

# Managing a Privileged Group Identity – Adaption and Validation of a German 4D-Scale

Ann-Christin Schröder<sup>1</sup>, Frank Asbrock<sup>1</sup> 

[1] *Department of Social Psychology, Chemnitz University of Technology, Chemnitz, Germany.*

---

Measurement Instruments for the Social Sciences, 2025, Vol. 7, Article e16079, <https://doi.org/10.5964/miss.16079>

**Received:** 2024-11-29 • **Accepted:** 2025-06-11 • **Published (VoR):** 2025-07-16

**Handling Editor:** Peter Schmidt, Justus-Liebig-Universität Gießen, Gießen, Germany

**Corresponding Author:** Ann-Christin Schröder, Professur Sozialpsychologie, Institut für Psychologie, Technische Universität Chemnitz, Wilhelm-Raabe-Str. 43, 09107, Chemnitz, Germany. E-mail: [ann-christin.schroeder@s2017.tu-chemnitz.de](mailto:ann-christin.schroeder@s2017.tu-chemnitz.de)

**Supplementary Materials:** Code, Data, Materials, Preregistration [see [Index of Supplementary Materials](#)]



---

## Abstract

In the present paper we introduce a German measure of managing a privileged group identity. We translated and adapted the 4D-Scale (Shuman et al., 2024) to the German context and validated it across three distinct samples. Results of Study 1 ( $N = 346$ ), Study 2 ( $N = 342$ ), and Study 3 ( $N = 204$ ) confirm the psychometric qualities of the German measure and replicate the 5-factor-structure including the management strategies Defend, Deny, Distance from Inequality, Distance from Identity and Dismantle. Moreover, Studies 1 and 2 provide evidence for the measure's construct validity and measurement invariance, while Study 3 offers additional support of its predictive validity and test-retest reliability within two weeks. The content of the first item of the Distancing from Identity subscale is not valid and is therefore not recommended for studies in the German context.

## Keywords

advantaged group, identity management, White privilege, White German identity, intergroup relations

## Theoretical Background

Privilege, often rooted in *race*, gender, socioeconomic status, ability, or educational background, provides distinct advantages to certain groups such as better access to resources, high-status jobs, housing and health care, and the absence of discrimination (Swim & Miller, 1999). To address systematic inequalities, it is important that those who are privi-



This is an open access article distributed under the terms of the [Creative Commons Attribution 4.0 International License](#), CC BY 4.0, which permits unrestricted use, distribution, and reproduction, provided the original work is properly cited.

leged become aware of their position and acknowledge its illegitimacy, yet, they tend to overlook and obscure their privilege (DiAngelo, 2011). White US Americans for example, show more awareness for inequality due to racism and fewer racist attitudes when confronted with their privileges (Powell et al., 2005). However, confrontation with privileges often leads to defensive behavior such as denial, playing down the severity, and showing strong emotion as anger about bringing up *race* topics, shame about own privileges and prejudices, as well as emotional withdrawal. Thereby, Whites reproduce the power imbalance by determining the discourse and maintain the status quo (DiAngelo, 2011). Understanding the strategies of privileged individuals is critical to unravel these racial hierarchies.

So far, the study of White privilege has been limited to the U.S., where racism emerged in the context of settler colonialism, slavery, and subsequent racial segregation and the discourse often revolves explicitly around *race* and racial identities. In Germany, the term *race*, tied to anti-Semitism and the legacy of the Holocaust, is characterized by its avoidance which even led to a lack of surveys on social inequality due to *race*. Though Germany's colonial past includes atrocities, exploitation and the deep entrenchment of racist ideology in the German population, the debate about colonialism remains isolated and lacks collective reappraisal. Whether the Holocaust is understood as a singular, unique historical event or as a development from the colonial legacy is the subject of an ongoing debate. What is certain, however, is that racism is widely perceived as a right-wing extremist marginal phenomenon and its embedding in the center of society is often denied (Foroutan, 2022; Roig, 2017).

Accordingly, a recent survey reveals that White Germans exhibit a considerable resistance to confronting racism (Foroutan et al., 2022). Despite the importance of the topic, White privilege is a scarcely researched area in Germany and research is needed to examine how White Germans are dealing with their privileged status. This paper aims to present a validated German version of the 4D-Scale of Shuman et al. (2024) to encompass the investigation of how White Germans deal with their privileges, and to advance privilege research by examine the extent to which U.S. privilege research is transferable to other cultural contexts.

## Instrument

The 4D-Scale (Shuman et al., 2024) consists of five identity management strategies to deal with a privileged identity and is based on the 3D-model by Knowles and colleagues (2014). According to the model, confrontation with privileges induces self-categorization. Consequently, Whites may perceive their own achievements as threatened, because systematic advantages become apparent. According to the model, Whites either *Deny* their privileged position or *Distance* their self-concept from the social category to undermine this *meritocratic threat*. Additionally, Whites may perceive the moral integrity of

the group to be threatened and either *Distance* themselves from *Whiteness* or support the *Dismantling* of the hierarchy to deal with this *group image threat* (Knowles et al., 2014). Shuman et al. (2024) developed the 4D-Scale to facilitate assessing the described strategies among privileged individuals. Because right-wing political movements gained strength and the public approval of White supremacy became more popular, Shuman and colleagues (2024) assumed that Whites can also feel threatened in their privileged status, when its legitimacy is questioned. Hence, Whites may also *Defend* their privileged position in order to counter the *status threat*. Accordingly, the authors extended the model and the scale to include a fourth strategy (4D). An exploratory factor analysis revealed that *Distancing* refers to two different domains, *Distancing from the social identity* of the privileged group and *from benefitting from ascribed privileges* (Shuman et al., 2024). To encompass investigations on privilege management in Germany, we translated the 4D-Scale by Shuman et al. (2024).

