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RESEARCH ARTICLE

A normative perspective on the linguistic intergroup bias: How intragroup approval of ingroup members who use the linguistic intergroup bias perpetuates explicit intergroup bias

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Abstract

The present research examined from a normative perspective how intragroup normative processes regulate the consequences of the linguistic intergroup bias (LIB). Results of three studies supported our hypothesis that intragroup approval of an ingroup member who uses the LIB plays a key role in perpetuating pro-ingroup bias. In Study 1, ingroup members who used pro-ingroup (vs. pro-outgroup) LIB elicited more intragroup approval and this effect was mediated by the perception of the speaker as being biased in favor of the ingroup. In Studies 2 and 3, intragroup approval (vs. disapproval) of an ingroup member who used the LIB enhanced the expression of pro-ingroup bias. By providing the first demonstration of how the LIB relates to intragroup normative processes, our studies highlight a new path by which the LIB helps perpetuate intergroup bias.

KEYWORDS

intragroup approval, linguistic intergroup bias, normative regulations, pro-ingroup bias, social norms

1 | INTRODUCTION

Linguistic biases, in other words slight variations in how people describe groups and their members, can help perpetuate stereotypes and intergroup discrimination (Beukeboom, 2014; Maass, 1999). Consequently, studying communication processes and language use is increasingly being seen as fundamental to fully understanding intergroup relations (Postmes et al., 2014; Rubini, Menegatti, & Moscatelli, 2014; Sutton, 2010). One of the most thoroughly investigated linguistic biases is the linguistic intergroup bias (LIB; Maass, Salvi, Arcuri, & Semin, 1989), which is the tendency to use abstract terms to describe positive behaviors by the ingroup and negative behaviors by the outgroup (e.g., an ingroup member is helpful; an outgroup member is aggressive), but to use concrete terms to describe negative behaviors by the ingroup and positive behaviors by

the outgroup (e.g., an ingroup member hits somebody; an outgroup member opens the door for somebody).

It is now widely accepted that, due to the effect of linguistic abstraction on cognitive inferences, the LIB provides speakers with a means of transmitting intergroup biases from speaker to recipients (Beukeboom, 2014; Wigboldus & Douglas, 2007). The present research provides new insights by using a normative perspective to examine how intragroup normative processes regulate the consequences of the LIB (Assilaméhou & Testé, 2013b). Although social norms have been shown to influence expressions of prejudice (e.g., Crandall, Eshleman, & O'Brien, 2002), researchers have neglected possible relations between linguistic biases and normative processes. Ingroup norms prescribe how group members should behave by indicating what is normative or deviant within a group, often through ingroup members' reactions showing approval or disapproval of other

Correction added on 05 October 2019, after first online publication: in the title of this article, "members who use the linguistic intragroup bias" has been corrected to "members who use the linguistic intergroup bias". In the first sentence of the abstract, the second occurrence of "intragroup" has been corrected to "intergroup".

group members' behaviors (Marques, Abrams, Paez, & Martinez-Taboada, 1998). We implemented this normative perspective by examining the effect intragroup approval of ingroup members who use the LIB has on the perpetuation of intergroup bias.

2 | COGNITIVE AND MOTIVATIONAL PROCESSES UNDERLYING THE LIB

Use of the LIB has been explained in both cognitive and motivational terms. According to the cognitive explanation, individuals use the LIB because they expect more positive behaviors from the ingroup than from the outgroup and because they consider abstract terms to be more appropriate for describing expected and typical behaviors (Maass, Milesi, Zabbini, & Stahlberg, 1995). According to the motivational explanation, descriptions in line with the LIB help maintain or bolster a positive social identity (Maass, Ceccarelli, & Rudin, 1996) by minimizing negative ingroup behaviors and positively distinguishing the ingroup from the outgroup. These two explanations are not contradictory, as they both involve transmitting a more positive image of the ingroup to recipients. Indeed, abstract descriptions of a group member's behavior lead recipients to generalize that behavior to the group and across different situations and times, whereas concrete descriptions promote event particularization (Assilaméhou, Lepastourel, & Testé, 2013; Maass et al., 1989; Wigboldus, Semin, & Spears, 2000). Consequently, the LIB results in recipients perceiving positive behaviors as more typical of ingroup members and negative behaviors as more typical of outgroup members (Wigboldus & Douglas, 2007).

The LIB is considered highly insidious because it is implicit and characterized by uncontrolled processes (Beukeboom & Burgers, 2017; see De Houwer & Moors, 2012, for more on the characterization of implicit processes). In fact, even when speakers want to be unprejudiced, they express their biases implicitly through the LIB (Franco & Maass, 1996, 1999), and recipients seem to be unaware of the effects of the LIB on their inferences. Interestingly, although the processes involved in linguistic abstraction are implicit, subtle variations in language use can still affect many explicit intergroup and interpersonal non-linguistic processes, including modern prejudice (Geschke, Sassenberg, Ruhrmann, & Sommer, 2010), attributions of blame and guilt in legal settings (Burguet, 2011; Schmid & Fiedler, 1998), agreement with political issues (Menegatti & Rubini, 2013), and inclination to apply for a job (Born & Taris, 2010).

However, the cognitive and motivational processes involved in the LIB are not always entirely implicit (Douglas, Sutton, & McGarty, 2008). In order to achieve conscious goals, such as managing the impression they give of a target or of themselves, speakers can control their use of linguistic abstraction when describing individuals (Assilaméhou & Testé, 2013b; Douglas & Sutton, 2003; Douglas, Sutton, & Wilkin, 2008). Similarly, recipients can use the cues offered by linguistic abstraction to infer communicative intentions and attitudes and thereby consciously evaluate speakers and their biases (Douglas & Sutton, 2006, 2010; Schellekens, Verlegh, & Smidts, 2010). For example, recipients may perceive group members who use

the LIB as favoring the ingroup over the outgroup and as having a more positive attitude toward the ingroup than toward the outgroup (Assilaméhou & Testé, 2013a). Speakers and recipients are probably unaware of the processes involved because they are unaware that they are using variations in linguistic abstraction to implement their goals or make inferences. As Douglas, Sutton, and McGarty (2008, p. 206) put it: "They know what they do, but not entirely how they do it."

3 | A NORMATIVE PERSPECTIVE ON THE LIB

Evidence for strategic use of linguistic abstraction led Assilaméhou and Testé (2013b) to study the LIB from a normative perspective in which the LIB is considered to be related to normative intragroup processes. In fact, even though the LIB is very subtle, group members can use it as a tool for communicating loyalty to other ingroup members by affirming the ingroup's superiority. Hence, the normative approach is founded on two main hypotheses. First, because speakers can use linguistic abstraction strategically, group members may use the LIB when they want to present themselves as normative group members and to elicit approval from ingroup members. Second, because recipients can judge speakers on the basis of their use of linguistic abstraction, use of the LIB is a criterion for intragroup differentiation, that is, for distinguishing normative ingroup members from deviant ingroup members and therefore for deciding whether or not to approve these ingroup members.

Assilaméhou and Testé (2013b) provided direct support for these hypotheses by showing that individuals tend to make linguistic choices in line with the LIB when they want to be perceived as good group members and that group members who use the LIB elicit more approval from participants and are perceived as better group members than group members who do not use the LIB. These results suggest an additional normative explanation for use of the LIB, according to which individuals use the LIB to appear as normative ingroup members, in conformity with the "loyalty norm" (Abrams & Rutland, 2008; Zdaniuk & Levine, 2001). This basic prescriptive group norm can be seen as a determinant of the expression of intergroup bias (Iacoviello & Spears, 2018), as it requires group members to be loyal to and to favor their ingroup, rather than the outgroup, especially in competitive intergroup contexts (Rutland, Killen, & Abrams, 2010).

