Chapter 1
Structure and Validity of Self-Concept Clarity Measures

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Abstract We examine the structure and validity of existing measures of self-concept clarity (SCC). We document six different measurement strategies that have been employed in the self-concept clarity literature, review existing research on their relationships with each other and with self-esteem, and present in-progress research designed to examine their structure and validity. We conclude that these measures largely reflect different constructs and that they demonstrate distinct patterns of relationships with criteria previously examined in the self-concept clarity literature. Further, we examine incremental validity over self-esteem, noting that measures of self-concept clarity demonstrate considerably weaker relationships with criteria once self-esteem is controlled for in the analyses. We discuss measurement of self-concept clarity, placing special emphasis on understanding potentially diverse measures of SCC-related constructs, the role of self-esteem in self-concept clarity research, and potential cultural boundedness of extant assessment strategies.

As evidenced by this volume and the chapters contained herein, understanding self-concept clarity (SCC) has implications for understanding a host of phenomena, ranging from personal and social identities, to interpersonal relationships, and to mental health. However, since the original publications on SCC, no work we are aware of has critically evaluated the structure and validity of self-concept clarity measures. In this chapter, we review existing research on the measurement of self-concept clarity and present a program of research we have initiated with our colleagues to more fully understand the interrelationships and construct validity of various SCC measurement strategies.

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Research on self-concept clarity began with the near simultaneous publication of two papers: Campbell (1990) and Baumgardner (1990). Both papers begin with the observation, building on previous research (e.g., Baumeister, Tice, & Hutton, 1989; McFarlin & Blascovich, 1981; Pelham & Swann, 1989), that people with low self-esteem or with negative self-concepts appear to hold more malleable or less certain views of themselves compared to those with high self-esteem. Campbell and Baumgardner each sought to systematically study the differences in self-views of individuals with high and low self-esteem – not by examining differences in the content of those self-views but rather in terms of the "strength" of those views.

Baumgardner (1990) examined what she labeled as certainty, which was primarily assessed using the latitudes of self-description questionnaire. For each of 20 attributes, participants reported their standing on a percentile scale (e.g., Maria might indicate her likeability is at the 70th percentile) and then report the highest and lowest possible percentiles that are plausibly self-descriptive (e.g., Maria may then indicate that she is more likeable than at least 60% of the population, but not more than 90% of the population). From these reports, Baumgardner calculated *latitudes* – parallel to work on social judgment examining latitudes of acceptance (e.g., Sherif & Hovland, 1961) – that were hypothesized to represent the certainty (or clarity) of one's self-views, with narrower latitudes indicating a more certain self-conception. Across these traits, she found that people high in self-esteem had narrower latitudes than did people low in self-esteem. Although these latitudes were the primary way she assessed "certainty," in one study she instead measured the latency to which people indicated their standing on each of a series of traits, arguing that the more certain and less confused a person is in their personality, the faster they should be to indicate their standing on any given attribute. In line with this prediction, Baumgardner found that people with high self-esteem were quicker to respond than people lower in self-esteem (Baumgardner, 1990; study 3).

Only 3 months later, Campbell's original paper on self-concept clarity (1990) was published – the first to employ the term. Campbell (1990) defined self-concept clarity as the degree to which the self-concept is clearly and confidently defined, later also adding the temporal stability and internal consistency of self-beliefs to her definition of SCC (Campbell et al., 1996). In her original work on self-concept clarity, Campbell examined self-esteem differences in SCC using a variety of different approaches. In Study 1, participants indicated their standing on each of 15 different bipolar traits and, after each rating, indicated their certainty in the rating. People low in self-esteem gave less extreme ratings on the traits (i.e., closer to the scale midpoint) and reported less certainty in their self-ratings. In Study 2, participants reported their standing on 20 unipolar traits on two occasions, separated by approximately 2 months. The ratings of people low in self-esteem were less similar on the two occasions than were the ratings of people high in self-esteem, consistent with greater stability in self-views as self-esteem increases. Study 3 was similar, except the time 2 ratings were specific to a structured interaction with another participant. In this study, as self-esteem increased, people were more likely to report ratings of their behavior in the interaction that were consistent with self-ratings from 2 to 3 months prior, consistent with both temporal and cross-situational stability. Finally, in Study 4, participants made "me" versus "not me" responses to

each of a series of traits, including 25 pairs of opposite traits, and indicated their confidence in each response. This study thus provided measures of confidence, response time (similar to Baumgardner, 1990), and consistency, which was computed by summing the number of consistent responses to the opposing traits (i.e., "me" to one trait and "not me" to its opposite). High self-esteem was associated with more certainty, shorter response latencies, and more consistency in responses.

These two papers independently documented differences in the characteristics of the self-conceptions of people with high and low self-esteem, and did so using a variety of methods (Baumgardner, 1990; Campbell, 1990). Add to these the subsequently developed self-concept clarity scale (SCCS; Campbell et al., 1996), and no fewer than six methods have been used to examine differences in the clarity of people's self-conceptions as a function of self-esteem (i.e., the SCCS; latitudes of self-description; and the certainty, extremity, consistency, and response latency of self-views). However, these early studies raise two issues, which we believe have not been adequately addressed by the subsequent literature on self-concept clarity.

Issue 1: Are Measures of SCC Measuring the *Same* Clarity?

In the decades since this original research, researchers who study self-concept clarity have still continued to utilize a variety of measures, including measures described above, such as latitudes of self-description (Burger & Guadagno, 2003), response latency (Boucher, 2011; Study 3), certainty (Hamid & Cheng, 1995), extremity (Landau, Greenberg, Sullivan, Routledge, & Arndt, 2009; Study 2), consistency (Boucher, 2011; Study 3), and the SCCS (Slotter, Gardner, & Finkel, 2010), as well as other measures (e.g., self-esteem ambivalence; DeMarree & Rios, 2014). However, in this work, all of these different approaches are uniformly labeled as self-concept-clarity. Interestingly, because the definition of SCC is relatively broad (i.e., self-conceptions that are clearly and confidently defined, temporally stable, and internally consistent; Campbell et al., 1996), each of these measures might tap into different aspects of that definition (Guerrettaz & Arkin, 2016). But, despite purporting to measure self-concept clarity, little is actually known about the extent to which the different indicators of self-concept clarity are measuring the *same* "self-concept clarity."