## Scale Development

### Translation

Initially, the original scale was translated by a native German sociologist who lived in the USA for several years. The online AI-based translation tool DeepL reverse translated the German items into English and differences between the reverse translation and the original scale were discussed and adapted. The final version of the scale is displayed in Table 1.

**Table 1**

*Standardized Factor Loadings of Translated Items*

Item Translation German / English	Factor loading	M	SD
<b>Verteidigen / Defend</b>			
1. Die Ungleichheiten, die zwischen People of Color und <i>Weiß</i> bestehen, sind ein gerechtfertigtes Ergebnis der realen Unterschiede zwischen den Gruppen.	.90	1.68	1.02
1. The inequalities that exist between Black and White Americans are a justified outcome of the real differences between the groups.	.86 <sup>a</sup>		
2. Aufgrund der grundlegenden kulturellen Unterschiede zwischen People of Color und <i>Weiß</i> ist es fair, dass es Ungleichheiten zwischen den Gruppen gibt.	.82	1.80	1.24
2. Because of fundamental cultural differences between Black and White Americans, it is fair that there are inequalities between the groups.	.84 <sup>a</sup>		
3. Die Ungleichheit, die zwischen People of Color und <i>Weiß</i> besteht, spiegelt einfach die natürliche Ordnung der Dinge wider.	.90	1.49	0.86

Item Translation German / English	Factor loading	M	SD
3. The inequality that exists between Black and White Americans simply reflects the natural order of things.	.80 <sup>a</sup>		
4. Die Kluft zwischen People of Color und <i>Weiß</i> en spiegelt die natürlichen Unterschiede zwischen den Gruppen wider.	.76	1.90	1.24
4. The gaps between Black and White Americans reflect natural differences between the groups.	.87 <sup>a</sup>		
<b>Leugnen / Denial</b>			
1. Das Ausmaß der Diskriminierung, der People of Color ausgesetzt sind, wird oft übertrieben.	.87	2.66	1.46
1. The amount of discrimination that Black Americans face is often exaggerated.	.92 <sup>a</sup>		
2. Das Ausmaß der Ungleichheit zwischen People of Color und <i>Weiß</i> en ist eigentlich recht gering.	.93	2.77	1.42
2. The amount of inequality between Black and White Americans is actually quite small.	.92 <sup>a</sup>		
3. People of Color wurden früher ungleich behandelt, aber heute sind sie nicht mehr viel Diskriminierung ausgesetzt.	.89	2.81	1.52
3. Black Americans in the US used to be treated unequally, but they don't face much discrimination anymore.	.92 <sup>a</sup>		
4. <i>Weiß</i> e und People of Color werden heutzutage in der Gesellschaft im Allgemeinen gleich behandelt.	.89	2.96	1.50
4. White Americans and Black Americans are generally treated equally in society nowadays.	.89 <sup>a</sup>		
<b>Distanzierung von Ungleichheit / Distance from Inequality</b>			
1. Ich habe nie persönlich von der Ungleichheit profitiert, die zwischen People of Color und <i>Weiß</i> en besteht, aber andere vielleicht schon.	.74	4.35	1.73
1. I have never personally benefited from the inequality that exists between Black and White Americans, though others might have.	.75 <sup>a</sup>		
2. Obwohl es einem normalerweise echte Vorteile im Leben gibt, <i>weiß</i> zu sein, habe ich nicht viele dieser Vorteile genossen.	.71	3.79	1.60
2. While being White usually gives on real advantages in life, I haven't enjoyed many of these advantages.	.70 <sup>a</sup>		
3. Nur einige <i>Weiß</i> e genießen Privilegien, die sich aus der Ungleichheit aufgrund von Rassismus ergeben.	.73	3.56	1.64
3. Only some White Americans enjoy privileges as a result of racial inequality.	.74 <sup>a</sup>		
4. Die derzeitigen Ungleichheiten, die zwischen People of Color und <i>Weiß</i> en bestehen, haben nur für einige wenige <i>Weiß</i> e Vorteile.	.80	3.41	1.60
4. The current inequalities that exist between Black and White Americans only have benefits for a few White Americans.	.73 <sup>a</sup>		

Item Translation German / English	Factor loading	M	SD
<b>Distanzierung von Identität / Distance from Identity</b>			
1. Ich definiere mich lieber über meine individuellen Eigenschaften als über die Tatsache, dass ich <i>weiß</i> bin.	.35 <sup>b</sup>	6.37	0.91
1. I prefer to define myself by my individual characteristics rather than by the fact that I am a White American.	.52 <sup>a</sup>		
2. Es stört mich, wenn sich die Leute darauf fokussieren, dass ich <i>weiß</i> bin und nicht auf die Dinge, die mich als Individuum definieren.	.81	4.90	1.67
2. It bothers me when people focus on my racial identity rather than on the things that define me as an individual.	.84 <sup>a</sup>		
3. Ich wünschte, dass wenn die Leute mit mir interagieren, sie nicht so sehr betonen würden, dass ich <i>weiß</i> bin.	.71	3.90	1.59
3. I wish that when people interact with me that they wouldn't emphasize my racial identity.	.77 <sup>a</sup>		
4. Es stört mich, wenn andere Menschen hervorheben, dass ich <i>weiß</i> bin.	.82	4.01	1.75
4. It bothers me when other people highlight my racial identity.	.80 <sup>a</sup>		
<b>Abbauen / Dismantle</b>			
1. Um Gleichberechtigung für People of Color zu erreichen, sollten <i>Weißer</i> bereit sein, einen Teil der Vorurteile, die sie genießen, aufzugeben.	.91	4.82	1.57
1. To achieve equality for Black Americans, White Americans should be willing to give up some of the advantages they enjoy.	.92 <sup>a</sup>		
2. Ich denke, <i>Weißer</i> müssen einige ihrer Privilegien aufgeben, um eine gleichberechtigtere Gesellschaft zu erschaffen.	.88	4.54	1.64
2. I think White Americans need to give up some of the privileges they have in order to create a more equal society.	.93 <sup>a</sup>		
3. Wenn ich an meine Privilegien als <i>Weißer</i> denke, habe ich das Gefühl, dass ich etwas tun muss, um die Ungleichheit anzugehen, mit der People of Color konfrontiert sind.	.74	4.63	1.53
3. When I think of my privileges as a White American, I feel I must do something in order to address the inequality faced by Black Americans.	.85 <sup>a</sup>		
4. Ich würde einige meiner Privilegien als <i>Weißer</i> aufgeben, um die Ungleichheit zu verringern.	.88	5.00	1.55
4. I would give up some of my privileges as a White American in order to reduce inequality.	.89 <sup>a</sup>		

