The assessment of social status:

A review of measures and experimental manipulations

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Abstract

This chapter provides an overview of measures and experimental manipulations developed and used in research on social status. Our goal is to provide researchers with a resource for identifying and selecting appropriate self- and other-report scales, behavioral measures, and experimental manipulation tools for their future empirical work on status. We provide a brief summary of each tool and how it was developed, noting, where relevant, its original source, reliability, validity, and frequency of use. We conclude with recommendations for how researchers might select among the reviewed measures and manipulations.

Keywords: social status, measures, assessment, experiment, manipulations, methodology

In this chapter, we provide an overview of measures and experimental methods available for assessing and manipulating social status. Numerous measures and manipulations have been used in the fairly vast literature on social status, so we focus our review on a diverse set of methodologies that were systematically developed and well validated. In addition, in keeping with the volume's focus on social rank differences that arise spontaneously in social interactions, we exclude methodologies aimed at measuring or manipulating institutionally endowed differences in power, which is to say asymmetric control over resources between, for example, a boss and a subordinate. Institutionally endowed power is a related but distinct concept from naturally emerging social rank (see Blader & Chen, Chapter 2, this volume; Magee & Galinsky, 2008), and a variety of power measures and manipulations exist (see Smith, Jostmann, Galinsky, & van Dijk, 2008), but are beyond the scope of this review. Below, we first summarize available self-report, peer-report, and behavioral measures of status; then we review experimental methods that have been used to effectively manipulate status.

Measures of Social Status

In this section, we provide an overview of the most widely used and well validated measures of social status. These measures can be organized into self-report or peer-report rating scales and behavioral measures, and are discussed in that order, and are listed alphabetically by the lead author's last name. For each measure, we provide information regarding: (a) the original source article detailing the measure's development; (b) our interpretation of the broader, underlying rank-related concept that the measure assesses; (c) a brief description of the measure; (d) sample items (for self- and peer-rating instruments only); (e) psychometric information about reliability and validity (i.e., convergent and discriminant validity, generalizability) where available (though it should be cautioned that this information reflects characteristics of the

measure when administered to the particular sample reported on); (f) information about frequency of use, as indicated (albeit crudely) by the number of citations the article has received (an index that overestimates the measure's frequency of use given that these articles are often cited for substantive and other reasons as well); and (g) a sample recent article that has used this measure to investigate topics related to social rank, and, in doing so, has offered further information about its nomological network and the underlying rank construct.

Self- and Other-Report Scales

1. The Personal Sense of Power Scale (Self-Report)

Originally developed in:

Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality*, *80*, 313-344. [includes full scale]

Broader concept assessed: Social rank and influence.

Scale description: A set of eight items were developed to assess individuals' beliefs about their ability to make decisions, influence others' behavior, opinions, and beliefs, and to satisfy their own wishes and desires within social relationships. Participants rate the extent to which they agree with a series of self-statements on a seven-point scale (1 = "disagree strongly"; 7 = "agree strongly").

Sample items: "I can get him/her/them to listen to what I say", "If I want to, I get to make the decisions."

Reliability: Scale showed good internal consistency (αs = .76 to .91), and ratings were moderately consistent across different relationships (e.g., family member, teaching assistant, close friend; rs = .03 to .47 [*M* = .23]).

Convergent validity: Scale showed good convergent validity with measures of related constructs (e.g., dominance [rs = .28 to .59], peer-rated sociometric status [rs = .33 to .37], extraversion [r = .48], and narcissism [r = .46]).

Generalizability: Scale was developed with undergraduates at North American universities.

Additional information about scale development: Authors began scale development with a large initial item pool, drawn primarily from an extensive theoretical review (Keltner et al., 2003).

Frequency of use: The original article has been cited 27 times since its publication in 2012.

Sample of other research that used this scale:

Joshi, P. D. & Fast, N. D. (2013). Power and reduced temporal discounting. *Psychological Science*, *24*, 432-438.

[The scale was used to assess participants' sense of power in their workplace.]

2. Desire for Dominance (Self-Report)

Originally developed in:

Cassidy, C. & Lynn, R. (1989). A multifactorial approach to achievement motivation: The development of a comprehensive measure. *Journal of Occupational Psychology*, *62*, 301-312. [includes full scale]

Broader concept assessed: The desire to achieve social rank and influence.