Given these considerations, we wondered whether approval of use of the LIB promotes expressions of ingroup favoritism. In intragroup interactions, social approval indicates what is normative within a group and therefore regulates group members' behaviors by promoting behaviors that are consistent with the norm (Marques et al., 1998; Smith & Postmes, 2011). Hence, we assumed that if an ingroup member who uses the LIB is perceived as favoring the ingroup over the outgroup, intragroup approval of this favoritism should promote expressions of ingroup favoritism by other ingroup members. This assumption is supported by research showing that expressions of intergroup bias and prejudice are affected by the behaviors of peers (i.e., ingroup members), which provide social clues about the acceptability of discrimination. When these

FIGURE 1 Postulated causal chain model.

clues create a climate of tolerance for prejudice, they increase expressions of prejudice (Blanchard, Crandall, Brigham, & Vaughn, 1994; Ford, Wentzel, & Lorion, 2001; Goodman, Schell, Alexander, & Eidelman, 2008). Furthermore, individuals express intergroup bias because they think it is expected from fellow ingroup members and will elicit intragroup approval (Iacoviello & Spears, 2018). Additionally, we expected the perception of biased communicative intentions to play a critical role in the effect approval of an ingroup member who uses the LIB has on the expression of ingroup favoritism by other members. If observers do not perceive these biased intentions, they would not be able to identify the kinds of behavior prescribed within the group.

Some studies suggest that how ingroup members evaluate ingroup norms plays a role in the adoption or rejection of prescribed behaviors. Group members are able to actively consider ingroup norms when they have to adopt or deviate from normative behaviors (Packer, 2008). More precisely, Falomir-Pichastor, Gabarrot, and Mugny (2009a, 2009b) showed that group members align their attitudes to an ingroup norm only when they find the ingroup norm to be appropriate in the immediate context. These results suggest that intragroup approval of use of the LIB may be a cue that affects the extent to which ingroup members perceive usual expressions of pro-ingroup bias as appropriate. Specifically, we assumed that approval of use of the LIB, compared with disapproval, would enhance perceptions that usual expressions of pro-ingroup bias in intragroup interactions are appropriate, and therefore increase the likelihood of expressing intergroup bias.

4 | OVERVIEW OF THE PRESENT RESEARCH

The present research's main goal was to extend the normative perspective on the LIB by examining how intragroup processes related to the LIB affect the expression of intergroup bias. Because we expected intragroup approval of use of the LIB to play a key role in perpetuating pro-ingroup bias, we operationalized the normative perspective by studying the determinants and consequences of approval of an ingroup member who uses the LIB during an intragroup interaction. We modeled the process as a causal chain (see Figure 1)

and then tested the different links in this chain via three experimental studies with intragroup approval of use of the LIB as either the dependent variable (Study 1) or the independent variable (Studies 2 and 3). These three studies enabled us to examine the successive steps in the chain and the ingroup members engaged in different communicative roles (speaker, recipient, observer) during intragroup interactions. In all three studies, we differentiated between pro-ingroup LIB, which corresponds to the usual definition of the LIB and implies ingroup favoritism, and pro-outgroup LIB, which implies outgroup favoritism.

As a first step, Study 1 examined how use of pro-ingroup (vs. pro-outgroup) LIB by an ingroup speaker affects intragroup approval of this speaker by ingroup recipients. This study was designed to replicate previous research (Assilaméhou & Testé, 2013b) and to extend these findings by revealing the mediating process. Because ingroup members who use the LIB are perceived as favoring the ingroup (Assilaméhou & Testé, 2013a), they would appear to comply with the loyalty norm and therefore elicit approval. Consequently, we assumed that perception of the speaker's biased communicative intentions in favor of the ingroup would mediate the effect of use of the LIB on intragroup approval. An ingroup member who uses pro-ingroup (vs. pro-outgroup) LIB would be perceived as more strongly favoring the ingroup and more strongly disparaging the outgroup and would therefore elicit more intragroup approval (H1).

As a second step, Studies 2 and 3 investigated how use of the LIB by a speaker followed by approval (vs. disapproval) by ingroup recipients affects the expression of intergroup bias by ingroup observers of the speaker-recipients interaction. In both studies, we hypothesized that intragroup approval (vs. disapproval) of an ingroup member who uses pro-ingroup LIB increases the likelihood of expressing pro-ingroup bias (H2). In Study 2, we manipulated only the approval (vs. disapproval) of an ingroup speaker who uses pro-ingroup LIB and examined the moderating role of the perception of the speaker's biased communicative intentions by the observers. We expected the effect of intragroup approval of an ingroup member who uses pro-ingroup LIB to occur only if this member is perceived as favoring the ingroup and/or disfavoring

the outgroup (H3). In Study 3, we manipulated the use of the LIB (pro-ingroup vs. pro-outgroup) by the speaker and intragroup approval (vs. disapproval) by recipients. Again, we examined the effects on the likelihood of expressing pro-ingroup bias by observers, but this time we also investigated the mediating process. Given that adoption of a normative behavior depends on the degree to which ingroup members perceive the ingroup norm as appropriate (Falomir-Pichastor et al., 2009a, 2009b), we expected the perception of appropriateness of usual ways of describing the ingroup and the outgroup to mediate the effect of approval of an ingroup member who uses the LIB on the likelihood of expressing bias (H4).

5 | STUDY 1

Study 1 focused on the determinants of intragroup approval of use of the LIB—the first step of our model—and tested H1. We induced a confrontational intergroup context, as previous research suggests that approval of the LIB is more likely in this type of situation than when intergroup relationships are friendly (Assilaméhou & Testé, 2013b). We manipulated linguistic bias (pro-ingroup vs. pro-outgroup LIB) by presenting participants with an ingroup speaker who had described an ingroup member and an outgroup member. Thus, participants were given the role of recipients and were asked to evaluate the ingroup speaker. We measured approval of the ingroup member who used the LIB by asking participants to evaluate her or him as a loyal group member (ingroup member loyalty) and to indicate whether other group members should approve or disapprove of her or him (prescribed approval/prescribed disapproval). We also measured perceptions of the ingroup member's communicative intentions.

The ingroup member using pro-ingroup (vs. pro-outgroup) LIB was expected to be evaluated as a more loyal group member, to elicit higher prescribed approval and lower prescribed disapproval (H1a), and to be perceived as having more favorable intentions toward the ingroup and less favorable intentions toward the outgroup (H1b). We also expected the effect of linguistic bias on approval to be mediated by the perception of the ingroup member's communicative intentions toward the ingroup and toward the outgroup (H1c).

5.1 | Method

5.1.1 | Participants and design

Participants were 88 students (48 women, aged between 17 and 40 years, $M = 21.56$, $SD = 3.54$) at the University of Rennes (France), all of whom were of French nationality. Participation was voluntary and non-remunerated. Each participant was randomly assigned to one of the experimental conditions according to linguistic bias (between-participants: pro-ingroup LIB vs. pro-outgroup LIB).

5.1.2 | Procedure

Participants, recruited in the University of Rennes library, were given a booklet whose cover sheet informed them that they would be asked to give their impression of a person based on things that person had said during an interview. We introduced the intergroup context by explaining that the person in question was an advisor to a French delegate to the World Trade Organization, who had been interviewed following a series of negotiations between the French and Russian delegations. We stressed the tense nature of the relationship between France (participants' ingroup) and Russia (participants' outgroup), due to the two countries having opposing views on many issues. The next page contained the linguistic bias manipulation in the form of extracts from a bogus interview with the advisor (i.e., ingroup member), who made two statements about the French delegate (descriptions of an ingroup member) and two statements about the Russian delegate (descriptions of an outgroup member). These statements described a positive and a negative behavior for each delegate. After reading the interview, participants completed a questionnaire answering all the items on 9-point scales (1 = *Not at all*, 9 = *Completely*). The last page asked participants to state their sex, age, nationality, and identification with the ingroup (i.e., French nationality, $M = 5.22$, $SD = 2.28$).¹ Finally, participants were thanked and debriefed.