Note. Likert-Scale: 1-7 (1 = I strongly disagree, 3 = I neither agree nor disagree 7 = I strongly agree).

<sup>a</sup>Results Study 5, Shuman et al. (2024). <sup>b</sup>Only Item 1 of the dimension „Distance from Identity“ is non-significant in this sample.

## Quality Criteria

In three studies we tested for the factorial structure, construct validity, measurement invariance and the predictive reliability of the German version of the 4D-Scale and

extended the quality criteria with test-retest reliability. All studies were preregistered and approved by the ethics committee of the research institution.

## Study 1

In Study 1, we collected data to test for the factorial structure and for construct validity of the German version of the scale, hypothesizing a five-factor structure as found by Shuman et al. (2024). We assessed one part of the validity constructs from the original study of Shuman et al. (2024) to keep a reasonable length of the survey and expected the correlation with the validity constructs to be similar to their results (Preregistration Study 1, see Schröder & Asbrock, 2023a).

## Method

### Participants

A total of 628 people participated in the online survey. The final sample included 346 participants (155 male, 178 female, 13 diverse gender) with a mean age of 29.94 ( $SD = 9.33$ ) years. No missing values occurred for key variables, as responses to these items were mandatory. We report all analyses with the sample in which outliers were excluded by a Mahalanobis distance analysis ( $N = 346$ ). For transparency, we report all analyses with outliers included ( $N = 441$ ) in the Supplementary Materials (Schröder & Asbrock, 2025), but no major differences occurred between both samples. For power analysis, exclusion criteria, sample description, measures and instructions see Schröder (2025).

### Materials and Procedure

For the acquisition of participants, we used the British online platform Prolific that offers a diverse, high-quality participant pool and ensures the participants match the study criteria via pre-screening. Matching Prolific users received an invitation to participate in a 15-minute study on perceptions of social justice. After informed consent and a brief explanation of the term People of Color, participants indicated whether they are typically perceived as White or as a Person of Color to include only people who experience racial privilege. People of Color then had the opportunity to download information and further explanation for the termination of the study. The remaining participants filled in the following measures that were assessed with 7-point Likert scales if not specified otherwise (Schröder, 2025 for details on scales and items): Our translated 20-item *4D-Scale on Group Privileges* (Shuman et al., 2024), measuring management of White privilege; a German 8-item *System Justification* scale (Ullrich & Cohrs, 2007); a translation of the 3-item *meritocratic beliefs* scale (Major et al., 2007), assessing beliefs about merit and success; a 16-item German *Social Dominance Orientation* scale (Saldarriaga et al., 2017), investigating people's justification of social hierarchies and three dimensions of

the *Human Values* scale (Schwartz, 2007), assessing values about achievement (2-items), power (2-items) and universalism (3-items) on a 6-point Likert-scale. The survey included two attention check items. Finally, participants provided information on their political orientation, age, gender, educational level, social status, state, nationality, and income. They then were thanked for their participation and redirected to Prolific to receive their reward of 2.30 £. A final section displayed more detailed background information on the study.

## Results and Discussion

We conducted a maximum-likelihood CFA with robust standard errors using *lavaan* 0.6 – 18 package (Rosseel, 2012) in R Version 4.3.3 to replicate the five-factor structure of the 4D-Scale found by Shuman et al. (2024) in a German sample.

### Factorial Validity

The results of the CFA for a 5-factor-structure show an acceptable model fit according to the classification of Hu and Bentler (1999;  $\chi^2 = 412.39$ ,  $df = 160$ ,  $p < .001$ , SRMR = .064, RMSEA = .068, 90% CI [0.060, 0.076], TLI = .939, CFI = .949, AIC = 19838.98). The first item of the Distance from Identity scale showed a low factor loading (.35), whereas all other items sufficiently loaded onto their factors ( $> .50$ , see Table 1).

A CFA without this low-loading item also show an acceptable model fit ( $\chi^2 = 354.40$ ,  $df = 142$ ,  $p < .001$ , SRMR = .057, RMSEA = .066, 90% CI [.057, .074], TLI = .95, CFI = .96, AIC = 18957.42). Removing Item 1 from Distance from Identity only marginally improves the model fit indices but the lower AIC indicates a better model fit than the model with the item included and the internal consistency of the subscale increases ( $\omega = .78 / .83$ ). All other subscales show a good internal consistency with a McDonald's Omega above .80 (Schröder, 2025; Table S1).