Scale description: A subscale consisting of seven items from the Achievement Motivation Scale (developed in the same paper) was developed to assess the desire to lead or to be in a position of dominance. Participants rate their endorsement of several preferences and behavioral tendencies on a three-point scale (0 = "No"; 2 = "Yes"; midpoint scale value not given).

Sample Items: "I think I would enjoy having authority over other people", "When a group I belong to plans an activity I would rather direct it myself than just help out and have someone else organize it."

Reliability: Scale showed good internal consistency (αs = .73 to .81) and split-half reliability (rs = .70 to .81).

Convergent validity: Scale showed good convergent validity with measures of status aspiration and competitiveness (rs = .18 to .93 [M = .46]).

Generalizability: Scale was developed with undergraduates at North American universities and adults from the general population.

Additional information about scale development: Authors began scale development with a large initial item pool drawn from a number of existing measures used to assess a variety of motivations. Exploratory factor analysis was used to arrive at the final scale items.

Frequency of use: The original article has been cited 188 times since its publication in 1989.

Sample of other research that used this scale:

Mead, N. L. & Maner, J. K. (2012). On keeping your enemies close: Powerful leaders seek proximity to ingroup power threats. *Journal of Personality and Social Psychology, 102*, 576-591.

[The scale was used to assess individual differences in the desire for status and rank.]

3. **Need for Dominance in the Workplace (Self- and Other-Report)**

Originally developed in:

Steers, R. M. & Braunstein, D. N. (1976). A behaviorally based measure of manifest needs in work settings. *Journal of Vocational Behavior*, *9*, 251-266. [includes full scale]

Broader concept assessed: The desire to achieve social rank and influence.

Scale description: A subscale consisting of five items from the Manifest Needs Questionnaire was developed to assess dominant and leadership behaviors in the workplace. Individuals rate the frequency with which they (self-report) or students in their classes (peer-report) engage in certain behaviors, using a seven-point scale (1 = "never"; 7 = "always").

Sample Items. "I seek an active role in the leadership of a group", "I strive to gain more control over the events around me at work"

Reliability: Self-reports showed good test-retest ($r = .86$) and internal consistency reliability ($\alpha = .82$). Peer-reports elicited high inter-judge agreement (αs = .74 to .85).

Convergent validity: Self-reports and peer-reports showed good convergent validity (rs = .49 and .74). Self-reports also showed good convergent validity with self-reported Need for Dominance taken from other existing scales (e.g., the Personality Research Form; Jackson, 1967; $r = .62$), self-reported preferred work preferences (e.g., being a group leader, playing major role in determining group performance; rs = .39 to .47), and peer-ratings of various aspects of leadership ability (e.g., control, self-confidence, persuasiveness; rs = .29 to .32).

Generalizability: Scale was developed with samples of graduate students at North American universities and middle-aged North American adults.

Additional information about scale development: Authors selected items based on previously developed taxonomies of human needs (Murray, 1938).

Frequency of use: The original article has been cited 402 times since its publication in 1976.

Sample of other research that used this scale:

O'Reilly, C. A., & Caldwell, D. F. (1979). Informational influence as a determinant of perceived task characteristics and job satisfaction. *Journal of Applied Psychology, 64*, 157-165.

[The scale was used to assess participants' aspiration for social rank; authors included it as a covariate in their main analyses.]

4. **Perceived Social Status Scale (Self- and Other-Report)**

Originally developed in:

Anderson, C., John, O. P., Keltner, D., & Kring, A. M. (2001). Who attains social status? The effect of personality and physical attractiveness in social groups. *Journal of Personality and Social Psychology*, *81*, 116-132. [includes full scale]

Broader concept assessed: Social rank and influence based on earned respect and admiration.

Scale description: A set of three related measures were used to assess social status (defined as the amount of respect, influence, and prominence each member enjoys in the eyes of the others), all of which were administered by asking individuals to rate members of their social group on the amount of status, influence, and prominence—or on a subset of these—that the group member has obtained. Rating scales and endpoints varied across measures.

Items: Scale #1: "status", "influence", and "prominence in the [group]" (Study 2); Scale #2: "prominence" (Study 1); and Scale #3: "the amount of prominence, respect, and influence" (Study 3).

Reliability: Scale #1 showed good internal consistency ($\alpha = .98$), high inter-item correlations (mean $r = .93$), and high inter-judge reliability (αs $= .90$ to $.97$ for each item); Scale #2 showed high inter-judge reliability ($\alpha = .92$); Scale #3 showed high inter-judge reliability (mean αs $= .81$) and strong test-retest reliability (i.e., long-term stability over 4 to 5 months; rs $= .61$ to $.86$).