5.1.3 | Independent variable

Half of the participants read pro-ingroup LIB statements (abstract terms for the positive behavior and concrete terms for the negative behavior by the French delegate; abstract terms for the negative behavior and concrete terms for the positive behavior by the Russian delegate); the other half read pro-outgroup LIB statements (statements for the French and Russian delegates were inverted). The linguistic category model (Semin & Fiedler, 1988) divides interpersonal predicates into four categories according to their level of linguistic abstraction, increasing from descriptive action verbs to interpretive action verbs, state verbs, and adjectives. In line with previous research (e.g., Douglas & Sutton, 2010; Geschke, Sassenberg, Ruhrmann, & Sommer, 2007; Wigboldus et al., 2000), we based our linguistic abstraction manipulation only on the distinction between action verbs and adjectives, rather than on all four categories. We used four pairs of abstract/concrete descriptions (see Appendix A). A pre-test confirmed the semantic correspondence between the abstract and concrete descriptions in each pair and the positivity/negativity of the descriptions. The abstract and concrete descriptions in each pair were only similar, not perfectly equivalent, which is to be expected given the difficulty of controlling valence when manipulating linguistic abstraction (Douglas & Sutton, 2006); however, the effect of linguistic

¹Although we measured identification in all the studies, we decided not to report these results in the body of the text because the manipulations had inconsistent effects across the studies and because identification did not correlate with the main dependent variables in any of the studies. Details are given in the Supplementary Materials.

abstraction is independent of the effect of the abstraction's perceived valence (Assilaméhou & Testé, 2013a, 2013b; Douglas & Sutton, 2003, 2010). Counterbalancing descriptions between pro-ingroup and pro-outgroup LIB and randomizing the order of the descriptions between participants gave us 16 different combinations for each experimental condition.

5.1.4 | Measures

Approval. Three measures adapted from Assilaméhou and Testé (2013b) were used to assess approval toward the ingroup member. First, we assessed *loyalty of the ingroup member* by asking participants whether the advisor “shows solidarity towards the French delegation”, “contributes to the cohesion of the French delegation”, and “is loyal to the French delegation” ($\alpha = .75$). Next we measured *prescribed approval* and *prescribed disapproval* for the ingroup member by asking participants whether other members of the French delegation should “have a positive opinion of the advisor”, “encourage the advisor to give other interviews”, “be nice to the advisor” (*prescribed approval*, $\alpha = .74$); “be unfriendly toward the advisor”, “exclude the advisor from the delegation”, and “have a negative opinion of the advisor” (*prescribed disapproval*, $\alpha = .81$).

Ingroup member's communicative intentions. For *intentions toward the ingroup*, participants indicated whether the advisor wanted “people listening to have a positive image of the delegation”, “people listening to have a favorable opinion of the delegation”, “to highlight to listeners the French delegation's qualities” ($\alpha = .88$). After replacing the word “French” with “Russian”, we used the same three items to measure *intentions toward the outgroup* ($\alpha = .90$).

5.2 | Results and discussion

5.2.1 | Approval

We tested *H1a* by conducting a 2 (linguistic bias: pro-ingroup vs. pro-outgroup) between-participants MANOVA with loyalty of the ingroup member, prescribed approval, and prescribed disapproval as dependent variables. In line with our hypothesis, a Pillai's Trace Test revealed a significant main effect of linguistic bias, $V = 0.16$, $F(3, 84) = 5.43$, $p = .002$ (see Table 1 for means and SD). A discriminant analysis conducted as a follow up to the MANOVA² revealed one discriminant function that explained 100% of the variance, canonical $R^2 = .40$, and significantly differentiated between the experimental groups, $\Lambda = 0.84$, $\chi^2(3) = 14.98$, $p = .002$. The differences between the groups were primarily due to assessments of the ingroup member's loyalty ($r = .99$), with much smaller contributions from prescribed approval and prescribed

TABLE 1 Means (and standard deviations) for approval and communicative intentions as a function of linguistic bias (Study 1)

	Linguistic bias	
	Pro-ingroup	Pro-outgroup
Approval		
Loyalty of the ingroup member	5.38 (1.60)	4.01 (1.56)
Prescribed approval	5.03 (1.79)	4.67 (1.48)
Prescribed disapproval	3.55 (1.81)	3.90 (1.66)
Communicative intentions		
Perception of intentions toward the ingroup	5.89 (1.43)	4.57 (1.91)
Perception of intentions toward the outgroup	4.15 (1.95)	5.06 (1.84)

Note: All scores range from 1 to 9.

disapproval ($r = .25$ and $r = -.23$, respectively). The signs of the correlations indicated that the effects of linguistic bias on loyalty and on prescribed approval were in the same direction, whereas it had the opposite effect on prescribed disapproval. Evaluating the functions at the group centroids showed differences between the experimental groups with respect to the measures of approval, with values of 0.43 for pro-ingroup LIB and -0.45 for pro-outgroup LIB. These results support *H1a*, as they show that the ingroup member who used pro-ingroup LIB was perceived as a more loyal group member and was ascribed greater approval than the ingroup member who used pro-outgroup LIB.

5.2.2 | Communicative intentions

We tested *H1b* by conducting a 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (target group: ingroup vs. outgroup) mixed ANOVA, with target group as a within-participant factor (see Table 1 for means and SD). This analysis revealed a main effect for target group, $F(1, 86) = 5.60$, $p = .020$, $\eta_p^2 = .06$, but not for linguistic bias, $F(1, 86) = 0.54$, $p = .464$, $\eta_p^2 < .01$. The interaction between linguistic bias and target group was significant, $F(1, 86) = 18.00$, $p < .001$, $\eta_p^2 = .17$. In line with our hypothesis, the ingroup member who used pro-ingroup LIB was perceived as having more favorable intentions toward the ingroup, $F(1, 86) = 13.47$, $p < .001$, $\eta_p^2 = .14$, and less favorable intentions toward the outgroup, $F(1, 86) = 5.06$, $p = .027$, $\eta_p^2 = .06$, than when pro-outgroup LIB was used. In addition, the ingroup member who used pro-ingroup LIB was perceived as having more favorable intentions toward the ingroup than toward the outgroup, $F(1, 86) = 21.84$, $p < .001$, $\eta_p^2 = .20$. The simple effect for target group was not significant when the ingroup member used pro-outgroup LIB, $F(1, 86) = 1.76$, $p = .188$, $\eta_p^2 = .02$. In other words, the ingroup member who used pro-ingroup LIB was perceived as wanting to favor the ingroup over the outgroup, but this was not the case for the ingroup member who used pro-outgroup LIB.

²Several authors recommend following MANOVAs with appropriate multivariate post-hoc tests, such as discriminant analysis, rather than univariate tests, such as separate ANOVAs (for more details, see Barton, Yeatts, Henson, & Martin, 2016; Warne, 2014).

FIGURE 2 Study 1: Mediation of the effect of linguistic bias (pro-ingroup vs. pro-outgroup) on ingroup member loyalty, prescribed approval, and prescribed disapproval by the communicative intentions toward the ingroup and toward the outgroup. Unstandardized coefficients are reported. Values in parentheses refer to the total effect of linguistic bias. The different values for the effect of linguistic bias on communicative intentions are due to the fact that a participant did not complete all the items. * $p < .05$, ** $p < .01$, *** $p < .001$.

5.2.3 | Mediation analysis

We tested $H1c$ by examining the significance of the indirect effects of linguistic bias through the impact of perception of communicative intentions on the three separate measures of approval (see Figure 2). We did this by computing 95% confidence intervals from 1,000 bootstrapped samples, using Hayes' (2013) "PROCESS" macros. We entered linguistic bias as the independent variable (pro-ingroup = 1; pro-outgroup = -1) and perception of communicative intentions toward the ingroup and toward the outgroup as mediators. All the continuous variables were standardized.

With ingroup member loyalty as the outcome variable, the analysis showed a significant indirect effect via perception of communicative intentions toward the ingroup, $b = .17$, 95% CI [0.072, 0.316], but not via perception of communicative intentions toward the outgroup, $b < .01$, 95% CI [-0.095, 0.036]. The direct effect of linguistic bias remained significant, $b = .26$, 95% CI [0.067, 0.452].

