The Facets of Social Hierarchy: How Judges' Legitimacy Beliefs and Relative Status Shape Their Evaluation of Assertiveness and Ability

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ABSTRACT

Contemporary approaches of impression formation and stereotypes celebrate the role of the Big Two in social evaluation: the horizontal and vertical dimensions (Abele et al., 2021). Recently, interest has grown in making further distinctions within each of these dimensions (Abele et al., 2008). Here, we focused on the vertical facets, namely, assertiveness and ability. Research found that assertiveness is more strongly related to a target's status than ability. Arguably, this pattern emerges because assertiveness comes across as less negotiable, whereas ability leaves more room for appreciation. Building on this assumption, we reasoned that judgments of ability provide more opportunity to justify or to reclaim positive identity, depending on one's position in the hierarchy. Specifically, we hypothesized that the legitimacy beliefs and status of the judges are key factors to consider in that they moderate the perceived overlap between the vertical facets. Using a novel paradigm based on Goodman et al.'s (2001) social ladder, Studies 1a and 1b relied on judges' legitimacy beliefs as a proxy for status, whereas Studies 2 and 3 directly examined the judges' relative status. As predicted, we consistently found more overlap between assertiveness and ability among high-legitimacy/status judges than among low-legitimacy/status judges. We discuss the importance of taking into account the more specific meaning of the facets.

Do high-status people judge others the same way that low-status people do? Do judges' legitimacy beliefs moderate the way they evaluate social targets on such aspects as ability and assertiveness? The vast majority of studies on social perception examined how people appraise social targets in general and how specific features of these targets orient evaluation (Abele et al., 2021; Fiske, 2015; Yzerbyt, 2016; Yzerbyt, 2018). A recurrent message from this literature is that two dimensions, that is, the horizontal and vertical dimensions, organize social evaluation. The horizontal dimension, also known as warmth or communion, stresses the degree and nature of interdependence of the target with others, i.e., how the target 'gets along'. As to the vertical dimension, often labeled competence or agency, it denotes the target's means and determination to reach its goals, i.e., how the target 'gets ahead'.

Recent work started making further distinctions within these dimensions, suggesting, for instance, that the vertical dimension comprises two facets, assertiveness and ability (Abele et al., 2008; Abele et al., 2016). Interestingly, compared to the efforts investigating the influence of targets' features on the evaluations on assertiveness and ability, or the other way around (Carrier et al., 2014; Louvet et al., 2019), hardly any work examined the possible impact of judges' features. Also, most of these efforts focused on individual targets. The present series of studies aimed to examine the way people appraise a group's assertiveness and ability as a function of judges' own relative status. In addition to looking at status proper, we focused on legitimacy beliefs, namely, system justification and social dominance beliefs (De Oliveira, Guimond & Dambrun, 2012; Guimond et al., 2003). Our hypothesis was that the overlap between assertiveness and ability should be more marked among perceivers high in system justification and social dominance or high-status perceivers than among perceivers low in system justification and social dominance or low-status perceivers.

FROM THE FUNDAMENTAL DIMENSION TO THEIR FACETS

Two fundamental dimensions underlie social evaluation (for reviews, see Abele et al., 2021; Koch et al., 2021). Next to a so-called horizontal dimension that denotes the degree to which a social target is an ally and pursues similar goals with such characteristics as warm, sociable, sincere, and moral, a vertical dimension translates the extent to which a target can count on resources and enjoys status and wealth with traits like competent, efficient, assertive and determined. Capitalizing on the several related models and labels populating this literature (Abele & Wojciszke, 2007, 2014, 2018; Ellemers, 2017; Fiske et al., 2002, Fiske 2015; Yzerbyt et

al., 2005; Yzerbyt, 2018), several contributors to this field initiated an adversarial collaboration in order to provide an integrated view of current knowledge on these issues. (Ellemers et al., 2019). The resulting model of social evaluation (Abele et al., 2021; Koch et al., 2021) clearly builds on the assets of the most significant models of impression formation and group stereotypes.

One dividend of this initiative proves particularly relevant for the present studies. Indeed, several authors converge to conclude that the vertical dimension tends to be more consensual than the horizontal one (Koch et al., 2021; Yzerbyt & Cambon, 2017). Although social evaluation is inherently subjective and work on social perception is hardly concerned with the establishment of actual levels of traits in the targets, interjudge consensus may constitute a useful indicator that the specific traits inferred build on objective aspects of reality. To the extent that power, status, and economic resources are undisputable objective features of reality, a high level of agreement prevails when it comes to competence or agency judgments. In line with these considerations, Yzerbyt & Cambon (2017) found that trait inferences on the vertical dimension were consensual—more so than on the horizontal dimension—and at the same time closely tied to social status.

Another lesson resulting from this large-scale collaboration is that each dimension may well encompass several aspects (Abele et al., 2008). Indeed, recent empirical work (Abele et al., 2016; Carrier et al., 2014; Carrier, Louvet & Rohmer, 2014; Louvet et al., 2019; Mollaret & Miraucourt, 2016) suggests that each dimension comprises at least two facets (Fiske, 2018; Yzerbyt, 2018). Turning to the horizontal dimension first, morality relates to trust, reliability, and honesty, whereas friendliness refers to benevolence, warmth, and likability (Abele et al., 2021; Brambilla et al., 2012; Leach, Ellemers & Barreto, 2007). Distinctive as they may be, each of these two facets informs on aspects that likely promote or threaten harmonious relationships, irrespective of issues of social positioning (Carrier et al., 2022; Ellemers, 2017).