Convergent validity: Scale #2 was shown to be strongly predictive of one's position(s) and office(s) in their fraternity ($r = .56$). Peer ratings on Scale #3 were strongly correlated with the

target individual's self-ratings on the same scale (rs = .58 to .62). Self-reports from all three

scales showed good convergent validity with self-reported extraversion (rs = .36 to .48).

Generalizability: Scale #1 was developed with undergraduate all-female sorority groups; Scale

#2 was developed with undergraduate all-male fraternity groups; and Scale #3 was developed

with mixed-gender dormitory groups. All three samples were drawn from North American

universities.

Frequency of use: The original article has been cited 327 times since its publication in 2001.

Sample of other research that used this scale:

Pettit, N. C., Yong, K., & Spataro, S. E. (2010). Holding your place: Reactions to the prospect of

status gains and losses. *Journal of Experimental Social Psychology*, *46*, 396-401.

[The scale was adapted to assess the extent to which participants value gaining others' respect

and admiration, following an experimental manipulation.]

5. Dominance and Prestige Scales (Self- and Other-Report)

Originally developed in:

Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary

foundations of human social status. *Evolution and Human Behavior*, *31*, 334-347. [full

scale included]

Broader concepts assessed: Social rank and influence based on force and intimidation

(Dominance), and earned respect and admiration (Prestige).

Scale description: A set of items were developed to assess two dimensions of social rank:

dominance (i.e., the induction of fear and intimidation; 8 items) and prestige (i.e., the attainment

of respect and admiration; 9 items). Participants indicate the extent to which each statement

describes themselves (for self-rating version) or a target individual (for peer-rating version) on a seven-point scale (1 = "Not at all"; 7 = "Very much").

Sample items: "Some people are afraid of me" (dominance); "Members of my peer group respect and admire me" (prestige)

Reliability: Scales showed good internal consistency (αs = .83 to .88 and .80 to .85 for dominance and prestige, respectively,), and peer-reports elicited high inter-judge agreement (αs = .78 and .84 for dominance and prestige, respectively.

Convergent validity: Self- and peer-reports were shown to have good convergent validity with measures of a range of similar constructs. Dominance was shown to correlate positively with narcissism (rs = .22 to .56), aggression (rs = .35 to .55), agency (r = .46), and peer-rated leadership (r = .40). Prestige was shown to correlate positively with social acceptance (rs = .29 to .59), agency (r = .39), peer-rated advice-giving ability (r = .56), and peer-rated leadership (r = .73).

Discriminant validity: Self- and peer-reports were shown to have good divergent validity with measures of theoretically divergent constructs. For example, dominance was shown to correlate negatively with agreeableness (rs = -.39 to -.61). Prestige was shown to correlate negatively or have no relation with aggression (rs = -.38 and .03).

Generalizability: Scales were developed with samples of undergraduates and varsity athletes at North American universities.

Additional information about scale development: Authors began scale development with a large initial item pool, drawn primarily from a theoretical model of dominance and prestige (Henrich & Gil-White, 2001). Exploratory factor analysis and confirmatory factor analysis were used to arrive at final scale items and to derive the two-factor structure.

Frequency of use: The original article has been cited 57 times since its publication in 2010.

Sample of other research that used this scale:

Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the

      top: Evidence that dominance and prestige are distinct yet viable avenues to social rank

      and influence. *Journal of Personality and Social Psychology*, *104*, 103-125.

[The scale was used to assess group member-perceived dominance and prestige following a

group interaction.]

6. Agency Subscale of the Revised Interpersonal Adjective Scales (Self- and Other-Report)

Originally developed in:

Wiggins, J. S., Trapnell, P., & Phillips, N. (1988). Psychometric and geometric characteristics of

      the Revised Interpersonal Adjective Scales (IAS-R). *Multivariate Behavioral Research*,

      23, 517-530. [includes full scale]

Broader concept assessed: Social rank and influence.

Scale description: A set of eight items was developed to assess personality characteristics related

to agency (i.e., control and assertiveness). Participants rate the self-descriptive accuracy of

personality adjectives on an eight point scale (1= "extremely inaccurate"; 8 = "extremely

accurate").

Sample items: "self-assured"; "dominant"; "forceful"

Reliability: Scale showed good internal consistency (αs = .79 to .88 across nine subsamples).