We also tested the significance of the indirect effect with prescribed approval and prescribed disapproval as outcome variables. The analysis for prescribed approval showed an indirect effect through perception of communicative intentions toward the outgroup, $b = -.07$, 95% CI [-0.173, -0.011], but not through perception of communicative intentions toward the ingroup, $b = .03$, 95% CI [-0.064, 0.132]. The analysis for prescribed disapproval did not show any significant indirect effect through perception of communicative intentions either toward the outgroup, $b = .02$, 95% CI [-0.036, 0.111], or toward the ingroup, $b = .04$, 95% CI [-0.045, 0.160].

In summary, the results of Study 1 support $H1$, as ingroup members who used pro-ingroup (vs. pro-outgroup) LIB elicited more intra-group approval and this effect was mediated by a greater perception of communicative intentions in line with pro-ingroup bias. These results suggest that approval of using pro-ingroup LIB strengthens the perception that favoring the ingroup is expected and valued within the ingroup, and should therefore increase expressions of ingroup favoritism.

6 | STUDY 2

Study 2 focused on the second step of our causal chain: the effect on ingroup observers of an interaction between an ingroup speaker who uses the LIB and ingroup recipients. We manipulated approval of an ingroup member who used pro-ingroup LIB, so the ingroup speaker received either approval or disapproval from ingroup recipients on the basis of what she or he said. We measured the effect of this manipulation on the likelihood ingroup observers will express bias. In an ecological intergroup context involving already tense intergroup relations, we tested $H2$, according to which intragroup approval (vs. disapproval) of an ingroup member who uses pro-ingroup LIB increases the likelihood of expressing pro-ingroup bias. In addition, we expected the effect of approval on the likelihood of expressing bias to be moderated by perception of the ingroup member's communicative intentions toward the ingroup and toward the outgroup ($H3$). The expression of ingroup favoritism is unlikely to

be affected in people who do not perceive the ingroup favoritism expressed through pro-ingroup LIB, as they cannot relate the approval to an ingroup favoritism behavior. We expected the effect of approval to occur only when the ingroup member was perceived as having favorable intentions toward the ingroup (*H3a*) and/or negative intentions toward the outgroup (*H3b*).

6.1 | Method

6.1.1 | Participants and design

Participants were 88 students (51 women, aged between 18 and 20 years, $M = 18.88$, $SD = 0.74$) from the Department of Business and Administrative Management at Rennes Institute of Technology (France). Participation was voluntary and non-remunerated. Each participant was assigned randomly to one of the experimental conditions (between-participants: approval vs. disapproval).

6.1.2 | Intergroup context

We carried out the study at the Business School, which shares a building with the Social Careers Department (SC, courses focus on the management of not-for-profit organizations). In this study, Business students were the ingroup and SC students were the outgroup. Intergroup differentiation between the two departments is very strong and students from the two departments rarely mix, despite several attempts by the Institute of Technology to bring them closer together. Relations between students from the two departments are not overtly antagonistic, but they are not friendly.

6.1.3 | Procedure

The study was conducted in the participants' classrooms at the beginning of a tutorial and was introduced as focusing on perceptions of communication about groups. Participants were given a booklet and told that all the data collected would be completely anonymous and confidential.

In the first section, the cover story indicated that a previous study had asked a group of 15 ingroup students to watch and evaluate a video of a debate between ingroup and outgroup students. Participants were presented with a statement made by one of the 15 ingroup students, labeled "GEA1". The statement was adapted from the pro-ingroup LIB statement used in Study 1 (see Appendix A), so positive abstract terms and negative concrete terms were used to describe behaviors by Business students (participants' ingroup members), and negative abstract terms and positive concrete terms were used to describe behaviors by SC students (participants' outgroup members). We did not manipulate linguistic bias, so all of the participants read the same pro-ingroup LIB statement. After reading GEA1's pro-ingroup LIB statement, participants completed the measure of perception of communicative intentions.

Section two of the booklet contained a cover story, which we used to manipulate approval, while section three of the booklet

contained the measure of likelihood of expressing bias and a check for perception of ingroup norm. The last page of the booklet asked the participants to state their sex, age, and the extent to which they identified with the ingroup. We also asked them to say what they thought the purpose of the study was. Finally, participants were thanked and debriefed.

6.1.4 | Independent variable

Approval of an ingroup member who uses the LIB was manipulated by stating how the other ingroup members in the fictional study had responded to GEA1's statement. Half of the participants read that GEA1's statement elicited approval from other ingroup members; the other half read that the statement elicited disapproval. Participants read three sentences presented as reflecting the feelings elicited by GEA1's statement among other ingroup students. The sentences were adapted from the measure of prescribed approval and disapproval used in Study 1. The sentences were [approval/disapproval]: "I think I would be [friendly/unfriendly] toward GEA1"; "I think it would be OK to say [positive/negative] things about GEA1"; "I wouldn't mind if GEA1 [played a leading role in the group/were excluded from the group]".

6.1.5 | Measures

Communicative intentions. Participants indicated on 9-point scales (1 = *Not at all*, 9 = *Completely*) the extent to which "GEA1 tried to present a positive image of Business students" (intentions toward the ingroup) and "GEA1 tried to present a positive image of Social Careers students" (intentions toward the outgroup).

Approval manipulation check. After reading the sentences used to manipulate approval, participants indicated on a 9-point scale how positive the other members' impressions of GEA1 were (1 = *Very negative impression*, 9 = *Very positive impression*).

Likelihood of expressing bias. This measure required participants to state, as a percentage (from 0 to 100), the likelihood they themselves would say each of eight sentences comparing Business students (ingroup) and SC students (outgroup), and expressing either ingroup favoritism, ingroup disparagement, outgroup favoritism, or outgroup favoritism (two statements for each type of bias, see Appendix B). We created two difference scores, one for the ingroup and one for the outgroup, by subtracting the mean for the favoritism sentences from the mean for the disparagement sentences (scores ranged from -100, indicating disparagement, to 100, indicating favoritism). Next, we created an intergroup bias score by subtracting the score for the ingroup from the score for the outgroup. Greater positive values indicated greater likelihood of pro-ingroup bias, whereas greater negative values indicated greater likelihood of pro-outgroup bias.

Ingroup norm. In order to check that there is an ingroup favoritism norm within the ingroup, participants were asked to indicate

the percentage of ingroup members they thought would say each sentence presented for the likelihood of expressing bias measure. We calculated a perception of ingroup norm score in the same way we calculated the likelihood of expressing pro-ingroup bias. Again, greater positive values indicated greater perception of a pro-ingroup bias norm, whereas greater negative values indicated greater perception of a pro-outgroup bias norm.

Two other items measured perception of ingroup members' agreement with bias and participants' personal agreement with bias (readers interested in this aspect of our study will find details in the Supplementary Materials).

6.2 | Results and discussion

6.2.1 | Ingroup norm

In line with the intergroup context, participants perceived a strong pro-ingroup bias norm among ingroup members, as perception of ingroup norm scores was significantly above zero, ($M = 59.02$, $SD = 49.85$), $t(87) = 11.11$, $p < .001$, $\eta_p^2 = .59$. There was no difference between the approval and disapproval conditions, ($M_{\text{approval}} = 52.60$, $SD = 52.93$; $M_{\text{disapproval}} = 65.43$, $SD = 46.27$), $t(86) = 1.21$, $p = .229$, $\eta_p^2 = .02$. The perception of ingroup norm was correlated with the likelihood of expressing bias, $r = .48$, $p < .001$.

6.2.2 | Approval manipulation check

Participants in the approval condition ($M = 7.93$, $SD = 0.93$) ascribed more positive reactions toward the ingroup member who used pro-ingroup LIB than did participants in the disapproval condition ($M = 1.73$, $SD = 1.02$), $t(86) = 29.89$, $p < .001$, $\eta_p^2 = .91$.

6.2.3 | Communicative intentions

As in Study 1, participants perceived the ingroup member who used pro-ingroup LIB as having more favorable intentions toward the ingroup ($M = 6.24$, $SD = 1.66$) than toward the outgroup ($M = 3.47$, $SD = 1.52$), $t(87) = 11.27$, $p < .001$, $\eta_p^2 = .59$.