The perspective is somewhat different for the vertical facets, as they both relate to status, prestige, resources, and power and have to do with the hierarchical stratification of our society (Abele et al., 2021; Carrier et al., 2014; Dubois, 2010; Louvet et al., 2019). Still, whereas ability denotes intelligence, efficiency, and skills, assertiveness stands for ambition, dominance, and self-confidence. Recent work shows that individuals interpret social positions of actors in terms of capacity and assertiveness (Nicolas, Bai & Fiske, 2021; Tanjitpiyanond, Jetten & Peters, 2022). However, although evaluations on ability and assertiveness both provide indications regarding the specific positions of social targets in the social hierarchy, they are not equivalent. In several studies, Carrier and colleagues (2014) as well as Louvet and collaborators

(2019) showed that ability is less straightforwardly related to status than assertiveness. Admittedly, ability is required at all levels of the hierarchy because people are expected to contribute with efficiency and diligence whatever their social position. The same idea that ability comes in many guises emerges in cross-cultural work. For instance, Ybarra and colleagues (2008) showed that qualities enabling people to perform tasks, solve problems, and attain their goals are less universal than communion. In other words, what corresponds to ability tends to be more context dependent, leading judgments of ability to be issued for a wide variety of behaviors related to specific situations. In contrast, assertiveness comprises a set of characteristics mostly associated with the highest ranks in human organizations, that is, those implying decision-making, dominance, and self-confidence, independently of specific contexts. In sum, the available research points to tighter links of status with assertiveness than with ability.

One striking feature of the work on the vertical facets is its focus on attributes pertaining to the target(s). Still, the perceiver's characteristics should also likely guide evaluations. People are not neutral observers but find themselves embedded in a hierarchical society (Dubois & Beauvois, 2012; Koch et al., 2020; Yzerbyt, 2016). Their status relative to the target as well as their associated beliefs constitute meaningful information that possibly shapes their evaluation of themselves and others. Still, both facets may not prove equally sensitive to these constraints. To the extent that assertiveness more directly translates a target's social position, it seems rather difficult for any perceiver to question a target's assertiveness. In comparison, judgments on ability are less constrained. Because they constitute a more suitable means to assign value to a target, they may more easily be shaped by self-serving or ideological motivations.

In other words, judgments of ability may prove much more sensitive to the position and indeed the stakes of the judge. Specifically, people who enjoy a high status may be inclined to use ability in exactly the same way that they use assertiveness. In this way, they can see their status as being earned by their capacities. In contrast, low-status perceivers may want to seize the opportunity to question the social hierarchy by minimizing the ability differential between high-status and low-status targets and declare themselves as capable as high-status targets in spite of their status position (Abele & Wocjiszke, 2014; Cambon & Yzerbyt, 2018; Yzerbyt & Cambon, 2017). Along similar lines, people high in system justification or social dominance, who appraise the social system in hierarchical terms and consider that the state of affairs is what it should be, should show more overlap between the two vertical facets than people low in system justification or social dominance, who are more inclined to question the existing social hierarchy. This latter prediction resonates with previous research showing

that social dominance or system-justification beliefs often lead people to ascribe high scores on the vertical dimension to high-status groups (Fiske & Bai, 2020; Jost & Hunyady, 2005; Oldmeadow & Fiske, 2007).

STUDIES AND HYPOTHESES

In the present studies, participants always judged two groups, one lower than the other in status. To make participants aware of the status differences between the target groups, an initial phase had them report their position in the social hierarchy using Goodman et al.'s (2001) social ladder. We then asked participants to think of particular groups located on this same social ladder. In Studies 1a and 1b, we examined participants' evaluation of assertiveness and ability of two outgroups. Participants thus found themselves in a position of observers. We also measured participants' economic system justification (ESJ; Jost & Thompson, 2000) and social dominance orientation (SDO; Guimond et al., 2003; Jost & Thompson, 2000; for the original construct, see Pratto et al., 1994) beliefs.

Replicating earlier work, our first hypothesis was that assertiveness would be more tightly associated with targets' status than ability. That is, we expected the difference between a high-status target group and a low-status target group to be larger overall on assertiveness than on ability. Our second hypothesis concerned the impact of participants' legitimacy beliefs. Specifically, we predicted that participants high in ESJ or SDO would make less of a distinction between the two vertical facets than participants low in ESJ and SDO. We expected that this stronger connection between the two facets would manifest itself in the pattern of means, with participants high in ESJ or SDO showing a more similar pattern in the differences between the groups on the two facets than those low in ESJ or SDO. Importantly, we not only wanted to examine the association between the vertical facets using a nomothetic approach by looking at the means differential produced by participants high and low in ESJ or SDO, but we also expected to find convergent evidence by adopting an idiothetic approach. Our third hypothesis thus concerned the presence of a stronger within-participant correlation between the judgments of the target groups on the two facets among participants high in ESJ or SDO than low in ESJ or SDO. As such, this difference in correlations constitutes a strong test of our hypothesis because it sheds light on the overlap between the two facets in the very heads of participants high in ESJ or SDO as compared to low in ESJ or SDO.

In Studies 2 and 3, we aimed to change participants' vantage point from that of an observer to that of a group member. After the initial phase measuring participants' position in the social hierarchy, again using Goodman et al.'s (2001) social ladder, they judged their own group as

well as another group. In Study 2, participants who either initially located themselves high or low on the social ladder rated the ingroup as well as an outgroup located low or high on the social ladder, respectively. As for Study 3, we aimed to control the absolute position in the social hierarchy and only selected participants who located themselves at the middle of the social ladder and asked them to rate their own group and an outgroup located either below or above them. In doing so, Studies 2 and 3 allowed us to examine the role of participants' relative status by asking them to rate an outgroup that enjoyed a lower or a higher status than the ingroup.

We again predicted a larger difference between a high-status target group and a low-status target group on assertiveness than on ability. More importantly, and replicating the findings on legitimacy beliefs, ESJ and SDO, but with status differences, we predicted that high-status participants would make less of a distinction between the two facets than low-status participants. As before, we hypothesized that this differentiated link between the two facets would show both in the means, that is, at the nomothetic level, and in the correlations, that is, at the idiothetic level.