Convergent validity: Scale was shown to have good convergent validity with scales comprised of

closely related personality adjectives on the interpersonal circumplex (e.g., arrogant-calculating;

gregarious-extraverted). Although specific correlations were not reported, these results were

based on indices of spatial proximity—indicating similarity between constructs—between the agency scale and these related constructs within the circumplex space.

Discriminant validity: Scale was shown to have good discriminant validity with scales comprised of divergent personality adjectives on the interpersonal circumplex (e.g., unassured-submissive; aloof-introverted). The spatial distances between the agency scale and these constructs within the circumplex space were high, indicating divergence.

Generalizability: Scale was developed with undergraduates at North American universities.

Additional information about scale development: Authors began scale development with a large initial item pool drawn from a comprehensive taxonomy of personality adjectives, which formed the basis for a previously validated version of the scale (Wiggins, 1979). Principal components analysis was used to arrive at the final scale items and the interpersonal circumplex structure. The scale factor structure and reliability were replicated across nine sub-samples.

Frequency of use: The original article has been cited 394 times since its publication in 1988.

Sample of other research that used this scale:

Anderson, C., Brion, S., Moore, D., A., & Kennedy, J. A. (2012). A status-enhancement account of overconfidence. *Journal of Personality and Social Psychology*, *103*, 718-735.

[The scale was used to assess trait dominance; it was included as a covariate in main analyses.]

7. **Resource Control Ability in Children (Teacher-Report)**

Originally developed in:

Hawley, P. H., Johnson, S. E., Mize, J. A., McNamara, K. A. (2007). Physical attractiveness in preschoolers: Relationships with power, status, aggression, and social skills. *Journal of School Psychology*, *45*, 499-521.

Broader concept assessed: Social rank and influence in children.

Scale description: A set of six items was developed to assess children's resource control effectiveness in school settings. Teachers rated the extent to which several statements accurately characterized children in their classroom on a seven-point scale (scale endpoints and labels not provided).

Sample items: "This child usually gets first access to preferred toys when with peers", "This child usually plays with the favored toys when with peers."

Reliability: Scale showed good internal consistency ($\alpha = .91$).

Convergent validity: Scale was shown to have good convergent validity with measures of similar constructs (e.g., teacher-rated ranking of students' dominance [$r = .62$] and teacher-rated aggression and assertion [rs = .60 to .76].

Generalizability: Scale was developed with North American preschool children.

Frequency of use: The original article has been cited 29 times since its publication in 2007.

Other sample research that used this scale:

Olthof, T., Goossens, F. A., Vermande, M. M., Aleva, E. A., & van der Meulen, M. (2011). Bullying as a strategic behavior: Relations with desired and acquired dominance in the peer group. *Journal of School Psychology, 49,* 339-359.

[The scale was adapted to assess peer-reported, teacher-reported, and self-reported resource control among children.]

Behavioral Measures

1. Decision-Making Impact in a Survival Task (Lost on the Moon Exercise)

Originally developed in:

Bottger, P. C. (1984). Expertise and air time as bases of actual and perceived influence in

problem-solving groups. *Journal of Applied Psychology*, *69*, 214-221.

Broader concept assessed: Social influence.

Measure description: Participants work collaboratively in small groups on the NASA-developed moon survival exercise, a widely used task for eliciting and observing small groups interactions. The task requires individuals to imagine having crash landed on the moon, with only 15 pieces of equipment available. Individuals are asked to rank order the items in terms of their utility for bringing the crew to safety. Participants initially complete this task on their own, then solve the problem again collaboratively. Interpersonal influence is quantified as the degree of similarity between each individual's response and the group's collective decision, with convergence indicating greater influence.

Generalizability: This measure of social influence was developed with undergraduate students at North American universities.

Frequency of use: The original article that detailed this methodology has been cited 105 times since its publication in 1984.

Other sample research that used this measure:

Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the

top: Evidence that dominance and prestige are distinct yet viable avenues to social rank

and influence. *Journal of Personality and Social Psychology*, *104*, 103-125.

[The measure was used to assess participants' influence over other group members in a leaderless group task.]

2. Visual Attention Received

As used in:

Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the

top: Evidence that dominance and prestige are distinct yet viable avenues to social rank

and influence. *Journal of Personality and Social Psychology*, *104*, 103–125.