6.2.4 | Likelihood of expressing bias

We conducted a multiple regression analysis with approval (approval = 1, disapproval = -1), perception of communicative intentions toward the ingroup, perception of communicative intentions toward the outgroup, and all the two-way and three-way interactions as predictors. Perception of ingroup norm was included as a covariate because it was correlated with the outcome. All continuous variables were standardized. Results of this analysis supported $H2$, as they showed a significant main effect of approval, $b = .54$, $t = 2.95$, $p = .004$ ($M_{\text{approval}} = 22.48$, $SD = 56.87$; $M_{\text{disapproval}} = -2.68$, $SD = 56.72$). The main effect of intentions toward the outgroup was marginally significant, $b = .24$, $t = 1.86$, $p = .067$, but there was no main effect of intentions toward the

ingroup, $b = -.11$, $t = -.80$, $p = .423$. Results also supported $H3b$, as the interaction between approval and intentions toward the outgroup was marginally significant, $b = -.32$, $t = -1.73$, $p = .088$. We further characterized the nature of this interaction by applying the Johnson–Neymann (J–N) technique (as recommended by Hayes, 2013). A J–N analysis of the simple effects showed that the significance region for the simple effects of approval was for values of perception of intentions toward the outgroup of below 4.19 (77.27% of the participants), this being the mid-point of the scale. As expected, approval (vs. disapproval) of the ingroup member who used pro-ingroup LIB increased the likelihood of expressing ingroup favoritism when the ingroup member was perceived as having negative intentions toward the outgroup. Contrary to $H3a$, the interaction between approval and perception of communicative intentions toward the ingroup was not significant, $b = -.05$, $t = -.27$, $p = .789$. Nevertheless, the J–N analysis of the simple effects showed that the region of significance for the simple effect of approval was for values of perception of intentions toward the ingroup of between 4.30 and 7.84 (67.04% of the participants), that is, when the ingroup member who used the LIB was perceived as having favorable intentions toward the ingroup. The interaction between approval, intentions toward the ingroup, and intentions toward the outgroup was not significant, $b = -.27$, $t = 1.44$, $p = .153$.

In summary, the results of Study 2 validated the second step of our model. In line with $H2$ and, partially, with $H3$, approval of the ingroup member who used pro-ingroup LIB increased the likelihood of expressing pro-ingroup bias and this effect was moderated by perception of the ingroup member's biased communicative intentions toward the outgroup, but not by intentions toward the ingroup. Unexpectedly, the perception of unfavorable attitudes toward the outgroup expressed through the LIB appeared to play a more important role than the perception of favorable attitudes toward the ingroup. This difference in the effects of perceptions of intentions toward the ingroup and toward the outgroup may be due to there being more doubt about whether or not it is appropriate to express negative attitudes toward the outgroup, as this could be seen as prejudice. Thus, perceiving approval of unfavorable intentions toward the outgroup would be more relevant than perceiving approval of favorable intentions toward the ingroup when ingroup members decide to express pro-ingroup bias. Although our results did not support all our hypotheses, they show that approval of an ingroup member who uses pro-ingroup LIB only affects the expression of pro-ingroup bias by ingroup observers when these observers perceive the intergroup bias expressed through the LIB.

The results of Study 2 led us to conduct a third study in order to investigate the mediating process of the effect of approval of an ingroup member who uses the LIB. This third study enabled us to overcome some of Study 2's methodological limitations, as we manipulated linguistic bias by adding pro-outgroup LIB conditions, as well as approval/disapproval. We also considered both sides of the intergroup context by including participants from both groups (Business and SC).

7 | STUDY 3

Study 3 was designed to replicate and extend the results of Study 2 by examining the processes that mediate the effect of approval of an ingroup member who uses pro-ingroup LIB on the likelihood of expressing bias. We tested *H4*, according to which the perceived appropriateness of usual ways of describing the ingroup and the outgroup in intragroup interactions mediates the effect of intragroup approval. In an intergroup context where expression of pro-ingroup bias is usual, as in the context used in Study 2, usual ways of describing the ingroup and the outgroup should be mainly expressions of pro-ingroup bias. Because pro-ingroup bias is perceived though the use of pro-ingroup LIB, we assumed that approval of the use of pro-ingroup LIB would strengthen the perception that usual ways of describing the ingroup and the outgroup in intragroup interactions are appropriate, and this perception would increase the expression of pro-ingroup bias.

We used the same intergroup context as in Study 2, but we manipulated two independent variables: the linguistic bias used by the ingroup member (pro-ingroup LIB vs. pro-outgroup LIB) and the approval (vs. disapproval) elicited by this ingroup member. Our dependent variable was still the likelihood of expressing bias. We measured the perceived appropriateness of the usual ways in which ingroup members refer to the ingroup and the outgroup as potential mediators. As in Study 2, we tested our general hypothesis *H2*, according to which approval of an ingroup member who uses pro-ingroup LIB increases the likelihood of expressing bias. We also expected linguistic bias to moderate the effect of approval on the likelihood of expressing bias, as the results of Study 1 suggested that an ingroup member who uses pro-outgroup LIB is not perceived as being biased in favor of the ingroup. Thus, from the results of Study 2, we assumed that approval of an ingroup member who uses pro-outgroup LIB would not affect the likelihood of expressing bias. We expected the same approval $\times$ linguistic bias interaction on perceived appropriateness, because pro-outgroup LIB would not be consistent with usual ways of describing the ingroup and the outgroup. Approval of an ingroup member who uses pro-ingroup LIB would enhance the perceived appropriateness of the usual ways ingroup members describe the ingroup (*H4a*) and the outgroup (*H4b*), whereas approval of an ingroup member who uses pro-outgroup LIB would not. Finally, we expected to find a moderated mediation, because the effect of the interaction between approval and linguistic bias on the likelihood of expressing bias is mediated by the appropriateness of the usual ways ingroup members describe the ingroup (*H4c*) and the outgroup (*H4d*).

7.1 | Method

7.1.1 | Participants and design

Participants were 138 students (65 women, aged between 18 and 25 years, $M = 19.77$, $SD = 1.51$) at Rennes Institute of Technology (France). Seventy-three participants were from the Business

department and 65 were from the SC department. Participation was voluntary and non-remunerated. We used a 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) vs. (approval: approval vs. disapproval) between-participants design.

7.1.2 | Procedure and independent variables

The procedure was similar to Study 2, but we created two conditions in which the ingroup member, GEA1 (CS1 for participants from the SC department), used either pro-ingroup LIB or pro-outgroup LIB. The pro-ingroup statement was the same as in Study 2. The pro-outgroup LIB statement was created by inverting the reference to ingroup and outgroup members. After reading GEA1's [CS1's] statement, participants answered the same items as in Study 2 to indicate their perception of communicative intentions, read the same cover story used to manipulate approval, and then completed the manipulation check. We also measured group-based emotions (pride, happiness, shame, anger; readers interested in this aspect of our study will find details in the Supplementary Materials). The next section of the booklet contained a questionnaire with the measures. Finally, participants reported their sex, age, and identification with the ingroup, were asked about the purpose of the study, and were thanked and debriefed.

7.1.3 | Measures

Likelihood of expressing bias The measure was similar to the one used in Study 2, but instead of reading sentences comparing the two groups of students, participants read 16 sentences with the following structure: "Students in the Business [SC] department are [four positive traits: intelligent, competent, warm, friendly; and four negative traits: negligent, lazy, selfish, insensitive, for each group]". Eight sentences referred to Business students and eight sentences referred to SC students. After each sentence, participants indicated on a 5-point scale the likelihood they would express such a thing in a conversation with ingroup members: "I would express this idea when talking with [participant's ingroup: Business/SC] students" (1 = *Not at all*, 5 = *Completely*). We computed scores for both measures for the ingroup and for the outgroup, and for positive traits and negative traits (all alphas $> .73$). We then calculated difference scores (positive traits *minus* negative traits), which could range from +4 to -4. As in Study 2, we created intergroup bias scores by subtracting scores for the ingroup from scores for the outgroup. Greater positive values indicated greater likelihood of pro-ingroup bias, whereas greater negative values indicated greater likelihood of pro-outgroup bias.