STUDIES 1A AND 1B

Study 1a's ambition was to examine the way perceivers rate a high-status and a low-status group on both facets of the vertical dimension and to check how individual differences in terms of legitimacy beliefs would influence the relation between the two facets. Participants first had to indicate where they thought they were located on a social ladder. Next, they had to imagine and rate two groups of people, one located 2 ranks higher and another 2 ranks lower than themselves on the ladder. Finally, they reported their legitimacy beliefs. Study 1b was a direct replication of Study 1a.

METHOD
Participants and Design
Study 1a involved 155 American participants recruited via Prolific Academic (www.prolific.co) completed our online questionnaire (using Qualtrics) in exchange for $1.36. We selected only American citizens using the available platform filters because we used specific materials from other studies that relied on American samples (Goodman et al., 2001; Jost & Thompson, 2000; Koch et al., 2016). We removed four participants from the analyses because they failed the manipulation or attention checks or used a consistent response pattern. We discarded another four participants who located themselves at ranks 1, 2, 9, and 10. The final sample comprised 147 participants (52.4% women, M_{age} = 32.3).

Based on the effect of Study 1a (Rsq = .09 for the three-way interaction with SDO), a power analysis

(PANGEA) indicated that Study 1b required 80 participants to reach a power of 99%. To take into account effect size overestimation, the fact that participants at the extreme levels of the ladder had to be discarded and that some participants would fail the attention checks, we recruited 116 American participants via Prolific Academic in exchange for $1.28. We removed participants who failed the manipulation or attention checks, used a consistent response pattern, or located themselves at ranks 1, 2, 9, and 10. Study 1b's final sample comprised 101 participants (53.5% women, M_{age} = 32.9).

Both studies adopted a 2 (status of the target group: high status vs. low status) × 2 (facet: assertiveness vs. ability) repeated measures design. Because we also used participants' legitimacy beliefs as a moderator, we eventually relied on a mixed design for the analyses.

Procedure and Measures
Studies 1a and 1b relied on the same procedure and measures. After having given their informed consent, participants provided their subjective social rank by means of Goodman et al.'s (2001) scale. They saw an image of a ladder with 10 rungs along with the following instructions: 'Think of this ladder as representing where different groups stand in our society. At the top of the ladder are those groups who are the best off, they have the most money, the highest amount of schooling, and the jobs that bring the most respect. At the bottom are those groups who are the worst off, they have the least money, little or no education, no job or jobs that no one wants or respects.' Participants had to indicate the rung, that is the rank, that best represented where they thought their group stood on the ladder. Next, participants had to visualize, as best as possible, two social groups, one located two ranks above them on the ladder and the other two ranks below them on the ladder. After identifying the ranks of the groups, participants consolidated their impression of the groups by writing a few lines about what they thought the typical lives of people belonging to each of these two groups were like (Judd et al., 2005).

Participants then evaluated both groups on assertiveness and ability. They rated three traits tapping assertiveness (assertive, dominant, and self-confident) and three tapping ability (competent, intelligent, and skilled) on scales ranging from 1 (not at all) to 7 (extremely). The traits appeared in the same random order.

Next, participants completed the social dominance orientation (SDO) and economic system justification (ESJ) scales, again in a counterbalanced order. Researchers generally rely on only one of these scales to measure legitimacy beliefs, but we decided to measure both. To measure SDO, we used Jost and Thompson's (2000; Study 3) 16-item scale. To assess participants' belief in ESJ, we used Jost and Thompson's (2000; Study 4) 17-item scale.

For both scales, participants responded on scales ranging from 1 (strongly disagree) to 7 (strongly agree).

Finally, participants completed a series of demographic measures concerning their age, sex, and the highest degree of education of their parents. They were then debriefed and thanked.

RESULTS
Study 1a
To test our first hypothesis, we conducted a mixed model analysis using the *lme4* package for the ANOVA (R package) and the *r2glmm* package for the computation of the effect size with the *nsj* method. We treated target status, facet, and their interaction as fixed effects. We included both traits and participants as random intercepts along with the relevant random slopes. There was a significant effect of target status ($b = 0.94$, $t(146) = 9.01$, $p < .001$, $Rsq = .13$) and a significant interaction ($b = -0.88$, $t(146) = -6.88$, $p < .001$, $Rsq = .032$). As predicted, the target status effect was larger on assertiveness ($b = 1.38$, $t(146) = 10.92$, $p < .001$) than on ability ($b = 0.50$, $t(146) = 4.25$, $p < .001$) (see Table 1a).

To examine our second prediction, we examined the means of participants' ratings of the two groups on the two facets. We first turned to SDO as an indicator of perceivers' legitimacy beliefs (see Table 1a). For the means, we computed a SDO score for our participants (Cronbach's alpha = .93) and added this (centered) score as an additional fixed effect to the above model along with all its interactions with the other effects. There was no main effect of SDO, but, as expected, the three-way interaction proved significant ($b = 0.42$, $t(145) = 3.80$, $p < .001$, $Rsq = .009$). Follow-up analyses at one standard deviation above and below the mean confirmed that the target status by facet interaction was weaker for the high SDO participants ($b = -0.41$, $t(145) = -2.40$, $p < .02$, $Rsq = .004$) than for the low SDO participants ($b = -1.34$, $t(145) = -7.77$, $p < .001$, $Rsq = .037$).

Looking at ESJ (centered; Cronbach's alpha = .88), there again was no main effect of ESJ but a significant three-way interaction ($b = 0.50$, $t(145) = 4.23$, $p < .001$, $Rsq = .011$). Follow-up analyses at one standard deviation above and below the mean confirmed that the target status by facet interaction was weaker for the high ESJ participants ($b = -0.37$, $t(145) = -2.15$, $p < .001$, $Rsq = .003$) than for the low ESJ participants ($b = -1.39$, $t(145) = -8.13$, $p < .001$, $Rsq = .04$).