The existing evidence is not promising. In her original paper, Campbell (1990) reported a correlation of 0.24 between extremity and certainty in Study 1. In the SCCS development paper (Campbell et al., 1996), the SCCS was positively, but modestly, related to consistency ($r = 0.31$) and temporal stability ($|rs| = 0.27-0.38$). These correlations are consistent with subsequent literature on self-clarity as well. Although most studies do not include multiple measures of self-concept clarity, the papers that we've identified that report correlations between two or more potential measures of self-concept clarity generally find small to moderate correlations, typically around $r = 0.3$ (range -0.05 to 0.48 in DeMarree, Morrison, Wheeler, & Petty, 2011; DeMarree, Petty, & Strunk, 2010; Stopa, Brown, Luke, & Hirsch, 2010; Story, 2004). These correlations are far below what one would expect from measures of the same construct.

However, it is worth noting that because many of these measures are *indirect* measures of self-concept clarity, each is likely laden with measure-specific variance. The most obvious example of this is response latency, where participants' response times to me/not me judgments on a series of trait adjectives are likely influenced by the clarity of their self-views in general but also by the clarity of the specific trait in question as well as clarity-irrelevant factors like their reading speed, general response time, general (i.e., self-irrelevant) decisiveness, finger placement, and so forth. In other words, when measures that are so very different are compared with each other, the non-shared, measure-specific variance associated with each of these potential indicators of self-concept clarity limits the magnitude of correlations that can be expected.

Issue 2: Are the Associations and Effects of SCC Independent of Self-Esteem?

Recall that nearly all of the early work on SCC sought to explain differences in self-conceptions of people low and high in self-esteem. Consequently, the correlations between measures of SCC and self-esteem are generally moderate to large in magnitude, with some studies reporting extremely strong correlations of $r = 0.70$ or more (e.g., Constantino, Wilson, Horowitz, & Pinel, 2006; Thomas & Gadbois, 2007; Wong, Vallacher, & Nowak, 2014). In other words, measures of self-concept clarity are often at least as closely related to self-esteem as they are with each other! This offers some support for the possibility that different measures of SCC may be distinct constructs (see above) but also raises another important concern.

Quite simply, the relationship between self-esteem and self-concept clarity is important because many of the purported correlates and effects of SCC are plausible, and often times well-documented, correlates and effects of self-esteem. Most notable among these effects are mental health outcomes like depression, anxiety, and beliefs related to disordered eating, but the majority of the intrapersonal and interpersonal variables examined in self-concept clarity research are potentially associated with self-esteem as well.

Although some work has shown that SCC measures predict relevant outcomes after controlling for self-esteem (e.g., Lee-Flynn, Pomaki, DeLongis, Biesanz, & Puterman, 2011; Nezlek & Plesko, 2001; Stopa et al., 2010; Vartanian, 2009), other studies have measured self-esteem but do not control for it in their analyses (e.g., Bigler, Neimeyer, & Brown, 2001; Błażek & Besta, 2012). Finally, some studies do not appear to measure self-esteem at all, despite potential relevance to the effects of interest (e.g., Ayduk, Gyurak, & Luerssen, 2009; De Dreu & van Knippenberg, 2005).

When self-esteem is not measured or controlled for in the relevant analyses involving self-concept clarity, it undermines the strength of the conclusions that can be drawn. For example, Bigler and colleagues (2001) predicted depression symptoms (among other outcomes) from the SCCS and self-concept differentiation (SCD). They observed that SCC predicted depression symptoms over SCD. However these analyses

did not control for self-esteem, which was also included in the study and was strongly correlated with SCC ($r = 0.64$). Further, self-esteem was more strongly correlated with depression than was SCC (rs = -0.73 and -0.63, respectively). It is difficult to conclude that SCC is the proximal predictor variable when SCC's close correlate, self-esteem, more strongly predicts depression and has been identified in many previous studies as a consistent predictor of depression symptoms. This failure to establish incremental validity over self-esteem greatly weakens the conclusions that can be drawn from these data. Fortunately, because the authors reported full descriptive statistics and a table of correlations among all measures, we were able to reanalyze these data using MPlus (Muthén & Muthén, 1998–2011). When we add self-esteem to the model predicting depression symptoms, self-esteem is the strongest predictor, $\beta = -0.538$, SE = 0.068, $t = 7.949$, $p < 0.001$, although SCC does continue to predict, $\beta = -0.255$, SE = 0.073, $t = 3.489$, $p < 0.001$, albeit much more weakly than when self-esteem was excluded from the model. Although in this case, the original conclusion holds up to further analysis, in most cases such reanalysis is not even possible.

Confronting These Issues Empirically

These two issues limit the strength of the conclusions that can be drawn from the SCC literature. Are findings using one assessment strategy directly comparable to findings with another assessment strategy? Which of the extant self-concept clarity findings hold up once self-esteem is accounted for and which are due only to SCC's close correlate, self-esteem?

To address these potential issues, we, along with our colleagues (Bobrowski, DeMarree, Lodi-Smith, & Naragon-Gainey, 2018), collected two data sets including multiple measures of self-concept clarity along with self-esteem and many previously identified correlates or consequences of SCC. Our first goal was to examine the structure and interrelationships among SCC measures. Our second goal was to determine the extent to which SCC (or SCC-related constructs, depending on the emergent factor structure) predicts relevant outcomes over and above self-esteem.