Ingroup norm perception. We checked that a pro-ingroup norm occurred within the ingroup by asking participants to indicate for each sentence: "To say such things when talking with [participant's ingroup: Business/SC] students... is really a problem—is a bit of a problem—I don't know—is not really a problem—is not a problem at all" (coded from 1 to 5). We computed scores for ingroup norm perception as for

likelihood of expressing bias. Greater positive values indicated greater perception of a pro-ingroup bias norm, whereas greater negative values indicated greater perception of a pro-outgroup bias norm.

Perceived appropriateness of usual ways of describing the ingroup and the outgroup. Participants indicated whether or not the ways ingroup students generally describe the ingroup and outgroup when talking among themselves are appropriate. Three items measured *appropriateness of usual ways of describing the ingroup* ($\alpha = .81$): "When talking with [participant's ingroup: Business/SC] students, what people usually say about what [participant's ingroup: Business/SC] students are like is legitimate; justified; normal", all on 7-point scales (1 = *Not at all*, 7 = *Completely*). After replacing participant's ingroup with participants' outgroup in the second part of the sentence, we used the same three items to measure *appropriateness of usual ways of describing the outgroup* ($\alpha = .81$).

7.2 | Results and discussion

7.2.1 | Ingroup norm

As in Study 2, the perception of ingroup norm score was significantly above zero, ($M = 0.55$, $SD = 1.42$), $t(128) = 4.44$, $p < .001$, $\eta_p^2 = .13$, showing that participants perceived a pro-ingroup bias norm among ingroup members. Moreover, a 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (approval: approval vs. disapproval) ANOVA did not show any significant effects, all $ps > .31$, indicating that there was no difference between the experimental conditions. Again as in Study 2, the perception of ingroup norm score was correlated with the likelihood of expressing bias, $r = .48$, $p < .001$.

7.2.2 | Approval manipulation check

A 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (approval: approval vs. disapproval) ANOVA showed the expected main effect of approval, $F(1, 130) = 258.45$, $p < .001$, $\eta_p^2 = .67$. As expected, perceived reactions toward the speaker were more positive in the approval condition ($M = 5.36$, $SD = 1.23$) than in the disapproval condition ($M = 1.97$, $SD = 1.21$). There were no other significant effects.

We excluded nine participants from the subsequent analysis because their answers showed that they did not perceive approval reactions as positive (i.e., score below 4) or disapproval reactions as negative (i.e., score above 4).

7.2.3 | Communicative intention

A 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (target of the intentions: ingroup vs. outgroup) ANOVA, with the last variable as a within-participant factor, showed main effects for department, $F(1, 134) = 4.82$, $p = .030$, $\eta_p^2 = .03$, and for target, $F(1, 134) = 7.52$,

$p = .007$, $\eta_p^2 = .05$, and an interaction between linguistic bias and target, $F(1, 134) = 58.42$, $p < .001$, $\eta_p^2 = .30$ (see Table 2 for means and SD). As in Study 1, compared with the ingroup member who used pro-outgroup LIB, the ingroup member who used pro-ingroup LIB was perceived as having more favorable intentions toward the ingroup, $F(1, 134) = 30.15$, $p < .001$, $\eta_p^2 = .18$, and less favorable intentions toward the outgroup, $F(1, 134) = 36.98$, $p < .001$, $\eta_p^2 = .22$. Moreover, as in Study 2, the ingroup member who used pro-ingroup LIB was perceived as having more favorable intentions toward the ingroup than toward the outgroup, $F(1, 134) = 52.97$, $p < .001$, $\eta_p^2 = .28$. Conversely, the ingroup member who used pro-outgroup LIB was perceived as having more positive intentions toward the outgroup than toward the ingroup, $F(1, 134) = 12.23$, $p = .001$, $\eta_p^2 = .08$. The ANOVA did not reveal any other significant effects, all $ps > .13$.

7.2.4 | Likelihood of expressing bias

We performed a 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (approval: approval vs. disapproval) ANCOVA (see Table 2 for means and SD). As in Study 2, perception of ingroup norm was included as a covariate because it was correlated with the outcome. The expected interaction between approval and linguistic bias was significant, $F(1, 120) = 4.65$, $p = .033$, $\eta_p^2 = .04$ (see Table 3 for means and SD). In line with H2, compared with disapproval, approval of the ingroup member who used pro-ingroup LIB increased the likelihood of expressing bias, $F(1, 120) = 6.80$, $p = .010$, $\eta_p^2 = .05$, but there was no such effect for the ingroup member who used pro-outgroup LIB, $F(1, 120) = 0.21$, $p = .651$, $\eta_p^2 < .01$. The ANCOVA did not reveal any other significant effects, all $ps > .13$.

7.2.5 | Appropriateness of usual ways of describing the ingroup

A 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (approval: approval vs. disapproval) ANOVA showed a main effect of participant's department $F(1, 121) = 5.76$, $p = .018$, $\eta_p^2 = .05$, as perceived appropriateness was higher for Business students than for SC students. The expected interaction between approval and linguistic bias was marginally significant, $F(1, 119) = 3.45$, $p = .066$, $\eta_p^2 = .03$ (see Table 2 for means and SD). In line with H4a, compared with disapproval, approval of the ingroup member who used pro-ingroup LIB led to greater perceived appropriateness of usual ways of describing the ingroup, $F(1, 121) = 5.14$, $p = .025$, $\eta_p^2 = .04$, but there was no such effect for the ingroup member who used pro-outgroup LIB, $F(1, 121) = 0.14$, $p = .712$, $\eta_p^2 < .01$. Unexpectedly, the analysis also revealed a three-way interaction between linguistic bias, approval, and participant's department, $F(1, 121) = 4.99$, $p = .027$, $\eta_p^2 = .04$. Breaking down this three-way interaction into separate two-way interactions for Business and SC students showed that the linguistic bias $\times$ approval interaction was significant for SC students, $F(1, 59) = 7.55$, $p = .008$,

TABLE 2 Means (and standard deviations) for communicative intentions, likelihood of expressing bias, and appropriateness of usual ways of describing the ingroup and the outgroup (Study 3)

	Pro-ingroup LIB		Pro-outgroup LIB	
Perception of speaker's intentions toward the ingroup	4.57 (1.49)		3.24 (1.32)	
Perception of speaker's intentions toward the outgroup	2.72 (1.06)		4.10 (1.52)	
	Approval	Disapproval	Approval	Disapproval
Likelihood of expressing bias	0.80 (1.66) _a	0.02 (1.41) _b	0.54 (1.46) _c	0.69 (1.19) _c
Appropriateness of usual ways of describing the ingroup	4.91 (1.20) _a	4.31 (1.45) _b	4.39 (1.05) _c	4.55 (1.00) _c
Appropriateness of usual ways of describing the outgroup	2.71 (1.19) _a	2.89 (1.28) _a	3.43 (1.27) _b	3.13 (1.35) _b

Note: Communicative intentions and appropriateness scores could range from 1 to 7. Likelihood of expressing bias scores could range from -8 (greatest pro-outgroup bias) to +8 (greatest pro-ingroup bias). Different subscripts indicate means that differ significantly within each row and within a linguistic bias condition (pro-ingroup or pro-outgroup LIB).

