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### Dimensions of Grace Scale: Concurrent Validation

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# DIMENSIONS OF GRACE SCALE: CONCURRENT VALIDATION

*Presenters: Rodger Bufford, Javeen Beard, Melissa Flores, Lindsay Price,  
& Adam Hodge*

## THEOLOGY OF GRACE

- The concept of grace is influenced by culture and religious traditions
- Similar Christian concepts have been explored
  - Compassion
  - Forgiveness
  - Gratitude
  - Humility
- Documents often include the concept of grace but do not measure it
- Grace is viewed differently within different Christian and other traditions

(Bufford, Sisemore,  
& Blackburn, 2017)

# PSYCHOLOGY OF GRACE

- Positive psychology and grace
- Positive psychology emphasizes personal strength and thriving, identifying six key domains (Peterson and Seligman; 2004)
  - Courage, Justice, Humility, Temperance, Transcendence, and Wisdom
- Transcendence is the domain most closely connected with meaning and purpose; it is the context for grace (Hall & McMinn, 2021)
- Transcendence: “allows individuals to forge connections to the larger universe and thereby provide meaning to their lives” (Peterson & Seligman, 2004)

# HISTORY OF GRACE MEASUREMENTS

## Efforts to measure grace

- Tjeltveit (2004), suggested the importance of formal exploration of grace in therapy
- Measuring grace can be difficult.
- Several scales have been developed around grace, but most were used in only a couple studies.

# MEASURING GRACE

- A recent review of the grace literature was developed by Hodge et al. (2021).
  - Hodge et al. noted that grace is an inherently relational construct.
  - Further, grace is the hallmark of God relationships for many, but is also a concern for human relationships as well.

## GRACE SCALES

- Watson et al. (1988)
- Grace Scale (Bufford et al., 2002; Payton et al., 2000)
- Richmond Grace Scale (Sisemore et al 2011)
- The Amazing Grace Scale (Basset et al., 2013)
- Relational Grace Scale (Patrick et al., 2013; Sells et al., 2009)

## DIMENSIONS OF GRACE

- Using two samples, Bufford et al. (2017) developed the Dimensions of Grace Scale
- Factor analyses showed highly similar structure in both samples with five factors
- Items were selected for normal response distributions
- Preliminary validation was provided



## 5 FACTORS ON THE DIMENSIONS OF GRACE SCALE

- Factor 1-Experiencing God's Grace
- Factor 2- Costly Grace
- Factor 3- Grace to self
- Factor 4- Grace from others
- Factor 5- Grace to Others