### Construct Validity

Congruent with the results of Shuman et al. (2024) a correlational analysis shows substantial associations among the subscales (Schröder, 2025; Table S2). The correlations between *Distance from Identity* and *Dismantle* substantially deviate across samples (US sample:  $r = -.25$ , Shuman et al., 2024; German sample:  $r = -.05$ ), which may reflect cultural differences in how *race* and *Whiteness* are approached. In the US, racial categorization is normalized. White US-Americans who wish to dismantle a system of racial privilege should acknowledge their accountability and distance themselves less from *Whiteness*, as distancing tends to obscure and thus perpetuate advantages. In Germany, racial terminology and attributions are generally avoided (Kerner, 2013), so both those who seek to preserve a system of racial privilege and those who aim to dismantle it may tend to distance themselves from *Whiteness* because it is embedded in cultural practice. However,

even in Germany, distancing oneself from White identity can also serve to maintain one's privileges.

In line with Shuman et al. (2024), we calculated quantifying construct validity (qcv) in R Version 4.3.3 with the *qcv* package (Furr & Heuckeroth, 2019) offering two metrics.  $r_{\text{alerting-CV}}$  roughly indicates whether the predicted patterns correlate with the observed patterns of correlation and the overall fit of the predicted interrelations.  $r_{\text{contrast-CV}}$  is sensible for low correlations with the nomological network and takes parameters such as the variability of the correlations and the sample size into account, generating more precise estimates. An  $r_{\text{alerting-CV}}$  larger than .79 and  $r_{\text{contrast-CV}}$  larger than .71 to .89 are interpreted as indicators of good theoretical prediction. Significant *p*-values exhibit that the overlapping correlations do not occur randomly (Furr & Heuckeroth, 2019).

We conducted a qcv with estimated strength and directions of the correlations based on the results of Shuman et al. (2024) and with our observed patterns. The metrics indicate good theoretical predictions for *Defend*, *Deny* and *Dismantle* ( $r_{\text{contrast-CV}} > .70$ ), though some associations with Power, Achievement, Meritocratic Beliefs and System Justification strongly differ from those found in the US sample (Shuman et al., 2024; Schröder, 2025 Table S6). The results do not support good theoretical prediction for both *Distancing strategies* ( $r_{\text{contrast-CV}} < .46$ ), showing essential differences in the correlation with Power and Achievement (*Distance from Inequality*) and with System Justification and Achievement (*Distance from Identity*). We assume that differences between the German and US samples in the correlations of the subscales with some validity constructs are due to cultural differences: System Justification may be less related to racism among Whites in Germany than in the United States, because racism receives much less public attention (Ball et al., 2022). Instead, a more critical view of, for example the political system or class, may be more prevalent in the German sample.

Meritocratic values are highly emphasized in the US (Reynolds & Xian, 2014), whereas, in Germany excessive inequality in success is generally rejected, but people are expected to be hard working (Heuer et al., 2020). In Germany, attitudes towards meritocracy and achievement may be less pronounced overall and may differ in their meaning from the market-liberal meritocratic ideology of the US. Furthermore, values concerning power in relation with racism may be more of a conscious thought of power that is earned and must be defended in the US, than an invisible and natural dominance that must be maintained in Germany (Ball et al., 2022).

We interpret the qcv analysis results as reflections of cultural differences between Germany and the US. In particular, the *Distancing strategies* appear to differ in their relation to the nomological network between the countries.

## Study 2

In this second study, we aimed at replicating the five-factor structure of our scale and at further validating the scale with additional constructs. We hypothesized a five-factor structure with good fit measures as found in Study 1 and that the validity constructs would correlate with the subscales as found by Shuman et al. (2024; Preregistration Study 2, see Schröder & Asbrock, 2023b).

### Method

#### Participants

A total of 461 people participated in an online survey implemented identically to Study 1. The final sample consisted of 342 participants (180 male, 146 female, 13 diverse gender, 3 unspecified) with a mean age of 32.74 ( $SD = 10.42$ ) years. For power analysis, exclusion criteria, measures and instructions see Schröder (2025).

#### Materials and Procedure

Prolific users read the instructions (identical to Study 1) and filled in the *German 4D-Scale*, followed by validation constructs, assessed with 7-point Likert scales if not specified otherwise: A translation of three 3-item scales by van Zomeren et al. (2011) for measuring *Social Identification with White Germans*, *German People of Color*, and a *Superordinate Group of Germans*; a translation of a 4-item scale by Knowles et al. (2009) assessing *Colorblind Beliefs*, meaning the avoidance of categorization based on racial groups and the same demographics as in Study 1. The survey included two attention check items. They then were thanked for their participation and redirected to Prolific to receive their reward of 1.50 £.

### Results and Discussion

A maximum-likelihood CFA was exceeded as in Study 1.

#### Factorial Validity

The CFA for a 5-factor-structure again resulted in acceptable model fit measures ( $\chi^2 = 344.88$ ,  $df = 160$ ,  $p < .001$ , SRMR = .053, RMSEA = .058, 90% CI [.049, .066], TLI = .95, CFI = .96, AIC = 19230.71). All items, except for the first item of the *Distance from Identity* factor (.45) are loading sufficiently on their factors ( $> .50$ ; Schröder, 2025, Figure S1). The subscales show good internal consistency with no differences to the results of Study 1 ( $\omega > .78$ ; Schröder, 2025, Table S9).

## Construct Validity

The observed correlations between the 4D-subscales are consistent across the German samples of Study 1 and Study 2 (see Schröder, 2025, Table S10). We again conducted a qcv analysis to test whether the subscales are related to Identification and Colorblindness as found by Shuman et al. (2024). The subscales correlate differently with their nomological network in this German sample than in the US sample of Shuman et al. (2024), especially with Colorblindness (Schröder, 2025, Table S12). The metrics indicate that the correlations from the US sample does not represent good theoretical predictions for any of the subscales ( $r_{\text{contrast-CV}} < .40$ ), suggesting cultural differences between Germans and US Americans regarding Common Identity and Colorblindness (see Table 2).