Assessment and Structure of Self-Concept Clarity

In these data sets, we included the six measures of self-concept clarity identified earlier: the SCCS, the certainty, extremity, accessibility (response latency), and consistency of self-views, and the latitudes of self-description questionnaire. To examine the structure of these measures, we took two critical factors into consideration.

First, as noted earlier, each of these measures has measure-specific variance that may not be correlated with self-concept clarity (e.g., average response speed affecting the response time measure, cultural norms affecting tendency to adopt extreme positions). To address this concern, we employed an exploratory structural equation modeling

(ESEM) approach (e.g., Asparouhov & Muthén, 2009). This approach is analogous to an exploratory factor analysis, except with ESEM we can allow error terms of all items on a given measure to correlate with each other to remove the measure-specific variance to more easily identify the shared variance across measures.

A second issue is that other than the SCCS, which is a relatively direct self-report measure of self-concept clarity, the other measures are rather indirect – operationalizing self-concept clarity as aggregates across many different traits. Each of these indirect assessments likely only shares a small portion of its variance with a global self-concept clarity construct, as responses to each will represent some global SCC component as well as trait-specific clarity (e.g., how certain I am of my own level of "silliness"). To address these issues, we created separate random item parcels for each of the measures. By creating parcels (e.g., of three different certainty items), the trait-specific variance will be reduced. The hope in creating parcels is that each parcel contains more "true score" variance than the individual items had. So, for certainty, for example, one parcel contained the traits of hardworking, quiet, and risky. We sought to have minimal overlap of clusters for other measures of self-concept clarity to reduce parcel content contributing to the structure observed, so we selected among possible random order those that minimized such overlap (e.g., the cluster for response latency that contains hardworking does not include quiet or risky but instead contains harsh and bold).

Table 1.1 shows the zero-order correlations among manifest measures of SCC in one of our data sets. Consistent with the past research outlined above, correlations among measures of SCC are weak to modest in magnitude (median $r = 0.09$), with certainty providing the strongest interrelationships with extremity and the SCCS. Further, many of the correlations with self-esteem were of a similar magnitude to the correlations between measures of self-concept clarity (median $r = 0.105$).

As noted earlier, however, a combination of measure-specific variance and the indirect nature of most of these measures can limit the magnitude of these interrelationships. To address this issue and to get a better idea of the structure of measures of self-concept clarity, we conducted an ESEM on parcels of items, allowing for the error terms of items from a given measure to correlate. This analysis suggested a three-factor solution. The first factor represented the SCCS. The second factor was a combination of certainty and extremity. The third factor was latitudes of self-

Table 1.1 Zero-order correlations among measures of self-concept clarity in Sample 1, $N = 347$

	SCCS	Certainty	Extremity	Response Latency	Consistency	Latitudes
SCCS						
Certainty	0.19***					
Extremity	0.08	0.51***				
Response Latency	−0.02	−0.12*	−0.15**			
Consistency	0.07	0.03	0.13*	0.06		
Latitudes	−0.09	0.04	−0.09	0.16**	0.05	
Self-esteem	0.59***	0.27***	0.15**	−0.06	−0.01	0.001

Data from Bobrowski et al. (2018)
*p <.05; **p <.01; ***p <.001

description. Neither response latency nor consistency loaded on any factors, although models with four or more factors failed to converge, so it is possible that these factors would have emerged. The first two factors were moderately correlated ($r = 0.28$, $p = 0.006$), whereas they were not strongly correlated with the third (rs < 0.07, ps > 0.55). This structure was supported in confirmatory analyses in a second, independent data set (Bobrowski et al., 2018).

Predictive Utility of Self-Concept Clarity Over and Above Self-Esteem

Our structural analyses suggested that self-concept clarity measures might actually reflect three weakly related concepts. How do these constructs relate to criteria? Using latent variable regressions, we first regressed each criterion on the three self-concept clarity factors. These self-concept clarity factors demonstrated unique patterns of relationships with criterion variables (See Table 1.2). Specifically, the SCCS factor predicted reduced depressive symptoms, reduced perseverative thinking, and reduced physical symptoms. The certainty/extremity factor did not predict these three criteria, but it did positively predict self-efficacy, satisfaction with life, and the observer-rated coherence of participants' self-defining narratives. Finally, the latitudes factor predicted decreased physical symptoms and (marginally) increased self-efficacy. Thus, each of the self-concept clarity factors demonstrated a different pattern of relationships with criterion variables.

Table 1.2 Self-concept clarity factors predicting selected criteria with and without controlling for self-esteem in Sample 1

| Criterion | SCCS factor | | Certainty/extremity factor | | Latitudes factor | | |
	Just SCC	W/ self-esteem	Just SCC	W/ self-esteem	Just SCC	W/ self-esteem	Self-esteem
Depressive symptoms	−0.56***	−0.15**	−0.02	0.24**	−0.09	−0.02	−0.76***
Perseverative thinking	−0.66***	−0.46***	−0.06	0.06	−0.08	−0.04	−0.38***
Physical symptoms	−0.49***	−0.37***	−0.05	0.01	−0.11*	−0.09†	−0.21*
Self-efficacy	0.31***	−0.004	0.48***	0.29***	0.10†	0.05	0.59***
Satisfaction with life	0.43***	0.09	0.31***	0.13†	0.06	0.01	0.61***
SDM coherence	−0.05	−0.09	0.25***	0.26**	0.05	0.05	0.05

For each self-concept clarity factor, the first column represents the standardized beta from a simultaneous regression of a latent variable of the relevant criterion on the SCC latent variables
The second column represents the beta from a comparable regression model that also includes the self-esteem latent variable as a predictor
Data from Bobrowski et al. (2018). SDM coherence is observer ratings of participant essays in which participants were asked to describe a self-defining memory
*p <.05; **p <.01; ***p <.001; †p <.10