Our third hypothesis pertained to the within-participant relations between the assertiveness and ability ratings of the two groups. We conducted a multiple regression with the difference in ability attributed to the two groups as the criterion and (centered) difference in assertiveness attributed to the two the groups, (centered) SDO, and their interaction as predictors.[1] Using the difference scores allowed taking into account the fact that participants each provided ratings of ability and assertiveness for both groups. This analysis confirmed that both the difference in assertiveness and SDO significantly predicted the difference in ability ($b = 0.44$, $t(143) = 6.88$, $p < .001$, $Rsq = .249$ and $b = 0.41$, $t(143) = 4.61$, $p < .001$, $Rsq = .129$). The interaction only approached significance ($b = 0.10$, $t(143) = 1.81$, $p < .08$, $Rsq = .023$). Follow-up analyses at one standard deviation above and below the mean confirmed that the relation between difference in assertiveness and difference in ability tended to be larger for the high SDO participants ($b = 0.56$, $t(143) = 5.89$, $p < .001$, $Rsq = .195$) than for the low SDO participants ($b = 0.33$, $t(143) = 3.87$, $p < .001$, $Rsq = .095$). The same regression using (centered) ESJ instead of SDO showed that difference in assertiveness and ESJ both significantly predicted ability ($b = 0.42$, $t(143) = 6.69$, $p < .001$, $Rsq = .238$ and $b = 0.49$, $t(143) = 5.13$, $p < .001$, $Rsq = .155$). Here too the interaction approached significance ($b = 0.10$, $t(143) = 1.67$, $p < .10$, $Rsq = .019$). The relation between difference in assertiveness and difference in ability tended to be larger for the high ESJ participants ($b = 0.53$, $t(143) = 6.20$, $p < .001$, $Rsq = .212$) than for the low ESJ participants ($b = 0.32$, $t(143) = 3.54$, $p < .001$, $Rsq = .081$).

Study 1b
With respect to our first prediction, the same analysis as in Study 1a revealed the presence of a significant effect of target status ($b = 1.20$, $t(100) = 10.39$, $p < .001$, $Rsq = .19$) and a significant interaction ($b = -1.08$, $t(100) = -5.56$, $p < .001$, $Rsq = .046$). As predicted, the

	ALL	HIGH SDO	LOW SDO	HIGH ESJ	LOW ESJ
Assertiveness					
High-status targets	5.11 (1.18)[a]	5.07 (0.145)[b]	5.15 (0.145)[b]	5.13 (0.145)[b]	5.08 (0.145)[b]
Low-status targets	3.73 (1.33)	3.71 (0.163)	3.75 (0.163)	3.76 (0.163)	3.70 (0.163)
Ability					
High-status targets	5.01 (1.05)	5.10 (0.137)	4.92 (0.137)	5.22 (0.136)	4.80 (0.136)
Low-status targets	4.51 (1.26)	4.15 (0.155)	4.86 (0.155)	4.22 (0.157)	4.80 (0.157)

Table 1a Ratings as a function of facet, target status, and type of participant (Study 1a).
Notes: [a] Number in parentheses in this column are standard deviations. [b] Number in parentheses in this column are standard errors.

	ALL	HIGH SDO	LOW SDO	HIGH ESJ	LOW ESJ
Assertiveness					
High-status targets	5.44 (1.22)[a]	5.18 (0.170)[b]	5.69 (0.170)[b]	5.33 (0.173)[b]	5.54 (0.173)[b]
Low-status targets	3.70 (1.37)	3.72 (0.190)	3.67 (0.190)	3.61 (0.190)	3.78 (0.190)
Ability					
High-status targets	5.23 (1.08)	5.18 (0.163)	5.28 (0.163)	5.16 (0.163)	5.30 (0.163)
Low-status targets	4.57 (1.22)	4.24 (0.161)	4.89 (0.161)	4.25 (0.162)	4.88 (0.162)

Table 1b Ratings as a function of facet, target status, and type of participant (Study 1b).
Notes: [a] Number in parentheses in this column are standard deviations. [b] Number in parentheses in this column are standard errors.

difference was larger on assertiveness than on ability (see Table 1b). Again, the target status effect was larger on assertiveness ($b = 1.74$, $t(100) = 10.15$, $p < .001$) than on ability ($b = 0.66$, $t(100) = 5.23$, $p < .001$) (see Table 1b).

Concerning our second prediction (see Table 1b), we first computed a SDO score for our participants (Cronbach's alpha = .94) and added this (centered) score as an additional fixed effect along with all its interactions with the other effects to the above analysis. We found a main effect of SDO ($b = -0.14$, $t(99) = -2.36$, $p < .02$, $Rsq = .015$) and a significant target status by facet interaction ($b = -1.08$, $t(99) = -5.77$, $p < .001$, $Rsq = .047$). As expected, the three-way interaction proved significant ($b = 0.51$, $t(99) = 2.97$, $p < .001$, $Rsq = .013$). Follow-up analyses confirmed that the target status by facet interaction was weaker for the high social dominance participants ($b = -0.52$, $t(99) = -1.98$, $p < .001$, $Rsq = .006$) than for the low social dominance participants ($b = -1.63$, $t(99) = -6.18$, $p < .001$, $Rsq = .053$). Replacing SDO with ESJ, there was a main effect of ESJ ($b = -0.15$, $t(99) = -2.24$, $p < .03$, $Rsq = .014$) and a significant target status by facet interaction ($b = -1.08$, $t(99) = -5.58$, $p < .001$, $Rsq = .046$). This time, however, the three-way interaction failed to reach significance ($b = 0.27$, $t(99) = 1.34$, *ns*).