**Table 2**

*Correlations of Common Identity and Colorblindness with 4D-Scales*

Scales	Common Identity	Colorblindness
Defend	.21/.27	.28/-.02
Deny	.35/.27	.53/.08
Distance Inequality	.22/.17	.46/.23
Distance Identity	.27/-.01/.00 <sup>a</sup>	.56/.41/.38 <sup>a</sup>
Dismantle	-.28/-.14	-.46/.01

Note. Pearson's  $r$ . The first  $r$  is from Shuman et al. (2024), Study 5; the second  $r$  is from the present Study 2 sample.

<sup>a</sup>Item 1 excluded.

According to Kerner (2013), *Whiteness* has different implications in the US than in Germany, as the term *race* was deliberately removed from the public debate in order to break with National Socialist racial policy resulting in no official racial classification system in politics, administration and society overall. Even its use in the context of anti-discrimination is avoided and replaced by the English term. Kerner (2013) theorizes that no reinterpretation of racial categories in the course of identity politics movements has yet taken place in Germany as it happened in the US. Furthermore, she outlines that forms of racism in Germany are generally not discussed in terms of explicit racial differences, as in the US, but of national-cultural and religious differences. As a result, it is less clear who is understood as White and who is understood as non-White in Germany, creating a special context for the identification with *Whiteness* and Colorblindness (Roig, 2017).

In summary, the results of the qcv analysis reveal differences between the findings in the German and the US sample that can be explained by cultural differences. Hence, we assume construct validity for the German 4D-Scale, except for the first item of *Distancing from identity*. As this item shows low factor loadings in both studies, we question its

content validity and assume it does not capture distancing from a social identity but a preference of individuality. We decided to not reformulate this item, as the content of the scale is already quite homogeneous, but recommend to exclude it in German surveys.

### Measurement Invariance

We performed a multigroup CFA in R (4.3.3) using the *lavaan 0.6 – 18* package (Rosseel, 2012) with the dataset of Study 2 and the data from Shuman et al. (2024, Study 5). We excluded the first item of the Distance from Identity scale because it is lacking validity (for results including this item and with the dataset of Study 1 see Schröder, 2025). We set cross-group constraints to test for configural, metric and scalar invariance (Fischer & Karl, 2019). To deal with the different sample sizes, we randomly drew  $n = 342$  from the larger sample of  $n = 526$  in one hundred runs. We performed the invariance tests with each of these one hundred samples and calculated the mean values of all fit measures (Yoon & Lai, 2018).

A good configural model fit indicates that the data of both groups correspond to the predicted latent factors. Large changes in the model fit when equating the factor loadings indicate a different metric distribution of the data and a lack of metric comparability. With scalar invariance, the mean values of the indicators are equated. If the model fit changes too much here, mean values are not comparable across the groups.

### Results and Discussion

The configural invariance model indicates an acceptable fit with a CFI  $> .95$  and RMSEA and SRMR  $< .07$  (see Table 3). According to Chen (2007), changes in fit measures of the invariance models should not exceed  $\Delta\text{CFI} = -.01$ ,  $\Delta\text{RMSEA} < .015$ ,  $\Delta\text{SRMR} < .03$ . We prefer this method to the chi-square difference statistic, because the latter is highly sensitive to sample sizes and therefore no conclusive measure to assess measurement invariance (Chen, 2007). For the results of a chi-square difference test see Schröder (2025; Table S28). The changes in the fit measures of the metric invariance model are small (see Table 3), whereas the change in the CFI of the scalar invariance model slightly exceeds the recommended cut-offs ( $-.015$ ). Since the changes in RMSEA and SRMR are well below the cut-off, we assume measurement invariance between the German and US 4D-Scale.

**Table 3***Fit Indices for Measurement Invariance Models*

Model	$\chi^2(df)$	$\Delta\chi^2(df)$	CFI	$\Delta$ CFI	RMSEA	$\Delta$ RMSEA	SRMR	$\Delta$ SRMR
Configural	604.52 (284)	—	.967	—	.057	—	.042	—
Metric	633.06 (298)	28.54 (14)	.965	-.002	.057	.0001	.047	-.005
Scalar	794.30 (312)	161.24 (14)	.951	-.014	.067	-.0100	.055	-.008

Note. Item 1 of Distance from Identity is not included

## Study 3

In Study 3, we tested the predictive validity of the German 4D-Scale as well as its test-retest reliability in two measurement points (T1, T2). We tested the predictive validity across behavioral constructs assuming correlations would be similar to those found by Shuman et al., (2024). In addition, we developed a method for measuring engagement with social media comments that involved the 4D-strategies. We hypothesized that participants would like or answer positively to a comment the more they agreed with the corresponding strategy on the 4D-Scale (Preregistration Study 3, see Schröder & Asbrock, 2024).

## Method

### Participants

At T1 262 people participated in the survey of which 206 (78.63%) participated in T2 two weeks later. The final sample size consisted of 204 participants (123 male, 75 female, 3 diverse gender, 3 unspecified) with a mean age of 35.51 ( $SD = 10.97$ ) years. For power analysis, exclusion criteria, measures and instructions see Schröder (2025).