Next, we added self-esteem to this model. In this data set, self-esteem predicted many of the criteria included in this study (depressive symptoms, perseverative thinking, physical symptoms, self-efficacy, and satisfaction with life) after controlling for the three self-concept clarity factors. Critically, many of the previously documented correlates of the self-concept clarity factors were either eliminated or reduced in magnitude once self-esteem was accounted for. Analyses like this are critical to identify the true associates of self-concept clarity constructs. For example, consistent with the reanalysis of Bigler et al. (2001) reported earlier, the relationship of the SCCS factor with depressive symptoms, although present, appears to be much weaker than analyses without self-esteem might lead us to conclude. However, some outcomes do appear to be uniquely related to self-concept clarity measures and not to self-esteem in this data set. Most notably, the extremity/certainty factor predicted naïve coders' ratings of the coherence of participants' self-defining narratives, whereas self-esteem did not, although this relationship was not replicated across these data sets. This particular outcome – the ability to clearly express a personally defining memory – is conceptually more related to self-concept clarity than to self-esteem (Adler, Lodi-Smith, Philippe, & Houle, 2016) and is one that may warrant further research.

Moving Forward

As should be apparent from the data we have on the measurement and validity of SCC measures, our existing understanding of self-concept clarity measurement is rather incomplete. Next we attempt to interpret these new findings and offer a road map forward for the study of SCC.

Recommendations for Assessing Self-Concept Clarity

Despite analyses that reduced measure-specific variance, our ESEM analysis largely suggested that the different approaches to assessing SCC are meaningfully distinct from each other, and they do not represent a unitary "self-concept clarity" construct. Only extremity and certainty loaded onto a single factor, and even this should be interpreted with caution as these two measures were collected simultaneously (i.e., as each person indicated their standing on each trait [from which extremity was calculated], they also indicated their certainty of their standing on that trait). Although we were unable to fit a model in which response latency or consistency had meaningful loadings on any factors, the overall takeaway is that, for the most part, each of the measures of SCC should be treated as measures of separate constructs. Treating any two measures as equivalent in a given study should only be done when there is a compelling empirical basis for doing so. For example, DeMarree and Rios (2014) found strong correlations between the SCCS and subjective

ambivalence in the self-evaluation[1] (in each of three studies, |*rs*| = 0.54, 0.70, 0.70) and found parallel results with the two measures and consequently averaged them (after recoding ambivalence) to create a self-concept clarity composite variable.

This recommendation parallels work on attitude strength. Researchers studying attitudes have documented a host of variables that are associated with the strength – that is the stability, resistance, and predictive utility – of an evaluation, including certainty, accessibility, extremity, importance, and ambivalence, among others (for reviews, see e.g., Bassili, 2008; DeMarree, Petty, & Briñol, 2007; Howe & Krosnick, 2017; Petty & Krosnick, 1995). In terms of nomenclature, these variables (i.e., accessibility, certainty, etc.) are said to *predict* the strength of the attitude to which they apply, and are not, themselves, strength (Krosnick & Petty, 1995). Consequently, they are sometimes called "strength-related attitude features" or "strength-related attitude attributes" (e.g., Krosnick & Petty, 1995; Visser, Bizer, & Krosnick, 2006). One critical recommendation from this literature is that instead of referring to "strength," researchers should refer to the specific strength-related attitude feature(s) under consideration at a given time. We make a similar recommendation for reporting work on self-concept clarity. Rather than referring to "self-concept clarity," we encourage researchers to specify the specific self-concept feature they are examining (e.g., responses to the self-concept clarity scale, *certainty* of self-conceptions, *accessibility* of self-conceptions, etc.). Such an approach more clearly conveys to readers that the different strategies for assessing self-concept clarity might not be equivalent.

In addition, we recommend that researchers include multiple measures of self-concept clarity in their work. If the different self-concept clarity assessment strategies are not equivalent, it will be critically important to know which outcomes are related to each assessment and which are not. Furthermore, it may be worth exploring interactions among different self-concept clarity assessment strategies – particularly between those assessment strategies that represent structural features of one's self-conceptions (e.g., accessibility, consistency) and metacognitive features of one's self-conceptions (e.g., certainty, SCCS) – in order to gain greater insight into self-related processes (Guerrettaz & Arkin, 2016). Recall that the various indicators of self-concept clarity were largely uncorrelated with each other. So the responses of people with the same level of one self-concept clarity indicator (e.g., high SCCS, a metacognitive indicator of self-concept clarity) might differ depending on their level of another self-concept clarity indicator (e.g., high versus low self-concept accessibility, a structural indicator of self-concept clarity). For example, someone who perceives high self-concept clarity (i.e., SCCS), but who has difficulty retrieving self-relevant information due to their inaccessibility, might be surprised by such difficulty and may even experience it as a threat (Guerrettaz & Arkin, 2015). Across a wide range of potential future studies, a more complete body of data – examining multiple measures in parallel and interactively – will be useful in helping to develop and refine theory relating to self-concept clarity.

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[1] Self-evaluation ambivalence is not typically used as a measure of clarity, but it does share some conceptual overlap with the content of the SCCS (see DeMarree & Morrison, 2012)

Treating Measures of Self-Concept Clarity as Strength-Related Self-Features

One notable feature of the attitude strength literature is that main effects of strength-related attitude features are relatively rare. Instead, variables related to the strength of attitudes tend to interact with the valence of the attitude itself in predicting the consequences of the attitude. For example, an attitude (e.g., positivity or negativity toward a political candidate) predicts attitude-relevant outcomes (e.g., biased perceptions of debate performance, likelihood of voting for a candidate) *to a greater extent* as the strength of the attitude increases (e.g., as indicated by the strength-related attitude feature of accessibility; Fazio & Williams, 1986). That is, strength-related attitude features moderate the impact of the attitude. Comparable effects have been documented with the strength of the self-attitude (i.e., self-esteem) as well, with self-esteem predicting related consequences (information processing biases) to a greater extent as features associated with strength (accessibility, in this case) increase (e.g., DeMarree et al., 2010; for a review, see DeMarree et al., 2007). This raises the question of whether the various measures of self-concept clarity might serve a similar moderating influence.

