research questions within this framework and beyond were put under scrutiny. With the introduction of the criteria, a procedure for the differentiation, organization and integration of several conceptualizations of personality characteristics was illustrated. In that sense, the outlined criteria also serve as a quasi-preregistration that future studies can refer to when deciphering what constructs are core dispositions and which should be considered surface characteristics. Additionally, the introduction of the freely available longitudinal multirater SPeADy age-groups data serves as an invitation to pursue a myriad of research questions.

The examination of the psychometric properties of the German HEXACO-60 and BFI-2 self-report forms attested the reliability, validity and overall usefulness of both instruments. Prior findings regarding the German self-report forms were thereby replicated and substantiated. These results join a host of international studies demonstrating the distinct qualities of the self-report forms of both instruments. This in turn attests the intercultural and cross-lingual applicability and validity of the HEXACO-60 and BFI-2. The current dissertation project contributed to the completion of this notion by expanding validation efforts on the informant-report forms of the German HEXACO-60 and BFI-2 for the first time. In this regard, both instruments were found to possess comparable psychometric properties to their respective self-report counterparts. This in turn established both informant-report forms as viable methods for assessing personality via informants. In that sense, this dissertation laid valuable groundwork by attesting and affirming the solid foundation of these instruments that future research can build upon either within the framework for the differentiation of core dispositions and surface characteristics or beyond.

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Erklärung über den Eigenanteil an den Publikationen

Gemäß § 6 Absatz 2 Nummer 2 der Promotionsordnung der Universität Bremen für die Verleihung des Grades Dr. rer. nat. im Fachbereich 11 vom 13.07.2022 folgt ein Nachweis über die Eigenanteile der einzelnen Arbeiten dieser kumulativen Dissertation.

Studie I:

Yannik Wiechers: Konzeptualisierung, Datenkuration, Projektverwaltung, Schreiben des Entwurfes, Überarbeitung, Revision

Alexandra Zapko-Willmes: Datenkuration, Projektverwaltung, Schreiben des Entwurfes, Visualisierung, formale Analyse, Überarbeitung, Revision

Julia Richter: Datenkuration, Projektverwaltung, Schreiben des Entwurfes, Überarbeitung, Revision

Christian Kandler: Konzeptualisierung, Datenkuration, Finanzierungsbeschaffung, Methodik, Projektverwaltung, Supervision, Überarbeitung, Revision

Studie II:

Yannik Wiechers: Konzeptualisierung, Datenkuration, formale Analyse, Untersuchung, Methodik, Projektverwaltung, Visualisierung, Schreiben des Entwurfes, Überarbeitung, Revision

Christian Kandler: Konzeptualisierung, Datenkuration, Finanzierungsbeschaffung, Methodik, Projektverwaltung, Supervision, Überarbeitung, Revision

Studie III:

Yannik Wiechers: Konzeptualisierung, Datenkuration, formale Analyse, Untersuchung, Methodik, Projektverwaltung, Visualisierung, Schreiben des Entwurfes, Überarbeitung, Revision

Christian Kandler: Konzeptualisierung, Datenkuration, Finanzierungsbeschaffung, Methodik, Projektverwaltung, Supervision, Überarbeitung, Revision

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