### Materials and Procedure

At T1 Prolific users were invited to participate in a 3-minute study on perceptions of social justice with an introduction as in the previous studies. At T2, after completing the *German 4D-Scale*, participants responded to the following behavioral constructs on a 7-point Likert scale if not specified otherwise:

A 1-item scale by Schlueter and Huth-Stöckle (2023) investigating participants *Social Distance* with People of Color in Germany on a 4-point-Likert scale; a translated multi-level measure of *Confronting Prejudiced Responses (CPR)* by Ashburn-Nardo et al. (2008), asking participants to evaluate described situations regarding their perception of racial discrimination, their assessment of the situation's severity and the urgency to act against it, their sense of personal responsibility to intervene, and their motivation to oppose racism in the given scenario. A translated measure of *Principle Implementation Gap* of

Tuch and Hughes (1996) evaluating attitudes towards achieving an equal status between People of Color and Whites in Germany; a translated scale assessing the *Support for Affirmative Action* by Kteily et al. (2017) asking for attitudes towards the implementation of policies to foster the equality of opportunity for People of Color in Germany in work contexts and a translated measure to assess *Willingness to engage in solidarity-based action on racial issues* by Selvanathan et al. (2018) asking participants to rate the likelihood of engaging in opportunities to act against racial injustices in society on a 4-point Likert scale. Additionally, we designed a method assessing *Engagement on Social Media*, presenting the participants five screenshots of YouTube comments each representing a strategy of the 4D-Scale. They then were asked to indicate if they would react by giving a thumbs up, thumbs down, replying to, or reporting the YouTube comments. The survey included two attention check items. Participants were then thanked, debriefed and redirected to Prolific to receive their reward of 4.70 £ in total (0.40 £ after T1 and 4.30 £ after T2).

## Results and Discussion

### Test-Retest Reliability

Dolnicar et al. (2022) suggest the indicators strict and binary stability to investigate test-retest reliability on item-level in addition to the intra class correlation coefficient (ICC) on subscale-level. *Strict stability* determines the proportion of participants giving the exact same answer on both occasions, while *binary stability* reflects the percentage of respondents whose answers fall on the same side of the scale (positive or negative) in both instances.

The authors consider an ICC of below .70 as unacceptable. Accordingly, all subscales show good reliability with ICC ranging from .84 to .96 (see Schröder, 2025, Table S29). On item-level, no item exceeds a strict stability of 67%. As a 7-point Likert scale provides various answer options, the binary stability coefficients may be more suitable and range from 62 to 90%. Especially, the *Distancing strategies* show high inconsistencies over the time, indicating that they may depend on situational factors, that influence the response behavior. Only the first item of *Distancing from identity* is outstandingly consistent (89%) supporting the assumption that the content of this item is invalid.

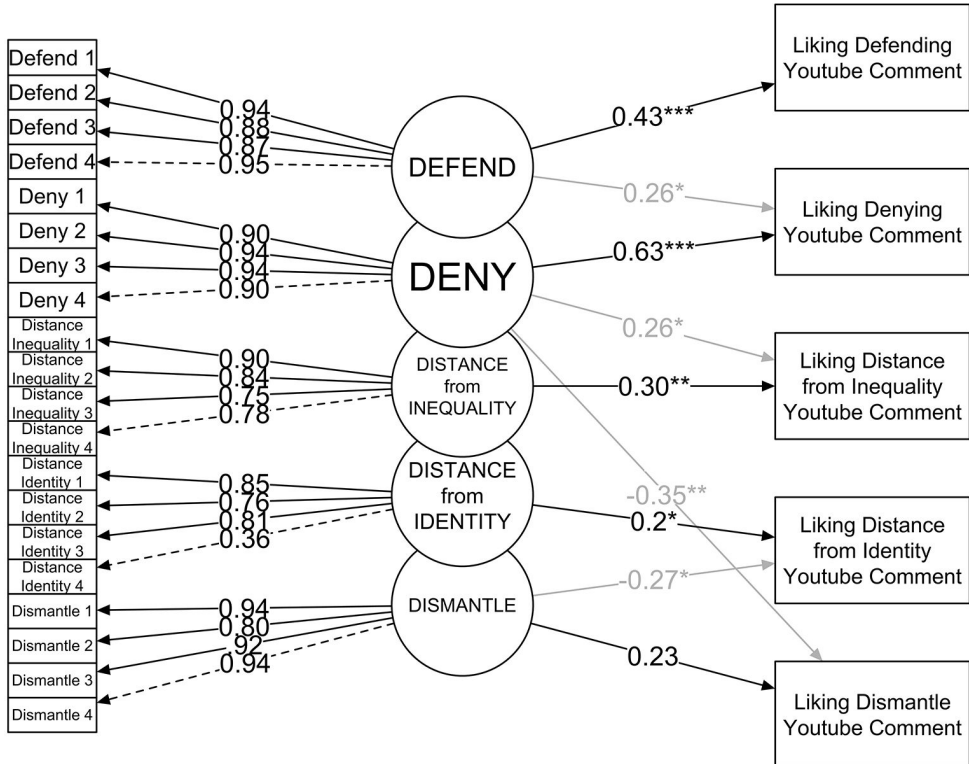
### Predictive Validity

We calculated another qcv analysis with the behavioral constructs and a structural equation model (SEM) to test whether the 4D-Scale predicts responses to YouTube comments (Figure 1). The  $r_{\text{alerting-CV}}$  for all criterion variables range from .96 to .99, indicating excellent predictive validity of the behavioral constructs. However, correlations with *Distancing strategies* deviate between the samples, with associations between Affirmative Action, Solidarity Based Collective Action and Equality Implementation being neutral in

the German sample but significantly negative in the US sample (Schröder, 2025, Table S30).

**Figure 1**

*Predictive Validity Model*



Note. Nonsignificant paths are not displayed, key paths are black.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

The SEM indicates an acceptable model fit ( $\chi^2 = 419.45$ ,  $df = 235$ ,  $p < .001$ , SRMR = 0.043, RMSEA = 0.063, TLI = 0.945, CFI = 0.957, AIC = 13409.05). The latent factors significantly predict the Liking of YouTube comments, except for *Dismantle* exhibiting a  $p$ -level of .055 (Figure 1). Also, the predictive strength of the *Distancing strategies* is weaker compared to *Defend* and *Deny*.