Initial evidence suggests that yes, high SCC might be associated with greater "strength" of self-conceptions. Notably, Lewandowski and Nardone (2012) found that increased SCC (measured by the SCCS) was associated with greater self-other congruence. In other words, people's self-views predicted a friend's perceptions of them across a number of dimensions to a greater extent as self-concept clarity increased. This congruence could occur, for example, because people high in self-concept clarity express their self-conceptions more consistently and clearly in their overt behavior (a "strength" effect), leading their friends to form perceptions of them that are consistent with their self-views.

Typically, attitude strength is assessed at the level of the specific attitude object (e.g., accessibility of an attitude toward a specific presidential candidate, policy, or brand). Researchers have had success applying a similar approach to people's self-conceptions, such as the certainty of people's level of extraversion (Swann & Ely, 1984), political ideology (Shoots-Reinhard, Petty, DeMarree, & Rucker, 2015), and specific personality scales (Shoots-Reinhard et al., 2015) or the accessibility of people's self-esteem (DeMarree et al., 2010), self-guides (Norman & Aron, 2003), and specific personality scales (Mellema & Bassili, 1995). However, SCC presumably applies to the whole of one's self-conceptions, so it is not entirely clear how narrowly or broadly it is expected to extend (DeMarree & Morrison, 2012). Critically, variables tend to best predict outcomes measured at the same level of specificity (e.g., Fishbein & Ajzen, 1975), and since SCC applies relatively broadly to one's self-conceptions, it might be that it best moderates the outcomes of relatively broad measures of self-conceptions or broad patterns of self-concept expression, as in the Lewandowski and Nardone (2012) work. In addition, because self-esteem is related to people's self-views across a wide range of domains (Pelham, 1995; Pelham & Swann, 1989), and because SCC is related to ambivalence in one's level of self-esteem (DeMarree & Rios, 2014), SCC might also predict the "strength" of self-esteem.
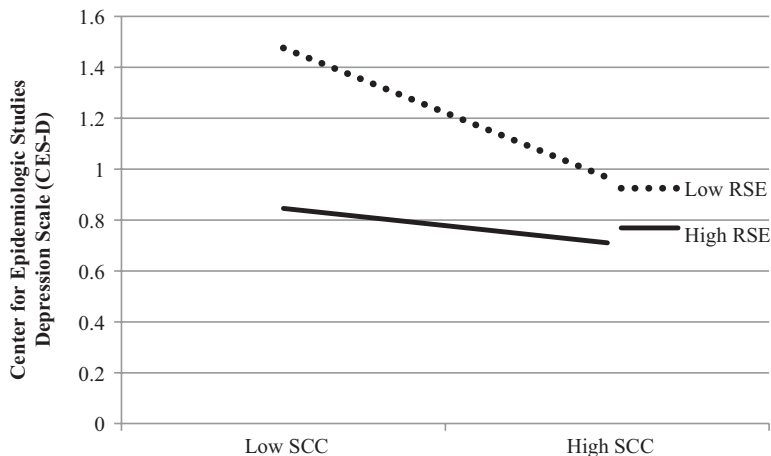
Fig. 1.1 Interaction between self-esteem (RSE) and self-concept clarity scale (SCCS) latent factors on symptoms of depression (CES-D)

In some exploratory analyses with the data described above, we examined possible interactions between self-esteem and the various SCC measures included in our samples to predict the outcomes included in the study. In these analyses, we observed several effects that make conceptual sense. For example, we found that the SCCS factor moderated the relationship between self-esteem and depressive symptoms. Overall, high self-esteem individuals report fewer depressive symptoms. However, high self-concept clarity seems to buffer low self-esteem individuals against depressive symptoms more than their low-clarity counterparts (see Fig. 1.1).

This may be thought of as a protective or buffering effect of high self-concept clarity. However, on a different outcome – self-efficacy – we see more of a strength effect of latitudes, with self-esteem more strongly predicting this efficacy as the latitude facet of self-concept clarity increases (Bobrowski et al., 2018). Thus, different measures of self-concept clarity show different patterns of interaction with self-esteem on relevant outcomes, further reinforcing the nonequivalence of these measures.

Self-Esteem

As we have noted repeatedly, SCC measures are consistently related to self-esteem. Further, many of the main effect associations observed of self-concept clarity appear to be due, at least in part, to the relationship of SCC measures with self-esteem. Interactions with self-esteem, such as those just described, offer evidence that self-concept clarity is not redundant with self-esteem. However, it should be clear that research examining SCC-related self features would benefit from the inclusion of, and examination of, self-esteem.

In addition to the above, it is worth considering why self-esteem and self-clarity are related to each other. Campbell (1990; see also her forward to this volume) discussed possible causal relationships between SCC and self-esteem, noting either direction is plausible. For example, low self-esteem could lead to reduced self-concept clarity because self-verification motives would lead people with low self-esteem to acquire information that is inconsistent with what would be acquired via their self-enhancement motives, resulting in reduced SCC. Alternatively, low self-concept clarity could undermine self-esteem because it might leave people more open to the self-information available, some of which is negative. In contrast, high self-clarity people would have more clear self-boundaries, and consequently would reject information that does not seem to "fit" who they are, leading negative information to be preferentially rejected given high levels of self-esteem on average. Both causal directions have been supported in at least one longitudinal study, although the support was strongest for low self-esteem undermining SCC, as operationalized as the SCCS (Wu, Watkins, & Hattie, 2010).