TABLE 3 Summary of general hypotheses and main results

Study	Hypothesis	Main results
1	H1: Effect of linguistic bias on approval mediated by the perception of intentions toward the ingroup and toward the outgroup	<i>Validated:</i> An ingroup speaker who used pro-ingroup (vs. pro-outgroup) LIB elicited more approval from ingroup recipients (<i>H1a</i>) and this effect was mediated by a greater perception of the speaker as having more favorable intentions toward the ingroup and more unfavorable intentions toward the outgroup (<i>H1b</i> and <i>H1c</i>)
2 and 3	H2: Effect of approval of an ingroup member who uses pro-ingroup LIB on the likelihood of expressing bias	<i>Validated:</i> Intragroup approval (vs. disapproval) of an ingroup member who used pro-ingroup LIB led ingroup observers to say they would be more likely to express pro-ingroup bias themselves in future intragroup conversations
2	H3: Moderation of the effect of approval on the likelihood of expressing bias by the perception of intentions toward the ingroup and toward the outgroup	<i>Partially validated:</i> The effect of approval of an ingroup member who used the LIB was moderated by perception of intentions toward the outgroup, as the effect of approval was significant only when the ingroup member who used the LIB was perceived as having unfavorable intentions toward the outgroup (<i>H3b validated</i>). Perception of favorable intentions toward the ingroup did not significantly moderate the effect of approval (<i>H3a not validated</i>)
3	H4: Mediation of the effect of approval on the likelihood of expressing bias by the appropriateness of usual ways of describing the ingroup and the outgroup	<i>Partially validated:</i> Approval of an ingroup member who used the LIB affected the likelihood of expressing bias by enhancing the perception of appropriateness of usual ways of describing the ingroup (<i>H4a and H4c validated</i>). However, the appropriateness of usual ways of describing the outgroup did not mediate the effect (<i>H4b and H4d not validated</i>)

$\eta_p^2 = .11$, but not for Business students, $F(1, 62) = 0.08$, $p = .781$, $\eta_p^2 < .01$. The ANOVA did not reveal any other significant effects, all $ps > .18$.

7.2.6 | Appropriateness of usual ways of describing the outgroup

A 2 (participant's department: Business vs. SC) $\times$ 2 (linguistic bias: pro-ingroup vs. pro-outgroup) $\times$ 2 (approval: approval vs. disapproval) ANOVA showed a main effect of linguistic bias, $F(1, 121) = 5.79$, $p = .018$, $\eta_p^2 = .05$. Contrary to *H4b*, the expected interaction between approval and linguistic bias was not significant, $F(1, 121) = 1.26$, $p = .264$, $\eta_p^2 = .01$ (see Table 2 for means and *SD*), but there was an interaction between linguistic bias, approval, and participants'

department, $F(1, 121) = 6.33$, $p = .013$, $\eta_p^2 = .05$. Breaking down this interaction into separate two-way interactions for Business and SC students showed that the linguistic bias $\times$ approval interaction was significant for Business students, $F(1, 62) = 6.41$, $p = .014$, $\eta_p^2 = .09$, but not for SC students, $F(1, 59) = 1.01$, $p = .319$, $\eta_p^2 = .02$. For Business students, compared with disapproval, approval of the ingroup member who used pro-outgroup LIB ($M = 3.95$, $SD = 1.12$) increased perceptions of the appropriateness of usual ways of describing the outgroup ($M = 2.82$, $SD = 1.34$), $F(1, 62) = 5.92$, $p = .018$, $\eta_p^2 = .09$, but the simple effect of approval was not significant when the ingroup member used pro-ingroup LIB ($M_{\text{approval}} = 2.69$, $SD = 1.17$; $M_{\text{disapproval}} = 3.17$, $SD = 1.44$), $F(1, 62) = 1.22$, $p = .273$, $\eta_p^2 = .02$. In addition, compared with approval of the ingroup member who used pro-ingroup LIB, approval of the ingroup member who

used pro-outgroup LIB increased perceptions of the appropriateness of usual ways of describing the outgroup, $F(1, 62) = 7.45, p = .008, \eta_p^2 = .11$. The simple effect of linguistic bias was not significant for disapproval of the ingroup member, $F(1, 62) = 0.62, p = .433, \eta_p^2 < .01$. The ANOVA did not reveal any other significant effects, all $p > .26$.

7.2.7 | Mediation analysis

Because we found the expected linguistic bias $\times$ approval interaction only for the perceived appropriateness of usual ways of describing the ingroup, we considered it to be the only potential mediator and decided to test only $H4c$ and not $H4d$ (i.e., perceived appropriateness of usual ways of describing the outgroup as potential mediator). Thus, we tested $H4c$ by examining the significance of the indirect effects of approval through perceived appropriateness of usual ways of describing the ingroup in the pro-ingroup LIB and pro-outgroup LIB conditions. As illustrated in Figure 3, our test involved computing 95% confidence intervals from 1,000 bootstrapped samples, using Hayes' (2013) "PROCESS" macros (Model 8), entering approval as the independent variable (approval = 1; disapproval = -1), linguistic bias as the moderator (pro-ingroup LIB = 1; pro-outgroup LIB = -1), perceived appropriateness of usual ways of describing the ingroup as a mediator (standardized), and perception of ingroup norm as a covariate (standardized). The indirect effect of the interaction between approval and linguistic bias through perceived appropriateness of usual ways of describing the ingroup was significant, $b = .06$, 95% CI [0.005, 0.185]. More precisely, the conditional indirect effect through perceived appropriateness of usual ways of describing the ingroup was significant when the ingroup member used pro-ingroup LIB, $b = .05$, 95% CI [0.004, 0.146], but not when she or he used pro-outgroup LIB, $b = -.01$, 95% CI [-0.081, 0.016]. The direct conditional effect of approval remained significant when the ingroup member used pro-ingroup LIB ($b = .18, p = .033$).

In summary, the results of Study 3, like those of Study 2, supported $H2$, with approval of an ingroup member who used pro-ingroup LIB again increasing the likelihood that participants would express ingroup favoritism. Furthermore, approval did not affect the expression of ingroup favoritism when the ingroup member used pro-outgroup LIB. Our mediation hypothesis, $H4$, was partially validated, as the effect of approval of an ingroup member who used pro-ingroup LIB was mediated only by the perceived

appropriateness of usual ways of describing the ingroup, but not by the perceived appropriateness of usual ways of describing the outgroup. Nevertheless, because participants indicated the presence of a pro-ingroup norm in intragroup interactions, our results suggest that approval of ingroup members who use the LIB increased the perceived appropriateness of usual expressions of pro-ingroup bias. In turn, this greater perceived appropriateness increased intention to express pro-ingroup bias in future intragroup interactions. In addition, unexpectedly, participants' department moderated the effect of approval on perceived appropriateness. This result suggests that the relative status of groups may moderate the effect of approval of the LIB, as Business students probably enjoy higher status. Further research on this point would be useful.

8 | GENERAL DISCUSSION

The present research investigated the consequences of the LIB from an innovative normative perspective. Our three experimental studies, in which we analyzed the separate steps involved in intragroup interactions and took into account the different communicative roles (speaker, recipients, observers), represent the first ever attempt to examine how the expression of pro-ingroup bias is affected by intragroup normative processes related to use of the LIB. Our results provide consistent evidence for our postulated causal chain model (see Table 3 for a summary), according to which intragroup approval of an ingroup member who uses the LIB plays a key role in perpetuating pro-ingroup bias.

8.1 | Theoretical and practical implications

Our research's main contribution is to highlight a new path by which the LIB helps perpetuate intergroup bias. The interplay between the LIB and normative processes is likely to create a self-perpetuating cycle in intragroup interactions. Previous research has shown that ingroup members can use the LIB to show their loyalty to the ingroup and appear to be normative ingroup members (Assilaméhou & Testé, 2013b). Study 1's results confirmed that ingroup members who use the LIB are likely to elicit intragroup approval and that this effect is due to a greater perception of the speaker as being biased in favor of the ingroup. These first results are important as they show that the

FIGURE 3 Study 3: Mediation of the interaction effect of approval (approval vs. disapproval) and linguistic bias (pro-ingroup vs. pro-outgroup) on likelihood of expressing bias by the appropriateness of usual ways of describing the ingroup. Value in parentheses refers to the total interaction effect. Unstandardized coefficients are reported. † $p < .10$, * $p < .05$, ** $p < .01$.

use of even subtle linguistic biases is subject to ingroup normative regulation and that this normative regulation rewards and promotes ingroup favoritism and loyalty within the group. Furthermore, the results of Studies 2 and 3 showed the significant consequences of ingroup recipients' approval of an ingroup member who uses the LIB, as this approval increases future expression of pro-ingroup bias in ingroup interactions. Use of the LIB is also likely to be encouraged, thereby beginning a new cycle. Nevertheless, our results suggest that disapproval of ingroup members who use the LIB can break this cycle. Further research is needed to determine the conditions in which use of the LIB elicits disapproval in intergroup contexts.