Turning to our third prediction, we again used difference in ability as the criterion and (centered) difference in assertiveness, (centered) SDO, and their interaction as predictors.[2] Both difference in assertiveness and SDO significantly predicted difference in ability ($b = 0.17$, $t(97) = 2.42$, $p < .02$, $Rsq = .057$ and $b = 0.33$, $t(97) = 2.92$, $p < .005$, $Rsq = .081$). As predicted, the interaction was also significant ($b = 0.14$, $t(97) = 2.23$, $p < .03$, $Rsq = .049$). Follow-up analyses at one standard deviation above and below the mean confirmed that relation between difference in assertiveness and difference in ability was significant for the high SDO participants ($b = 0.33$, $t(97) = 3.25$, $p < .002$, $Rsq = .098$) but not for the low SDO participants ($b = 0.02$, *ns*). The same regression using (centered) ESJ again showed that difference in assertiveness significantly predicted ability ($b = 0.15$, $t(97) = 1.98$, $p < .05$, $Rsq = .039$), and ESJ was almost significant ($b = 0.25$, $t(97) = 1.93$, $p < .06$, $Rsq = .037$).

Echoing the pattern of means, the interaction was not significant ($b = 0.10$, *ns*).

DISCUSSION

Studies 1a and 1b send an encouraging message with respect to our hypotheses. Replicating previous work on the two facets (Carrier et al., 2014), the difference between the high-status group and the low-status group was larger on assertiveness than on ability. More importantly, confirming our second hypothesis, participants' legitimacy beliefs, whether measured as SDO or ESJ, moderated this pattern in that high levels in SDO or ESJ were conducive to more similar patterns for the vertical facets than low levels in SDO or ESJ. Specifically, compared to participants high in SDO or ESJ, participants low in SDO or ESJ saw less of a difference on ability between the two groups. Interestingly, and in line with our third hypothesis, the psychological overlap between the two vertical facets also emerged in the within-participant correlations, with stronger interfacet relations for participants high in SDO or ESJ as opposed to low in SDO or ESJ. Importantly, individuals who consider the system to be fair constrained their judgment between assertiveness and ability less easily than those thinking it is unfair.

Studies 1a and 1b relied on individual differences in social dominance beliefs and economic system justification to examine the use of the vertical facets when it comes to describing targets at different levels on the social ladder. Our findings replicate and extend other efforts (Fiske & Bai, 2020; Gaubert & Louvet, 2021; Jost & Hunyady, 2005; Oldmeadow & Fiske, 2007), but the question remains as to whether status has the same impact as legitimacy beliefs. Clearly, taking into consideration relative status would constitute a much more satisfactory test of the validity of our second and third hypotheses. We adapted our design to constrain participants' relative status, predicting that this would alter their judgments both at the nomothetic and idiothetic levels.

A second feature of our initial studies is that participants judged two outgroups, thus being in the position of observers. An intriguing question is whether

the pattern observed in Studies 1a and 1b would emerge when people belong to one of the groups. Building on other findings, most notably in the literature on compensation (Schmitz & Yzerbyt, 2020; Yzerbyt, 2018), we expected group members to be as likely to manifest the pattern that was found in Studies 1a and 1b.

In Studies 2 and 3, we thus decided to rely on participants' relative status, with some of them occupying a high status and others a low status. Additionally, we wanted participants to be members of one of the groups they were judging. We relied on the same procedure as before. The data collection for both studies took place simultaneously to optimize the use of participants. Depending on their answers on the Goodman et al.'s (2001) scale, we directed participants to Study 2 or Study 3.

STUDY 2

In Study 2, we selected participants who positioned themselves on rank 3 or 4 (versus rank 7 or 8) and asked them to imagine a group positioned on rank 7 or 8 (versus rank 3 or 4). In both cases, participants then rated their own group as well as the other group. As such, this study relies on a full design whereby both two groups are the focus of their own members and the members of the other group (Judd et al., 2005; Yzerbyt, Provost & Corneille, 2005). The measures of the facets were the same as before. Our hypotheses remained unchanged, except that relative status now replaced beliefs as a predictor.

METHOD

Because we needed participants located at ranks 3, 4, 7, or 8 for Study 2 and at ranks 5 or 6 for Study 3, we relied on a single data collection and assigned participants to Study 2 or Study 3 depending on where they located themselves on the ladder. Again, we recruited American participants via Prolific Academic, who completed our online questionnaire (using Qualtrics) in exchange for $1.36. A power analysis (PANGEA) indicated that we needed a minimum of 90 participants per study to reach a power of 99% with the effect size ($Rsq = 0.082$) associated with our three-way interaction (see Study 1b). Based on the distributions observed in Studies 1a and 1b, and taking into account effect size overestimation and data loss, we collected 385 participants. We discarded 26 participants who located themselves at ranks 1, 2, 9, or 10. The program directed the 135 who located themselves at ranks 5 or 6 to Study 3. Of the 224 remaining participants who located themselves at ranks 3, 4, 7, or 8, we discarded 20 who failed the manipulation or attention checks or used a consistent response pattern. The final sample for Study 2 comprised 204 participants (49.5% women, $M_{age} = 31.9$).

The design was a 2 (target status: high vs. low) × 2 (facet: assertiveness vs. ability) × 2 (judge status: high vs. low) mixed design, with the first two factors varying within participants and the third between them.

Procedure

After having given their informed consent, participants provided their subjective social rank by means of Goodman et al.'s (2001) scale. Next, participants had to visualize, as best as possible, another social group located four ranks above or below their group on the ladder, depending on whether they located their own group at rank 3 or 4 versus rank 7 or 8. Again, they had to write a few lines about the typical lives of people belonging to each of these two groups (Judd et al., 2005) before evaluating both groups on assertiveness and ability, as in Studies 1a and 1b. Finally, they were debriefed and thanked.