## DIMENSIONS OF GRACE SCALE

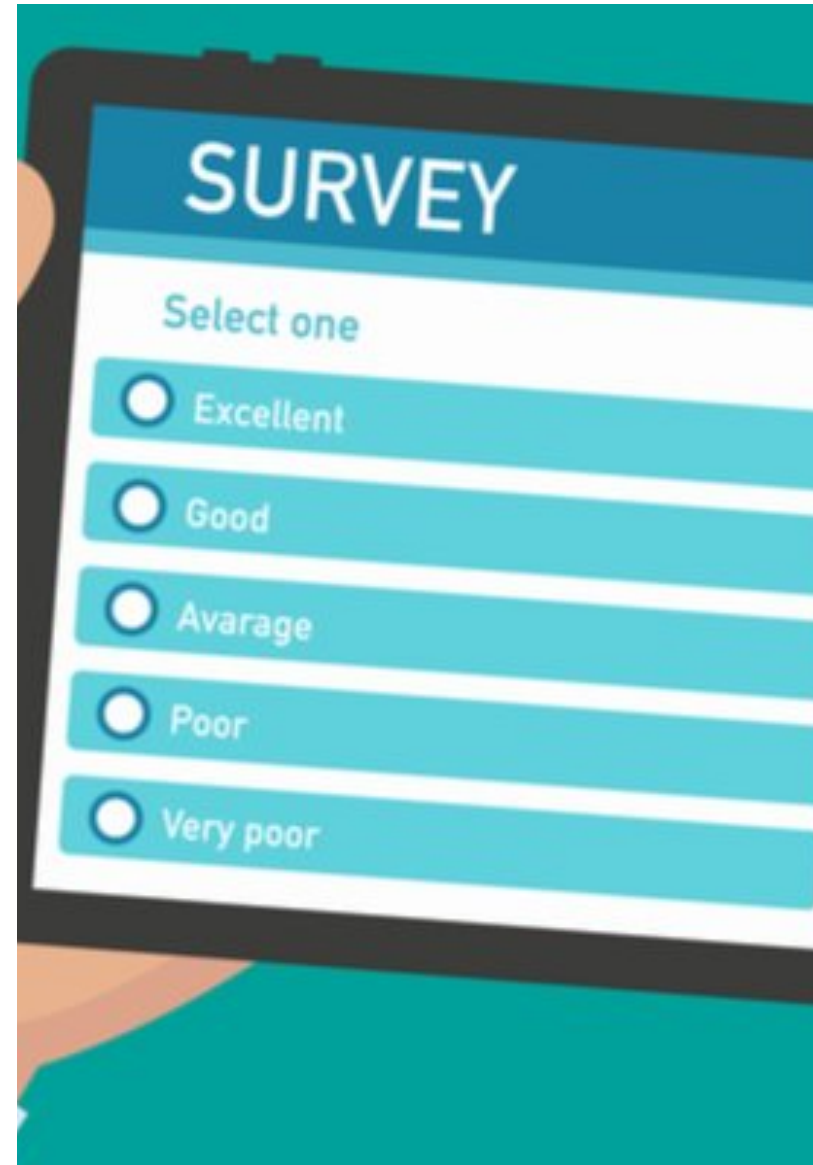
- Grace is multidimensional
- The underlying scales appear to be based on different theological perspectives on grace
  - All included God's Grace
  - The Richmond Grace Scale added Costly Grace
  - Most items for Grace to Self, Grace from Others, and Grace to Other derive from the Grace Scale
  - Human grace is assessed by these latter three scales

## PURPOSE OF THIS STUDY

- The present study sought to extend validity support for the DGS.
- It explored the relationship between the DGS and Big 5 personality dimensions, religious/spiritual engagement, and intrinsic orientation.

## METHODS: ADMINISTRATION & PARTICIPANTS

- A brief demographics questionnaire & six measures
- Aspects of: grace, personality traits, self-compassion, cultural humility, and Christ-Centered Spiritual Growth.
- 135 undergraduate students
- 73.3% of students were European American
- Mean age of 18.9





## DIMENSIONS OF GRACE (DGS) (BUFFORD, SISEMORE, & BLACKBURN, 2017)

- 36 items that measure one's experience of grace
- God's Grace, Costly Grace (someone always pays for grace), Grace to Self, Grace from Others, and Grace to Others
- Responses were on a seven-point continuum from 1 (Strongly Disagree) to 7 (Strongly Agree)

- Pearson's correlations among the five dimensions of grace
  - Ranged from nonsignificant correlations with absolute values less than .12 to a high of .50
- DGS Alpha Varied from 0.654-0.824

***Descriptive Data and Alpha Coefficients for Study Measures***

Dimensions of Grace Scale	Alpha	Mean	SD
God's Grace	.798	41.65	7.14
Costly Grace	.799	39.99	7.00
Grace to Self	.654	22.06	5.88
Grace from Others	.824	36.95	8.78
Grace to Others	.808	32.00	7.32