Overall, the *Distancing strategies* appear to be less clearly delineated, less consistent and therefore more influenced by situational and cultural factors than the strategies of *Denial*, *Defend* and *Dismantle*. However, *Dismantle* does not predict behavior that

reflects this strategy, which may be due to an inhibitory effect of group image threat on behavior, as described in the 3D-Model (Knowles et al., 2014).

## General Discussion

Investigating complex psychological processes, such as managing a privileged group identity, requires comprehensive and precise measurement instruments. The validation of the German 4D-Scale revealed differences in cultural comparability, stability, and prediction of behavior across the strategies for dealing with White privilege. These findings underline the complexity of this social phenomenon and demonstrate the scale's utility in examining it. Future research is needed to clarify situational influences and consequences of using distancing strategies and colorblindness in Germany as well as the causes for the behavioral tendencies of the strategies. Furthermore, the examination of White privilege management in a representative German sample and the extension to other contexts display promising fields of research.

## Conclusion

With the exception of the first item in the Distancing from Identity subscale, the German 4D-Scale demonstrates promising validity and reliability for assessing privileged identity management in Germany. The observed deviations in correlations with the nomological network and the higher inconsistencies over time for the Distancing strategies provide useful insights for further investigation of these strategies as well as for the application of the scale. Overall, the findings underscore the importance of validating measurement instruments in cross-cultural contexts.

---

**Funding:** The first author was supported by a sponsorship by the Land of Saxony

---

**Acknowledgments:** Thanks to Aaron Bielejewski and Jonas Bergmann for assisting in (re-)translation.

---

**Competing Interests:** The authors have declared that no competing interests exist.

---

**Ethics Statement:** Ethics approval was granted by the Chemnitz University ethics committee.

---

**Data Availability:** For this article, data is freely available (see Schröder, 2025).

---

## Supplementary Materials

For this article, the following Supplementary Materials are available:

- Preregistration Study 1 (see Schröder & Asbrock, 2023a)
- Preregistration Study 2 (see Schröder & Asbrock, 2023b)

- Preregistration Study 3 (see Schröder & Asbrock, 2024)
- Code, data, additional information and results, questionnaire (see Schröder, 2025)

### Index of Supplementary Materials

- Schröder, A., & Asbrock, F. (2023a). *German version of the 4D-Scale for measuring a privileged group identity - Study 1* [Preregistration Study 1]. OSF Registries. <https://osf.io/g3maz>
- Schröder, A., & Asbrock, F. (2023b). *German version of the 4D-Scale for measuring a privileged group identity - Study 2* [Preregistration Study 2]. OSF Registries. <https://osf.io/dty9b>
- Schröder, A., & Asbrock, F. (2024). *German version of the 4D-Scale for measuring a privileged group identity - Study 3* [Preregistration Study 3]. OSF Registries. <https://osf.io/zq2dv>
- Schröder, A. (2025). *Supplementary materials "Managing a privileged group identity – Adaption and validation of a German 4D-scale"* [Code, data, additional information and results, questionnaire]. OSF. <https://osf.io/28uk7>

## References

- Ashburn-Nardo, L., Morris, K. A., & Goodwin, S. A. (2008). The Confronting Prejudiced Responses (CPR) Model: Applying CPR in organizations. *Academy of Management Learning & Education*, 7(3), 332–342. <https://doi.org/10.5465/amle.2008.34251671>
- Ball, E., Steffens, M. C., & Niedlich, C. (2022). Racism in Europe: Characteristics and intersections with other social categories. *Frontiers in Psychology*, 13, Article 789661. <https://doi.org/10.3389/fpsyg.2022.789661>
- Chen, F. F. (2007). Sensitivity of Goodness of Fit Indexes to Lack of Measurement Invariance. *Structural Equation Modeling*, 14(3), 464–504. <https://doi.org/10.1080/10705510701301834>
- DiAngelo, R. (2011). White fragility. *The International Journal of Critical Pedagogy*, 3(3), 54–70. [https://www.researchgate.net/publication/277069107\\_White\\_Fragility](https://www.researchgate.net/publication/277069107_White_Fragility)
- Dolnicar, S., Grün, B., & MacInnes, S. (2022). Assessing survey response stability: A complementary quality assurance protocol for survey studies in the social sciences. *Social Sciences & Humanities Open*, 6(1), Article 100339. <https://doi.org/10.1016/j.ssaho.2022.100339>
- Fischer, R., & Karl, J. A. (2019). A primer to (cross-cultural) multi-group invariance testing possibilities in R. *Frontiers in Psychology*, 10, Article 1507. <https://doi.org/10.3389/fpsyg.2019.01507>
- Foroutan, N. (2022, December 23). *Comparing racisms in post-migrant societies—similarities and differences in approaching racism in Germany and the United States*. American-German Institute. <https://americangerman.institute/publication/comparing-racisms-in-post-migrant-societies>
- Foroutan, N., Ha, N., Kalter, F., Shooman, Y., & Sinanoglu, C. (2022). Rassistische Realitäten: Wie setzt sich Deutschland mit Rassismus auseinander? *Deutsches Zentrum für Integrations- und Migrationsforschung (DeZIM)*. [https://www.rassismusmonitor.de/fileadmin/user\\_upload/NaDiRa/](https://www.rassismusmonitor.de/fileadmin/user_upload/NaDiRa/)