RESULTS

As before, we treated target status, facet, and judge status, and their interactions as fixed effects in a mixed model analysis using the *lme4* package for the ANOVA (R package) and the *r2glmm* package for the computation of the effect size with the *nsj* method. We included both traits and participants as random intercepts with all possible random slopes. There was a significant effect of target status ($b = 0.98$, $t(202) = 10.40$, $p < .001$, $Rsq = .132$). As predicted, the target status by facet interaction was also significant ($b = -1.07$, $t(202) = -9.43$, $p < .001$, $Rsq = .044$), showing that the difference between the two targets was more pronounced on assertiveness than on ability.

Confirming our second hypothesis, the target status by facet by judge status interaction also proved significant ($b = 0.79$, $t(202) = 3.46$, $p < .001$, $Rsq = .006$) (see Table 2). Follow-up analyses for each condition of judge status showed that the target status by facet interaction was more marked for the low-status judge condition than for the high-status judge condition ($b = -1.47$, $t(202) = -9.07$, $p < .001$, $Rsq = .041$, and $b = -0.68$, $t(202) = -4.24$, $p < .001$, $Rsq = .009$, respectively). Breaking down the three-way interaction by facet revealed a target status by judge status interaction for assertiveness but not for ability ($b = -0.60$, $t(202) = -2.53$, $p < .02$, $Rsq = .007$, and $b = 0.19$, $t(202) = 0.94$, ns, respectively). Simple effect analyses showed that whereas high-status participants judged high-status targets more assertive than low-status targets ($b = 1.21$, $t(202) = 7.25$, $p < .001$, $Rsq = .056$), this pattern was more pronounced for low-status judges ($b = 1.82$, $t(202) = 10.73$, $p < .001$, $Rsq = .115$). As for ability, both high-status and low-status participants rated high-status targets more able than low-status targets ($b = 0.53$, $t(202) = 3.79$, $p < .001$, $Rsq = .011$ and, $b = 0.35$, $t(202) = 2.44$, $p < .02$, $Rsq = .005$,

	HIGH-STATUS JUDGES	LOW-STATUS JUDGES
Assertiveness		
High-status targets	5.25 (1.25)*	5.55 (1.20)
Low-status targets	4.04 (1.45)	3.73 (1.30)
Ability		
High-status targets	5.34 (1.24)	5.08 (1.18)
Low-status targets	4.81 (1.27)	4.74 (1.04)

Table 2 Ratings as a function of facet, target status, and judge status (Study 2).
Note: * Numbers in parentheses are standard deviation.

respectively). Finally, looking at each target separately, the facet by judge interaction came out significant for the high-status targets but not for the low-status targets ($b = 0.55$, $t(39) = 3.54$, $p < .001$, $Rsq = .006$ and $b = -0.24$, $t(44) = -1.46$, ns). Interestingly, low-status judges rated the high-status target more assertive than able ($b = 0.47$ $t(10) = 3.15$, $p < .01$, $Rsq = .008$), whereas no such difference emerged in the judgments by the high-status judges ($b = 0.09$, $t(6) = 0.44$, ns).

For our third hypothesis, we ran a regression model with difference in ability as the criterion and (centered) difference in assertiveness, status of the judge (contrast coded), and their interaction as predictors. Again, difference in assertiveness significantly predicted difference in ability ($b = 0.36$, $t(200) = 7.04$, $p < .001$, $Rsq = .20$). The status of the judge also proved significant ($b = 0.40$, $t(200) = 2.33$, $p < .03$, $Rsq = .026$), showing that participants saw the high-status group relatively more capable than the low-status group when they enjoyed a high status rather than a low status. More importantly, the interaction proved significant ($b = 0.43$, $t(200) = 4.27$, $p < .001$, $Rsq = .084$). Follow-up analyses confirmed that the relation between difference in assertiveness and difference in ability was significantly stronger for high-status participants ($b = 0.58$, $t(200) = 8.77$, $p < .001$, $Rsq = .28$) than for the low-status participants ($b = 0.14$, $t(200) = 1.81$, $p < .08$, $Rsq = .016$).

DISCUSSION

The present findings send a clear message regarding all three of our hypotheses. In line with earlier findings, the data confirm the tighter relation between target status and assertiveness than between target status and ability. In addition, participants' ratings reveal that there is less of a parallelism in the pattern of means on the two vertical facets among low-status participants than among high-status participants. Interestingly enough, low-status judges stressed the intergroup difference on assertiveness more so than on ability, once again showing that ability is less related to the social hierarchy than assertiveness. Finally, yet importantly, the relations between the two facets are stronger in the minds of

the high-status judges than in those of the low-status judges, consistent with the view that ability can serve as a strategic tool by allowing assigning positive value to a target.

One plausible limitation is that participants occupy different levels of the social hierarchy and might thus differ in other aspects than social status. A straightforward manner to address this limitation is to rely on participants who locate themselves at the same level of the social hierarchy but end up evaluating their own group and either a group below them or a group above them (Yzerbyt & Cambon, 2017). In spite of this modification, we would expect the same phenomena to operate in this context, namely, more closely connected vertical facets when participants are in the (relative) high-status position than in the (relative) low-status position. This is the situation created in Study 3.

STUDY 3

In Study 3, we again asked participants to judge their own group as well as another group, but we wanted to keep the absolute position of the judges constant and only change the position of the outgroup. In order words, we manipulated the relative status of the judges with respect to the targets. To this end, we only examined participants who located themselves on levels 5 or 6 on the social ladder ranging from 1 to 10 (Goodman et al., 2001). We asked half of the participants to think of a group of people located two ranks below their own group and half of them to think of a group of people located two ranks above their group. Participants then evaluated both their group and the other group on the vertical facets.