## DUKE RELIGION INDEX (DUREL) (HAROLD G. KOENIG & ARNDT BÜSSING, 2010)

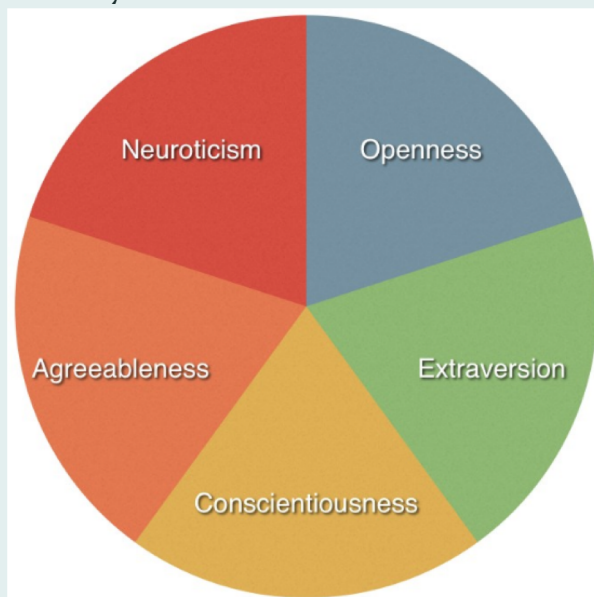
- Brief five-item measure of religious involvement and religiosity
- Can be used to examine relationships between religion and health outcomes
- 3 major dimensions of religiosity: organizational religious activity, non-organizational religious activity, and intrinsic religiosity (or subjective religiosity).
- Each dimension has a separate subscale and correlations with health outcomes can be analyzed.
- The DUREL was found to have:
  - high test-retest reliability (intra-class correlation = 0.91),
  - high internal consistency (Cronbach's alpha's = 0.78-0.91),
  - high convergent validity with other measures of religiosity ( $r$ 's = 0.71-0.86).

THE BIG FIVE  
PERSONALITY  
INVENTORY  
(JOHN &  
SRIVASTAVA,  
1999)

- A 44-item self-report measure that provides a multidimensional personality overview
- Uses a five-point response continuum from 1 (Strongly Disagree) to 5 (Strongly Agree)
- 5 different domains: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness.
- Alpha = Agreeableness-0.69, Conscientiousness-0.79, Extraversion-0.87, Neuroticism-0.84, and Openness-0.78



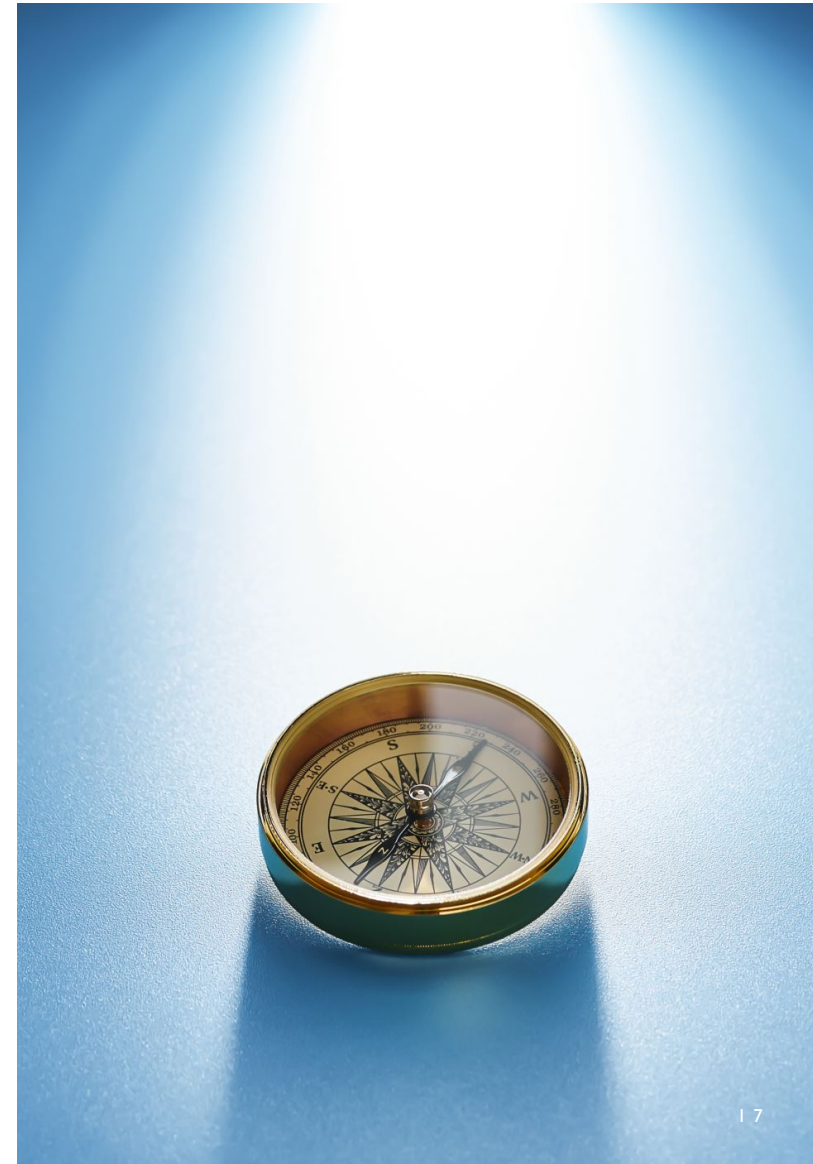
- Alpha =
- Agreeableness -0.69
- Conscientiousness -0.79
- Extraversion -0.87
- Neuroticism -0.84
- Openness -0.78
- Big 5 Dimensions from the 1999 study →