Additional evidence examining the relationship between self-esteem and SCC is consistent with the notion that self-enhancing biases might undermine the self-concept clarity of people low in self-esteem. Specifically, building on the observation that discrepancies between actual and desired attitudes on any topic can increase people's experience of conflict in their attitudes (DeMarree, Wheeler, Briñol, & Petty, 2014), DeMarree and Rios (2014) found that actual-desired self-esteem discrepancies – which are greatest for people low in self-esteem – strongly predicted decreases in self-concept clarity (SCCS and subjective ambivalence). Further, self-esteem level was no longer a significant linear predictor of self-concept clarity once these discrepancies were entered into the analysis. However, the *quadratic* effect of self-esteem remained significant (DeMarree & Rios, 2014). In the attitudes literature, there is a consistent relationship between the extremity of an evaluation (i.e., deviation from neutrality) and its strength (both in terms of strength outcomes and strength-related attitude features; see e.g., Bassili, 1996; Krosnick, Boninger, Chuang, Berent, & Carnot, 1993). However, because "low" self-esteem in most healthy samples is at or above the neutral point of self-esteem scales, it is rare that the distribution of self-esteem has sufficient range to observe a curvilinear pattern, leaving a stronger linear pattern present than if the full possible range were available. Although Campbell (1990) found no evidence for curvilinear associations in her original study (reported in the general discussion, p. 546), it is plausible that the limited statistical power or restriction of range could have weakened the sensitivity to such effects. Future research on self-concept clarity might benefit from sampling a wide range of the self-esteem distribution to tease apart potential linear and quadratic relationships between these constructs.

Cultural Boundaries

One critical variable that has been understudied in the literature on SCC is culture. Different cultures emphasize a variety of dimensions related to the clarity of one's self-views. For example, relative to Western European cultures, East Asian cultures

emphasize the inevitability of contradiction and the inability to understand something independent of its context (e.g., Choi, Koo, & Choi, 2007; Markus & Kitayama, 1991; Nisbett, Peng, Choi, & Norenzayan, 2001). Consequently, the self-conceptions and self-evaluations of people from East Asian cultures tend to contain more contradiction (Spencer-Rodgers, Boucher, Mori, Wang, & Peng, 2009; Spencer-Rodgers & Peng, 2005) and have more contextually defined self-views (English & Chen, 2007, 2011), compared with people from Western European cultures (see Gardner & Garr-Schultz, this volume for more on identity-based conceptualizations of self-concept clarity).

Perhaps because of their relative greater comfort with and expectation of contradiction, Japanese participants scored lower on the SCCS and demonstrated a weaker correlation between the SCCS and self-esteem than Canadian participants in the original publication of the scale (Campbell et al., 1996). However, the implications for self-concept clarity extend beyond such mean level differences. When testing or comparing across cultures, it is important that the conceptual variables of interest are instantiated in a way that is meaningful in each culture (Hardin, Robitschek, Flores, Navarro, & Ashton, 2014). Although the global self-concept might be meaningful in a Western cultural context, context-specific self-conceptions might be the most meaningful in East Asian cultures (Chen, English, & Peng, 2006; Cousins, 1989; English & Chen, 2007). Consequently, global self-concept clarity may not tap into the culturally meaningful form of self-concept clarity in East Asian cultures, and, instead, the clarity of specific social, relational, or contextual selves might be more appropriate when investigating self-concept clarity in these cultural contexts (DeMarree & Morrison, 2012; see also Gardner & Garr-Schultz, this volume).

In addition, different ways of conceptualizing self-concept clarity might differ in their cultural relevance. For example, even when considered in a contextually defined context, people from East Asian cultures may still be more likely than their Western counterparts to recognize contradiction in their self-views (i.e., have low self-concept clarity based on indices of consistency). However, it is possible that these individuals could hold those contradictory self-conceptions with confidence and believe that they will be consistently displayed in that particular role.

Although these ideas are somewhat speculative, they point to new directions for future research on self-concept clarity. Most centrally, there is a need to understand the extent to which contextually constrained self-concept clarity concepts are meaningful within and between cultures. Related to this issue are questions about whether the correlates and consequences of different SCC measures are the same or different, when assessed at the appropriate level of analysis, across cultures.

SCC Measurement and Barriers to Conceptual Development

We have raised a number of important issues with the measurement of self-concept clarity: multiple, nonequivalent self-concept clarity assessment strategies, potential confounds with self-esteem, and concerns with the cross-cultural validity of self-concept clarity conceptualization and measurement. We believe that the issues

raised pose serious barriers that the SCC literature needs to overcome. But, over-coming and addressing these barriers also pose a number of opportunities as well.

As discussed at length above, we identified at least three distinct constructs that have all been labeled as "self-concept clarity." By recognizing the differences among these measures, the field will be better prepared to identify differences in the effects or correlates of various SCC-related measures that can inform conceptual understanding of the self. Moving forward, researchers should think carefully about what aspects of self-concept clarity are most important to their research questions in order to maximize the strength of their designs. Additionally, they may choose to include multiple measures of self-concept clarity to demonstrate the specificity of their predictions.

Because at least some measures of self-concept clarity are typically strongly cor-related with self-esteem, a failure to appreciate the distinction between self-esteem and SCC may further hinder conceptual development. This is especially important when the purported outcomes are ones that are strongly associated with self-esteem, such as various mental health outcomes. Further, the failure to consider both self-esteem and SCC simultaneously prevents us from gaining insights into their poten-tial interactions. As noted earlier, self-concept clarity – at least as indicated by some self-concept clarity measures (see Fig. 1.1 for an example using the SCCS) – might buffer low self-esteem individuals against negative consequences typically associated with negative self-evaluations. Alternatively, to the extent that SCC-related constructs represent the global "strength" of one's self-concept, it might be expected to predict the durability and impactfulness of self-esteem and people's self-conceptions.

Finally, because current conceptualizations of self-concept clarity are largely based on the notion of a unitary, context invariant self-concept, SCC research fails to adequately address culture. Future work may benefit from taking into account the culture-specific ways in which the self-concept and SCC may be manifest (Hardin et al., 2014).