- CATI\_Studie\_Rassistische\_Realit%C3%A4ten/DeZIM-Rassismusmonitor-Studie\_Rassistische-Realit%C3%A4ten\_Wie-setzt-sich-Deutschland-mit-Rassismus-auseinander.pdf
- Furr, R. M., & Heuckeroth, S. (2019). The “quantifying construct validity” procedure: Its role, value, interpretations, and computation. *Assessment*, *26*(4), 555–566.  
<https://doi.org/10.1177/1073191118820638>
- Hu, L.-t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55.  
<https://doi.org/10.1080/10705519909540118>
- Heuer, J.-O., Lux, T., Mau, S., & Zimmermann, K. (2020). Legitimizing inequality: The moral repertoires of meritocracy in four countries. *Comparative Sociology*, *19*(4–5), 542–584.  
<https://doi.org/10.1163/15691330-BJA10017>
- Kerner, I. (2013). Critical Whiteness Studies: Potentiale und Grenzen eines wissenspolitischen Projekts. *Feministische Studien: Zeitschrift für interdisziplinäre Frauen- und Geschlechterforschung*, *31*(2), 278–293. <https://doi.org/10.25595/1950>
- Knowles, E. D., Lowery, B. S., Chow, R. M., & Unzueta, M. M. (2014). Deny, Distance, or Dismantle? How White Americans Manage a Privileged Identity. *Perspectives on Psychological Science*, *9*(6), 594–609. <https://doi.org/10.1177/1745691614554658>
- Knowles, E. D., Lowery, B. S., Hogan, C. M., & Chow, R. M. (2009). On the malleability of ideology: Motivated construals of color blindness. *Journal of Personality and Social Psychology*, *96*(4), 857–869. <https://doi.org/10.1037/a0013595>
- Kteily, N. S., Sheehy-Skeffington, J., & Ho, A. K. (2017). Hierarchy in the eye of the beholder: (Anti-)egalitarianism shapes perceived levels of social inequality. *Journal of Personality and Social Psychology*, *112*(1), 136–159. <https://doi.org/10.1037/pspp0000097>
- Major, B., Kaiser, C. R., O’Brien, L. T., & McCoy, S. K. (2007). Perceived discrimination as worldview threat or worldview confirmation: Implications for self-esteem. *Journal of Personality and Social Psychology*, *92*(6), 1068–1086. <https://doi.org/10.1037/0022-3514.92.6.1068>
- Powell, A. A., Branscombe, N. R., & Schmitt, M. T. (2005). Inequality as ingroup privilege or outgroup disadvantage: The impact of group focus on collective guilt and interracial attitudes. *Personality and Social Psychology Bulletin*, *31*(4), 508–521.  
<https://doi.org/10.1177/0146167204271713>
- Reynolds, J., & Xian, H. (2014). Perceptions of meritocracy in the land of opportunity. *Research in Social Stratification and Mobility*, *36*, 121–137. <https://doi.org/10.1016/j.rssm.2014.03.001>
- Roig, E. (2017). Uttering “race” in colorblind France and post-racial Germany. In K. Fereidooni & M. El (Eds.), *Rassismuskritik und Widerstandsformen* (pp. 613–627). Springer.  
[https://doi.org/10.1007/978-3-658-14721-1\\_36](https://doi.org/10.1007/978-3-658-14721-1_36)
- Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, *48*(2). <https://doi.org/10.18637/jss.v048.i02>
- Saldarriaga, L., Boege, R., Rees, J., Koller, C., Carvacho, H., & Böhner, G. (2017). *SDO 7 Scale: Translation and validation*. Paper presented at the annual meeting of the FGSP.

- [https://www.researchgate.net/publication/360714986\\_SDO7\\_Scale\\_German\\_translation\\_and\\_validation](https://www.researchgate.net/publication/360714986_SDO7_Scale_German_translation_and_validation)
- Schlueter, E., & Huth-Stöckle, N. (2023). *German natives' average social distance towards 40 immigrant groups, 2021* [Dataset]. Open Science Framework.  
<https://doi.org/10.17605/OSF.IO/XKFGY>
- Schwartz, S. H. (2007). Value orientations: Measurement, antecedents and consequences across nations. In R. Jowell, C. Roberts, R. Fitzgerald, & G. Eva (Eds.), *Measuring attitudes cross-nationally* (pp. 169–203). SAGE. <https://doi.org/10.4135/9781849209458.n9>
- Selvanathan, H. P., Techakesari, P., Tropp, L. R., & Barlow, F. K. (2018). Whites for racial justice: How contact with Black Americans predicts support for collective action among White Americans. *Group Processes & Intergroup Relations*, 21(6), 893–912.  
<https://doi.org/10.1177/1368430217690908>
- Shuman, E., Van Zomeren, M., Saguy, T., Knowles, E., & Halperin, E. (2024). Defend, deny, distance, and dismantle: A new measure of advantaged identity management. *Personality and Social Psychology Bulletin*, 51(8), 1490–1518. <https://doi.org/10.1177/01461672231216769>
- Swim, J. K., & Miller, D. L. (1999). White guilt: Its antecedents and consequences for attitudes toward affirmative action. *Personality and Social Psychology Bulletin*, 25(4), 500–514.  
<https://doi.org/10.1177/0146167299025004008>
- Tuch, S. A., & Hughes, M. (1996). Whites' opposition to race-targeted policies: One cause or many? *Social Science Quarterly*, 77(4), 778–788. <https://psycnet.apa.org/record/1997-02102-006>
- Ullrich, J., & Cohrs, J. C. (2007). Terrorism Salience increases System Justification: Experimental Evidence. *Social Justice Research*, 20(2), 117–139. <https://doi.org/10.1007/s11211-007-0035-y>
- van Zomeren, M., Postmes, T., Spears, R., & Bettache, K. (2011). Can moral convictions motivate the advantaged to challenge social inequality?: Extending the social identity model of collective action. *Group Processes & Intergroup Relations*, 14(5), 735–753.  
<https://doi.org/10.1177/1368430210395637>
- Yoon, M., & Lai, M. H. C. (2018). Testing factorial invariance with unbalanced samples. *Structural Equation Modeling*, 25(2), 201–213. <https://doi.org/10.1080/10705511.2017.1387859>