<b>Big Five Dimensions</b>	<b>Facet (and correlated trait adjective)</b>
Extraversion vs. introversion	Gregariousness (sociable) Assertiveness (forceful) Activity (energetic) Excitement-seeking (adventurous) Positive emotions (enthusiastic) Warmth (outgoing)
Agreeableness vs. antagonism	Trust (forgiving) Straightforwardness (not demanding) Altruism (warm) Compliance (not stubborn) Modesty (not show-off) Tender-mindedness (sympathetic)
Conscientiousness vs. lack of direction	Competence (efficient) Order (organized) Dutifulness (not careless) Achievement striving (thorough) Self-discipline (not lazy) Deliberation (not impulsive)
Neuroticism vs. emotional stability	Anxiety (tense) Angry hostility (irritable) Depression (not contented) Self-consciousness (shy) Impulsiveness (moody) Vulnerability (not self-confident)
Openness vs. closedness to experience	Ideas (curious) Fantasy (imaginative) Aesthetics (artistic) Actions (wide interests) Feelings (excitable) Values (unconventional)

# RESULTS

- Results include:
  - Descriptive Data - See Table 1
  - Correlational Data – See Table 2
  - K-Cluster Data – See Table 3



# RESULTS

Table 1

*Descriptive Data and Alpha Coefficients for Study Measures: DGS*

Scale	Alpha	Mean	SD	Skew	Kurtosis
• God's Grace	.798	41.65	7.14	-.31	.08
• Costly Grace	.799	39.99	7.00	-.45	-.89
• Grace to Self	.654	22.06	5.88	.30	.41
• Grace from Others	.824	36.95	8.78	-.56	-.31
• Grace to Others	.808	32.00	7.32	.00	-.53
N ≥ 133					

# RESULTS

Table 1

*Descriptive Data and Alpha Coefficients for Study Measures: Big 5*

Scale	Alpha	Mean	SD	Skew	Kurtosis
• Openness	.784	35.82	6.37	-.07	-.58
• Conscientiousness	.788	31.65	5.54	.01	.04
• Extraversion	.867	24.61	6.86	.05	-.54
• Agreeableness	.687	34.91	4.69	-.14	-.26
• Neuroticism	.838	25.27	6.60	-.39	.23