Final Thoughts

In reviewing the existing literature and our ongoing work on the measurement and validity of self-concept clarity, we have identified a number of distinct ways that researchers have attempted to measure self-concept clarity. These different strate-gies appear to reflect different constructs and in some cases demonstrate limited incremental validity over self-esteem. Although many of the issues we raised repre-sent potential "problems" with the SCC literature, we believe that they also present opportunities. By better understanding the measures and conceptual space of SCC-related constructs, the field can begin to grow. Researchers can make more informed choices about the measures they use and the research and analytic designs they employ. We hope this additional nuance will help researchers to develop richer, more accurate theory in this area.

References

Adler, J. M., Lodi-Smith, J., Philippe, F. L., & Houle, I. (2016). The incremental validity of narrative identity in predicting well-being: A review of the field and recommendations for the future. *Personality and Social Psychology Review*, *20*, 142–175.

Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, *16*, 397–438.

Ayduk, Ö., Gyurak, A., & Luerssen, A. (2009). Rejection sensitivity moderates the impact of rejection on self-concept clarity. *Personality and Social Psychology Bulletin*, *35*, 1467–1478.

Bassili, J. N. (1996). Meta-judgmental versus operative indexes of psychological attributes: The case of measures of attitude strength. *Journal of Personality and Social Psychology*, *71*, 637–653.

Bassili, J. N. (2008). Attitude strength. In W. D. Crano & R. Prislin (Eds.), *Attitudes and attitude change* (pp. 237–260). New York, NY: Psychology Press.

Baumeister, R. F., Tice, D. M., & Hutton, D. G. (1989). Self-presentational motivations and personality differences in self-esteem. *Journal of Personality*, *57*, 547–579.

Baumgardner, A. H. (1990). To know oneself is to like oneself: Self-certainty and self-affect. *Journal of Personality and Social Psychology*, *58*, 1062–1072.

Bigler, M., Neimeyer, G. J., & Brown, E. (2001). The divided self revisited: Effects of self-concept clarity and self-concept differentiation on psychological adjustment. *Journal of Social and Clinical Psychology*, *20*, 396–415.

Błażek, M., & Besta, T. (2012). Self-concept clarity and religious orientations: Prediction of purpose in life and eelf-esteem. *Journal of Religion & Health*, *51*, 947–960.

Bobrowski, M. E., DeMarree, K. G., Lodi-Smith, J., & Naragon-Gainey, K. (2018). *What does it mean to have a clear sense of self? Structure and validity of self-concept clarity measures. Manuscript in preparation.* Buffalo, NY: University at Buffalo.

Boucher, H. C. (2011). Self-knowledge defenses to self-threats. *Journal of Research in Personality*, *45*, 165–174.

Burger, J. M., & Guadagno, R. E. (2003). Self-concept clarity and the foot-in-the-door procedure. *Basic & Applied Social Psychology*, *25*, 79–86.

Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology*, *59*, 538–549.

Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, *70*, 141–156.

Chen, S., English, T., & Peng, K. (2006). Self-verification and contextualized self-views. *Personality and Social Psychology Bulletin*, *32*, 930–942.

Choi, I., Koo, M., & Choi, J. A. (2007). Individual differences in analytic versus holistic thinking. *Personality and Social Psychology Bulletin*, *33*, 691–705.

Constantino, M. J., Wilson, K. R., Horowitz, L. M., & Pinel, E. C. (2006). The direct and stress-buffering effects of self-organization on psychological adjustment. *Journal of Social & Clinical Psychology*, *25*, 333–360.

Cousins, S. D. (1989). Culture and self-perception in Japan and the United States. *Journal of Personality and Social Psychology*, *56*, 124–131.

De Dreu, C. K. W., & van Knippenberg, D. (2005). The possessive self as a barrier to conflict resolution: Effects of mere ownership, process accountability, and self-concept clarity on competitive cognitions and behavior. *Journal of Personality and Social Psychology*, *89*, 345–357.

DeMarree, K. G., & Morrison, K. R. (2012). What do I think about who I am? Metacognition and the self-concept. In P. Briñol & K. G. DeMarree (Eds.), *Social metacognition* (pp. 103–119). New York, NY: Psychology Press.

DeMarree, K. G., Morrison, K. R., Wheeler, S. C., & Petty, R. E. (2011). Self-ambivalence and resistance to subtle self-change attempts. *Personality and Social Psychology Bulletin*, *37*, 674–686.

DeMarree, K. G., Petty, R. E., & Briñol, P. (2007). Self and attitude strength parallels: Focus on accessibility. *Social and Personality Psychology Compass*, *1*, 441–468.

DeMarree, K. G., Petty, R. E., & Strunk, D. R. (2010). Self-esteem accessibility as attitude strength: On the durability and impactfulness of accessible self-esteem. *Personality and Social Psychology Bulletin*, *36*, 628–641.

DeMarree, K. G., & Rios, K. (2014). Understanding the relationship between self-esteem and self-clarity: The role of desired self-esteem. *Journal of Experimental Social Psychology*, *50*, 202–209.

DeMarree, K. G., Wheeler, S. C., Briñol, P., & Petty, R. E. (2014). Wanting other attitudes: Actual–desired attitude discrepancies predict feelings of ambivalence and ambivalence consequences. *Journal of Experimental Social Psychology*, *53*, 5–18.

English, T., & Chen, S. (2007). Culture and self-concept stability: Consistency across and within contexts among Asian Americans and European Americans. *Journal of Personality and Social Psychology*, *93*, 478–490.

English, T., & Chen, S. (2011). Self-concept consistency and culture: The differential impact of two forms of consistency. *Personality and Social Psychology Bulletin*, *37*, 838–849.

Fazio, R. H., & Williams, C. J. (1986). Attitude accessibility as a moderator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential election. *Journal of Personality and Social Psychology*, *51*, 505–514.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

Guerrettaz, J., & Arkin, R. M. (2015). Who am I? How asking the question changes the answer. *Self and Identity*, *14*, 90–103.

Guerrettaz, J., & Arkin, R. M. (2016). Distinguishing the subjective and the objective aspects of self-concept clarity. *Social and Personality Psychology Compass*, *10*, 219–230.