Broader concept assessed: Social rank, under the assumption that higher ranked group members

receive greater social attention.

Measure description: Observers' eye gaze is tracked using an eye-tracking device while they

view a video-recording of a social interaction among several targets; the visual attention received

by each target is assessed. Rank is quantified as the total duration of visual attention received by

each target, averaged across observers.

Convergent validity: This measure showed good convergent validity with measures of perceived

influence, dominance, and prestige.

Discriminant validity: Likeability, which is theoretically distinct and perhaps even independent

from social rank (Wiggins & Trapnell, 1996), was found to be unrelated to the amount of visual

attention received.

Generalizability: This measure was developed with undergraduate students at North American

universities.

Frequency of use: The original article that detailed this methodology has been cited 15 times

since its publication in 2013.

Other sample research that used a similar methodology:

Maner, J. K., DeWall, C. N., & Gailliot, M. T. (2008). Selective attention to signs of success:

Social dominance and early stage interpersonal perception. *Personality and Social*

Psychology Bulletin, *34*, 488-501.

[The measure was used to assess the extent of attention paid to targets who display signs of prestige.]

3. Interpersonal Influence in a Pattern Recognition Task

Originally developed in:

Moore Jr, J. C. (1968). Status and influence in small group interactions. *Sociometry*, *31*, 47-63.

Broader concept assessed: Social rank and influence based on respect and admiration.

Measure description: A pair of participants collaborate virtually in a "contrast-sensitivity task", in which they independently decide which of two checkerboard images contains more white area. After providing their own answer, participants are shown their partner's answer and given the opportunity to change their response accordingly. Influence is quantified as the proportion of trials in which a participant changes his/her response to that of his/her partner, out of the total trials in which the two disagree. Because participants know that their partners will not be informed of their decision, participants' tendency to change their responses indicates persuasion, and thus influence based on respect, rather than conformity, or influence based on dominance/intimidation.

Generalizability: This measure of was developed among undergraduate students at North American universities.

Frequency of use: The original article that detailed this methodology has been cited 153 times since its publication in 1968.

Other sample research that used this measure:

Willer, R. (2009). Groups reward individual sacrifice: The status solution to the collective action problem. *American Sociological Review*, *74*, 23-43.

[The measure was used to assess interpersonal influence conferred to one's partner following an experimental manipulation.]

Experimental Manipulations of Social Status

In the remainder of this chapter, we provide a brief overview of experimental methodologies that have been developed and used to manipulate status. These methodologies can be organized under five broad classes: (a) manipulations based on thinking or writing exercises, (b) vignette or narrative manipulations, and manipulations based on altering (c) dress cues, (d) size cues, and (e) social dynamics between individuals. These include manipulations that vary the status of the participant and those that vary the perceived status of a target individual (as seen from the participant's perspective). For each experimental manipulation, we provide: (a) information on the original published article in which it was used; (b) a description of the manipulation; (c) results of any manipulation check; and (d) information about frequency of use, in the form of number of citations received by the article (note that, as in the case for measures, this indicator overestimates the frequency at which the manipulation has been used).

1. Thinking or Writing Exercises

A number of experimental manipulations in the form of thinking or writing exercises have been designed to elicit momentary feelings of, or desire for, high (or low) social status among participants.

For example, in Anderson, Kraus, Galinsky, and Keltner (2012; Study 3), participants were asked to compare themselves with someone who had either high or low status, defined as respect, admiration, and influence. Participants were instructed to think about the similarities and

differences between themselves and the comparison target in an imagined getting-acquainted social interaction. A manipulation check suggested that the high-status prompt elicited higher self-reported social standing vis-à-vis others (Cohen's d = .54). This article has been cited 18 times since its publication in 2012.

Tiedens, Unzueta, and Young (2007; Studies 5 and 6) employed a similar exercise. Here, participants assigned to the high status condition were asked to write about instances from their lives in which they felt self-confident and acted in an assertive and directive manner. In contrast, participants assigned to the low status condition described instances in which they felt timid and followed directions from others. A manipulation check showed that participants who recalled behaving in more assertive ways rated themselves as more dominant and self-assured, in comparison to participants who recalled behaving in more submissive ways (ds = .40 and .29). This article has been cited 62 times since its publication in 2007.

2. Vignettes or Narratives

Studies have manipulated the status of participants or a target (or targets) using vignettes or narratives detailing their demeanor, personality, or behavior in terms of influence, assertiveness, dominance, or respect.