N ≥ 133

# RESULTS

Table 1

*Descriptive Data and Alpha Coefficients for Study Measures: Durel*

Scale	Alpha	Mean	SD	Skew	Kurtosis
• Org Religiosity	-	4.38	1.34	-.84	.25
• Non-Org Religiosity	-	3.19	1.55	.05	-1.19
• Intrinsic	.866	11.04	3.03	-.83	.51

N ≥ 133

# RESULTS

Table 2

*Correlations of Dimensions of Grace with Other Measures*

• Scales	Open	Conscien	Extrave	Agree.	Neurotic	Intrinsic
• God's Grace	.21*	.17*	.08	.34**	-.38**	.73**
• Costly Grace	.07	.09	.02	.20*	-.25**	.45**
• Grace to Self	.12	.08	.16	.03	-.47**	.05
• Grace from Others	-.02	.17*	-.03	.08	.05	.23**
• Grace to Others	.00	.12	.06	.44**	.23**	.31**

•  
N ≥ 133

## RESULTS: CORRELATIONAL DATA

- God's Grace was significantly correlated with Openness, Conscientiousness, Agreeableness, and Neuroticism, but not to Extraversion
- Costly Grace was significantly correlated with Agreeableness and Neuroticism
- Grace to Self was significantly negatively correlated with Neuroticism, but not with the remaining Big 5 scales
- Grace from Others was significantly correlated with Conscientiousness but not with the remaining Big 5 scales
- Grace to Others was significantly correlated with Neuroticism, but not with the remaining Big 5 scales
- Intrinsic Religious Orientation was significantly correlated with God's Grace. Costly Grace, Grace from Others and Grace to Others, but not with Grace to Self

## RESULTS: K-CLUSTERS

- Somewhat parallel to factor analysis, K-Cluster analysis is a data simplification strategy
- Rather than exploring the relationships among items, K-Cluster analysis explores the relationships among individuals in terms of similar responses to the study measures



## RESULTS: K-CLUSTERS

Clustering asks:

- Can individuals be classified into groups of individuals that are similar in their responses to the study measures
- How many clusters (or groups) are there
- How strongly similar are the individuals within a given cluster
- How different are the clusters in terms of their distributions of scores on study variables

## RESULTS: K- CLUSTERS

- For this study, clusters were based on scores for the five DGS scales
- Results of the cluster analysis revealed two clusters with 63 (48%) and 68 (52%) members respectively and 4 missing.
- Clusters achieved convergence with eight iterations

## RESULTS: K- CLUSTERS

- Clusters **differed significantly** on
  - God's grace –
    - $F_{1,129} = 68.72$ ;  $p < .001$ ; Cohen's  $d = 1.47$
  - Costly grace –
    - $F_{1,129} = 103.03$ ;  $p < .001$ ; Cohen's  $d = 1.79$
  - Grace from others –
    - $F_{1,129} = 53.03$ ;  $p < .001$  Cohen's  $d = 1.27$
  - Grace to Others –
    - $F_{1,129} = 136.04$ ;  $p < .001$ ; Cohen's  $d = 2.04$
- Clusters **did not differ** significantly on Grace to Self
  - $F_{1,129} = 0.28$ ;  $p < .599$ ; Cohen's  $d = 0.09$

## RESULTS: K-CLUSTERS

- Among the Big 5 factors the two Clusters differed significantly on Agreeableness and Neuroticism, but effect sizes were small
  - Openness –  $F_{1,129} = 0.55; p = .46$       Cohen's  $d = 0.13$
  - Conscientiousness  $F_{1,129} = .23; p = .23$       Cohen's  $d = 0.21$
  - Extraversion –  $F_{1,129} = .50; p = .50$       Cohen's  $d = 0.12$
  - Agreeableness –  $F_{1,129} = 18.39; p < .001$       Cohen's  $d = 0.29$
  - Neuroticism –  $F_{1,129} = 10.32; p = .002$       Cohen's  $d = 0.52$