Hamid, P. N., & Cheng, C. (1995). Self-esteem, and self-concept clarity in Chinese students. *Social Behavior & Personality: An International Journal*, *23*, 273.

Hardin, E. E., Robitschek, C., Flores, L. Y., Navarro, R. L., & Ashton, M. W. (2014). The cultural lens approach to evaluating cultural validity of psychological theory. *American Psychologist*, *69*(7), 656–668.

Howe, L. C., & Krosnick, J. A. (2017). Attitude strength. *Annual Review of Psychology*, *68*, 327–351.

Krosnick, J. A., Boninger, D. S., Chuang, Y. C., Berent, M. K., & Carnot, C. G. (1993). Attitude strength: One construct or many related constructs? *Journal of Personality and Social Psychology*, *65*, 1132–1151.

Krosnick, J. A., & Petty, R. E. (1995). Attitude strength: An overview. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 1–24). Mahwah, NJ: Lawrence Erlbaum Associates.

Landau, M. J., Greenberg, J., Sullivan, D., Routledge, C., & Arndt, J. (2009). The protective identity: Evidence that mortality salience heightens the clarity and coherence of the self-concept. *Journal of Experimental Social Psychology*, *45*, 796–807.

Lee-Flynn, S. C., Pomaki, G., DeLongis, A., Biesanz, J. C., & Puterman, E. (2011). Daily cognitive appraisals, daily affect, and long-term depressive symptoms: The role of self-esteem and self-concept clarity in the stress process. *Personality and Social Psychology Bulletin*, *37*, 255–268.

Lewandowski, G. W., & Nardone, N. (2012). Self-concept clarity's role in self–other agreement and the accuracy of behavioral prediction. *Self & Identity*, *11*, 71–89.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224–253.

McFarlin, D. B., & Blascovich, J. (1981). Effects of self-esteem and performance feedback on future affective preferences and cognitive expectations. *Journal of Personality and Social Psychology*, *40*, 521–531.

Mellema, A., & Bassili, J. N. (1995). On the relationship between attitudes and values: Exploring the moderating effects of self-monitoring and self-monitoring schematicity. *Personality and Social Psychology Bulletin*, *21*, 885–892.

Muthén, L. K., & Muthén, B. O. (1998–2011). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.

Nezlek, J. B., & Plesko, R. M. (2001). Day-to-day relationships among self-concept clarity, self-esteem, daily events, and mood. *Personality and Social Psychology Bulletin*, *27*, 201–211.

Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, *108*, 291–310.

Norman, C. C., & Aron, A. (2003). Aspects of possible self that predict motivation to achieve or avoid it. *Journal of Experimental Social Psychology*, *39*, 500–507.

Pelham, B. W. (1995). Further evidence for a Jamesian model of self-worth: Reply to Marsh (1995). *Journal of Personality and Social Psychology*, *69*, 1161–1165.

Pelham, B. W., & Swann, W. B. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*, *57*, 672–680.

Petty, R. E., & Krosnick, J. A. (1995). *Attitude strength: Antecedents and consequences*. Mahwah, NJ: Lawrence Erlbaum Associates.

Sherif, M., & Hovland, C. I. (1961). *Social judgment: Assimilation and contrast effects in communication and attitude change*. New Haven, CT: Yale University Press.

Shoots-Reinhard, B. L., Petty, R. E., DeMarree, K. G., & Rucker, D. D. (2015). Personality certainty and politics: Increasing the predictive utility of individual-difference inventories. *Political Psychology*, *36*, 415–430.

Slotter, E. B., Gardner, W. L., & Finkel, E. J. (2010). Who am I without you? The influence of romantic breakup on the self-concept. *Personality and Social Psychology Bulletin*, *36*, 147–160.

Spencer-Rodgers, J., Boucher, H. C., Mori, S. C., Wang, L., & Peng, K. (2009). The dialectical self-concept: Contradiction, change, and holism in East Asian cultures. *Personality and Social Psychology Bulletin*, *35*, 29–44.

Spencer-Rodgers, J., & Peng, K. (2005). The dialectical self: Contradiction, change, and holism in the East Asian self-concept. In R. M. Sorrentino, D. Cohen, J. M. Olson, & M. P. Zanna (Eds.), *Culture and social behavior: The Ontario symposium* (pp. 224–249). Mahwah, NJ: Erlbaum.

Stopa, L., Brown, M. A., Luke, M. A., & Hirsch, C. R. (2010). Constructing a self: The role of self-structure and self-certainty in social anxiety. *Behaviour Research and Therapy*, *48*, 955–965.

Story, A. L. (2004). Self-esteem and self-certainty: A mediational analysis. *European Journal of Personality*, *18*, 115–125.

Swann, W. B., & Ely, R. J. (1984). A battle of wills: Self-verification versus behavioral confirmation. *Journal of Personality and Social Psychology*, *46*, 1287–1302.

Thomas, C. R., & Gadbois, S. A. (2007). Academic self-handicapping: The role of self-concept clarity and students' learning strategies. *British Journal of Educational Psychology*, *77*, 101–119.

Vartanian, L. R. (2009). When the body defines the self: Self-concept clarity, internalization, and body image. *Journal of Social and Clinical Psychology*, *28*, 94–126.

Visser, P. S., Bizer, G. Y., & Krosnick, J. A. (2006). Exploring the latent structure of strength related attitude attributes. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 1–67). New York, NY: Academic Press.

Wong, A. E., Vallacher, R. R., & Nowak, A. (2014). Fractal dynamics in self-evaluation reveal self-concept clarity. *Nonlinear Dynamics, Psychology, and Life Sciences*, *18*, 349–369.

Wu, J., Watkins, D., & Hattie, J. (2010). Self-concept clarity: A longitudinal study of Hong Kong adolescents. *Personality and Individual Differences*, *48*, 277–282.