METHOD
Participants and Design
As mentioned above, we conducted the data collection at once for Study 2 and Study 3, and the program directed 135 participants to Study 3 who had located themselves at ranks 5 or 6. We further removed 15 from the analyses because they failed the manipulation or attention checks

or used a consistent response pattern. The final sample comprised 123 participants (55.8% women, M_{age} = 29.8).

The design was a 2 (target status: high vs. low) × 2 (facet: assertiveness vs. ability) × 2 (judge status: high vs. low) mixed design, with the first two factors varying within participants and the third between them.

Procedure

The procedure was the same as in Study 2 except that participants had to visualize their own group as well as another social group located two ranks above or below their group on the social ladder.

RESULTS

The same analysis as in Study 2 revealed the presence of a significant effect of target status (b = 0.58, $t(118)$ = 6.37, p < .001, Rsq = .065). Confirming our first hypothesis, the target status by facet interaction was also significant (b = −0.59, $t(121)$ = −5.49, p < .001, Rsq = .018), showing that the difference between the two targets was more pronounced on assertiveness than on ability.

Supporting our second hypothesis, the target status by facet by judge status interaction was also significant (b = 0.82, $t(118)$ = 3.77, p < .001, Rsq = .009) (see Table 3). Follow-up analyses for each condition of judge status confirmed that the target status by facet interaction was more marked for the low-status judge condition than for the high-status judge condition (b = −1.01, $t(118)$ = −6.60, p < .001, Rsq = .026 and b = −0.19, $t(118)$ = −1.20, *ns*, respectively). Decomposing the three-way interaction by facet revealed the presence of a target status by judge status interaction for ability but not for assertiveness (b = 0.94, $t(118)$ = 4.67, p < .001, Rsq = .023 and b = 0.12, $t(118)$ = 0.56, *ns*, respectively). Simple effect analyses showed that, for assertiveness, both high-status and low-status participants rated high-status targets higher than low-status targets (b = 0.94, $t(118)$ = 5.96, p < .001, Rsq = .044 and, b = 0.81, $t(118)$ = 5.26, p < .001, Rsq = .034, respectively). Regarding ability, high-status participants judged high-status targets higher than low-status targets (b = 0.75, $t(118)$ = 5.22, p < .001, Rsq = .029), but this was not the case for low-status judges (b = −0.19, $t(118)$ = −1.35,

ns). Finally, looking at each target separately, the facet by judge status interaction came out significant for the high-status targets but not for the low-status targets (b = 0.78, $t(38)$ = 4.54, p < .001, Rsq = .016 and b = −0.04, $t(45)$ = −0.22, *ns*). Specifically, low-status judges tended to see the high-status target as being less able than assertive (b = −0.33, $t(10)$ = −2.00, p < .08, Rsq = .006). In contrast, a trend in the opposite direction emerged in the judgments issued by the high-status judges (b = 0.45, $t(6)$ = 2.05, p < .09, Rsq = .011).

To examine our third hypothesis, the same regression model as before confirmed that difference in assertiveness significantly predicted difference in ability (b = 0.47, $t(116)$ = 6.50, p < .001, Rsq = .27). The status of the judge also proved significant (b = 0.88, $t(116)$ = 5.13, p < .001, Rsq = .19), showing that participants saw the high-status group relatively more capable than the low-status group when they enjoyed a high status rather than a low one in the comparison context. More importantly, the interaction proved significant (b = 0.46, $t(116)$ = 3.15, p < .002, Rsq = .08). Follow-up analyses confirmed that the relation between difference in assertiveness and difference in ability was significantly stronger for high-status participants (b = 0.70, $t(116)$ = 6.31, p < .001, Rsq = .26) than for the low-status participants (b = 0.24, $t(116)$ = 2.60, p < .02, Rsq = .06).

DISCUSSION

Study 3 aimed to replicate the pattern obtained in Study 2 with participants who positioned themselves at the middle of the social ladder and rated their own group and an outgroup located either two ranks below or two ranks above them. In other words, this procedure allowed to control for the actual position of the judges and varied their relative status. The results fully confirmed our key hypotheses that participants who rated their group and one outgroup two ranks below them, that is participants who were in the high-status position, saw more overlap between the vertical facets than those who rated their group and one outgroup two ranks above them, that is, participants who were in the low-status position. We can posit that ability may serve a strategic function for individuals in low-status assignment.

	HIGH-STATUS JUDGES	LOW-STATUS JUDGES
Assertiveness		
High-status targets	4.71 (1.10)*	5.16 (0.91)
Low-status targets	3.77 (1.25)	4.41 (1.26)
Ability		
High-status targets	5.30 (1.06)	4.97 (1.05)
Low-status targets	4.48 (1.05)	5.16 (0.90)

Table 3 Ratings as a function of facet, target status, and judge status (Study 3).
Note: * Numbers in parentheses are standard deviations.

GENERAL DISCUSSION

In three studies, we investigated how social perceivers appraise groups on the vertical facets of assertiveness and ability. We wanted to go beyond earlier research showing that assertiveness more strongly relates to status, power, and resources than ability in judgments about individual and group targets. Specifically, we aimed to examine the influence of perceivers' characteristics on the relation between assertiveness and ability in their social judgments. Our focus was on the perceivers' status, operationalized here by means of their legitimacy beliefs or their hierarchical position. Assuming that ability judgments are less constrained by social reality and thus more open to appreciation than assertiveness, it should be more tainted by strategic considerations. We therefore hypothesized that participants high in SDO or ESJ or higher in status would see both vertical facets more aligned with each other than participants low in SDO or ESJ or lower in status. We expected this differential overlap between the two facets as a function of judges' legitimacy beliefs and status to show both nomothetically, that is, in mean differences, and idiothetically, that is, in within-participant correlations.