For example, in Griskevicius, Tybur, Gangestad, Perea, Shapiro, and Kenrick (2009), participants' motivation to seek social rank was manipulated with a short story prime describing a protagonist who recently graduated from college working at his/her first high-status job and aspiring to move up the company's social hierarchy. A manipulation check indicated that this prompt elicited an increased momentary desire for status and competition (d = 2.40). The original article in which this manipulation was developed has been cited 93 times since its publication in 2009.

To vary a target's social rank based primarily on perceived force and threat, Sadalla, Kenrick, and Vershure (1987; Studies 2, 3, and 4) described the high status target in a vignette as a strong, forceful, powerful, and competitive individual in athletic or social contexts. In contrast, the low status target was described as submissive, timid, deferential, and non-competitive. A manipulation check showed that the target described as strong and forceful was rated as more socially dominant than the target described as yielding and submissive (ds = 1.48 to 4.64). This article has been cited 295 times since its publication in 1987.

Building on this initial work, Snyder, Kirkpatrick, and Barrett (2008; Study 2) developed vignettes that manipulated a target's rank based on respect and admiration; the high status target was described as a prominent, respectable, confident, relaxed, and non-forceful individual. This article has been cited 30 times since its publication in 2008.

2. **Altering Dress Cues**

Numerous studies have experimentally manipulated the status of target individuals (primarily based upon respect and admiration) by varying their dress.

For example, high status targets—depicted either in person (Fortenberry, MacLean, Morris, & O'Connell, 1978) or photographs (Maner, DeWall, & Gailliot, 2008)—were portrayed wearing professional business suits. Conversely, low status targets were shown as dressed in casual attire. Manipulation checks showed that participants display increased deferential behavior towards targets dressed in professional attire (Fortenberry et al., 1978), and rate them as higher in social status (d = 2.85; Maner et al., 2008), compared to those dressed in casual attire. These articles have been cited 17 times and 44 times, respectively, since their publication in 1978 and 2008.

Similarly, in Ratcliff, Hugenberg, Shriver, and Bernstein (2011; Study 2), high status targets were portrayed wearing uniforms that convey high-status occupations (e.g., doctor, judge, four-star general). In contrast, low status targets wore uniforms that convey low-status occupations (e.g., fry, cook, mechanic). A manipulation check showed that targets wearing prestigious uniforms were rated as higher in "status" relative to targets wearing less prestigious uniforms ($d = 6.84$). This article has been cited 19 times since its publication in 2011.

In Shariff, Tracy, and Markusoff (2012; Study 3), participants were shown images of two identical twins, one wearing a business suit and the other wearing dirty rags and blankets. Accompanying textual passages explained that one twin worked in finance and the other was homeless. A manipulation check showed that the well dressed twin was rated as higher in status (defined in terms of high rank) than the rags-wearing twin ($d = 3.17$). This article has been cited 2 times since its publication in 2011.

3. **Alteration of Size Cues**

A large number of studies have manipulated the social status of either a target individual or the participant by varying their posture (expansive and open vs. contractive and closed) and apparent size (big vs. small).

For example, Sadalla and colleagues (1987; Study 1) manipulated the status of a target individual (i.e., an actor) in a video-recording by depicting him in a relaxed and asymmetrical posture while leaning back in a chair, in sharp contrast to a low status target who appeared tense, constricted, and leaned forward while interacting with another person. A manipulation check showed that the target who displayed a more relaxed and expansive nonverbal posture was rated as more socially dominant, compared to the target who displayed more tense and constrictive

nonverbal behaviors (d = 4.64). This article has been cited 295 times since its publication in 1987.

Tiedens and Fragale (2003) manipulated the perceived status of a confederate, who interacted face to face with participants in a similar fashion. The high status confederate assumed more space with both the upper and lower body when seated, with one arm over the back of the chair and one leg crossed expansively. In contrast, the low status confederate sat in a constricted position, with legs together, hands in the lap, and a slouched upper body. A manipulation check revealed that the expansive confederate was rated by participants as more socially dominant than the constrictive confederate (d = .80). This article has been cited 319 times since its publication in 2003.

As an example of research that utilized differential physical size to convey target status, Thomsen, Frankenhuis, Ingold-Smith, and Carey (2011) showed infants two agents represented by two blocks of different sizes, each with an eye and a mouth. The larger agent was used to portray a high status target and the smaller agent a low status target. Results suggested that infants mentally represent relative size as a status cue. They demonstrated an expectation (as indicated by looking time) for the smaller sized agent to show greater deference to the larger sized agent, but not vice versa (ds = .64 to .90). This article has been cited 43 times since its publication in 2011.