## RESULTS: K- CLUSTERS

- Clusters also differed significantly on the DUREL:
  - Frequency of corporate R/S activity  
 $F_{1,129} = 27.27; p < .001; \text{Cohen's } d = 0.93$
  - Frequency of individual R/S activity  
 $F_{1,129} = 19.84; p < .001; \text{Cohen's } d = 0.78$
  - Intrinsic religiousness  
 $F_{1,129} = 51.60; p < .001; \text{Cohen's } d = 1.27$

## RESULTS: K-CLUSTERS

- In general, effect sizes for Cluster differences were large for the DGS subscales apart from Grace to Self
- Cluster differences were insignificant or very small for Big 5 scales.
- Clusters differences also were large in terms of their scores on the Durel

## DISCUSSION / REFLECTIONS

- Recent definitions of Grace emphasize:
  - Acceptance (Emmons et al., 2017) – Social Obligation
  - God's Love (Hall & McMinn, in press) – Relationship with Godself
- Both of these definitions make sense with the assumption that grace is inherently relational (Hodge et al., 2020b)
- Patterns of relationships in this symposium match that of a meta-analysis on the Big-5 and Forgiveness, further suggesting convergent validity
  - Medium to Large Positive Effect for Agreeableness with Self, Other, and Situational Forgiveness
  - Medium to Large Negative Effect for Neuroticism with Self, Other, and Situational Forgiveness (Hodge et al., 2020a)

# DISCUSSION / REFLECTIONS

- A Christian understanding of virtue purports that virtues, while distinguishable, cannot simply be disunited (Nelson & Slife, 2017).
- The relational aspects of many virtues (e.g., grace, love, forgiveness, gratitude) suggest that these character strengths operate more or less in tandem.
- Divine grace could be a prerequisite for other virtues (Emmons et al., 2017)
- Perhaps this is why we see two clusters of participants:
  - High Grace – High Religious Folks
  - Low Grace – Low Religious Folks
  - Expected directions of Agreeableness and Neuroticism for each cluster



# RECEIVING GRACE

**Table 2**

*Correlations of Dimensions of Grace with Other Measures*

Scales	Open	Conscientious	Extraversion	Agreeable	Neurotic	Intrinsic
God's Grace	.21*	.17*	.08	.34**	-.38**	.73**
Costly Grace	.07	.09	.02	.20*	-.25**	.45**
Grace to Self	.12	.08	.16	.03	-.47**	.05
Grace from Others	-.02	.17*	-.03	.08	.05	.23**
Grace to Others	.00	.12	.06	.44**	.23**	.31**

# EXTENDING GRACE

**Table 2**

*Correlations of Dimensions of Grace with Other Measures*

Scales	Open	Conscientious	Extraversion	Agreeable	Neurotic	Intrinsic
God's Grace	.21*	.17*	.08	.34**	-.38**	.73**
Costly Grace	.07	.09	.02	.20*	-.25**	.45**
Grace to Self	.12	.08	.16	.03	-.47**	.05
Grace from Others	-.02	.17*	-.03	.08	.05	.23**
Grace to Others	.00	.12	.06	.44**	-.23**	.31**

## TWO REFLECTIONS ON GRACE TO SELF

- Grace to Self items from DGS (Cronbach's  $\alpha = .654$ )
  - I tend to be hard on myself.\*
  - When I do something wrong I just can easily forget it.
  - I accept my shortcomings.
- Self-Forgiveness Items (Thompson, 2005)
  - With time I get understanding of myself for mistakes I've made.
  - "It is really hard for me to accept myself once I've messed up"\*
- Self-Compassion Items (Neff, 2003)
  - I'm disapproving and judgmental about my own flaws and inadequacies.
- Perhaps Grace to Self is more *relational* than what we are currently capturing.