We tested these hypotheses using a novel paradigm. We asked participants to locate themselves on a social ladder and to rate two specific groups, either two outgroups, one below and the other above them (Studies 1a and 1b), or their own group and another group, either below or above their group (Studies 2 and 3). Participants then rated both groups on assertiveness and ability. Whereas Studies 1a and 1b capitalized on legitimacy beliefs, the remaining studies examined the relative status of the judges.

Replicating earlier findings that focused on individual targets (Carrier et al., 2014; Louvet et al., 2019), participants saw more of a difference between the two target groups on assertiveness than on ability. More importantly, these four studies provide unambiguous support for our key hypotheses. Turning to Studies 1a and 1b first, participants high in SDO or ESJ rated the two groups more similarly on the two facets than participants low in SDO or ESJ did. In addition, the within-participant correlations between the facets proved higher among participants high in SDO or ESJ than among participants low in SDO or ESJ. This result highlights the role of ability in enhancing the self-perception of low legitimacy perceivers.

Using a full design, Study 2 replicated and extended these findings. Indeed, another key aspect of Study 2 is that we asked judgments from people who occupy different levels of the social hierarchy. As predicted, there was more overlap between the vertical facets in the eyes of high-status individuals than in those of low-status people. Although this research strategy offers a nice way to evidence different uses of the vertical facets as a function of one's position in the social hierarchy, it is possible that some confounding variable accounts for the different patterns observed. Study 3 addressed this limitation by asking people occupying the exact same rank of the social ladder to judge their own group as well as another group located below or above their own. Again, the results clearly showed more overlap between ability and assertiveness in judgments of high-status individuals than in those of low-status perceivers.

Interestingly, recent research on the compensation effect points to the fact that the vertical dimension tends to reflect more objective aspects of social reality than the horizontal dimension (Yzerbyt & Cambon, 2017; for a review, see Yzerbyt, 2018; see also Koch et al., 2020). For instance, Yzerbyt and Cambon (2017) asked their participants, all of them psychology students, to rate their own group and another group of students whose status was either very superior, slightly superior, slightly inferior, or very inferior. When participants initially thought that they would rate the groups only on the vertical dimension, those facing a very superior outgroup were unable to show ingroup favoritism, confirming the reality constraints characterizing the vertical dimension. In contrast, when participants initially thought that they would rate the groups only on the horizontal dimension, those confronted with a very inferior outgroup had no problem showing strong ingroup favoritism, in line with the idea that the horizontal dimension is much more open to interpretation. Moreover, their participants rated the vertical dimension much more objective than the horizontal dimension (see also, Cambon & Yzerbyt, 2018).

In the context of their recent model of social evaluation, Abele and colleagues (2021) similarly conjectured that the facets of morality and friendliness are likely to be more open to interpretation than those of assertiveness and ability. Indeed, several studies show that qualities related to the vertical dimension rest on concrete indicators of power, status, and economic resources and, as such, end up being more concrete and stable across contexts (Yzerbyt & Cambon, 2017; Koch et al., 2020). The present empirical findings go further to suggest that the two vertical facets may also differ from each other on this aspect. Indeed, our data are consistent with the hypothesis that assertiveness seems less disputable, whereas ability appears more malleable. In other words, the difference in the target's social status is more readily translated into assertiveness than ability. This opens the possibility for perceivers, high- and low-status perceivers alike, to rely on ability with an eye on self-serving or ideological motivations.

To be sure, the present work also comes with limitations. One weakness is that we had no control over the specific groups that people had in mind when

they were filling out the ratings. It would therefore be instructive to replicate the present results with real groups. For instance, keeping the ingroup constant, for example, psychology students, one would want to examine the ratings of the ingroup and either a superior outgroup, such as medical students, or an inferior outgroup, for example, social work students (Cambon & Yzerbyt, 2017; Yzerbyt & Cambon, 2017). Alternatively, it would be important to minimize the interference of existing stereotypes and create a situation by which people face a minimal paradigm that throws them in a social context in which their ingroup is either the low-status group or the high-status group (Schmitz & Yzerbyt, 2020).

To conclude, the present set of studies built on the assumption that, in contrast to assertiveness, ability offers more room for negotiation and constitutes an ideal means for justifying versus questioning the social structure. In line with this conjecture, our data confirm that people see less overlap between the two vertical facets of assertiveness and ability when they occupy a low-status position as compared to a high-status position and sanction the importance to distinguish different facets within the vertical dimension.

NOTES

1   The design was not conceived to test the impact of people's status on their judgments (and indeed asked all participants to appraise a group located two ranks above and another two ranks below) and thus suffered from a marked lack of power with respect to this question. Still, we examined the moderating role of self-reported status on the relation between the difference on assertiveness and the difference on ability. The same regression as for SDO and ESJ revealed no such moderating relation ($p > 0.41$).

2   As for Study 1a, we examined the moderating role of self-reported status on the relation between the difference on assertiveness and the difference on ability. Again, the same regression as for SDO and ESJ revealed no such moderating relation ($p > 0.35$).

ADDITIONAL FILES

The additional files for this article can be found as follows:

- **Yzerbyt et al. IRSP study 1a.** These are the data for Study 1a. DOI: https://doi.org/10.5334/irsp.695.s1
- **Yzerbyt et al. IRSP study 1b.** These are the data for Study 1b. DOI: https://doi.org/10.5334/irsp.695.s2
- **Yzerbyt et al. IRSP study 2.** These are the data for Study 2. DOI: https://doi.org/10.5334/irsp.695.s3
- **Yzerbyt et al. IRSP study 3.** These are the data for Study 3. DOI: https://doi.org/10.5334/irsp.695.s4

COMPETING INTERESTS

The authors have no competing interests to declare.

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