According to the original LIB model (Maass, 1999), the way a speaker formulates a message can help perpetuate intergroup bias among the message's recipients. A speaker's use of linguistic abstraction, which reflects biased expectations and/or ingroup protection motives, is thought to affect recipients' inferences and attitudes in a way that maintains a more positive image of the ingroup. The self-perpetuating cycle produced by normative processes related to the LIB substantially expands this idea.

First, the effects revealed by our studies concerned observers who noted both an utterance in line with the LIB *and* how ingroup members responded to it. Hence, our results show the need to consider the effects of the LIB in wider terms than a message's direct recipients and to take into account recipients' responses as well as the original utterance. In fact, the effects of using the LIB can be indirect, as they depend on whether use of this bias by an ingroup member is approved or disapproved. Interestingly, in Study 3 the main effect of linguistic bias on the likelihood of expressing bias was not significant, but its interaction effect with approval was significant. Therefore, our results suggest that when there is no information about how people respond to ingroup members who use the LIB, the effects of the LIB probably depend on cognitive inferences about the target and the group being described, whereas normative processes are likely to come into play when information is available about whether an ingroup member who used the LIB has elicited approval or disapproval. Second, the effect of approval of an ingroup member who uses the LIB on the expression of bias requires observers to play an active role, as they must recognize the biased intentions expressed via the LIB. In contrast, the cognitive effects of linguistic abstraction do not require such a clear-sighted evaluation of a speaker's biases.

The effect observed in our studies, in which conversational processes help perpetuate intergroup bias, has similarities with shared reality processes (Echterhoff, 2010). Shared reality arises when a communicator and an audience experience a commonality of inner states and is therefore very likely to occur in intragroup interactions (Higgins, Echterhoff, Crespiello, & Kopietz, 2007). Most investigations of these processes have been conducted in relation to the "saying-is-believing" effect, in which tailoring a message to suit an audience's attitudes subsequently affects the communicator's attitudes and memories about the target (Higgins & Rholes, 1978). Transposing this effect to our results might suggest that they are due to our participants attempting to align their

responses with other ingroup members' inferred inner attitudes toward the ingroup and the outgroup. However, the process mediating the effect of approval of an ingroup member who uses the LIB differs because it is not based on a perception of shared attitudes but on the perceived appropriateness of the expression of these shared attitudes.

Furthermore, given the ecological context used in Studies 2 and 3, the effects of normative processes related to the LIB revealed by our studies could be expected to occur in other natural intergroup settings characterized by antagonistic or tense relationships and by groups with fairly impermeable borders. Use of the LIB has already been demonstrated in many such groups, including political parties, sports fans, and national groups (Maass, 1999). In addition, our findings seem particularly relevant to research into digital communication, where readers frequently comment on the content of news websites and social-networking websites, "liking" some messages and criticizing others.

8.2 | Limitations and future directions

Although our studies provide additional evidence for the role of the LIB in perpetuating intergroup bias, our research has limitations. First, we did not statistically control perceived valence when manipulating linguistic bias, as research has consistently shown that the effect of linguistic abstraction is independent of the effect of perceived valence (Assilaméhou & Testé, 2013a, 2013b; Douglas & Sutton, 2003, 2010). Nevertheless, this raises the question of whether any expression of pro-ingroup bias containing more positive descriptions of the ingroup would produce similar results. If, as we believe, the subtle nature of the LIB plays an important role, approval of flagrant bias would not have the same effect. Although pro-ingroup bias is perceived through the LIB, it is still considered acceptable and harmless. A post-test of the material used in Study 3 showed that a LIB statement was perceived as much more socially acceptable and less disparaging for the outgroup than a blatant ingroup superiority statement. Unlike outright statements of ingroup superiority, which would be perceived as blatant discrimination, using the LIB helps individuals follow the ingroup loyalty norm and promote ingroup favoritism behaviors without overtly transgressing egalitarian and anti-discrimination norms (Franco & Maass, 1996, 1999). Thus, it would be interesting to determine how the effects of approval of subtle biases differ from those of approval of more flagrant biases.

Second, the ecological intergroup context we used was characterized by strong and clear pro-ingroup norms for both groups. Approval of ingroup members who use the LIB may have different consequences when the pre-existing ingroup norm is not so clear (Zitek & Hebl, 2007). Moreover, because participants would not have viewed the outgroup used in our studies as "socially protected", our results need to be replicated with other types of group, especially those benefitting from stronger non-discrimination norms.

Third, we operationalized our mediator via an indirect measure of perception of the appropriateness of the ingroup norm. Even though our findings provide further evidence for the role of the evaluation

of group norms in the adoption of normative behaviors, future research needs to provide a more direct measure of this concept and to extend it to the appropriateness of other norms affecting the expression of bias, such as egalitarian norms.

9 | CONCLUSION

Despite our studies' limitations, investigating the consequences of subtle linguistic bias from a normative perspective provides insights into the role language use plays in intragroup and intergroup relations. In addition to underlining the importance of taking into account social norms when examining communication processes, our results highlight the deleterious effect on intergroup relations of the use and approval of an apparently harmless linguistic bias. Hence, our findings provide additional evidence for the insidious consequences of subtle variations in language.

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CONFLICT OF INTEREST

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. The authors declare that the research was conducted ethically, the results are reported honestly, the submitted work is original and not (self-) plagiarized, and authorship reflects individuals' contributions.

TRANSPARENCY STATEMENT

The data and materials for all the studies reported in this manuscript are openly available at the following link: <https://osf.io/jm5td/>

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SUPPORTING INFORMATION

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APPENDIX A

Pairs of abstract and concrete descriptions used in the LIB statements

	Abstract	Concrete
Positive	was dynamic* [<i>a été dynamique</i>]	led the meeting from the beginning to the end [<i>a animé la reunion du début à la fin</i>]
	was productive [<i>a été productif</i>]	made numerous suggestions* [<i>a fait de nombreuses suggestions</i>]
Negative	was disdainful* [<i>a été méprisant</i>]	disparaged his opposite number's work [<i>a dénigré le travail de son homologue</i>]
	was rude [<i>a été malpoli</i>]	answered her phone during the discussion* [<i>a répondu à son téléphone lors de la discussion</i>]

Note: All the abstract descriptions are adjectives. The first three concrete descriptions include interpretative action verbs; the last description includes a descriptive action verb. The four pairs of descriptions were used in Study 1. Descriptions marked with an asterisk were used for the LIB statement in Studies 2 and 3. Original French statements are given in brackets.

APPENDIX B

Statements about Business and Social Careers students used for the likelihood of expressing bias and ingroup norm measures (Study 2)

Bias	Statements
Ingroup favoritism	Business students are smarter than Social Careers students [<i>sont plus intelligents</i>]
	Business students work harder than Social Careers students [<i>travaillent plus sérieusement</i>]
Ingroup disparagement	Business students are more self-centered than Social Careers students [<i>sont plus égoïstes</i>]
	Business students belittle others more often than Social Careers students [<i>dénigrent plus souvent les autres</i>]
Outgroup favoritism	Social Careers students are friendlier than Business students [<i>sont plus chaleureux</i>]
	Social Careers students are more likely to help people in need than Business students [<i>aident plus volontairement les personnes en difficulté</i>]
Outgroup disparagement	Social Careers students are scruffier than Business students [<i>sont plus négligés</i>]
	Social Careers students are less concerned about fitting into society than Business students [<i>cherchent moins à s'intégrer dans la société</i>]

Note: Original French statements are given in brackets.