Similar manipulations have been used to vary the status of research participants. For example, in Carney, Cuddy, and Yap (2010), participants' body posture was manually configured by experimenters into either a high status pose entailing open limbs and spatial expansion, or a low status pose entailing closed limbs and spatial constriction. A manipulation check confirmed that participants who posed expansively reported feeling more powerful and in

charge than those who adopted a contractive and closed posture ($d = .91$). This article has been cited 125 times since its publication in 2010. Using a similar posture manipulation, Li Huang, Galinsky, Gruenfeld, and Guillory (2011) showed that expansive postures activate not only a heightened subjective sense of power ($d = .48$), but also greater implicit power ($d = .60$). Moreover, Bohns and Wiltermuth (2012) adapted this manipulation to vary both the status of research participants (Study1) and of a confederate (Study 2).

4. Altering the Social Dynamics between Individuals

Finally, diverse experimental manipulations have been designed to systematically manipulate the social status of participants or target individuals by varying the perceived social dynamics between the participant and other group members, or between target individuals and their peers.

As one example, Fast, Halevy, and Galinsky (2012) manipulated the status of participants by telling them that they had been virtually paired with a partner to work on a collaborative task. Those assigned to the high-status role were informed that they would adopt the role of an idea producer, a position that attracts a great deal of respect and admiration. In contrast, those assigned to the low-status role were informed that they would adopt the role of a worker, a position that receives little or no respect and admiration. A manipulation check showed that participants assigned to the high status role perceived their role as affording greater respect and admiration, relative to participants assigned to the low-status role ($d = 2.95$). This article has been cited 21 times since its publication in 2012.

In Willer (2009; Study 4), after working on a purportedly collective task in small groups via networked computers, participants rated the extent to which they respected and admired each of the other group members. Participants were then shown fictitious average ratings that they

received from the other group members. Those randomly assigned to the high prestige condition were shown high ratings, whereas those in the moderate or low prestige condition were shown moderate or low ratings. This article has been cited 137 times since its publication in 2009.

Finally, in a study that capitalized on the previously documented tendency to pay attention to skilled and respected others (Hold, 1976), Chudek, Heller, Birch, and Henrich (2012) manipulated the perceived status of two target individuals (shown in a video-recording) using differential attention. Child participants watched a video-recording in which these two target individuals received unequal attention from two bystanders standing between the target individuals. Both bystanders were angled toward and preferentially watching the high status (i.e., prestigious) target for the entire duration of the clip, while ignoring the low status target entirely. No manipulation check was performed, but the authors assumed that observers inferred greater status in targets who received more attention. The article in which this manipulation was developed has been cited 37 times since its publication in 2012.

Summary and Conclusions

In summary, a diversity of measurement instruments and experimental methods have been developed for the empirical study of social status. In this chapter we provided an overview of many of these methods, to give researchers a sense of the available means for assessing different aspects of social status—from self- and other-reports, and behavioral indices—as well as several of the most frequently used and diverse experimental methods for manipulating status.

Together, these methods contribute to the recent progression and proliferation of empirical research on social status, which has become a major topic of scientific investigation. In spite of these major advances, however, our overview also highlights several limitations. First,

future research would benefit from focusing more extensively on behavioral indicators of status—such as the decision-making impact and eye-tracking measures highlighted above, which are utilized less frequently than the rating scales—to complement self- and other-reports of status. Prior research suggests that even group members' perceptions of influence, which is generally considered an optimal approach for assessing status, may be distorted by individuals' everyday beliefs about who is most skilled and deserved of status (Berger & Conner, 1969), and by the motivation to rationalize the hierarchy that has emerged (Jost & Banaji, 1994). For this reason, more objective behavioral measures are particularly important.

A second area for improvement concerns the use of more behavioral based experimental designs. Outside the lab, individuals' assessments of their own and others' relative status tend to be informed and sustained by patterns of attention, deference, and other behavioral exchanges (e.g., complementary postures) among group members. Thus, manipulations that directly and systematically vary such cues of status—such as those reviewed above involving attentional, clothing, and postural cues—may provide a way for future researchers to ensure ecological validity of their findings.

<div align="center">**References**</div>

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