## TWO REFLECTIONS ON GRACE TO SELF

- The other 4 factors of the DGS include relationally-based items:
  - Grace of God: My beliefs about grace encourage me to be forgiving of others
  - Costly Grace: The more obedient I am, the more God loves me
  - Grace from Others: My parents always remember my mistakes
  - Grace to Others: Others must earn my forgiveness\*
- Because many of the items on the DGS tap into elements of other virtues (e.g., forgiveness, love, self-regulation), the concept of grace appears to more fully capture a sense of total beneficence.
- How might a person be fully benevolent toward themselves?

# TWO REFLECTIONS ON GRACE TO SELF

- Grace to Self might not be relational
- Grace to Self might not be related to religiosity as we currently measure it.
- Neuroticism may be more to blame for negative views of self
- Grace to Self from a Christian Perspective?  
Roman 7:21-25 (ESV)
- <sup>18</sup>For I know that nothing good dwells in me, that is, in my flesh. For I have the desire to do what is right, but not the ability to carry it out. <sup>19</sup>For I do not do the good I want, but the evil I do not want is what I keep on doing. <sup>20</sup>Now if I do what I do not want, it is no longer I who do it, but sin that dwells within me. <sup>21</sup>So I find it to be a law that when I want to do right, evil lies close at hand. <sup>22</sup>For I delight in the law of God, in my inner being, <sup>23</sup>but I see in my members another law waging war against the law of my mind and making me captive to the law of sin that dwells in my members. <sup>24</sup>**Wretched man that I am! Who will deliver me from this body of death?** <sup>25</sup>Thanks be to God through Jesus Christ our Lord! So then, I myself serve the law of God with my mind, but with my flesh I serve the law of sin.

## TWO REFLECTIONS ON GRACE TO SELF

- Perhaps this is why we do not see Grace to Self predicting Gratitude or Positive Religious Coping, whereas Grace to Self was a robust predictor of:
  - Spiritual Well-Being
  - Less Internalized Shame
  - Less Negative Religious Coping
  - Less Global Distress (Bufford et al., 2017).
- For Christians, God may be the one to be Grateful to, and Grace may be viewed as God's love despite sin (Hall & McMinn, in press).
- Christians may have a heightened awareness of sin, but not dwell on feelings of guilt, shame, or inadequacy.

## TWO REFLECTIONS ON GRACE TO SELF

### • Isaiah 64:6

<sup>5</sup> You meet him who joyfully  
works righteousness,  
those who remember you  
in your ways.

Behold, you were angry, and  
we sinned;

in our sins we have been  
a long time, and shall we be  
saved?<sup>[b]</sup>

<sup>6</sup> We have all become like  
one who is unclean,

and all our righteous  
deeds are like a polluted  
garment.

We all fade like a leaf,

and our iniquities, like  
the wind, take us away.

<sup>8</sup> But now, O Lord, you are  
our Father;

we are the clay, and you  
are our potter;

we are all the work of  
your hand.

<sup>9</sup> Be not so terribly angry,  
O Lord,

and remember not  
iniquity forever.

Behold, please look, we  
are all your people.

---

<sup>12</sup> Will you restrain yourself  
at these things, O Lord?

Will you keep silent, and  
afflict us so terribly.

## FUTURE RESEARCH

- We are in need of research on grace using more diverse samples (Hodge et al., 2020b)
- Does human grace look different if the individual perceives that they do not receive grace from God (e.g., more grace to self)?
- Networks of connections between grace and other constructs
- Networks of connections between dimensions of grace



## FUTURE RESEARCH

- The Mean for Grace to Self in the current sample was much lower than the other dimensions (22.06; next lowest 32.00 - Grace to Others)
- Maybe emphasizing an increase in Grace to Self, as currently measured, is not conducive for Christians.
- Sin and Grace are intrinsically interconnected (McMinn et al., 2006, McMinn, 2008).
- "An awareness of sin is a good thing... [acknowledging sin] opens up the possibility for a grace..." (McMinn, 2008).

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